CHIQUES CREEK FLOOD RESILIENCY STUDY



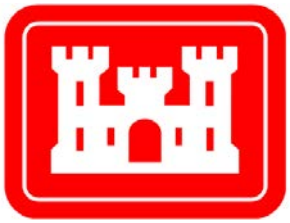
SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA

Prepared by:
Susquehanna River Basin Commission and
U.S. Army Corps of Engineers

APRIL 2018

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1 INTRODUCTION

1.1 BACKGROUND AND STUDY PURPOSE

The Susquehanna River Basin Commission (SRBC) has partnered with the Pennsylvania Department of Environmental Protection (PADEP), Pennsylvania State University (PSU), and local stakeholders to develop an alternate approach to Total Maximum Daily Load (TMDL) development in the Chiques Creek watershed in Lancaster and Lebanon Counties, Pennsylvania. As a compliment to this effort, SRBC received funding from PADEP to develop hydrologic and hydraulic modeling to evaluate alternatives for enhancing flood resiliency in the watershed.

SRBC has requested the assistance of the U.S. Army Corps of Engineers (USACE), Baltimore District, to develop these hydrologic and hydraulic models for priority flood risk reaches of Chiques Creek and/or its tributaries. These models were then used by SRBC to characterize existing conditions, simulate various alternatives under proposed conditions, and formulate recommendations for improving flood resiliency in the watershed.

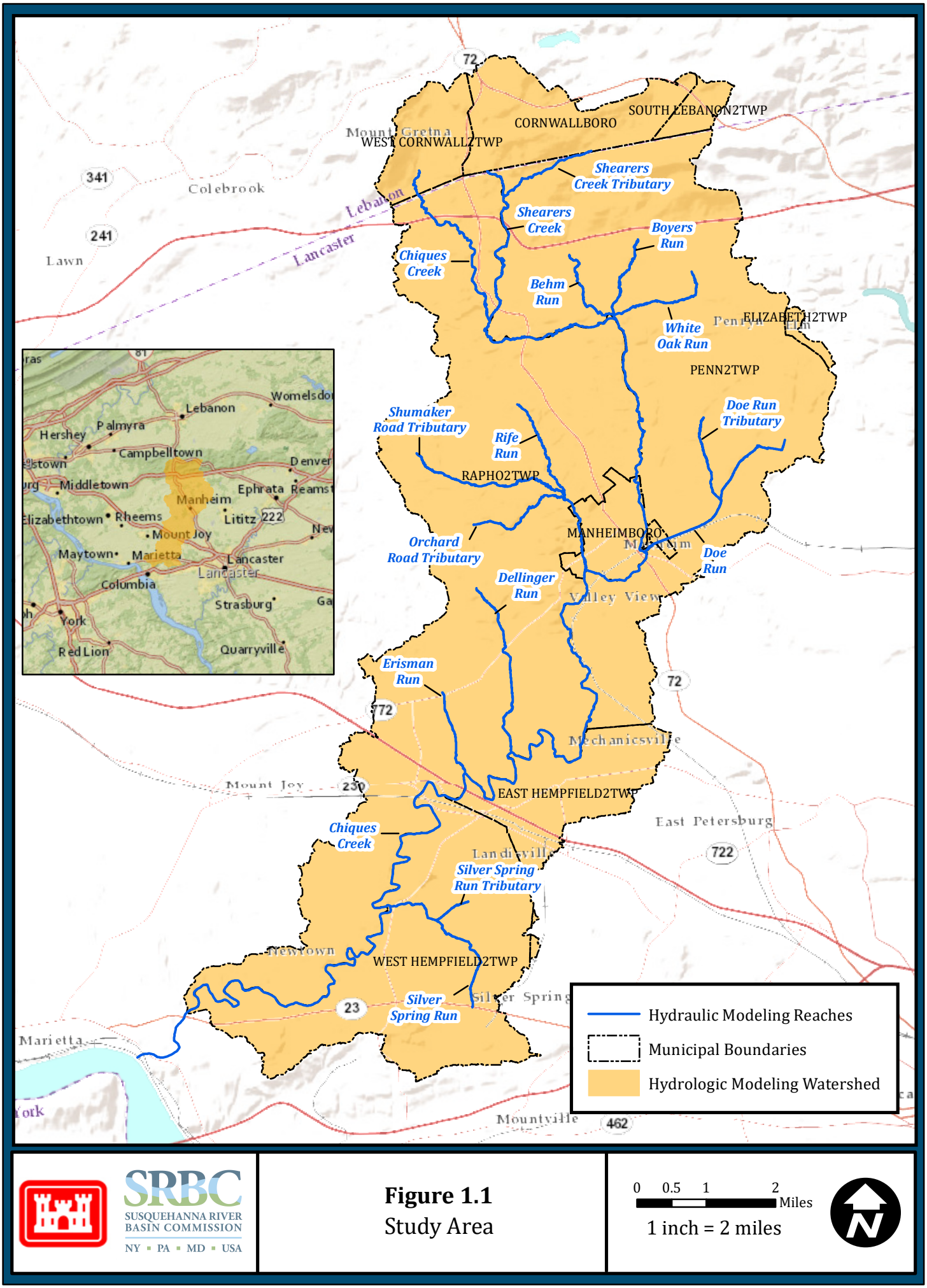
1.2 STUDY AUTHORITY

This study was conducted by SRBC under a grant from PADEP, and by USACE, Baltimore District, for SRBC under the Floodplain Management Services Program (FPMS). The FPMS program is designed to provide planning-level assistance to communities and partners for floodplain related issues. The study is planning-level only; no detailed design or construction resulted from this investigation.

1.3 STUDY AREA

Prior to the initiation of the hydrologic and hydraulic modeling, a flood risk characterization was performed by SRBC, using existing datasets, including the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL), flood insurance repetitive claims and claims paid, census block populations, critical infrastructure including hospitals, water/wastewater treatment facilities, elderly housing, and shelters/distribution centers. Local stakeholder input on critical flood hazard areas was also solicited and evaluated. The goal of this characterization was to identify, map, and prioritize key flood risk zones to inform the siting of hydraulic modeling reaches and development of potential alternatives. The results of this characterization assisted in setting the limits of the study area.

Using the flood risk characterization results, the study area for the hydrologic analysis, is the Chiques Creek watershed to a point just upstream of the confluence of Little Chiques Creek. The study area for the hydraulic modeling is Chiques Creek from its confluence with the Susquehanna River and its tributaries upstream of the confluence of Little Chiques Creek (Figure 1.1).



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Figure 1.1
Study Area

0 0.5 1 2 Miles
1 inch = 2 miles

Primary named tributaries to Chiques Creek in the study area include Behm Run, Boyers Run, Dellinger Run, Doe Run, Rife Run, and Shearers Creek. For the purposes of this investigation, previously unnamed tributaries to Chiques Creek were named. These watercourses include Doe Run Tributary, Erisman Run, Orchard Road Tributary, Shearers Creek Tributary, Shumaker Road Tributary, Silver Spring Run, and Silver Spring Run Tributary. The limits of the hydraulic modeling correspond to the limits of the existing 1-percent annual chance floodplain in the NFHL. For the hydrologic modeling, Landisville Run and Mill Road Tributary were also named, but hydraulic modeling was not completed for these watercourses.

The Chiques Creek watershed is approximately 126.0 square miles at its confluence with the Susquehanna River. The watershed upstream of the confluence of Little Chiques Creek, which is the area of hydrologic study in this investigation, is approximately 63.4 square miles, and spans West Hempfield Township, East Hempfield Township, Mt. Joy Borough, Rapho Township, Penn Township, Elizabeth Township, and Manheim Borough in Lancaster County and West Cornwall Township, South Lebanon Township, and Cornwall Borough in Lebanon County. The land use in the majority of the watershed is related to farming activities, with 56-percent of the land being farmsteads, pasture, and row crops. Development (residential, commercial, and industrial) covers approximately 19-percent of the watershed, with the majority of that in the Manheim Borough area.

Flooding is a regular occurrence along Chiques Creek, especially in Manheim Borough. The most recent major flooding occurred in September 2011 from the remnants of Tropical Storm Lee. The system dumped an average of 11 inches of rainfall over a 4-day period on the watershed, causing significant flooding in Manheim Borough and surrounding areas. Based upon Lancaster County Emergency Management Agency, 5 buildings were completely destroyed due to the flooding, and hundreds more sustained major or minor damages. Several smaller storms have caused minor damages and roadway closures since the September 2011 storm in Manheim Borough.

1.4 COORDINATION

SRBC managed the tasks of the overall investigation, and USACE led the hydrologic and hydraulic management tasks. Several meetings were held throughout the study process with SRBC, USACE, and other project partners to assure compatibility between flood resiliency goals and TMDL goals.

1.5 REPORT OUTLINE

The tasks completed in this investigation included field surveys; hydrologic analyses; hydraulic analyses; floodplain mapping; and the development and analysis of flood resiliency alternatives.

Section 1 of this report provides an introduction to the study by describing the purpose and study area, and outlining the data sources and previous studies. Section 2 describes the field survey completed to support the hydrologic and hydraulic analyses and Section 3

describes the development of land use and stormwater management data to support the analyses. Section 4 outlines the methodology and results of the existing-conditions hydrologic analysis and Section 5 describes the existing-conditions hydraulic analysis and floodplain mapping. Section 6 includes an outline of the development and analysis of flood resiliency alternatives and Section 7 is a summary of conclusions as a result of this investigation.

1.6 DATA SOURCES

Data was collected from various Federal, State, and local entities to support the analyses in this study. A list of this data in provided in Table 1.1, with the following entities contributing data to this investigation: SRBC, FEMA, National Weather Service (NWS), United State Geological Survey (USGS), Natural Resources Conservation Service (NRCS), Pennsylvania Department of Conservation and Natural Resources (PADCNR), Pennsylvania Department of Transportation (PENNDOT), Pennsylvania Turnpike Commission (PTC), Lancaster County Emergency Management Agency (LCEMA), Penn Township, Manheim Borough, and Land Studies, Inc.

Table 1.1: Data Collected

Data	*Date*	*Source*
Flood Insurance Study (FIS) for Lancaster County, Pennsylvania and Incorporated Areas	4/5/2016	FEMA
Flood Insurance Study (FIS) for Lebanon County, Pennsylvania and Incorporated Areas	6/5/2012	FEMA
Geographic Information System (GIS) Data Layers for Lancaster and Lebanon Counties (Land Use, Roads, Parcels, Stormwater Infrastructure, Buildings)	Various	SRBC
Radar-based Rainfall data for September 2011 Flood Event	Various	NWS
Point Precipitation Frequency Estimates for Chiques Creek Watershed (NOAA Atlas 14, Volume 2, Version 3)	2006	NWS
0.7-meter resolution Digital Elevation Model (DEM) for Lancaster County, Pennsylvania	Nov-Dec 2014	USGS
Soil Survey Data for Lancaster and Lebanon Counties	Sept 2016	NRCS
1-meter resolution DEM for Lebanon County, PA	2005	PADCNR

Table 1.1: Data Collected (Continued)

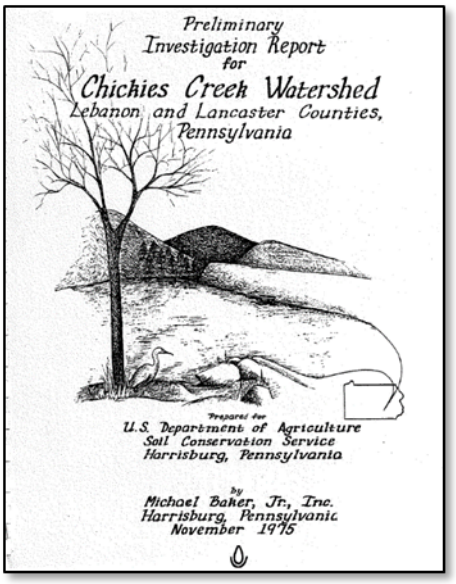
Data	*Date*	*Source*
Various Bridge Plans	Various	PENNDOT
Bridge Plans for Pennsylvania Turnpike	1949	PTC
StormNet Precipitation and Stream Stage data for Lancaster County	Various	LCEMA
Doe Run Elementary Plans	December 2015	Penn Twp.
Various Reports and Data	Various	Manheim Borough
Various Reports and Data	Various	Land Studies, Inc.

A "project DEM" was developed that spanned the Chiques Creek watershed. This DEM was used for delineating drainage areas and developing elevation-area curves for stormwater reservoirs for the hydrologic modeling, for overbank elevation data for cross-sections in the hydraulic model, for floodplain mapping, and for contour data for the development of flood resiliency alternatives. The project DEM was created by meshing the countywide DEMs obtained from USGS (Lancaster County) and PADCNR (Lebanon County). The horizontal coordinate system for the project DEM is Pennsylvania State Plane Feet South and the vertical datum is the North American Vertical Datum of 1988 (NAVD88).

1.7 PREVIOUS STUDIES

The Chiques Creek watershed has been studied extensively in the past, with the first known flood study being completed in 1964 (as referenced in a June 1978 study), and additional flood and environmental restoration studies being completed more recently by USACE and Land Studies, Inc. A list and brief description of previous investigations is provided below.

November 1975: Preliminary Investigation for Chickies Creek Watershed, Lebanon and Lancaster Counties

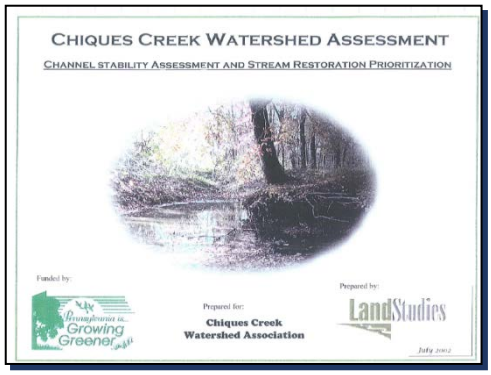


Michael Baker Jr., Inc. completed this study for the United States Department of Agriculture, Soil Conservation Service in November 1975. Local sponsors included the Lancaster County Conservation District, the County of Lancaster, and the Borough of Manheim. This report was prepared as the first step in the planning process for the Chiques Creek watershed, and was initiated under the criteria of Senate Document 19. The study investigated the feasibility of several alternatives to reduce flooding in the watershed, including single purpose (flood retention) and multi-purpose (flood retention and habitat creation) dams, channel improvements, and dikes. The study concluded that the inclusion of multi-purpose features in the watershed constitutes sound long-range conservation in the use of reservoir sites by providing fuller development of natural resources. The study also concluded that any of the alternatives are feasible with benefit cost ratios greater than one. None of the alternatives proposed in this 1975 investigation were carried forward to design or construction.

June 1978: Determination of Flood Discharges, Frequency Relationships, and Flood Plain Limits for Chickies Creek Watershed, Thru Manheim, Pennsylvania

This study was completed by the United States Department of Agriculture (USDA), Soil Conservation Service (SCS) to provide flood data for Chiques (then Chickies) Creek thru Manheim. A hydrologic model using the NRCS TR-20 program and a hydraulic model using the WSP-II program was developed for this investigation and calibrated to the Agnes event in 1972. The report contained several high water marks in Manheim Borough for Agnes, and concluded that the Agnes event in 1972 was roughly equivalent to the 1-percent annual chance flood (100-year flood) at the time of study.

July 2002: Chiques Creek Watershed Assessment



Land Studies, Inc. completed this assessment in July 2002 for the Chiques Creek Watershed Association. The goals of the assessment included to identify potential stream restoration projects; to identify sources of erosion and sediment; to determine the stable dimensions of the channel; and to classify stream types. Chiques Creek and its tributaries were divided into representative stream reaches in this assessment. The overall conclusion of the assessment

was that the stream channels in the watershed are suffering from excessive erosion and sedimentation, causing loss of land and degradation of water quality and loss of habitat, with the main cause of instability being current and historic land use practices. Fifteen stream reaches were identified as high priority, and since the time of this study, planning has occurred in order to implement some of the proposed solutions. A project was recently constructed in Reach R, Rife Run at Logan Park, where the floodplain was restored.

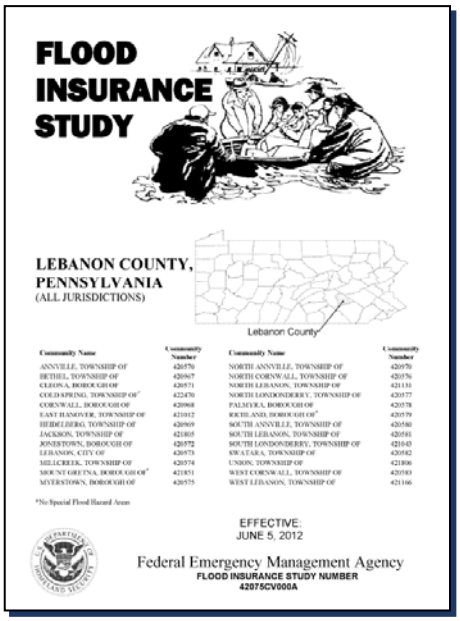
December 2004: Doe Run/Chiques Creek, Manheim Township, Pennsylvania Small Flood Control Project

This study was completed by USACE under Section 205 of the Flood Control Act of 1948, as amended, to consider plans for mitigating flooding from Chiques Creek and Doe Run in Manheim Borough. Alternative plans in this study included the construction of an impound area for floodwaters upstream of Manheim Borough along White Oak Road; a flood warning system alert Manheim Borough of an impending flood; and a relocation of Doe Run back to its historical location. The recommended plan during this investigation was a flood-warning system and flood-proofing individual buildings.

April 2010: Chiques Creek Stream Restoration/Flood Reduction Concept

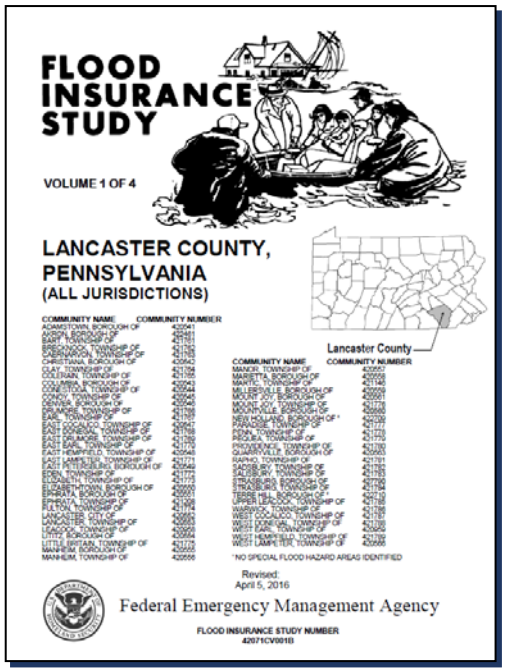
The goal of this effort, completed by USACE in 2010, was to create better in-stream habitat and improve conveyance of Chiques Creek in Manheim Borough. Ultimately, a stream channel re-alignment near Stiegel Street was proposed in this investigation to provide a better angle and flow towards the bridge and improve conveyance.

June 2012: Flood Insurance Study (FIS) for Lebanon County, Pennsylvania and Incorporated Areas



This FIS investigates the existence and severity of flood hazards in the geographic area of Lebanon County, Pennsylvania. Chiques Creek and its tributaries in Lebanon County has a Special Flood Hazard Area (SFHA), or 1-percent annual chance (100-year) floodplain, that is delineated a Zone A, meaning no detailed flood data is available. Thus, limited information is available from this report for Chiques Creek; however, as part of the FIS and delineation of the Zone A, FEMA developed approximate hydraulic models (in HEC-RAS format) for Chiques Creek and its tributaries in Lebanon County. These models were obtained from FEMA to use for reference in this current study.

April 2016: Flood Insurance Study (FIS) for Lancaster County, Pennsylvania and Incorporated Areas



This FIS investigates the existence and severity of flood hazards in the geographic area of Lancaster County, Pennsylvania. Portions of Chiques Creek and Rife Run have a SFHA that is delineated a Zone AE, meaning detailed flood data is available. Other portions of Chiques Creek and all the other tributaries are delineated a Zone A, and the approximate Zone A HEC-RAS models were obtained from FEMA to use for reference in this current study.

For the detailed study portion of Chiques Creek in and upstream of Manheim Borough and Rife Run, peak discharges were taken from the TR-20 model developed by USDA SCS in 1978 (discussed above). For Chiques Creek south of Manheim Borough, the flood-flow frequency data was developed using regional flood flow frequency procedure developed by USACE in 1975. South of U.S. Route 283, peak flow estimates for Chiques Creek were established using a U.S. Water Resource Council log-Pearson Type III method. The procedure is based upon a log-Pearson Type III analysis of a large number of station records in the Susquehanna River basin through 1972, and transferred via standard equations to the Chiques Creek watershed. The USACE HEC-2 program was used to compute water surface elevations for all detailed study portions of Chiques Creek and Rife Run. This study was completed in 1982, although this FIS report is dated 2016.

2 FIELD SURVEY

Field surveys were completed by USACE staff in August 2016 through February 2017 to support the hydrologic and hydraulic modeling in this investigation. The field work included a detailed survey of 120 bridges, culverts, or weirs that cross Chiques Creek and its tributaries, numerous channel cross-sections at various locations within the study area, and a survey of nearly 60 man-made stormwater management facilities or natural stormwater storage areas within the Chiques Creek watershed (Figure 2.1).

The survey utilized relative positioning techniques yielding precision on the order of < 2 centimeters horizontally and vertically. More specifically, Real-Time Kinematic (RTK) Global Positioning System (GPS) techniques were used. The Trimble R8 GNSS (Global Navigation Satellite System) unit was utilized to perform the field survey.

Figure 2.1: Example Survey Points in Manheim Borough Area



All survey points were coded based upon Table 9 in the 2014 FEMA *Data Capture Technical Reference* (FEMA 2014) to ensure compatible data if any information is submitted to FEMA in the future for flood mapping changes based upon the results of this study.

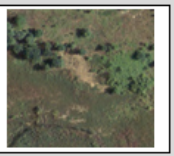
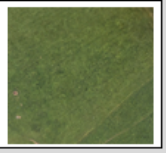
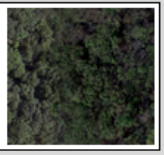
3 LAND USE AND STORMWATER MANAGEMENT DATA

Land use data and existing stormwater management data is critical in accurately completing the hydrologic analysis for the Chiques Creek watershed.

3.1 LAND USE CATEGORIES

A GIS layer of the existing land use in the watershed was developed utilizing several GIS layers for Lancaster County and Lebanon County, provided by SRBC. These source layers, such as land use, road edges, building, and parcels, were merged to create the watershed specific layer. Twelve different land use categories were identified within the Chiques Creek watershed. These land use categories correspond to the land cover descriptions in the NRCS Technical Release 55 (TR-55) program, which is a component for determining sub-basin losses during hydrologic modeling (discussed in Section 4 of this report). A list of the land use categories for this investigation is shown in Table 3.1, and a map of the existing land use in the Chiques Creek watershed in shown in Figure 3.1.

Table 3.1: Land Use Categories for the Chiques Creek Watershed

Brush- Good Condition		Water	
Commercial and Business		Pasture	
Farmsteads		Residential- 1/8 acre-2 acre	
Impervious (Streets, Roads, Parking Lots)		Row Crops	
Industrial		Woods- Good Condition	
Open Space- Good Condition		Woods-Grass Combination -Good Condition	

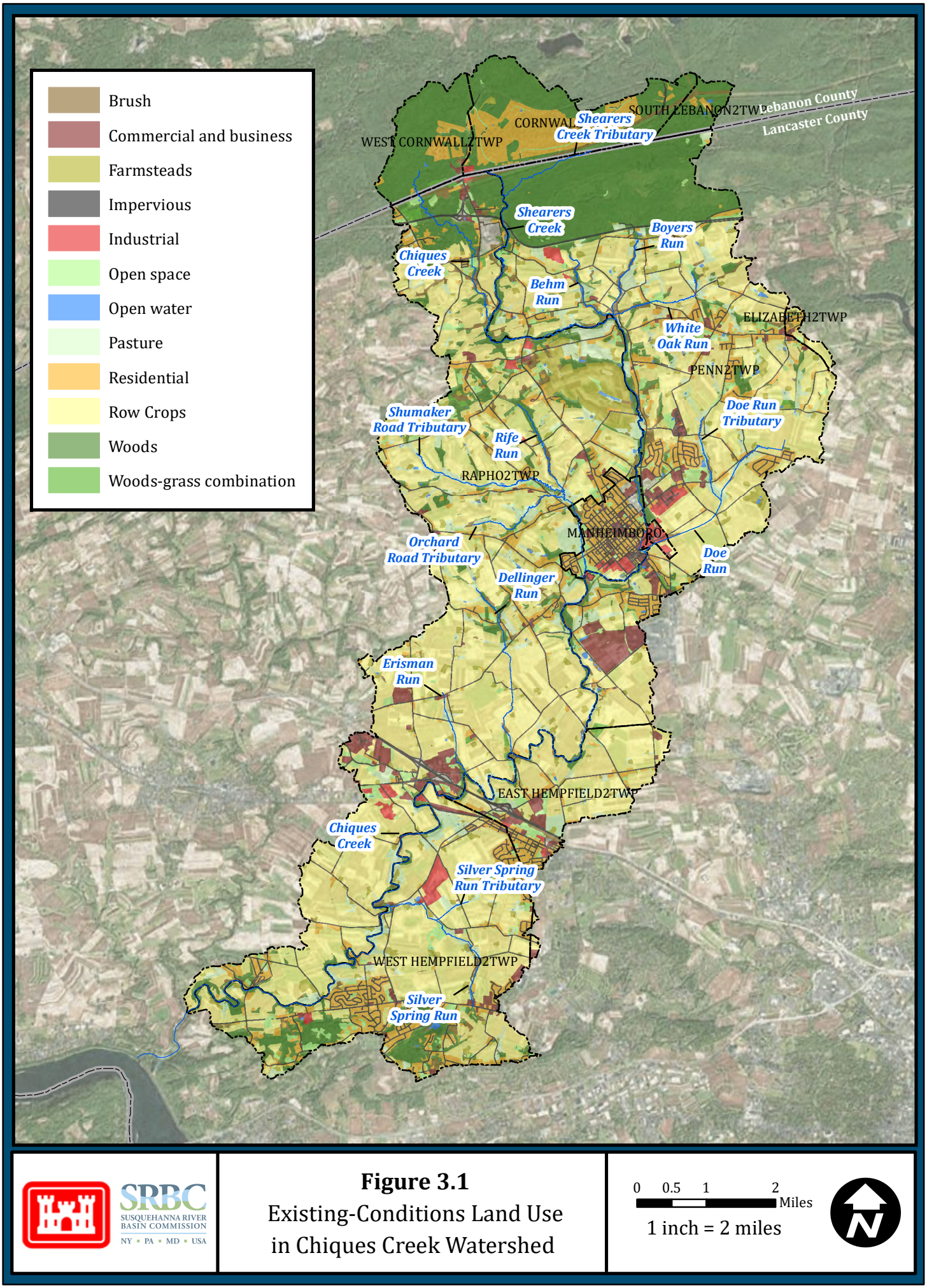
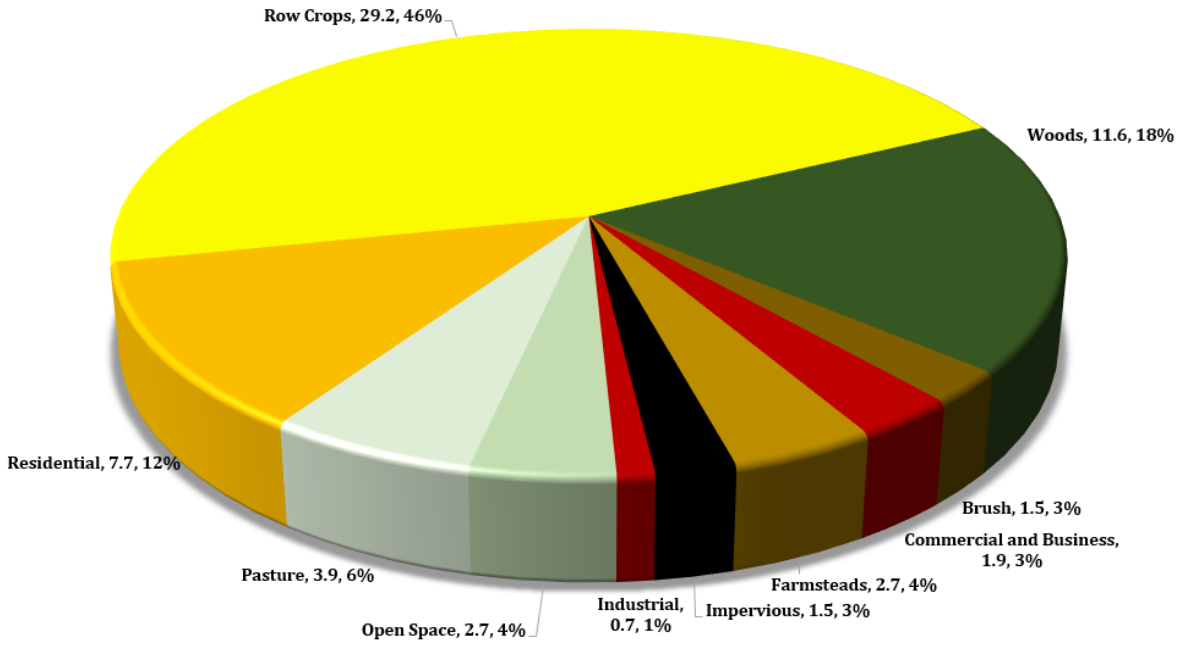


Figure 3.1
Existing-Conditions Land Use
in Chiques Creek Watershed

Farming activities comprise 56-percent of the watershed land use, with 18-percent being wooded or mixed open space/wooded, and 4-percent being general open space. The remaining 19-percent of the watershed is considered developed, comprised on residential, commercial, industrial, and roadways. A breakdown of the existing land use in the Chiques Creek watershed is shown in Figure 3.2.

Figure 3.2: Breakdown of Existing Land Use in the Chiques Creek Watershed

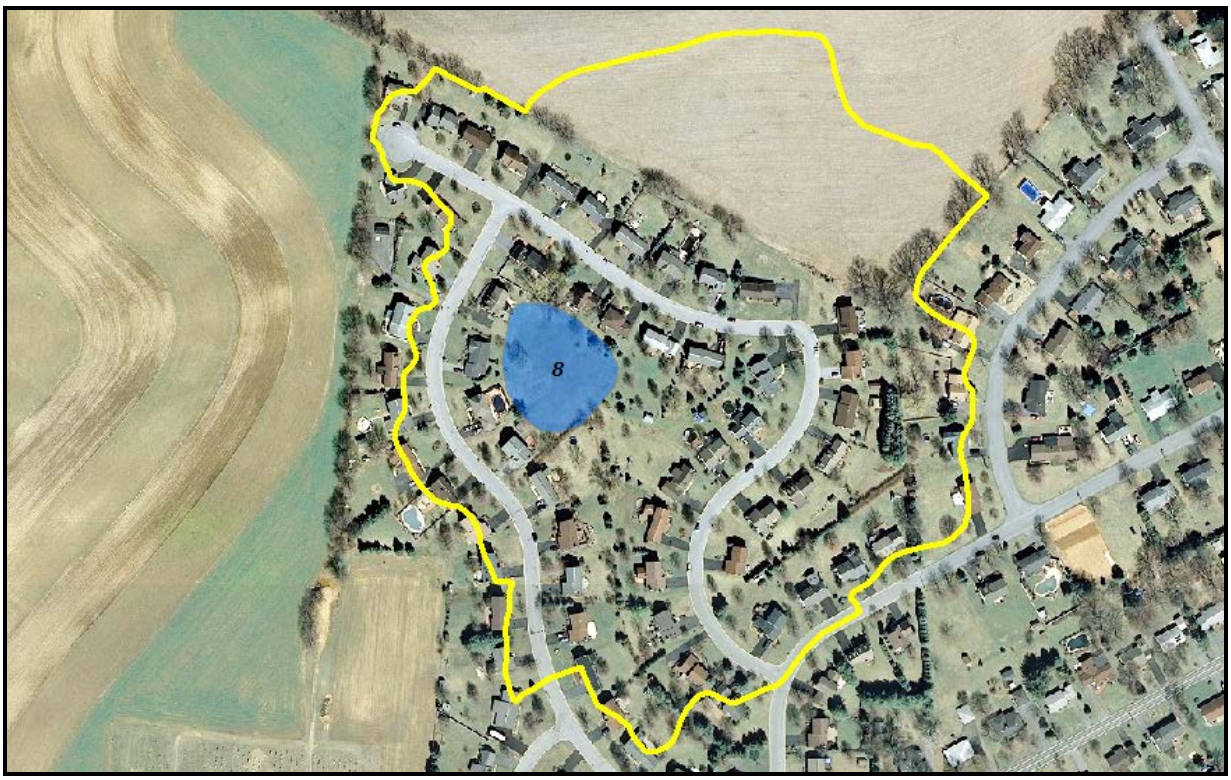


3.2 STORMWATER MANAGEMENT FACILITIES

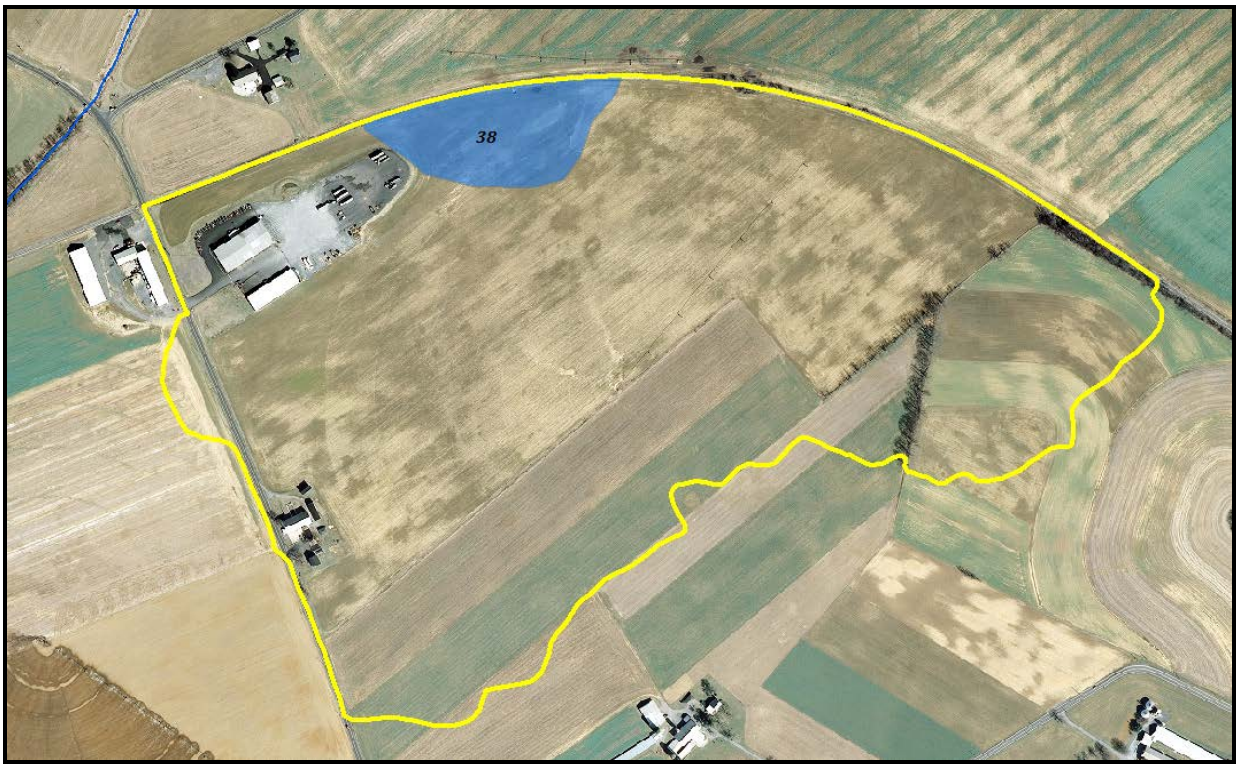
Stormwater management facilities (termed "reservoirs" for the purposes of this study) may have an impact of flows in the watershed. When a new development is constructed, the increase in runoff with increased impervious area must be mitigated to prevent and increase in flows in downstream areas. The reservoirs have less of an impact the further downstream from the outfall of the reservoir. For example, a stormwater reservoir in the headwaters of the Doe Run watershed will have more of an impact on the upper reaches of Doe Run than it will on Chiques Creek downstream of Manheim; however, since the hydrologic analysis in this investigation is developing flow data for numerous points within the watershed, the location and impact of these reservoirs must be considered when developing hydrologic information.

As a first step, a desktop analysis using the project DEM and recent aerial photography was conducted to assess the presence of designed stormwater reservoirs or natural areas where the storage of floodwaters would occur (Figure 3.3). If it was determined that the reservoir would have a potential impact of downstream peak flows, the reservoir outlet

Figure 3.3: Stormwater Reservoirs and Drainage Areas



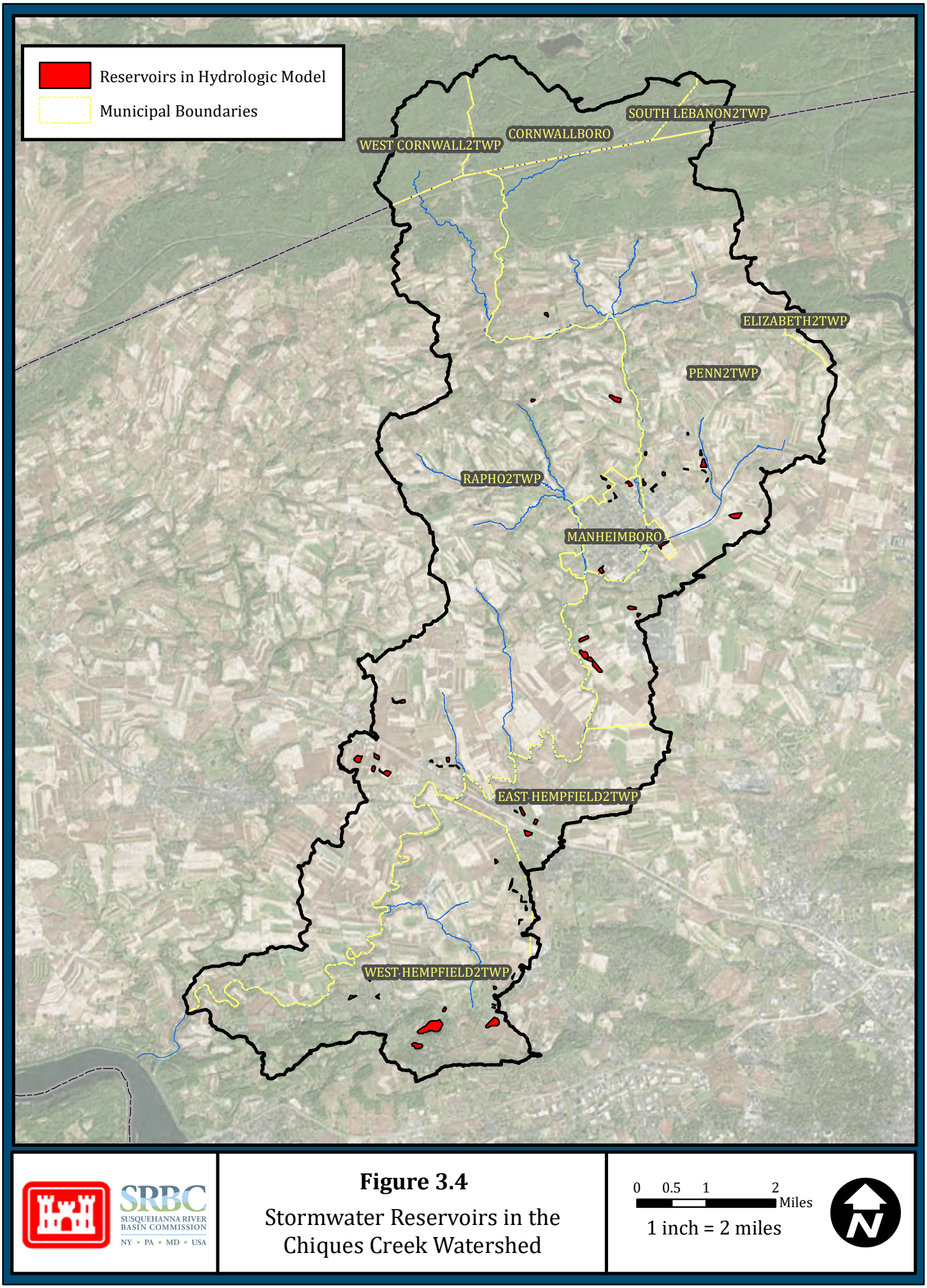
Reservoir 8 is a designed stormwater reservoir for a residential development



Reservoir 38 is a natural stormwater storage area behind a railroad with no outlet pipe

structure was surveyed to include in the hydrologic model. Stormwater Best Management Practices (BMPs) such as bio-retention that were designed only for water-quality improvement and not water quantity management were not considered in the hydrologic modeling.

During this investigation, a total of 59 existing stormwater management reservoirs in the Chiques Creek watershed were identified for inclusion into the hydrologic model. Figure 3.4 shows the location of these reservoirs. Ponds 58 and 39 are associated with Doe Run Elementary School, which was under construction at the time of this study. Development plans for this school were obtained from Penn Township and these reservoirs were included in the model as if they were fully constructed, as the construction will be near completion in the near future.



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Figure 3.4

Stormwater Reservoirs in the Chiques Creek Watershed

0 0.5 1 2 Miles

1 inch = 2 miles

4 HYDROLOGIC ANALYSIS

The USACE Hydrologic Modeling System (HMS), version 4.2.0, was used to estimate peak flows for the Chiques Creek watershed. HEC-HMS is a public domain software package developed by the USACE Hydrologic Engineering Center (HEC). HEC-HMS is designed to simulate the precipitation-runoff process in dendritic watershed systems. It is designed to be applicable in a wide range of geographic areas for solving the widest possible range of problems (USACE 2016). It is widely used and is an approved model by many Federal, State, and local agencies for flood and stormwater investigations.

The HEC-HMS model has three basic components. The physical representation of the watershed is accomplished with a *basin model*. Hydrologic elements are connected in a dendritic network to simulate runoff processes. Meteorological data analysis is performed by the *meteorological model*, which includes six different historical and synthetic precipitation methods. The simulation time span is controlled by *control specifications*. A simulation run is created by combining these three components.

Peak flows for eight storm events were calculated in this investigation. Table 4.1 lists these eight storm events.

Table 4.1: Modeled Storm Events

Recurrence Interval (years)	*Percent Chance of Occurring in Any Given Year*
2	50.0
5	20.0
10	10.0
25	4.0
50	2.0
100	1.0
200	0.4
500	0.2

Included in the model are several storm events used for verification of the results of the HEC-HMS model. These storms include August 2015, October 2012, October 2013, September 2015, and September 2011-Lee.

All hydrologic modeling was completed to comply with all of FEMA's guidance documents and standards. This was done in the event that the peak flows computed in this investigation were to be submitted to FEMA by SRBC or any of the local municipalities for a change to the effective Flood Insurance Rate Maps (FIRMs). The modeling completed in this study uses more up-to date data as the effective FEMA studies and better estimates the

peak flows on Chiques Creek. Because of this, using the results of the HEC-HMS modeling, the "1-percent plus" flood discharge was determined. The methodology for determining the 1-percent plus flood discharge is explained in Section 4.5 of this report.

4.1 BASIN MODEL

Hydrologic elements within a HEC-HMS basin model include junctions, sub-basins, reaches, and reservoirs. A junction represents a flow point within the watershed where flow accumulates. Sub-basins are the contributing drainage area to the flow points, reaches are the stream channel and corresponding floodplains between junctions (flow points), and reservoirs represent stormwater management facilities, man-made or natural.

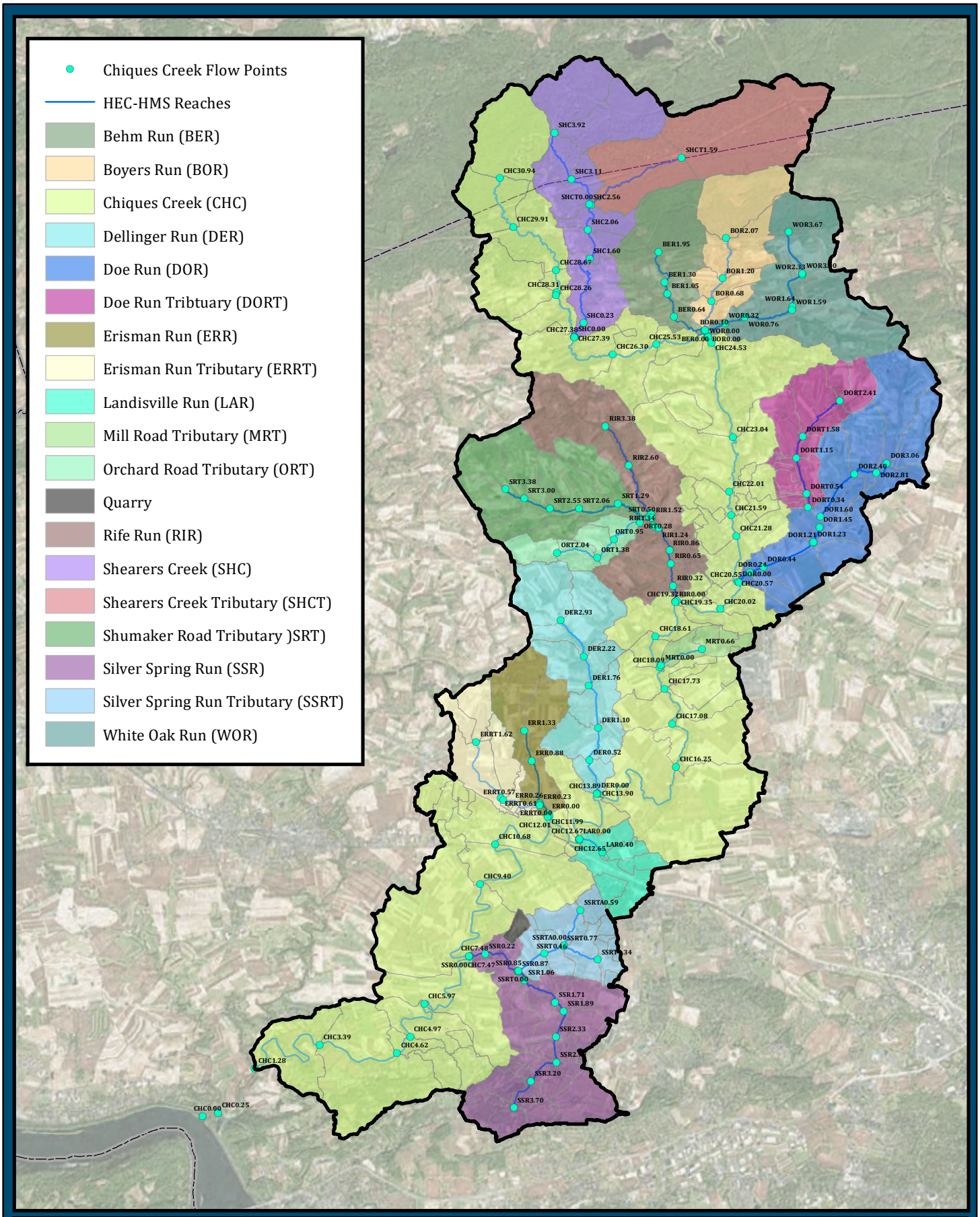
Flow Points (Junctions)

The HEC-HMS basin model for the Chiques Creek watershed is set-up with a nomenclature system that consists of an abbreviation representing the watercourse and a number representing the distance upstream of the confluence of each watercourse. For example, Flow Point CHC20.57 is a flow point on Chiques Creek that is 20.57 miles upstream of the confluence with the Susquehanna River. Flow Point BOR2.07 is a flow point on Boyers Run that is 2.07 miles upstream of the confluence with Chiques Creek.

Flow points were generally located at road crossings, just downstream of confluences of tributaries, or at other hydrologically significant points in the watershed. A total of 141 flow points are included in the Chiques Creek HEC-HMS basin model. The location of these points is shown in Figure 4.1. Flow points CHC0.00 and CHC0.25 are shown on Figure 4.1, but are not included in the HEC-HMS model. These flow points were required for the hydraulic model, and peak flows for these tow flow points were computed using USGS regression equations via the StreamStats program. There is a large quarry present in the watershed. This quarry has a drainage area of approximately .09 square miles, and all flow into the quarry would accumulate in the quarry and not be released into the watershed. Therefore, this quarry was not included in the HEC-HMS model.

Sub-basins Drainage Area

The Chiques Creek watershed was divided into 186 sub-basins of similar land use and characteristics (Figure 4.1). Sub-basins are named based upon the flow point in which the contribute runoff to. SRBC obtained GIS data layers of the existing stormwater infrastructure within the watershed, including inlet locations, pipe locations, and pipe sizes. This data was limited in detail, but was used wherever possible in the delineation of sub-basins. Sub-basins were delineated using the project DEM described in Section 1.6 of this report. Significant detail was placed on the delineation of the sub-basin boundaries. In many applications of HEC-HMS, peak flows for only one study point are required, and the detail in the delineation of sub-basins is not necessary. For this study, however, detail was necessary to provide accurate peak flow data for many study points throughout the watershed to meet the objectives of the investigation.



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Figure 4.1
Flow Points and Sub-basins in the Chiques Creek HEC-HMS Basin Model

0 0.5 1 2 Miles
1 inch = 2 miles

Sub-basins Loss Method

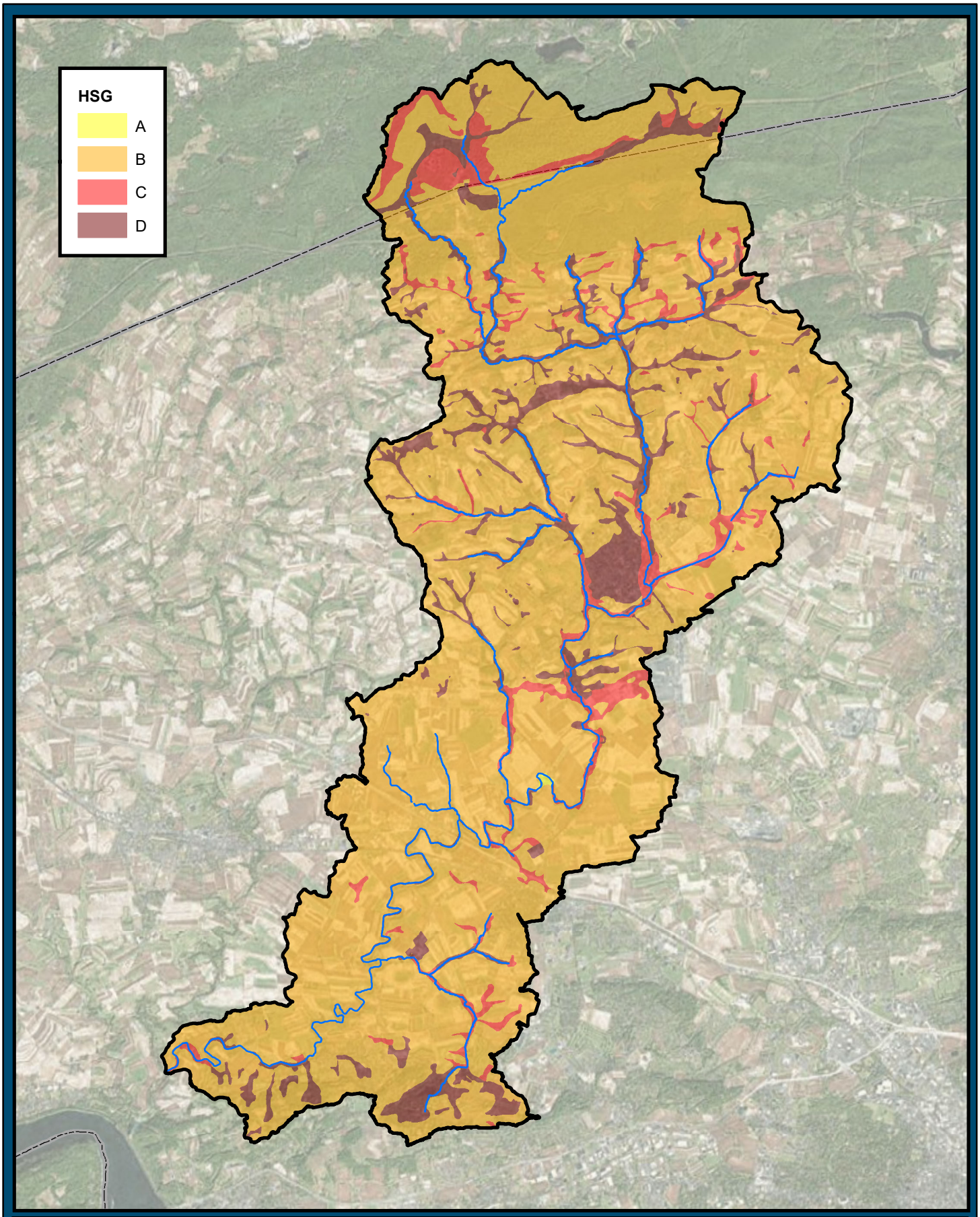
The SCS Curve Number Loss Method was chosen for the HEC-HMS basin models. Runoff Curve Numbers were developed by the NRCS in programs such as TR-55 and Technical Release 20 (TR-20), and are used in HEC-HMS and other applications to convert mass rainfall into mass runoff. CN is based upon soils, plant cover, the amount of impervious area, interception, and surface storage. CN's generally range from 30 to 98, with 30 having the least amount of runoff and 98 being impervious area, with the most amount of runoff. This method was chosen for this watershed as it is a widely used method in hydrologic modeling throughout the United States and is appropriate for a watershed that is vastly farmland.

A GIS routine was used to union the land use data discussed in Section 3.1 of this report with soil data for the watershed to compute the CN values. In regards to soils, a Hydrologic Soil Group (HSG) classification was developed by the NRCS to indicate the minimum rate of infiltration obtained for bare soil after prolonged wetting. The hydrologic soil groups are named A, B, C, and D, with Group A having low runoff potential and Group D having high runoff potential. Spatial soil data, dated 2016, was obtained from the NRCS to use in this investigation. Figure 4.2 shows the hydrologic soil groups within the Chiques Creek watershed, with the majority of soils in the being classified as Group B soils. Note that within the HEC-HMS basin model the percent imperviousness and initial abstraction were left blank. The impervious area was considered in the CN calculations and the initial abstraction was left blank in order to allow the program to calculate the standard values.

Sub-basins Transform Method

The SCS Unit Hydrograph Method was used as the transform method for the sub-basins in the HEC-HMS basin models. This method requires the input of the SCS lag time, which is defined as 60% of the time of concentration (T_c). Travel time (T_t) is the time it takes water to travel from one location to another in the watershed. T_t is a component of T_c, which is the time for runoff to travel from the most hydrologically remote point in the watershed to the point of interest. T_c is calculated by summing the travel time for consecutive flow components in each sub-basin. Methods outlined in the NRCS TR-55 were used to calculate the T_t and T_c for each sub-basin. Existing topographic mapping, field reconnaissance, and stormwater infrastructure information was used to determine flow paths and hydraulic characteristics of the flow paths.

Lag time is a critical factor in the estimation of peak flows within a watershed, and although lag time is defined as 60% of the T_c, it is often a variable that varies based upon regional factors. The level of confidence in the calculated T_c is relatively high because it is calculated based upon physical factors that can be field measured. The level of confidence in the lag time, however, is not as high when using the standard $0.6T_c$ definition, especially in this relatively smaller watershed. Therefore, for the HEC-HMS model, the T_c was used as the SCS lag time in the SCS Unit Hydrograph Method. The confidence in using the T_c in lieu of the lag time is high during the verification process, discussed in Section 4.4.



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Figure 4.2
Soils in the
Chiques Creek Watershed

0 0.5 1 2 Miles
1 inch = 2 miles

N

Sub-basins Baseflow

Baseflow is the portion of stream flow that comes from the sum of deep subsurface flow and delayed shallow subsurface flow, and in the realm of hydrologic modeling, is the amount of flow in a channel prior to the storm event occurring. For Chiques Creek and its tributaries, this flow amount is negligible and will not impact flood flows. Therefore, baseflow was not included in the HEC-HMS models.

Reaches and Routing

The Muskingum-Cunge Routing Method was used for the HEC-HMS basin models. This method is based on the combination of the conservation of mass and the diffusion representation of the conservation of momentum. It is designed to account for peak flow attenuation within the reaches. The 8-Point method was utilized for all reaches, as cross-sections were developed from the field survey and the project DEM. Aerial photographs and field data were used to assist in determining the Manning's n values for the channel and over bank areas. The cross-sections are stored as paired data within the HEC-HMS model.

Reservoirs

As discussed in Section 3.2, a total of 59 stormwater facilities were included as reservoirs in the basin model. For the majority of these reservoirs, the "outflow structures" method was used, and field survey data were used to model the orifice, riser, and spillway (if present), and dam top. Elevation-area curves for these reservoirs, input as paired data into the model, were developed from the project DEM. For reservoirs that are dry during normal (no rain) conditions, the initial elevation was set to the bottom of the reservoir. For reservoirs that are wet during normal conditions, the initial elevation was set to the top of water elevation from the field survey data.

Ponds 58 and 39 are associated with Doe Run Elementary School, which was under construction at the time of this study. Development plans for this school were obtained from Penn Township and these reservoirs were included in the model as if they were fully constructed, as the construction will be near completion in the near future. Data for the orifice, riser, spillway, and dam top were taken directly from the plans.

All input data into the Chiques Creek basin model is provided in Appendix A of this report. The data includes a table showing the drainage area, CN, and T_c used for each sub-basin, reach data, cross-section paired data, and reservoir input data.

4.2 METEOROLOGICAL MODEL

The Frequency Storm method was used as the meteorological model for the HEC-HMS model. This method is designed to produce a synthetic storm from statistical precipitation data to compute a hyetograph for each sub-basin. For this investigation, precipitation data

was taken from the NOAA Atlas 14, Volume 2, Version 3, at the latitude and longitude of the watershed (Table 4.2).

Table 4.2: Precipitation Data

Duration	*Recurrence Interval (years)*							
	2	*5*	*10*	*25*	*50*	*100*	*200*	*500*
1-hr	1.35	1.68	1.93	2.25	2.49	2.74	2.98	3.30
2-hr	1.59	2.01	2.34	2.80	3.17	3.56	3.97	4.55
3-hr	1.74	2.19	2.55	3.05	3.46	3.89	4.33	4.96
6-hr	2.15	2.70	3.16	3.82	4.37	4.97	5.61	6.55
12-hr	2.62	3.32	3.91	4.80	5.55	6.39	7.32	8.71
24-hr	3.03	3.85	4.56	5.63	6.56	7.59	8.74	10.5

4.3 CONTROL SPECIFICATIONS

A duration of 24-hours and a 1-minute time step was used for the HEC-HMS models. A 1-minute time step was chosen due to the small times of concentration within the watershed. A 1-minute time step is necessary in order to allow the program to perform computations within the limits established. The date was set randomly as 01Jan2017. The actual duration was set 36 hours to allow ample time for the watershed to respond to the 24-hour storm.

4.4 CALIBRATION AND VERIFICATION

Calibration is the adjustment of the basin model to replicate conditions during storm events with known historical data (i.e. stream flow and precipitation data). Verification is the determination that the model is accurate for the range of storm events to be modeled in the study. Both calibration and verification involve the input of known stream flow and precipitation data for various storms throughout a time period representative of current watershed conditions. There are no stream flow gages located in the Chiques Creek watershed. There is one stage gage located at Hamaker Road and several precipitation gages in or near the Chiques Creek watershed (Figure 4.3) that are operated by LCEMA through their StormNet program. There is also a camera at Elizabethtown Road operated by SRBC. Because there is no stream flow gage to measure the flow of floodwaters and compare it to the modeling results, direct calibration of the HEC-HMS model could not be performed. However, precipitation and stage data was collected from LCEMA for several more frequency, smaller flood events in order to verify the model is at a minimum simulating the timing of the peak at the Hamaker Road stage gage correctly. The Hamaker Road stage gage is located on reach CHC23.04_CHC22.01 in the HEC-HMS basin model, and the precipitation data was entered into the HEC-HMS as a "specified hyetograph" for all historical storms.

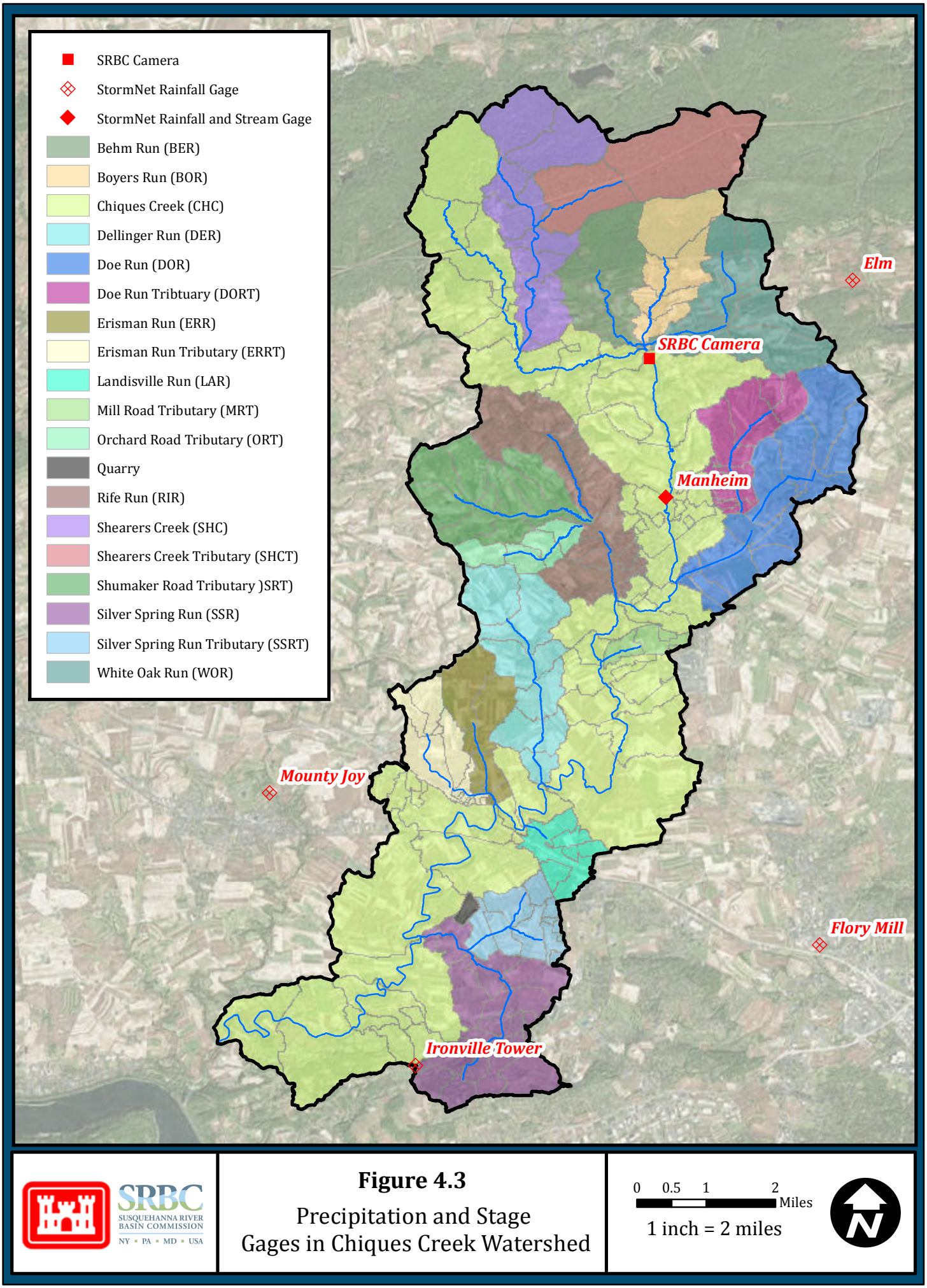


Figure 4.3

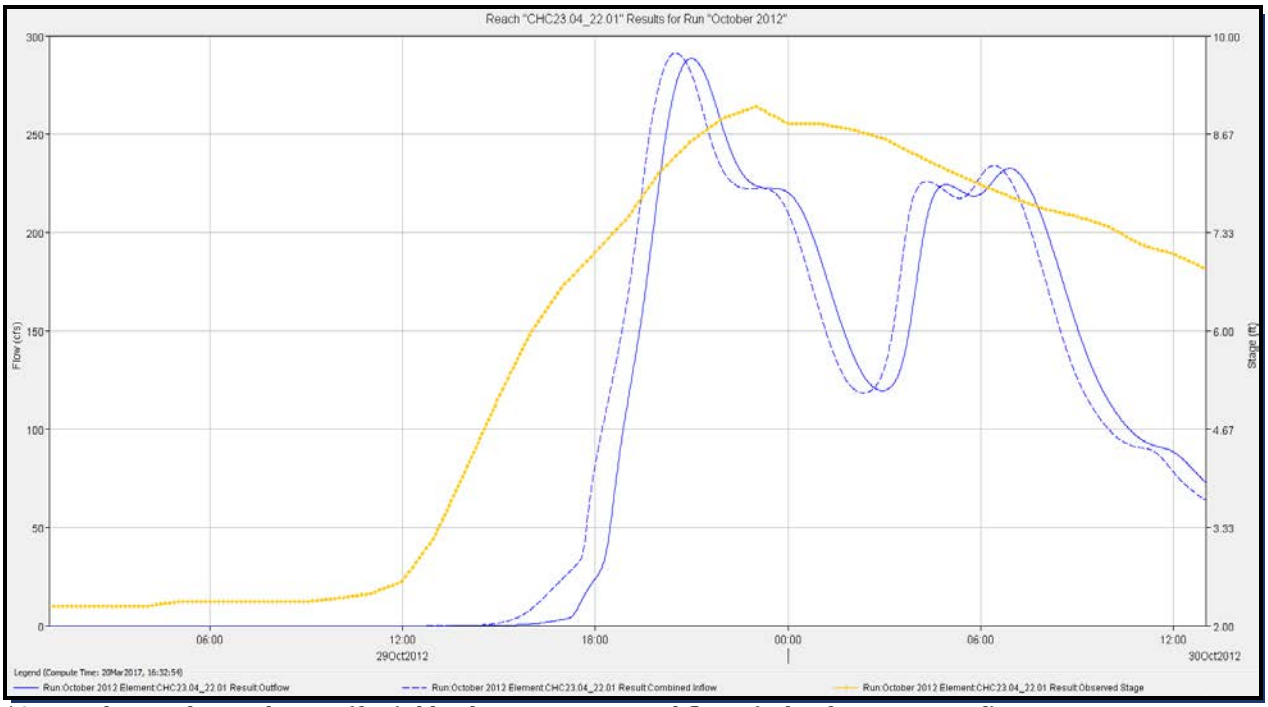
Precipitation and Stage Gages in Chiques Creek Watershed

Verification-More Frequent, Smaller Flood Events

Several historical storms were included in the HEC-HMS model, but only the October 2012, August 2015, and September 2015 had sufficient precipitation and stage data to adequately verify the results of the HEC-HMS model.

The October 2012 storm occurred over a 36 hour period between October 29-30, 2012. Only the Mount Joy and Ironville Gages recorded data during this event, as the Mount Joy gage recorded a total of 2.4 inches of rain and the Ironville gage recorded 2.0 inches of rain over the 36 hour period. The precipitation gage data was assigned to the appropriate HEC-HMS sub-basins and the model was run. The results showed that the peak of the stage at Hamaker Road corresponds well with the peak of the flow from the HEC-HMS model (Figure 4.4).

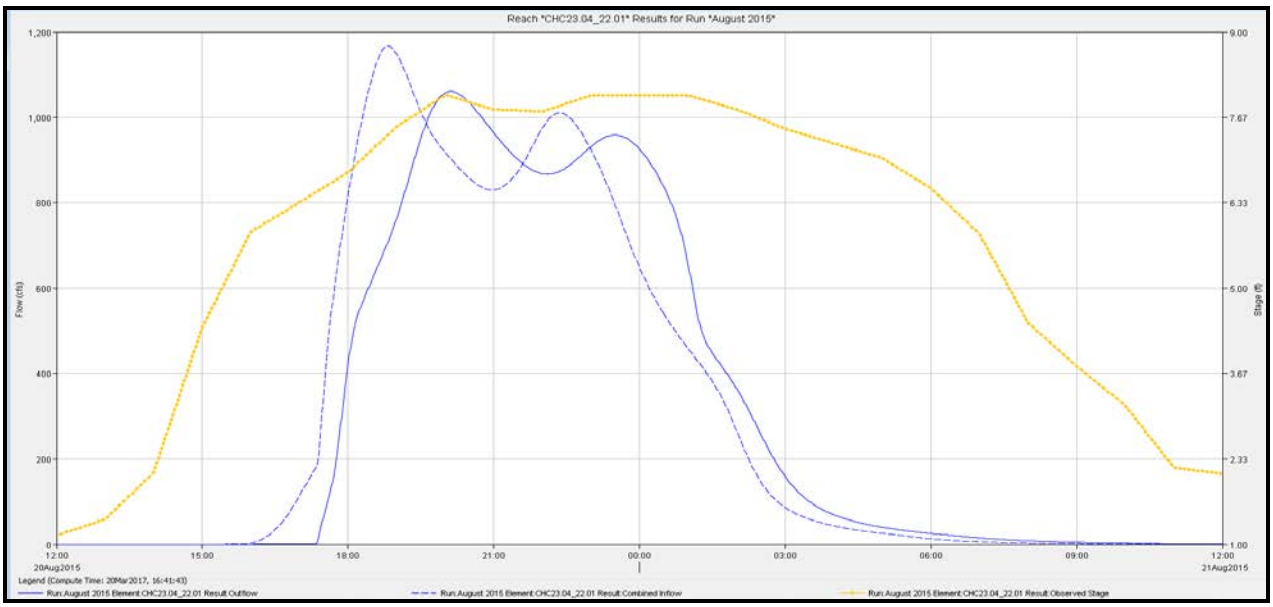
Figure 4.4: Verification of October 2012 Storm



**Orange line is observed stage (feet), blue lines are computed flows (cubic feet per second)*

The August 2015 storm occurred over a 24 hour period between August 20-21, 2015. For the duration of the storm, the Mount Joy precipitation gage recorded 4.5 inches of rain, the Manheim precipitation gage recorded 2.9 inches of rain, and the Ironville precipitation gage recorded only 0.8 inches of rain. The precipitation gage data was assigned to the appropriate HEC-HMS sub-basins and the model was run. The results showed that the peak of the stage at Hamaker Road corresponds well with the peak of the flow from the HEC-HMS model (Figure 4.5).

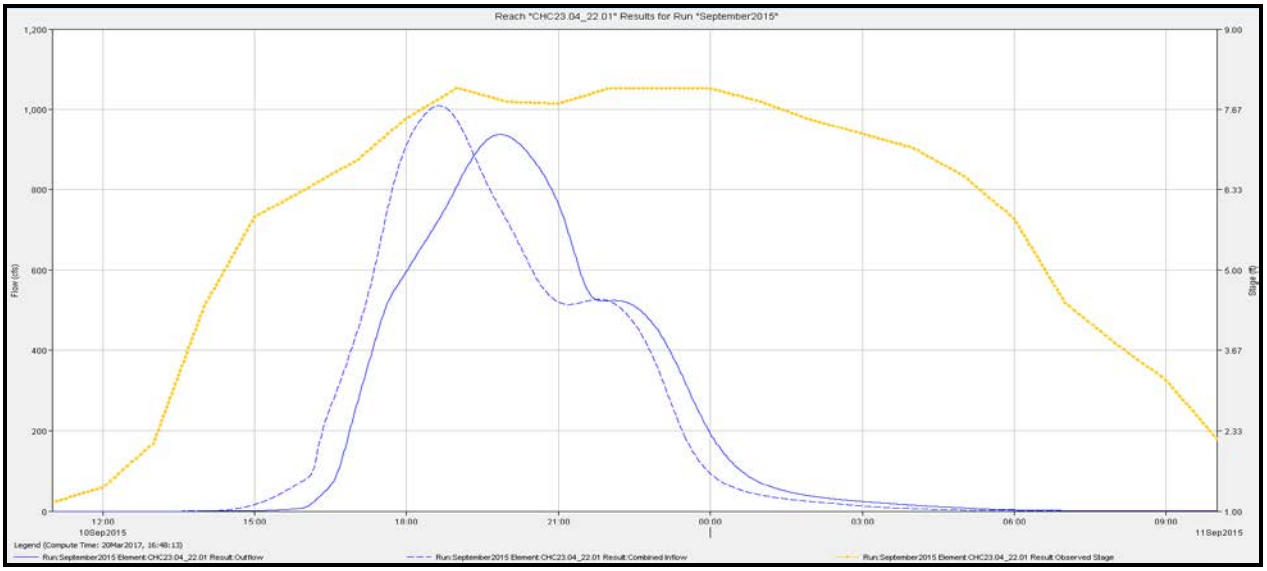
Figure 4.5: Verification of August 2015 Storm



**Orange line is observed stage (feet), blue lines are computed flows (cubic feet per second)*

The September 2015 storm occurred between September 10-11, 2015. For the duration of 24-hour storm, the Mount Joy precipitation gage recorded 1.5 inches of rain, the Manheim precipitation gage recorded 2.5 inches of rain, and the Ironville precipitation gage recorded 2.2 inches of rain. The precipitation gage data was assigned to the appropriate HEC-HMS sub-basins and the model was run. The results showed that the peak of the stage at Hamaker Road corresponds well with the peak of the flow from the HEC-HMS model (Figure 4.6).

Figure 4.6: Verification of September 2015 Storm



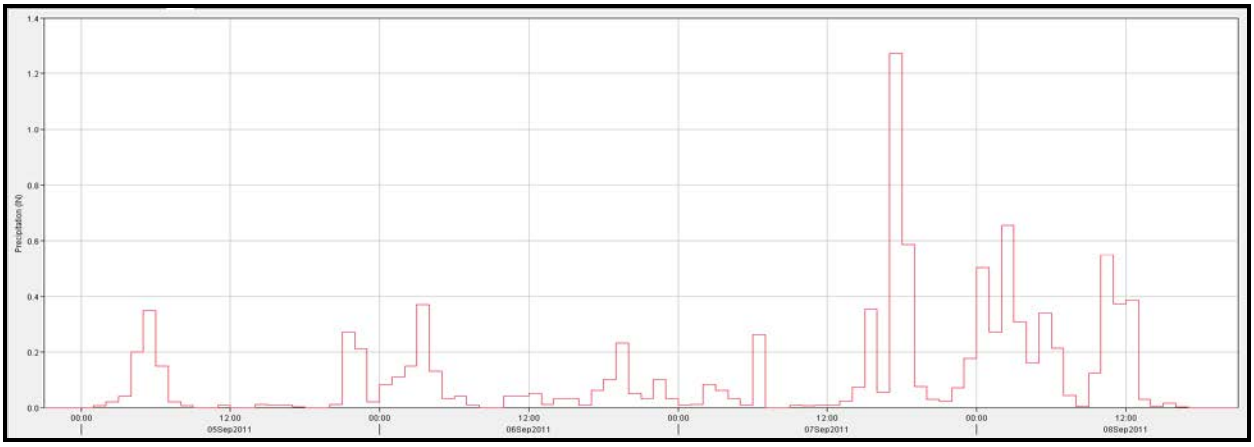
**Orange line is observed stage (feet), blue lines are computed flows (cubic feet per second)*

Based upon the comparison between the stage data at Hamaker Road and the computed peak flows from HEC-HMS, the model computes the timing of the peaks sufficiently, at least for these smaller, less frequent events. This validates the use of T_c in lieu of the SCS lag time in the SCS Unit Hydrograph Method, discussed above.

Verification-September 2011 Lee Event

For the September 2011 Lee storm event, the Hamaker Road stage gage was not operating, and, reliable precipitation data from StormNet was not available. To model the September 2011 Lee event, radar-based rainfall data for this event was obtained from the NWS. The radar-based data was in grid format, and 14 grids covered the Chiques Creek watershed. A specified hyetograph (Figure 4.7) was developed for each grid using the rainfall data.

Figure 4.7: Specified Hyetograph for September 2011 Storm-Area 11



Each sub-basin in the HEC-HMS basin model was assigned a hyetograph (Figure 4.8). The September 2011 storm was modeled with control specifications that started at 21:00 on 4 September 2011 and continued until 21:00 on 9 September 2011. A 1 minute time step was used. The system dumped an average of 11 inches of rainfall over a 4-day period on the watershed, with the most intense rainfall occurring in the evening of September 7, 2011.

The flows computed from this model run were later input into the hydraulic model to assure the model was estimating the September 2011 storm adequately, which it is based upon high water mark data (discussed is Section 5.2), as no other flow or stage data was available for this event. Computed peak flows for the September 2011-Lee storm is shown at select locations in the watershed in Table 4.3, with an example flood hydrograph at the Chiques Creek-Rife Run confluence (Flow Point CHC19.32) shown in Figure 4.9, which shows the peak of Rife Run occurring a few hours prior to the peak of Chiques Creek. Full results for the September 2011 event and all other storms are located in Appendix B.

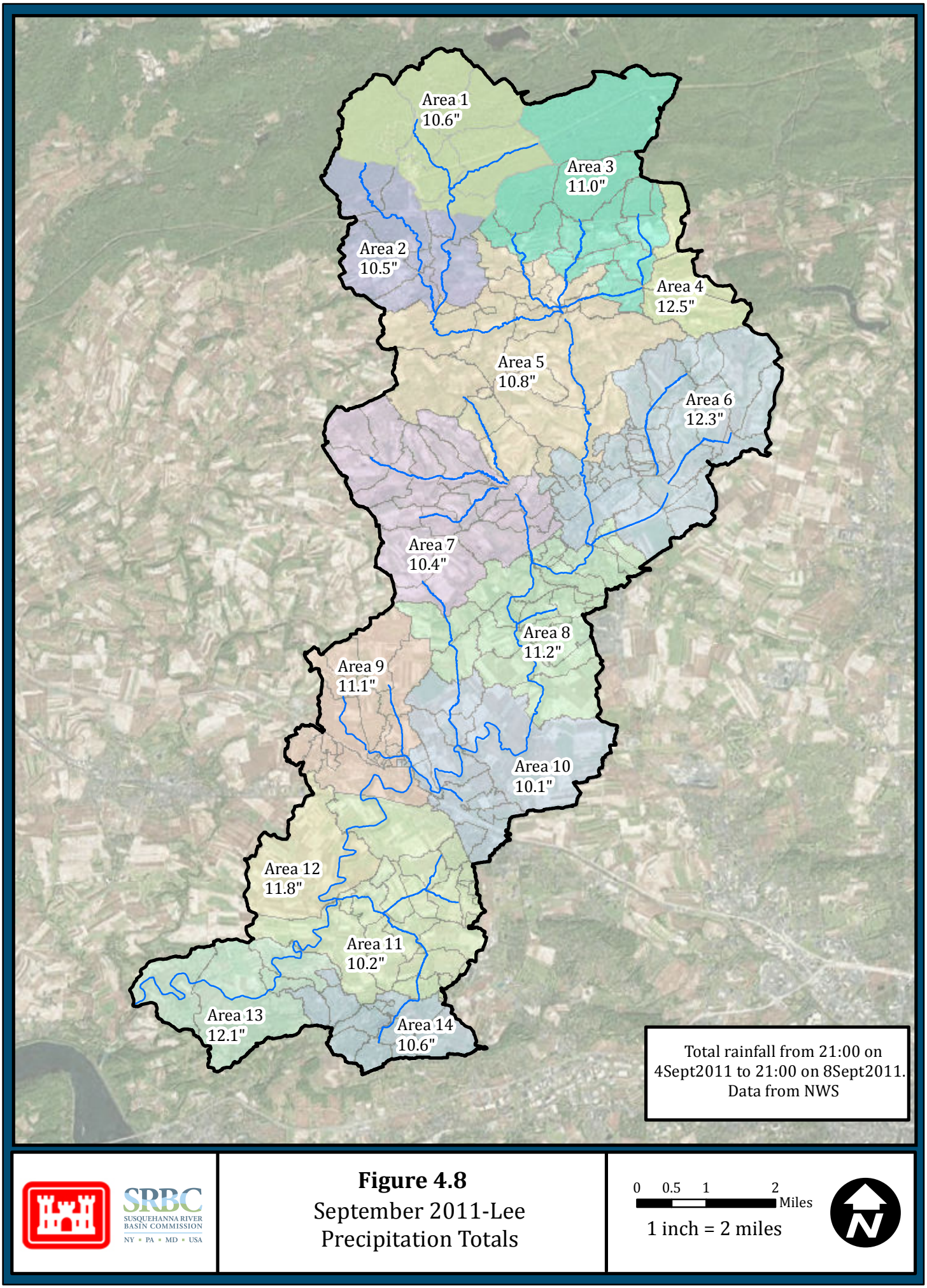
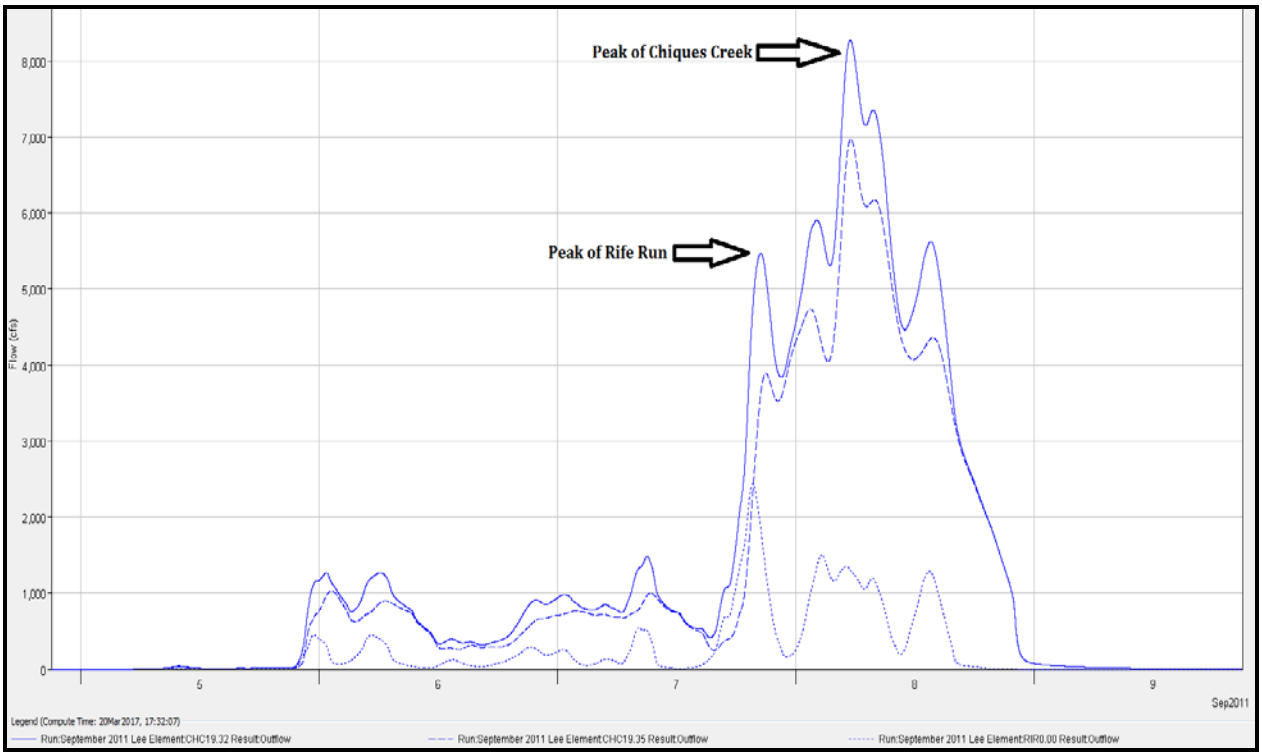


Figure 4.8
September 2011-Lee
Precipitation Totals

Table 4.3: Peak Flow HEC-HMS Results for September 2011-Lee Storm

Flow Point	*Location*	*Drainage Area (sq. mi.)*	*Sept 2011-Lee Computed Flow (cfs)*
CHC26.30	At Lebanon Road	10.8	2,921
CHC20.57	Upstream of confluence of Doe Run	23.3	5,193
CHC19.32	Downstream of confluence of Rife Run	36.1	8,722
CHC3.39	At Kinderhook Road	62.5	10,642

Figure 4.9: Hydrograph (September 2011 Event) at Flow Point CHC19.32



4.5 EXISTING-CONDITIONS RESULTS

With the verification process confirming that the HEC-HMS model adequately simulates watershed response to rainfall for historical events, synthetic storms were run in the HEC-HMS model with confidence. Peak flows for the eight storm events shown in Table 4.1 and were calculated using HEC-HMS. As full summary of results for the HEC-HMS model is located in Appendix C. Table 4.4 provides abbreviated results at select locations in the Chiques Creek watershed.

Table 4.4: Existing-Conditions HEC-HMS Results

Flow Point	Stream	Location	Existing-Conditions Computed Peak Flow (cfs)								
			Drainage Area (sq. mi.)	2-year	5-year	10-year	25-year	50-year	100-year	200-year	500-year
CHC29.91	Chiques Creek	At PA Turnpike	1.7	146	276	401	603	808	1,039	1,291	1,659
CHC27.39	Chiques Creek	US of confluence of Shearers Creek	3.5	304	535	733	1,097	1,389	1,758	2,200	2,838
CHC27.38	Chiques Creek	DS of confluence of Shearers Creek	10.0	707	1,366	2,084	3,368	4,494	5,685	7,039	9,127
CHC26.30	Chiques Creek	At Lebanon Road	10.8	637	1,339	1,996	3,130	4,160	5,332	6,657	8,657
CHC24.64	Chiques Creek	US of confluence of Boyers Run	11.8	596	1,184	1,773	2,770	3,671	4,726	5,925	7,769
CHC24.53	Chiques Creek	At Elizabethtown Road	18.4	929	1,580	2,256	3,584	4,753	6,136	7,771	10,395
CHC22.01	Chiques Creek	At Hamaker Road	21.8	1,034	1,766	2,353	3,783	5,066	6,619	8,485	11,517
CHC20.57	Chiques Creek	US of confluence of Doe Run	23.3	1,018	1,729	2,365	3,802	5,107	6,679	8,536	11,498
CHC20.55	Chiques Creek	DS of confluence of Doe Run	28.8	1,292	2,108	2,889	4,267	5,771	7,575	9,710	13,115
CHC19.35	Chiques Creek	US of confluence of Rife Run	29.6	1,294	2,040	2,738	4,290	5,792	7,580	9,685	13,049
CHC19.32	Chiques Creek	DS of confuence of Rife Run	36.1	2,118	3,388	4,469	6,413	8,141	10,152	12,449	15,965
CHC16.25	Chiques Creek	At Colebrook Road	39.4	1,889	3,068	4,103	5,955	7,606	9,515	11,713	15,191
CHC9.40	Chiques Creek	At Newcomer Road	51.4	2,024	3,206	4,291	6,265	8,072	10,258	12,887	17,211
CHC4.62	Chiques Creek	At Bridge Valley Road	60.7	2,123	3,366	4,517	6,673	8,677	11,075	13,912	18,549
CHC1.28	Chiques Creek	US of confluence of Little Chiques Creek	63.4	2,024	3,184	4,259	6,315	8,257	10,588	13,326	17,752
CHC0.00	Chiques Creek	At confluence with Susquehanna River*	126.0	4,140	6,540	8,420	11,300	13,400	15,900	18,200	22,600
BER0.00	Behm Run	At confluence with Boyers Run	1.9	191	331	501	796	993	1,209	1,500	1,937
BOR0.00	Boyers Run	At confluence with Chiques Creek	6.6	703	1,303	1,910	2,969	3,816	4,748	5,785	7,297
DER0.00	Dellinger Run	At confluence with Chiques Creek	2.9	411	714	980	1,434	1,808	2,214	2,643	3,272
DOR0.00	Doe Run	At confluence with Chiques Creek	5.5	770	1,272	1,729	2,526	3,223	4,003	4,936	6,239
DORT0.34	Doe Run Trib	At Doe Run Road	1.7	337	553	717	980	1,205	1,538	1,872	2,320
ERR0.00	Erisman Run	At confluence with Chiques Creek	2.7	559	988	1,307	1,806	2,188	2,595	3,016	3,598
ERRT0.00	Erisman Run Trib	At confluence with Erisman Run	1.3	290	512	669	915	1,100	1,297	1,498	1,768
ORT0.28	Orchard Road Trib	At Old Line Road	0.8	191	304	400	571	717	864	1,010	1,213
RIR1.62	Rife Run	At Hernley Road	1.9	307	543	755	1,110	1,392	1,695	2,014	2,458
RIR0.00	Rife Run	At confluence with Chiques Creek	6.6	903	1,611	2,278	3,453	4,408	5,427	6,491	8,001
SHC0.00	Shearers Creek	At confluence with Chiques Creek	6.5	466	939	1,440	2,379	3,178	4,005	4,952	6,345
SHCT0.00	Shearers Creek Trib	At confluence with Shearers Creek	3.1	242	551	838	1,359	1,792	2,270	2,775	3,493
SRT0.50	Shumaker Road Trib	At Hernley Road	2.7	506	901	1,225	1,757	2,177	2,633	3,099	3,746
SSR2.70	Silver Spring Run	At Marietta Avenue	1.7	258	429	569	801	976	1,143	1,292	1,539
SSR0.00	Silver Spring Run	At confluence with Chiques Creek	4.8	790	1,331	1,835	2,702	3,395	4,134	4,879	5,893
SSRT0.46	Silver Spring Run Trib	At Eby Chiques Road	1.1	268	441	571	788	969	1,194	1,406	1,758
WOR0.00	White Oak Run	At confluence with Boyers Run	2.9	385	709	1,002	1,513	1,932	2,383	2,856	3,523

**Value computed using USGS Regression Equations via StreamStats program.*

Peak flow data for the 10-, 50-, 100-, and 500-year flood events were obtained from the effective FIS for Lancaster County for a few locations in Chiques Creek watershed. A comparison was made between the results of the HEC-HMS model with the results of the FEMA FIS, which was computed using the TR-20 rainfall-runoff model in 1978 and a USACE flood frequency procedure dated 1972. The results of the HEC-HMS model were also compared to an analysis completed using USGS regression equations via the StreamStats program at the same locations. The results of this comparison are shown in Table 4.5.

Table 4.5: Comparison between HEC-HMS Results and Other Methods

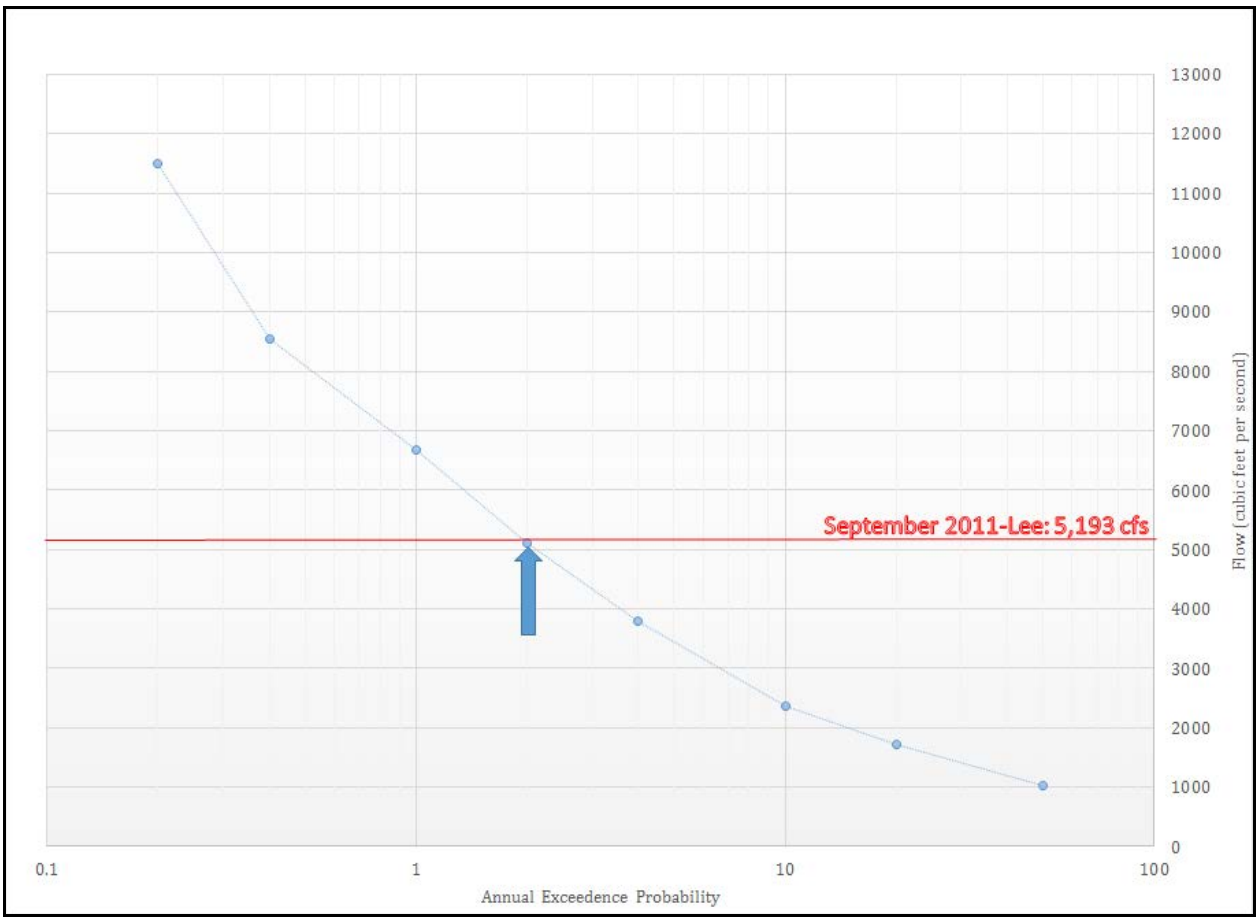
Flow Point	Location	Drainage Area (sq. mi.)	Computed Peak Flows (cubic feet per second)											
			10-year			50-year			100-year			500-year		
			Effective FEMA	2017 USGS Regression	2017 USACE HEC-HMS	Effective FEMA	2017 USGS Regression	2017 USACE HEC-HMS	Effective FEMA	2017 USGS Regression	2017 USACE HEC-HMS	Effective FEMA	2017 USGS Regression	2017 USACE HEC-HMS
CHC26.30	At Lebanon Road	10.8	950	2200	1996	1920	3930	4160	2510	4850	5332	4090	7500	8657
CHC20.57	Upstream of confluence of Doe Run	23.3	2420	3540	2365	4750	6140	5107	6032	7490	6679	9480	11300	11498
CHC19.32	Downstream of confluence of Rife Run	36.1	4349	4530	4469	8246	7700	8141	10524	9330	10152	16216	13900	15965
CHC3.39	At Kinderhook Road	62.5	5410	5380	4253	10130	8700	8227	13310	10400	10547	21820	15000	17672

As seen on Table 4.5, the results of the HEC-HMS model compare well with the results using the USGS regression equations. There is no more than approximately a 10-percent difference between the results of the HEC-HMS model and the USGS regression equations. The results of the HEC-HMS model compared to the effective FEMA FIS values are also comparable, especially in areas where the TR-20 model was used in the effective FEMA FIS, such as Flow Points CHC20.57 and CHC19.32. At the other two flow points, there is less of an agreement due to the fact that the effective FIS used different methodology.

After running the HEC-HMS model with the eight synthetic flows, frequency curves can be developed for any point in the watershed. Using these frequency curves, the approximate frequency of the September 2011-Lee storm can be determined, which varies in different parts of the watershed. At Flow Point CHC20.57, which is just upstream of the confluence of Doe Run in Manheim Borough, the September 2011-Lee event was approximately a 2-percent (50-year) annual chance storm (Figure4.10). Further upstream in the watershed, at Lebanon Road (Flow Point CHC26.30), the September 2011-Lee storm was between a 10-percent (10-year) annual chance storm and 4-percent (25-year) annual chance storm, and further downstream in the watershed, at Kinderhook Road (Flow Point CHC3.39), Lee was approximately a 1-percent annual (100-year)chance storm.

The "1-percent plus" flood discharge was determined using the results of the HEC-HMS model. Per FEMA's *Standard for Flood Risk Analysis and Mapping #84* (FEMA, undated) the 1-percent plus flood elevation is defined as the flood elevation derived by using discharges that include the average predictive error for the analysis. This error is added to the existing-conditions 1-percent flood discharge to determine the 1-percent plus flood discharge.

Figure 4.10: Flow Frequency Curve Upstream of Doe Run (Flow Point CHC20.57)



Per FEMA guidance, for rainfall-runoff models, an analytical approach using the 50-, 10-, and 1- percent annual chance flood discharges from the HEC-HMS model, equations from Water Resources Council (WRC) Bulletin 17B, and equivalent year of record determination per guidance in USACE Engineering Manual (EM) 1110-2-1619 was used to estimate the upper 84-percent confidence limit of the HEC-HMS results.

Using WRC Bulletin 17B and averaging the results of all flow points in the Chiques Creek watershed, a mean of 3.078, a standard deviation of .2640 standard deviation, and a generalized skew of .9251 was determined. Using tables in EM 110-2-1619, the equivalent period of record for the HEC-HMS model was determined to be 30-years based upon the high confidence in the verification of the model to historical storms. The variables were used to determine the upper 84-percent confidence limit for each flow point and this value was used for the 1-percent plus discharge, which is shown in the full summary of results located in Appendix C.

5 HYDRAULIC ANALYSIS

The USACE HEC-RAS (River Analysis System), version 5.0.3, was used to develop geo-referenced hydraulic models for Chiques Creek and its tributaries, calculate flood elevations for the existing-conditions 2-, 5-, 10-, 25-, 50-, 100-, 200- and 500-year flood events, and complete a 100-year floodway encroachment analysis for select reaches of Chiques Creek and Rife Run. HEC-RAS is software that performs one-dimensional steady and unsteady state river flow hydraulic calculations. It is an integrated system of software designed for interactive use for a multi-tasking environment. The system is comprised of a graphical user interface, separate analysis components, data storage and management capabilities, graphics and reporting facilities (USACE 2016). It is widely used and is an approved model for use in FEMA FIS's and floodplain mapping. The HEC-GeoRAS pre- and post-processor utilities were used to assist in the development of cross-sections and the mapping of the floodplain. All elevations in the modeling and mapping are referenced to the NAVD88 vertical datum and the Pennsylvania State Plane Feet South horizontal datum.

All hydraulic modeling was completed to comply with FEMA's guidance documents and standards. This was done in the event that the floodplain mapping completed in this investigation were to be submitted to FEMA by SRBC or any of the local municipalities for a change to the effective FIRMs. The modeling completed in this study uses more up-to date data as the effective FEMA studies and better estimates the flood elevations and floodplain boundaries for Chiques Creek and its tributaries.

5.1 EXISTING-CONDITIONS HEC-RAS MODEL

An Existing-Conditions HEC-RAS model was developed to determine flood elevations along Chiques Creek and its tributaries at the time of this study and to be used as a baseline to determine the impacts of flood resiliency alternatives developed in this investigation. Peak flow data from the HEC-HMS model were input into HEC-RAS, and a steady state computation was completed for each flooding source.

Topographic Data

The HEC-GeoRAS pre-processor, using the project DEM described in Section 1.6, was used to develop cross-sections for this study. The overbank portions of the cross-sections are from the DEM. The "wet sections" of the cross-sections were input based upon the channel field survey data described in Section 2 of this report. For intermediate cross-sections between surveyed sections, the channel dimensions were interpolated. The source of channel data for each cross-section is listed in the description box in the geometric data editor, along with any correlation between effective FEMA cross-sections.

The HEC-RAS model has cross-sections that have river stations generated by the HEC-GeoRAS program. The station identifier for all watercourses is the stream distance in feet upstream of the confluence with the receiving watercourse. For Chiques Creek, the receiving watercourse is the Susquehanna River. For Doe Run and Rife Run, the receiving watercourse in Chiques Creek.

Road Crossings

Data for road crossings (and weirs) were obtained from the field survey described in Section 2.0 of this report or from as-built plans provided by PENNDOT or PTC. The field team noted sizes, shapes and materials, as well as obtain inverts or top of culverts, low chord, high chord, top or road, and other required spot elevations using RTK GPS technology. The source of data for each road crossing is listed in the description box in the geometric data editor. A list of road crossings included in the HEC-RAS models is located in Appendix D.

Manning's Roughness Values

Roughness factors (Manning's "n") were chosen based upon engineering judgment, land use, aerial photography, and field observation. An n value of .150-.200 is considered high due to heavy obstructions such as large trees or for buildings, where an n value of .013 is considered low and is used for paved surfaces such as roads and parking lots. For Chiques Creek, base channel n values range from .040-.045 in the channel for the majority of the studied reach. The values were adjusted slightly up in some locations during the calibration process, discussed below. In upstream heavily wooded areas, channel n values range from .055-.060.

For tributaries, channel n values ranged from .038-.045 for the majority of the reaches, with higher values again used in upstream heavily wooded areas. Overbank n values for all flooding sources ranged from .013-.200.

Ineffective Flow Areas and Obstructions

Ineffective flow areas were set appropriately at bridges and other areas where flood flow would not be effective. Obstructions in the model represent buildings that would occupy storage space for floodwaters.

Contraction/Expansion Coefficients

Contraction/expansion values for the cross-sections at bridges were set at the FEMA recommended values of .3 and .5, respectively. All other cross-sections were assigned contraction/expansion coefficients of .1 and .3, respect

Reach Boundary Conditions

Normal depth was used as the downstream reach boundary condition for the HEC-RAS model for all watercourses. A normal depth slope was input into the HEC-RAS model based upon the developed channel profile. Using the time of peak data from the HEC-HMS model, a sensitivity analysis was performed using HEC-RAS, setting the downstream boundary condition at the upper reach tributaries to a known water surface elevation that corresponds to the flow from the Chiques Creek model. The results show that there is no difference in results using a known water surface elevation versus normal depth.

Therefore, normal depth was kept as the downstream boundary condition for all HEC-RAS modeling completed in this investigation.

Floodway Encroachment Analysis

A floodway encroachment analysis is required if the data developed in this investigation were to be submitted to FEMA for a map change. The regulatory floodway is defined as the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to convey the 100-year flood without cumulatively increasing the water-surface elevation by more than a designated height (surcharge). The NFIP standard surcharge of 1-ft has been adopted in Pennsylvania. HEC-RAS was used to complete the floodway encroachment analysis. Method 4 in HEC-RAS was initially used to specify a target water-surface increase, which is 1-ft. Method 1 was then employed to further refine the floodway encroachment stations. The floodway encroachment analysis would only be required by FEMA for reaches that have a floodway mapped currently on the effective FEMA FIRMs (although for Chiques Creek the floodway encroachment analysis was run for the entire length in HEC-RAS). For Chiques Creek, the reaches are XS 7132-60, XS 33479-19201, XS 5737-51346, XS 112299-104871, and XS 145949-137552. For Rife Run, the reach with floodways is XS 825-8478.

Modeling Notes

Special circumstances arise during HEC-RAS modeling that should be documented for future users of the model. A list of stream specific modeling notes for the HEC-RAS modeling is located in Appendix E.

5.2 CALIBRATION AND VERIFICATION

Calibration and verification in HEC-RAS modeling involves the input of a rating curve for a stream gage or high water marks (HWM) for a particular flood event to assure the hydraulic variables input into the model lead to accurate results. There are no stream flow gages located in the Chiques Creek watershed; however, a map showing the extent of the flooding from Chiques Creek during the September 2011 Lee event was provided by LCEMA. According the LCEMA, this map was created by walking the damage line immediately following the event. In addition to the LCEMA data, research was conducted by USACE to obtain photographs posted on-line during and after the September 2011-Lee event, and these photographs were used to determine debris lines to survey HWM for the calibration of the HEC-RAS model (Figure 5.1). This included photography from the SRBC camera located at Elizabethtown Road.

Figure 5.1: Surveyed HWM for September 2011-Lee Flood







Figure 5.1: Surveyed HWM for September 2011-Lee Flood (Continued)



The peak flows for the September 2011-Lee storm were input into the HEC-RAS model to simulate the event and compare to the Lancaster EMA data and surveyed HWM. For the "ChiquesCreek_Calibration" geometry file in the HEC-RAS model, the geometry differs slightly between XS 107673-108384. During the September 2011-Lee flood event, this portion of the channel had 3-5 feet of additional sediment than is existing today because after the event, PENNDOT removed this sediment to improve conveyance. Based upon a comparison of the September 2011-Lee flood using the calibration geometry versus the existing-conditions geometry, this removal of sediment would have had a minimal impact if Lee were to occur today (less than 0.2 ft.). This is due to the fact that Lee was such a larger event. This sediment removal likely has a greater impact for smaller, more frequent storms. Therefore, the September 2011-Lee flows were also input into the "ChiquesCreek_ExistingConditions" plan file.

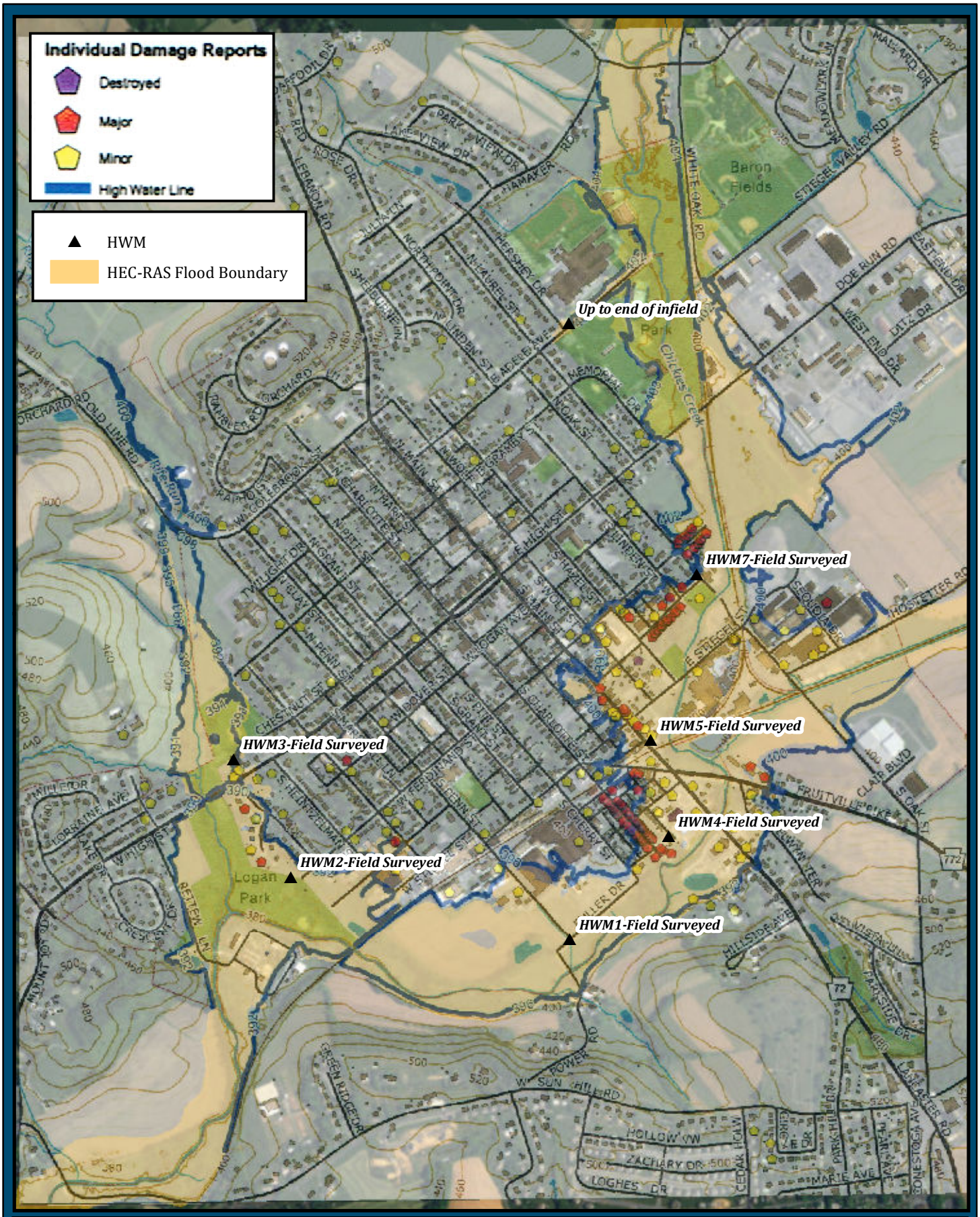
Initial runs of the September 2011-Lee flood event showed favorable results, with minimal alteration to base input variables to achieve calibration within a reasonable tolerance. Manning's n values were increased slightly (.043 to .045) for the reach through Manheim Borough and ineffective flows were adjusted accordingly for the significant area of contraction and expansion of floodwaters from the railroad bridge at Station 103385. This minimal changes to hydraulic variables also confirms the flows computed by HEC-HMS for this event are accurate. Table 5.1 shows the calibration results to the September 2011-Lee flood event.

Table 5.1: Calibration Results for September 2011-Lee Flood

HEC-RAS XS	*Flow (cfs)*	*Observed Flood Elevation (ft. NAVD88)*	*Computed Flood Elevation (feet NAVD88)*	*Difference (ft.)*
129520	5082	430.5	430.3	-0.2
113946	5254	403.7	403.8	0.1
110553	5193	398.7	398.6	-0.1
109141	5193	398.5	398.2	-0.3
107475	7292	396.3	396.2	-0.2
105859	7044	395.0	394.7	-0.3
102751	7044	392.3	392.1	-0.2
95546	8138	380.7	380.7	0.0
90026	8227	373.9	373.9	0.0

Flood mapping of the September 2011-Lee flood was also developed in order to compare the results of the modeling to the LCEMA damage map. The floodplain boundary of the September 2011-Lee flood event generated from the HEC-RAS model is shown on Figure 5.2, along with the LCEMA damage map (only Manheim Borough area shown). The floodplain mapping corresponds well with the LCEMA damage map. The mapping for areas outside of Manheim Borough was reviewed by the local municipalities and they confirmed that the HEC-RAS modeling/mapping does depict the flooding that occurred in September 2011.

Calibration of the HEC-RAS model to the smaller, more frequent flood events was not completed due to lack of data. There are no HWM or any historical data available for these storms other than on-line photographs, that do not specify a date or time the flooding occurred.



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Figure 5.2

September 2011-Lee Floodplain Mapping in Manheim Borough

5.3 EXISTING-CONDITIONS RESULTS

The peak flows computed using HEC-HMS for the eight frequencies and the 1-percent plus flood event were input into the HEC-RAS model to compute existing-conditions flood elevations for Chiques Creek and its tributaries. The plans were run in a sub-critical flow regime. Floodway data tables for Chiques Creek and Rife Run are provided in Appendix F. Flood profiles for Chiques Creek and all its tributaries are located in Appendix G. Detailed HEC-RAS output tables for Chiques Creek and its tributaries are located in Appendix H.

The HEC-RAS plan files were input into the CHECKRAS program to identify any deficiencies within the model. CHECKRAS is a program developed by FEMA to check the reasonableness of data from the HEC-RAS files. CHECKRAS reviews the HEC-RAS data to assure (1) the hydraulic estimates and assumptions made in the model appear to be justified; (2) the data is in accordance with FEMA requirements; and (3) the data is compatible with the assumptions and limitations of the HEC-RAS program. CHECKRAS report printouts for this study area located on the attached project disc.

The modeling completed in this study uses more up-to date data as the effective FEMA studies and better estimates the flood elevations for Chiques Creek and its tributaries. A comparison of 1-percent annual (100-year) chance flood elevations (or base flood elevations (BFEs) from the effective FEMA study and this revised study are shown in Table 5.2 for Chiques Creek and Rife Run.

Table 5.2: Comparison of Effective FEMA vs. Revised Study BFEs

HEC-RAS XS	*FEMA Lettered XS*	*Effective FEMA BFE (ft. NAVD88)*	*Revised BFE (ft. NAVD88)*	*Difference (ft.)*
Chiques Creek				
144197	BP	446.7	450.3	3.6
143365	BO	445.7	449.3	3.6
142662	BN	442.4	448.4	6.0
140990	BM	440.8	445.3	4.5
139930	BL	440.2	444.0	3.8
138937	BK	440.0	443.7	3.7
138644	BJ	438.2	440.5	2.3
138163	BI	437.9	440.2	2.3
137910	BH	437.7	439.9	2.2
111765	BG	400.4	401.9	1.5
110316	BF	399.8	399.2	-0.6
109740	BE	399.5	399.1	-0.4
109060	BD	399.1	398.9	-0.2
108231	BC	397.9	397.1	-0.8
107871	BB	397.0	396.8	-0.2
106849	BA	396.1	395.8	-0.3

Table 5.2: Comparison of Effective FEMA vs. Revised Study BFEs (Continued)

HEC-RAS XS	*FEMA Lettered XS*	*Effective FEMA BFE (ft. NAVD88)*	*Revised BFE (ft. NAVD88)*	*Difference (ft.)*
Chiques Creek				
105859	AZ	396.0	395.4	-0.6
105669	AY	396.0	395.4	-0.6
104871	AX	396.0	395.1	-0.9
85737	AW	369.2	369.8	0.6
83678	AV	367.6	368.1	0.5
81362	AU	364.8	365.1	0.3
78613	AT	362.7	362.0	-0.7
75873	AS	360.4	358.9	-1.5
72364	AR	354.7	354.8	0.1
70645	AQ	351.7	353.3	1.6
65279	AP	350.1	348.6	-1.5
62110	AO	349.2	344.3	-4.9
60263	AN	344.2	340.8	-3.4
57310	AM	336.8	335.6	-1.2
56936	AL	335.3	335.1	-0.2
55423	AK	331.4	331.8	0.4
54720	AJ	331.4	331.5	0.1
53776	AI	330.3	330.5	0.2
53049	AH	329.8	329.8	0.0
51846	AG	329.3	328.5	-0.8
51405	AF	327.2	328.0	0.8
33479	AE	307.5	308.0	0.5
32874	AD	307.3	305.5	-1.8
32814	AC	306.8	305.5	-1.3
32599	AB	306.8	304.3	-2.5
31654	AA	306.0	303.3	-2.7
31226	Z	304.8	301.8	-3.0
30237	Y	303.5	300.5	-3.0
28854	X	301.0	298.5	-2.5
26867	W	298.2	294.9	-3.3
24399	V	296.1	293.8	-2.3
20967	T	295.8	291.8	-4.0
19201	S	295.2	290.8	-4.4
6668	R	272.4	267.0	-5.4
6424	Q	269.8	265.9	-3.9
6339	P	269.8	265.3	-4.5
5162	O	269.4	265.0	-4.4
4663	N	269.0	264.8	-4.2
4185	M	267.7	263.2	-4.5

Table 5.2: Comparison of Effective FEMA vs. Revised Study BFEs (Continued)

HEC-RAS XS	*FEMA Lettered XS*	*Effective FEMA BFE (ft. NAVD88)*	*Revised BFE (ft. NAVD88)*	*Difference (ft.)*
Chiques Creek				
3914	L	267.4	263.4	-4.0
3150	K	264.7	262.7	-2.0
2681	J	264.0	262.0	-2.0
1853	I	262.5	261.3	-1.2
1368	H	261.2	260.8	-0.4
1076	G	258.5*	259.0	0.5
858	F	258.5*	257.2	n/a
607	E	258.5*	257.0	n/a
443	D	258.5*	255.6	n/a
332	C	258.5*	255.6	n/a
241	B	258.5*	255.6	n/a
60	A	258.5*	255.4	n/a
Rife Run				
6271	G	408.8	408.2	-0.6
5812	F	405.0	406.7	1.7
5168	E	399.4	405.3	5.9
4571	D	396.9	405.2	8.3
3520	C	393.2	395.1	1.9
1495	B	391.6*	389.5	n/a
825	A	391.6*	388.5	n/a

*Backwater areas

The significant increase in flood elevations on Rife Run at XS D and E are due to Old Line Road not being included in the effective FEMA model. This roadway and embankment causes significant backwater that was not accounted for in the effective FEMA model.

5.4 FLOODPLAIN MAPPING

The results of the Existing-Condition HEC-RAS model for Chiques Creek and its tributaries were used to create digital floodplain inundation, depth grids, and water surface elevation grids for all storm events included in this investigation (including September 2011-Lee, excluding 1-percent plus). The HEC-GeoRAS postprocessor and the project DEM were used to delineate the floodplain boundaries and develop the depth and water surface elevation grids. All mapping products are provided digitally in GIS shapefile and raster format, respectively, on the attached project disc. Appendix I contains flood mapping for each storm event in Manheim Borough, since that area is the primary focus of this investigation.

5.5 FLOOD IMPACTS

The results from the HEC-RAS modeling and flood mapping were used to determine the impacts to buildings as a result of flooding on Chiques Creek and its tributaries. A building footprint GIS layer from Lancaster County, provided by SRBC, was intersected with the floodplain mapping for each storm event to determine the total number of buildings that are located in the respective floodplain. The GIS layer contained all buildings, including outbuildings such as sheds and garages. All building impacts are in Lancaster County, no buildings are impacted by flooding in Lebanon County. Table 5.3 outlines the results of the flood impact analysis.

Table 5.3: No. of Buildings in Floodplain per Stream

Stream	*2-year*	*5-year*	*10-year*	*25-year*	*50-year*	*100-year*	*200-year*	*500-year*
Chiques Creek	25	76	161	280	396	531	690	906
Behm Run	0	0	0	0	0	0	0	1
Boyers Run	0	0	0	1	1	2	3	5
Dellinger Run	4	9	9	9	9	9	10	12
Doe Run	8	10	11	21	25	32	40	49
Doe Run Tributary	0	0	0	0	0	0	0	0
Erisman Run	2	3	3	3	3	3	3	3
Orchard Road Tributary	0	0	0	0	0	1	1	1
Rife Run	4	6	11	23	29	31	36	39
Shearers Creek	1	1	2	2	2	2	3	4
Shearers Creek Tributary	0	0	0	0	0	0	0	0
Shumaker Road Tributary	0	0	0	0	0	0	1	1
Silver Spring Run	4	6	7	9	9	10	11	12
Silver Spring Run Tributary	0	0	0	0	0	1	1	2
White Oak Run	1	2	2	2	2	2	5	6

6 FLOOD RESILIENCY ALTERNATIVES ANALYSIS

Evaluating use of green infrastructure on a watershed scale to reduce flood risk in the Chiques Creek watershed is the primary reason for undertaking this effort. The study was guided by a targeted stakeholder group consisting of Community representatives familiar with flood concerns in the region. After undertaking a broad desktop evaluation of flood risk in the entire Chiques Creek watershed, including Little Chiques Creek and Donegal Creek, the stakeholder group concluded the study should focus on reducing flood risk in Manheim Borough, as the Borough has the greatest identified flood risk in the watershed. For the purpose of the study, flood risk was strictly defined as a threat to residential and commercial structures, public health and safety infrastructure, and roads and bridges. Agricultural land and pasture was not considered in the risk analysis.

Alternatives selected for the analysis were developed from a comprehensive list of Best Management Practice (BMP) type projects developed for improving water quality in the watershed. The comprehensive list of projects included everything from small streambank stabilization projects to large scale floodplain restoration and reconnection projects. Recognizing that project scale will ultimately be a determining factor in any one project's ability to reduce the flood risk in Manheim Borough, a short list of projects was developed to be considered for baseline modeling. The shortlist of projects was divided into watershed projects and channel projects, where the watershed projects attempted to use existing landscape features within the watershed upstream of Manheim Borough to attenuate flood peaks while maintaining the goal of improving water quality and environmental sustainability, and the channel projects evaluated geomorphological changes along the study reach to reduce flood elevations and/or depths. Alternatives considering large flood control dams and levees/floodwalls, such as those developed in the November 1975 USDA study, were not evaluated in this current study. Although these alternatives may provide benefit to substantially reducing the flood risk in Manheim Borough, these types of projects are not considered "green infrastructure", which, as noted above, was the primary reason for undertaking this effort.

The fundamental difference between watershed projects and channel projects is the methodology used to analyze each. Watershed projects were all evaluated using the HEC-HMS model and are designated with a "W" in the alternative name. Channel projects are all evaluated using the HEC-RAS model and the frequency discharge values established by the HEC-HMS model and are designated with a "C" in the alternative name.

A total of sixteen alternatives were included on the shortlist of projects for evaluation. These sixteen alternatives include three stand-alone watershed projects and, one combined watershed project, eight stand-alone channel projects, two combined channel projects, and one alternative that combines a watershed project and channel project (s). Alternatives were evaluating solely on the level of reduction of peak flows (watershed projects) and flood elevations/depths (channel alternatives) for the 10-year, 100-year, and the September 2011-Lee storm event. Although all models for the developed alternatives were run with all storm events listed in Table 4.1, the 10-year, 100-year, and September 2011-Lee storm events were chosen to provide an evaluation for a more frequent storm event

that causes damages (10-year), to a recently occurring storm event (Lee), to a large, less frequent storm event (100-year). For the watershed projects, the evaluation of peak flow reduction was completed at five critical locations within the Chiques Creek watershed in Manheim Borough. These locations are listed on Table 6.1.

Table 6.1: Evaluation Locations for Watershed Projects

HEC-HMS Flow Point	*Location*
CHC22.01	At Hamaker Road
CHC20.57	Upstream of confluence with Doe Run
CHC20.55	Downstream of confluence with Doe Run
CHC19.35	Upstream of confluence with Rife Run
CHC19.32	Downstream of confluence with Rife Run

For channel projects, the evaluation of flood elevation/depth reduction was completed at twelve critical locations along Chiques Creek in Manheim Borough. These locations are listed on Table 6.2.

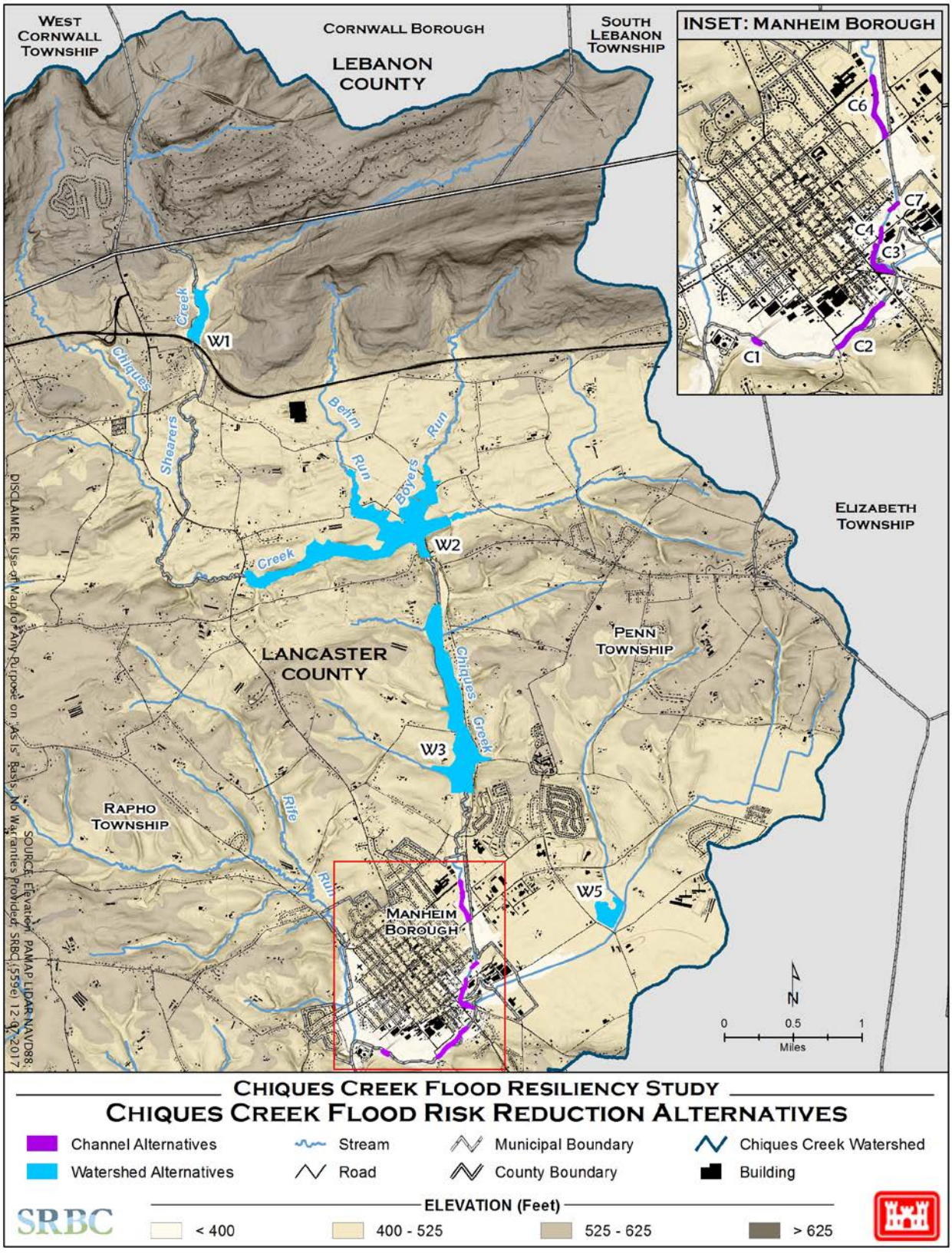
Table 6.2: Evaluation Locations for Channel Projects

HEC-RAS XS	*Location*
114230	At Manheim Farm Show
112748	At Manheim Veterans Park
110423	Downstream of South Oak Street
109610	At Tait Towers
109141	At AD Autos
108540	Downstream of Doe Run
108094	At Dollar General
107775	At Hondru Ford
107182	At South Cherry Street
105859	At South Penn Street
104213	At Fenner Precision
102751	Upstream of Wastewater Treatment Plant

Alternatives were not evaluated for other factors such as utility impacts, endangered species impacts, or recreational opportunities. For alternatives that were considered viable alternatives for possible implementation, planning level costs were developed for the alternative.

The general location of the alternative in the watershed is shown in Figure 6.1, with a discussion of each alternative provided in the following Sections. Appendix J contains concept-level mapping for each alternative, and Appendix K contains detailed HEC-HMS and/or HEC-RAS output data for each alternative.

Figure 6.1: Location of Developed Alternatives



6.1 ALTERNATIVE W1-SHEARER'S CREEK TURNPIKE DETENTION

Description

Alternative W1 evaluates the potential of providing flood storage upstream of the Pennsylvania Turnpike on Shearer's Creek. The alternative would include the placement of a weir structure upstream of the existing 47.44' x 17.0' concrete arch culvert at an elevation of 493.0 feet (NAVD 1988). The approximately 100 ft. long curved concrete weir would include a 24" round low flow orifice at elevation 482.7 ft. to slowly release water ponded behind the weir.

Results

The existing-conditions HEC-HMS model was modified to add a reservoir upstream of Node SHC2.06 to represent this alternative. A comparison of peak flows for the 10-year, 100 –year, and September 2011-Lee storm events at the five critical locations in Manheim Borough indicates minor reductions in peak flows. The maximum reduction in peak flow of was 1.8-percent, and occurred at CHC20.57 with the 10-year discharge.

Conclusion

The minimal reduction in peak flows is insignificant in terms of flood risk reduction related to the potential cost to construct the project and therefore Alternative W1 is found to have no benefit to reducing flood risk in Manheim Borough.

6.2 ALTERNATIVE W2-WHITE OAK DAM RESTORATION

Description

This alternative evaluates the restoration of the White Oak Dam (Elizabethtown Road) to better control runoff from 18.38 square mile drainage area above the proposed dam. Elizabethtown Road would be replaced with a perched bridge with a left bank elevation of 428.0 ft. (acting as an emergency spillway) and a top elevation of 430.0 ft. The culvert under the road would be replaced with an 8.0' x 4.0' concrete box culvert with an invert elevation of 418.0 ft. The upstream area would be excavated up to six feet to create a wetland storage area.

Results

The existing-conditions HEC-HMS model was modified to include a reservoir upstream of Node CHC24.53 to represent this alternative. A comparison of peak flows for the 10-year, 100 –year, and September 2011-Lee storm events indicates a modest reductions in peak flows over several of the flow points of interest. Three of the flow points of interest, CHC22.01, CHC20.57, and CHC19.35 have reductions in peak flows of greater than 10-

percent with the maximum discharge reduction of 18.5-percent occurring at CHC20.57 for a 10-year discharge.

Conclusion

While modest reductions in evaluated peak flows are obtained with this alternative, the overall effect on flood risk reduction is minor compared to the potential scope and cost of constructing the alternative. Therefore Alternative W2 is found to have no benefit to reducing flood risk in Manheim Borough and not considered viable in this study.

6.3 ALTERNATIVE W3-HERNLEY ROAD IMPROVEMENTS

Description

Alternative W3 includes the development of floodwater storage for a 21.0 square mile drainage area by restoring 2,500 linear feet of Chiques Creek downstream of Hernley Road. An inline embankment would be constructed that contains a 6.0' x 8.0' concrete box culvert for low flow and fish passage. A 40 ft. wide emergency spillway at elevation 412.0 and a dam top of 414.0 would be control high flows out of the storage area. Chiques Creek would be realigned at the current stream bed elevation with micro pools added for improved habitat. An outbuilding along White Oak Road would be relocated with this alternative.

Results

The existing-conditions HEC-HMS model was modified to include a reservoir upstream of Node CHC23.04 to represent this alternative. A comparison of peak flows for the 10-year, 100 –year, and September 2011-Lee storm events indicates a minor (less than 10-percent) reduction in peak flows over several of the flow points of interest. CHC20.55 has a reduction of 12.2-percent from the 10-year storm, which is the maximum flow reduction at all points and all storms.

Conclusion

Minor peak flow reductions are obtained with this alternative. Due to limited overall effect on flood risk reduction compared to the potential scope and cost of constructing the alternative, Alternative W2 found to have no benefit to reducing flood risk in Manheim Borough.

6.4 ALTERNATIVE W4-WHITE OAK DAM RESTORATION AND HERNLEY ROAD IMPROVEMENTS

Description

This alternative is the implementation of both Alternative W2 and Alternative W3, as described above.

Results

The existing-conditions HEC-HMS model was modified to include a reservoir upstream of Node CHC24.53 (Alternative W2) and a reservoir upstream of Node CHC23.04 (Alternative W3) to represent this alternative. A comparison of peak flows for the 10-year, 100 –year, and September 2011-Lee storm events indicates modest decreases in peak flows. Peak flow at CHC19.35 is reduced by more than 10-percent for both the 10-year and 100-year storms. The maximum reduction in peak flow is 30.2-percent, which occurs at CHC20.57 for the 10-year storm].

Conclusion

Combining both Alternative W2 and Alternative W3 does provide for enhanced benefit from completing both alternatives collectively, as peak flow reduction reaches 30-percent in some locations for a 10-year storm. However, the benefit realized is further reducing the low end of flood risk spectrum where damages are typically minimal. Due to limited overall effect on flood risk reduction compared to the potential scope and cost of constructing the alternative, Alternative W4 is found to have no significant benefit to reducing flood risk in Manheim Borough and is not considered viable in this study.

6.5 ALTERNATIVE W5-DOE RUN WATERSHED STORAGE

Description

Alternative W5 includes the construction of a wetland on the west bank of Doe Run upstream of Penryn Road. The wetland would capture stormwater collected from a 4.3 square mile drainage area, during high flows via a concrete weir diversion structure at the upstream end. The outflow structure would be a 3-inch low flow orifice at an elevation of 405.0 ft., a concrete weir structure at the top of a riser at elevation 408.0 ft., and a dam top elevation at 409.0 ft. Water would be conveyed from a northern wetland area to a southern wetland area through the riser and under Penryn Road via a 36-inch concrete pipe. Water would be introduced back into Doe Run via a rip-rap spillway on the southern wetland area.

Results

The existing-conditions HEC-HMS model was modified to include a reservoir upstream of Node DOR1.23 to represent this alternative. A comparison of peak flows for the 10-year, 100 –year, and September 2011-Lee storm events indicates an insignificant decrease in peak flows, with peak flows actually increasing in some locations due to the alteration of the time of peaks at the Doe Run-Chiques Creek confluence.

Conclusion

This alternative provides no apparent flood risk reduction in Manheim Borough and is therefore considered not viable in this study.

6.6 ALTERNATIVE C1-MODIFY RAILROAD CROSSING ABOVE RETTEW LANE

Description

This alternative includes the modification of both the channel and approach to the railroad bridge crossing immediately upstream of Rettew Lane by installing twin 96" corrugated metal pipes (CMP) on the left bank of railroad bridge embankment. The upstream invert elevation of these pipes would be at an elevation 385.8 feet to only function during high flow events. The excavation of a floodplain bench at this elevation would be required on the upstream end only.

Results

The existing-conditions HEC-RAS model was modified at Station 103385 (bridge) to include the twin 96" CMP pipes mitered to fill slope on left bank. Additional model parameters adjusted included adding a multiple opening analysis at this location and adjusting ineffective flow areas to account for the increase in expansion and contraction on the left bank. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show a maximum decrease in flood depth of 0.6 ft. for less frequent, larger storms in Manheim Borough. For more frequent, smaller storms, the reduction in flood depth does not exceed 0.2 -0.3 ft.

Conclusion

Alternative C1 provides minimal reduction in flood depths in Manheim Borough and is not considered a viable alternative in this study.

6.7 ALTERNATIVE C2-STREAM IMPROVEMENTS BETWEEN EBY STREET AND MAIN STREET

Description

Alternative C2 is a stream improvement project between Eby Street and Main Street in Manheim Borough. The stream would be re-aligned and a natural channel would be designed to improve conveyance. The natural channel, at a length of approximately 1,700 linear feet, would be trapezoidal with a 40 ft. wide bottom width, a 64 ft. wide top width, and 3 ft. depth. The top of banks would be at the same elevation of a large floodplain bench that would tie into existing high ground on the outer edges. The invert of the channel would remain at the existing elevation (no dredging). The floodplain bench would contain low vegetative cover. The modified channel is 3 ft. deep and includes a wide flood plain bench. HEC – RAS existing conditions model revised channel from XS 105731-107475 and uses Manning's n value of .035 for channel and .05 for floodplain bench.

Results

The existing-conditions HEC-RAS model was modified between XS 105731-107475 to include the stream improvement project. The natural channel was input into the model, Manning's n values were adjusted accordingly, and ineffective flow areas were modified to account for the alternative. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show a maximum decrease in flood depth of 2.5 ft. for a 10-year flood event at Hondru Ford (XS 107775). Flood elevations would have been 1.3 ft. less during the September 2011-Lee storm event at Hondru Ford if this alternative were in place, potentially eliminating damages from flooding at that location (Figure 6.2).

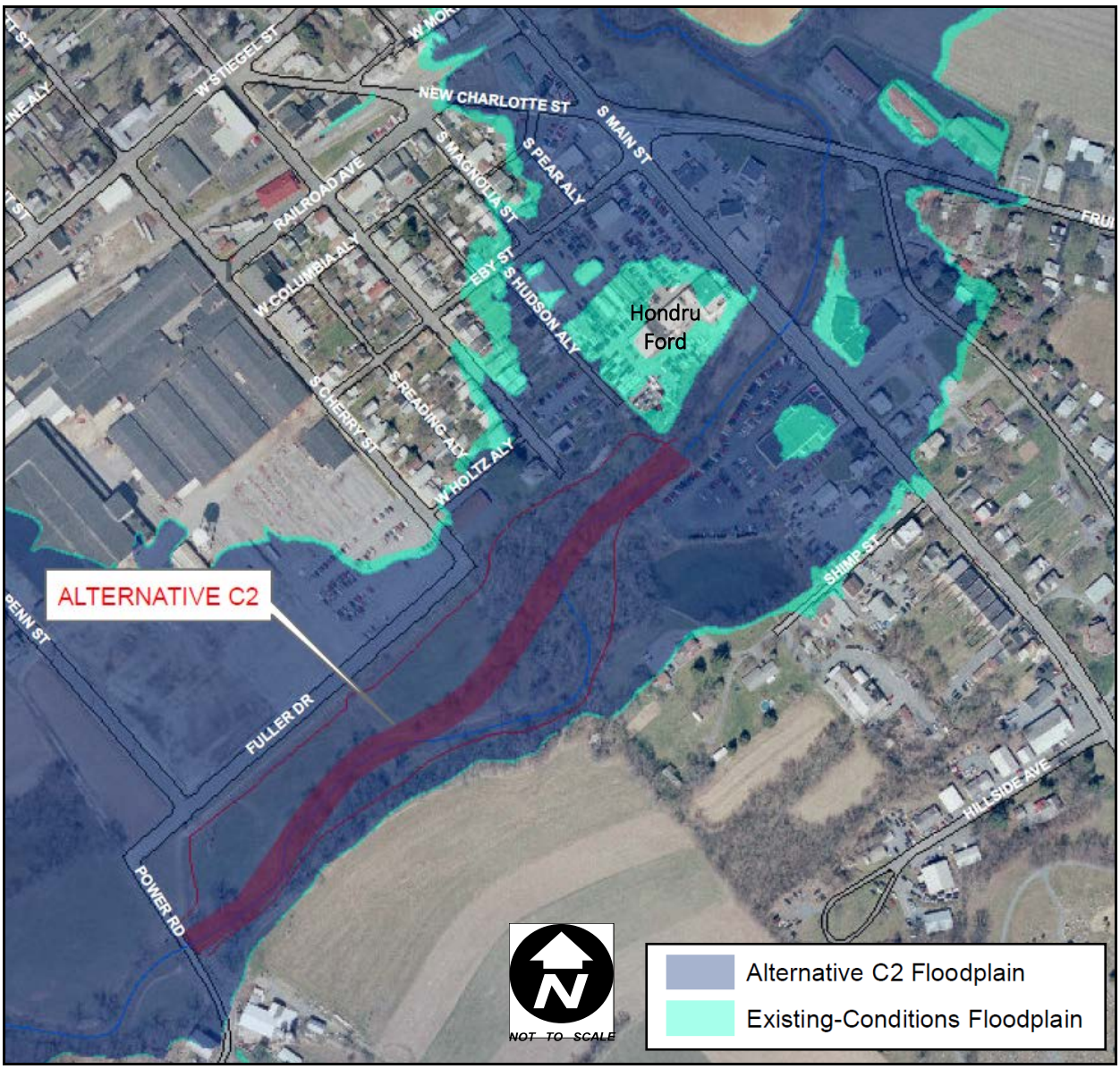
Conclusion

Alternative C2 provides considerable (greater than 1.0 feet) flood risk reduction in the central portion of the evaluated reach. This alternative is considered viable for this study and should be considered for stand-alone implementation or implementation with other alternatives.

Estimated Cost

The estimated cost of Alternative C2 is $800,000-$900,000. This cost is based upon cost data from previous studies and includes labor and materials for construction, design, permitting, and contingency. It does not include the cost of real estate acquisition or utility relocation, if necessary.

Figure 6.2: September 2011-Lee Storm Event Flooding w/Alternative C2



6.8 ALTERNATIVE C2A-REVISED STREAM IMPROVEMENTS BETWEEN EBY STREET AND MAIN STREET

Description

Alternative C2A is identical to Alternative C2, but contains a modified upper reach where the floodplain bench encroaches into an existing parking lot and pond to provide additional conveyance area.

Results

The existing-conditions HEC-RAS model was modified between XS 105731-107475 to include the stream improvement project (Alternative C2) and modifications to the upstream area (Alternative 2CA). A comparison of the flood elevations for Alternative C2 with the computed flood elevations with this alternative show insignificant decreases to flood elevations as a result of the modified upper reach.

Conclusion

This alternative was not considered viable as the increased scope and cost to implement would not provide incremental benefit to flood risk reduction. The results suggest that an iterative design process for Alternative C2 would yield a better design for flood risk reduction in Manheim Borough in lieu of Alternative C2A.

6.9 ALTERNATIVE C3-STREAM IMPROVEMENTS BETWEEN FRUITVILLE PIKE AND STEIGEL STREET

Description

This alternative is a stream improvement project between Fruitville Pike and Steigel Street, restoring a natural floodplain on the right bank with a floodplain bench at an elevation of 389.0 ft. With this stream improvement, conveyance under the existing railroad would be improved. A stone or concrete retaining wall would be constructed on the edge of the right bank. The existing stream bed elevation of Chiques Creek would be maintained with this alternative.

Results

The existing-conditions HEC-RAS model was modified in this reach to include the stream improvement project. The channel and floodplain modifications were input into the model, Manning's n values were adjusted accordingly, and ineffective flow areas were modified to account for the alternative. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show minimal reductions in flood depths (0.0-0.2 feet) for all profiles upstream of this improvements. However, further analysis shows that implementing Alternative 3 in combination with Alternative 2 provides added benefits in flood depth reduction. This is discussed in Section 6.14.

Conclusion

Alternative C3 as a stand -alone project does not provide a significant reduction in flood risk in the study area; however, the alternative should be considered in combination with other alternatives for potential stacked benefits of implementing multiple projects.

Estimated Cost

The estimated cost of Alternative C3 is $1,000,000-$1,200,000. This cost is based upon cost data from previous studies and includes labor and materials for construction, design, permitting, and contingency. It does not include the cost of real estate acquisition or utility relocation, if necessary.

6.10 ALTERNATIVE C4-REMOVAL OF STEIGEL STREET BRIDGE

Description

Alternative C4 includes the complete removal of the existing Steigel Street bridge and the rerouting traffic around this location. The concrete wall on the left bank downstream of the bridge would also be removed. Note that a concept-level map of this alternative was not prepared.

Results

The existing-conditions HEC-RAS model was modified to remove the existing Steigel Street bridge along with all associated ineffective flow areas. Contraction and expansion coefficient were also reduced to account for the removal of the bridge. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show insignificant reductions in flood depths for flood events upstream of this modification.

Conclusion

Alternative C4 provides minimal reduction in flood depths in Manheim Borough and is not considered a viable alternative in this study.

6.11 ALTERNATIVE C5-WEIR REMOVAL ON CHIQUES CREEK

Description

There are a total of eight concrete weirs along Chiques Creek. Alternative C5 is the removal of these weirs to determine if collectively, flood depths and elevations would be reduced in Manheim Borough. Note that a concept-level map of this alternative was not prepared.

Results

The existing-conditions HEC-RAS model was modified to remove all eight weirs along Chiques Creek. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show insignificant reductions in flood depths for all flood events within Manheim Borough with this alternative implemented.

Conclusion

Alternative C5 provides no reduction in flood depths in Manheim Borough and is not considered a viable alternative in this study.

6.12 ALTERNATIVE C6-MEMORIAL PARK RESTORATION

Description

Alternative C6 includes the channel modification and floodplain restoration in reach that passes through Memorial Park. Approximately 3,600 linear feet of stream would be restored, based pond a concept plan provided by Land Studies, Inc.

Results

The existing-conditions HEC-RAS model was modified by Land Studies, Inc. to include the stream restoration project outlined in this alternative. The revisions were made between XS 115220 and XS 112428. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show no reduction of flood depths within Manheim Borough except for at the Manheim Farm Show, where there is a decrease of approximately 0.5 ft. in flood depth for all storm events.

Conclusion

Alternative C6 provides minimal reduction in flood depths in Manheim Borough and is not considered a viable alternative for this study. However, this alternative may provide substantial benefits to water quality on Chiques Creek and should be considered for implementation in that regard.

Estimated Cost

Based upon information from Land Studies, Inc., the estimated cost of Alternative C6 is $1,520,000. This cost includes labor and materials for construction, design, permitting, and contingency. It does not include the cost of utility relocation, if necessary. Real estate acquisition is not anticipated with this alternative since Manheim Borough owns the land.

6.13 ALTERNATIVE C7-REMOVAL OF OAK STREET BRIDGE

Description

This alternative is the removal of the Oak Street bridge, which is currently closed to traffic. This alternative was specifically requested by Manheim Borough to include in this study to determine any benefits to reducing flooding this alternative may have. Note that a concept-level map of this alternative was not prepared.

Results

The existing-conditions HEC-RAS model was modified to remove the existing Oak Street bridge at Station 110532 and all associated ineffective flow areas. Contraction and expansion coefficient were also reduced to account for the removal of the bridge. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show zero reductions (or increases) in flood depths for all flood events upstream or downstream of this modification.

Conclusion

This alternative provides no reduction in flood depths in Manheim Borough and is not considered a viable alternative in this study.

6.14 ALTERNATIVE C2C3-COMBINATION OF ALTERNATIVES C2 AND C3

Description

This alternative evaluates the combined effect on flood depth reduction when the stream improvements between Eby Street and Main Street (Alternative C2) are completed in combination with stream improvements between Fruitville Pike and Steigel Street (Alternative C3).

Results

The existing-conditions HEC-RAS model was modified to include the stream improvement projects outlined in Alternative C2 and Alternative C3. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show that by completing Alternative C3 in addition to Alternative C2, additional decreases in flood depth for a 10-year flood event at AD Autos (XS 109141) would be 1.4 ft. This alternative would eliminate flooding during a 10-year flood event at the intersection of South Main Street and Fruitville Pike, and remove several residential homes from the 10-year floodplain (Figure 6.3). For a 100-year food event, an additional reduction of 0.6 ft. could be achieved.

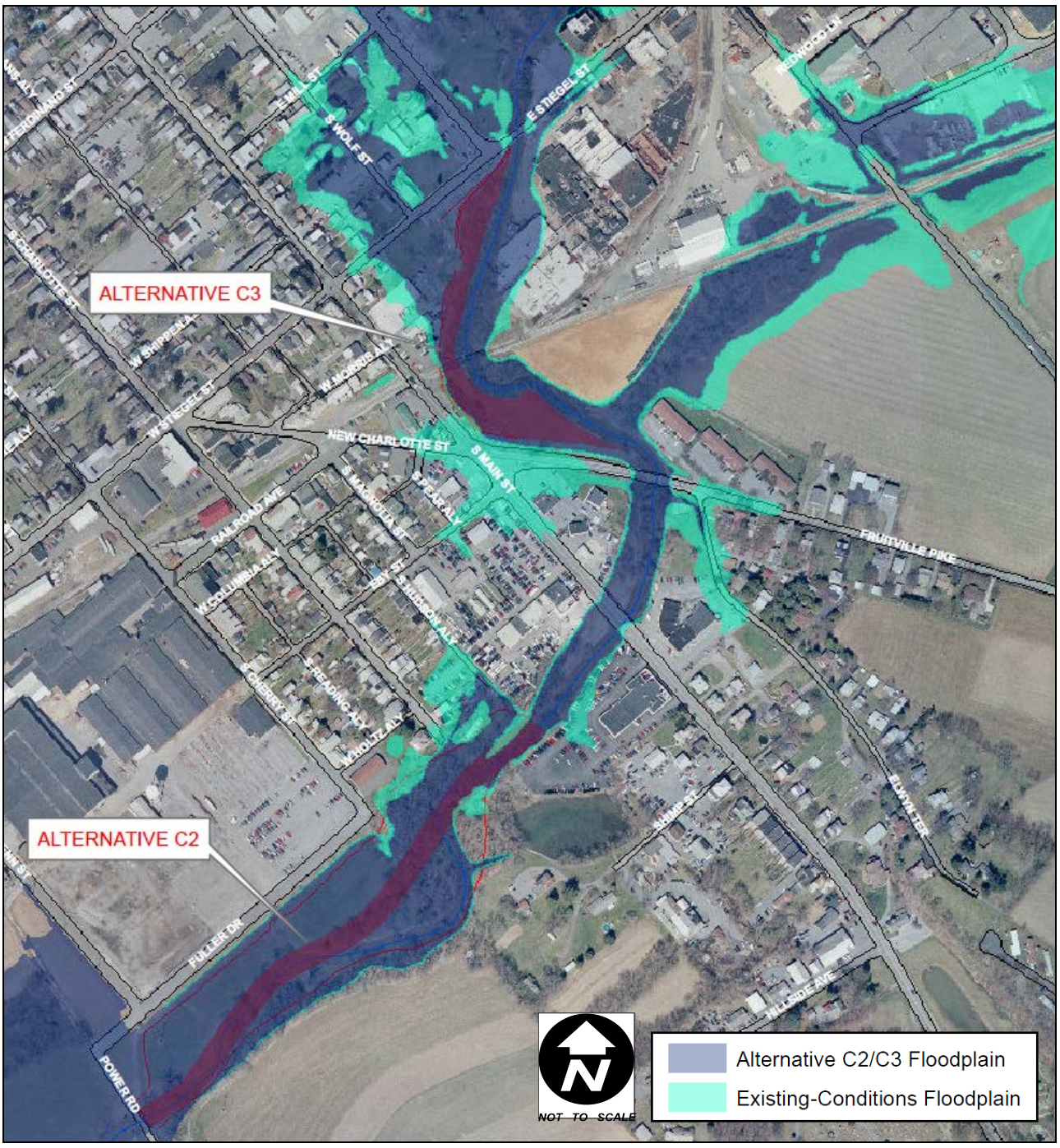
Conclusion

Alternative C2C3 provides considerable flood risk reduction in Manheim Borough, especially for smaller, more frequent flood events. This alternative is considered viable for this study and should be considered for implementation.

Estimated Cost

The estimated cost of Alternative C2C3 is $1,800,000-$2,100,000. This cost is determined by adding the estimated cost range of Alternative C2 with the estimated cost range of Alternative C3.

Figure 6.3: 10-year Storm Event Flooding w/Alternative C2C3



6.15 ALTERNATIVE C2C3C6-COMBINATION OF ALTERNATIVES C2, C3, AND C6

Description

Alternative C2C3C6 evaluates the combined effect on flood depth reduction when the stream improvements between Eby Street and Main Street (Alternative 2) are completed in combination with stream improvements between Fruitville Pike and Steigel Street (Alternative C3) and the floodplain restoration project in Memorial Park (Alternative C6).

Results

The existing-conditions HEC-RAS model was modified to include the stream improvement projects outlined in Alternative C2, Alternative C3, and Alternative C6. A comparison of the existing-conditions flood elevations with the computed flood elevations with this alternative show that no additional flood depth reduction is achieved by completing Alternative 6 with AlternativesC2C3. Alternative 6 is located too far upstream to of the other alternatives to benefit from a reduction in flood depths from those alternatives.

Conclusion

There is no benefit to completing Alternative C6 with Alternative C2C3.

6.16 ALTERNATIVE W4C2-COMBINATION OF ALTERNATIVES W4 AND C2

Description

This alternative evaluates the combined effect on flooding in Manheim Borough when White Oak Dam and Hernley Road improvements (Alternative W4) are completed in combination with stream improvements between Eby Street and Main Street (Alternative C2).

Results

The existing-conditions HEC-RAS model was modified to include the stream improvement projects outlined in Alternative C2, and the flow values computed in Alternative W4 were also added into the HEC-RAS model. A comparison of the existing-conditions flood elevations with the computed flood elevations for Alternative W4C2 show minimal additional reduction in flood depths by implementing Alternative W4 with Alternative C2.

Conclusion

This alternative was not considered viable as the increased scope and cost to implement Alternative W4 would not provide incremental benefit to flood risk reduction in Manheim Borough over completing Alternative C2 as a stand-alone project.

6.17 SUMMARY OF ALTERNATIVES

This study evaluated both "watershed" alternatives and "channel" alternatives. Of the watershed alternatives studied, the most significant benefits to downstream peak flow reduction was the combination of Alternatives W2 and Alternative W3, which is Alternative W4. The potentially high cost and scope associated with the construction of Alternative W4 compared with the only modest peak flow reduction in Manheim Borough led to the study team concluding that the implementation of this alternative is not a viable path forward to reducing the flood risk in Manheim Borough.

It was concluded by the project team that Alternative C2 is viable for consideration for implementation. Alternative C2 provides substantial flood risk reduction in Manheim Borough for smaller, more frequent flood events. Additionally, based on the evaluation of alternatives implemented collectively, Alternative C2C3 is a viable alternative for consideration. A summary of alternatives developed in this investigation is listed in Table 6.4.

Table 6.4: Summary of Alternatives

Alternative	*Description*	*Viable?*	*Notes*
W1	Shearer's Creek Turnpike Detention	No	Minimal reduction in peak flows
W2	White Oak Dam Restoration	No	Overall effect on flood risk reduction is minor compared to the potential scope and cost of construction
W3	Hernley Road Improvements	No	Overall effect on flood risk reduction is minor compared to the potential scope and cost of construction
W4	White Oak Dam Restoration and Hernley Road Improvements	No	Overall effect on flood risk reduction is minor compared to the potential scope and cost of construction
W5	Doe Run Watershed Storage	No	Minimal reduction in peak flows
C1	Modify Railroad Crossing above Rettew Lane	No	Minimal reduction in flood depths

Table 6.4: Summary of Alternatives (continued)

Alternative	*Description*	*Viable?*	*Notes*
C2	Stream Improvements between Eby Street and Main Street	Yes	Estimated cost of $800,000-$900,000
C2A	Revised Stream Improvements between Eby Street and Main Street	No	Overall added benefit on flood risk reduction compared to Alternative C2 is minor compared to the potential scope and cost of construction
C3	Stream Improvements between Fruitville Pike and Steigel Street	No	Estimated cost of $1,000,000-$1,200,000
C4	Removal of Steigel Street Bridge	No	Minimal reduction in flood depths
C5	Weir Removal on Chiques Creek	No	Minimal reduction in flood depths in Manheim Borough
C6	Memorial Park Restoration	No	Minimal reduction in flood depths-should be considered for water quality benefits
C7	Removal of Oak Street Bridge	No	Minimal reduction in flood depths
C2C3	Stream Improvements between Eby Street and Main Street and between Fruitville Pike and Steigel Street	Yes	Estimated cost of $1,800,000-$2,100,000.
C2C3C6	Stream Improvements between Eby Street and Main Street and between Fruitville Pike and Steigel Street and Memorial Park Restoration	No	No benefit to completing Alternative C6 with Alternative C2C3
W4C2	White Oak Dam Restoration and Hernley Road Improvements and Stream Improvements between Eby Street and Main Street	No	Overall effect on flood risk reduction is minor compared to the potential scope and cost of construction

7 CONCLUSIONS

SRBC received funding from PADEP to develop hydrologic and hydraulic modeling to evaluate alternatives for enhancing flood resiliency in the Chiques Creek watershed. Prior to the initiation of the hydrologic and hydraulic modeling, a flood risk characterization was performed by SRBC, with significant stakeholder input, to identify, map, and prioritize key flood risk zones to inform the siting of hydraulic modeling reaches and development of potential alternatives.

The USACE HEC-HMS rainfall runoff model was used to estimate peak flows for the Chiques Creek watershed, upstream of the confluence of Little Chiques Creek, as identified by the flood risk characterization. The HEC-HMS model for Chiques Creek was calibrated to the September 2011-Lee flood event, and existing-conditions peak flows were calculated for multiple points within the watershed for eight flood frequency storm events.

The USACE HEC-RAS hydraulic model was used to develop geo-referenced hydraulic models for Chiques Creek and its tributaries. The existing-conditions HEC-RAS models were developed to determine flood elevations along Chiques Creek and its tributaries at the time of this study and to be used as a baseline to determine the impacts of flood resiliency alternatives developed in this investigation. Peak flow data from the HEC-HMS model were input into HEC-RAS, and a steady state computation was completed for each flooding source.

Based upon the results of the hydrologic and hydraulic modeling, the stakeholder group concluded the study should focus on reducing flood risk in Manheim Borough, as the Borough has the greatest identified flood risk in the watershed. A total of sixteen alternatives were developed in this study. The alternatives were divided into watershed projects and channel projects, where the watershed projects attempted to use existing landscape features within the watershed upstream of Manheim Borough to attenuate flood peaks while maintaining the goal of improving water quality and environmental sustainability, and the channel projects evaluated geomorphological changes along the study reach to reduce flood elevations and/or depths.

Of the watershed alternatives studied, the most significant benefits to downstream peak flow reduction was Alternative W4. The potentially high cost and scope associated with the construction of Alternative W4 compared with the only modest peak flow reduction in Manheim Borough led to the study team concluding that the implementation of this alternative is not a viable path forward to reducing the flood risk in Manheim Borough.

It was concluded by the project team that Alternative C2 is viable for consideration for implementation. Alternative C2 provides substantial flood risk reduction in Manheim Borough for smaller, more frequent flood events. Additionally, based on the evaluation of alternatives implemented collectively, Alternative C2C3 is a viable alternative for consideration.

The study team arrived at the following conclusions based upon the results of this investigation and the discussions at the project meetings:

1. Stakeholder input is critical to completing a study of this nature.

2. The ability of a green infrastructure project to mitigate flooding fully depends on the physical location of the project relative to the area of risk as well as the ultimate size of the project.

3. The alternatives studied here provide a comprehensive suite of options to consider for flood risk reduction in Manheim Borough. Regardless of whether or not a particular study alternative is implemented, the data gathered here should be used to inform flood risk in the Manheim area as it represents the best available data.

4. Storage type projects do not provide significant flood risk reduction in the Manheim area and are cost prohibitive to implement if value is directly based on flood risk reduction.

5. Channel reconfiguration projects within the Manheim area appear to offer the greatest potential for flood risk reduction benefits.

6. Flood risk reduction using Alternative C2 is achievable in numbers but must be evaluated at the community level for ultimate benefit.

8 REFERENCES

Federal Emergency Management Agency, Data Capture Technical Reference, May 2014.

U.S. Army Corps of Engineers, Hydrologic Modeling System HEC-HMS, User's Manual, Version 4.2, August 2016.

Federal Emergency Management Agency, Standard for Flood Risk Analysis and Mapping #84.

U.S. Army Corps of Engineers, River Analysis System HEC-RAS, User's Manual, Version 5.0, February 2016.

APPENDIX A



HEC-HMS Input Data

SUBBASIN	DRAINAGE AREA (SQ MI)	CN	TC (HR)	TC (MIN)
BER0.00A	0.1087	73	0.6	36.0
BER0.64A	0.3111	74	0.42	25.2
BER1.05A	0.279	73	0.65	39.0
BER1.30A	0.5289	67	0.66	39.6
BER1.95A	0.6201	55	0.51	30.6
BOR0.00A	0.0062	74	0.1	6.0
BOR0.10A	0.2331	73	0.79	47.4
BOR0.68A	0.2555	73	0.65	39.0
BOR1.20A	0.5429	69	0.88	52.8
BOR2.07A	0.8224	55	0.45	27.0
CHC10.68A	0.7377	77	0.75	45.0
CHC10.68B	0.0477	77	0.56	33.6
CHC10.68C	0.118	75	0.68	40.8
CHC10.68D	0.1638	85	0.96	57.6
CHC10.68E	0.0528	85	0.34	20.4
CHC12.01A	0.1403	74	0.15	9.0
CHC12.67A	0.5547	75	1.74	104.4
CHC13.90A	2.4712	74	5.29	317.4
CHC16.25A	0.7783	75	1.89	113.4
CHC17.08A	0.5852	76	1.27	76.2
CHC17.08B	0.3448	90	0.87	52.2
CHC17.73A	0.387	77	0.96	57.6
CHC17.73B	0.0626	92	0.36	21.6
CHC18.09A	0.1663	69	0.57	34.2
CHC18.61A	0.5761	70	0.43	25.8
CHC19.35A	0.3523	77	1.09	65.4
CHC19.35B	0.0175	87	0.23	13.8
CHC1.28A	0.8402	71	2.71	162.6
CHC20.02A	0.3588	81	0.75	45.0
CHC20.57A	0.5512	83	1.65	99.0
CHC21.28A	0.3509	84	0.91	54.6
CHC21.28B	0.0187	89	0.09	5.4
CHC21.28C	0.0073	79	0.85	51.0
CHC21.28D	0.0224	81	0.16	9.6
CHC21.28E	0.0497	71	0.23	13.8
CHC21.28F	0.1457	74	0.22	13.2
CHC21.59A	0.2001	77	0.69	41.4
CHC21.59B	0.0256	86	0.26	15.6
CHC21.59C	0.0275	84	0.17	10.2
CHC21.59D	0.0896	77	0.23	13.8
CHC22.01A	1.2726	73	0.13	7.8
CHC22.01B	0.0456	79	0.08	4.8
CHC23.04A	1.8763	72	1.75	105.0
CHC23.04B	0.2164	75	0.46	27.6
CHC24.64A	0.2517	67	1.4	84.0
CHC25.53A	0.6693	72	0.91	54.6
CHC25.53B	0.0163	69	0.1	6.0
CHC26.30A	0.8065	71	2.11	126.6

SUBBASIN	DRAINAGE AREA (SQ MI)	CN	TC (HR)	TC (MIN)
CHC27.39A	0.3314	72	0.77	46.2
CHC28.31A	0.095	72	0.31	18.6
CHC28.31B	0.7915	71	0.75	45.0
CHC28.67A	0.6654	63	0.74	44.4
CHC29.91A	0.6097	61	0.66	39.6
CHC30.94A	1.0461	65	0.89	53.4
CHC3.39A	1.8419	70	0.69	41.4
CHC4.62A	0.1505	73	0.33	19.8
CHC4.62B	0.1946	73	0.38	22.8
CHC4.97A	0.4693	71	1.35	81.0
CHC4.97B	0.058	76	0.36	21.6
CHC4.97C	0.2012	71	0.21	12.6
CHC5.97A	1.1314	74	0.95	57.0
CHC7.48A	2.2128	74	4.5	270.0
CHC9.40A	1.1576	74	1.15	69.0
DER0.00A	0.1924	73	0.33	19.8
DER0.52A	0.5165	75	0.62	37.2
DER1.10A	0.3712	75	0.67	40.2
DER1.76A	0.5078	70	0.67	40.2
DER2.22A	0.7235	71	0.86	51.6
DER2.93A	0.6085	74	0.62	37.2
DORT0.34A	0.0357	73	0.16	9.6
DORT0.34B	0.0234	72	0.16	9.6
DORT0.54A	0.2058	74	0.5	30.0
DORT0.54B	0.0280	64	0.2	12.0
DORT0.54C	0.0058	81	0.24	14.4
DORT0.54D	0.0832	76	0.65	39.0
DORT0.54E	0.0367	73	0.1	6.0
DORT1.15A	0.4022	75	0.38	22.8
DORT1.15B	0.0103	90	0.13	7.8
DORT1.58A	0.4931	73	0.56	33.6
DORT2.41A	0.2384	72	0.39	23.4
DORT2.41B	0.1294	74	0.37	22.2
DOR0.00A	0.0475	79	0.43	25.8
DOR0.24A	0.1218	76	0.44	26.4
DOR0.24B	0.1287	77	0.6	36.0
DOR0.44A	0.5212	76	0.78	46.8
DOR1.21A	0.243	76	0.96	57.6
DOR1.21B	0.2037	75	0.39	23.4
DOR1.23A	0.2095	77	0.55	33.0
DOR1.60A	0.5501	74	0.59	35.4
DOR2.40A	0.4594	74	0.76	45.6
DOR2.81A	0.2367	76	0.63	37.8
DOR3.06A	0.3648	73	0.56	33.6
DOR3.06B	0.7639	72	0.93	55.8
ERRT0.00A	0.1098	82	0.63	37.8
ERRT0.00B	0.0077	85	0.03	1.8
ERRT0.00C	0.0074	92	0.07	4.2

SUBBASIN	DRAINAGE AREA (SQ MI)	CN	TC (HR)	TC (MIN)
ERRT0.00D	0.0036	92	0.06	3.6
ERRT0.00E	0.0045	92	0.08	4.8
ERRT0.57A	0.2788	76	1.38	82.8
ERRT0.61A	0.4551	77	0.88	52.8
ERRT1.62A	0.1546	73	0.49	29.4
ERRT1.62B	0.2547	76	0.13	7.8
ERRT1.62C	0.0144	92	0.07	4.2
ERR0.00A	0.0718	72	0.29	17.4
ERR0.00B	0.0053	92	0.12	7.2
ERR0.23A	0.1922	73	0.41	24.6
ERR0.23B	0.0298	89	0.1	6.0
ERR0.88A	0.5048	75	0.94	56.4
ERR1.33A	0.5783	74	0.54	32.4
LAR0.00A	0.5827	76	1.47	88.2
LAR0.40A	0.0039	93	0.04	2.4
LAR0.40B	0.1091	89	0.48	28.8
LAR0.40C	0.1251	76	0.45	27.0
LAR0.40D	0.1245	73	0.38	22.8
MRT0.00A	0.1647	72	0.44	26.4
MRT0.66A	0.203	74	0.21	12.6
MRT0.66B	0.0376	75	0.11	6.6
MRT0.66C	0.0149	78	0.17	10.2
ORT0.28A	0.1786	70	0.38	22.8
ORT0.95A	0.1851	70	0.26	15.6
ORT1.38A	0.191	71	0.29	17.4
ORT2.04A	0.2289	73	0.41	24.6
RIR0.00A	0.0647	84	0.76	45.6
RIR0.32A	0.5587	72	0.81	48.6
RIR0.65A	0.1896	76	0.2	12.0
RIR0.86A	0.2984	72	0.61	36.6
RIR1.24A	0.098	70	0.17	10.2
RIR1.62A	0.5008	73	0.84	50.4
RIR2.60A	0.3125	72	0.37	22.2
RIR3.38A	1.0434	71	0.66	39.6
RIR3.38B	0.0294	70	0.07	4.2
SHCT0.00A	0.9966	60	0.67	40.2
SHCT1.59A	2.0504	61	0.6	36.0
SHC0.00A	0.0458	68	0.42	25.2
SHC0.23A	0.6386	73	1.24	74.4
SHC1.60A	0.2628	69	0.33	19.8
SHC2.06A	0.2828	58	0.4	24.0
SHC2.56A	0.4506	66	0.55	33.0
SHC3.11A	0.2775	74	0.21	12.6
SHC3.92A	0.6934	59	0.6	36.0
SHC3.92B	0.7957	63	0.78	46.8
SRT0.50A	0.4294	72	0.94	56.4
SRT1.29A	0.3191	71	0.9	54.0
SRT2.06A	0.4839	73	0.68	40.8

SUBBASIN	DRAINAGE AREA (SQ MI)	CN	TC (HR)	TC (MIN)
SRT2.55A	0.3465	72	0.43	25.8
SRT3.00A	0.7468	72	0.64	38.4
SRT3.38A	0.3636	72	0.48	28.8
SSRTA0.00A	0.2628	75	0.55	33.0
SSRTA0.59A	0.1379	73	0.33	19.8
SSRT0.00A	0.2236	73	0.58	34.8
SSRT0.46A	0.1893	74	0.33	19.8
SSRT0.77A	0.252	74	0.51	30.6
SSRT0.77B	0.0603	72	0.24	14.4
SSRT1.34A	0.1112	72	0.34	20.4
SSRT1.34B	0.0172	73	0.11	6.6
SSRT1.34C	0.0236	73	0.11	6.6
SSRT1.34D	0.0122	73	0.11	6.6
SSRT1.34E	0.0281	73	0.18	10.8
SSR0.00A	0.0601	73	0.14	8.4
SSR0.22A	0.2501	77	0.43	25.8
SSR0.87A	0.3806	74	0.86	51.6
SSR1.06A	0.2647	74	0.51	30.6
SSR1.71A	0.3665	76	0.87	52.2
SSR1.89A	0.3178	76	0.59	35.4
SSR1.89B	0.0231	92	0.07	4.2
SSR2.33A	0.175	77	0.25	15.0
SSR2.33B	0.0381	73	0.11	6.6
SSR2.70A	0.4613	72	0.58	34.8
SSR2.70B	0.0112	74	0.07	4.2
SSR2.70C	0.0064	93	0.17	10.2
SSR2.70D	0.0343	69	0.17	10.2
SSR2.70E	0.4472	74	0.45	27.0
SSR3.20A	0.1108	69	0.37	22.2
SSR3.20B	0.2023	69	0.25	15.0
SSR3.70A	0.1906	65	0.34	20.4
SSR3.70B	0.1861	63	0.25	15.0
WOR0.00A	0.0359	72	0.19	11.4
WOR0.32A	0.1901	70	0.73	43.8
WOR0.76A	0.3131	75	0.4	24.0
WOR1.59A	0.4536	75	0.6	36.0
WOR1.59B	0.76	71	0.95	57.0
WOR1.64A	0.2551	74	0.61	36.6
WOR2.33A	0.3233	69	0.5	30.0
WOR3.00A	0.353	72	0.5	30.0
WOR3.67A	0.211	56	0.17	10.2

Stream	Reach	ElevIn	ElevOut	LengthFt	Slope	NChan	NLB	NRB	Invert
Behm Run	BER0.64_0.00	429.84	420.89	3362	0.0026	0.045	0.08	0.08	426.1
Behm Run	BER1.05_0.64	435.78	429.84	2163	0.0027	0.045	0.08	0.08	428.19
Behm Run	BER1.30_1.05	441.23	435.78	1294	0.0042	0.05	0.1	0.1	434.2
Behm Run	BER1.95_1.30	469.37	441.23	3425	0.0082	0.05	0.1	0.1	454.26
Boyers Run	BOR.0.10_0.00	421.12	420.76	548	0.0006	0.045	0.06	0.06	419.57
Boyers Run	BOR0.68_0.10	429.54	421.12	3056	0.0027	0.045	0.06	0.06	422.9
Boyers Run	BOR1.20_0.68	447.86	429.54	2739	0.0067	0.045	0.08	0.08	434.92
Boyers Run	BOR2.07_1.20	488.19	447.86	4582	0.0088	0.045	0.08	0.08	447.61
Chiques Creek	CHC10.68_9.40	321.36	311.36	6737	0.0014	0.05	0.1	0.1	318.25
Chiques Creek	CHC11.99_10.68	334.39	321.36	6904	0.0018	0.05	0.1	0.1	329
Chiques Creek	CHC12.65_12.01	336.13	334.39	3386	0.0005	0.05	0.1	0.1	329.28
Chiques Creek	CHC13.89_12.67	345.09	336.13	6415	0.0013	0.05	0.1	0.1	339.62
Chiques Creek	CHC16.25_13.90	358.04	345.09	12411	0.001	0.05	0.1	0.1	344.11
Chiques Creek	CHC17.08_16.25	363.7	358.04	4386	0.0012	0.05	0.1	0.1	357.29
Chiques Creek	CHC17.73_17.08	369.11	363.7	3433	0.0015	0.05	0.1	0.1	365.8
Chiques Creek	CHC18.09_17.73	371.47	369.11	1899	0.0012	0.05	0.1	0.1	368.42
Chiques Creek	CHC18.61_18.09	374.74	371.47	2726	0.0012	0.05	0.1	0.1	372.83
Chiques Creek	CHC19.32_18.61	378.87	374.74	3754	0.0011	0.05	0.1	0.1	374.37
Chiques Creek	CHC20.02_19.35	383.55	378.87	3521	0.0013	0.05	0.08	0.08	379.3
Chiques Creek	CHC20.55_20.02	387.37	383.55	2783	0.0013	0.05	0.1	0.1	380.5
Chiques Creek	CHC21.28_20.57	393.79	387.37	3752	0.0017	0.05	0.12	0.08	388.6
Chiques Creek	CHC21.59_21.28	395.33	393.79	1626	0.0009	0.05	0.1	0.08	389.98
Chiques Creek	CHC22.01_21.59	398.18	395.33	2218	0.0012	0.05	0.1	0.1	393.47
Chiques Creek	CHC23.04_22.01	406.87	398.18	5462	0.0015	0.05	0.08	0.08	401.8
Chiques Creek	CHC24.53_23.04	420.75	406.87	7855	0.0017	0.05	0.12	0.12	410.28
Chiques Creek	CHC25.53_24.64	425.63	421.27	4720	0.0009	0.05	0.1	0.1	423.38
Chiques Creek	CHC26.30_25.53	434.14	425.63	4081	0.002	0.05	0.1	0.1	427.83
Chiques Creek	CHC27.38_26.30	442.09	434.14	5715	0.0013	0.05	0.12	0.12	435.2
Chiques Creek	CHC28.26_27.39	458.57	442.09	4613	0.0035	0.05	0.1	0.1	445.3
Chiques Creek	CHC28.67_28.31	474.88	459.47	1902	0.0081	0.05	0.08	0.08	470.17
Chiques Creek	CHC29.91_28.67	533.38	474.88	6542	0.0089	0.06	0.12	0.12	494.19
Chiques Creek	CHC30.94_29.91	606.68	533.38	5453	0.0134	0.06	0.12	0.12	546.32
Chiques Creek	CHC3.39_1.28	278.89	253.92	11133	0.0022	0.05	0.1	0.1	256.16
Chiques Creek	CHC4.62_3.39	280.91	278.89	6489	0.0003	0.05	0.1	0.1	276.07
Chiques Creek	CHC4.97_4.62	282.35	280.91	1863	0.0007	0.05	0.1	0.1	278.13

Chiques Creek	CHC5.97_4.97	289.3	280.91	5306	0.0015	0.05	0.1	0.1	282.41
Chiques Creek	CHC7.47_5.97	300.63	289.3	7937	0.0014	0.05	0.1	0.1	294.96
Chiques Creek	CHC9.40_7.47	311.36	300.63	10111	0.001	0.05	0.1	0.1	306.59
Dellinger Run	DER0.52_0.00	360.1	344.35	2740	0.0057	0.045	0.08	0.08	352.6
Dellinger Run	DER1.10_0.52	372.51	360.08	3053	0.004	0.045	0.08	0.08	369.78
Dellinger Run	DER1.76_1.10	394.64	372.51	3459	0.0064	0.045	0.06	0.06	378.66
Dellinger Run	DER2.22_1.76	411.02	394.64	2429	0.0067	0.045	0.06	0.1	401.13
Dellinger Run	DER2.93_2.22	449.29	411.02	3759	0.0102	0.05	0.12	0.12	429.79
Doe Run Tributary	DORT0.54_0.34	422.6	416.49	1054	0.0057	0.045	0.1	0.1	418.4
Doe Run Tributary	DORT1.15_0.54	444.92	422.6	3213	0.0069	0.045	0.08	0.08	430.04
Doe Run Tributary	DORT1.58_1.15	456.91	444.92	2282	0.0052	0.045	0.065	0.065	444.8
Doe Run Tributary	DORT2.41_1.58	496.59	456.91	4390	0.009	0.05	0.1	0.1	465.3
Doe Run	DOR0.24_0.00	389.91	386.65	1256	0.0025	0.05	0.1	0.1	385.38
Doe Run	DOR0.44_0.24	392.65	389.91	1049	0.0026	0.045	0.065	0.065	390.06
Doe Run	DOR1.21_0.44	402.5	392.65	4058	0.0024	0.045	0.065	0.065	393.16
Doe Run	DOR1.45_1.23	406.92	402.5	1152	0.0038	0.045	0.065	0.065	403
Doe Run	DOR2.40_1.60	427.11	408.3	4227	0.0044	0.045	0.06	0.06	411.52
Doe Run	DOR2.81_2.40	435.99	427.11	2189	0.004	0.045	0.06	0.06	428.75
Doe Run	DOR3.06_2.81	443.23	435.99	1332	0.0054	0.045	0.06	0.06	437.75
Ersiman Run Tributary	ERRT0.57_0.00	359.76	342.15	2989	0.0058	0.04	0.06	0.06	352.3
Ersiman Run Tributary	ERRT1.62_0.61	391.21	359.76	5331	0.0059	0.06	0.06	0.06	368.7
Erisman Run	ERR0.23_0.00	342.15	334.02	1214	0.0067	0.05	0.12	0.12	334.17
Erisman Run	ERR0.88_0.23	365.23	342.15	3291	0.007	0.05	0.06	0.06	348.7
Erisman Run	ERR1.33_0.88	379.61	365.23	2366	0.006	0.04	0.06	0.06	370.13
Landisville Run	LAR0.40_0.00	361.8	337.29	2128	0.0115	0.045	0.06	0.06	349.5
Mill Road Tributary	MRT0.66_0.00	412.27	372.68	3501	0.0113	0.045	0.06	0.06	393.4
Orchard Road Tributary	ORT0.95_0.28	445.15	417.37	3544	0.0078	0.045	0.06	0.06	428.56
Orchard Road Tributary	ORT1.38_0.95	470.28	445.15	2277	0.011	0.05	0.1	0.1	458.16
Orchard Road Tributary	ORT2.04_1.38	516.25	470.28	3485	0.0132	0.045	0.06	0.06	480.97
Rife Run	RIR0.32_0.00	382.68	378.89	1715	0.0022	0.045	0.065	0.065	380
Rife Run	RIR0.65_0.32	388.84	382.68	1723	0.0035	0.045	0.06	0.06	383.8
Rife Run	RIR0.86_0.65	393.04	388.84	1082	0.0038	0.04	0.06	0.06	388.7
Rife Run	RIR1.24_0.86	400.37	393.04	1984	0.0036	0.045	0.1	0.1	394.46
Rife Run	RIR2.60_1.62	434.36	407.43	5188	0.0052	0.05	0.1	0.1	428.98
Rife Run	RIR3.38_2.60	459.35	434.36	4112	0.006	0.06	0.12	0.12	449.6
Shearers Creek Tributary	SHCT1.59_0.00	724.99	502.44	8409	0.0264	0.06	0.12	0.12	559.8

Shearers Creek	SHC0.23_0.00	444.63	442.12	1231	0.002	0.05	0.12	0.12	442.6
Shearers Creek	SHC1.60_0.23	465.8	444.63	7226	0.0029	0.05	0.1	0.1	447.2
Shearers Creek	SHC2.06_1.60	479.89	465.8	2415	0.0058	0.06	0.12	0.12	466.6
Shearers Creek	SHC2.56_2.06	503.73	479.89	2648	0.009	0.06	0.12	0.12	487.55
Shearers Creek	SHC3.11_2.56	626.05	503.73	2886	0.0423	0.06	0.12	0.12	532.75
Shearers Creek	SHC3.92_3.11	698.88	626.05	4297	0.0169	0.06	0.12	0.12	680
Shumaker Road Tributary	SRT1.29_0.50	422.49	406.03	4183	0.0039	0.04	0.05	0.05	413.5
Shumaker Road Tributary	SRT2.06_1.29	441.84	422.49	4085	0.0047	0.045	0.06	0.06	428.1
Shumaker Road Tributary	SRT2.55_2.06	458.6	441.84	2576	0.0065	0.045	0.06	0.06	452.3
Shumaker Road Tributary	SRT3.00_2.55	473.36	458.6	2383	0.0061	0.045	0.06	0.06	465.45
Shumaker Road Tributary	SRT3.38_3.00	495.5	473.36	2018	0.011	0.045	0.06	0.06	484.5
Silver Spring Run Tributary A	SSRTA0.59_0.00	376.59	354.91	3101	0.007	0.045	0.06	0.06	356
Silver Spring Run Tributary	SSRT0.46_0.00	341.99	333.54	2454	0.0034	0.045	0.06	0.06	337.8
Silver Spring Run Tributary	SSRT0.77_0.46	354.91	341.99	1635	0.0079	0.045	0.06	0.06	346.5
Silver Spring Run Tributary	SSRT1.34_0.77	375.18	354.91	2995	0.0068	0.045	0.06	0.06	367
Silver Spring Run	SSR0.22_0.00	313.87	302.57	1174	0.0096	0.05	0.1	0.1	310.32
Silver Spring Run	SSR0.85_0.22	333.54	313.87	3306	0.0059	0.045	0.06	0.06	329.23
Silver Spring Run	SSR1.06_0.87	339.66	333.54	1027	0.0059	0.045	0.06	0.06	335.9
Silver Spring Run	SSR1.71_1.06	359.72	339.66	3419	0.0059	0.045	0.06	0.06	344.7
Silver Spring Run	SSR1.89_1.71	362.72	359.72	969	0.003	0.045	0.06	0.06	361.5
Silver Spring Run	SSR2.33_1.89	375.25	362.72	2343	0.0053	0.045	0.06	0.06	369.9
Silver Spring Run	SSR2.70_2.33	392.7	375.25	1959	0.0089	0.045	0.06	0.06	377.4
Silver Spring Run	SSR3.20_2.70	429.33	392.7	2635	0.0139	0.05	0.1	0.1	392.4
Silver Spring Run	SSR3.70_3.20	465.14	429.33	2651	0.0135	0.06	0.1	0.1	448
White Oak Run	WOR0.32_0.00	428.43	421.04	1687	0.0043	0.045	0.06	0.06	423.6
White Oak Run	WOR0.76_0.32	432.5	428.43	2329	0.0017	0.05	0.1	0.1	426.3
White Oak Run	WOR1.59_0.76	448.91	432.5	4377	0.0037	0.045	0.06	0.06	437
White Oak Run	WOR2.33_1.64	462.58	450.24	3660	0.0033	0.045	0.08	0.08	454.3
White Oak Run	WOR3.67_3.00	523.47	462.58	3480	0.0174	0.045	0.06	0.06	488

Reach:	BER0.64_0.00
RAS XS:	2390
Station	Elevation
0	438.33
337	429.66
472	429.57
475	426.1
485	426.1
487	429.9
619	429.94
837	443.94

Reach:	BER1.05_0.64
RAS XS:	3642
Station	Elevation
0	445.62
396	432.41
499	431.94
502	428.19
512	428.19
515	431.95
605	432.04
868	450.03

Reach:	BER1.30_1.05
RAS XS:	5677
Station	Elevation
0	449.09
1117	438.11
1234	437.96
1241	434.2
1267	434.2
1273	437.85
1364	438.24
1842	457.85

Reach:	BER1.95_1.30
RAS XS:	8729
Station	Elevation
0	465.4
203	457.81
299	457.72
306	454.26
312	454.26
316	457.72
342	461.41
575	473.56

Reach:	BOR.0.10_0.00
RAS XS:	263
Station	Elevation
0	445.96
1226	424.21
1410	423.63
1417	419.57
1427	419.57
1433	423.64
1645	424.03
1912	438.62

Reach:	BOR0.68_0.10
RAS XS:	1659
Station	Elevation
0	435.31
249	427.24
344	427.13
350	422.9
353	422.9
356	427.15
525	427.25
831	437.97

Reach:	BOR1.20_0.68
RAS XS:	5208
Station	Elevation
0	451.73
231	440.5
305	438.95
315	434.92
321	434.92
328	438.77
523	440.18
747	476.64

Reach:	BOR2.07_1.20
RAS XS:	6886
Station	Elevation
0	469.83
144	454.86
251	450.91
258	447.61
274	447.61
277	451.13
327	451.78
365	466.49

Reach:	CHC10.68_9.40
RAS XS:	54365
Station	Elevation
0	349.93
506	340.73
560	322.77
563	318.25
630	318.25
634	322.32
711	323.35
1000	349.37

Reach:	CHC11.99_10.68
RAS XS:	61225
Station	Elevation
0	358.71
367	337.2
458	334.74
462	329
532	329
539	334.7
613	335.27
1036	359.28

Reach:	CHC12.65_12.01
RAS XS:	64523
Station	Elevation
0	361.68
301	338.15
405	336.94
409	329.28
466	329.28
473	336.58
506	338.5
624	357.52

Reach:	CHC13.89_12.67
RAS XS:	71231
Station	Elevation
0	371.64
627	350.2
644	346.18
654	339.62
701	339.62
718	344.99
927	345.35
1341	367.95

Reach:	CHC16.25_13.90
RAS XS:	74414
Station	Elevation
0	372.39
672	353.03
716	350.02
721	344.11
771	344.11
777	350
900	350.15
1259	368.08

Reach:	CHC17.08_16.25
RAS XS:	87247
Station	Elevation
0	373.33
311	364.15
577	363.88
594	357.29
631	357.29
637	363.7
741	364.37
865	373.02

Reach:	CHC17.73_17.08
RAS XS:	92578
Station	Elevation
0	390.5
755	371.13
903	370.25
924	365.8
964	365.8
971	369.9
1085	370.37
1634	384.99

Reach:	CHC18.09_17.73
RAS XS:	94555
Station	Elevation
0	396.46
1406	374.4
1551	373.8
1566	368.42
1605	368.42
1635	373.06
1910	373.88

2110	397

Reach:	CHC18.61_18.09
RAS XS:	97601
Station	Elevation
0	400.15
631	378.84
736	378.14
742	372.83
793	372.83
806	377.48
917	379.68
1011	398.91

Reach:	CHC19.32_18.61
RAS XS:	99577
Station	Elevation
0	435.22
316	381.66
551	380.47
562	374.37
608	374.37
618	380.19
851	380.9
1692	428.54

Reach:	CHC20.02_19.35
RAS XS:	104213
Station	Elevation
0	402.91
269	394.26
293	384.8
300	379.3
334	379.3
344	384.87
566	384.98
1238	399.07

Reach:	CHC20.55_20.02
RAS XS:	106332
Station	Elevation
0	411.55
600	387.8
674	387.7
680	380.5
734	380.5
741	388.12

842	388.2
2168	402.48

Reach:	CHC21.28_20.57
RAS XS:	111366
Station	Elevation
0	401.65
2254	392.28
2412	393.06
2416	388.6
2442	388.6
2449	393.95
2486	394.11
3382	405.1
Reach:	CHC21.59_21.28
RAS XS:	113162
Station	Elevation
0	410.86
678	396.85
866	396.31
890	389.98
913	389.98
926	396.93
1158	399.39
1930	410.41

Reach:	CHC22.01_21.59
RAS XS:	114718
Station	Elevation
0	413.64
758	398.68
939	397.83
949	393.47
973	393.47
980	398.44
1076	399.3
1633	408.46

Reach:	CHC23.04_22.01
RAS XS:	120110
Station	Elevation
0	438.45
724	407.91
1075	406.48
1089	401.8
1120	401.8

1128	407.09
1229	407.28
1780	435.97

Reach:	CHC24.53_23.04
RAS XS:	126630
Station	Elevation
0	450
309	416.69
605	415.46
612	410.28
670	410.28
675	415.64
700	416.21
992	437.23

Reach:	CHC25.53_24.64
RAS XS:	133807
Station	Elevation
0	457.78
626	427.76
854	427.57
861	423.38
882	423.38
884	427.82
978	427.75
1277	451.15

Reach:	CHC26.30_25.53
RAS XS:	137552
Station	Elevation
0	472.62
202	433.18
458	432.86
468	427.83
485	427.83
491	432.71
582	435.61
764	462.11

Reach:	CHC27.38_26.30
RAS XS:	140990
Station	Elevation
0	464.18
238	440.05
459	439.31
463	435.2

486	435.2
490	439.27
564	440.83
715	464.82

Reach:	CHC28.26_27.39
RAS XS:	147403
Station	Elevation
0	465.83
204	451.89
390	451.4
398	445.3
408	445.3
414	451.92
454	452.02
511	462.06

Reach:	CHC28.67_28.31
RAS XS:	151100
Station	Elevation
0	503.07
356	475.43
480	473.84
487	470.17
500	470.17
503	473.99
577	473.99
778	487.96

Reach:	CHC29.91_28.67
RAS XS:	153493
Station	Elevation
0	514.63
472	497.64
486	496.95
493	494.19
506	494.19
509	496.79
607	497.25
845	512.07

Reach:	CHC3.39_1.28
RAS XS:	10819
Station	Elevation
0	303.68
336	266.36
390	264.52

396	256.16
457	256.16
463	264.35
928	268.89
1043	303

Reach:	CHC30.94_29.91
RAS XS:	159327
Station	Elevation
0	565
402	550.17
523	549.21
530	546.32
537	546.32
543	549.68
620	549.69
843	564.68

Reach:	CHC4.62_3.39
RAS XS:	21510
Station	Elevation
0	328
786	283.3
895	282.86
901	276.07
955	276.07
965	282.27
1080	283.27
1445	300.88

Reach:	CHC4.97_4.62
RAS XS:	25270
Station	Elevation
0	328.46
1025	286.97
1126	285.68
1136	278.13
1200	278.13
1213	284.62
1340	285.82
1809	318.57

Reach:	CHC5.97_4.97
RAS XS:	28854
Station	Elevation
0	336.65
306	292.48

340	289.99
350	282.41
404	282.41
417	289.47
461	292.48
548	321.18

Reach:	CHC7.47_5.97
RAS XS:	36517
Station	Elevation
0	392.78
361	306.34
402	300.54
405	294.96
456	294.96
463	301.42
675	302.8
877	328.74

Reach:	CHC9.40_7.47
RAS XS:	45420
Station	Elevation
0	347.92
256	313.59
354	311.84
364	306.59
438	306.59
448	311.67
545	316.88
757	349.68

Reach:	DER0.52_0.00
RAS XS:	1081
Station	Elevation
0	365.83
461	353.55
515	353.18
518	352.6
525	352.6
528	353.39
569	353.48
869	363.89

Reach:	DER1.10_0.52
RAS XS:	5353
Station	Elevation
0	379.39
521	372.51
699	371.97
702	369.78
712	369.78
716	372.37
812	372.56
1243	378.78

Reach:	DER1.76_1.10
RAS XS:	7035
Station	Elevation
0	388
482	383.28
758	382.46
761	378.66
768	378.66
771	381.52
1111	381.71
1510	386.67

Reach:	DER2.22_1.76
RAS XS:	10344
Station	Elevation
0	428.76
451	403.97
528	403.63
531	401.13
541	401.13
545	403.36
658	404.01
894	425.97

Reach:	DER2.93_2.22
RAS XS:	13675
Station	Elevation
0	470.36
212	436.05
293	432.37
297	429.79
303	429.79
310	432.97
337	433.06
434	464.23

Reach:	DOR0.24_0.00
RAS XS:	123
Station	Elevation
0	400.68
504	395.79
558	389.68
567	385.38
584	385.38
587	389.72
610	395.95
970	403.15

Reach:	DOR0.44_0.24
RAS XS:	1919
Station	Elevation
0	406.28
405	393.7
540	391.41
543	390.06
553	390.06
566	394.39
798	395.63
842	400.56

Reach:	DOR1.21_0.44
RAS XS:	3189
Station	Elevation
0	404.29
504	396.65
539	396.12
540	393.16
547	393.16
549	396.39
697	396.49
1371	403.53

Reach:	DOR1.45_1.23
RAS XS:	7152
Station	Elevation
0	414.06
816	407.48
884	407.23
890	403
909	403
912	405.96
1118	407.27
2553	415.34

Reach:	DOR2.40_1.60
RAS XS:	9045
Station	Elevation
0	423.92
516	414.66
662	413.28
668	411.52
681	411.52
685	413.36
735	413.5
1122	425.15

Reach:	DOR2.81_2.40
RAS XS:	13724
Station	Elevation
0	443.28
306	432.26
393	431.7
397	428.75
413	428.75
420	431.21
528	431.33
1200	451.12

Reach:	DOR3.06_2.81
RAS XS:	15348
Station	Elevation
0	447.39
922	440.88
1124	439.23
1127	437.75
1134	437.75
1136	439.39
1430	437.98
2228	450.96

Reach:	DORT0.54_0.34
RAS XS:	2300
Station	Elevation
0	441.14
238	425.16
311	421.71
318	418.4
331	418.4
334	421.6
350	426.07
675	444.67

Reach:	DORT1.15_0.54
RAS XS:	4072
Station	Elevation
0	467.16
255	432.96
352	433.45
356	430.04
364	430.04
365	432.7
411	432.56
522	463.88

Reach:	DORT1.58_1.15
RAS XS:	6800
Station	Elevation
0	479.83
350	449.42
484	447.34
487	444.8
496	444.8
501	447.34
521	455.85
642	474.23

Reach:	DORT2.41_1.58
RAS XS:	n/a
Station	Elevation
0	503
161	467.5
195	467.2
197	465.3
207	465.3
208	467.2
301	467.8
506	499

Reach:	ERR0.23_0.00
RAS XS:	631
Station	Elevation
0	355.85
323	346.24
358	336.09
359	334.17
369	334.17
373	336.15
457	338.27
651	350.2

Reach:	ERR0.88_0.23
RAS XS:	2748
Station	Elevation
0	369.81
191	353.56
318	350.08
321	348.7
324	348.7
331	350.04
364	351.41
528	361.14

Reach:	ERR1.33_0.88
RAS XS:	5561
Station	Elevation
0	386.17
354	370.9
378	370.56
381	370.13
385	370.13
389	370.61
485	370.96
808	379.01

Reach:	ERRT0.57_0.00
RAS XS:	n/a
Station	Elevation
0	359.3
88	354.6
134	353.7
140	352.3
151	352.3
162	353.7
235	354.7
370	363.4

Reach:	ERRT1.62_0.61
RAS XS:	n/a
Station	Elevation
0	380
312	371.5
397	369
404	368.7
424	368.7
454	369
538	371.5
800	380

Reach:	LAR0.40_0.00
RAS XS:	n/a
Station	Elevation
0	363.8
157	353.8
188	352.1
189	349.5
199	349.5
200	352.1
278	352.2
515	363.6

Reach:	MRT0.66_0.00
RAS XS:	n/a
Station	Elevation
0	415.7
175	397.2
315	396.7
316	393.4
323	393.4
324	396.7
444	397.3
541	415.7

Reach:	ORT0.95_0.28
RAS XS:	3001
Station	Elevation
0	474.95
201	432.7
275	431.72
278	428.56
288	428.56
292	430.97
366	432.6
467	458.39

Reach:	ORT1.38_0.95
RAS XS:	6434
Station	Elevation
0	510.99
168	465.29
219	459.81
223	458.16
232	458.16
236	460.23
252	460.33
436	498.18

Reach:	ORT2.04_1.38
RAS XS:	8079
Station	Elevation
0	519.62
269	484.15
306	483.38
314	480.97
323	480.97
326	483.5
400	488.17
555	514.68

Reach:	RIR0.32_0.00
RAS XS:	825
Station	Elevation
0	395
455	386
609	382
612	380
620	380
630	382
720	386
1200	395.33

Reach:	RIR0.65_0.32
RAS XS:	2375
Station	Elevation
0	398.74
283	387.63
780	386.5
786	383.8
799	383.8
803	387.6
910	387.85
1173	402.52

Reach:	RIR0.86_0.65
RAS XS:	3735
Station	Elevation
0	401.8
435	393.18
756	391.6
762	388.7
785	388.7
792	392.12
852	394.05
977	403.99

Reach:	RIR1.24_0.86
RAS XS:	5168
Station	Elevation
0	426.89
256	402.62
417	400.18
444	394.46
463	394.46
487	400.06
674	411.81
694	423.94

Reach:	RIR2.60_1.62
RAS XS:	13011
Station	Elevation
0	466.02
340	432.43
424	430.96
427	428.98
441	428.98
444	431.37
534	432.56
658	463.42

Reach:	RIR3.38_2.60
RAS XS:	16575
Station	Elevation
0	522.31
416	463.12
583	452.18
588	449.6
605	449.6
608	452.25
624	464.14
782	500.76

Reach:	SHC0.23_0.00
RAS XS:	520
Station	Elevation
0	463.59
347	446.11
521	445
525	442.6
539	442.6
546	445.71
606	445.86
885	454.5

Reach:	SHC1.60_0.23
RAS XS:	3552
Station	Elevation
0	472
320	452.33
444	450.94
459	447.2
484	447.2
491	451.05
612	452.84
996	463.44

Reach:	SHC2.06_1.60
RAS XS:	8979
Station	Elevation
0	512.74
396	476.82
406	470.34
409	466.6
426	466.6
433	470.64
612	468.32
922	491.72

Reach:	SHC2.56_2.06
RAS XS:	11594
Station	Elevation
0	523.94
426	497.52
439	490.33
443	487.55
477	487.55
486	491.43
516	492.28
659	545.3

Reach:	SHC3.11_2.56
RAS XS:	14904
Station	Elevation
0	575
258	542.22
326	536.15
332	532.75
348	532.75
351	535.5
398	540
620	560.82

Reach:	SHC3.92_3.11
RAS XS:	n/a
Station	Elevation
0	700
320	687
608	683
610	680
635	680
638	683
744	684
968	707

Reach:	SHCT1.59_0.00
RAS XS:	3235
Station	Elevation
0	581
273	564.9
282	563
289	559.8
315	559.8
320	563.1
328	564.4
691	581.75

Reach:	SRT1.29_0.50
RAS XS:	2251
Station	Elevation
0	446
257	415.75
311	415.6
314	413.5
327	413.5
331	415.57
394	415.58
613	441

Reach:	SRT2.06_1.29
RAS XS:	6097
Station	Elevation
0	477.7
506	430.66
559	431.15
562	428.1
570	428.1
576	430.73
695	432.3
852	466.12

Reach:	SRT2.55_2.06
RAS XS:	10300
Station	Elevation
0	485
335	455.12
361	454.75
368	452.3
374	452.3
381	454.55
408	454.37
600	475

Reach:	SRT3.00_2.55
RAS XS:	12384
Station	Elevation
0	489.12
358	468.04
398	468.56
404	465.45
412	465.45
413	466.91
442	467.39
480	487.17

Reach:	SRT3.38_3.00
RAS XS:	14660
Station	Elevation
0	505
215	488.32
308	487.15
313	484.5
322	484.5
325	486.77
381	487.73
563	509.13

Reach:	SSR0.22_0.00
RAS XS:	934
Station	Elevation
0	335
191	314.16
218	312.88
231	310.32
255	310.32
262	313.68
326	316.75
376	334.46

Reach:	SSR0.85_0.22
RAS XS:	3485
Station	Elevation
0	360
441	331.74
468	331.5
477	329.26
485	329.26
495	331.25
576	332.21
657	348.43

Reach:	SSR1.06_0.87
RAS XS:	5001
Station	Elevation
0	350
530	338.41
654	337.8
658	335.9
671	335.9
678	337.93
782	340.89
1370	349.28

Reach:	SSR1.71_1.06
RAS XS:	7012
Station	Elevation
0	359
442	347.44
583	347.06
590	344.7
596	344.7
599	347.03
710	346.5
871	364.02

Reach:	SSR1.89_1.71
RAS XS:	9500
Station	Elevation
0	375
138	365.18
296	362.7
299	361.5
305	361.5
309	362.45
437	364.23
658	375.11

Reach:	SSR2.33_1.89
RAS XS:	11398
Station	Elevation
0	385
307	373.07
428	372.01
441	369.9
454	369.9
461	371.8
517	372.66
873	386.1

Reach:	SSR2.70_2.33
RAS XS:	12395
Station	Elevation
0	395
299	380.28
349	379.04
355	377.4
359	377.4
366	379.12
403	379.6
700	386.8

Reach:	SSR3.20_2.70
RAS XS:	14096
Station	Elevation
0	406
389	398.21
550	396.9
556	392.4
569	392.4
576	396.15
723	396.5

911	405.29

Reach:	SSR3.70_3.20
RAS XS:	n/a
Station	Elevation
0	475
102	454
160	450
162	448
173	448
175	450
300	452
470	472

Reach:	SSRT0.46_0.00
RAS XS:	801
Station	Elevation
0	345
244	339.25
321	339.3
328	337.8
336	337.8
341	339.45
385	339.62
532	347.17

Reach:	SSRT0.77_0.46
RAS XS:	2956
Station	Elevation
0	355
136	349.2
216	348.45
223	346.5
230	346.5
236	348.56
283	349.79
313	355.13

Reach:	SSRT1.34_0.77
RAS XS:	n/a
Station	Elevation
0	382.7
177	372.7
267	369
270	367
278	367
280	369
402	370
683	382

Reach:	SSRTA0.59_0.00
RAS XS:	n/a
Station	Elevation
0	370.1
158	362
270	358
272	356
276	356
278	358
376	362
608	372

Reach:	WOR0.32_0.00
RAS XS:	1018
Station	Elevation
0	460
239	426.98
250	426.5
255	423.6
262	423.6
266	426.15
433	426.14
628	441.78

Reach:	WOR0.76_0.32
RAS XS:	2334
Station	Elevation
0	446
185	429.15
314	429.43
317	426.3
331	426.3
337	429.3
502	430.72
600	450

Reach:	WOR1.59_0.76
RAS XS:	5889
Station	Elevation
0	464
213	441.8
240	439.4
247	437
260	437
263	439.93
300	440.88
600	465

Reach:	WOR2.33_1.64
RAS XS:	9698
Station	Elevation
0	464
285	455.69
366	455.8
368	454.3
373	454.3
376	456.35
440	456.81
758	468

Reach:	WOR3.67_3.00
RAS XS:	n/a
Station	Elevation
0	502
150	495
265	490
267	488
285	488
287	490
415	495
670	502

Pond: 0 (CHC4.62B)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	42" RCP at 328.24	9.62 sqft orifice at 328.24
2	9.5' weir at 332.99	9.5' weir at 332.99
3	450' dam top at 339.5	450' dam top at 339.5

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
328.24	0	0
329	0.02	0.02
330	0.07	0.09
331	0.22	0.31
332	0.24	0.55
333	0.19	0.74
334	0.18	0.92
335	0.18	1.11
336	0.18	1.29
337	0.17	1.45
338	0.18	1.63
339	0.18	1.81
340	0.18	1.99
341	0.19	2.18
342	0.19	2.37
343	0.24	2.62
344	0.22	2.84

Pond: 1 (CHC4.97C)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	36" CMP at 372.89	7.07 sqft orifice at 372.89
2	4.5' round vortex riser top at 377.89	14.1' weir at 377.89
3	450' dam top at 378.3	450' dam top at 378.3

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
371.9	0	0.000
372	0.00	0.001
373	0.08	0.081
374	0.16	0.242
375	0.10	0.338
376	0.06	0.397
377	0.05	0.448
378	0.07	0.513
379	0.09	0.606
380	0.08	0.690
381	0.06	0.745
382	0.07	0.813

Pond: 2 (CHC4.97B)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	6" orifice plate at 345.66	.20 sqft orifice at 345.66
2	2' x 2' grate top	8.0' weir at 354.03
3	25' earth spillway at 355.78	25' weir at 355.78
4	600' dam top at 358.41	600' dam top at 358.41

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
345.66	0	0
347	0.02	0.02
348	0.19	0.21
349	0.12	0.34
350	0.11	0.45
351	0.12	0.56
352	0.08	0.64
353	0.08	0.72
354	0.08	0.80
355	0.09	0.90
356	0.11	1.01
357	0.13	1.14
358	0.15	1.29
359	0.17	1.46

Pond: 3 (CSSR3.70B)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	Natural Ground	30' weir at 475.0

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
464	0	0
466	3.18	3.18
468	0.54	3.72
470	0.52	4.24
472	0.44	4.68
474	0.45	5.13
476	0.51	5.64

Pond: 4-Lake Grubb (CSSR3.20B)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	6' x 4' RCP ellipse to 6' channel plus 20 ft. natural weir	26' weir at 438.5
2	350' dam top at 442.0	350' dam top at 442.0

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
438.3	0	0
440	16.20	16.20
442	0.83	17.03
444	0.77	17.80
446	0.64	18.44
448	0.66	19.10
450	0.66	19.76

Pond: 5 (SSR2.70D)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	12" CMP at 431.24	.79 sqft orifice at 431.24
2	18" vortex riser top at 432.74	4.7' weir at 432.74
3	194 ft. dam top at 437.0	194 ft. dam top at 437.0

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
431.24	0	0
432	0.01	0.01
433	0.09	0.10
434	0.17	0.28
435	0.22	0.49
436	0.15	0.65
437	0.15	0.80
438	0.21	1.00
439	0.19	1.20
440	0.17	1.37

Pond: 6 -Railroad (SSR2.70E)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	Twin 30" Cast Iron Pipes	Culvert- 50', US 409.7, DS 408.56
2	1300' dam top at 423.0	1300' dam top at 423.0

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
408.56	0	0
410	0.01	0.01
411	0.06	0.07
412	0.70	0.77
413	1.46	2.23
414	1.75	3.98
415	1.78	5.76
416	1.85	7.61
417	1.81	9.42
418	1.84	11.25
419	1.92	13.17
420	1.99	15.17
421	2.31	17.47
424		50.00

Pond: 7 (SSR2.70C)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	15" CMP projecting from fill	Culvert- 50ft., US-421.02, DS-420.95
2	250' dam top at 424.29	250' dam top at 424.29

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
420.95	0	0
421	0.01	0.01
422	0.15	0.16
423	0.11	0.27
424	0.14	0.41
426		2.00

Pond: 8 (SSR2.33B)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	12" RCP at 409.96	.79 sqft orifice at 409.96
2	2.75 grate inlet top at 412.86	8.6' weir at 412.86
3	200 ft. dam top at 414.7	200 ft. dam top at 414.7

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
409.96	0	0
411	0.04	0.04
412	0.37	0.41
413	0.20	0.61
414	0.08	0.69
415	0.06	0.75
416	0.00	2.00

Pond: 9 (SSRT1.34E)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	11' orifice plate at 390.72	.64 sqft orifice at 390.72
2	660 ft. dam top at 398.03	660 ft. dam top at 398.03

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
390.72	0.00	0.00
392	0.04	0.04
393	0.11	0.14
394	0.07	0.21
395	0.07	0.28
396	0.09	0.38
397	0.11	0.49
398	0.18	0.67
399	0.20	0.88
400	0.92	1.80

Pond: 10 (SSRT1.34D)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	4" RCP at 395.47	.09 sqft orifice at 395.47
2	4' x 2' grate inlet top at 398.47	12' weir at 398.47
3	420 ft. dam top at 400.49	420 ft. dam top at 400.49

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
395.47	0	0
396	0.00	0.00
397	0.25	0.25
398	0.19	0.44
399	0.20	0.64
400	0.28	0.92
401	0.37	1.29
402	0.40	1.69
403	0.41	2.10

Pond: 11 (SSRT1.34C)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	24" CMP projecting from fill	Culvert: 24" CMP, 40', US-397.22, DS-396.57
2	900' dam top at 401.18	900' dam top at 401.18

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
396.57	0	0
398	0.02	0.02
399	0.15	0.17
400	0.23	0.40
401	0.31	0.71
402	0.45	1.16
404		5.00

Pond: 12 (SSRT1.34B)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	12" CMP with flared ES	Culvert-12" CMP, 40', US-400.32, DS-399.32
2	450 ft. dam top at 404.83	450 ft. dam top at 404.83

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
399.32	0	0
401	0.00	0.00
402	0.19	0.19
403	0.21	0.40
404	0.16	0.55
405	0.12	0.67
406	0.12	0.80
407	0.10	0.89
408	0.16	1.05

Pond: 13 (SSRT0.77B)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	18" CMP with flared ES	Culvert-18" CMP, 75', US-400.79, DS-400.50
2	18' rip-rap spillway at 403.82	18' weir at 403.82
3	880 ft. dam top at 405.94	880 ft. dam top at 405.94

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
400.5	0	0
402	0.07	0.07
403	0.36	0.43
404	0.38	0.81
405	0.34	1.15
406	0.38	1.53
407	0.43	1.95
408	0.8	2.7

Pond: 14 (SSRTA0.59A)

Data Source: USACE field survey 11/29/16

Outflow Data		
Outflow	Field Data	Model
1	30" CMP with flared ES	Culvert-30" CMP, 45', US-376.75, DS-375.94
2	10' earth spillway at 380.86	10' weir at 380.86
3	300 ft. dam top at 382.41	300 ft. dam top at 382.41

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
375.94	0	0
377	0.00	0.00
378	0.33	0.33
379	0.24	0.58
380	0.13	0.71
381	0.16	0.87
382	0.23	1.09
383	0.4	1.5
384	0.46	1.99
385	0.77	2.76

Pond: 15 (CHC10.68B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	12" CMP at 352.22	0.79 orifice at 352.22
2	50' earth spillway at 358.50	50' weir at 358.50
3	4' x 2' grate top at 358.82	12' weir at 358.82
4	1150 ft. dam top at 360.28	1150 ft. dam top at 360.28

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
352.22	0	0
353	0.01	0.01
354	0.15	0.15
355	0.36	0.51
356	0.43	0.94
357	0.20	1.14
358	0.20	1.34
359	0.2	1.6
360	0.64	2.22
361	0.69	2.90
362	0.45	3.35
363	0.50	3.85
364	0.61	4.46

Pond: 16 (CHC10.68C)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	8" CMP at 355.63	0.35 orifice at 355.63
2	2' x 4' grate at 364.09	12' weir at 364.09
3	100' earth spillway at 365.61	100' weir at 365.61
4	500 ft. dam top at 367.67	500 ft. dam top at 367.67

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
355.63	0	0
356	0.00	0.00
357	0.02	0.02
358	0.09	0.11
359	0.40	0.51
360	0.32	0.83
361	0.27	1.11
362	0.2	1.3
363	0.12	1.40
364	0.11	1.50
365	0.11	1.61
366	0.14	1.75
367	0.12	1.87
368	0.18	2.05
369	0.13	2.18
370	0.10	2.28
371	0.14	2.43

Pond: 17-Great Dane (CHC10.68E)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	15" RCP at 365.29	1.23 orifice at 365.29
2	2' x 4' grate at 376.23	12' weir at 376.23
3	40' earth spillway at 376.28	40' weir at 376.28
4	1000 ft. dam top at 378.76	1000 ft. dam top at 378.76

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
365.29	0	0
366	0.00	0.00
367	0.03	0.03
368	0.23	0.26
369	0.48	0.74
370	0.46	1.20
371	0.34	1.54
372	0.2	1.7
373	0.12	1.81
374	0.11	1.92
375	0.11	2.04
376	0.12	2.16
377	0.15	2.30
378	0.14	2.44
379	0.17	2.61
380	0.31	2.92
381	0.37	3.30

Pond: 18- (CHC10.68D)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	18" RCP at 365.67	1.77 orifice at 365.67
2	12" RCP at 370.40	0.79 orifice at 370.40
3	2' x 4' grate at 372.90	12' weir at 372.90
4	100' earth spillway at 373.63	100' weir at 373.63
5	1030 ft. dam top at 375.96	1000 ft. dam top at 375.96

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
365.67	0	0
367	0.15	0.15
368	0.59	0.74
369	1.07	1.82
370	1.30	3.11
371	0.58	3.69
372	0.23	3.92
373	0.2	4.1
374	0.21	4.31
375	0.18	4.48
376	0.21	4.69
377	0.30	5.00
378	1.08	6.08
379	0.99	7.06

Pond: 19 (ERR0.00B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	1.0' x .76' conc. Box at 351.80	.76 orifice at 351.80
2	8' rip-rap at 354.32	8' weir at 354.32
3	400 ft. dam top at 354.98	400 ft. dam top at 354.98

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
351.8	0	0
353	0.13	0.13
354	0.10	0.23
355	0.12	0.35
356	0.27	0.62
357	0.50	1.13
358	0.27	1.39
359	0.4	1.7

Pond: 20 (ERRT0.00B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	12" RCP at 350.59	0.79 orifice at 350.59
2	2' x 4' grate at 354.20	12' weir at 354.20
3	35' earth spillway at 353.42	35' weir at 353.42
4	420 ft. dam top at 355.06	420 ft. dam top at 355.06

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
350.9	0	0
351	0.00	0.00
352	0.12	0.12
353	0.12	0.24
354	0.07	0.31
355	0.07	0.38
356	0.06	0.44
357	0.0	0.5
358	0.05	0.53
359	0.11	0.64

Pond: 21 (ERR0.23B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	20" RCP at 351.7	2.2 orifice at 351.7
2	3.0' concrete weir at 355.2	3' weir at 355.2
3	4' x 2' grate at 357.2	12' weir at 357.2
4	100' earth spillway at 357.42	100' weir at 357.42
5	460 ft. dam top at 358.99	460 ft. dam top at 355.06

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
351.7	0	0
353	0.02	0.02
354	0.30	0.32
355	0.54	0.86
356	0.42	1.28
357	0.14	1.43
358	0.62	2.04
359	1.5	3.5
360	1.50	5.03
361	1.74	6.77
362	1.94	8.71

Pond: 22 (ERRT0.00C)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	18" RCP at 358.21	1.77 orifice at 358.21
2	270 ft. dam top at 359.43	270 ft. dam top at 359.43

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
356.39	0	0
357	0.09	0.09
358	0.08	0.18
359	0.08	0.26
360	0.04	0.30
361	0.04	0.34
362	0.04	0.38
363	0.0	0.4

Pond: 23 (ERRT0.00D)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	6-1 in openings at 355.9	0.20 orifice at 355.9
2	18" round vortex riser at 357.42	4.7' weir at 357.42
3	15' earth spillway at 358.43	15' weir at 358.43
4	250 ft. dam top at 359.42	250 ft. dam top at 359.42

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
355.9	0	0
356	0.03	0.03
357	0.03	0.06
358	0.03	0.09
359	0.04	0.13
360	0.03	0.16
361	0.02	0.18
362	0.0	0.2

Pond: 24 (ERRT0.00E)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	7" RCP at 357.27	.28+C43 orifice at 357.27
2	8' earth spillway at 360.86	8' weir at 360.86
3	325 ft. dam top at 361.7	325 ft. dam top at 361.7

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
357.27	0	0
358	0.01	0.01
359	0.08	0.09
360	0.11	0.20
361	0.06	0.26
362	0.06	0.31
363	0.07	0.39
364	0.1	0.5

Pond: 25 (ERR1.62B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	8" RCP at 390.91	0.45 orifice at 390.91
2	10" RCP at 392.41	0.54 orifice at 392.41
3	12" RCP at 393.81	0.79 orifice at 393.81
4	4' x 2' grate at 396.21	12' weir at 396.21
5	30' earth spillway at 396.46	30' weir at 396.46
6	840 ft. dam top at 398.45	840 ft. dam top at 398.45

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
390.91	0	0
394	0.85	0.85
396	0.56	1.41
398	0.57	1.98
400	1.28	3.26

Pond: 26 (ERRT1.62C)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	15" RCP with flared ES	Culvert-15" RCP, 78', US-395.68, DS-395.41
2	150 ft. dam top at 400.34	150 ft. dam top at 400.34

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
395.41	0	0
397	0.06	0.06
398	0.34	0.40
399	0.47	0.87
400	0.34	1.21
401	0.16	1.37
402	0.10	1.47
403	0.1	1.5

Pond: 27-Railroad (LAR0.40D)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	36" RCP	Culvert-36" RCP, 110', US-387.29, DS-386.45
2	1000 ft. dam top at 400.0	1000 ft. dam top at 400.0

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
386.45	0	0
388	0.00	0.00
389	0.04	0.04
390	0.55	0.59
391	0.91	1.50
392	1.01	2.51
393	0.90	3.41
394	0.8	4.2
395	1.01	5.22
396	1.21	6.43
400		50.00

Pond: 28 Lancaster Co. Offices (LAR0.40C)

Data Source: USACE field survey 1/10/2017

Outflow Data		
Outflow	Field Data	Model
1	7-1" round orifices at 386.7	0.26 orifice at 386.7
2	8' metal weir at 387.2	8' weir at 387.2
3	20' earth spillway at 389.4	20' weir at 389.4
4	360 ft. dam top at 390.3	360 ft. dam top at 390.3

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
385.2	0	0
386	1.03	1.03
388	0.45	1.48
390	0.16	1.64
392	0.43	2.07
394	0.62	2.69

Pond: 29-Spookynook Sports (LAR0.40B)

Data Source: USACE field survey 1/10/2017

Outflow Data		
Outflow	Field Data	Model
1	6" PVC orifice at 369.0	0.20 orifice at 369.0
2	2.5' x 0.25' concrete box at 374.0	0.625 orifice at 374.0
3	4' x 2' grate top at 375.0	12' weir at 375.0
4	200' earth spillway at 375.9	200' weir at 375.9
5	800 ft. dam top at 377.3	800 ft. dam top at 377.3

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
369	0	0
370	0.21	0.21
372	1.80	2.01
374	0.32	2.33
376	0.26	2.59
378	0.42	3.01

Pond: 30-Yamaha (LAR0.40A)

Data Source: USACE field survey 1/10/2017

Outflow Data		
Outflow	Field Data	Model
1	6" PVC orifice at 368.0	0.20 orifice at 368.0
2	16' earth spillway at 370.5	16' weir at 370.5
3	340 ft. dam top at 372.5	340 ft. dam top at 372.5

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
365	0	0
370	0.28	0.28
372	0.19	0.47
374	0.37	0.84

Pond: 31 (CHC17.08B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	36" RCP at 373.69	7.07 orifice at 373.69
2	Twin 36" RCP at 375.49	14.14' orifice at 375.49
3	4' x 2' grate at 379.33	12' weir at 379.33
4	550' earth spillway at 379.54	550' weir at 379.54
5	3000 ft. dam top at 381.46	3000 ft. dam top at 381.46

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
370.85	0	0
372	4.56	4.56
373	4.64	9.20
374	0.86	10.06
375	0.69	10.75
376	0.64	11.39
377	0.51	11.90
378	0.5	12.4
379	0.43	12.81
380	0.67	13.48
381	1.04	14.52
382	2.64	17.17
383	1.90	19.07
384	3.49	22.56
385	3.82	26.37

Pond: 32 (CHC17.73B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	36" RCP at 377.11	7.07 orifice at 377.11
2	5' x 2' grate top at 385.35	14' weir at 385.35
3	180' earth spillway at 387.99	180' weir at 387.99
4	960 ft. dam top at 390.73	960 ft. dam top at 390.73

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
377.11	0	0
381	2.53	2.53
382	0.14	2.67
383	0.13	2.80
384	0.13	2.93
385	0.13	3.06
386	0.13	3.19
387	0.1	3.3
388	0.33	3.66
389	0.36	4.02
390	0.47	4.49
391	0.67	5.16
392	0.72	5.88
393	0.87	6.75
394	0.91	7.66

Pond: 33 (MRT0.66C)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	4" PVC at 460.21	0.09 orifice at 460.21
2	3" CI at 460.54	0.05 orifice at 460.54
3	7" concrete weir active at 464.29	0.6' weir at 464.29
4	4' x 2' grate at 466.04	12' weir at 466.04
5	100' earth spillway at 466.08	100' weir at 466.08
6	360 ft. dam top at 467.36	360 ft. dam top at 467.36

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
460.21	0	0
462	0.24	0.24
463	0.27	0.51
464	0.11	0.62
465	0.05	0.67
466	0.05	0.72
467	0.07	0.79
468	0.07	0.86
469	0.05	0.91
470	0.04	0.95
471	0.04	1.00
472	0.06	1.05
473	0.08	1.14
474	0.10	1.24

Pond: 34 (MRT0.66B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	2" RCP at 448.89	0.02 orifice at 448.89
2	7.5" RCP at 451.19	0.31 orifice at 451.19
3	4" RCP at 452.19	0.09 orifice at 452.19
4	4' x 2' grate at 454.39	12' weir at 454.39
5	180' earth spillway at 454.48	180' weir at 454.48
6	680 ft. dam top at 456.45	680 ft. dam top at 456.45

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
448.89	0	0
450	0.15	0.15
451	0.66	0.81
452	0.68	1.50
453	0.28	1.78
454	0.10	1.88
455	0.11	1.99
456	0.08	2.07
457	0.10	2.17
458	0.06	2.23
459	0.06	2.23

Pond: 35-Autumn Leaf Estates (RIR3.38B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	24" RCP at 520.56	3.14 sqft orifice at 520.56
2	4' x 2' weir at 524.63	12' weir at 524.63
3	18" RCP at 525.20	1.77 sqft orifice at 525.20
4	250' dam top at 528.15	250' dam top at 528.15

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
520.56	0	0
522	0.11	0.11
523	0.10	0.21
524	0.06	0.26
525	0.04	0.31
526	0.04	0.35
527	0.04	0.39
528	0.05	0.44
529	0.09	0.53
530	0.07	0.60
531	0.06	0.67
532	0.06	0.72
533	0.05	0.78
534	0.05	0.83

Pond: 36 (CHC19.35B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	36" RCP at 380.26	7.1 sq. ft. orifice at 380.26
2	4' x 2' grate at 383.97	12' weir at 383.97
3	650' dam top at 386.92	650' dam top at 386.92

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
380.26	0	0
382	0.10	0.10
383	0.31	0.41
384	0.46	0.87
385	0.46	1.34
386	0.43	1.76
390		5.00

Pond: 37-(DOR0.24B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	9" RCP at 393.37	.44 orifice at 393.37
2	4' x 2' grate top at 395.51	12' weir at 395.51
3	135' spillway at 396.95	135' weir at 396.95
4	920' dam top at 398.50	920' dam top at 398.50

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
392.9	0	0
393	0.00	0.00
394	0.18	0.18
395	1.80	1.98
396	0.35	2.33
397	0.26	2.59
398	0.28	2.87
399	0.83	3.70
400	1.00	4.70

Pond: 38-Railroad (DORT1.21B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	3500' dam top at 413.0	3500' dam top at 413.0

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
408.5	0	0
410	3.29	3.29
412	8.14	11.43
414	8.70	20.13
416	8.90	29.03

Pond: 39-Doe Run Elementary School Basin 1 (DORT0.34B)

Data Source: Harbor Engineering, Inc. Land Development Plan dated April 2016

Outflow Data		
Outflow	Field Data	Model
1	3" circular orifice at 425.5	.05 orifice at 425.5
2	24" x 6" orifice at 427.67	1.0 ft. orifice at 427.67
3	2' x 4' grate top at 429.17	12' weir at 429.17
4	15' rip rap spillway at 429.42	15' weir at 429.42
5	400' dam top at 432.0	400' dam top at 432.0

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
425.5	0	0
426	0.06	0.06
427	0.11	0.17
428	0.05	0.22
430	0.12	0.34
432	0.10	0.44
434	0.08	0.52
437	0.61	1.13

Pond: 40-Brookshire (DORT0.54D)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	12" RCP at 456.92	.79 sqft orifice at 456.92
2	4' x 2' grate at 460.92	12' weir at 460.92
3	250' earth spillway at 461.27	250' weir at 461.27
4	1200' dam top at 463.41	1200' dam top at 463.41

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
456.92	0	0
458	2.89	2.89
459	0.38	3.27
460	0.31	3.58
461	0.23	3.81
462	0.24	4.05
463	0.23	4.28
464	0.24	4.52
465	0.17	4.69
466	0.24	4.52

Pond: 41 (DORT0.54C)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	4" RCP at 474.9	.09 sqft orifice at 474.9
2	7" RCP at 476.4	.26 sq. ft orifice at 476.4
3	4' x 2' grate at 478.4	12' weir at 478.4
4	350' dam top at 479.5	350' dam top at 479.5

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
474.9	0	0
476	0.00	0.00
477	0.12	0.12
478	0.07	0.20
479	0.09	0.28
480	0.12	0.40
481	0.16	0.56
482	0.33	0.89

Pond: 42 (DORT0.54E)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	2" RCP at 452.75	.08 sqft orifice at 452.75
2	3.5' x 2.5' concete box at 455.26	3.5' weir at 455.26
3	6.0' x 2.0' grate at 458.26	16' weir at 458.26
4	150' earth spillway at 460.22	150' weir at 460.22
5	1000' dam top at 462.42	1000' dam top at 462.42

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
452.75	0	0
453	0.02	0.02
454	0.12	0.14
455	0.20	0.34
456	0.11	0.44
457	0.11	0.55
458	0.09	0.64
459	0.09	0.73
460	0.10	0.83
461	0.13	0.96
462	0.11	1.07
463	0.13	1.21
464	0.10	1.30
465	0.10	1.40

Pond: 43 (DORT1.15B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	9" RCP at 513.42	.44 sqft orifice at 513.42
3	4' x 2' grate at 516.67	12' weir at 516.67
4	300' dam top at 517.94	350' dam top at 517.94

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
513.42	0	0
514	0.01	0.01
515	0.15	0.15
516	0.05	0.20
517	0.03	0.23
518	0.04	0.27
519	0.05	0.32
520	0.04	0.36
521	0.03	0.39
522	0.03	0.41

Pond: 44 (DORT2.41B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	8" cast iron pipe at 518.28	2.1 ft weir at 518.28
2	8' rock spillway at 519.11	8' weir at 519.11
3	250' dam top at 521.11	250' dam top at 521.11

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
518.28	0	0
521	3.21	3.21
522	0.37	3.58
523	0.28	3.87
524	0.31	4.18
525	0.33	4.50

Pond: 45 (CHC21.28F)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	42" round weir at 424.44	11.0 ft weir at 424.44
2	45' earth spillway at 429.64	45' weir at 429.64
3	400' dam top at 430.69	400' dam top at 430.69

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
424.44	0	0
425	0.68	0.68
426	0.11	0.79
427	0.07	0.86
428	0.08	0.93
429	0.12	1.05
430	0.16	1.22
431	0.21	1.42
432	0.19	1.61

Pond: 46 (CHC21.28B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	6" RCP at 404.56	.196 sqft orifice at 404.56
2	18" RCP at 406.06	1.77 sqft orifice at 406.06
3	4' x 2' grate at 409.56	12' weir at 409.56
4	30' earth spillway at 409.52	30' weir at 409.52
5	850' dam top at 412.17	850' dam top at 412.17

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
404.56	0	0
406	0.01	0.01
407	0.33	0.34
408	0.16	0.50
409	0.16	0.66
410	0.18	0.84
411	0.18	1.02
412	0.21	1.22
413	0.14	1.37
414	0.06	1.42
415	0.06	1.48

Pond: 47-Manheim Central Middle School (CHC21.59C)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	6" RCP at 399.07	.196 sqft orifice at 399.07
2	2.5 x 2" weir at 404.57	2.5' weir at 404.57
3	4' x 2' grate at 405.57	12' weir at 405.57
4	27' earth spillway at 405.71	27' weir at 405.71
5	750' dam top at 406.84	750' dam top at 406.84

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
399.07	0	0
401	0.11	0.11
402	0.28	0.39
403	0.38	0.77
404	0.29	1.05
405	0.17	1.23
406	0.19	1.42
407	0.45	1.87
408	0.52	2.38

Pond: 48 (CHC22.01B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	2" RCP at 418.96	.08 sq. ft orifice at 418.96
2	4" PVC at 423.87	.09 sq. ft. orifice at 423.87
3	4' x 2' grate at 428.96	12' weir at 428.96
4	150' earth spillway at 429.03	150' weir at 429.03
5	470' dam top at 430.37	470' dam top at 430.37

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
418.96	0	0
421	0.14	0.14
422	0.16	0.30
423	0.07	0.37
424	0.04	0.42
425	0.05	0.47
426	0.04	0.51
427	0.04	0.55
428	0.04	0.59
429	0.06	0.65
430	0.09	0.74
431	0.04	0.78
432	0.03	0.81

Pond: 49-Manheim High School Field (CHC21.59B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	3 4' x 2' grates at 403.0	36' weir at 403.0
2	35' earth spillway at 404.27	35' weir at 404.27
3	850' dam top at 405.16	850' dam top at 405.16

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
403	0	0
404	0.53	0.53
405	0.92	1.45
406	0.66	2.11

Pond: 50 (CHC21.28C)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	3" PVC at 418.91	.049 sqft orifice at 418.91
2	4' x 2' grate at 421.91	12' weir at 421.91
3	10' earth spillway at 422.24	10' weir at 422.24
4	325' dam top at 423.32	325' dam top at 423.32

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
418.91	0	0
419	0.04	0.04
420	0.05	0.09
421	0.04	0.13
422	0.03	0.16
423	0.04	0.21
424	0.09	0.29

Pond: 51 (CHC21.28D)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	12" RCP at 410.44	.785 sq. ft. orifice at 410.44
2	5.4' weir at 412.86	5.4' weir at 412.86
3	4' x 2' grate at 413.44	12' weir at 413.44
4	25' earth spillway at 413.61	25' weir at 413.61
5	900' dam top at 415.01	900' dam top at 415.01

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
410.44	0	0
411	0.02	0.02
412	0.23	0.25
413	0.20	0.45
414	0.18	0.63
415	0.32	0.94
416	0.27	1.21

Pond: 52 (CHC21.28E)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	9" RCP at 421.77	.44 sq. ft. orifice at 421.77
2	4' x 2' grate at 427.97	12' weir at 427.97
3	90' earth spillway at 428.27	90' weir at 428.27
4	425' dam top at 430.08	425' dam top at 430.08

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
421.77	0	0
423	0.12	0.12
424	0.32	0.44
425	0.12	0.56
426	0.04	0.60
427	0.04	0.64
428	0.04	0.68
429	0.05	0.73
430	0.04	0.76
431	0.04	0.80
432	0.02	0.82
433	0.02	0.84
434	0.02	0.85
435	0.02	0.87
436	0.02	0.88
437	0.02	0.90
438	0.02	0.92

Pond: 53 (CHC1.59D)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	12" CMP at 437.51	.785 sqft orifice at 437.51
2	3.5' round CMP weir at 442.01	11' weir at 442.01
3	15' earth spillway at 443.13	15' weir at 443.13
4	460' dam top at 444.21	460' dam top at 444.21

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
437.51	0	0
440	0.19	0.19
441	0.14	0.33
442	0.10	0.43
443	0.11	0.54
444	0.13	0.67
445	0.14	0.81
446	0.12	0.93
447	0.11	1.04
448	0.12	1.16
449	0.12	1.28
450	0.12	1.40
451	0.15	1.55

Pond: 54 (CHC23.04B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	8" round CMP at 439.86	2.07' weir at 439.86
2	18" round CMP at 449.43	4.7' weir at 449.43
3	12' earth spillway at 449.69	12' weir at 449.69
4	300' dam top at 451.70	300' dam top at 451.70

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
439.86	0	0
443	2.78	2.78
444	0.19	2.97
445	0.15	3.12
446	0.14	3.26
447	0.14	3.40
448	0.15	3.55
449	0.15	3.70
450	0.17	3.87
451	0.17	4.04
452	0.18	4.21
453	0.14	4.35
454	0.15	4.50
455	0.16	4.66

Pond: 55 (CHC25.53B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	12" CMP at 471.69	12" CMP culvert, 55 ft. long, US 471.69, DS 467.3
2	15' earth spillway at 475.25	15' weir at 475.25
3	360' dam top at 477.25	360' dam top at 477.25

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
467.3	0	0
473	0.08	0.08
474	0.13	0.20
475	0.10	0.30
476	0.10	0.40
477	0.13	0.54
478	0.14	0.68
479	0.15	0.83
480	0.21	1.04
481	0.19	1.23

Pond: 56 (SSR1.89B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	12" RCP at 428.50	0.79 orifice at 428.50
2	4' x 2' grate at 431.50	12' weir at 431.5
3	550' dam top at 433.99	550' dam top at 433.99

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
428.5	0	0
429	0.01	0.01
430	0.09	0.10
431	0.12	0.23
432	0.14	0.36
433	0.13	0.49
434	0.26	0.75
435	0.54	1.29

Pond: 57 (SSR2.70B)

Data Source: USACE field survey 11/30/16

Outflow Data		
Outflow	Field Data	Model
1	6" x 3" concrete box at 423.50	0.125 orifice at 423.50
2	15" grate at 426.0	3.9' weir at 426.0
3	360' dam top at 426.5	360' dam top at 426.5

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
423.5	0	0
424	0.12	0.12
425	0.15	0.28
426	0.15	0.42
427	0.18	0.60
428	0.17	0.77

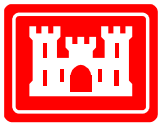
Pond: 58-Doe Run Elementary School Basin 2 (DORT0.54B)

Data Source: Harbor Engineering, Inc. Land Development Plan dated April 2016

Outflow Data		
Outflow	Field Data	Model
1	4" RCP at 445.0	.09 orifice at 445.0
2	18" x 9" orifice at 447.50	1.125 orifice at 447.50
3	2' x 4' grate top at 449.25	12' weir at 449.25
4	50' earth spillway at 449.50	50' weir at 449.50
5	550' dam top at 450.2	550' dam top at 450.2

Elevation-Acreage Data (Source: DEM)		
Elevation	Acreage	Cumulative Acreage
445	0	0
446	0.18	0.18
447	0.12	0.30
448	0.14	0.44
449	0.12	0.56
450	0.56	1.12
452	0.07	1.19

APPENDIX B





Historical Storms HEC-HMS Results

Project: ChiquesCreek Simulation Run: September 2011 Lee

Start of Run: 04Sep2011, 21:00 Basin Model: September 2011 Lee
End of Run: 09Sep2011, 21:00 Meteorologic Model: September 2011 Lee
Compute Time: 05Feb2017, 09:44:21 Control Specifications: September 2011 Lee

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	641.3	08Sep2011, 05:02	6.34
BER0.00A	0.1087	47.8	07Sep2011, 19:07	7.38
BER0.64	1.7391	637.8	08Sep2011, 04:32	6.33
BER0.64A	0.3111	143.9	07Sep2011, 19:03	7.52
BER0.64_0.00	1.7391	626.6	08Sep2011, 05:03	6.27
BER1.05	1.4280	594.1	08Sep2011, 04:23	6.07
BER1.05A	0.2790	121.3	07Sep2011, 19:09	7.38
BER1.05_0.64	1.4280	583.5	08Sep2011, 04:41	6.07
BER1.30	1.1490	502.4	08Sep2011, 04:20	5.76
BER1.30A	0.5289	254.4	08Sep2011, 04:13	6.69
BER1.30_1.05	1.1490	498.3	08Sep2011, 04:28	5.76
BER1.95	0.6201	262.9	08Sep2011, 04:08	4.98
BER1.95A	0.6201	262.9	08Sep2011, 04:08	4.98
BER1.95_1.30	0.6201	260.6	08Sep2011, 04:30	4.96
BOR0.00	6.6030	2778.3	08Sep2011, 04:57	7.01
BOR0.00A	0.0062	2.9	07Sep2011, 19:00	7.52
BOR0.10	6.5968	2841.2	08Sep2011, 04:53	7.01

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	97.6	07Sep2011, 19:14	7.38
BOR0.10_0.00	6.5968	2777.8	08Sep2011, 04:57	7.01
BOR0.68	1.6208	694.8	08Sep2011, 04:32	6.04
BOR0.68A	0.2555	131.4	08Sep2011, 04:13	7.52
BOR0.68_0.10	1.6208	684.5	08Sep2011, 04:54	6.04
BOR1.20	1.3653	596.4	08Sep2011, 04:18	5.77
BOR1.20A	0.5429	244.7	08Sep2011, 04:24	6.97
BOR1.20_0.68	1.3653	590.0	08Sep2011, 04:37	5.76
BOR2.07	0.8224	356.1	08Sep2011, 04:06	4.98
BOR2.07A	0.8224	356.1	08Sep2011, 04:06	4.98
BOR2.07_1.20	0.8224	355.5	08Sep2011, 04:15	4.97
CHC10.68	50.2637	9029.4	08Sep2011, 08:36	7.15
CHC10.68A	0.7377	506.9	07Sep2011, 18:24	8.16
CHC10.68B	0.0477	36.2	07Sep2011, 18:14	8.16
CHC10.68C	0.1180	81.9	07Sep2011, 18:20	7.89
CHC10.68D	0.1638	110.3	07Sep2011, 18:35	9.22
CHC10.68E	0.0528	47.8	07Sep2011, 18:03	9.22
CHC10.68_9.40	50.2637	9018.6	08Sep2011, 08:53	7.15
CHC11.99	49.1437	8967.8	08Sep2011, 08:18	7.13
CHC11.99_10.68	49.1437	8946.2	08Sep2011, 08:47	7.12
CHC12.01	46.4709	8723.4	08Sep2011, 09:12	7.08

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	64.0	07Sep2011, 19:00	6.80
CHC12.65	46.3306	8811.8	08Sep2011, 08:54	7.09
CHC12.65_12.01	46.3306	8719.9	08Sep2011, 09:08	7.08
CHC12.67	45.3853	8762.1	08Sep2011, 08:59	7.09
CHC12.67A	0.5547	178.1	07Sep2011, 19:56	6.93
CHC13.89	44.8306	8777.1	08Sep2011, 08:28	7.10
CHC13.89_12.67	44.8306	8718.4	08Sep2011, 09:02	7.09
CHC13.90	41.9107	8387.2	08Sep2011, 08:38	7.11
CHC13.90A	2.4712	416.1	08Sep2011, 07:48	6.80
CHC16.25	39.4395	8253.9	08Sep2011, 07:16	7.16
CHC16.25A	0.7783	305.7	08Sep2011, 05:00	8.02
CHC16.25_13.90	39.4395	7979.0	08Sep2011, 08:40	7.13
CHC17.08	38.6612	8227.0	08Sep2011, 06:47	7.16
CHC17.08A	0.5852	271.3	08Sep2011, 04:31	8.15
CHC17.08B	0.3448	191.4	08Sep2011, 04:15	9.99
CHC17.08_16.25	38.6612	8108.8	08Sep2011, 07:18	7.15
CHC17.73	37.7312	8129.6	08Sep2011, 06:25	7.13
CHC17.73A	0.3870	196.4	08Sep2011, 04:19	8.29
CHC17.73B	0.0626	40.5	07Sep2011, 19:02	10.24
CHC17.73_17.08	37.7312	8040.8	08Sep2011, 06:48	7.12
CHC18.09	37.2816	8138.2	08Sep2011, 06:11	7.11

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	86.1	08Sep2011, 04:06	7.19
CHC18.09_17.73	37.2816	8060.2	08Sep2011, 06:24	7.11
CHC18.61	36.6951	8158.9	08Sep2011, 05:55	7.11
CHC18.61A	0.5761	307.9	08Sep2011, 04:02	7.33
CHC18.61_18.09	36.6951	8049.8	08Sep2011, 06:11	7.10
CHC19.32	36.1190	8276.9	08Sep2011, 05:30	7.12
CHC19.32_18.61	36.1190	8077.0	08Sep2011, 05:54	7.11
CHC19.35	29.5506	6973.1	08Sep2011, 05:33	7.15
CHC19.35A	0.3523	172.7	08Sep2011, 04:24	8.29
CHC19.35B	0.0175	11.2	07Sep2011, 19:00	9.60
CHC1.28	63.3656	10701.5	08Sep2011, 13:56	7.16
CHC1.28A	0.8402	341.2	07Sep2011, 20:11	8.33
CHC20.02	29.1808	7043.5	08Sep2011, 05:14	7.14
CHC20.02A	0.3588	197.1	08Sep2011, 04:11	8.82
CHC20.02_19.35	29.1808	6894.9	08Sep2011, 05:35	7.14
CHC20.55	28.8220	7291.6	08Sep2011, 04:55	7.12
CHC20.55_20.02	28.8220	6983.9	08Sep2011, 05:15	7.12
CHC20.57	23.2797	5192.6	08Sep2011, 07:35	6.73
CHC20.57A	0.5512	334.2	08Sep2011, 04:49	10.17
CHC21.28	22.7285	5231.3	08Sep2011, 06:54	6.66
CHC21.28A	0.3509	265.0	08Sep2011, 04:15	10.31

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	15.7	08Sep2011, 04:00	10.96
CHC21.28C	0.0073	5.5	08Sep2011, 04:13	9.63
CHC21.28D	0.0224	18.3	08Sep2011, 04:00	9.90
CHC21.28E	0.0497	38.3	08Sep2011, 04:00	8.50
CHC21.28F	0.1457	114.7	08Sep2011, 04:00	8.93
CHC21.28_20.57	22.7285	5070.3	08Sep2011, 07:36	6.65
CHC21.59	22.1338	5254.3	08Sep2011, 06:38	6.58
CHC21.59A	0.2001	153.4	08Sep2011, 04:07	9.35
CHC21.59B	0.0256	21.3	08Sep2011, 04:00	10.57
CHC21.59C	0.0275	22.8	08Sep2011, 04:00	10.31
CHC21.59D	0.0896	71.8	08Sep2011, 04:00	9.35
CHC21.59_21.28	22.1338	5116.4	08Sep2011, 06:54	6.58
CHC22.01	21.7910	5354.7	08Sep2011, 06:17	6.54
CHC22.01A	1.2726	595.0	07Sep2011, 19:00	7.38
CHC22.01B	0.0456	37.0	08Sep2011, 04:00	9.63
CHC22.01_21.59	21.7910	5187.7	08Sep2011, 06:38	6.54
CHC23.04	20.4728	5238.6	08Sep2011, 05:42	6.49
CHC23.04A	1.8763	576.1	07Sep2011, 19:57	7.25
CHC23.04B	0.2164	100.8	07Sep2011, 19:04	7.65
CHC23.04_22.01	20.4728	5082.1	08Sep2011, 06:16	6.48
CHC24.53	18.3801	5081.8	08Sep2011, 04:57	6.40

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	4745.6	08Sep2011, 05:45	6.40
CHC24.63	18.3801	5081.8	08Sep2011, 04:57	6.40
CHC24.64	11.7771	2736.6	07Sep2011, 21:45	6.06
CHC24.64A	0.2517	78.5	07Sep2011, 19:41	6.56
CHC25.53	11.5254	2920.4	07Sep2011, 21:04	6.10
CHC25.53A	0.6693	266.2	07Sep2011, 19:19	7.25
CHC25.53B	0.0163	7.2	07Sep2011, 19:00	6.84
CHC25.53_24.64	11.5254	2718.3	07Sep2011, 21:45	6.05
CHC26.30	10.8398	2920.9	07Sep2011, 20:41	6.04
CHC26.30A	0.8065	219.4	07Sep2011, 20:16	7.11
CHC26.30_25.53	10.8398	2878.8	07Sep2011, 21:06	6.03
CHC27.38	10.0333	2911.1	07Sep2011, 19:58	5.99
CHC27.38_26.30	10.0333	2713.7	07Sep2011, 20:43	5.96
CHC27.39	3.5391	1042.3	07Sep2011, 19:32	6.17
CHC27.39A	0.3314	154.8	07Sep2011, 18:27	6.98
CHC28.26	3.2077	962.9	07Sep2011, 19:03	6.10
CHC28.26_27.39	3.2077	948.5	07Sep2011, 19:39	6.09
CHC28.31	3.2077	962.9	07Sep2011, 19:03	6.10
CHC28.31A	0.0950	52.5	07Sep2011, 18:03	6.98
CHC28.31B	0.7915	366.5	07Sep2011, 18:26	6.85
CHC28.67	2.3212	650.3	07Sep2011, 19:10	5.81

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	265.3	07Sep2011, 18:26	5.76
CHC28.67_28.31	2.3212	649.9	07Sep2011, 19:20	5.81
CHC29.91	1.6558	493.5	07Sep2011, 19:13	5.85
CHC29.91A	0.6097	239.6	07Sep2011, 18:21	5.48
CHC29.91_28.67	1.6558	491.5	07Sep2011, 19:55	5.83
CHC30.94	1.0461	339.2	07Sep2011, 19:08	6.07
CHC30.94A	1.0461	339.2	07Sep2011, 19:08	6.07
CHC30.94_29.91	1.0461	338.5	07Sep2011, 19:43	6.07
CHC3.39	62.5254	10641.8	08Sep2011, 13:11	7.14
CHC3.39A	1.8419	1525.8	07Sep2011, 18:20	8.18
CHC3.39_1.28	62.5254	10602.7	08Sep2011, 13:56	7.14
CHC4.62	60.6835	10677.6	08Sep2011, 13:09	7.15
CHC4.62A	0.1505	155.7	07Sep2011, 18:03	8.62
CHC4.62B	0.1946	169.8	07Sep2011, 18:06	7.16
CHC4.62_3.39	60.6835	10415.1	08Sep2011, 13:17	7.11
CHC4.97	60.3384	10671.3	08Sep2011, 13:05	7.15
CHC4.97A	0.4693	283.8	07Sep2011, 18:58	8.33
CHC4.97B	0.0580	53.5	07Sep2011, 18:05	7.56
CHC4.97C	0.2012	178.9	07Sep2011, 18:01	6.90
CHC4.97_4.62	60.3384	10625.5	08Sep2011, 13:11	7.15
CHC5.97	59.6099	10576.1	08Sep2011, 12:49	7.15

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	534.5	07Sep2011, 18:39	6.98
CHC5.97_4.97	59.6099	10556.5	08Sep2011, 13:06	7.14
CHC7.47	58.4785	10387.7	08Sep2011, 12:11	7.16
CHC7.47_5.97	58.4785	10313.5	08Sep2011, 12:50	7.15
CHC7.48	53.6341	9542.3	08Sep2011, 09:16	7.19
CHC7.48A	2.2128	615.5	07Sep2011, 21:47	8.40
CHC9.40	51.4213	9088.1	08Sep2011, 08:15	7.14
CHC9.40A	1.1576	503.7	07Sep2011, 18:55	6.98
CHC9.40_7.47	51.4213	9055.1	08Sep2011, 09:18	7.14
DER0.00	2.9199	1097.8	07Sep2011, 19:52	7.04
DER0.00A	0.1924	85.3	07Sep2011, 19:01	6.67
DER0.52	2.7275	1090.9	07Sep2011, 19:37	7.06
DER0.52A	0.5165	228.5	07Sep2011, 19:06	6.93
DER0.52_0.00	2.7275	1086.2	07Sep2011, 19:52	7.06
DER1.10	2.2110	965.0	07Sep2011, 19:22	7.16
DER1.10A	0.3712	199.1	08Sep2011, 04:08	8.02
DER1.10_0.52	2.2110	955.1	07Sep2011, 19:47	7.10
DER1.76	1.8398	791.8	07Sep2011, 19:07	7.02
DER1.76A	0.5078	260.3	08Sep2011, 04:08	7.33
DER1.76_1.10	1.8398	790.3	07Sep2011, 19:28	6.98
DER2.22	1.3320	568.6	07Sep2011, 18:44	6.91

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	291.6	07Sep2011, 18:44	6.73
DER2.22_1.76	1.3320	567.7	07Sep2011, 18:58	6.91
DER2.93	0.6085	277.8	07Sep2011, 18:23	7.13
DER2.93A	0.6085	277.8	07Sep2011, 18:23	7.13
DER2.93_2.22	0.6085	277.0	07Sep2011, 18:43	7.12
DORT0.34	1.6920	1222.5	08Sep2011, 04:12	8.85
DORT0.34A	0.0357	27.9	08Sep2011, 04:00	8.79
DORT0.34B	0.0234	18.2	08Sep2011, 04:00	8.64
DORT0.54	1.6329	1203.1	08Sep2011, 04:12	8.85
DORT0.54A	0.2058	159.3	08Sep2011, 04:03	8.93
DORT0.54B	0.0280	20.2	08Sep2011, 04:00	7.46
DORT0.54C	0.0058	4.7	08Sep2011, 04:00	9.90
DORT0.54D	0.0832	63.9	08Sep2011, 04:06	9.21
DORT0.54E	0.0367	28.8	08Sep2011, 04:00	8.79
DORT0.54_0.34	1.6329	1201.0	08Sep2011, 04:16	8.85
DORT1.15	1.2734	954.3	08Sep2011, 04:06	8.86
DORT1.15A	0.4022	316.6	08Sep2011, 04:01	9.07
DORT1.15B	0.0103	8.7	08Sep2011, 04:00	11.09
DORT1.15_0.54	1.2734	951.7	08Sep2011, 04:19	8.85
DORT1.58	0.8609	645.2	08Sep2011, 04:07	8.74
DORT1.58A	0.4931	375.9	08Sep2011, 04:04	8.79

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	643.9	08Sep2011, 04:18	8.73
DORT2.41	0.3678	282.1	08Sep2011, 04:03	8.74
DORT2.41A	0.2384	183.6	08Sep2011, 04:01	8.64
DORT2.41B	0.1294	101.2	08Sep2011, 04:01	8.93
DORT2.41_1.58	0.3678	280.6	08Sep2011, 04:31	8.67
DOR0.00	5.5423	3437.4	08Sep2011, 04:56	8.77
DOR0.00A	0.0475	27.3	08Sep2011, 04:02	8.56
DOR0.24	5.4948	3507.0	08Sep2011, 04:46	8.79
DOR0.24A	0.1218	68.5	08Sep2011, 04:02	8.15
DOR0.24B	0.1287	71.1	08Sep2011, 04:06	8.29
DOR0.24_0.00	5.4948	3432.8	08Sep2011, 04:56	8.78
DOR0.44A	0.5212	389.3	08Sep2011, 04:11	9.21
DOR0.44_0.24	5.2443	3436.3	08Sep2011, 04:47	8.82
DOR1.21	4.7231	3253.9	08Sep2011, 04:19	8.77
DOR1.21A	0.2430	173.3	08Sep2011, 04:18	9.21
DOR1.21B	0.2037	160.3	08Sep2011, 04:01	9.07
DOR1.21_0.44	4.7231	3169.8	08Sep2011, 04:46	8.77
DOR1.23	4.2764	2953.0	08Sep2011, 04:23	8.87
DOR1.23A	0.2095	164.4	08Sep2011, 04:04	9.35
DOR1.45	4.0669	2823.6	08Sep2011, 04:18	8.84
DOR1.45_1.23	4.0669	2814.4	08Sep2011, 04:25	8.84

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	1612.7	08Sep2011, 04:22	8.84
DOR1.60A	0.5501	420.7	08Sep2011, 04:05	8.93
DOR2.40	1.8248	1302.7	08Sep2011, 04:21	8.82
DOR2.40A	0.4594	339.9	08Sep2011, 04:10	8.93
DOR2.40_1.60	1.8248	1296.1	08Sep2011, 04:42	8.81
DOR2.81	1.3654	980.8	08Sep2011, 04:15	8.78
DOR2.81A	0.2367	182.3	08Sep2011, 04:06	9.21
DOR2.81_2.40	1.3654	977.3	08Sep2011, 04:27	8.78
DOR3.06	1.1287	805.2	08Sep2011, 04:10	8.69
DOR3.06A	0.3648	278.1	08Sep2011, 04:04	8.79
DOR3.06B	0.7639	532.9	08Sep2011, 04:17	8.64
DOR3.06_2.81	1.1287	804.1	08Sep2011, 04:18	8.69
DOR.44	5.2443	3449.7	08Sep2011, 04:42	8.82
ERRR0.57_0.00	1.1576	742.6	07Sep2011, 18:45	8.05
ERRT0.00	1.2906	816.7	07Sep2011, 18:43	8.14
ERRT0.00A	0.1098	84.8	07Sep2011, 18:17	8.83
ERRT0.00B	0.0077	4.0	07Sep2011, 19:00	8.21
ERRT0.00C	0.0074	7.2	07Sep2011, 18:00	10.11
ERRT0.00D	0.0036	3.5	07Sep2011, 18:00	10.11
ERRT0.00E	0.0045	4.4	07Sep2011, 18:00	10.11
ERRT0.57	1.1576	746.0	07Sep2011, 18:33	8.05

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	143.9	07Sep2011, 19:04	8.03
ERRT0.61	0.8788	624.3	07Sep2011, 18:31	8.06
ERRT0.61A	0.4551	293.2	07Sep2011, 18:31	8.16
ERRT1.62	0.4237	336.7	07Sep2011, 18:03	7.95
ERRT1.62A	0.1546	115.2	07Sep2011, 18:10	7.62
ERRT1.62B	0.2547	218.3	07Sep2011, 18:00	8.03
ERRT1.62C	0.0144	14.0	07Sep2011, 18:00	10.11
ERRT1.62_0.61	0.4237	331.2	07Sep2011, 18:31	7.94
ERR0.00	2.6728	1663.4	07Sep2011, 18:47	7.95
ERR0.00A	0.0718	31.4	07Sep2011, 19:01	6.53
ERR0.00B	0.0053	2.9	07Sep2011, 19:00	9.08
ERR0.23	2.5957	1634.2	07Sep2011, 18:42	7.99
ERR0.23A	0.1922	148.7	07Sep2011, 18:07	7.62
ERR0.23B	0.0298	28.5	07Sep2011, 18:00	9.73
ERR0.23_0.00	2.5957	1629.6	07Sep2011, 18:47	7.98
ERR0.26	1.3051	818.6	07Sep2011, 18:40	7.83
ERR0.88	1.0831	727.0	07Sep2011, 18:29	7.82
ERR0.88A	0.5048	308.0	07Sep2011, 18:34	7.89
ERR0.88_0.23	1.0831	723.6	07Sep2011, 18:43	7.82
ERR1.33	0.5783	426.1	07Sep2011, 18:13	7.76
ERR1.33A	0.5783	426.1	07Sep2011, 18:13	7.76

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	424.2	07Sep2011, 18:26	7.76
LAR0.00	0.9453	362.4	07Sep2011, 19:30	7.12
LAR0.00A	0.5827	206.8	07Sep2011, 19:42	7.06
LAR0.40	0.3626	160.9	07Sep2011, 19:12	7.23
LAR0.40A	0.0039	2.1	07Sep2011, 19:00	9.20
LAR0.40B	0.1091	57.8	07Sep2011, 19:02	8.71
LAR0.40C	0.1251	57.6	07Sep2011, 19:03	7.06
LAR0.40D	0.1245	55.0	07Sep2011, 19:02	6.67
LAR0.40_0.00	0.3626	160.4	07Sep2011, 19:24	7.23
MRT0.00	0.4202	226.0	08Sep2011, 04:07	7.77
MRT0.00A	0.1647	89.6	08Sep2011, 04:03	7.61
MRT0.66	0.2555	137.7	08Sep2011, 04:01	7.88
MRT0.66A	0.2030	114.1	08Sep2011, 04:00	7.88
MRT0.66B	0.0376	21.4	07Sep2011, 19:00	8.02
MRT0.66C	0.0149	8.8	07Sep2011, 19:00	8.42
MRT0.66_0.00	0.2555	137.2	08Sep2011, 04:08	7.88
ORT0.28	0.7836	353.5	07Sep2011, 18:26	6.74
ORT0.28A	0.1786	83.1	07Sep2011, 18:08	6.59
ORT0.95	0.6050	281.2	07Sep2011, 18:11	6.79
ORT0.95A	0.1851	88.7	07Sep2011, 18:03	6.59
ORT0.95_0.28	0.6050	279.8	07Sep2011, 18:30	6.78

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	199.6	07Sep2011, 18:09	6.87
ORT1.38A	0.1910	92.6	07Sep2011, 18:04	6.73
ORT1.38_0.95	0.4199	199.3	07Sep2011, 18:19	6.87
ORT2.04	0.2289	110.9	07Sep2011, 18:10	6.99
ORT2.04A	0.2289	110.9	07Sep2011, 18:10	6.99
ORT2.04_1.38	0.2289	110.8	07Sep2011, 18:19	6.99
Pond 0	0.1946	156.3	07Sep2011, 18:16	7.17
Pond 1	0.2012	178.8	07Sep2011, 18:02	6.89
Pond 10	0.0122	4.4	08Sep2011, 03:03	6.85
Pond 11	0.0236	14.2	07Sep2011, 18:04	6.85
Pond 12	0.0172	4.6	07Sep2011, 19:04	6.85
Pond 13	0.0603	34.8	07Sep2011, 18:10	6.71
Pond 14	0.1379	74.7	07Sep2011, 18:18	6.85
Pond 15	0.0477	9.3	07Sep2011, 19:39	8.16
Pond 16	0.3346	117.8	07Sep2011, 18:26	8.75
Pond 17	0.0528	14.5	07Sep2011, 19:15	9.22
Pond 18	0.1638	30.6	07Sep2011, 20:18	9.22
Pond 19	0.0053	2.9	07Sep2011, 19:01	9.08
Pond 2	0.0580	35.7	07Sep2011, 18:26	7.56
Pond 20	0.0077	4.0	07Sep2011, 19:00	8.21
Pond 21	0.0298	23.2	07Sep2011, 18:05	9.73

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	6.7	07Sep2011, 18:02	9.66
Pond 23	0.0036	3.5	07Sep2011, 18:00	10.11
Pond 24	0.0045	2.2	07Sep2011, 18:08	10.10
Pond 25	0.2547	217.2	07Sep2011, 18:01	8.03
Pond 26	0.0144	7.5	07Sep2011, 18:07	10.11
Pond 27	0.1245	49.2	07Sep2011, 19:14	6.66
Pond 28	0.1251	53.9	07Sep2011, 19:14	6.92
Pond 29	0.1091	56.6	07Sep2011, 19:10	8.22
Pond 3	0.1861	35.5	08Sep2011, 11:30	1.66
Pond 30	0.0039	1.4	07Sep2011, 19:03	7.86
Pond 31	0.3448	124.0	08Sep2011, 04:55	9.26
Pond 32	0.0626	35.6	08Sep2011, 04:11	10.24
Pond 33	0.0149	3.6	08Sep2011, 04:14	8.42
Pond 34	0.0376	20.5	08Sep2011, 04:03	7.65
Pond 35	0.0294	13.2	07Sep2011, 19:00	6.97
Pond 36	0.0175	11.2	07Sep2011, 19:00	9.61
Pond 37	0.1287	68.8	08Sep2011, 04:16	8.29
Pond 38	0.2037	160.1	08Sep2011, 04:03	6.21
Pond 39	0.0234	18.2	08Sep2011, 04:01	8.64
Pond 4	0.2023	133.7	07Sep2011, 18:15	6.52
Pond 40	0.0832	61.1	08Sep2011, 04:19	9.21

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	4.2	08Sep2011, 04:09	9.90
Pond 42	0.0367	28.3	08Sep2011, 04:02	8.79
Pond 43	0.0103	8.7	08Sep2011, 04:00	11.09
Pond 44	0.1294	99.3	08Sep2011, 04:07	8.93
Pond 45	0.1457	114.3	08Sep2011, 04:02	8.93
Pond 46	0.0187	13.7	08Sep2011, 04:03	10.96
Pond 47	0.0275	22.5	08Sep2011, 04:03	10.31
Pond 48	0.0456	37.0	08Sep2011, 04:00	9.52
Pond 49	0.0256	21.3	08Sep2011, 04:00	10.57
Pond 5	0.0343	28.8	07Sep2011, 18:04	6.62
Pond 50	0.0073	5.4	08Sep2011, 04:18	9.63
Pond 51	0.0721	56.5	08Sep2011, 04:01	8.94
Pond 52	0.0497	38.2	08Sep2011, 04:01	8.50
Pond 53	0.0896	71.7	08Sep2011, 04:01	9.35
Pond 54	0.2164	61.8	07Sep2011, 19:30	7.65
Pond 55	0.0163	5.2	07Sep2011, 19:05	6.70
Pond 56	0.0231	18.4	07Sep2011, 18:01	9.28
Pond 57	0.0112	3.5	08Sep2011, 03:04	6.98
Pond 58	0.0280	20.1	08Sep2011, 04:02	7.46
Pond 6	0.4472	126.8	07Sep2011, 19:19	7.30
Pond 7	0.0064	3.6	07Sep2011, 18:13	9.39

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	20.0	07Sep2011, 18:07	6.85
Pond 9	0.0281	7.4	07Sep2011, 19:08	6.85
RIR0.00	6.5684	2436.5	07Sep2011, 19:40	6.96
RIR0.00A	0.0647	36.0	08Sep2011, 04:11	9.22
RIR0.32	6.5037	2437.2	07Sep2011, 19:29	6.94
RIR0.32A	0.5587	232.2	07Sep2011, 18:39	6.86
RIR0.32_0.00	6.5037	2408.8	07Sep2011, 19:41	6.94
RIR0.65	5.9450	2248.2	07Sep2011, 19:23	6.95
RIR0.65A	0.1896	100.4	07Sep2011, 18:01	7.39
RIR0.65_0.32	5.9450	2244.0	07Sep2011, 19:32	6.95
RIR0.86	5.7554	2233.8	07Sep2011, 19:19	6.94
RIR0.86A	0.2984	132.5	07Sep2011, 18:23	6.86
RIR0.86_0.65	5.7554	2230.3	07Sep2011, 19:25	6.94
RIR1.24	5.4570	2135.1	07Sep2011, 19:12	6.94
RIR1.24A	0.0980	47.4	07Sep2011, 18:01	6.59
RIR1.24_0.86	5.4570	2127.8	07Sep2011, 19:21	6.94
RIR1.34	5.3590	2118.9	07Sep2011, 19:16	6.95
RIR1.52	4.5754	1835.9	07Sep2011, 19:21	6.99
RIR1.62	1.8861	732.5	07Sep2011, 19:35	7.19
RIR1.62A	0.5008	206.6	07Sep2011, 19:16	7.38
RIR2.60	1.3853	567.1	07Sep2011, 19:11	7.13

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	141.4	07Sep2011, 19:02	7.25
RIR2.60_1.62	1.3853	558.0	07Sep2011, 19:45	7.12
RIR3.38	1.0728	447.4	07Sep2011, 19:04	7.11
RIR3.38A	1.0434	438.6	07Sep2011, 19:10	7.11
RIR3.38B	0.0294	13.2	07Sep2011, 19:00	6.97
RIR3.38_2.60	1.0728	443.5	07Sep2011, 19:21	7.10
SHCT0.00	3.0470	1132.5	08Sep2011, 04:21	5.69
SHCT0.00A	0.9966	297.8	07Sep2011, 19:03	5.38
SHCT1.59	2.0504	931.6	08Sep2011, 04:11	5.84
SHCT1.59A	2.0504	931.6	08Sep2011, 04:11	5.84
SHCT1.59_0.00	2.0504	931.1	08Sep2011, 04:22	5.84
SHC0.00	6.4942	1956.9	07Sep2011, 20:09	5.89
SHC0.00A	0.0458	19.3	07Sep2011, 19:03	6.70
SHC0.23	6.4484	1976.1	07Sep2011, 19:58	5.89
SHC0.23A	0.6386	260.3	07Sep2011, 19:00	7.12
SHC0.23_0.00	6.4484	1954.5	07Sep2011, 20:09	5.89
SHC1.60	5.8098	1838.0	07Sep2011, 19:20	5.78
SHC1.60A	0.2628	137.7	07Sep2011, 18:04	6.58
SHC1.60_0.23	5.8098	1792.6	07Sep2011, 20:04	5.76
SHC2.06	5.5470	1796.7	07Sep2011, 19:13	5.74
SHC2.06A	0.2828	90.5	08Sep2011, 01:05	5.10

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	1789.4	07Sep2011, 19:24	5.74
SHC2.56	5.2642	1724.3	07Sep2011, 19:09	5.78
SHC2.56A	0.4506	155.7	07Sep2011, 18:27	6.21
SHC2.56_2.06	5.2642	1722.4	07Sep2011, 19:15	5.78
SHC3.11	1.7666	559.4	07Sep2011, 19:01	5.81
SHC3.11A	0.2775	116.6	07Sep2011, 18:02	7.29
SHC3.11_2.56	1.7666	559.4	07Sep2011, 19:05	5.81
SHC3.92	1.4891	454.8	07Sep2011, 19:03	5.54
SHC3.92A	0.6934	208.8	08Sep2011, 01:14	5.24
SHC3.92B	0.7957	251.4	07Sep2011, 19:04	5.80
SHC3.92_3.11	1.4891	454.7	07Sep2011, 19:11	5.54
SRT0.50	2.6893	1143.8	07Sep2011, 19:10	6.84
SRT0.50A	0.4294	172.5	07Sep2011, 18:52	6.86
SRT1.29	2.2599	977.3	07Sep2011, 18:55	6.86
SRT1.29A	0.3191	127.3	07Sep2011, 18:48	6.73
SRT1.29_0.50	2.2599	974.4	07Sep2011, 19:11	6.84
SRT2.06	1.9408	853.3	07Sep2011, 18:36	6.89
SRT2.06A	0.4839	213.0	07Sep2011, 18:28	6.99
SRT2.06_1.29	1.9408	850.4	07Sep2011, 18:55	6.89
SRT2.55	1.4569	643.7	07Sep2011, 18:29	6.86
SRT2.55A	0.3465	164.1	07Sep2011, 18:11	6.86

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	642.9	07Sep2011, 18:38	6.86
SRT3.00	1.1104	496.6	07Sep2011, 18:23	6.86
SRT3.00A	0.7468	328.0	07Sep2011, 18:25	6.86
SRT3.00_2.55	1.1104	495.7	07Sep2011, 18:33	6.86
SRT3.38	0.3636	169.2	07Sep2011, 18:14	6.86
SRT3.38A	0.3636	169.2	07Sep2011, 18:14	6.86
SRT3.38_3.00	0.3636	169.0	07Sep2011, 18:21	6.86
SSRTA0.00	0.4007	208.6	07Sep2011, 18:25	7.02
SSRTA0.00A	0.2628	154.1	07Sep2011, 18:15	7.11
SSRTA0.59	0.1379	74.7	07Sep2011, 18:18	6.85
SSRTA0.59A	0.1379	86.2	07Sep2011, 18:04	6.85
SSRTA0.59_0.00	0.1379	73.6	07Sep2011, 18:40	6.84
SSRT0.00	1.3182	678.2	07Sep2011, 18:31	6.92
SSRT0.00A	0.2236	124.6	07Sep2011, 18:17	6.85
SSRT0.46	1.0946	570.9	07Sep2011, 18:18	6.94
SSRT0.46A	0.1893	120.4	07Sep2011, 18:04	6.98
SSRT0.46_0.00	1.0946	565.9	07Sep2011, 18:34	6.94
SSRT0.77	0.9053	476.6	07Sep2011, 18:17	6.93
SSRT0.77A	0.2520	148.2	07Sep2011, 18:13	6.98
SSRT0.77B	0.0603	37.9	07Sep2011, 18:02	6.71
SSRT0.77_0.46	0.9053	475.9	07Sep2011, 18:25	6.93

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	94.4	07Sep2011, 18:05	6.77
SSRT1.34A	0.1112	68.0	07Sep2011, 18:05	6.71
SSRT1.34B	0.0172	11.2	07Sep2011, 18:00	6.85
SSRT1.34C	0.0236	15.4	07Sep2011, 18:00	6.85
SSRT1.34D	0.0122	7.9	07Sep2011, 18:00	6.85
SSRT1.34E	0.0281	18.1	07Sep2011, 18:01	6.85
SSRT1.34_0.77	0.1923	93.4	07Sep2011, 18:26	6.77
SSR0.00	4.8444	2327.1	07Sep2011, 18:58	6.81
SSR0.00A	0.0601	39.0	07Sep2011, 18:00	6.85
SSR0.22	4.7843	2310.1	07Sep2011, 18:55	6.81
SSR0.22A	0.2501	160.7	07Sep2011, 18:09	7.37
SSR0.22_0.00	4.7843	2308.5	07Sep2011, 18:58	6.81
SSR0.85	4.5342	2225.2	07Sep2011, 18:46	6.78
SSR0.85_0.22	4.5342	2219.7	07Sep2011, 18:56	6.78
SSR0.87	3.2160	1591.6	07Sep2011, 18:50	6.72
SSR0.87A	0.3806	187.4	07Sep2011, 18:33	6.98
SSR1.06	2.8354	1417.5	07Sep2011, 18:47	6.69
SSR1.06A	0.2647	155.7	07Sep2011, 18:13	6.98
SSR1.06_0.87	2.8354	1415.8	07Sep2011, 18:52	6.69
SSR1.71	2.5707	1317.3	07Sep2011, 18:34	6.66
SSR1.71A	0.3665	185.9	07Sep2011, 18:34	7.24

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	1312.7	07Sep2011, 18:49	6.66
SSR1.89	2.2042	1135.6	07Sep2011, 18:28	6.56
SSR1.89A	0.3178	185.7	07Sep2011, 18:17	7.24
SSR1.89B	0.0231	18.6	07Sep2011, 18:00	9.27
SSR1.89_1.71	2.2042	1131.4	07Sep2011, 18:34	6.56
SSR2.33	1.8633	955.7	07Sep2011, 18:20	6.41
SSR2.33A	0.1750	119.4	07Sep2011, 18:02	7.37
SSR2.33B	0.0381	24.8	07Sep2011, 18:00	6.85
SSR2.33_1.89	1.8633	952.7	07Sep2011, 18:31	6.41
SSR2.70	1.6502	864.3	07Sep2011, 18:16	6.30
SSR2.70A	0.4613	357.0	07Sep2011, 18:15	7.03
SSR2.70B	0.0112	7.4	07Sep2011, 18:00	6.98
SSR2.70C	0.0064	5.2	07Sep2011, 18:00	9.40
SSR2.70D	0.0343	29.6	07Sep2011, 18:01	6.62
SSR2.70E	0.4472	383.7	07Sep2011, 18:09	7.30
SSR2.70_2.33	1.6502	862.4	07Sep2011, 18:24	6.30
SSR3.20	0.6898	361.9	07Sep2011, 18:13	5.10
SSR3.20A	0.1108	90.5	07Sep2011, 18:06	6.62
SSR3.20B	0.2023	172.1	07Sep2011, 18:02	6.62
SSR3.20_2.70	0.6898	361.6	07Sep2011, 18:18	5.10
SSR3.70	0.3767	145.1	07Sep2011, 18:05	3.90

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	145.1	07Sep2011, 18:05	6.08
SSR3.70B	0.1861	139.7	07Sep2011, 18:03	5.80
SSR3.70_3.20	0.3767	144.5	07Sep2011, 18:19	3.90
WOR0.00	2.8951	1467.1	08Sep2011, 04:53	7.95
WOR0.00A	0.0359	16.5	07Sep2011, 19:00	7.25
WOR0.32	2.8592	1467.0	08Sep2011, 04:46	7.97
WOR0.32A	0.1901	77.2	07Sep2011, 19:12	6.97
WOR0.32_0.00	2.8592	1464.6	08Sep2011, 04:53	7.96
WOR0.76	2.6691	1471.1	08Sep2011, 04:30	8.06
WOR0.76A	0.3131	178.8	08Sep2011, 04:04	7.79
WOR0.76_0.32	2.6691	1420.7	08Sep2011, 04:48	8.04
WOR1.59	2.3560	1401.6	08Sep2011, 04:20	8.10
WOR1.59A	0.4536	330.4	08Sep2011, 04:09	9.24
WOR1.59B	0.7600	476.0	08Sep2011, 04:24	8.67
WOR1.59_0.76	2.3560	1386.6	08Sep2011, 04:35	8.09
WOR1.64	1.1424	620.0	08Sep2011, 04:26	7.27
WOR1.64A	0.2551	134.4	08Sep2011, 04:11	7.65
WOR2.33	0.8873	519.9	08Sep2011, 04:06	7.20
WOR2.33A	0.3233	231.5	08Sep2011, 04:06	8.37
WOR2.33_1.64	0.8873	506.3	08Sep2011, 04:33	7.16
WOR3.00	0.5640	288.5	08Sep2011, 04:07	6.53

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	190.3	08Sep2011, 04:07	7.38
WOR3.67	0.2110	98.4	08Sep2011, 04:00	5.12
WOR3.67A	0.2110	98.4	08Sep2011, 04:00	5.12
WOR3.67_3.00	0.2110	98.3	08Sep2011, 04:08	5.12

Project: ChiquesCreek Simulation Run: October 2013

Start of Run: 10Oct2013, 05:00 Basin Model: October 2013
End of Run: 12Oct2013, 05:00 Meteorologic Model: October 2013
Compute Time: 05Feb2017, 10:18:58 Control Specifications: October 2013

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	544.7	11Oct2013, 19:09	4.74
BER0.00A	0.1087	43.7	10Oct2013, 20:15	5.71
BER0.64	1.7391	533.3	11Oct2013, 18:33	4.71
BER0.64A	0.3111	136.7	10Oct2013, 20:08	5.83
BER0.64_0.00	1.7391	521.2	11Oct2013, 19:10	4.68
BER1.05	1.4280	460.7	11Oct2013, 18:20	4.47
BER1.05A	0.2790	110.3	10Oct2013, 20:17	5.71
BER1.05_0.64	1.4280	453.6	11Oct2013, 18:41	4.46
BER1.30	1.1490	359.0	11Oct2013, 18:19	4.17
BER1.30A	0.5289	182.1	11Oct2013, 18:17	4.96
BER1.30_1.05	1.1490	358.7	11Oct2013, 18:23	4.17
BER1.95	0.6201	186.1	11Oct2013, 18:10	3.49
BER1.95A	0.6201	186.1	11Oct2013, 18:10	3.49
BER1.95_1.30	0.6201	182.9	11Oct2013, 18:34	3.48
BOR0.00	6.6030	1909.2	11Oct2013, 19:14	5.01
BOR0.00A	0.0062	3.0	10Oct2013, 20:00	5.83
BOR0.10	6.5968	1959.0	11Oct2013, 19:09	5.01

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	87.8	10Oct2013, 20:24	5.71
BOR0.10_0.00	6.5968	1908.2	11Oct2013, 19:14	5.01
BOR0.68	1.6208	500.1	11Oct2013, 18:37	4.41
BOR0.68A	0.2555	101.0	10Oct2013, 20:17	5.71
BOR0.68_0.10	1.6208	493.5	11Oct2013, 19:01	4.41
BOR1.20	1.3653	423.7	11Oct2013, 18:21	4.17
BOR1.20A	0.5429	176.0	11Oct2013, 18:29	5.21
BOR1.20_0.68	1.3653	419.6	11Oct2013, 18:41	4.17
BOR2.07	0.8224	251.8	11Oct2013, 18:07	3.49
BOR2.07A	0.8224	251.8	11Oct2013, 18:07	3.49
BOR2.07_1.20	0.8224	251.4	11Oct2013, 18:18	3.49
CHC10.68	50.2637	6612.0	11Oct2013, 10:11	4.95
CHC10.68A	0.7377	323.8	10Oct2013, 20:20	6.20
CHC10.68B	0.0477	22.2	10Oct2013, 20:12	6.20
CHC10.68C	0.1180	49.5	10Oct2013, 20:18	5.95
CHC10.68D	0.1638	85.8	10Oct2013, 20:26	7.18
CHC10.68E	0.0528	31.7	10Oct2013, 20:03	7.18
CHC10.68_9.40	50.2637	6603.1	11Oct2013, 10:35	4.89
CHC11.99	49.1437	6505.5	11Oct2013, 09:35	4.98
CHC11.99_10.68	49.1437	6500.1	11Oct2013, 08:39	4.92
CHC12.01	46.4709	6380.1	11Oct2013, 09:24	4.92

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	66.1	10Oct2013, 20:01	5.83
CHC12.65	46.3306	6400.3	11Oct2013, 09:05	4.97
CHC12.65_12.01	46.3306	6365.0	11Oct2013, 09:22	4.92
CHC12.67	45.3853	6346.8	11Oct2013, 09:10	4.95
CHC12.67A	0.5547	167.3	10Oct2013, 21:20	5.95
CHC13.89	44.8306	6329.5	11Oct2013, 08:44	5.02
CHC13.89_12.67	44.8306	6306.6	11Oct2013, 09:14	4.94
CHC13.90	41.9107	6060.4	11Oct2013, 09:01	4.98
CHC13.90A	2.4712	402.1	11Oct2013, 01:54	5.65
CHC16.25	39.4395	5836.1	11Oct2013, 07:50	5.12
CHC16.25A	0.7783	225.8	10Oct2013, 21:31	5.95
CHC16.25_13.90	39.4395	5681.1	11Oct2013, 09:01	4.94
CHC17.08	38.6612	5769.7	11Oct2013, 07:31	5.16
CHC17.08A	0.5852	210.0	10Oct2013, 20:48	6.08
CHC17.08B	0.3448	208.1	10Oct2013, 20:19	7.79
CHC17.08_16.25	38.6612	5717.1	11Oct2013, 07:54	5.10
CHC17.73	37.7312	5669.7	11Oct2013, 07:16	5.18
CHC17.73A	0.3870	158.9	10Oct2013, 20:30	6.20
CHC17.73B	0.0626	42.4	10Oct2013, 20:02	8.03
CHC17.73_17.08	37.7312	5627.8	11Oct2013, 07:36	5.13
CHC18.09	37.2816	5650.2	11Oct2013, 07:06	5.19

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	60.6	11Oct2013, 18:12	5.21
CHC18.09_17.73	37.2816	5616.1	11Oct2013, 07:17	5.16
CHC18.61	36.6951	5645.2	11Oct2013, 06:53	5.21
CHC18.61A	0.5761	222.4	11Oct2013, 18:06	5.33
CHC18.61_18.09	36.6951	5597.4	11Oct2013, 07:07	5.18
CHC19.32	36.1190	5693.9	11Oct2013, 06:34	5.23
CHC19.32_18.61	36.1190	5593.9	11Oct2013, 06:54	5.20
CHC19.35	29.5506	4152.4	11Oct2013, 06:46	5.15
CHC19.35A	0.3523	138.8	10Oct2013, 20:37	6.20
CHC19.35B	0.0175	11.1	10Oct2013, 20:01	7.43
CHC1.28	63.3656	7700.5	11Oct2013, 12:13	4.51
CHC1.28A	0.8402	175.8	10Oct2013, 22:46	5.45
CHC20.02	29.1808	4116.1	11Oct2013, 06:29	5.15
CHC20.02A	0.3588	178.1	10Oct2013, 20:18	6.69
CHC20.02_19.35	29.1808	4089.9	11Oct2013, 06:50	5.14
CHC20.55	28.8220	4113.5	11Oct2013, 06:10	5.14
CHC20.55_20.02	28.8220	4057.1	11Oct2013, 06:32	5.13
CHC20.57	23.2797	3255.9	11Oct2013, 03:06	5.00
CHC20.57A	0.5512	224.8	10Oct2013, 21:06	6.94
CHC21.28	22.7285	3224.2	11Oct2013, 02:17	4.97
CHC21.28A	0.3509	181.3	10Oct2013, 20:24	7.06

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	12.4	10Oct2013, 20:00	7.67
CHC21.28C	0.0073	3.3	10Oct2013, 20:24	6.45
CHC21.28D	0.0224	12.6	10Oct2013, 20:01	6.69
CHC21.28E	0.0497	20.9	10Oct2013, 20:03	5.46
CHC21.28F	0.1457	67.5	10Oct2013, 20:02	5.83
CHC21.28_20.57	22.7285	3193.3	11Oct2013, 03:04	4.96
CHC21.59	22.1338	3193.9	11Oct2013, 01:52	4.93
CHC21.59A	0.2001	89.5	10Oct2013, 20:17	6.20
CHC21.59B	0.0256	15.8	10Oct2013, 20:02	7.30
CHC21.59C	0.0275	16.5	10Oct2013, 20:01	7.06
CHC21.59D	0.0896	45.1	10Oct2013, 20:02	6.20
CHC21.59_21.28	22.1338	3161.0	11Oct2013, 02:13	4.92
CHC22.01	21.7910	3207.9	11Oct2013, 01:27	4.92
CHC22.01A	1.2726	585.1	10Oct2013, 20:01	5.71
CHC22.01B	0.0456	24.9	10Oct2013, 20:00	6.45
CHC22.01_21.59	21.7910	3162.0	11Oct2013, 01:51	4.91
CHC23.04	20.4728	3251.5	11Oct2013, 22:02	4.87
CHC23.04A	1.8763	500.4	10Oct2013, 21:25	5.58
CHC23.04B	0.2164	97.1	10Oct2013, 20:09	5.95
CHC23.04_22.01	20.4728	3199.9	11Oct2013, 22:37	4.86
CHC24.53	18.3801	3218.7	11Oct2013, 21:21	4.80

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	3067.3	11Oct2013, 22:10	4.78
CHC24.63	18.3801	3218.7	11Oct2013, 21:21	4.80
CHC24.64	11.7771	2392.2	11Oct2013, 21:46	4.68
CHC24.64A	0.2517	66.3	11Oct2013, 19:03	4.96
CHC25.53	11.5254	2609.0	11Oct2013, 20:53	4.70
CHC25.53A	0.6693	232.7	10Oct2013, 20:30	5.58
CHC25.53B	0.0163	6.6	10Oct2013, 20:00	5.21
CHC25.53_24.64	11.5254	2373.3	11Oct2013, 21:47	4.67
CHC26.30	10.8398	2578.1	11Oct2013, 20:30	4.65
CHC26.30A	0.8065	189.3	10Oct2013, 21:56	5.46
CHC26.30_25.53	10.8398	2538.8	11Oct2013, 20:58	4.64
CHC27.38	10.0333	2631.4	11Oct2013, 19:39	4.61
CHC27.38_26.30	10.0333	2401.5	11Oct2013, 20:31	4.59
CHC27.39	3.5391	819.2	11Oct2013, 19:45	4.83
CHC27.39A	0.3314	121.1	10Oct2013, 20:23	5.58
CHC28.26	3.2077	761.3	11Oct2013, 18:57	4.78
CHC28.26_27.39	3.2077	756.4	11Oct2013, 19:53	4.76
CHC28.31	3.2077	761.3	11Oct2013, 18:57	4.78
CHC28.31A	0.0950	40.3	10Oct2013, 20:05	5.58
CHC28.31B	0.7915	280.1	10Oct2013, 20:22	5.46
CHC28.67	2.3212	579.1	11Oct2013, 19:27	4.51

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	210.5	11Oct2013, 18:21	4.47
CHC28.67_28.31	2.3212	578.5	11Oct2013, 19:37	4.51
CHC29.91	1.6558	457.6	11Oct2013, 18:49	4.53
CHC29.91A	0.6097	192.9	11Oct2013, 18:17	4.22
CHC29.91_28.67	1.6558	455.2	11Oct2013, 19:32	4.53
CHC30.94	1.0461	321.4	11Oct2013, 18:29	4.72
CHC30.94A	1.0461	321.4	11Oct2013, 18:29	4.72
CHC30.94_29.91	1.0461	319.8	11Oct2013, 19:00	4.72
CHC3.39	62.5254	7652.8	11Oct2013, 11:16	4.59
CHC3.39A	1.8419	649.1	11Oct2013, 18:18	5.33
CHC3.39_1.28	62.5254	7627.1	11Oct2013, 12:12	4.50
CHC4.62	60.6835	7902.7	11Oct2013, 07:16	4.76
CHC4.62A	0.1505	65.7	10Oct2013, 20:05	5.71
CHC4.62B	0.1946	83.7	10Oct2013, 20:07	5.71
CHC4.62_3.39	60.6835	7483.8	11Oct2013, 12:18	4.57
CHC4.97	60.3384	7939.2	11Oct2013, 07:10	4.79
CHC4.97A	0.4693	134.7	10Oct2013, 20:57	5.46
CHC4.97B	0.0580	27.6	10Oct2013, 20:05	6.08
CHC4.97C	0.2012	85.0	10Oct2013, 20:02	5.46
CHC4.97_4.62	60.3384	7881.8	11Oct2013, 07:27	4.76
CHC5.97	59.6099	7866.0	11Oct2013, 06:58	4.82

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	418.8	10Oct2013, 20:31	5.83
CHC5.97_4.97	59.6099	7848.7	11Oct2013, 07:18	4.78
CHC7.47	58.4785	7776.6	11Oct2013, 06:17	4.89
CHC7.47_5.97	58.4785	7717.2	11Oct2013, 07:09	4.80
CHC7.48	53.6341	7056.1	11Oct2013, 08:05	4.83
CHC7.48A	2.2128	397.5	11Oct2013, 00:55	5.73
CHC9.40	51.4213	6744.1	11Oct2013, 06:56	4.91
CHC9.40A	1.1576	400.6	10Oct2013, 20:42	5.83
CHC9.40_7.47	51.4213	6702.9	11Oct2013, 08:00	4.79
DER0.00	2.9199	895.5	10Oct2013, 21:33	5.65
DER0.00A	0.1924	84.0	10Oct2013, 20:05	5.71
DER0.52	2.7275	861.2	10Oct2013, 21:17	5.65
DER0.52A	0.5165	220.9	10Oct2013, 20:15	5.95
DER0.52_0.00	2.7275	859.7	10Oct2013, 21:33	5.65
DER1.10	2.2110	746.6	10Oct2013, 20:54	5.59
DER1.10A	0.3712	156.3	10Oct2013, 20:17	5.95
DER1.10_0.52	2.2110	742.0	10Oct2013, 21:21	5.58
DER1.76	1.8398	641.7	10Oct2013, 20:39	5.55
DER1.76A	0.5078	180.3	11Oct2013, 18:17	5.33
DER1.76_1.10	1.8398	640.4	10Oct2013, 21:01	5.52
DER2.22	1.3320	494.6	10Oct2013, 20:32	5.63

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	246.1	10Oct2013, 20:28	5.46
DER2.22_1.76	1.3320	493.2	10Oct2013, 20:47	5.63
DER2.93	0.6085	251.6	10Oct2013, 20:15	5.83
DER2.93A	0.6085	251.6	10Oct2013, 20:15	5.83
DER2.93_2.22	0.6085	250.5	10Oct2013, 20:36	5.83
DORT0.34	1.6920	590.8	10Oct2013, 20:33	5.70
DORT0.34A	0.0357	16.3	10Oct2013, 20:01	5.71
DORT0.34B	0.0234	10.4	10Oct2013, 20:01	5.58
DORT0.54	1.6329	578.5	10Oct2013, 20:29	5.70
DORT0.54A	0.2058	88.3	10Oct2013, 20:11	5.83
DORT0.54B	0.0280	10.5	11Oct2013, 18:00	4.59
DORT0.54C	0.0058	3.2	10Oct2013, 20:02	6.69
DORT0.54D	0.0832	36.5	10Oct2013, 20:16	6.08
DORT0.54E	0.0367	17.0	10Oct2013, 20:00	5.71
DORT0.54_0.34	1.6329	577.6	10Oct2013, 20:33	5.70
DORT1.15	1.2734	486.1	10Oct2013, 20:15	5.78
DORT1.15A	0.4022	184.5	10Oct2013, 20:06	5.95
DORT1.15B	0.0103	6.9	10Oct2013, 20:00	7.79
DORT1.15_0.54	1.2734	483.8	10Oct2013, 20:33	5.78
DORT1.58	0.8609	335.5	10Oct2013, 20:19	5.68
DORT1.58A	0.4931	200.7	10Oct2013, 20:13	5.71

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	333.6	10Oct2013, 20:33	5.68
DORT2.41	0.3678	153.0	10Oct2013, 20:09	5.66
DORT2.41A	0.2384	98.9	10Oct2013, 20:07	5.58
DORT2.41B	0.1294	57.7	10Oct2013, 20:06	5.83
DORT2.41_1.58	0.3678	151.3	10Oct2013, 20:38	5.65
DOR0.00	5.5423	1673.2	10Oct2013, 21:31	5.71
DOR0.00A	0.0475	24.2	10Oct2013, 20:07	6.45
DOR0.24	5.4948	1667.5	10Oct2013, 21:26	5.71
DOR0.24A	0.1218	56.7	10Oct2013, 20:08	6.08
DOR0.24B	0.1287	59.1	10Oct2013, 20:14	6.20
DOR0.24_0.00	5.4948	1662.8	10Oct2013, 21:31	5.71
DOR0.44A	0.5212	219.2	10Oct2013, 20:22	6.08
DOR0.44_0.24	5.2443	1604.6	10Oct2013, 21:27	5.69
DOR1.21	4.7231	1495.8	10Oct2013, 20:47	5.65
DOR1.21A	0.2430	96.4	10Oct2013, 20:31	6.08
DOR1.21B	0.2037	93.2	10Oct2013, 20:07	5.95
DOR1.21_0.44	4.7231	1474.0	10Oct2013, 21:22	5.65
DOR1.23	4.2764	1404.7	10Oct2013, 20:49	5.75
DOR1.23A	0.2095	97.6	10Oct2013, 20:12	6.20
DOR1.45	4.0669	1346.9	10Oct2013, 20:42	5.73
DOR1.45_1.23	4.0669	1343.4	10Oct2013, 20:52	5.73

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	789.1	10Oct2013, 20:59	5.75
DOR1.60A	0.5501	229.6	10Oct2013, 20:14	5.83
DOR2.40	1.8248	657.8	10Oct2013, 20:39	5.73
DOR2.40A	0.4594	181.4	10Oct2013, 20:22	5.83
DOR2.40_1.60	1.8248	653.6	10Oct2013, 21:05	5.73
DOR2.81	1.3654	497.6	10Oct2013, 20:28	5.70
DOR2.81A	0.2367	104.3	10Oct2013, 20:15	6.08
DOR2.81_2.40	1.3654	494.3	10Oct2013, 20:45	5.70
DOR3.06	1.1287	402.8	10Oct2013, 20:21	5.62
DOR3.06A	0.3648	148.5	10Oct2013, 20:13	5.71
DOR3.06B	0.7639	263.7	10Oct2013, 20:31	5.58
DOR3.06_2.81	1.1287	401.7	10Oct2013, 20:33	5.62
DOR.44	5.2443	1609.8	10Oct2013, 21:18	5.69
ERRR0.57_0.00	1.1576	471.7	10Oct2013, 20:49	6.10
ERRT0.00	1.2906	520.5	10Oct2013, 20:46	6.19
ERRT0.00A	0.1098	57.8	10Oct2013, 20:13	6.81
ERRT0.00B	0.0077	4.8	10Oct2013, 20:00	7.18
ERRT0.00C	0.0074	5.1	10Oct2013, 20:00	8.03
ERRT0.00D	0.0036	2.5	10Oct2013, 20:00	8.03
ERRT0.00E	0.0045	3.1	10Oct2013, 20:00	8.03
ERRT0.57	1.1576	473.1	10Oct2013, 20:35	6.10

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	96.7	10Oct2013, 20:55	6.08
ERRT0.61	0.8788	381.4	10Oct2013, 20:33	6.10
ERRT0.61A	0.4551	191.7	10Oct2013, 20:26	6.20
ERRT1.62	0.4237	195.8	10Oct2013, 20:04	6.01
ERRT1.62A	0.1546	64.4	10Oct2013, 20:11	5.71
ERRT1.62B	0.2547	127.5	10Oct2013, 20:01	6.08
ERRT1.62C	0.0144	9.9	10Oct2013, 20:00	8.03
ERRT1.62_0.61	0.4237	192.5	10Oct2013, 20:36	6.00
ERR0.00	2.6728	1028.4	10Oct2013, 20:47	6.03
ERR0.00A	0.0718	30.7	10Oct2013, 20:04	5.58
ERR0.00B	0.0053	3.6	10Oct2013, 20:00	8.03
ERR0.23	2.5957	1015.3	10Oct2013, 20:42	6.04
ERR0.23A	0.1922	82.0	10Oct2013, 20:08	5.71
ERR0.23B	0.0298	19.7	10Oct2013, 20:00	7.67
ERR0.23_0.00	2.5957	1012.6	10Oct2013, 20:47	6.04
ERR0.26	1.3051	496.5	10Oct2013, 20:39	5.90
ERR0.88	1.0831	438.7	10Oct2013, 20:28	5.89
ERR0.88A	0.5048	194.5	10Oct2013, 20:30	5.95
ERR0.88_0.23	1.0831	437.3	10Oct2013, 20:44	5.89
ERR1.33	0.5783	245.2	10Oct2013, 20:12	5.83
ERR1.33A	0.5783	245.2	10Oct2013, 20:12	5.83

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	244.4	10Oct2013, 20:27	5.83
LAR0.00	0.9453	316.8	10Oct2013, 20:52	6.06
LAR0.00A	0.5827	196.8	10Oct2013, 21:00	6.08
LAR0.40	0.3626	125.9	11Oct2013, 18:27	6.04
LAR0.40A	0.0039	2.7	10Oct2013, 20:00	8.16
LAR0.40B	0.1091	69.5	10Oct2013, 20:05	7.67
LAR0.40C	0.1251	58.1	10Oct2013, 20:08	6.08
LAR0.40D	0.1245	53.6	10Oct2013, 20:07	5.71
LAR0.40_0.00	0.3626	125.8	11Oct2013, 18:32	6.04
MRT0.00	0.4202	164.3	10Oct2013, 20:10	5.57
MRT0.00A	0.1647	67.3	10Oct2013, 20:09	5.58
MRT0.66	0.2555	97.4	10Oct2013, 20:02	5.56
MRT0.66A	0.2030	94.3	10Oct2013, 20:02	5.83
MRT0.66B	0.0376	18.4	10Oct2013, 20:00	5.95
MRT0.66C	0.0149	7.8	10Oct2013, 20:01	6.32
MRT0.66_0.00	0.2555	97.1	10Oct2013, 20:10	5.56
ORT0.28	0.7836	298.1	10Oct2013, 20:18	5.47
ORT0.28A	0.1786	69.9	11Oct2013, 18:04	5.33
ORT0.95	0.6050	240.1	10Oct2013, 20:08	5.51
ORT0.95A	0.1851	74.5	10Oct2013, 20:04	5.33
ORT0.95_0.28	0.6050	238.6	10Oct2013, 20:24	5.51

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	172.8	10Oct2013, 20:07	5.59
ORT1.38A	0.1910	78.9	10Oct2013, 20:04	5.46
ORT1.38_0.95	0.4199	172.4	10Oct2013, 20:17	5.59
ORT2.04	0.2289	97.6	10Oct2013, 20:08	5.71
ORT2.04A	0.2289	97.6	10Oct2013, 20:08	5.71
ORT2.04_1.38	0.2289	97.5	10Oct2013, 20:17	5.71
Pond 0	0.1946	80.0	10Oct2013, 20:15	5.71
Pond 1	0.2012	73.2	10Oct2013, 20:11	5.46
Pond 10	0.0122	4.7	11Oct2013, 18:04	5.34
Pond 11	0.0236	10.1	10Oct2013, 20:04	5.71
Pond 12	0.0172	4.3	10Oct2013, 20:11	5.71
Pond 13	0.0603	24.5	10Oct2013, 20:09	5.58
Pond 14	0.1379	53.3	10Oct2013, 20:16	5.71
Pond 15	0.0477	8.4	10Oct2013, 22:33	6.20
Pond 16	0.3346	79.4	10Oct2013, 20:41	6.41
Pond 17	0.0528	13.8	10Oct2013, 20:57	7.18
Pond 18	0.1638	27.9	11Oct2013, 06:48	7.18
Pond 19	0.0053	3.6	10Oct2013, 20:02	8.03
Pond 2	0.0580	21.4	11Oct2013, 18:17	5.51
Pond 20	0.0077	4.5	10Oct2013, 20:01	7.18
Pond 21	0.0298	17.2	10Oct2013, 20:05	7.67

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	5.0	10Oct2013, 20:01	7.58
Pond 23	0.0036	2.5	10Oct2013, 20:00	8.03
Pond 24	0.0045	2.2	10Oct2013, 20:06	8.03
Pond 25	0.2547	125.4	10Oct2013, 20:03	6.08
Pond 26	0.0144	7.2	10Oct2013, 20:01	8.03
Pond 27	0.1245	45.4	10Oct2013, 20:21	5.70
Pond 28	0.1251	49.9	10Oct2013, 20:25	5.90
Pond 29	0.1091	38.9	11Oct2013, 18:29	6.55
Pond 3	0.1861	19.0	11Oct2013, 20:14	0.32
Pond 30	0.0039	1.3	10Oct2013, 20:05	6.81
Pond 31	0.3448	94.1	10Oct2013, 22:12	7.01
Pond 32	0.0626	39.5	10Oct2013, 20:14	8.03
Pond 33	0.0149	2.3	11Oct2013, 05:24	5.48
Pond 34	0.0376	3.7	11Oct2013, 20:07	4.16
Pond 35	0.0294	12.4	10Oct2013, 20:01	5.34
Pond 36	0.0175	11.1	10Oct2013, 20:02	7.43
Pond 37	0.1287	46.0	10Oct2013, 20:41	6.09
Pond 38	0.2037	83.2	11Oct2013, 18:07	3.09
Pond 39	0.0234	7.9	10Oct2013, 20:10	5.54
Pond 4	0.2023	64.4	11Oct2013, 18:15	5.10
Pond 40	0.0832	11.1	11Oct2013, 20:31	4.51

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	2.2	10Oct2013, 20:19	6.69
Pond 42	0.0367	15.0	10Oct2013, 20:05	5.66
Pond 43	0.0103	6.6	10Oct2013, 20:04	7.79
Pond 44	0.1294	54.9	10Oct2013, 20:14	5.81
Pond 45	0.1457	65.5	10Oct2013, 20:07	5.83
Pond 46	0.0187	11.1	10Oct2013, 20:04	7.67
Pond 47	0.0275	6.4	11Oct2013, 05:15	6.14
Pond 48	0.0456	19.8	11Oct2013, 18:00	5.52
Pond 49	0.0256	15.8	10Oct2013, 20:03	7.30
Pond 5	0.0343	13.6	11Oct2013, 18:02	5.21
Pond 50	0.0073	3.0	10Oct2013, 20:47	6.19
Pond 51	0.0721	25.9	11Oct2013, 05:05	5.84
Pond 52	0.0497	17.4	11Oct2013, 05:03	5.46
Pond 53	0.0896	44.3	10Oct2013, 20:06	6.20
Pond 54	0.2164	55.7	10Oct2013, 20:48	5.94
Pond 55	0.0163	4.7	11Oct2013, 18:07	5.08
Pond 56	0.0231	15.8	10Oct2013, 20:00	8.04
Pond 57	0.0112	3.3	11Oct2013, 05:04	5.72
Pond 58	0.0280	6.5	11Oct2013, 18:18	4.52
Pond 6	0.4472	102.8	10Oct2013, 20:55	5.83
Pond 7	0.0064	3.8	10Oct2013, 20:08	8.15

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	14.4	10Oct2013, 20:06	5.71
Pond 9	0.0281	6.7	10Oct2013, 20:20	5.71
RIR0.00	6.5684	2059.4	10Oct2013, 21:19	5.58
RIR0.00A	0.0647	34.8	10Oct2013, 20:17	7.06
RIR0.32	6.5037	2059.8	10Oct2013, 21:09	5.57
RIR0.32A	0.5587	201.3	10Oct2013, 20:25	5.58
RIR0.32_0.00	6.5037	2039.5	10Oct2013, 21:20	5.56
RIR0.65	5.9450	1920.4	10Oct2013, 21:01	5.56
RIR0.65A	0.1896	93.5	10Oct2013, 20:02	6.08
RIR0.65_0.32	5.9450	1915.6	10Oct2013, 21:11	5.56
RIR0.86	5.7554	1883.8	10Oct2013, 20:56	5.55
RIR0.86A	0.2984	115.3	10Oct2013, 20:16	5.58
RIR0.86_0.65	5.7554	1880.4	10Oct2013, 21:01	5.55
RIR1.24	5.4570	1816.0	10Oct2013, 20:50	5.55
RIR1.24A	0.0980	40.5	10Oct2013, 20:02	5.33
RIR1.24_0.86	5.4570	1808.8	10Oct2013, 20:57	5.54
RIR1.34	5.3590	1798.4	10Oct2013, 20:50	5.55
RIR1.52	4.5754	1593.7	10Oct2013, 20:56	5.56
RIR1.62	1.8861	634.2	10Oct2013, 20:52	5.54
RIR1.62A	0.5008	185.5	10Oct2013, 20:26	5.71
RIR2.60	1.3853	483.9	10Oct2013, 20:17	5.48

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	130.4	10Oct2013, 20:07	5.58
RIR2.60_1.62	1.3853	477.2	10Oct2013, 20:58	5.48
RIR3.38	1.0728	386.6	10Oct2013, 20:18	5.46
RIR3.38A	1.0434	381.4	10Oct2013, 20:18	5.46
RIR3.38B	0.0294	12.5	10Oct2013, 20:00	5.33
RIR3.38_2.60	1.0728	384.4	10Oct2013, 20:34	5.45
SHCT0.00	3.0470	966.2	11Oct2013, 18:24	4.18
SHCT0.00A	0.9966	309.1	11Oct2013, 18:18	4.10
SHCT1.59	2.0504	663.5	11Oct2013, 18:14	4.22
SHCT1.59A	2.0504	663.5	11Oct2013, 18:14	4.22
SHCT1.59_0.00	2.0504	663.2	11Oct2013, 18:27	4.22
SHC0.00	6.4942	1813.3	11Oct2013, 19:38	4.48
SHC0.00A	0.0458	17.3	11Oct2013, 18:06	5.09
SHC0.23	6.4484	1845.3	11Oct2013, 19:26	4.48
SHC0.23A	0.6386	206.3	10Oct2013, 20:48	5.71
SHC0.23_0.00	6.4484	1805.8	11Oct2013, 19:38	4.48
SHC1.60	5.8098	1764.4	11Oct2013, 18:36	4.36
SHC1.60A	0.2628	102.8	11Oct2013, 18:03	5.21
SHC1.60_0.23	5.8098	1677.9	11Oct2013, 19:28	4.35
SHC2.06	5.5470	1716.0	11Oct2013, 18:25	4.32
SHC2.06A	0.2828	93.0	11Oct2013, 18:05	3.86

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	1708.0	11Oct2013, 18:37	4.32
SHC2.56	5.2642	1644.5	11Oct2013, 18:21	4.34
SHC2.56A	0.4506	159.5	11Oct2013, 18:12	4.84
SHC2.56_2.06	5.2642	1643.0	11Oct2013, 18:27	4.34
SHC3.11	1.7666	529.2	11Oct2013, 18:11	4.49
SHC3.11A	0.2775	128.9	10Oct2013, 20:02	5.83
SHC3.11_2.56	1.7666	529.1	11Oct2013, 18:15	4.49
SHC3.92	1.4891	462.1	11Oct2013, 18:18	4.24
SHC3.92A	0.6934	217.1	11Oct2013, 18:14	3.98
SHC3.92B	0.7957	247.9	11Oct2013, 18:23	4.47
SHC3.92_3.11	1.4891	461.8	11Oct2013, 18:26	4.24
SRT0.50	2.6893	962.7	10Oct2013, 20:58	5.58
SRT0.50A	0.4294	147.7	10Oct2013, 20:32	5.58
SRT1.29	2.2599	836.7	10Oct2013, 20:44	5.59
SRT1.29A	0.3191	107.0	10Oct2013, 20:30	5.46
SRT1.29_0.50	2.2599	832.7	10Oct2013, 21:00	5.58
SRT2.06	1.9408	738.9	10Oct2013, 20:26	5.61
SRT2.06A	0.4839	189.3	10Oct2013, 20:18	5.71
SRT2.06_1.29	1.9408	734.5	10Oct2013, 20:46	5.61
SRT2.55	1.4569	555.2	10Oct2013, 20:19	5.58
SRT2.55A	0.3465	142.0	10Oct2013, 20:09	5.58

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	554.1	10Oct2013, 20:28	5.58
SRT3.00	1.1104	432.0	10Oct2013, 20:17	5.58
SRT3.00A	0.7468	285.5	10Oct2013, 20:17	5.58
SRT3.00_2.55	1.1104	430.7	10Oct2013, 20:27	5.58
SRT3.38	0.3636	146.6	10Oct2013, 20:10	5.58
SRT3.38A	0.3636	146.6	10Oct2013, 20:10	5.58
SRT3.38_3.00	0.3636	146.5	10Oct2013, 20:16	5.58
SSRTA0.00	0.4007	159.6	10Oct2013, 20:17	5.87
SSRTA0.00A	0.2628	114.9	10Oct2013, 20:12	5.95
SSRTA0.59	0.1379	53.3	10Oct2013, 20:16	5.71
SSRTA0.59A	0.1379	60.2	10Oct2013, 20:05	5.71
SSRTA0.59_0.00	0.1379	52.7	10Oct2013, 20:37	5.70
SSRT0.00	1.3182	507.4	10Oct2013, 20:28	5.78
SSRT0.00A	0.2236	90.4	10Oct2013, 20:14	5.71
SSRT0.46	1.0946	429.7	10Oct2013, 20:15	5.79
SSRT0.46A	0.1893	85.3	10Oct2013, 20:05	5.83
SSRT0.46_0.00	1.0946	425.9	10Oct2013, 20:32	5.79
SSRT0.77	0.9053	358.7	10Oct2013, 20:14	5.78
SSRT0.77A	0.2520	107.9	10Oct2013, 20:11	5.83
SSRT0.77B	0.0603	26.1	10Oct2013, 20:03	5.58
SSRT0.77_0.46	0.9053	358.0	10Oct2013, 20:22	5.78

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	69.4	11Oct2013, 18:04	5.61
SSRT1.34A	0.1112	46.8	10Oct2013, 20:06	5.58
SSRT1.34B	0.0172	7.9	10Oct2013, 20:00	5.71
SSRT1.34C	0.0236	10.9	10Oct2013, 20:00	5.71
SSRT1.34D	0.0122	5.6	10Oct2013, 20:00	5.71
SSRT1.34E	0.0281	12.8	10Oct2013, 20:02	5.71
SSRT1.34_0.77	0.1923	69.2	11Oct2013, 18:13	5.61
SSR0.00	4.8444	1550.9	10Oct2013, 20:51	5.57
SSR0.00A	0.0601	27.6	10Oct2013, 20:01	5.71
SSR0.22	4.7843	1539.7	10Oct2013, 20:48	5.56
SSR0.22A	0.2501	120.3	10Oct2013, 20:07	6.20
SSR0.22_0.00	4.7843	1539.2	10Oct2013, 20:51	5.56
SSR0.85	4.5342	1477.2	10Oct2013, 20:39	5.53
SSR0.85_0.22	4.5342	1475.0	10Oct2013, 20:49	5.53
SSR0.87	3.2160	997.5	10Oct2013, 20:47	5.43
SSR0.87A	0.3806	145.3	10Oct2013, 20:27	5.83
SSR1.06	2.8354	867.7	10Oct2013, 20:46	5.37
SSR1.06A	0.2647	113.3	10Oct2013, 20:11	5.83
SSR1.06_0.87	2.8354	866.9	10Oct2013, 20:51	5.37
SSR1.71	2.5707	798.9	10Oct2013, 20:31	5.32
SSR1.71A	0.3665	149.7	10Oct2013, 20:26	6.08

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	796.6	10Oct2013, 20:49	5.33
SSR1.89	2.2042	652.9	10Oct2013, 20:25	5.20
SSR1.89A	0.3178	141.8	10Oct2013, 20:14	6.08
SSR1.89B	0.0231	15.9	10Oct2013, 20:00	8.03
SSR1.89_1.71	2.2042	650.2	10Oct2013, 20:32	5.20
SSR2.33	1.8633	516.0	11Oct2013, 18:14	5.02
SSR2.33A	0.1750	87.8	10Oct2013, 20:03	6.20
SSR2.33B	0.0381	17.6	10Oct2013, 20:00	5.71
SSR2.33_1.89	1.8633	514.2	11Oct2013, 18:30	5.02
SSR2.70	1.6502	455.5	11Oct2013, 18:15	4.87
SSR2.70A	0.4613	180.0	10Oct2013, 20:14	5.58
SSR2.70B	0.0112	5.4	10Oct2013, 20:00	5.83
SSR2.70C	0.0064	4.4	10Oct2013, 20:00	8.16
SSR2.70D	0.0343	13.7	10Oct2013, 20:02	5.21
SSR2.70E	0.4472	194.9	10Oct2013, 20:09	5.83
SSR2.70_2.33	1.6502	455.0	11Oct2013, 18:24	4.87
SSR3.20	0.6898	176.7	11Oct2013, 18:10	3.72
SSR3.20A	0.1108	43.0	11Oct2013, 18:04	5.21
SSR3.20B	0.2023	80.1	11Oct2013, 18:01	5.21
SSR3.20_2.70	0.6898	176.6	11Oct2013, 18:16	3.72
SSR3.70	0.3767	70.9	11Oct2013, 18:03	2.55

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	70.9	11Oct2013, 18:03	4.72
SSR3.70B	0.1861	68.3	11Oct2013, 18:01	4.47
SSR3.70_3.20	0.3767	70.8	11Oct2013, 18:11	2.55
WOR0.00	2.8951	893.8	10Oct2013, 21:13	5.47
WOR0.00A	0.0359	15.8	10Oct2013, 20:02	5.58
WOR0.32	2.8592	888.1	10Oct2013, 21:05	5.47
WOR0.32A	0.1901	66.0	11Oct2013, 18:20	5.33
WOR0.32_0.00	2.8592	887.1	10Oct2013, 21:13	5.46
WOR0.76	2.6691	866.8	10Oct2013, 20:44	5.47
WOR0.76A	0.3131	142.9	10Oct2013, 20:07	5.95
WOR0.76_0.32	2.6691	843.2	10Oct2013, 21:07	5.48
WOR1.59	2.3560	798.0	11Oct2013, 18:29	5.41
WOR1.59A	0.4536	195.2	10Oct2013, 20:14	5.95
WOR1.59B	0.7600	250.2	10Oct2013, 20:33	5.46
WOR1.59_0.76	2.3560	790.6	11Oct2013, 18:47	5.41
WOR1.64	1.1424	397.6	11Oct2013, 18:35	5.16
WOR1.64A	0.2551	105.8	10Oct2013, 20:15	5.83
WOR2.33	0.8873	326.2	11Oct2013, 18:09	4.98
WOR2.33A	0.3233	120.8	11Oct2013, 18:09	5.21
WOR2.33_1.64	0.8873	317.2	11Oct2013, 18:40	4.97
WOR3.00	0.5640	205.4	11Oct2013, 18:09	4.84

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	141.5	10Oct2013, 20:11	5.58
WOR3.67	0.2110	69.4	11Oct2013, 18:00	3.61
WOR3.67A	0.2110	69.4	11Oct2013, 18:00	3.61
WOR3.67_3.00	0.2110	69.3	11Oct2013, 18:09	3.61

APPENDIX C



Existing-Condition HEC-HMS Results

Project: ChiquesCreek Simulation Run: 2YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 2YR_24HR
Compute Time: 31Jan2017, 15:51:38 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	190.8	01Jan2017, 15:06	0.57
BER0.00A	0.1087	27.7	01Jan2017, 13:52	0.88
BER0.64	1.7391	205.5	01Jan2017, 13:59	0.56
BER0.64A	0.3111	98.5	01Jan2017, 13:43	0.93
BER0.64_0.00	1.7391	183.6	01Jan2017, 15:06	0.55
BER1.05	1.4280	157.3	01Jan2017, 14:07	0.48
BER1.05A	0.2790	68.2	01Jan2017, 13:54	0.88
BER1.05_0.64	1.4280	153.6	01Jan2017, 14:15	0.48
BER1.30	1.1490	97.8	01Jan2017, 14:05	0.38
BER1.30A	0.5289	81.2	01Jan2017, 13:58	0.60
BER1.30_1.05	1.1490	97.3	01Jan2017, 14:11	0.38
BER1.95	0.6201	22.5	01Jan2017, 13:58	0.20
BER1.95A	0.6201	22.5	01Jan2017, 13:58	0.20
BER1.95_1.30	0.6201	22.3	01Jan2017, 14:15	0.20
BOR0.00	6.6030	702.8	01Jan2017, 15:13	0.66
BOR0.00A	0.0062	2.5	01Jan2017, 13:31	0.93
BOR0.10	6.5968	728.9	01Jan2017, 15:10	0.66

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	51.1	01Jan2017, 14:02	0.88
BOR0.10_0.00	6.5968	702.4	01Jan2017, 15:13	0.66
BOR0.68	1.6208	158.2	01Jan2017, 14:17	0.47
BOR0.68A	0.2555	62.5	01Jan2017, 13:54	0.88
BOR0.68_0.10	1.6208	143.2	01Jan2017, 15:10	0.47
BOR1.20	1.3653	114.0	01Jan2017, 14:12	0.39
BOR1.20A	0.5429	82.3	01Jan2017, 14:10	0.68
BOR1.20_0.68	1.3653	113.5	01Jan2017, 14:21	0.39
BOR2.07	0.8224	32.1	01Jan2017, 13:54	0.20
BOR2.07A	0.8224	32.1	01Jan2017, 13:54	0.20
BOR2.07_1.20	0.8224	31.9	01Jan2017, 14:14	0.20
CHC10.68	50.2637	2015.3	01Jan2017, 22:14	0.76
CHC10.68A	0.7377	213.7	01Jan2017, 13:58	1.09
CHC10.68B	0.0477	16.0	01Jan2017, 13:48	1.09
CHC10.68C	0.1180	32.1	01Jan2017, 13:55	0.98
CHC10.68D	0.1638	62.9	01Jan2017, 14:07	1.61
CHC10.68E	0.0528	30.3	01Jan2017, 13:37	1.61
CHC10.68_9.40	50.2637	2007.2	01Jan2017, 22:48	0.76
CHC11.99	49.1437	1993.9	01Jan2017, 21:39	0.76
CHC11.99_10.68	49.1437	1986.9	01Jan2017, 22:16	0.75
CHC12.01	46.4709	1941.5	01Jan2017, 21:42	0.74

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	55.4	01Jan2017, 13:32	0.93
CHC12.65	46.3306	1999.3	01Jan2017, 21:11	0.75
CHC12.65_12.01	46.3306	1939.6	01Jan2017, 21:42	0.74
CHC12.67	45.3853	1978.1	01Jan2017, 21:12	0.74
CHC12.67A	0.5547	80.7	01Jan2017, 15:03	0.98
CHC13.89	44.8306	1988.4	01Jan2017, 20:22	0.75
CHC13.89_12.67	44.8306	1965.3	01Jan2017, 21:13	0.74
CHC13.90	41.9107	1920.7	01Jan2017, 20:27	0.74
CHC13.90A	2.4712	148.8	01Jan2017, 19:22	0.91
CHC16.25	39.4395	1888.9	01Jan2017, 18:36	0.75
CHC16.25A	0.7783	106.3	01Jan2017, 15:14	0.98
CHC16.25_13.90	39.4395	1777.3	01Jan2017, 20:30	0.73
CHC17.08	38.6612	1919.2	01Jan2017, 17:45	0.74
CHC17.08A	0.5852	114.3	01Jan2017, 14:31	1.03
CHC17.08B	0.3448	173.6	01Jan2017, 14:00	2.01
CHC17.08_16.25	38.6612	1853.1	01Jan2017, 18:38	0.74
CHC17.73	37.7312	1896.2	01Jan2017, 17:12	0.74
CHC17.73A	0.3870	97.1	01Jan2017, 14:10	1.09
CHC17.73B	0.0626	45.6	01Jan2017, 13:35	2.19
CHC17.73_17.08	37.7312	1862.1	01Jan2017, 17:46	0.74
CHC18.09	37.2816	1909.2	01Jan2017, 16:50	0.73

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	32.8	01Jan2017, 13:52	0.69
CHC18.09_17.73	37.2816	1874.8	01Jan2017, 17:13	0.73
CHC18.61	36.6951	1941.2	01Jan2017, 16:26	0.73
CHC18.61A	0.5761	139.3	01Jan2017, 13:44	0.73
CHC18.61_18.09	36.6951	1889.0	01Jan2017, 16:51	0.73
CHC19.32	36.1190	2118.1	01Jan2017, 15:42	0.74
CHC19.32_18.61	36.1190	1921.1	01Jan2017, 16:26	0.73
CHC19.35	29.5506	1294.0	01Jan2017, 16:06	0.72
CHC19.35A	0.3523	81.5	01Jan2017, 14:18	1.09
CHC19.35B	0.0175	11.4	01Jan2017, 13:33	1.77
CHC1.28	63.3656	2023.8	02Jan2017, 02:32	0.72
CHC1.28A	0.8402	66.8	01Jan2017, 16:20	0.78
CHC20.02	29.1808	1314.2	01Jan2017, 15:30	0.71
CHC20.02A	0.3588	129.7	01Jan2017, 13:57	1.34
CHC20.02_19.35	29.1808	1265.8	01Jan2017, 16:07	0.71
CHC20.55	28.8220	1291.5	01Jan2017, 15:22	0.71
CHC20.55_20.02	28.8220	1282.8	01Jan2017, 15:32	0.70
CHC20.57	23.2797	1017.9	01Jan2017, 19:01	0.66
CHC20.57A	0.5512	132.9	01Jan2017, 14:51	1.47
CHC21.28	22.7285	1016.0	01Jan2017, 17:53	0.64
CHC21.28A	0.3509	132.5	01Jan2017, 14:05	1.54

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	13.5	01Jan2017, 13:30	1.93
CHC21.28C	0.0073	2.2	01Jan2017, 14:03	1.21
CHC21.28D	0.0224	12.1	01Jan2017, 13:32	1.34
CHC21.28E	0.0497	15.6	01Jan2017, 13:35	0.78
CHC21.28F	0.1457	54.6	01Jan2017, 13:34	0.93
CHC21.28_20.57	22.7285	991.1	01Jan2017, 19:04	0.64
CHC21.59	22.1338	1017.7	01Jan2017, 17:29	0.62
CHC21.59A	0.2001	60.8	01Jan2017, 13:55	1.09
CHC21.59B	0.0256	15.9	01Jan2017, 13:34	1.69
CHC21.59C	0.0275	16.5	01Jan2017, 13:32	1.54
CHC21.59D	0.0896	38.8	01Jan2017, 13:34	1.09
CHC21.59_21.28	22.1338	989.3	01Jan2017, 17:54	0.62
CHC22.01	21.7910	1033.5	01Jan2017, 16:58	0.62
CHC22.01A	1.2726	481.4	01Jan2017, 13:32	0.87
CHC22.01B	0.0456	23.6	01Jan2017, 13:30	1.21
CHC22.01_21.59	21.7910	1001.6	01Jan2017, 17:31	0.61
CHC23.04	20.4728	1104.6	01Jan2017, 15:38	0.60
CHC23.04A	1.8763	218.8	01Jan2017, 15:07	0.82
CHC23.04B	0.2164	70.3	01Jan2017, 13:44	0.98
CHC23.04_22.01	20.4728	991.7	01Jan2017, 16:59	0.60
CHC24.53	18.3801	928.5	01Jan2017, 15:13	0.58

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	887.7	01Jan2017, 15:42	0.58
CHC24.63	18.3801	928.5	01Jan2017, 15:13	0.58
CHC24.64	11.7771	596.4	01Jan2017, 19:03	0.54
CHC24.64A	0.2517	23.3	01Jan2017, 14:48	0.60
CHC25.53	11.5254	638.1	01Jan2017, 17:43	0.53
CHC25.53A	0.6693	124.8	01Jan2017, 14:10	0.82
CHC25.53B	0.0163	5.1	01Jan2017, 13:31	0.69
CHC25.53_24.64	11.5254	590.2	01Jan2017, 19:03	0.53
CHC26.30	10.8398	637.1	01Jan2017, 16:47	0.52
CHC26.30A	0.8065	76.6	01Jan2017, 15:36	0.78
CHC26.30_25.53	10.8398	615.7	01Jan2017, 17:44	0.52
CHC27.38	10.0333	707.1	01Jan2017, 15:23	0.50
CHC27.38_26.30	10.0333	580.2	01Jan2017, 16:51	0.50
CHC27.39	3.5391	304.3	01Jan2017, 14:48	0.57
CHC27.39A	0.3314	68.7	01Jan2017, 14:02	0.83
CHC28.26	3.2077	274.6	01Jan2017, 14:35	0.55
CHC28.26_27.39	3.2077	270.9	01Jan2017, 14:52	0.55
CHC28.31	3.2077	274.6	01Jan2017, 14:35	0.55
CHC28.31A	0.0950	29.4	01Jan2017, 13:38	0.83
CHC28.31B	0.7915	154.6	01Jan2017, 14:01	0.78
CHC28.67	2.3212	183.2	01Jan2017, 14:42	0.46

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	64.3	01Jan2017, 14:06	0.44
CHC28.67_28.31	2.3212	183.0	01Jan2017, 14:47	0.46
CHC29.91	1.6558	145.7	01Jan2017, 14:24	0.47
CHC29.91A	0.6097	50.3	01Jan2017, 14:02	0.38
CHC29.91_28.67	1.6558	145.0	01Jan2017, 14:47	0.47
CHC30.94	1.0461	109.8	01Jan2017, 14:14	0.52
CHC30.94A	1.0461	109.8	01Jan2017, 14:14	0.52
CHC30.94_29.91	1.0461	109.5	01Jan2017, 14:31	0.52
CHC3.39	62.5254	2015.2	02Jan2017, 02:09	0.73
CHC3.39A	1.8419	348.1	01Jan2017, 13:58	0.73
CHC3.39_1.28	62.5254	2014.6	02Jan2017, 02:36	0.72
CHC4.62	60.6835	2123.2	02Jan2017, 01:16	0.76
CHC4.62A	0.1505	48.6	01Jan2017, 13:39	0.88
CHC4.62B	0.1946	60.1	01Jan2017, 13:41	0.88
CHC4.62_3.39	60.6835	2012.0	02Jan2017, 02:19	0.73
CHC4.97	60.3384	2131.9	02Jan2017, 01:04	0.76
CHC4.97A	0.4693	61.9	01Jan2017, 14:40	0.78
CHC4.97B	0.0580	21.6	01Jan2017, 13:39	1.04
CHC4.97C	0.2012	64.2	01Jan2017, 13:34	0.78
CHC4.97_4.62	60.3384	2120.2	02Jan2017, 01:19	0.76
CHC5.97	59.6099	2124.6	02Jan2017, 00:49	0.76

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	235.2	01Jan2017, 14:12	0.92
CHC5.97_4.97	59.6099	2122.6	02Jan2017, 01:05	0.76
CHC7.47	58.4785	2127.5	01Jan2017, 23:47	0.77
CHC7.47_5.97	58.4785	2111.0	02Jan2017, 00:49	0.76
CHC7.48	53.6341	2065.6	01Jan2017, 23:50	0.76
CHC7.48A	2.2128	149.8	01Jan2017, 18:25	0.92
CHC9.40	51.4213	2023.9	01Jan2017, 22:48	0.76
CHC9.40A	1.1576	211.8	01Jan2017, 14:24	0.92
CHC9.40_7.47	51.4213	1997.6	01Jan2017, 23:56	0.75
DER0.00	2.9199	411.1	01Jan2017, 15:45	0.87
DER0.00A	0.1924	62.1	01Jan2017, 13:39	0.88
DER0.52	2.7275	406.1	01Jan2017, 15:26	0.87
DER0.52A	0.5165	146.8	01Jan2017, 13:52	0.98
DER0.52_0.00	2.7275	402.2	01Jan2017, 15:45	0.87
DER1.10	2.2110	387.6	01Jan2017, 14:51	0.84
DER1.10A	0.3712	101.5	01Jan2017, 13:55	0.98
DER1.10_0.52	2.2110	373.1	01Jan2017, 15:26	0.85
DER1.76	1.8398	354.6	01Jan2017, 14:23	0.81
DER1.76A	0.5078	98.6	01Jan2017, 13:57	0.73
DER1.76_1.10	1.8398	351.0	01Jan2017, 14:52	0.82
DER2.22	1.3320	291.4	01Jan2017, 14:07	0.84

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	130.0	01Jan2017, 14:08	0.78
DER2.22_1.76	1.3320	288.2	01Jan2017, 14:27	0.85
DER2.93	0.6085	162.4	01Jan2017, 13:52	0.93
DER2.93A	0.6085	162.4	01Jan2017, 13:52	0.93
DER2.93_2.22	0.6085	161.6	01Jan2017, 14:06	0.93
DORT0.34	1.6920	337.1	01Jan2017, 14:15	0.91
DORT0.34A	0.0357	13.3	01Jan2017, 13:32	0.88
DORT0.34B	0.0234	8.3	01Jan2017, 13:33	0.83
DORT0.54	1.6329	332.7	01Jan2017, 14:12	0.91
DORT0.54A	0.2058	60.9	01Jan2017, 13:46	0.93
DORT0.54B	0.0280	5.5	01Jan2017, 13:35	0.48
DORT0.54C	0.0058	3.0	01Jan2017, 13:34	1.34
DORT0.54D	0.0832	24.6	01Jan2017, 13:53	1.04
DORT0.54E	0.0367	14.3	01Jan2017, 13:31	0.88
DORT0.54_0.34	1.6329	332.2	01Jan2017, 14:15	0.91
DORT1.15	1.2734	290.0	01Jan2017, 13:52	0.91
DORT1.15A	0.4022	139.4	01Jan2017, 13:41	0.98
DORT1.15B	0.0103	7.6	01Jan2017, 13:30	2.01
DORT1.15_0.54	1.2734	288.5	01Jan2017, 14:17	0.91
DORT1.58	0.8609	209.1	01Jan2017, 13:51	0.87
DORT1.58A	0.4931	129.9	01Jan2017, 13:50	0.87

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	205.4	01Jan2017, 14:07	0.86
DORT2.41	0.3678	92.0	01Jan2017, 13:46	0.86
DORT2.41A	0.2384	68.6	01Jan2017, 13:42	0.83
DORT2.41B	0.1294	42.8	01Jan2017, 13:40	0.93
DORT2.41_1.58	0.3678	86.9	01Jan2017, 14:14	0.85
DOR0.00	5.5423	770.1	01Jan2017, 15:29	0.91
DOR0.00A	0.0475	19.6	01Jan2017, 13:42	1.21
DOR0.24	5.4948	769.2	01Jan2017, 15:25	0.90
DOR0.24A	0.1218	42.6	01Jan2017, 13:43	1.03
DOR0.24B	0.1287	41.9	01Jan2017, 13:50	1.09
DOR0.24_0.00	5.4948	767.1	01Jan2017, 15:30	0.90
DOR0.44A	0.5212	139.3	01Jan2017, 14:00	1.03
DOR0.44_0.24	5.2443	750.0	01Jan2017, 15:25	0.90
DOR1.21	4.7231	723.0	01Jan2017, 14:39	0.88
DOR1.21A	0.2430	57.4	01Jan2017, 14:11	1.03
DOR1.21B	0.2037	70.1	01Jan2017, 13:41	0.98
DOR1.21_0.44	4.7231	708.9	01Jan2017, 15:21	0.88
DOR1.23	4.2764	678.0	01Jan2017, 14:42	0.91
DOR1.23A	0.2095	70.9	01Jan2017, 13:48	1.09
DOR1.45	4.0669	660.2	01Jan2017, 14:30	0.90
DOR1.45_1.23	4.0669	657.3	01Jan2017, 14:47	0.90

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	392.1	01Jan2017, 14:54	0.90
DOR1.60A	0.5501	150.6	01Jan2017, 13:51	0.93
DOR2.40	1.8248	357.2	01Jan2017, 14:22	0.89
DOR2.40A	0.4594	109.9	01Jan2017, 14:00	0.93
DOR2.40_1.60	1.8248	349.2	01Jan2017, 14:56	0.89
DOR2.81	1.3654	275.9	01Jan2017, 14:09	0.87
DOR2.81A	0.2367	71.0	01Jan2017, 13:52	1.03
DOR2.81_2.40	1.3654	271.6	01Jan2017, 14:27	0.87
DOR3.06	1.1287	220.0	01Jan2017, 14:00	0.84
DOR3.06A	0.3648	96.2	01Jan2017, 13:50	0.87
DOR3.06B	0.7639	140.4	01Jan2017, 14:12	0.82
DOR3.06_2.81	1.1287	218.9	01Jan2017, 14:14	0.84
DOR.44	5.2443	752.0	01Jan2017, 15:19	0.90
ERRR0.57_0.00	1.1576	269.8	01Jan2017, 14:40	1.05
ERRT0.00	1.2906	290.4	01Jan2017, 14:39	1.09
ERRT0.00A	0.1098	45.4	01Jan2017, 13:50	1.40
ERRT0.00B	0.0077	5.0	01Jan2017, 13:30	1.61
ERRT0.00C	0.0074	5.8	01Jan2017, 13:30	2.19
ERRT0.00D	0.0036	2.8	01Jan2017, 13:30	2.19
ERRT0.00E	0.0045	3.5	01Jan2017, 13:30	2.19
ERRT0.57	1.1576	276.2	01Jan2017, 14:20	1.05

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	51.4	01Jan2017, 14:38	1.03
ERRT0.61	0.8788	228.8	01Jan2017, 14:19	1.05
ERRT0.61A	0.4551	120.5	01Jan2017, 14:06	1.09
ERRT1.62	0.4237	126.3	01Jan2017, 13:39	1.02
ERRT1.62A	0.1546	43.4	01Jan2017, 13:46	0.88
ERRT1.62B	0.2547	112.2	01Jan2017, 13:31	1.03
ERRT1.62C	0.0144	11.3	01Jan2017, 13:30	2.19
ERRT1.62_0.61	0.4237	117.0	01Jan2017, 14:21	1.01
ERR0.00	2.6728	558.8	01Jan2017, 14:42	1.02
ERR0.00A	0.0718	22.7	01Jan2017, 13:37	0.83
ERR0.00B	0.0053	4.1	01Jan2017, 13:30	2.19
ERR0.23	2.5957	558.7	01Jan2017, 14:36	1.03
ERR0.23A	0.1922	57.8	01Jan2017, 13:42	0.88
ERR0.23B	0.0298	21.5	01Jan2017, 13:30	1.93
ERR0.23_0.00	2.5957	554.7	01Jan2017, 14:42	1.03
ERR0.26	1.3051	293.8	01Jan2017, 14:24	0.96
ERR0.88	1.0831	276.0	01Jan2017, 14:07	0.95
ERR0.88A	0.5048	113.3	01Jan2017, 14:10	0.98
ERR0.88_0.23	1.0831	273.7	01Jan2017, 14:25	0.95
ERR1.33	0.5783	165.0	01Jan2017, 13:48	0.93
ERR1.33A	0.5783	165.0	01Jan2017, 13:48	0.93

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	163.5	01Jan2017, 14:06	0.93
LAR0.00	0.9453	133.9	01Jan2017, 14:24	1.00
LAR0.00A	0.5827	102.4	01Jan2017, 14:44	1.03
LAR0.40	0.3626	51.4	01Jan2017, 13:57	0.95
LAR0.40A	0.0039	3.1	01Jan2017, 13:30	2.28
LAR0.40B	0.1091	67.3	01Jan2017, 13:41	1.93
LAR0.40C	0.1251	43.4	01Jan2017, 13:43	1.03
LAR0.40D	0.1245	38.5	01Jan2017, 13:41	0.88
LAR0.40_0.00	0.3626	51.3	01Jan2017, 14:03	0.95
MRT0.00	0.4202	122.9	01Jan2017, 13:43	0.87
MRT0.00A	0.1647	45.3	01Jan2017, 13:44	0.83
MRT0.66	0.2555	78.2	01Jan2017, 13:34	0.90
MRT0.66A	0.2030	76.6	01Jan2017, 13:34	0.93
MRT0.66B	0.0376	16.1	01Jan2017, 13:31	0.98
MRT0.66C	0.0149	7.0	01Jan2017, 13:32	1.15
MRT0.66_0.00	0.2555	77.6	01Jan2017, 13:43	0.90
ORT0.28	0.7836	190.6	01Jan2017, 13:51	0.78
ORT0.28A	0.1786	45.5	01Jan2017, 13:42	0.73
ORT0.95	0.6050	155.0	01Jan2017, 13:43	0.80
ORT0.95A	0.1851	53.0	01Jan2017, 13:36	0.73
ORT0.95_0.28	0.6050	153.7	01Jan2017, 13:55	0.80

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	114.6	01Jan2017, 13:42	0.83
ORT1.38A	0.1910	56.6	01Jan2017, 13:38	0.78
ORT1.38_0.95	0.4199	114.3	01Jan2017, 13:50	0.83
ORT2.04	0.2289	68.9	01Jan2017, 13:42	0.88
ORT2.04A	0.2289	68.9	01Jan2017, 13:42	0.88
ORT2.04_1.38	0.2289	68.7	01Jan2017, 13:52	0.88
Pond 0	0.1946	59.8	01Jan2017, 13:43	0.87
Pond 1	0.2012	53.2	01Jan2017, 13:41	0.77
Pond 10	0.0122	0.6	01Jan2017, 15:12	0.88
Pond 11	0.0236	8.3	01Jan2017, 13:34	0.88
Pond 12	0.0172	3.7	01Jan2017, 13:39	0.88
Pond 13	0.0603	7.8	01Jan2017, 13:52	0.82
Pond 14	0.1379	29.2	01Jan2017, 13:55	0.88
Pond 15	0.0477	6.8	01Jan2017, 14:29	1.09
Pond 16	0.3346	34.7	01Jan2017, 15:59	1.27
Pond 17	0.0528	12.3	01Jan2017, 14:04	1.61
Pond 18	0.1638	18.3	01Jan2017, 15:44	1.61
Pond 19	0.0053	3.9	01Jan2017, 13:34	2.19
Pond 2	0.0580	2.3	01Jan2017, 16:36	1.04
Pond 20	0.0077	4.4	01Jan2017, 13:31	1.61
Pond 21	0.0298	16.9	01Jan2017, 13:35	1.93

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	5.3	01Jan2017, 13:32	1.74
Pond 23	0.0036	2.7	01Jan2017, 13:31	2.19
Pond 24	0.0045	2.0	01Jan2017, 13:36	2.19
Pond 25	0.2547	78.5	01Jan2017, 13:38	1.03
Pond 26	0.0144	6.8	01Jan2017, 13:35	2.19
Pond 27	0.1245	35.5	01Jan2017, 13:48	0.87
Pond 28	0.1251	19.8	01Jan2017, 14:14	0.89
Pond 29	0.1091	4.6	01Jan2017, 18:26	1.12
Pond 3	0.1861	0.0	01Jan2017, 01:00	0.00
Pond 30	0.0039	0.5	01Jan2017, 13:50	0.94
Pond 31	0.3448	32.4	01Jan2017, 16:09	1.28
Pond 32	0.0626	36.7	01Jan2017, 13:49	2.19
Pond 33	0.0149	1.0	01Jan2017, 14:17	1.15
Pond 34	0.0376	1.1	01Jan2017, 17:40	0.67
Pond 35	0.0294	9.8	01Jan2017, 13:32	0.73
Pond 36	0.0175	11.4	01Jan2017, 13:33	1.76
Pond 37	0.1287	14.3	01Jan2017, 14:43	1.09
Pond 38	0.2037	0.0	01Jan2017, 01:00	0.00
Pond 39	0.0234	3.8	01Jan2017, 13:45	0.83
Pond 4	0.2023	14.7	01Jan2017, 14:08	0.58
Pond 40	0.0832	4.5	01Jan2017, 16:03	1.04

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	1.8	01Jan2017, 13:48	1.34
Pond 42	0.0367	5.8	01Jan2017, 13:41	0.88
Pond 43	0.0103	3.6	01Jan2017, 13:42	2.01
Pond 44	0.1294	29.5	01Jan2017, 13:56	0.92
Pond 45	0.1457	49.0	01Jan2017, 13:40	0.93
Pond 46	0.0187	10.8	01Jan2017, 13:35	1.93
Pond 47	0.0275	1.9	01Jan2017, 15:19	1.54
Pond 48	0.0456	1.6	01Jan2017, 17:36	1.00
Pond 49	0.0256	15.9	01Jan2017, 13:35	1.69
Pond 5	0.0343	9.0	01Jan2017, 13:38	0.69
Pond 50	0.0073	0.4	01Jan2017, 16:54	1.21
Pond 51	0.0721	8.4	01Jan2017, 13:47	0.95
Pond 52	0.0497	3.6	01Jan2017, 14:09	0.78
Pond 53	0.0896	32.5	01Jan2017, 13:42	1.09
Pond 54	0.2164	33.0	01Jan2017, 14:15	0.97
Pond 55	0.0163	3.2	01Jan2017, 13:37	0.55
Pond 56	0.0231	17.7	01Jan2017, 13:31	2.19
Pond 57	0.0112	0.7	01Jan2017, 14:02	0.93
Pond 58	0.0280	0.6	01Jan2017, 16:53	0.48
Pond 6	0.4472	73.7	01Jan2017, 14:10	0.93
Pond 7	0.0064	3.5	01Jan2017, 13:39	2.27

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	6.0	01Jan2017, 13:42	0.88
Pond 9	0.0281	5.4	01Jan2017, 13:46	0.88
RIR0.00	6.5684	903.3	01Jan2017, 15:32	0.83
RIR0.00A	0.0647	27.0	01Jan2017, 13:56	1.54
RIR0.32	6.5037	919.5	01Jan2017, 15:20	0.82
RIR0.32A	0.5587	112.2	01Jan2017, 14:04	0.82
RIR0.32_0.00	6.5037	897.1	01Jan2017, 15:33	0.82
RIR0.65	5.9450	888.7	01Jan2017, 15:06	0.82
RIR0.65A	0.1896	79.7	01Jan2017, 13:33	1.03
RIR0.65_0.32	5.9450	879.9	01Jan2017, 15:20	0.82
RIR0.86	5.7554	885.5	01Jan2017, 14:57	0.81
RIR0.86A	0.2984	70.5	01Jan2017, 13:53	0.83
RIR0.86_0.65	5.7554	877.6	01Jan2017, 15:06	0.81
RIR1.24	5.4570	869.3	01Jan2017, 14:51	0.81
RIR1.24A	0.0980	30.6	01Jan2017, 13:33	0.73
RIR1.24_0.86	5.4570	864.5	01Jan2017, 14:58	0.81
RIR1.34	5.3590	864.6	01Jan2017, 14:51	0.81
RIR1.52	4.5754	810.9	01Jan2017, 14:53	0.82
RIR1.62	1.8861	306.6	01Jan2017, 14:48	0.81
RIR1.62A	0.5008	105.5	01Jan2017, 14:05	0.87
RIR2.60	1.3853	258.9	01Jan2017, 14:04	0.79

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	91.5	01Jan2017, 13:41	0.83
RIR2.60_1.62	1.3853	249.6	01Jan2017, 14:54	0.78
RIR3.38	1.0728	220.9	01Jan2017, 13:56	0.77
RIR3.38A	1.0434	219.1	01Jan2017, 13:56	0.78
RIR3.38B	0.0294	10.0	01Jan2017, 13:30	0.73
RIR3.38_2.60	1.0728	218.7	01Jan2017, 14:11	0.77
SHCT0.00	3.0470	241.5	01Jan2017, 14:15	0.36
SHCT0.00A	0.9966	71.2	01Jan2017, 14:04	0.34
SHCT1.59	2.0504	177.1	01Jan2017, 13:58	0.37
SHCT1.59A	2.0504	177.1	01Jan2017, 13:58	0.37
SHCT1.59_0.00	2.0504	176.9	01Jan2017, 14:18	0.37
SHC0.00	6.4942	466.0	01Jan2017, 15:30	0.47
SHC0.00A	0.0458	9.7	01Jan2017, 13:44	0.64
SHC0.23	6.4484	488.5	01Jan2017, 15:13	0.46
SHC0.23A	0.6386	103.7	01Jan2017, 14:31	0.87
SHC0.23_0.00	6.4484	464.1	01Jan2017, 15:30	0.47
SHC1.60	5.8098	429.6	01Jan2017, 14:46	0.42
SHC1.60A	0.2628	65.6	01Jan2017, 13:40	0.69
SHC1.60_0.23	5.8098	412.9	01Jan2017, 15:15	0.42
SHC2.06	5.5470	433.0	01Jan2017, 14:22	0.41
SHC2.06A	0.2828	20.9	01Jan2017, 13:47	0.28

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	417.8	01Jan2017, 14:46	0.41
SHC2.56	5.2642	424.8	01Jan2017, 14:15	0.42
SHC2.56A	0.4506	70.4	01Jan2017, 13:52	0.56
SHC2.56_2.06	5.2642	423.7	01Jan2017, 14:22	0.42
SHC3.11	1.7666	137.4	01Jan2017, 14:15	0.47
SHC3.11A	0.2775	104.7	01Jan2017, 13:34	0.93
SHC3.11_2.56	1.7666	137.4	01Jan2017, 14:20	0.47
SHC3.92	1.4891	119.1	01Jan2017, 14:05	0.38
SHC3.92A	0.6934	46.4	01Jan2017, 14:00	0.31
SHC3.92B	0.7957	74.2	01Jan2017, 14:08	0.44
SHC3.92_3.11	1.4891	119.0	01Jan2017, 14:17	0.38
SRT0.50	2.6893	506.2	01Jan2017, 14:54	0.83
SRT0.50A	0.4294	78.6	01Jan2017, 14:12	0.82
SRT1.29	2.2599	462.2	01Jan2017, 14:34	0.83
SRT1.29A	0.3191	55.8	01Jan2017, 14:10	0.78
SRT1.29_0.50	2.2599	456.9	01Jan2017, 14:55	0.83
SRT2.06	1.9408	423.0	01Jan2017, 14:09	0.84
SRT2.06A	0.4839	115.3	01Jan2017, 13:56	0.87
SRT2.06_1.29	1.9408	416.6	01Jan2017, 14:36	0.84
SRT2.55	1.4569	323.3	01Jan2017, 14:02	0.82
SRT2.55A	0.3465	96.0	01Jan2017, 13:44	0.83

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	321.8	01Jan2017, 14:14	0.82
SRT3.00	1.1104	267.1	01Jan2017, 13:53	0.82
SRT3.00A	0.7468	171.5	01Jan2017, 13:54	0.82
SRT3.00_2.55	1.1104	263.7	01Jan2017, 14:07	0.82
SRT3.38	0.3636	96.3	01Jan2017, 13:46	0.83
SRT3.38A	0.3636	96.3	01Jan2017, 13:46	0.83
SRT3.38_3.00	0.3636	96.1	01Jan2017, 13:51	0.83
SSRTA0.00	0.4007	103.3	01Jan2017, 13:53	0.94
SSRTA0.00A	0.2628	79.2	01Jan2017, 13:49	0.98
SSRTA0.59	0.1379	29.2	01Jan2017, 13:55	0.88
SSRTA0.59A	0.1379	44.6	01Jan2017, 13:39	0.88
SSRTA0.59_0.00	0.1379	29.1	01Jan2017, 14:07	0.88
SSRT0.00	1.3182	304.1	01Jan2017, 14:12	0.91
SSRT0.00A	0.2236	58.0	01Jan2017, 13:51	0.88
SSRT0.46	1.0946	267.8	01Jan2017, 13:56	0.91
SSRT0.46A	0.1893	64.8	01Jan2017, 13:39	0.93
SSRT0.46_0.00	1.0946	263.2	01Jan2017, 14:15	0.91
SSRT0.77	0.9053	233.8	01Jan2017, 13:49	0.91
SSRT0.77A	0.2520	73.9	01Jan2017, 13:47	0.93
SSRT0.77B	0.0603	19.9	01Jan2017, 13:35	0.83
SSRT0.77_0.46	0.9053	232.4	01Jan2017, 14:00	0.91

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	50.9	01Jan2017, 13:37	0.85
SSRT1.34A	0.1112	33.5	01Jan2017, 13:39	0.83
SSRT1.34B	0.0172	6.7	01Jan2017, 13:31	0.88
SSRT1.34C	0.0236	9.1	01Jan2017, 13:31	0.88
SSRT1.34D	0.0122	4.7	01Jan2017, 13:31	0.88
SSRT1.34E	0.0281	10.3	01Jan2017, 13:33	0.88
SSRT1.34_0.77	0.1923	50.4	01Jan2017, 13:49	0.85
SSR0.00	4.8444	790.1	01Jan2017, 14:41	0.88
SSR0.00A	0.0601	22.7	01Jan2017, 13:32	0.88
SSR0.22	4.7843	787.3	01Jan2017, 14:38	0.88
SSR0.22A	0.2501	93.0	01Jan2017, 13:42	1.09
SSR0.22_0.00	4.7843	786.9	01Jan2017, 14:41	0.88
SSR0.85	4.5342	768.7	01Jan2017, 14:25	0.86
SSR0.85_0.22	4.5342	766.4	01Jan2017, 14:39	0.86
SSR0.87	3.2160	509.9	01Jan2017, 14:38	0.85
SSR0.87A	0.3806	84.6	01Jan2017, 14:06	0.93
SSR1.06	2.8354	453.2	01Jan2017, 14:37	0.84
SSR1.06A	0.2647	77.6	01Jan2017, 13:47	0.93
SSR1.06_0.87	2.8354	452.6	01Jan2017, 14:43	0.84
SSR1.71	2.5707	431.2	01Jan2017, 14:18	0.82
SSR1.71A	0.3665	92.0	01Jan2017, 14:06	1.03

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	429.8	01Jan2017, 14:40	0.83
SSR1.89	2.2042	347.9	01Jan2017, 14:15	0.79
SSR1.89A	0.3178	98.4	01Jan2017, 13:50	1.03
SSR1.89B	0.0231	18.1	01Jan2017, 13:30	2.19
SSR1.89_1.71	2.2042	346.3	01Jan2017, 14:22	0.79
SSR2.33	1.8633	283.2	01Jan2017, 14:04	0.73
SSR2.33A	0.1750	74.6	01Jan2017, 13:35	1.09
SSR2.33B	0.0381	14.7	01Jan2017, 13:31	0.88
SSR2.33_1.89	1.8633	280.1	01Jan2017, 14:21	0.73
SSR2.70	1.6502	258.1	01Jan2017, 13:56	0.69
SSR2.70A	0.4613	111.8	01Jan2017, 13:51	0.82
SSR2.70B	0.0112	4.7	01Jan2017, 13:30	0.93
SSR2.70C	0.0064	5.1	01Jan2017, 13:31	2.28
SSR2.70D	0.0343	10.1	01Jan2017, 13:33	0.69
SSR2.70E	0.4472	137.9	01Jan2017, 13:44	0.93
SSR2.70_2.33	1.6502	257.2	01Jan2017, 14:06	0.69
SSR3.20	0.6898	70.0	01Jan2017, 13:50	0.42
SSR3.20A	0.1108	26.6	01Jan2017, 13:41	0.69
SSR3.20B	0.2023	54.8	01Jan2017, 13:36	0.69
SSR3.20_2.70	0.6898	69.9	01Jan2017, 13:58	0.42
SSR3.70	0.3767	34.5	01Jan2017, 13:41	0.26

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	34.5	01Jan2017, 13:41	0.52
SSR3.70B	0.1861	31.5	01Jan2017, 13:37	0.45
SSR3.70_3.20	0.3767	34.3	01Jan2017, 13:52	0.26
WOR0.00	2.8951	384.5	01Jan2017, 15:21	0.80
WOR0.00A	0.0359	12.4	01Jan2017, 13:34	0.83
WOR0.32	2.8592	383.5	01Jan2017, 15:10	0.80
WOR0.32A	0.1901	35.2	01Jan2017, 14:00	0.73
WOR0.32_0.00	2.8592	382.8	01Jan2017, 15:21	0.80
WOR0.76	2.6691	394.0	01Jan2017, 14:41	0.80
WOR0.76A	0.3131	106.8	01Jan2017, 13:41	0.98
WOR0.76_0.32	2.6691	371.3	01Jan2017, 15:11	0.80
WOR1.59	2.3560	378.8	01Jan2017, 14:18	0.78
WOR1.59A	0.4536	131.1	01Jan2017, 13:51	0.98
WOR1.59B	0.7600	128.0	01Jan2017, 14:13	0.78
WOR1.59_0.76	2.3560	372.6	01Jan2017, 14:42	0.78
WOR1.64	1.1424	186.2	01Jan2017, 14:32	0.70
WOR1.64A	0.2551	68.8	01Jan2017, 13:52	0.93
WOR2.33	0.8873	175.9	01Jan2017, 13:49	0.63
WOR2.33A	0.3233	68.0	01Jan2017, 13:48	0.69
WOR2.33_1.64	0.8873	155.1	01Jan2017, 14:35	0.63
WOR3.00	0.5640	108.0	01Jan2017, 13:49	0.60

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	91.8	01Jan2017, 13:47	0.83
WOR3.67	0.2110	17.0	01Jan2017, 13:35	0.23
WOR3.67A	0.2110	17.0	01Jan2017, 13:35	0.23
WOR3.67_3.00	0.2110	16.9	01Jan2017, 13:51	0.23

Project: ChiquesCreek Simulation Run: 5YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 5YR_24HR
Compute Time: 31Jan2017, 15:48:04 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	331.4	01Jan2017, 15:08	1.01
BER0.00A	0.1087	45.3	01Jan2017, 13:50	1.42
BER0.64	1.7391	340.6	01Jan2017, 14:27	0.98
BER0.64A	0.3111	155.6	01Jan2017, 13:42	1.49
BER0.64_0.00	1.7391	320.8	01Jan2017, 15:09	0.98
BER1.05	1.4280	321.9	01Jan2017, 14:02	0.87
BER1.05A	0.2790	111.9	01Jan2017, 13:53	1.42
BER1.05_0.64	1.4280	297.5	01Jan2017, 14:30	0.87
BER1.30	1.1490	218.6	01Jan2017, 14:00	0.74
BER1.30A	0.5289	150.1	01Jan2017, 13:56	1.05
BER1.30_1.05	1.1490	217.5	01Jan2017, 14:05	0.74
BER1.95	0.6201	73.0	01Jan2017, 13:53	0.47
BER1.95A	0.6201	73.0	01Jan2017, 13:53	0.47
BER1.95_1.30	0.6201	72.5	01Jan2017, 14:05	0.47
BOR0.00	6.6030	1302.6	01Jan2017, 15:03	1.12
BOR0.00A	0.0062	3.8	01Jan2017, 13:31	1.49
BOR0.10	6.5968	1347.0	01Jan2017, 14:56	1.12

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	84.6	01Jan2017, 14:01	1.42
BOR0.10_0.00	6.5968	1302.1	01Jan2017, 15:03	1.12
BOR0.68	1.6208	335.3	01Jan2017, 14:09	0.85
BOR0.68A	0.2555	102.5	01Jan2017, 13:53	1.42
BOR0.68_0.10	1.6208	317.6	01Jan2017, 14:41	0.86
BOR1.20	1.3653	249.9	01Jan2017, 14:04	0.75
BOR1.20A	0.5429	147.8	01Jan2017, 14:08	1.17
BOR1.20_0.68	1.3653	248.9	01Jan2017, 14:12	0.75
BOR2.07	0.8224	103.8	01Jan2017, 13:49	0.47
BOR2.07A	0.8224	103.8	01Jan2017, 13:49	0.47
BOR2.07_1.20	0.8224	103.1	01Jan2017, 14:03	0.47
CHC10.68	50.2637	3193.7	01Jan2017, 21:29	1.26
CHC10.68A	0.7377	332.2	01Jan2017, 13:57	1.69
CHC10.68B	0.0477	24.6	01Jan2017, 13:47	1.70
CHC10.68C	0.1180	51.1	01Jan2017, 13:54	1.55
CHC10.68D	0.1638	89.5	01Jan2017, 14:06	2.32
CHC10.68E	0.0528	42.0	01Jan2017, 13:36	2.32
CHC10.68_9.40	50.2637	3178.7	01Jan2017, 22:02	1.26
CHC11.99	49.1437	3168.1	01Jan2017, 20:50	1.26
CHC11.99_10.68	49.1437	3152.4	01Jan2017, 21:30	1.25
CHC12.01	46.4709	3082.6	01Jan2017, 20:55	1.24

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	84.2	01Jan2017, 13:32	1.49
CHC12.65	46.3306	3192.1	01Jan2017, 20:25	1.25
CHC12.65_12.01	46.3306	3079.4	01Jan2017, 20:55	1.24
CHC12.67	45.3853	3156.4	01Jan2017, 20:27	1.24
CHC12.67A	0.5547	131.8	01Jan2017, 15:00	1.55
CHC13.89	44.8306	3170.8	01Jan2017, 19:45	1.24
CHC13.89_12.67	44.8306	3133.0	01Jan2017, 20:28	1.24
CHC13.90	41.9107	3049.6	01Jan2017, 19:48	1.23
CHC13.90A	2.4712	242.9	01Jan2017, 19:13	1.47
CHC16.25	39.4395	3067.6	01Jan2017, 17:58	1.24
CHC16.25A	0.7783	173.7	01Jan2017, 15:10	1.55
CHC16.25_13.90	39.4395	2810.0	01Jan2017, 19:50	1.22
CHC17.08	38.6612	3120.9	01Jan2017, 17:16	1.24
CHC17.08A	0.5852	183.3	01Jan2017, 14:29	1.62
CHC17.08B	0.3448	233.9	01Jan2017, 14:00	2.78
CHC17.08_16.25	38.6612	3002.7	01Jan2017, 18:00	1.24
CHC17.73	37.7312	3102.7	01Jan2017, 16:46	1.23
CHC17.73A	0.3870	152.3	01Jan2017, 14:09	1.69
CHC17.73B	0.0626	59.4	01Jan2017, 13:35	2.97
CHC17.73_17.08	37.7312	3032.7	01Jan2017, 17:16	1.23
CHC18.09	37.2816	3131.0	01Jan2017, 16:27	1.22

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	57.4	01Jan2017, 13:50	1.17
CHC18.09_17.73	37.2816	3067.8	01Jan2017, 16:46	1.22
CHC18.61	36.6951	3187.3	01Jan2017, 16:05	1.22
CHC18.61A	0.5761	235.2	01Jan2017, 13:43	1.23
CHC18.61_18.09	36.6951	3098.0	01Jan2017, 16:27	1.22
CHC19.32	36.1190	3388.4	01Jan2017, 15:24	1.23
CHC19.32_18.61	36.1190	3153.9	01Jan2017, 16:05	1.22
CHC19.35	29.5506	2039.7	01Jan2017, 16:05	1.20
CHC19.35A	0.3523	128.2	01Jan2017, 14:17	1.69
CHC19.35B	0.0175	15.4	01Jan2017, 13:32	2.50
CHC1.28	63.3656	3184.1	02Jan2017, 02:04	1.20
CHC1.28A	0.8402	115.6	01Jan2017, 16:13	1.29
CHC20.02	29.1808	2045.6	01Jan2017, 15:38	1.19
CHC20.02A	0.3588	191.6	01Jan2017, 13:56	1.99
CHC20.02_19.35	29.1808	2011.5	01Jan2017, 19:29	1.19
CHC20.55	28.8220	2106.7	01Jan2017, 15:12	1.19
CHC20.55_20.02	28.8220	2008.5	01Jan2017, 19:01	1.18
CHC20.57	23.2797	1729.1	01Jan2017, 18:45	1.12
CHC20.57A	0.5512	195.1	01Jan2017, 14:49	2.15
CHC21.28	22.7285	1731.6	01Jan2017, 17:41	1.10
CHC21.28A	0.3509	190.2	01Jan2017, 14:04	2.24

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	17.8	01Jan2017, 13:30	2.68
CHC21.28C	0.0073	3.4	01Jan2017, 14:02	1.84
CHC21.28D	0.0224	17.0	01Jan2017, 13:31	2.00
CHC21.28E	0.0497	25.0	01Jan2017, 13:34	1.29
CHC21.28F	0.1457	83.9	01Jan2017, 13:34	1.49
CHC21.28_20.57	22.7285	1688.6	01Jan2017, 18:47	1.10
CHC21.59	22.1338	1744.6	01Jan2017, 17:17	1.08
CHC21.59A	0.2001	94.2	01Jan2017, 13:54	1.69
CHC21.59B	0.0256	21.7	01Jan2017, 13:33	2.41
CHC21.59C	0.0275	22.8	01Jan2017, 13:31	2.24
CHC21.59D	0.0896	57.6	01Jan2017, 13:34	1.70
CHC21.59_21.28	22.1338	1693.7	01Jan2017, 17:42	1.08
CHC22.01	21.7910	1765.8	01Jan2017, 16:48	1.07
CHC22.01A	1.2726	738.4	01Jan2017, 13:31	1.42
CHC22.01B	0.0456	33.7	01Jan2017, 13:30	1.84
CHC22.01_21.59	21.7910	1721.9	01Jan2017, 17:18	1.07
CHC23.04	20.4728	1729.3	01Jan2017, 15:59	1.05
CHC23.04A	1.8763	376.1	01Jan2017, 15:03	1.35
CHC23.04B	0.2164	110.0	01Jan2017, 13:43	1.55
CHC23.04_22.01	20.4728	1700.5	01Jan2017, 16:49	1.05
CHC24.53	18.3801	1579.8	01Jan2017, 15:06	1.02

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	1449.2	01Jan2017, 19:04	1.01
CHC24.63	18.3801	1579.8	01Jan2017, 15:06	1.02
CHC24.64	11.7771	1184.0	01Jan2017, 18:01	0.97
CHC24.64A	0.2517	44.2	01Jan2017, 14:43	1.05
CHC25.53	11.5254	1339.0	01Jan2017, 16:57	0.96
CHC25.53A	0.6693	211.7	01Jan2017, 14:08	1.35
CHC25.53B	0.0163	8.2	01Jan2017, 13:31	1.17
CHC25.53_24.64	11.5254	1171.6	01Jan2017, 18:01	0.96
CHC26.30	10.8398	1339.4	01Jan2017, 16:21	0.94
CHC26.30A	0.8065	133.5	01Jan2017, 15:29	1.29
CHC26.30_25.53	10.8398	1297.4	01Jan2017, 16:58	0.94
CHC27.38	10.0333	1367.7	01Jan2017, 15:36	0.91
CHC27.38_26.30	10.0333	1227.9	01Jan2017, 16:23	0.91
CHC27.39	3.5391	534.7	01Jan2017, 14:14	1.01
CHC27.39A	0.3314	115.7	01Jan2017, 14:00	1.35
CHC28.26	3.2077	549.4	01Jan2017, 14:12	0.98
CHC28.26_27.39	3.2077	481.9	01Jan2017, 15:01	0.97
CHC28.31	3.2077	549.4	01Jan2017, 14:12	0.98
CHC28.31A	0.0950	47.2	01Jan2017, 13:37	1.36
CHC28.31B	0.7915	264.8	01Jan2017, 13:59	1.29
CHC28.67	2.3212	325.2	01Jan2017, 15:03	0.85

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	133.9	01Jan2017, 14:02	0.84
CHC28.67_28.31	2.3212	325.0	01Jan2017, 15:08	0.85
CHC29.91	1.6558	275.5	01Jan2017, 14:09	0.86
CHC29.91A	0.6097	112.1	01Jan2017, 13:59	0.74
CHC29.91_28.67	1.6558	272.9	01Jan2017, 15:09	0.86
CHC30.94	1.0461	217.0	01Jan2017, 14:11	0.94
CHC30.94A	1.0461	217.0	01Jan2017, 14:11	0.94
CHC30.94_29.91	1.0461	215.0	01Jan2017, 14:45	0.94
CHC3.39	62.5254	3176.1	02Jan2017, 01:20	1.21
CHC3.39A	1.8419	605.3	01Jan2017, 13:56	1.22
CHC3.39_1.28	62.5254	3168.7	02Jan2017, 02:06	1.20
CHC4.62	60.6835	3366.2	02Jan2017, 00:27	1.26
CHC4.62A	0.1505	77.0	01Jan2017, 13:38	1.42
CHC4.62B	0.1946	95.9	01Jan2017, 13:40	1.42
CHC4.62_3.39	60.6835	3151.5	02Jan2017, 01:31	1.21
CHC4.97	60.3384	3381.9	02Jan2017, 00:10	1.26
CHC4.97A	0.4693	108.2	01Jan2017, 14:36	1.29
CHC4.97B	0.0580	33.0	01Jan2017, 13:39	1.62
CHC4.97C	0.2012	102.6	01Jan2017, 13:34	1.29
CHC4.97_4.62	60.3384	3360.5	02Jan2017, 00:27	1.25
CHC5.97	59.6099	3374.9	01Jan2017, 23:49	1.26

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	386.1	01Jan2017, 14:10	1.48
CHC5.97_4.97	59.6099	3367.7	02Jan2017, 00:10	1.26
CHC7.47	58.4785	3377.0	01Jan2017, 22:58	1.27
CHC7.47_5.97	58.4785	3353.5	01Jan2017, 23:49	1.26
CHC7.48	53.6341	3280.1	01Jan2017, 23:01	1.26
CHC7.48A	2.2128	245.1	01Jan2017, 18:17	1.48
CHC9.40	51.4213	3205.6	01Jan2017, 22:01	1.26
CHC9.40A	1.1576	349.8	01Jan2017, 14:22	1.48
CHC9.40_7.47	51.4213	3158.4	01Jan2017, 23:07	1.25
DER0.00	2.9199	713.9	01Jan2017, 15:23	1.41
DER0.00A	0.1924	98.4	01Jan2017, 13:38	1.42
DER0.52	2.7275	704.5	01Jan2017, 15:06	1.41
DER0.52A	0.5165	232.9	01Jan2017, 13:51	1.55
DER0.52_0.00	2.7275	699.6	01Jan2017, 15:23	1.41
DER1.10	2.2110	660.0	01Jan2017, 14:40	1.38
DER1.10A	0.3712	161.6	01Jan2017, 13:53	1.55
DER1.10_0.52	2.2110	648.0	01Jan2017, 15:08	1.38
DER1.76	1.8398	595.1	01Jan2017, 14:20	1.34
DER1.76A	0.5078	171.0	01Jan2017, 13:55	1.23
DER1.76_1.10	1.8398	591.4	01Jan2017, 14:43	1.34
DER2.22	1.3320	480.7	01Jan2017, 14:10	1.38

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	224.0	01Jan2017, 14:06	1.29
DER2.22_1.76	1.3320	477.5	01Jan2017, 14:25	1.38
DER2.93	0.6085	261.6	01Jan2017, 13:51	1.48
DER2.93A	0.6085	261.6	01Jan2017, 13:51	1.48
DER2.93_2.22	0.6085	259.0	01Jan2017, 14:12	1.48
DORT0.34	1.6920	552.9	01Jan2017, 14:07	1.46
DORT0.34A	0.0357	20.5	01Jan2017, 13:32	1.42
DORT0.34B	0.0234	12.9	01Jan2017, 13:32	1.36
DORT0.54	1.6329	545.8	01Jan2017, 14:03	1.46
DORT0.54A	0.2058	97.0	01Jan2017, 13:45	1.49
DORT0.54B	0.0280	10.1	01Jan2017, 13:34	0.89
DORT0.54C	0.0058	4.3	01Jan2017, 13:33	2.00
DORT0.54D	0.0832	38.5	01Jan2017, 13:52	1.62
DORT0.54E	0.0367	21.8	01Jan2017, 13:31	1.42
DORT0.54_0.34	1.6329	543.6	01Jan2017, 14:07	1.46
DORT1.15	1.2734	461.4	01Jan2017, 13:47	1.46
DORT1.15A	0.4022	216.2	01Jan2017, 13:40	1.55
DORT1.15B	0.0103	9.9	01Jan2017, 13:30	2.78
DORT1.15_0.54	1.2734	457.0	01Jan2017, 14:06	1.46
DORT1.58	0.8609	298.4	01Jan2017, 13:50	1.40
DORT1.58A	0.4931	211.4	01Jan2017, 13:48	1.42

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	295.2	01Jan2017, 14:04	1.40
DORT2.41	0.3678	162.5	01Jan2017, 13:44	1.40
DORT2.41A	0.2384	111.2	01Jan2017, 13:41	1.36
DORT2.41B	0.1294	67.2	01Jan2017, 13:39	1.49
DORT2.41_1.58	0.3678	155.9	01Jan2017, 14:26	1.38
DOR0.00	5.5423	1272.2	01Jan2017, 15:18	1.45
DOR0.00A	0.0475	29.1	01Jan2017, 13:41	1.84
DOR0.24	5.4948	1272.2	01Jan2017, 15:13	1.44
DOR0.24A	0.1218	65.6	01Jan2017, 13:42	1.62
DOR0.24B	0.1287	64.6	01Jan2017, 13:49	1.70
DOR0.24_0.00	5.4948	1267.8	01Jan2017, 15:18	1.44
DOR0.44A	0.5212	220.0	01Jan2017, 13:59	1.62
DOR0.44_0.24	5.2443	1238.4	01Jan2017, 15:14	1.43
DOR1.21	4.7231	1187.0	01Jan2017, 14:39	1.41
DOR1.21A	0.2430	91.4	01Jan2017, 14:09	1.62
DOR1.21B	0.2037	108.9	01Jan2017, 13:40	1.55
DOR1.21_0.44	4.7231	1169.2	01Jan2017, 15:10	1.41
DOR1.23	4.2764	1118.0	01Jan2017, 14:42	1.47
DOR1.23A	0.2095	108.8	01Jan2017, 13:47	1.69
DOR1.45	4.0669	1093.7	01Jan2017, 14:34	1.45
DOR1.45_1.23	4.0669	1086.5	01Jan2017, 14:43	1.45

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	673.8	01Jan2017, 14:42	1.45
DOR1.60A	0.5501	241.9	01Jan2017, 13:50	1.49
DOR2.40	1.8248	602.5	01Jan2017, 14:18	1.43
DOR2.40A	0.4594	178.7	01Jan2017, 13:59	1.49
DOR2.40_1.60	1.8248	594.0	01Jan2017, 14:45	1.44
DOR2.81	1.3654	462.2	01Jan2017, 14:06	1.42
DOR2.81A	0.2367	111.1	01Jan2017, 13:51	1.62
DOR2.81_2.40	1.3654	456.3	01Jan2017, 14:23	1.42
DOR3.06	1.1287	370.9	01Jan2017, 13:59	1.37
DOR3.06A	0.3648	156.5	01Jan2017, 13:48	1.42
DOR3.06B	0.7639	238.4	01Jan2017, 14:09	1.35
DOR3.06_2.81	1.1287	369.1	01Jan2017, 14:11	1.37
DOR.44	5.2443	1243.3	01Jan2017, 15:06	1.43
ERRR0.57_0.00	1.1576	469.5	01Jan2017, 14:24	1.64
ERRT0.00	1.2906	511.6	01Jan2017, 14:23	1.69
ERRT0.00A	0.1098	66.0	01Jan2017, 13:50	2.07
ERRT0.00B	0.0077	6.8	01Jan2017, 13:30	2.32
ERRT0.00C	0.0074	7.5	01Jan2017, 13:30	2.97
ERRT0.00D	0.0036	3.6	01Jan2017, 13:30	2.97
ERRT0.00E	0.0045	4.5	01Jan2017, 13:30	2.97
ERRT0.57	1.1576	474.1	01Jan2017, 14:09	1.64

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	82.5	01Jan2017, 14:36	1.62
ERRT0.61	0.8788	404.7	01Jan2017, 14:08	1.64
ERRT0.61A	0.4551	188.3	01Jan2017, 14:04	1.69
ERRT1.62	0.4237	228.5	01Jan2017, 13:35	1.60
ERRT1.62A	0.1546	70.1	01Jan2017, 13:45	1.42
ERRT1.62B	0.2547	166.3	01Jan2017, 13:31	1.62
ERRT1.62C	0.0144	14.5	01Jan2017, 13:30	2.97
ERRT1.62_0.61	0.4237	217.7	01Jan2017, 14:09	1.59
ERR0.00	2.6728	988.3	01Jan2017, 14:27	1.61
ERR0.00A	0.0718	36.2	01Jan2017, 13:37	1.36
ERR0.00B	0.0053	5.3	01Jan2017, 13:30	2.97
ERR0.23	2.5957	992.3	01Jan2017, 14:21	1.61
ERR0.23A	0.1922	92.6	01Jan2017, 13:41	1.42
ERR0.23B	0.0298	28.3	01Jan2017, 13:30	2.68
ERR0.23_0.00	2.5957	981.2	01Jan2017, 14:27	1.61
ERR0.26	1.3051	485.4	01Jan2017, 14:17	1.53
ERR0.88	1.0831	442.6	01Jan2017, 14:04	1.52
ERR0.88A	0.5048	182.9	01Jan2017, 14:09	1.55
ERR0.88_0.23	1.0831	439.3	01Jan2017, 14:20	1.52
ERR1.33	0.5783	263.9	01Jan2017, 13:47	1.48
ERR1.33A	0.5783	263.9	01Jan2017, 13:47	1.48

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	261.9	01Jan2017, 14:02	1.48
LAR0.00	0.9453	242.9	01Jan2017, 14:29	1.59
LAR0.00A	0.5827	164.6	01Jan2017, 14:41	1.62
LAR0.40	0.3626	92.5	01Jan2017, 14:03	1.55
LAR0.40A	0.0039	4.0	01Jan2017, 13:30	3.07
LAR0.40B	0.1091	90.5	01Jan2017, 13:41	2.68
LAR0.40C	0.1251	66.9	01Jan2017, 13:42	1.62
LAR0.40D	0.1245	61.4	01Jan2017, 13:40	1.42
LAR0.40_0.00	0.3626	92.4	01Jan2017, 14:08	1.55
MRT0.00	0.4202	192.9	01Jan2017, 13:42	1.42
MRT0.00A	0.1647	74.0	01Jan2017, 13:43	1.36
MRT0.66	0.2555	119.9	01Jan2017, 13:34	1.46
MRT0.66A	0.2030	117.5	01Jan2017, 13:33	1.49
MRT0.66B	0.0376	24.0	01Jan2017, 13:31	1.55
MRT0.66C	0.0149	10.2	01Jan2017, 13:32	1.77
MRT0.66_0.00	0.2555	119.2	01Jan2017, 13:41	1.46
ORT0.28	0.7836	304.1	01Jan2017, 13:55	1.30
ORT0.28A	0.1786	76.2	01Jan2017, 13:41	1.23
ORT0.95	0.6050	254.1	01Jan2017, 13:43	1.32
ORT0.95A	0.1851	86.9	01Jan2017, 13:36	1.23
ORT0.95_0.28	0.6050	251.1	01Jan2017, 14:00	1.32

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	190.0	01Jan2017, 13:41	1.36
ORT1.38A	0.1910	91.8	01Jan2017, 13:37	1.29
ORT1.38_0.95	0.4199	189.1	01Jan2017, 13:50	1.36
ORT2.04	0.2289	110.2	01Jan2017, 13:41	1.42
ORT2.04A	0.2289	110.2	01Jan2017, 13:41	1.42
ORT2.04_1.38	0.2289	110.0	01Jan2017, 13:50	1.42
Pond 0	0.1946	85.4	01Jan2017, 13:49	1.42
Pond 1	0.2012	75.6	01Jan2017, 13:43	1.29
Pond 10	0.0122	0.7	01Jan2017, 16:07	1.42
Pond 11	0.0236	11.6	01Jan2017, 13:35	1.42
Pond 12	0.0172	4.2	01Jan2017, 13:42	1.42
Pond 13	0.0603	22.7	01Jan2017, 13:46	1.35
Pond 14	0.1379	47.4	01Jan2017, 13:54	1.42
Pond 15	0.0477	7.7	01Jan2017, 14:41	1.70
Pond 16	0.3346	51.8	01Jan2017, 14:58	1.92
Pond 17	0.0528	13.4	01Jan2017, 14:11	2.32
Pond 18	0.1638	23.4	01Jan2017, 15:50	2.32
Pond 19	0.0053	4.4	01Jan2017, 13:36	2.97
Pond 2	0.0580	2.7	01Jan2017, 18:03	1.56
Pond 20	0.0077	5.1	01Jan2017, 13:32	2.32
Pond 21	0.0298	19.1	01Jan2017, 13:37	2.68

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	6.7	01Jan2017, 13:33	2.52
Pond 23	0.0036	3.6	01Jan2017, 13:31	2.97
Pond 24	0.0045	2.2	01Jan2017, 13:37	2.97
Pond 25	0.2547	156.4	01Jan2017, 13:34	1.62
Pond 26	0.0144	7.5	01Jan2017, 13:36	2.97
Pond 27	0.1245	46.0	01Jan2017, 13:55	1.42
Pond 28	0.1251	41.6	01Jan2017, 14:05	1.48
Pond 29	0.1091	12.9	01Jan2017, 15:20	1.78
Pond 3	0.1861	0.0	01Jan2017, 01:00	0.00
Pond 30	0.0039	1.1	01Jan2017, 13:37	1.73
Pond 31	0.3448	44.0	01Jan2017, 16:04	2.05
Pond 32	0.0626	45.5	01Jan2017, 13:51	2.97
Pond 33	0.0149	1.2	01Jan2017, 15:27	1.77
Pond 34	0.0376	1.7	01Jan2017, 17:45	1.20
Pond 35	0.0294	15.4	01Jan2017, 13:32	1.23
Pond 36	0.0175	15.4	01Jan2017, 13:33	2.50
Pond 37	0.1287	32.9	01Jan2017, 14:26	1.69
Pond 38	0.2037	0.0	01Jan2017, 01:00	0.00
Pond 39	0.0234	5.9	01Jan2017, 13:46	1.36
Pond 4	0.2023	40.1	01Jan2017, 13:56	1.06
Pond 40	0.0832	5.3	01Jan2017, 16:42	1.62

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	2.1	01Jan2017, 13:51	2.00
Pond 42	0.0367	13.8	01Jan2017, 13:37	1.42
Pond 43	0.0103	7.4	01Jan2017, 13:38	2.78
Pond 44	0.1294	55.8	01Jan2017, 13:51	1.48
Pond 45	0.1457	77.5	01Jan2017, 13:39	1.49
Pond 46	0.0187	12.8	01Jan2017, 13:35	2.68
Pond 47	0.0275	2.1	01Jan2017, 16:05	2.24
Pond 48	0.0456	2.0	01Jan2017, 18:42	1.42
Pond 49	0.0256	21.7	01Jan2017, 13:34	2.41
Pond 5	0.0343	15.4	01Jan2017, 13:37	1.17
Pond 50	0.0073	1.5	01Jan2017, 14:59	1.84
Pond 51	0.0721	15.6	01Jan2017, 13:41	1.51
Pond 52	0.0497	4.4	01Jan2017, 14:20	1.29
Pond 53	0.0896	55.0	01Jan2017, 13:38	1.70
Pond 54	0.2164	46.8	01Jan2017, 14:18	1.55
Pond 55	0.0163	4.5	01Jan2017, 13:38	1.04
Pond 56	0.0231	22.9	01Jan2017, 13:31	2.97
Pond 57	0.0112	0.9	01Jan2017, 15:01	1.49
Pond 58	0.0280	2.5	01Jan2017, 14:06	0.89
Pond 6	0.4472	94.5	01Jan2017, 14:17	1.49
Pond 7	0.0064	4.2	01Jan2017, 13:42	3.07

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	11.3	01Jan2017, 13:40	1.42
Pond 9	0.0281	6.5	01Jan2017, 13:49	1.42
RIR0.00	6.5684	1611.4	01Jan2017, 15:12	1.36
RIR0.00A	0.0647	38.5	01Jan2017, 13:56	2.24
RIR0.32	6.5037	1654.6	01Jan2017, 15:00	1.35
RIR0.32A	0.5587	189.3	01Jan2017, 14:02	1.35
RIR0.32_0.00	6.5037	1600.7	01Jan2017, 15:12	1.35
RIR0.65	5.9450	1587.6	01Jan2017, 14:50	1.35
RIR0.65A	0.1896	119.3	01Jan2017, 13:33	1.62
RIR0.65_0.32	5.9450	1574.9	01Jan2017, 15:01	1.35
RIR0.86	5.7554	1579.7	01Jan2017, 14:44	1.34
RIR0.86A	0.2984	117.3	01Jan2017, 13:51	1.35
RIR0.86_0.65	5.7554	1571.1	01Jan2017, 14:50	1.34
RIR1.24	5.4570	1552.3	01Jan2017, 14:38	1.34
RIR1.24A	0.0980	49.2	01Jan2017, 13:33	1.23
RIR1.24_0.86	5.4570	1538.5	01Jan2017, 14:45	1.34
RIR1.34	5.3590	1546.0	01Jan2017, 14:38	1.34
RIR1.52	4.5754	1443.1	01Jan2017, 14:39	1.35
RIR1.62	1.8861	542.5	01Jan2017, 14:38	1.33
RIR1.62A	0.5008	175.2	01Jan2017, 14:03	1.42
RIR2.60	1.3853	437.4	01Jan2017, 14:02	1.30

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	148.0	01Jan2017, 13:40	1.35
RIR2.60_1.62	1.3853	430.1	01Jan2017, 14:44	1.30
RIR3.38	1.0728	375.8	01Jan2017, 13:54	1.29
RIR3.38A	1.0434	372.7	01Jan2017, 13:54	1.29
RIR3.38B	0.0294	15.8	01Jan2017, 13:30	1.23
RIR3.38_2.60	1.0728	370.7	01Jan2017, 14:10	1.29
SHCT0.00	3.0470	550.6	01Jan2017, 14:08	0.72
SHCT0.00A	0.9966	166.1	01Jan2017, 14:00	0.69
SHCT1.59	2.0504	393.6	01Jan2017, 13:55	0.73
SHCT1.59A	2.0504	393.6	01Jan2017, 13:55	0.73
SHCT1.59_0.00	2.0504	393.0	01Jan2017, 14:10	0.73
SHC0.00	6.4942	939.1	01Jan2017, 15:40	0.85
SHC0.00A	0.0458	17.0	01Jan2017, 13:43	1.11
SHC0.23	6.4484	958.6	01Jan2017, 15:28	0.85
SHC0.23A	0.6386	174.5	01Jan2017, 14:28	1.42
SHC0.23_0.00	6.4484	936.4	01Jan2017, 15:40	0.85
SHC1.60	5.8098	984.5	01Jan2017, 14:27	0.80
SHC1.60A	0.2628	110.9	01Jan2017, 13:39	1.17
SHC1.60_0.23	5.8098	857.7	01Jan2017, 15:30	0.79
SHC2.06	5.5470	974.7	01Jan2017, 14:13	0.78
SHC2.06A	0.2828	52.3	01Jan2017, 13:45	0.60

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	960.7	01Jan2017, 14:28	0.78
SHC2.56	5.2642	951.4	01Jan2017, 14:07	0.79
SHC2.56A	0.4506	131.8	01Jan2017, 13:50	1.00
SHC2.56_2.06	5.2642	949.0	01Jan2017, 14:13	0.79
SHC3.11	1.7666	299.2	01Jan2017, 14:07	0.86
SHC3.11A	0.2775	160.5	01Jan2017, 13:33	1.49
SHC3.11_2.56	1.7666	299.0	01Jan2017, 14:11	0.86
SHC3.92	1.4891	264.5	01Jan2017, 14:01	0.75
SHC3.92A	0.6934	113.0	01Jan2017, 13:56	0.64
SHC3.92B	0.7957	155.0	01Jan2017, 14:05	0.84
SHC3.92_3.11	1.4891	264.2	01Jan2017, 14:10	0.75
SRT0.50	2.6893	900.8	01Jan2017, 14:39	1.36
SRT0.50A	0.4294	133.4	01Jan2017, 14:10	1.35
SRT1.29	2.2599	808.9	01Jan2017, 14:23	1.36
SRT1.29A	0.3191	96.4	01Jan2017, 14:08	1.29
SRT1.29_0.50	2.2599	798.7	01Jan2017, 14:41	1.36
SRT2.06	1.9408	729.9	01Jan2017, 14:04	1.37
SRT2.06A	0.4839	189.6	01Jan2017, 13:55	1.42
SRT2.06_1.29	1.9408	720.8	01Jan2017, 14:24	1.37
SRT2.55	1.4569	554.2	01Jan2017, 13:57	1.35
SRT2.55A	0.3465	156.6	01Jan2017, 13:42	1.35

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	551.9	01Jan2017, 14:07	1.35
SRT3.00	1.1104	443.5	01Jan2017, 13:52	1.35
SRT3.00A	0.7468	286.0	01Jan2017, 13:53	1.35
SRT3.00_2.55	1.1104	440.3	01Jan2017, 14:02	1.35
SRT3.38	0.3636	158.0	01Jan2017, 13:45	1.35
SRT3.38A	0.3636	158.0	01Jan2017, 13:45	1.35
SRT3.38_3.00	0.3636	157.6	01Jan2017, 13:51	1.35
SSRTA0.00	0.4007	159.7	01Jan2017, 13:53	1.51
SSRTA0.00A	0.2628	124.9	01Jan2017, 13:47	1.55
SSRTA0.59	0.1379	47.4	01Jan2017, 13:54	1.42
SSRTA0.59A	0.1379	70.6	01Jan2017, 13:38	1.42
SSRTA0.59_0.00	0.1379	46.6	01Jan2017, 14:12	1.42
SSRT0.00	1.3182	509.4	01Jan2017, 14:06	1.46
SSRT0.00A	0.2236	94.6	01Jan2017, 13:49	1.42
SSRT0.46	1.0946	440.8	01Jan2017, 13:51	1.47
SSRT0.46A	0.1893	101.2	01Jan2017, 13:38	1.49
SSRT0.46_0.00	1.0946	432.7	01Jan2017, 14:08	1.47
SSRT0.77	0.9053	373.6	01Jan2017, 13:48	1.46
SSRT0.77A	0.2520	117.9	01Jan2017, 13:46	1.49
SSRT0.77B	0.0603	31.5	01Jan2017, 13:35	1.36
SSRT0.77_0.46	0.9053	372.4	01Jan2017, 13:57	1.46

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	76.6	01Jan2017, 13:38	1.38
SSRT1.34A	0.1112	54.0	01Jan2017, 13:39	1.36
SSRT1.34B	0.0172	10.2	01Jan2017, 13:31	1.42
SSRT1.34C	0.0236	14.0	01Jan2017, 13:31	1.42
SSRT1.34D	0.0122	7.2	01Jan2017, 13:31	1.42
SSRT1.34E	0.0281	15.9	01Jan2017, 13:33	1.42
SSRT1.34_0.77	0.1923	75.8	01Jan2017, 13:50	1.38
SSR0.00	4.8444	1330.5	01Jan2017, 14:35	1.41
SSR0.00A	0.0601	34.9	01Jan2017, 13:32	1.42
SSR0.22	4.7843	1327.2	01Jan2017, 14:32	1.41
SSR0.22A	0.2501	141.3	01Jan2017, 13:41	1.69
SSR0.22_0.00	4.7843	1326.4	01Jan2017, 14:35	1.41
SSR0.85	4.5342	1296.0	01Jan2017, 14:22	1.39
SSR0.85_0.22	4.5342	1292.0	01Jan2017, 14:33	1.39
SSR0.87	3.2160	879.9	01Jan2017, 14:30	1.36
SSR0.87A	0.3806	138.4	01Jan2017, 14:04	1.49
SSR1.06	2.8354	774.4	01Jan2017, 14:28	1.35
SSR1.06A	0.2647	123.8	01Jan2017, 13:46	1.49
SSR1.06_0.87	2.8354	773.0	01Jan2017, 14:33	1.35
SSR1.71	2.5707	732.2	01Jan2017, 14:12	1.33
SSR1.71A	0.3665	145.8	01Jan2017, 14:04	1.62

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	728.7	01Jan2017, 14:30	1.33
SSR1.89	2.2042	593.8	01Jan2017, 14:06	1.28
SSR1.89A	0.3178	153.5	01Jan2017, 13:49	1.62
SSR1.89B	0.0231	23.3	01Jan2017, 13:30	2.97
SSR1.89_1.71	2.2042	590.5	01Jan2017, 14:13	1.28
SSR2.33	1.8633	474.0	01Jan2017, 13:58	1.20
SSR2.33A	0.1750	111.1	01Jan2017, 13:34	1.69
SSR2.33B	0.0381	22.5	01Jan2017, 13:31	1.42
SSR2.33_1.89	1.8633	470.4	01Jan2017, 14:13	1.20
SSR2.70	1.6502	428.9	01Jan2017, 13:52	1.15
SSR2.70A	0.4613	185.3	01Jan2017, 13:50	1.35
SSR2.70B	0.0112	7.0	01Jan2017, 13:30	1.49
SSR2.70C	0.0064	6.5	01Jan2017, 13:30	3.07
SSR2.70D	0.0343	16.5	01Jan2017, 13:33	1.17
SSR2.70E	0.4472	218.5	01Jan2017, 13:43	1.49
SSR2.70_2.33	1.6502	427.4	01Jan2017, 14:01	1.15
SSR3.20	0.6898	143.1	01Jan2017, 13:47	0.76
SSR3.20A	0.1108	45.3	01Jan2017, 13:40	1.17
SSR3.20B	0.2023	91.1	01Jan2017, 13:35	1.17
SSR3.20_2.70	0.6898	142.8	01Jan2017, 13:54	0.76
SSR3.70	0.3767	63.7	01Jan2017, 13:40	0.48

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	63.7	01Jan2017, 13:40	0.94
SSR3.70B	0.1861	59.9	01Jan2017, 13:36	0.84
SSR3.70_3.20	0.3767	63.4	01Jan2017, 13:49	0.48
WOR0.00	2.8951	709.0	01Jan2017, 15:02	1.32
WOR0.00A	0.0359	19.4	01Jan2017, 13:33	1.36
WOR0.32	2.8592	708.2	01Jan2017, 14:54	1.32
WOR0.32A	0.1901	61.3	01Jan2017, 13:58	1.23
WOR0.32_0.00	2.8592	706.3	01Jan2017, 15:02	1.32
WOR0.76	2.6691	735.3	01Jan2017, 14:30	1.32
WOR0.76A	0.3131	166.0	01Jan2017, 13:40	1.55
WOR0.76_0.32	2.6691	683.7	01Jan2017, 14:55	1.32
WOR1.59	2.3560	710.9	01Jan2017, 14:13	1.29
WOR1.59A	0.4536	207.6	01Jan2017, 13:50	1.55
WOR1.59B	0.7600	221.5	01Jan2017, 14:11	1.29
WOR1.59_0.76	2.3560	696.3	01Jan2017, 14:32	1.28
WOR1.64	1.1424	352.0	01Jan2017, 14:19	1.18
WOR1.64A	0.2551	110.7	01Jan2017, 13:51	1.49
WOR2.33	0.8873	312.6	01Jan2017, 13:46	1.09
WOR2.33A	0.3233	118.2	01Jan2017, 13:47	1.17
WOR2.33_1.64	0.8873	284.3	01Jan2017, 14:22	1.09
WOR3.00	0.5640	194.6	01Jan2017, 13:45	1.04

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	151.0	01Jan2017, 13:46	1.35
WOR3.67	0.2110	43.8	01Jan2017, 13:34	0.51
WOR3.67A	0.2110	43.8	01Jan2017, 13:34	0.51
WOR3.67_3.00	0.2110	43.6	01Jan2017, 13:45	0.51

Project: ChiquesCreek Simulation Run: 10YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 10YR_24HR
Compute Time: 31Jan2017, 15:23:55 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	500.6	01Jan2017, 14:53	1.42
BER0.00A	0.1087	59.5	01Jan2017, 13:50	1.91
BER0.64	1.7391	514.6	01Jan2017, 14:18	1.38
BER0.64A	0.3111	200.8	01Jan2017, 13:41	1.98
BER0.64_0.00	1.7391	484.0	01Jan2017, 14:54	1.39
BER1.05	1.4280	468.9	01Jan2017, 14:00	1.24
BER1.05A	0.2790	147.4	01Jan2017, 13:52	1.91
BER1.05_0.64	1.4280	443.3	01Jan2017, 14:22	1.24
BER1.30	1.1490	329.8	01Jan2017, 13:58	1.08
BER1.30A	0.5289	209.5	01Jan2017, 13:54	1.47
BER1.30_1.05	1.1490	328.3	01Jan2017, 14:02	1.08
BER1.95	0.6201	124.3	01Jan2017, 13:51	0.75
BER1.95A	0.6201	124.3	01Jan2017, 13:51	0.75
BER1.95_1.30	0.6201	123.5	01Jan2017, 14:01	0.75
BOR0.00	6.6030	1909.5	01Jan2017, 14:53	1.55
BOR0.00A	0.0062	4.8	01Jan2017, 13:31	1.98
BOR0.10	6.5968	1990.3	01Jan2017, 14:49	1.55

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	112.0	01Jan2017, 14:00	1.91
BOR0.10_0.00	6.5968	1908.9	01Jan2017, 14:53	1.55
BOR0.68	1.6208	463.6	01Jan2017, 14:16	1.22
BOR0.68A	0.2555	135.0	01Jan2017, 13:52	1.91
BOR0.68_0.10	1.6208	453.6	01Jan2017, 14:41	1.22
BOR1.20	1.3653	375.1	01Jan2017, 14:01	1.09
BOR1.20A	0.5429	203.9	01Jan2017, 14:06	1.61
BOR1.20_0.68	1.3653	367.9	01Jan2017, 14:21	1.09
BOR2.07	0.8224	175.4	01Jan2017, 13:47	0.75
BOR2.07A	0.8224	175.4	01Jan2017, 13:47	0.75
BOR2.07_1.20	0.8224	174.4	01Jan2017, 13:59	0.75
CHC10.68	50.2637	4277.6	01Jan2017, 21:02	1.72
CHC10.68A	0.7377	426.1	01Jan2017, 13:56	2.22
CHC10.68B	0.0477	31.4	01Jan2017, 13:47	2.22
CHC10.68C	0.1180	66.3	01Jan2017, 13:53	2.06
CHC10.68D	0.1638	109.6	01Jan2017, 14:06	2.92
CHC10.68E	0.0528	50.5	01Jan2017, 13:35	2.92
CHC10.68_9.40	50.2637	4253.9	01Jan2017, 21:33	1.71
CHC11.99	49.1437	4243.2	01Jan2017, 20:25	1.72
CHC11.99_10.68	49.1437	4220.2	01Jan2017, 21:03	1.71
CHC12.01	46.4709	4120.8	01Jan2017, 20:31	1.69

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	106.2	01Jan2017, 13:32	1.98
CHC12.65	46.3306	4276.9	01Jan2017, 20:02	1.70
CHC12.65_12.01	46.3306	4116.6	01Jan2017, 20:31	1.69
CHC12.67	45.3853	4227.1	01Jan2017, 20:03	1.69
CHC12.67A	0.5547	174.6	01Jan2017, 14:58	2.06
CHC13.89	44.8306	4247.7	01Jan2017, 19:26	1.70
CHC13.89_12.67	44.8306	4194.1	01Jan2017, 20:04	1.69
CHC13.90	41.9107	4053.3	01Jan2017, 19:29	1.68
CHC13.90A	2.4712	325.0	01Jan2017, 19:09	1.96
CHC16.25	39.4395	4102.6	01Jan2017, 17:40	1.69
CHC16.25A	0.7783	230.3	01Jan2017, 15:08	2.06
CHC16.25_13.90	39.4395	3730.1	01Jan2017, 19:30	1.67
CHC17.08	38.6612	4163.9	01Jan2017, 17:00	1.69
CHC17.08A	0.5852	239.6	01Jan2017, 14:27	2.14
CHC17.08B	0.3448	278.1	01Jan2017, 13:59	3.41
CHC17.08_16.25	38.6612	4009.8	01Jan2017, 17:41	1.69
CHC17.73	37.7312	4140.4	01Jan2017, 16:33	1.68
CHC17.73A	0.3870	196.6	01Jan2017, 14:08	2.22
CHC17.73B	0.0626	69.2	01Jan2017, 13:35	3.62
CHC17.73_17.08	37.7312	4046.9	01Jan2017, 17:03	1.68
CHC18.09	37.2816	4174.7	01Jan2017, 16:16	1.67

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	78.0	01Jan2017, 13:49	1.61
CHC18.09_17.73	37.2816	4093.4	01Jan2017, 16:34	1.67
CHC18.61	36.6951	4246.5	01Jan2017, 15:55	1.67
CHC18.61A	0.5761	313.3	01Jan2017, 13:42	1.68
CHC18.61_18.09	36.6951	4130.3	01Jan2017, 16:16	1.67
CHC19.32	36.1190	4468.8	01Jan2017, 15:17	1.68
CHC19.32_18.61	36.1190	4201.1	01Jan2017, 15:55	1.67
CHC19.35	29.5506	2738.2	01Jan2017, 16:02	1.64
CHC19.35A	0.3523	165.9	01Jan2017, 14:16	2.22
CHC19.35B	0.0175	18.3	01Jan2017, 13:32	3.11
CHC1.28	63.3656	4259.4	02Jan2017, 01:57	1.63
CHC1.28A	0.8402	158.6	01Jan2017, 16:09	1.75
CHC20.02	29.1808	2763.4	01Jan2017, 15:36	1.63
CHC20.02A	0.3588	239.3	01Jan2017, 13:55	2.56
CHC20.02_19.35	29.1808	2713.0	01Jan2017, 19:37	1.63
CHC20.55	28.8220	2888.6	01Jan2017, 15:09	1.63
CHC20.55_20.02	28.8220	2711.4	01Jan2017, 15:37	1.62
CHC20.57	23.2797	2365.4	01Jan2017, 20:22	1.56
CHC20.57A	0.5512	243.9	01Jan2017, 14:48	2.74
CHC21.28	22.7285	2347.4	01Jan2017, 19:44	1.53
CHC21.28A	0.3509	234.2	01Jan2017, 14:03	2.83

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	20.8	01Jan2017, 13:30	3.31
CHC21.28C	0.0073	4.3	01Jan2017, 14:01	2.39
CHC21.28D	0.0224	20.7	01Jan2017, 13:31	2.56
CHC21.28E	0.0497	32.4	01Jan2017, 13:34	1.76
CHC21.28F	0.1457	106.5	01Jan2017, 13:33	1.98
CHC21.28_20.57	22.7285	2331.7	01Jan2017, 20:26	1.53
CHC21.59	22.1338	2330.2	01Jan2017, 19:34	1.50
CHC21.59A	0.2001	120.6	01Jan2017, 13:53	2.22
CHC21.59B	0.0256	25.9	01Jan2017, 13:33	3.02
CHC21.59C	0.0275	27.3	01Jan2017, 13:31	2.83
CHC21.59D	0.0896	71.9	01Jan2017, 13:33	2.22
CHC21.59_21.28	22.1338	2315.6	01Jan2017, 19:46	1.50
CHC22.01	21.7910	2352.6	01Jan2017, 16:51	1.49
CHC22.01A	1.2726	936.6	01Jan2017, 13:31	1.90
CHC22.01B	0.0456	41.1	01Jan2017, 13:30	2.39
CHC22.01_21.59	21.7910	2310.5	01Jan2017, 19:35	1.49
CHC23.04	20.4728	2326.2	01Jan2017, 16:06	1.46
CHC23.04A	1.8763	511.0	01Jan2017, 15:01	1.82
CHC23.04B	0.2164	141.2	01Jan2017, 13:43	2.06
CHC23.04_22.01	20.4728	2283.2	01Jan2017, 19:19	1.47
CHC24.53	18.3801	2255.6	01Jan2017, 17:34	1.43

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	2154.7	01Jan2017, 18:41	1.42
CHC24.63	18.3801	2255.6	01Jan2017, 17:34	1.43
CHC24.64	11.7771	1773.1	01Jan2017, 17:43	1.36
CHC24.64A	0.2517	63.0	01Jan2017, 14:40	1.47
CHC25.53	11.5254	2005.5	01Jan2017, 16:47	1.36
CHC25.53A	0.6693	284.1	01Jan2017, 14:07	1.83
CHC25.53B	0.0163	10.7	01Jan2017, 13:31	1.61
CHC25.53_24.64	11.5254	1755.1	01Jan2017, 17:43	1.36
CHC26.30	10.8398	1996.3	01Jan2017, 16:17	1.33
CHC26.30A	0.8065	183.3	01Jan2017, 15:26	1.75
CHC26.30_25.53	10.8398	1949.0	01Jan2017, 16:48	1.33
CHC27.38	10.0333	2083.5	01Jan2017, 15:25	1.30
CHC27.38_26.30	10.0333	1842.5	01Jan2017, 16:19	1.29
CHC27.39	3.5391	732.8	01Jan2017, 14:54	1.41
CHC27.39A	0.3314	154.4	01Jan2017, 13:59	1.83
CHC28.26	3.2077	737.5	01Jan2017, 14:01	1.38
CHC28.26_27.39	3.2077	668.4	01Jan2017, 14:56	1.37
CHC28.31	3.2077	737.5	01Jan2017, 14:01	1.38
CHC28.31A	0.0950	61.2	01Jan2017, 13:37	1.83
CHC28.31B	0.7915	356.5	01Jan2017, 13:58	1.75
CHC28.67	2.3212	459.6	01Jan2017, 15:16	1.23

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	197.4	01Jan2017, 14:01	1.21
CHC28.67_28.31	2.3212	458.5	01Jan2017, 15:27	1.23
CHC29.91	1.6558	400.8	01Jan2017, 14:33	1.24
CHC29.91A	0.6097	169.4	01Jan2017, 13:57	1.09
CHC29.91_28.67	1.6558	395.4	01Jan2017, 15:19	1.24
CHC30.94	1.0461	313.7	01Jan2017, 14:09	1.34
CHC30.94A	1.0461	313.7	01Jan2017, 14:09	1.34
CHC30.94_29.91	1.0461	311.0	01Jan2017, 14:40	1.33
CHC3.39	62.5254	4253.1	02Jan2017, 00:54	1.65
CHC3.39A	1.8419	820.5	01Jan2017, 13:55	1.68
CHC3.39_1.28	62.5254	4238.7	02Jan2017, 01:58	1.63
CHC4.62	60.6835	4516.9	01Jan2017, 23:48	1.71
CHC4.62A	0.1505	99.4	01Jan2017, 13:37	1.91
CHC4.62B	0.1946	124.3	01Jan2017, 13:39	1.91
CHC4.62_3.39	60.6835	4215.5	02Jan2017, 00:56	1.65
CHC4.97	60.3384	4539.6	01Jan2017, 23:31	1.71
CHC4.97A	0.4693	147.9	01Jan2017, 14:35	1.75
CHC4.97B	0.0580	41.9	01Jan2017, 13:38	2.14
CHC4.97C	0.2012	132.8	01Jan2017, 13:33	1.76
CHC4.97_4.62	60.3384	4509.1	01Jan2017, 23:48	1.71
CHC5.97	59.6099	4530.4	01Jan2017, 23:12	1.72

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	509.8	01Jan2017, 14:08	1.98
CHC5.97_4.97	59.6099	4520.8	01Jan2017, 23:32	1.71
CHC7.47	58.4785	4531.6	01Jan2017, 22:27	1.73
CHC7.47_5.97	58.4785	4501.2	01Jan2017, 23:13	1.72
CHC7.48	53.6341	4395.2	01Jan2017, 22:30	1.71
CHC7.48A	2.2128	328.0	01Jan2017, 18:13	1.97
CHC9.40	51.4213	4291.3	01Jan2017, 21:32	1.72
CHC9.40A	1.1576	464.0	01Jan2017, 14:21	1.98
CHC9.40_7.47	51.4213	4220.8	01Jan2017, 22:36	1.70
DER0.00	2.9199	980.3	01Jan2017, 15:13	1.90
DER0.00A	0.1924	127.0	01Jan2017, 13:37	1.91
DER0.52	2.7275	967.4	01Jan2017, 14:58	1.90
DER0.52A	0.5165	301.6	01Jan2017, 13:50	2.06
DER0.52_0.00	2.7275	961.3	01Jan2017, 15:13	1.90
DER1.10	2.2110	903.9	01Jan2017, 14:34	1.86
DER1.10A	0.3712	209.7	01Jan2017, 13:53	2.06
DER1.10_0.52	2.2110	887.1	01Jan2017, 14:59	1.86
DER1.76	1.8398	807.9	01Jan2017, 14:16	1.81
DER1.76A	0.5078	231.4	01Jan2017, 13:54	1.68
DER1.76_1.10	1.8398	802.9	01Jan2017, 14:37	1.82
DER2.22	1.3320	639.3	01Jan2017, 14:08	1.86

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	302.8	01Jan2017, 14:04	1.75
DER2.22_1.76	1.3320	635.7	01Jan2017, 14:21	1.86
DER2.93	0.6085	341.3	01Jan2017, 13:50	1.98
DER2.93A	0.6085	341.3	01Jan2017, 13:50	1.98
DER2.93_2.22	0.6085	338.5	01Jan2017, 14:09	1.98
DORT0.34	1.6920	717.4	01Jan2017, 14:03	1.95
DORT0.34A	0.0357	26.0	01Jan2017, 13:32	1.91
DORT0.34B	0.0234	16.5	01Jan2017, 13:32	1.83
DORT0.54	1.6329	707.8	01Jan2017, 13:59	1.96
DORT0.54A	0.2058	125.8	01Jan2017, 13:45	1.98
DORT0.54B	0.0280	13.9	01Jan2017, 13:34	1.27
DORT0.54C	0.0058	5.2	01Jan2017, 13:33	2.56
DORT0.54D	0.0832	49.6	01Jan2017, 13:51	2.14
DORT0.54E	0.0367	27.6	01Jan2017, 13:31	1.91
DORT0.54_0.34	1.6329	705.2	01Jan2017, 14:03	1.96
DORT1.15	1.2734	586.6	01Jan2017, 13:46	1.95
DORT1.15A	0.4022	276.4	01Jan2017, 13:39	2.06
DORT1.15B	0.0103	11.6	01Jan2017, 13:30	3.41
DORT1.15_0.54	1.2734	582.1	01Jan2017, 14:03	1.95
DORT1.58	0.8609	394.5	01Jan2017, 14:11	1.89
DORT1.58A	0.4931	277.2	01Jan2017, 13:48	1.90

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	385.1	01Jan2017, 14:25	1.88
DORT2.41	0.3678	217.9	01Jan2017, 13:42	1.88
DORT2.41A	0.2384	145.4	01Jan2017, 13:40	1.83
DORT2.41B	0.1294	86.4	01Jan2017, 13:39	1.98
DORT2.41_1.58	0.3678	212.8	01Jan2017, 14:18	1.86
DOR0.00	5.5423	1728.7	01Jan2017, 15:12	1.92
DOR0.00A	0.0475	36.4	01Jan2017, 13:40	2.39
DOR0.24	5.4948	1730.7	01Jan2017, 15:06	1.92
DOR0.24A	0.1218	83.6	01Jan2017, 13:41	2.14
DOR0.24B	0.1287	82.3	01Jan2017, 13:49	2.22
DOR0.24_0.00	5.4948	1723.0	01Jan2017, 15:12	1.92
DOR0.44A	0.5212	284.6	01Jan2017, 13:58	2.14
DOR0.44_0.24	5.2443	1684.0	01Jan2017, 15:07	1.91
DOR1.21	4.7231	1617.6	01Jan2017, 14:32	1.88
DOR1.21A	0.2430	118.8	01Jan2017, 14:08	2.14
DOR1.21B	0.2037	139.2	01Jan2017, 13:39	2.06
DOR1.21_0.44	4.7231	1586.3	01Jan2017, 15:04	1.88
DOR1.23	4.2764	1519.0	01Jan2017, 14:35	1.96
DOR1.23A	0.2095	138.5	01Jan2017, 13:46	2.22
DOR1.45	4.0669	1477.3	01Jan2017, 14:28	1.94
DOR1.45_1.23	4.0669	1472.3	01Jan2017, 14:37	1.94

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	919.8	01Jan2017, 14:36	1.94
DOR1.60A	0.5501	315.2	01Jan2017, 13:49	1.98
DOR2.40	1.8248	816.0	01Jan2017, 14:14	1.92
DOR2.40A	0.4594	234.6	01Jan2017, 13:58	1.98
DOR2.40_1.60	1.8248	802.7	01Jan2017, 14:40	1.92
DOR2.81	1.3654	620.1	01Jan2017, 14:03	1.90
DOR2.81A	0.2367	142.9	01Jan2017, 13:50	2.14
DOR2.81_2.40	1.3654	613.4	01Jan2017, 14:18	1.90
DOR3.06	1.1287	495.9	01Jan2017, 13:58	1.85
DOR3.06A	0.3648	205.2	01Jan2017, 13:48	1.90
DOR3.06B	0.7639	320.0	01Jan2017, 14:08	1.83
DOR3.06_2.81	1.1287	494.5	01Jan2017, 14:07	1.85
DOR.44	5.2443	1690.2	01Jan2017, 15:00	1.91
ERRR0.57_0.00	1.1576	609.0	01Jan2017, 14:19	2.16
ERRT0.00	1.2906	669.1	01Jan2017, 14:18	2.22
ERRT0.00A	0.1098	81.7	01Jan2017, 13:49	2.65
ERRT0.00B	0.0077	8.1	01Jan2017, 13:30	2.92
ERRT0.00C	0.0074	8.6	01Jan2017, 13:30	3.62
ERRT0.00D	0.0036	4.2	01Jan2017, 13:30	3.62
ERRT0.00E	0.0045	5.2	01Jan2017, 13:30	3.62
ERRT0.57	1.1576	613.8	01Jan2017, 14:06	2.16

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	108.1	01Jan2017, 14:34	2.14
ERRT0.61	0.8788	524.8	01Jan2017, 14:05	2.16
ERRT0.61A	0.4551	242.5	01Jan2017, 14:03	2.22
ERRT1.62	0.4237	293.3	01Jan2017, 13:35	2.10
ERRT1.62A	0.1546	91.5	01Jan2017, 13:44	1.91
ERRT1.62B	0.2547	207.1	01Jan2017, 13:31	2.14
ERRT1.62C	0.0144	16.8	01Jan2017, 13:30	3.62
ERRT1.62_0.61	0.4237	282.5	01Jan2017, 14:05	2.10
ERR0.00	2.6728	1307.4	01Jan2017, 14:22	2.12
ERR0.00A	0.0718	46.9	01Jan2017, 13:36	1.83
ERR0.00B	0.0053	6.2	01Jan2017, 13:30	3.62
ERR0.23	2.5957	1303.5	01Jan2017, 14:17	2.12
ERR0.23A	0.1922	120.3	01Jan2017, 13:41	1.91
ERR0.23B	0.0298	33.1	01Jan2017, 13:30	3.31
ERR0.23_0.00	2.5957	1296.4	01Jan2017, 14:22	2.12
ERR0.26	1.3051	635.6	01Jan2017, 14:15	2.03
ERR0.88	1.0831	576.5	01Jan2017, 14:02	2.02
ERR0.88A	0.5048	239.5	01Jan2017, 14:08	2.06
ERR0.88_0.23	1.0831	572.7	01Jan2017, 14:18	2.02
ERR1.33	0.5783	343.0	01Jan2017, 13:47	1.98
ERR1.33A	0.5783	343.0	01Jan2017, 13:47	1.98

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	340.6	01Jan2017, 14:00	1.98
LAR0.00	0.9453	339.1	01Jan2017, 14:28	2.12
LAR0.00A	0.5827	215.8	01Jan2017, 14:40	2.14
LAR0.40	0.3626	135.0	01Jan2017, 14:12	2.08
LAR0.40A	0.0039	4.6	01Jan2017, 13:30	3.72
LAR0.40B	0.1091	107.3	01Jan2017, 13:40	3.31
LAR0.40C	0.1251	85.3	01Jan2017, 13:42	2.14
LAR0.40D	0.1245	79.5	01Jan2017, 13:39	1.91
LAR0.40_0.00	0.3626	134.9	01Jan2017, 14:16	2.08
MRT0.00	0.4202	241.0	01Jan2017, 13:44	1.90
MRT0.00A	0.1647	97.0	01Jan2017, 13:42	1.83
MRT0.66	0.2555	152.0	01Jan2017, 13:33	1.95
MRT0.66A	0.2030	149.2	01Jan2017, 13:33	1.98
MRT0.66B	0.0376	30.0	01Jan2017, 13:31	2.06
MRT0.66C	0.0149	12.7	01Jan2017, 13:32	2.30
MRT0.66_0.00	0.2555	144.9	01Jan2017, 13:46	1.94
ORT0.28	0.7836	400.4	01Jan2017, 13:57	1.76
ORT0.28A	0.1786	101.0	01Jan2017, 13:40	1.68
ORT0.95	0.6050	340.6	01Jan2017, 13:41	1.79
ORT0.95A	0.1851	113.9	01Jan2017, 13:35	1.68
ORT0.95_0.28	0.6050	335.4	01Jan2017, 14:02	1.79

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	250.5	01Jan2017, 13:40	1.84
ORT1.38A	0.1910	119.9	01Jan2017, 13:36	1.76
ORT1.38_0.95	0.4199	249.4	01Jan2017, 13:49	1.84
ORT2.04	0.2289	143.2	01Jan2017, 13:41	1.91
ORT2.04A	0.2289	143.2	01Jan2017, 13:41	1.91
ORT2.04_1.38	0.2289	142.9	01Jan2017, 13:49	1.91
Pond 0	0.1946	101.0	01Jan2017, 13:52	1.91
Pond 1	0.2012	132.8	01Jan2017, 13:34	1.75
Pond 10	0.0122	0.7	01Jan2017, 17:05	1.91
Pond 11	0.0236	14.8	01Jan2017, 13:35	1.91
Pond 12	0.0172	4.5	01Jan2017, 13:44	1.91
Pond 13	0.0603	34.4	01Jan2017, 13:42	1.83
Pond 14	0.1379	72.9	01Jan2017, 13:49	1.91
Pond 15	0.0477	8.2	01Jan2017, 14:48	2.22
Pond 16	0.3346	77.0	01Jan2017, 14:27	2.46
Pond 17	0.0528	14.1	01Jan2017, 14:16	2.92
Pond 18	0.1638	25.9	01Jan2017, 16:01	2.92
Pond 19	0.0053	4.8	01Jan2017, 13:37	3.62
Pond 2	0.0580	5.8	01Jan2017, 15:29	1.94
Pond 20	0.0077	5.6	01Jan2017, 13:32	2.92
Pond 21	0.0298	32.9	01Jan2017, 13:31	3.31

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	7.6	01Jan2017, 13:33	3.16
Pond 23	0.0036	4.2	01Jan2017, 13:30	3.62
Pond 24	0.0045	2.3	01Jan2017, 13:38	3.62
Pond 25	0.2547	200.5	01Jan2017, 13:34	2.14
Pond 26	0.0144	7.9	01Jan2017, 13:37	3.62
Pond 27	0.1245	52.8	01Jan2017, 13:58	1.90
Pond 28	0.1251	60.3	01Jan2017, 14:01	1.99
Pond 29	0.1091	30.6	01Jan2017, 14:31	2.39
Pond 3	0.1861	0.0	01Jan2017, 01:00	0.00
Pond 30	0.0039	1.3	01Jan2017, 13:37	2.38
Pond 31	0.3448	84.1	01Jan2017, 15:19	2.68
Pond 32	0.0626	51.5	01Jan2017, 13:52	3.62
Pond 33	0.0149	1.3	01Jan2017, 16:03	2.30
Pond 34	0.0376	2.2	01Jan2017, 17:36	1.64
Pond 35	0.0294	18.8	01Jan2017, 13:32	1.68
Pond 36	0.0175	18.3	01Jan2017, 13:33	3.11
Pond 37	0.1287	49.8	01Jan2017, 14:19	2.22
Pond 38	0.2037	0.0	01Jan2017, 01:00	0.00
Pond 39	0.0234	12.5	01Jan2017, 13:40	1.83
Pond 4	0.2023	65.1	01Jan2017, 13:52	1.51
Pond 40	0.0832	5.9	01Jan2017, 17:21	2.13

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	2.4	01Jan2017, 13:53	2.56
Pond 42	0.0367	20.3	01Jan2017, 13:36	1.91
Pond 43	0.0103	10.7	01Jan2017, 13:34	3.41
Pond 44	0.1294	76.3	01Jan2017, 13:49	1.97
Pond 45	0.1457	100.3	01Jan2017, 13:38	1.98
Pond 46	0.0187	14.1	01Jan2017, 13:36	3.31
Pond 47	0.0275	2.2	01Jan2017, 16:49	2.83
Pond 48	0.0456	3.8	01Jan2017, 16:06	1.76
Pond 49	0.0256	25.9	01Jan2017, 13:34	3.02
Pond 5	0.0343	20.6	01Jan2017, 13:36	1.61
Pond 50	0.0073	3.1	01Jan2017, 14:33	2.39
Pond 51	0.0721	23.0	01Jan2017, 13:37	2.01
Pond 52	0.0497	4.9	01Jan2017, 14:27	1.76
Pond 53	0.0896	70.4	01Jan2017, 13:37	2.22
Pond 54	0.2164	59.2	01Jan2017, 14:19	2.05
Pond 55	0.0163	5.1	01Jan2017, 13:40	1.48
Pond 56	0.0231	26.6	01Jan2017, 13:31	3.62
Pond 57	0.0112	1.0	01Jan2017, 15:13	1.98
Pond 58	0.0280	4.9	01Jan2017, 13:56	1.27
Pond 6	0.4472	110.4	01Jan2017, 14:20	1.98
Pond 7	0.0064	4.5	01Jan2017, 13:43	3.71

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	19.9	01Jan2017, 13:37	1.91
Pond 9	0.0281	7.1	01Jan2017, 13:52	1.91
RIR0.00	6.5684	2277.7	01Jan2017, 15:02	1.83
RIR0.00A	0.0647	47.3	01Jan2017, 13:55	2.83
RIR0.32	6.5037	2335.1	01Jan2017, 14:50	1.82
RIR0.32A	0.5587	253.1	01Jan2017, 14:01	1.83
RIR0.32_0.00	6.5037	2262.3	01Jan2017, 15:02	1.82
RIR0.65	5.9450	2225.8	01Jan2017, 14:41	1.82
RIR0.65A	0.1896	149.4	01Jan2017, 13:33	2.14
RIR0.65_0.32	5.9450	2209.4	01Jan2017, 14:51	1.82
RIR0.86	5.7554	2218.7	01Jan2017, 14:35	1.81
RIR0.86A	0.2984	155.4	01Jan2017, 13:50	1.83
RIR0.86_0.65	5.7554	2206.8	01Jan2017, 14:41	1.81
RIR1.24	5.4570	2190.8	01Jan2017, 14:28	1.81
RIR1.24A	0.0980	63.8	01Jan2017, 13:32	1.68
RIR1.24_0.86	5.4570	2153.2	01Jan2017, 14:36	1.81
RIR1.34	5.3590	2182.6	01Jan2017, 14:28	1.81
RIR1.52	4.5754	1977.1	01Jan2017, 14:31	1.82
RIR1.62	1.8861	755.1	01Jan2017, 14:29	1.81
RIR1.62A	0.5008	232.5	01Jan2017, 14:02	1.90
RIR2.60	1.3853	589.5	01Jan2017, 14:00	1.77

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	193.1	01Jan2017, 13:39	1.83
RIR2.60_1.62	1.3853	581.9	01Jan2017, 14:36	1.77
RIR3.38	1.0728	504.0	01Jan2017, 13:53	1.75
RIR3.38A	1.0434	499.6	01Jan2017, 13:53	1.75
RIR3.38B	0.0294	20.3	01Jan2017, 13:30	1.68
RIR3.38_2.60	1.0728	496.9	01Jan2017, 14:10	1.75
SHCT0.00	3.0470	838.2	01Jan2017, 14:05	1.06
SHCT0.00A	0.9966	255.6	01Jan2017, 13:58	1.02
SHCT1.59	2.0504	592.8	01Jan2017, 13:53	1.08
SHCT1.59A	2.0504	592.8	01Jan2017, 13:53	1.08
SHCT1.59_0.00	2.0504	592.2	01Jan2017, 14:07	1.08
SHC0.00	6.4942	1439.5	01Jan2017, 15:28	1.23
SHC0.00A	0.0458	23.0	01Jan2017, 13:42	1.54
SHC0.23	6.4484	1491.7	01Jan2017, 15:16	1.23
SHC0.23A	0.6386	233.8	01Jan2017, 14:27	1.90
SHC0.23_0.00	6.4484	1435.7	01Jan2017, 15:28	1.23
SHC1.60	5.8098	1498.6	01Jan2017, 14:22	1.16
SHC1.60A	0.2628	147.7	01Jan2017, 13:38	1.61
SHC1.60_0.23	5.8098	1336.6	01Jan2017, 15:18	1.16
SHC2.06	5.5470	1478.9	01Jan2017, 14:10	1.14
SHC2.06A	0.2828	81.2	01Jan2017, 13:44	0.91

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	1461.9	01Jan2017, 14:22	1.14
SHC2.56	5.2642	1440.9	01Jan2017, 14:04	1.15
SHC2.56A	0.4506	184.6	01Jan2017, 13:49	1.40
SHC2.56_2.06	5.2642	1436.4	01Jan2017, 14:10	1.15
SHC3.11	1.7666	450.7	01Jan2017, 14:04	1.23
SHC3.11A	0.2775	203.8	01Jan2017, 13:33	1.98
SHC3.11_2.56	1.7666	450.6	01Jan2017, 14:08	1.23
SHC3.92	1.4891	400.1	01Jan2017, 13:59	1.10
SHC3.92A	0.6934	176.2	01Jan2017, 13:54	0.97
SHC3.92B	0.7957	228.9	01Jan2017, 14:03	1.21
SHC3.92_3.11	1.4891	399.7	01Jan2017, 14:07	1.10
SRT0.50	2.6893	1224.6	01Jan2017, 14:32	1.84
SRT0.50A	0.4294	179.1	01Jan2017, 14:09	1.83
SRT1.29	2.2599	1086.3	01Jan2017, 14:19	1.84
SRT1.29A	0.3191	130.5	01Jan2017, 14:07	1.76
SRT1.29_0.50	2.2599	1075.7	01Jan2017, 14:34	1.84
SRT2.06	1.9408	972.7	01Jan2017, 14:02	1.85
SRT2.06A	0.4839	250.1	01Jan2017, 13:54	1.90
SRT2.06_1.29	1.9408	963.0	01Jan2017, 14:20	1.85
SRT2.55	1.4569	737.1	01Jan2017, 13:56	1.83
SRT2.55A	0.3465	205.3	01Jan2017, 13:42	1.83

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	734.4	01Jan2017, 14:05	1.83
SRT3.00	1.1104	586.6	01Jan2017, 13:52	1.83
SRT3.00A	0.7468	379.7	01Jan2017, 13:52	1.83
SRT3.00_2.55	1.1104	583.4	01Jan2017, 14:02	1.83
SRT3.38	0.3636	207.8	01Jan2017, 13:44	1.83
SRT3.38A	0.3636	207.8	01Jan2017, 13:44	1.83
SRT3.38_3.00	0.3636	207.1	01Jan2017, 13:53	1.83
SSRTA0.00	0.4007	207.6	01Jan2017, 13:51	2.01
SSRTA0.00A	0.2628	161.3	01Jan2017, 13:47	2.06
SSRTA0.59	0.1379	72.9	01Jan2017, 13:49	1.91
SSRTA0.59A	0.1379	91.1	01Jan2017, 13:37	1.91
SSRTA0.59_0.00	0.1379	71.2	01Jan2017, 14:12	1.90
SSRT0.00	1.3182	668.0	01Jan2017, 14:02	1.95
SSRT0.00A	0.2236	124.1	01Jan2017, 13:49	1.91
SSRT0.46	1.0946	570.5	01Jan2017, 13:49	1.96
SSRT0.46A	0.1893	129.7	01Jan2017, 13:37	1.98
SSRT0.46_0.00	1.0946	561.9	01Jan2017, 14:05	1.96
SSRT0.77	0.9053	479.8	01Jan2017, 13:48	1.96
SSRT0.77A	0.2520	153.0	01Jan2017, 13:45	1.98
SSRT0.77B	0.0603	40.6	01Jan2017, 13:34	1.83
SSRT0.77_0.46	0.9053	478.7	01Jan2017, 13:56	1.96

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	97.0	01Jan2017, 13:37	1.86
SSRT1.34A	0.1112	70.2	01Jan2017, 13:38	1.83
SSRT1.34B	0.0172	12.9	01Jan2017, 13:31	1.91
SSRT1.34C	0.0236	17.7	01Jan2017, 13:31	1.91
SSRT1.34D	0.0122	9.1	01Jan2017, 13:31	1.91
SSRT1.34E	0.0281	20.3	01Jan2017, 13:32	1.91
SSRT1.34_0.77	0.1923	94.8	01Jan2017, 13:59	1.86
SSR0.00	4.8444	1834.7	01Jan2017, 14:31	1.88
SSR0.00A	0.0601	44.3	01Jan2017, 13:31	1.91
SSR0.22	4.7843	1831.4	01Jan2017, 14:28	1.88
SSR0.22A	0.2501	178.8	01Jan2017, 13:41	2.22
SSR0.22_0.00	4.7843	1829.5	01Jan2017, 14:31	1.88
SSR0.85	4.5342	1788.7	01Jan2017, 14:19	1.86
SSR0.85_0.22	4.5342	1780.9	01Jan2017, 14:29	1.86
SSR0.87	3.2160	1209.3	01Jan2017, 14:24	1.82
SSR0.87A	0.3806	182.2	01Jan2017, 14:03	1.98
SSR1.06	2.8354	1057.0	01Jan2017, 14:21	1.80
SSR1.06A	0.2647	160.6	01Jan2017, 13:45	1.98
SSR1.06_0.87	2.8354	1055.0	01Jan2017, 14:26	1.80
SSR1.71	2.5707	990.7	01Jan2017, 14:07	1.78
SSR1.71A	0.3665	189.1	01Jan2017, 14:03	2.14

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	985.7	01Jan2017, 14:23	1.78
SSR1.89	2.2042	807.8	01Jan2017, 14:01	1.72
SSR1.89A	0.3178	197.0	01Jan2017, 13:48	2.14
SSR1.89B	0.0231	26.9	01Jan2017, 13:30	3.62
SSR1.89_1.71	2.2042	802.8	01Jan2017, 14:08	1.72
SSR2.33	1.8633	634.9	01Jan2017, 13:55	1.63
SSR2.33A	0.1750	138.9	01Jan2017, 13:34	2.22
SSR2.33B	0.0381	28.5	01Jan2017, 13:31	1.91
SSR2.33_1.89	1.8633	632.1	01Jan2017, 14:07	1.63
SSR2.70	1.6502	568.8	01Jan2017, 13:51	1.56
SSR2.70A	0.4613	245.3	01Jan2017, 13:49	1.83
SSR2.70B	0.0112	8.8	01Jan2017, 13:30	1.98
SSR2.70C	0.0064	7.5	01Jan2017, 13:30	3.72
SSR2.70D	0.0343	21.5	01Jan2017, 13:32	1.61
SSR2.70E	0.4472	282.5	01Jan2017, 13:42	1.98
SSR2.70_2.33	1.6502	567.1	01Jan2017, 13:59	1.56
SSR3.20	0.6898	208.1	01Jan2017, 13:46	1.07
SSR3.20A	0.1108	60.5	01Jan2017, 13:40	1.61
SSR3.20B	0.2023	120.4	01Jan2017, 13:35	1.61
SSR3.20_2.70	0.6898	207.7	01Jan2017, 13:52	1.07
SSR3.70	0.3767	88.3	01Jan2017, 13:39	0.68

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	88.3	01Jan2017, 13:39	1.34
SSR3.70B	0.1861	83.9	01Jan2017, 13:36	1.21
SSR3.70_3.20	0.3767	88.0	01Jan2017, 13:47	0.68
WOR0.00	2.8951	1001.9	01Jan2017, 14:52	1.78
WOR0.00A	0.0359	24.9	01Jan2017, 13:33	1.83
WOR0.32	2.8592	1001.3	01Jan2017, 14:45	1.78
WOR0.32A	0.1901	83.2	01Jan2017, 13:57	1.68
WOR0.32_0.00	2.8592	998.3	01Jan2017, 14:52	1.78
WOR0.76	2.6691	1039.3	01Jan2017, 14:24	1.78
WOR0.76A	0.3131	212.5	01Jan2017, 13:40	2.06
WOR0.76_0.32	2.6691	962.6	01Jan2017, 14:46	1.79
WOR1.59	2.3560	999.1	01Jan2017, 14:08	1.74
WOR1.59A	0.4536	268.7	01Jan2017, 13:49	2.06
WOR1.59B	0.7600	300.3	01Jan2017, 14:10	1.75
WOR1.59_0.76	2.3560	978.9	01Jan2017, 14:26	1.74
WOR1.64	1.1424	493.5	01Jan2017, 14:13	1.61
WOR1.64A	0.2551	144.4	01Jan2017, 13:50	1.98
WOR2.33	0.8873	425.0	01Jan2017, 13:44	1.51
WOR2.33A	0.3233	159.8	01Jan2017, 13:46	1.61
WOR2.33_1.64	0.8873	392.0	01Jan2017, 14:17	1.51
WOR3.00	0.5640	265.7	01Jan2017, 13:44	1.44

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	198.9	01Jan2017, 13:45	1.83
WOR3.67	0.2110	67.5	01Jan2017, 13:34	0.80
WOR3.67A	0.2110	67.5	01Jan2017, 13:34	0.80
WOR3.67_3.00	0.2110	67.3	01Jan2017, 13:43	0.80

Project: ChiquesCreek Simulation Run: 25YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 25YR_24HR
Compute Time: 31Jan2017, 15:32:20 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	796.0	01Jan2017, 14:39	2.17
BER0.00A	0.1087	82.7	01Jan2017, 13:49	2.78
BER0.64	1.7391	797.0	01Jan2017, 14:08	2.12
BER0.64A	0.3111	272.9	01Jan2017, 13:40	2.87
BER0.64_0.00	1.7391	765.1	01Jan2017, 14:41	2.13
BER1.05	1.4280	686.9	01Jan2017, 13:56	1.94
BER1.05A	0.2790	205.4	01Jan2017, 13:51	2.78
BER1.05_0.64	1.4280	668.8	01Jan2017, 14:16	1.95
BER1.30	1.1490	487.6	01Jan2017, 13:54	1.74
BER1.30A	0.5289	310.4	01Jan2017, 13:53	2.25
BER1.30_1.05	1.1490	486.2	01Jan2017, 14:00	1.74
BER1.95	0.6201	221.5	01Jan2017, 13:49	1.31
BER1.95A	0.6201	221.5	01Jan2017, 13:49	1.31
BER1.95_1.30	0.6201	215.3	01Jan2017, 14:16	1.30
BOR0.00	6.6030	2968.7	01Jan2017, 14:43	2.32
BOR0.00A	0.0062	6.3	01Jan2017, 13:30	2.88
BOR0.10	6.5968	3102.6	01Jan2017, 14:39	2.33

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	157.3	01Jan2017, 13:59	2.78
BOR0.10_0.00	6.5968	2967.8	01Jan2017, 14:43	2.32
BOR0.68	1.6208	724.4	01Jan2017, 14:16	1.91
BOR0.68A	0.2555	188.2	01Jan2017, 13:51	2.78
BOR0.68_0.10	1.6208	704.6	01Jan2017, 14:38	1.92
BOR1.20	1.3653	599.6	01Jan2017, 13:58	1.75
BOR1.20A	0.5429	299.4	01Jan2017, 14:05	2.42
BOR1.20_0.68	1.3653	588.2	01Jan2017, 14:19	1.75
BOR2.07	0.8224	309.4	01Jan2017, 13:46	1.31
BOR2.07A	0.8224	309.4	01Jan2017, 13:46	1.31
BOR2.07_1.20	0.8224	307.9	01Jan2017, 13:56	1.31
CHC10.68	50.2637	6237.8	01Jan2017, 20:39	2.55
CHC10.68A	0.7377	577.2	01Jan2017, 13:56	3.15
CHC10.68B	0.0477	42.1	01Jan2017, 13:46	3.16
CHC10.68C	0.1180	91.0	01Jan2017, 13:52	2.97
CHC10.68D	0.1638	141.0	01Jan2017, 14:05	3.95
CHC10.68E	0.0528	63.3	01Jan2017, 13:35	3.95
CHC10.68_9.40	50.2637	6208.4	01Jan2017, 21:08	2.54
CHC11.99	49.1437	6178.8	01Jan2017, 20:05	2.54
CHC11.99_10.68	49.1437	6150.4	01Jan2017, 20:40	2.54
CHC12.01	46.4709	5992.6	01Jan2017, 20:11	2.51

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	140.6	01Jan2017, 13:31	2.88
CHC12.65	46.3306	6197.1	01Jan2017, 19:41	2.53
CHC12.65_12.01	46.3306	5986.6	01Jan2017, 20:12	2.51
CHC12.67	45.3853	6121.3	01Jan2017, 19:43	2.52
CHC12.67A	0.5547	246.6	01Jan2017, 14:56	2.97
CHC13.89	44.8306	6141.8	01Jan2017, 19:04	2.52
CHC13.89_12.67	44.8306	6070.7	01Jan2017, 19:44	2.51
CHC13.90	41.9107	5867.4	01Jan2017, 19:08	2.50
CHC13.90A	2.4712	469.5	01Jan2017, 19:04	2.84
CHC16.25	39.4395	5955.4	01Jan2017, 17:19	2.51
CHC16.25A	0.7783	325.9	01Jan2017, 15:06	2.96
CHC16.25_13.90	39.4395	5397.9	01Jan2017, 19:09	2.48
CHC17.08	38.6612	6026.9	01Jan2017, 16:44	2.51
CHC17.08A	0.5852	332.9	01Jan2017, 14:26	3.06
CHC17.08B	0.3448	345.2	01Jan2017, 13:59	4.48
CHC17.08_16.25	38.6612	5809.3	01Jan2017, 17:20	2.50
CHC17.73	37.7312	5967.9	01Jan2017, 16:18	2.49
CHC17.73A	0.3870	268.5	01Jan2017, 14:07	3.16
CHC17.73B	0.0626	83.6	01Jan2017, 13:34	4.71
CHC17.73_17.08	37.7312	5829.0	01Jan2017, 16:45	2.49
CHC18.09	37.2816	6018.0	01Jan2017, 16:02	2.48

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	112.3	01Jan2017, 13:48	2.43
CHC18.09_17.73	37.2816	5897.3	01Jan2017, 16:19	2.48
CHC18.61	36.6951	6126.3	01Jan2017, 15:42	2.48
CHC18.61A	0.5761	441.1	01Jan2017, 13:41	2.51
CHC18.61_18.09	36.6951	5952.5	01Jan2017, 16:02	2.48
CHC19.32	36.1190	6412.8	01Jan2017, 15:09	2.49
CHC19.32_18.61	36.1190	6058.2	01Jan2017, 15:43	2.48
CHC19.35	29.5506	4290.1	01Jan2017, 19:58	2.44
CHC19.35A	0.3523	227.5	01Jan2017, 14:15	3.16
CHC19.35B	0.0175	22.5	01Jan2017, 13:32	4.16
CHC1.28	63.3656	6314.8	02Jan2017, 01:25	2.41
CHC1.28A	0.8402	234.2	01Jan2017, 16:05	2.60
CHC20.02	29.1808	4275.4	01Jan2017, 19:41	2.43
CHC20.02A	0.3588	314.4	01Jan2017, 13:55	3.55
CHC20.02_19.35	29.1808	4264.6	01Jan2017, 20:00	2.43
CHC20.55	28.8220	4266.6	01Jan2017, 19:27	2.42
CHC20.55_20.02	28.8220	4249.9	01Jan2017, 19:43	2.42
CHC20.57	23.2797	3802.3	01Jan2017, 19:39	2.34
CHC20.57A	0.5512	322.7	01Jan2017, 14:47	3.75
CHC21.28	22.7285	3788.5	01Jan2017, 19:01	2.31
CHC21.28A	0.3509	302.8	01Jan2017, 14:03	3.85

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	25.2	01Jan2017, 13:30	4.38
CHC21.28C	0.0073	5.7	01Jan2017, 14:00	3.35
CHC21.28D	0.0224	26.3	01Jan2017, 13:31	3.55
CHC21.28E	0.0497	44.3	01Jan2017, 13:34	2.60
CHC21.28F	0.1457	142.0	01Jan2017, 13:33	2.88
CHC21.28_20.57	22.7285	3746.8	01Jan2017, 19:41	2.30
CHC21.59	22.1338	3768.9	01Jan2017, 18:50	2.28
CHC21.59A	0.2001	162.8	01Jan2017, 13:52	3.16
CHC21.59B	0.0256	32.1	01Jan2017, 13:32	4.06
CHC21.59C	0.0275	34.0	01Jan2017, 13:31	3.85
CHC21.59D	0.0896	94.0	01Jan2017, 13:33	3.16
CHC21.59_21.28	22.1338	3736.9	01Jan2017, 19:01	2.27
CHC22.01	21.7910	3783.2	01Jan2017, 18:32	2.26
CHC22.01A	1.2726	1245.6	01Jan2017, 13:31	2.78
CHC22.01B	0.0456	52.4	01Jan2017, 13:30	3.35
CHC22.01_21.59	21.7910	3739.3	01Jan2017, 18:50	2.26
CHC23.04	20.4728	3738.5	01Jan2017, 17:57	2.23
CHC23.04A	1.8763	743.1	01Jan2017, 14:58	2.68
CHC23.04B	0.2164	191.1	01Jan2017, 13:42	2.97
CHC23.04_22.01	20.4728	3687.2	01Jan2017, 18:33	2.23
CHC24.53	18.3801	3584.0	01Jan2017, 17:06	2.18

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	3458.2	01Jan2017, 18:02	2.17
CHC24.63	18.3801	3584.0	01Jan2017, 17:06	2.18
CHC24.64	11.7771	2769.5	01Jan2017, 17:17	2.10
CHC24.64A	0.2517	96.3	01Jan2017, 14:38	2.25
CHC25.53	11.5254	3146.0	01Jan2017, 16:23	2.11
CHC25.53A	0.6693	404.9	01Jan2017, 14:06	2.69
CHC25.53B	0.0163	14.5	01Jan2017, 13:31	2.43
CHC25.53_24.64	11.5254	2739.6	01Jan2017, 17:18	2.09
CHC26.30	10.8398	3130.2	01Jan2017, 15:57	2.07
CHC26.30A	0.8065	270.0	01Jan2017, 15:23	2.60
CHC26.30_25.53	10.8398	3055.0	01Jan2017, 16:24	2.07
CHC27.38	10.0333	3367.7	01Jan2017, 15:11	2.03
CHC27.38_26.30	10.0333	2881.9	01Jan2017, 15:59	2.02
CHC27.39	3.5391	1097.3	01Jan2017, 14:37	2.18
CHC27.39A	0.3314	218.7	01Jan2017, 13:58	2.69
CHC28.26	3.2077	1015.5	01Jan2017, 14:02	2.13
CHC28.26_27.39	3.2077	971.8	01Jan2017, 14:41	2.13
CHC28.31	3.2077	1015.5	01Jan2017, 14:02	2.13
CHC28.31A	0.0950	83.7	01Jan2017, 13:36	2.69
CHC28.31B	0.7915	509.2	01Jan2017, 13:57	2.60
CHC28.67	2.3212	683.9	01Jan2017, 15:22	1.95

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	310.2	01Jan2017, 13:59	1.92
CHC28.67_28.31	2.3212	680.4	01Jan2017, 15:33	1.95
CHC29.91	1.6558	602.9	01Jan2017, 14:40	1.96
CHC29.91A	0.6097	272.8	01Jan2017, 13:55	1.76
CHC29.91_28.67	1.6558	591.5	01Jan2017, 15:23	1.96
CHC30.94	1.0461	483.9	01Jan2017, 14:07	2.08
CHC30.94A	1.0461	483.9	01Jan2017, 14:07	2.08
CHC30.94_29.91	1.0461	480.4	01Jan2017, 14:46	2.08
CHC3.39	62.5254	6298.4	02Jan2017, 00:16	2.44
CHC3.39A	1.8419	1179.8	01Jan2017, 13:54	2.50
CHC3.39_1.28	62.5254	6283.0	02Jan2017, 01:27	2.41
CHC4.62	60.6835	6673.1	01Jan2017, 23:04	2.53
CHC4.62A	0.1505	135.1	01Jan2017, 13:37	2.78
CHC4.62B	0.1946	169.7	01Jan2017, 13:39	2.78
CHC4.62_3.39	60.6835	6242.9	02Jan2017, 00:18	2.44
CHC4.97	60.3384	6703.9	01Jan2017, 22:48	2.54
CHC4.97A	0.4693	215.8	01Jan2017, 14:33	2.60
CHC4.97B	0.0580	55.8	01Jan2017, 13:37	3.06
CHC4.97C	0.2012	180.9	01Jan2017, 13:33	2.60
CHC4.97_4.62	60.3384	6661.6	01Jan2017, 23:04	2.53
CHC5.97	59.6099	6689.6	01Jan2017, 22:30	2.55

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	714.5	01Jan2017, 14:07	2.87
CHC5.97_4.97	59.6099	6676.8	01Jan2017, 22:48	2.54
CHC7.47	58.4785	6681.8	01Jan2017, 21:49	2.55
CHC7.47_5.97	58.4785	6646.3	01Jan2017, 22:30	2.54
CHC7.48	53.6341	6457.4	01Jan2017, 21:58	2.54
CHC7.48A	2.2128	473.2	01Jan2017, 18:08	2.86
CHC9.40	51.4213	6264.9	01Jan2017, 21:07	2.55
CHC9.40A	1.1576	654.4	01Jan2017, 14:19	2.87
CHC9.40_7.47	51.4213	6184.8	01Jan2017, 22:06	2.53
DER0.00	2.9199	1434.3	01Jan2017, 15:04	2.77
DER0.00A	0.1924	172.6	01Jan2017, 13:37	2.78
DER0.52	2.7275	1415.4	01Jan2017, 14:49	2.77
DER0.52A	0.5165	412.4	01Jan2017, 13:49	2.97
DER0.52_0.00	2.7275	1407.1	01Jan2017, 15:04	2.77
DER1.10	2.2110	1311.7	01Jan2017, 14:29	2.72
DER1.10A	0.3712	287.6	01Jan2017, 13:52	2.97
DER1.10_0.52	2.2110	1289.3	01Jan2017, 14:52	2.72
DER1.76	1.8398	1161.8	01Jan2017, 14:12	2.67
DER1.76A	0.5078	332.2	01Jan2017, 13:53	2.51
DER1.76_1.10	1.8398	1154.8	01Jan2017, 14:33	2.67
DER2.22	1.3320	900.5	01Jan2017, 14:06	2.72

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	435.0	01Jan2017, 14:03	2.60
DER2.22_1.76	1.3320	896.3	01Jan2017, 14:18	2.73
DER2.93	0.6085	470.7	01Jan2017, 13:50	2.87
DER2.93A	0.6085	470.7	01Jan2017, 13:50	2.87
DER2.93_2.22	0.6085	467.3	01Jan2017, 14:07	2.87
DORT0.34	1.6920	979.8	01Jan2017, 14:00	2.83
DORT0.34A	0.0357	34.7	01Jan2017, 13:32	2.78
DORT0.34B	0.0234	22.2	01Jan2017, 13:32	2.69
DORT0.54	1.6329	965.9	01Jan2017, 13:56	2.83
DORT0.54A	0.2058	172.1	01Jan2017, 13:44	2.88
DORT0.54B	0.0280	20.1	01Jan2017, 13:33	2.00
DORT0.54C	0.0058	6.6	01Jan2017, 13:33	3.55
DORT0.54D	0.0832	67.4	01Jan2017, 13:51	3.06
DORT0.54E	0.0367	36.5	01Jan2017, 13:30	2.78
DORT0.54_0.34	1.6329	962.2	01Jan2017, 14:00	2.83
DORT1.15	1.2734	789.5	01Jan2017, 13:45	2.84
DORT1.15A	0.4022	371.5	01Jan2017, 13:38	2.97
DORT1.15B	0.0103	14.0	01Jan2017, 13:30	4.49
DORT1.15_0.54	1.2734	784.4	01Jan2017, 14:00	2.84
DORT1.58	0.8609	614.7	01Jan2017, 13:58	2.76
DORT1.58A	0.4931	384.1	01Jan2017, 13:47	2.78

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	604.9	01Jan2017, 14:12	2.76
DORT2.41	0.3678	297.1	01Jan2017, 13:43	2.75
DORT2.41A	0.2384	200.3	01Jan2017, 13:39	2.69
DORT2.41B	0.1294	117.0	01Jan2017, 13:38	2.88
DORT2.41_1.58	0.3678	293.0	01Jan2017, 14:11	2.74
DOR0.00	5.5423	2525.5	01Jan2017, 15:08	2.77
DOR0.00A	0.0475	47.7	01Jan2017, 13:40	3.35
DOR0.24	5.4948	2573.6	01Jan2017, 14:59	2.78
DOR0.24A	0.1218	112.1	01Jan2017, 13:41	3.06
DOR0.24B	0.1287	110.7	01Jan2017, 13:48	3.16
DOR0.24_0.00	5.4948	2517.7	01Jan2017, 15:08	2.77
DOR0.44A	0.5212	389.1	01Jan2017, 13:57	3.06
DOR0.44_0.24	5.2443	2508.3	01Jan2017, 14:59	2.76
DOR1.21	4.7231	2422.3	01Jan2017, 14:30	2.73
DOR1.21A	0.2430	163.6	01Jan2017, 14:07	3.06
DOR1.21B	0.2037	187.4	01Jan2017, 13:39	2.97
DOR1.21_0.44	4.7231	2358.2	01Jan2017, 14:57	2.73
DOR1.23	4.2764	2281.7	01Jan2017, 14:31	2.84
DOR1.23A	0.2095	185.6	01Jan2017, 13:46	3.16
DOR1.45	4.0669	2222.5	01Jan2017, 14:25	2.82
DOR1.45_1.23	4.0669	2210.2	01Jan2017, 14:33	2.82

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	1344.4	01Jan2017, 14:28	2.82
DOR1.60A	0.5501	433.9	01Jan2017, 13:48	2.87
DOR2.40	1.8248	1163.0	01Jan2017, 14:10	2.80
DOR2.40A	0.4594	326.0	01Jan2017, 13:57	2.87
DOR2.40_1.60	1.8248	1148.3	01Jan2017, 14:33	2.80
DOR2.81	1.3654	875.9	01Jan2017, 14:02	2.78
DOR2.81A	0.2367	193.9	01Jan2017, 13:50	3.06
DOR2.81_2.40	1.3654	868.6	01Jan2017, 14:15	2.78
DOR3.06	1.1287	703.8	01Jan2017, 13:57	2.72
DOR3.06A	0.3648	284.4	01Jan2017, 13:47	2.78
DOR3.06B	0.7639	456.5	01Jan2017, 14:07	2.69
DOR3.06_2.81	1.1287	702.0	01Jan2017, 14:06	2.72
DOR.44	5.2443	2518.3	01Jan2017, 14:54	2.76
ERRR0.57_0.00	1.1576	827.6	01Jan2017, 14:16	3.08
ERRT0.00	1.2906	915.1	01Jan2017, 14:14	3.15
ERRT0.00A	0.1098	106.0	01Jan2017, 13:48	3.65
ERRT0.00B	0.0077	9.9	01Jan2017, 13:30	3.95
ERRT0.00C	0.0074	10.3	01Jan2017, 13:30	4.71
ERRT0.00D	0.0036	5.0	01Jan2017, 13:30	4.71
ERRT0.00E	0.0045	6.3	01Jan2017, 13:30	4.71
ERRT0.57	1.1576	833.0	01Jan2017, 14:04	3.08

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	150.5	01Jan2017, 14:33	3.06
ERRT0.61	0.8788	710.3	01Jan2017, 14:02	3.08
ERRT0.61A	0.4551	330.3	01Jan2017, 14:03	3.16
ERRT1.62	0.4237	391.8	01Jan2017, 13:34	3.02
ERRT1.62A	0.1546	126.1	01Jan2017, 13:44	2.78
ERRT1.62B	0.2547	269.9	01Jan2017, 13:31	3.06
ERRT1.62C	0.0144	20.1	01Jan2017, 13:30	4.71
ERRT1.62_0.61	0.4237	380.0	01Jan2017, 14:02	3.01
ERR0.00	2.6728	1805.8	01Jan2017, 14:18	3.03
ERR0.00A	0.0718	63.9	01Jan2017, 13:35	2.69
ERR0.00B	0.0053	7.4	01Jan2017, 13:30	4.71
ERR0.23	2.5957	1793.6	01Jan2017, 14:13	3.04
ERR0.23A	0.1922	164.7	01Jan2017, 13:40	2.78
ERR0.23B	0.0298	40.2	01Jan2017, 13:30	4.38
ERR0.23_0.00	2.5957	1786.0	01Jan2017, 14:18	3.04
ERR0.26	1.3051	879.4	01Jan2017, 14:12	2.93
ERR0.88	1.0831	794.2	01Jan2017, 14:01	2.92
ERR0.88A	0.5048	332.4	01Jan2017, 14:07	2.97
ERR0.88_0.23	1.0831	789.5	01Jan2017, 14:15	2.92
ERR1.33	0.5783	470.6	01Jan2017, 13:46	2.87
ERR1.33A	0.5783	470.6	01Jan2017, 13:46	2.87

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	467.7	01Jan2017, 13:58	2.87
LAR0.00	0.9453	510.9	01Jan2017, 14:12	3.05
LAR0.00A	0.5827	300.9	01Jan2017, 14:39	3.06
LAR0.40	0.3626	262.3	01Jan2017, 13:58	3.03
LAR0.40A	0.0039	5.5	01Jan2017, 13:30	4.82
LAR0.40B	0.1091	132.3	01Jan2017, 13:40	4.38
LAR0.40C	0.1251	114.4	01Jan2017, 13:41	3.06
LAR0.40D	0.1245	108.6	01Jan2017, 13:39	2.78
LAR0.40_0.00	0.3626	260.7	01Jan2017, 14:06	3.03
MRT0.00	0.4202	330.3	01Jan2017, 13:45	2.75
MRT0.00A	0.1647	134.3	01Jan2017, 13:41	2.69
MRT0.66	0.2555	202.2	01Jan2017, 13:33	2.81
MRT0.66A	0.2030	198.6	01Jan2017, 13:33	2.88
MRT0.66B	0.0376	39.2	01Jan2017, 13:31	2.97
MRT0.66C	0.0149	16.3	01Jan2017, 13:31	3.25
MRT0.66_0.00	0.2555	199.5	01Jan2017, 13:48	2.80
ORT0.28	0.7836	571.3	01Jan2017, 13:56	2.61
ORT0.28A	0.1786	141.5	01Jan2017, 13:39	2.51
ORT0.95	0.6050	480.8	01Jan2017, 13:40	2.64
ORT0.95A	0.1851	157.4	01Jan2017, 13:35	2.51
ORT0.95_0.28	0.6050	474.4	01Jan2017, 14:00	2.64

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	348.8	01Jan2017, 13:39	2.70
ORT1.38A	0.1910	164.8	01Jan2017, 13:36	2.60
ORT1.38_0.95	0.4199	347.0	01Jan2017, 13:47	2.70
ORT2.04	0.2289	196.1	01Jan2017, 13:40	2.78
ORT2.04A	0.2289	196.1	01Jan2017, 13:40	2.78
ORT2.04_1.38	0.2289	195.8	01Jan2017, 13:48	2.78
Pond 0	0.1946	152.1	01Jan2017, 13:48	2.78
Pond 1	0.2012	180.8	01Jan2017, 13:33	2.60
Pond 10	0.0122	4.1	01Jan2017, 13:46	2.78
Pond 11	0.0236	18.4	01Jan2017, 13:36	2.78
Pond 12	0.0172	5.0	01Jan2017, 13:50	2.78
Pond 13	0.0603	51.1	01Jan2017, 13:40	2.69
Pond 14	0.1379	114.7	01Jan2017, 13:44	2.78
Pond 15	0.0477	9.0	01Jan2017, 15:03	3.16
Pond 16	0.3346	122.9	01Jan2017, 14:03	3.40
Pond 17	0.0528	15.0	01Jan2017, 14:23	3.95
Pond 18	0.1638	31.5	01Jan2017, 16:10	3.95
Pond 19	0.0053	5.3	01Jan2017, 13:38	4.71
Pond 2	0.0580	24.2	01Jan2017, 14:08	2.80
Pond 20	0.0077	6.3	01Jan2017, 13:32	3.95
Pond 21	0.0298	40.1	01Jan2017, 13:30	4.38

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	8.8	01Jan2017, 13:33	4.25
Pond 23	0.0036	5.0	01Jan2017, 13:30	4.71
Pond 24	0.0045	2.5	01Jan2017, 13:40	4.71
Pond 25	0.2547	264.6	01Jan2017, 13:33	3.06
Pond 26	0.0144	8.4	01Jan2017, 13:38	4.71
Pond 27	0.1245	61.3	01Jan2017, 14:03	2.78
Pond 28	0.1251	97.9	01Jan2017, 13:54	2.91
Pond 29	0.1091	103.1	01Jan2017, 13:59	3.43
Pond 3	0.1861	0.0	01Jan2017, 01:00	0.00
Pond 30	0.0039	1.5	01Jan2017, 13:42	3.47
Pond 31	0.3448	122.7	01Jan2017, 15:10	3.76
Pond 32	0.0626	60.0	01Jan2017, 13:53	4.71
Pond 33	0.0149	1.6	01Jan2017, 16:23	3.21
Pond 34	0.0376	2.8	01Jan2017, 18:26	2.30
Pond 35	0.0294	23.8	01Jan2017, 13:33	2.51
Pond 36	0.0175	22.5	01Jan2017, 13:32	4.17
Pond 37	0.1287	95.5	01Jan2017, 14:04	3.15
Pond 38	0.2037	6.5	02Jan2017, 00:04	0.10
Pond 39	0.0234	21.9	01Jan2017, 13:34	2.69
Pond 4	0.2023	110.8	01Jan2017, 13:49	2.32
Pond 40	0.0832	6.8	01Jan2017, 18:37	2.73

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	3.3	01Jan2017, 13:52	3.55
Pond 42	0.0367	29.6	01Jan2017, 13:35	2.78
Pond 43	0.0103	13.8	01Jan2017, 13:33	4.49
Pond 44	0.1294	104.0	01Jan2017, 13:48	2.86
Pond 45	0.1457	135.7	01Jan2017, 13:38	2.88
Pond 46	0.0187	15.6	01Jan2017, 13:37	4.38
Pond 47	0.0275	4.6	01Jan2017, 14:22	3.68
Pond 48	0.0456	48.5	01Jan2017, 13:33	2.67
Pond 49	0.0256	32.1	01Jan2017, 13:34	4.06
Pond 5	0.0343	27.7	01Jan2017, 13:37	2.43
Pond 50	0.0073	5.3	01Jan2017, 14:15	3.33
Pond 51	0.0721	30.7	01Jan2017, 13:34	2.90
Pond 52	0.0497	16.7	01Jan2017, 13:58	2.60
Pond 53	0.0896	92.9	01Jan2017, 13:36	3.16
Pond 54	0.2164	81.5	01Jan2017, 14:19	2.96
Pond 55	0.0163	7.9	01Jan2017, 13:39	2.29
Pond 56	0.0231	32.0	01Jan2017, 13:31	4.71
Pond 57	0.0112	3.6	01Jan2017, 13:43	2.88
Pond 58	0.0280	7.2	01Jan2017, 13:57	2.00
Pond 6	0.4472	122.9	01Jan2017, 14:28	2.87
Pond 7	0.0064	4.9	01Jan2017, 13:44	4.81

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	32.0	01Jan2017, 13:35	2.78
Pond 9	0.0281	7.9	01Jan2017, 14:00	2.78
RIR0.00	6.5684	3452.5	01Jan2017, 14:51	2.69
RIR0.00A	0.0647	60.8	01Jan2017, 13:54	3.85
RIR0.32	6.5037	3524.8	01Jan2017, 14:40	2.68
RIR0.32A	0.5587	359.2	01Jan2017, 14:00	2.69
RIR0.32_0.00	6.5037	3427.9	01Jan2017, 14:51	2.68
RIR0.65	5.9450	3331.2	01Jan2017, 14:34	2.68
RIR0.65A	0.1896	196.1	01Jan2017, 13:32	3.06
RIR0.65_0.32	5.9450	3311.4	01Jan2017, 14:42	2.68
RIR0.86	5.7554	3320.4	01Jan2017, 14:29	2.67
RIR0.86A	0.2984	218.0	01Jan2017, 13:50	2.69
RIR0.86_0.65	5.7554	3307.1	01Jan2017, 14:34	2.67
RIR1.24	5.4570	3253.5	01Jan2017, 14:21	2.67
RIR1.24A	0.0980	87.2	01Jan2017, 13:32	2.51
RIR1.24_0.86	5.4570	3212.4	01Jan2017, 14:30	2.67
RIR1.34	5.3590	3240.9	01Jan2017, 14:21	2.67
RIR1.52	4.5754	2862.8	01Jan2017, 14:25	2.68
RIR1.62	1.8861	1109.7	01Jan2017, 14:23	2.66
RIR1.62A	0.5008	327.3	01Jan2017, 14:01	2.78
RIR2.60	1.3853	852.8	01Jan2017, 13:58	2.61

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	265.6	01Jan2017, 13:38	2.69
RIR2.60_1.62	1.3853	841.0	01Jan2017, 14:29	2.62
RIR3.38	1.0728	718.1	01Jan2017, 13:51	2.60
RIR3.38A	1.0434	709.8	01Jan2017, 13:52	2.60
RIR3.38B	0.0294	27.4	01Jan2017, 13:30	2.51
RIR3.38_2.60	1.0728	709.5	01Jan2017, 14:08	2.59
SHCT0.00	3.0470	1359.3	01Jan2017, 14:01	1.73
SHCT0.00A	0.9966	419.1	01Jan2017, 13:56	1.68
SHCT1.59	2.0504	949.6	01Jan2017, 13:52	1.75
SHCT1.59A	2.0504	949.6	01Jan2017, 13:52	1.75
SHCT1.59_0.00	2.0504	948.8	01Jan2017, 14:03	1.75
SHC0.00	6.4942	2378.9	01Jan2017, 15:13	1.94
SHC0.00A	0.0458	33.0	01Jan2017, 13:41	2.34
SHC0.23	6.4484	2471.9	01Jan2017, 15:01	1.94
SHC0.23A	0.6386	333.6	01Jan2017, 14:25	2.78
SHC0.23_0.00	6.4484	2373.0	01Jan2017, 15:13	1.94
SHC1.60	5.8098	2401.8	01Jan2017, 14:13	1.85
SHC1.60A	0.2628	207.5	01Jan2017, 13:37	2.43
SHC1.60_0.23	5.8098	2209.5	01Jan2017, 15:03	1.85
SHC2.06	5.5470	2345.1	01Jan2017, 14:04	1.82
SHC2.06A	0.2828	133.0	01Jan2017, 13:42	1.53

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	2332.7	01Jan2017, 14:15	1.82
SHC2.56	5.2642	2267.9	01Jan2017, 14:01	1.84
SHC2.56A	0.4506	274.2	01Jan2017, 13:48	2.17
SHC2.56_2.06	5.2642	2264.5	01Jan2017, 14:06	1.84
SHC3.11	1.7666	703.9	01Jan2017, 14:10	1.94
SHC3.11A	0.2775	271.4	01Jan2017, 13:33	2.87
SHC3.11_2.56	1.7666	703.8	01Jan2017, 14:13	1.94
SHC3.92	1.4891	645.2	01Jan2017, 13:57	1.77
SHC3.92A	0.6934	291.8	01Jan2017, 13:52	1.60
SHC3.92B	0.7957	360.8	01Jan2017, 14:01	1.92
SHC3.92_3.11	1.4891	642.4	01Jan2017, 14:13	1.77
SRT0.50	2.6893	1756.9	01Jan2017, 14:27	2.70
SRT0.50A	0.4294	255.6	01Jan2017, 14:07	2.69
SRT1.29	2.2599	1543.3	01Jan2017, 14:15	2.70
SRT1.29A	0.3191	187.7	01Jan2017, 14:05	2.60
SRT1.29_0.50	2.2599	1530.2	01Jan2017, 14:28	2.70
SRT2.06	1.9408	1373.5	01Jan2017, 14:00	2.71
SRT2.06A	0.4839	349.2	01Jan2017, 13:53	2.78
SRT2.06_1.29	1.9408	1361.5	01Jan2017, 14:15	2.72
SRT2.55	1.4569	1039.5	01Jan2017, 13:54	2.69
SRT2.55A	0.3465	284.0	01Jan2017, 13:41	2.69

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	1036.1	01Jan2017, 14:02	2.69
SRT3.00	1.1104	820.8	01Jan2017, 13:52	2.69
SRT3.00A	0.7468	533.7	01Jan2017, 13:51	2.69
SRT3.00_2.55	1.1104	817.0	01Jan2017, 14:00	2.69
SRT3.38	0.3636	288.7	01Jan2017, 13:43	2.69
SRT3.38A	0.3636	288.7	01Jan2017, 13:43	2.69
SRT3.38_3.00	0.3636	287.6	01Jan2017, 13:53	2.69
SSRTA0.00	0.4007	298.4	01Jan2017, 13:54	2.90
SSRTA0.00A	0.2628	219.6	01Jan2017, 13:46	2.97
SSRTA0.59	0.1379	114.7	01Jan2017, 13:44	2.78
SSRTA0.59A	0.1379	123.8	01Jan2017, 13:37	2.78
SSRTA0.59_0.00	0.1379	109.1	01Jan2017, 14:06	2.78
SSRT0.00	1.3182	929.8	01Jan2017, 14:00	2.84
SSRT0.00A	0.2236	172.2	01Jan2017, 13:48	2.78
SSRT0.46	1.0946	787.9	01Jan2017, 13:49	2.85
SSRT0.46A	0.1893	174.8	01Jan2017, 13:37	2.88
SSRT0.46_0.00	1.0946	778.2	01Jan2017, 14:04	2.85
SSRT0.77	0.9053	664.5	01Jan2017, 13:49	2.84
SSRT0.77A	0.2520	209.4	01Jan2017, 13:44	2.87
SSRT0.77B	0.0603	55.1	01Jan2017, 13:34	2.69
SSRT0.77_0.46	0.9053	663.2	01Jan2017, 13:56	2.84

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	130.6	01Jan2017, 13:38	2.73
SSRT1.34A	0.1112	96.3	01Jan2017, 13:37	2.69
SSRT1.34B	0.0172	17.1	01Jan2017, 13:31	2.78
SSRT1.34C	0.0236	23.4	01Jan2017, 13:31	2.78
SSRT1.34D	0.0122	12.1	01Jan2017, 13:31	2.78
SSRT1.34E	0.0281	27.1	01Jan2017, 13:32	2.78
SSRT1.34_0.77	0.1923	128.0	01Jan2017, 14:00	2.73
SSR0.00	4.8444	2701.8	01Jan2017, 14:23	2.73
SSR0.00A	0.0601	58.9	01Jan2017, 13:31	2.78
SSR0.22	4.7843	2697.7	01Jan2017, 14:20	2.73
SSR0.22A	0.2501	237.8	01Jan2017, 13:40	3.16
SSR0.22_0.00	4.7843	2694.2	01Jan2017, 14:23	2.73
SSR0.85	4.5342	2621.6	01Jan2017, 14:12	2.71
SSR0.85_0.22	4.5342	2611.0	01Jan2017, 14:21	2.71
SSR0.87	3.2160	1760.1	01Jan2017, 14:17	2.65
SSR0.87A	0.3806	254.4	01Jan2017, 14:02	2.87
SSR1.06	2.8354	1528.8	01Jan2017, 14:14	2.62
SSR1.06A	0.2647	219.9	01Jan2017, 13:44	2.87
SSR1.06_0.87	2.8354	1526.0	01Jan2017, 14:18	2.62
SSR1.71	2.5707	1413.0	01Jan2017, 14:02	2.59
SSR1.71A	0.3665	259.6	01Jan2017, 14:02	3.06

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	1406.8	01Jan2017, 14:17	2.60
SSR1.89	2.2042	1158.8	01Jan2017, 13:56	2.52
SSR1.89A	0.3178	266.8	01Jan2017, 13:48	3.06
SSR1.89B	0.0231	32.2	01Jan2017, 13:30	4.71
SSR1.89_1.71	2.2042	1153.4	01Jan2017, 14:02	2.52
SSR2.33	1.8633	906.3	01Jan2017, 13:51	2.40
SSR2.33A	0.1750	181.9	01Jan2017, 13:33	3.16
SSR2.33B	0.0381	37.8	01Jan2017, 13:31	2.78
SSR2.33_1.89	1.8633	903.1	01Jan2017, 14:02	2.40
SSR2.70	1.6502	800.8	01Jan2017, 13:49	2.31
SSR2.70A	0.4613	343.3	01Jan2017, 13:48	2.69
SSR2.70B	0.0112	11.6	01Jan2017, 13:30	2.88
SSR2.70C	0.0064	9.0	01Jan2017, 13:30	4.82
SSR2.70D	0.0343	29.6	01Jan2017, 13:32	2.43
SSR2.70E	0.4472	385.0	01Jan2017, 13:42	2.87
SSR2.70_2.33	1.6502	799.1	01Jan2017, 13:57	2.31
SSR3.20	0.6898	315.8	01Jan2017, 13:46	1.65
SSR3.20A	0.1108	85.5	01Jan2017, 13:39	2.43
SSR3.20B	0.2023	167.4	01Jan2017, 13:34	2.43
SSR3.20_2.70	0.6898	315.4	01Jan2017, 13:51	1.65
SSR3.70	0.3767	129.3	01Jan2017, 13:38	1.05

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	129.3	01Jan2017, 13:38	2.09
SSR3.70B	0.1861	124.0	01Jan2017, 13:35	1.92
SSR3.70_3.20	0.3767	128.5	01Jan2017, 13:51	1.05
WOR0.00	2.8951	1513.0	01Jan2017, 14:42	2.62
WOR0.00A	0.0359	33.6	01Jan2017, 13:32	2.69
WOR0.32	2.8592	1512.8	01Jan2017, 14:35	2.62
WOR0.32A	0.1901	119.9	01Jan2017, 13:56	2.51
WOR0.32_0.00	2.8592	1508.5	01Jan2017, 14:42	2.62
WOR0.76	2.6691	1549.6	01Jan2017, 14:17	2.62
WOR0.76A	0.3131	286.2	01Jan2017, 13:39	2.97
WOR0.76_0.32	2.6691	1444.4	01Jan2017, 14:37	2.63
WOR1.59	2.3560	1471.1	01Jan2017, 14:04	2.58
WOR1.59A	0.4536	366.9	01Jan2017, 13:48	2.97
WOR1.59B	0.7600	433.0	01Jan2017, 14:08	2.60
WOR1.59_0.76	2.3560	1446.3	01Jan2017, 14:20	2.58
WOR1.64	1.1424	729.6	01Jan2017, 14:08	2.41
WOR1.64A	0.2551	199.0	01Jan2017, 13:49	2.87
WOR2.33	0.8873	611.2	01Jan2017, 13:43	2.28
WOR2.33A	0.3233	228.7	01Jan2017, 13:45	2.43
WOR2.33_1.64	0.8873	571.2	01Jan2017, 14:11	2.27
WOR3.00	0.5640	383.6	01Jan2017, 13:42	2.20

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	276.8	01Jan2017, 13:44	2.69
WOR3.67	0.2110	108.5	01Jan2017, 13:33	1.38
WOR3.67A	0.2110	108.5	01Jan2017, 13:33	1.38
WOR3.67_3.00	0.2110	108.2	01Jan2017, 13:41	1.38

Project: ChiquesCreek Simulation Run: 50YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 50YR_24HR
Compute Time: 31Jan2017, 15:36:07 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	992.7	01Jan2017, 14:34	2.84
BER0.00A	0.1087	100.7	01Jan2017, 13:48	3.56
BER0.64	1.7391	964.3	01Jan2017, 14:01	2.79
BER0.64A	0.3111	327.8	01Jan2017, 13:40	3.66
BER0.64_0.00	1.7391	950.4	01Jan2017, 14:38	2.79
BER1.05	1.4280	847.4	01Jan2017, 14:10	2.59
BER1.05A	0.2790	250.6	01Jan2017, 13:51	3.56
BER1.05_0.64	1.4280	830.8	01Jan2017, 14:25	2.60
BER1.30	1.1490	662.1	01Jan2017, 14:02	2.35
BER1.30A	0.5289	391.7	01Jan2017, 13:53	2.96
BER1.30_1.05	1.1490	646.5	01Jan2017, 14:15	2.35
BER1.95	0.6201	306.2	01Jan2017, 13:48	1.85
BER1.95A	0.6201	306.2	01Jan2017, 13:48	1.85
BER1.95_1.30	0.6201	301.2	01Jan2017, 14:09	1.84
BOR0.00	6.6030	3815.7	01Jan2017, 14:38	3.02
BOR0.00A	0.0062	7.5	01Jan2017, 13:30	3.66
BOR0.10	6.5968	3978.5	01Jan2017, 14:34	3.03

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	192.9	01Jan2017, 13:58	3.56
BOR0.10_0.00	6.5968	3814.7	01Jan2017, 14:38	3.02
BOR0.68	1.6208	960.1	01Jan2017, 14:12	2.55
BOR0.68A	0.2555	229.5	01Jan2017, 13:51	3.56
BOR0.68_0.10	1.6208	928.8	01Jan2017, 14:33	2.56
BOR1.20	1.3653	788.8	01Jan2017, 13:57	2.37
BOR1.20A	0.5429	376.6	01Jan2017, 14:04	3.15
BOR1.20_0.68	1.3653	778.2	01Jan2017, 14:14	2.36
BOR2.07	0.8224	425.0	01Jan2017, 13:45	1.85
BOR2.07A	0.8224	425.0	01Jan2017, 13:45	1.85
BOR2.07_1.20	0.8224	423.1	01Jan2017, 13:54	1.85
CHC10.68	50.2637	8028.9	01Jan2017, 20:31	3.28
CHC10.68A	0.7377	693.2	01Jan2017, 13:55	3.97
CHC10.68B	0.0477	50.2	01Jan2017, 13:46	3.97
CHC10.68C	0.1180	110.0	01Jan2017, 13:52	3.76
CHC10.68D	0.1638	164.5	01Jan2017, 14:05	4.83
CHC10.68E	0.0528	72.6	01Jan2017, 13:35	4.83
CHC10.68_9.40	50.2637	7998.9	01Jan2017, 21:00	3.27
CHC11.99	49.1437	7952.7	01Jan2017, 19:59	3.28
CHC11.99_10.68	49.1437	7924.9	01Jan2017, 20:33	3.27
CHC12.01	46.4709	7714.0	01Jan2017, 20:07	3.24

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	166.1	01Jan2017, 13:31	3.66
CHC12.65	46.3306	7945.8	01Jan2017, 19:32	3.26
CHC12.65_12.01	46.3306	7706.3	01Jan2017, 20:07	3.24
CHC12.67	45.3853	7847.8	01Jan2017, 19:35	3.25
CHC12.67A	0.5547	305.1	01Jan2017, 14:55	3.76
CHC13.89	44.8306	7863.8	01Jan2017, 18:55	3.25
CHC13.89_12.67	44.8306	7782.7	01Jan2017, 19:36	3.24
CHC13.90	41.9107	7514.6	01Jan2017, 18:59	3.23
CHC13.90A	2.4712	592.3	01Jan2017, 19:01	3.62
CHC16.25	39.4395	7605.9	01Jan2017, 17:06	3.24
CHC16.25A	0.7783	403.8	01Jan2017, 15:05	3.76
CHC16.25_13.90	39.4395	6922.4	01Jan2017, 18:59	3.21
CHC17.08	38.6612	7681.8	01Jan2017, 16:34	3.24
CHC17.08A	0.5852	407.0	01Jan2017, 14:26	3.86
CHC17.08B	0.3448	394.4	01Jan2017, 13:59	5.39
CHC17.08_16.25	38.6612	7411.9	01Jan2017, 17:08	3.23
CHC17.73	37.7312	7603.6	01Jan2017, 16:09	3.22
CHC17.73A	0.3870	324.4	01Jan2017, 14:07	3.97
CHC17.73B	0.0626	93.8	01Jan2017, 13:34	5.62
CHC17.73_17.08	37.7312	7426.2	01Jan2017, 16:35	3.21
CHC18.09	37.2816	7666.8	01Jan2017, 15:54	3.21

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	139.4	01Jan2017, 13:48	3.16
CHC18.09_17.73	37.2816	7511.5	01Jan2017, 16:10	3.21
CHC18.61	36.6951	7807.1	01Jan2017, 15:36	3.21
CHC18.61A	0.5761	540.6	01Jan2017, 13:41	3.25
CHC18.61_18.09	36.6951	7582.2	01Jan2017, 15:54	3.21
CHC19.32	36.1190	8141.1	01Jan2017, 15:06	3.21
CHC19.32_18.61	36.1190	7718.9	01Jan2017, 15:36	3.21
CHC19.35	29.5506	5791.8	01Jan2017, 19:29	3.16
CHC19.35A	0.3523	275.8	01Jan2017, 14:14	3.97
CHC19.35B	0.0175	25.5	01Jan2017, 13:31	5.05
CHC1.28	63.3656	8257.1	02Jan2017, 00:57	3.10
CHC1.28A	0.8402	298.1	01Jan2017, 16:02	3.35
CHC20.02	29.1808	5777.1	01Jan2017, 19:12	3.15
CHC20.02A	0.3588	371.0	01Jan2017, 13:54	4.39
CHC20.02_19.35	29.1808	5755.4	01Jan2017, 19:30	3.14
CHC20.55	28.8220	5770.9	01Jan2017, 18:53	3.14
CHC20.55_20.02	28.8220	5740.3	01Jan2017, 19:12	3.13
CHC20.57	23.2797	5107.4	01Jan2017, 19:06	3.04
CHC20.57A	0.5512	384.1	01Jan2017, 14:47	4.61
CHC21.28	22.7285	5082.2	01Jan2017, 18:28	3.00
CHC21.28A	0.3509	354.3	01Jan2017, 14:02	4.72

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	28.4	01Jan2017, 13:30	5.28
CHC21.28C	0.0073	6.8	01Jan2017, 14:00	4.18
CHC21.28D	0.0224	30.3	01Jan2017, 13:31	4.40
CHC21.28E	0.0497	53.3	01Jan2017, 13:33	3.36
CHC21.28F	0.1457	168.5	01Jan2017, 13:33	3.66
CHC21.28_20.57	22.7285	5030.8	01Jan2017, 19:07	3.00
CHC21.59	22.1338	5054.3	01Jan2017, 18:18	2.97
CHC21.59A	0.2001	195.2	01Jan2017, 13:52	3.97
CHC21.59B	0.0256	36.6	01Jan2017, 13:32	4.94
CHC21.59C	0.0275	38.9	01Jan2017, 13:31	4.72
CHC21.59D	0.0896	110.2	01Jan2017, 13:33	3.97
CHC21.59_21.28	22.1338	5014.7	01Jan2017, 18:29	2.97
CHC22.01	21.7910	5066.1	01Jan2017, 18:03	2.95
CHC22.01A	1.2726	1475.1	01Jan2017, 13:31	3.55
CHC22.01B	0.0456	60.5	01Jan2017, 13:30	4.18
CHC22.01_21.59	21.7910	5015.7	01Jan2017, 18:19	2.95
CHC23.04	20.4728	4998.3	01Jan2017, 17:33	2.91
CHC23.04A	1.8763	934.3	01Jan2017, 14:57	3.44
CHC23.04B	0.2164	228.9	01Jan2017, 13:41	3.76
CHC23.04_22.01	20.4728	4937.7	01Jan2017, 18:04	2.92
CHC24.53	18.3801	4752.6	01Jan2017, 16:49	2.85

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	4603.3	01Jan2017, 17:38	2.85
CHC24.63	18.3801	4752.6	01Jan2017, 16:49	2.85
CHC24.64	11.7771	3670.9	01Jan2017, 16:59	2.75
CHC24.64A	0.2517	124.2	01Jan2017, 14:37	2.96
CHC25.53	11.5254	4187.7	01Jan2017, 16:11	2.77
CHC25.53A	0.6693	501.1	01Jan2017, 14:05	3.45
CHC25.53B	0.0163	17.5	01Jan2017, 13:31	3.16
CHC25.53_24.64	11.5254	3628.8	01Jan2017, 17:00	2.75
CHC26.30	10.8398	4159.6	01Jan2017, 15:47	2.73
CHC26.30A	0.8065	342.6	01Jan2017, 15:21	3.35
CHC26.30_25.53	10.8398	4063.3	01Jan2017, 16:11	2.73
CHC27.38	10.0333	4493.7	01Jan2017, 15:03	2.69
CHC27.38_26.30	10.0333	3833.3	01Jan2017, 15:48	2.68
CHC27.39	3.5391	1388.9	01Jan2017, 14:32	2.88
CHC27.39A	0.3314	269.4	01Jan2017, 13:57	3.45
CHC28.26	3.2077	1264.0	01Jan2017, 14:28	2.82
CHC28.26_27.39	3.2077	1235.7	01Jan2017, 14:53	2.82
CHC28.31	3.2077	1264.0	01Jan2017, 14:28	2.82
CHC28.31A	0.0950	100.7	01Jan2017, 13:36	3.46
CHC28.31B	0.7915	630.1	01Jan2017, 13:56	3.35
CHC28.67	2.3212	933.3	01Jan2017, 15:09	2.61

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	404.0	01Jan2017, 13:58	2.57
CHC28.67_28.31	2.3212	929.7	01Jan2017, 15:19	2.61
CHC29.91	1.6558	807.5	01Jan2017, 14:32	2.62
CHC29.91A	0.6097	359.3	01Jan2017, 13:54	2.39
CHC29.91_28.67	1.6558	796.9	01Jan2017, 15:11	2.62
CHC30.94	1.0461	624.8	01Jan2017, 14:06	2.76
CHC30.94A	1.0461	624.8	01Jan2017, 14:06	2.76
CHC30.94_29.91	1.0461	621.2	01Jan2017, 14:41	2.76
CHC3.39	62.5254	8226.3	02Jan2017, 00:00	3.14
CHC3.39A	1.8419	1464.8	01Jan2017, 13:54	3.24
CHC3.39_1.28	62.5254	8213.9	02Jan2017, 00:59	3.10
CHC4.62	60.6835	8676.8	01Jan2017, 22:47	3.26
CHC4.62A	0.1505	162.1	01Jan2017, 13:36	3.56
CHC4.62B	0.1946	204.3	01Jan2017, 13:38	3.56
CHC4.62_3.39	60.6835	8153.7	02Jan2017, 00:02	3.13
CHC4.97	60.3384	8710.0	01Jan2017, 22:30	3.27
CHC4.97A	0.4693	271.3	01Jan2017, 14:32	3.35
CHC4.97B	0.0580	66.3	01Jan2017, 13:37	3.87
CHC4.97C	0.2012	217.3	01Jan2017, 13:33	3.35
CHC4.97_4.62	60.3384	8661.8	01Jan2017, 22:47	3.26
CHC5.97	59.6099	8689.4	01Jan2017, 22:13	3.28

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	876.1	01Jan2017, 14:07	3.65
CHC5.97_4.97	59.6099	8674.9	01Jan2017, 22:31	3.27
CHC7.47	58.4785	8671.2	01Jan2017, 21:35	3.29
CHC7.47_5.97	58.4785	8632.9	01Jan2017, 22:14	3.27
CHC7.48	53.6341	8347.1	01Jan2017, 21:46	3.27
CHC7.48A	2.2128	596.0	01Jan2017, 18:05	3.64
CHC9.40	51.4213	8072.4	01Jan2017, 20:58	3.28
CHC9.40A	1.1576	806.2	01Jan2017, 14:19	3.65
CHC9.40_7.47	51.4213	7993.9	01Jan2017, 21:57	3.25
DER0.00	2.9199	1807.5	01Jan2017, 14:58	3.54
DER0.00A	0.1924	207.2	01Jan2017, 13:36	3.56
DER0.52	2.7275	1783.4	01Jan2017, 14:45	3.54
DER0.52A	0.5165	497.7	01Jan2017, 13:49	3.76
DER0.52_0.00	2.7275	1773.8	01Jan2017, 14:58	3.54
DER1.10	2.2110	1639.4	01Jan2017, 14:26	3.48
DER1.10A	0.3712	347.7	01Jan2017, 13:51	3.76
DER1.10_0.52	2.2110	1613.2	01Jan2017, 14:48	3.48
DER1.76	1.8398	1442.4	01Jan2017, 14:10	3.43
DER1.76A	0.5078	412.0	01Jan2017, 13:52	3.25
DER1.76_1.10	1.8398	1434.0	01Jan2017, 14:30	3.43
DER2.22	1.3320	1105.8	01Jan2017, 14:05	3.49

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	540.4	01Jan2017, 14:03	3.35
DER2.22_1.76	1.3320	1101.2	01Jan2017, 14:16	3.49
DER2.93	0.6085	570.7	01Jan2017, 13:49	3.66
DER2.93A	0.6085	570.7	01Jan2017, 13:49	3.66
DER2.93_2.22	0.6085	566.9	01Jan2017, 14:06	3.66
DORT0.34	1.6920	1205.4	01Jan2017, 14:12	3.59
DORT0.34A	0.0357	41.2	01Jan2017, 13:31	3.56
DORT0.34B	0.0234	26.4	01Jan2017, 13:31	3.46
DORT0.54	1.6329	1194.9	01Jan2017, 14:10	3.59
DORT0.54A	0.2058	207.5	01Jan2017, 13:43	3.66
DORT0.54B	0.0280	24.9	01Jan2017, 13:33	2.67
DORT0.54C	0.0058	7.7	01Jan2017, 13:32	4.40
DORT0.54D	0.0832	81.0	01Jan2017, 13:50	3.87
DORT0.54E	0.0367	43.2	01Jan2017, 13:30	3.56
DORT0.54_0.34	1.6329	1190.4	01Jan2017, 14:13	3.59
DORT1.15	1.2734	1039.9	01Jan2017, 13:58	3.63
DORT1.15A	0.4022	443.4	01Jan2017, 13:38	3.76
DORT1.15B	0.0103	15.7	01Jan2017, 13:30	5.39
DORT1.15_0.54	1.2734	1029.1	01Jan2017, 14:12	3.63
DORT1.58	0.8609	771.4	01Jan2017, 13:57	3.54
DORT1.58A	0.4931	466.7	01Jan2017, 13:46	3.56

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	768.3	01Jan2017, 14:07	3.54
DORT2.41	0.3678	377.1	01Jan2017, 13:41	3.52
DORT2.41A	0.2384	242.4	01Jan2017, 13:39	3.46
DORT2.41B	0.1294	140.1	01Jan2017, 13:38	3.66
DORT2.41_1.58	0.3678	371.1	01Jan2017, 14:07	3.52
DOR0.00	5.5423	3223.1	01Jan2017, 15:03	3.55
DOR0.00A	0.0475	56.1	01Jan2017, 13:39	4.18
DOR0.24	5.4948	3293.8	01Jan2017, 14:53	3.55
DOR0.24A	0.1218	133.6	01Jan2017, 13:40	3.87
DOR0.24B	0.1287	132.2	01Jan2017, 13:48	3.97
DOR0.24_0.00	5.4948	3213.5	01Jan2017, 15:03	3.55
DOR0.44A	0.5212	470.0	01Jan2017, 13:57	3.86
DOR0.44_0.24	5.2443	3215.2	01Jan2017, 14:53	3.54
DOR1.21	4.7231	3117.0	01Jan2017, 14:24	3.51
DOR1.21A	0.2430	198.6	01Jan2017, 14:07	3.87
DOR1.21B	0.2037	223.7	01Jan2017, 13:38	3.76
DOR1.21_0.44	4.7231	3010.8	01Jan2017, 14:51	3.50
DOR1.23	4.2764	2935.0	01Jan2017, 14:25	3.61
DOR1.23A	0.2095	221.4	01Jan2017, 13:45	3.97
DOR1.45	4.0669	2850.2	01Jan2017, 14:18	3.59
DOR1.45_1.23	4.0669	2831.2	01Jan2017, 14:26	3.59

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	1683.1	01Jan2017, 14:24	3.60
DOR1.60A	0.5501	525.3	01Jan2017, 13:48	3.66
DOR2.40	1.8248	1435.1	01Jan2017, 14:09	3.58
DOR2.40A	0.4594	397.3	01Jan2017, 13:56	3.66
DOR2.40_1.60	1.8248	1418.3	01Jan2017, 14:30	3.58
DOR2.81	1.3654	1077.9	01Jan2017, 14:01	3.55
DOR2.81A	0.2367	233.0	01Jan2017, 13:49	3.87
DOR2.81_2.40	1.3654	1070.0	01Jan2017, 14:13	3.55
DOR3.06	1.1287	868.5	01Jan2017, 13:57	3.49
DOR3.06A	0.3648	345.5	01Jan2017, 13:46	3.56
DOR3.06B	0.7639	565.3	01Jan2017, 14:06	3.45
DOR3.06_2.81	1.1287	866.5	01Jan2017, 14:05	3.49
DOR.44	5.2443	3229.7	01Jan2017, 14:48	3.54
ERRR0.57_0.00	1.1576	994.7	01Jan2017, 14:14	3.88
ERRT0.00	1.2906	1100.4	01Jan2017, 14:13	3.96
ERRT0.00A	0.1098	124.1	01Jan2017, 13:48	4.50
ERRT0.00B	0.0077	11.2	01Jan2017, 13:30	4.83
ERRT0.00C	0.0074	11.5	01Jan2017, 13:30	5.62
ERRT0.00D	0.0036	5.6	01Jan2017, 13:30	5.62
ERRT0.00E	0.0045	7.0	01Jan2017, 13:30	5.62
ERRT0.57	1.1576	1000.6	01Jan2017, 14:03	3.88

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	184.2	01Jan2017, 14:33	3.87
ERRT0.61	0.8788	849.1	01Jan2017, 14:01	3.89
ERRT0.61A	0.4551	398.3	01Jan2017, 14:02	3.97
ERRT1.62	0.4237	462.3	01Jan2017, 13:35	3.81
ERRT1.62A	0.1546	152.8	01Jan2017, 13:43	3.56
ERRT1.62B	0.2547	315.9	01Jan2017, 13:31	3.87
ERRT1.62C	0.0144	22.4	01Jan2017, 13:30	5.62
ERRT1.62_0.61	0.4237	451.0	01Jan2017, 14:01	3.81
ERR0.00	2.6728	2187.9	01Jan2017, 14:16	3.83
ERR0.00A	0.0718	76.9	01Jan2017, 13:35	3.46
ERR0.00B	0.0053	8.2	01Jan2017, 13:30	5.62
ERR0.23	2.5957	2170.0	01Jan2017, 14:11	3.84
ERR0.23A	0.1922	198.6	01Jan2017, 13:39	3.56
ERR0.23B	0.0298	45.1	01Jan2017, 13:30	5.28
ERR0.23_0.00	2.5957	2161.7	01Jan2017, 14:16	3.84
ERR0.26	1.3051	1071.2	01Jan2017, 14:10	3.72
ERR0.88	1.0831	962.9	01Jan2017, 14:00	3.70
ERR0.88A	0.5048	405.4	01Jan2017, 14:06	3.76
ERR0.88_0.23	1.0831	957.8	01Jan2017, 14:13	3.70
ERR1.33	0.5783	568.6	01Jan2017, 13:45	3.66
ERR1.33A	0.5783	568.6	01Jan2017, 13:45	3.66

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	565.4	01Jan2017, 13:57	3.66
LAR0.00	0.9453	627.6	01Jan2017, 14:10	3.86
LAR0.00A	0.5827	369.1	01Jan2017, 14:38	3.86
LAR0.40	0.3626	334.7	01Jan2017, 13:50	3.85
LAR0.40A	0.0039	6.1	01Jan2017, 13:30	5.74
LAR0.40B	0.1091	150.2	01Jan2017, 13:39	5.28
LAR0.40C	0.1251	136.4	01Jan2017, 13:41	3.87
LAR0.40D	0.1245	130.8	01Jan2017, 13:38	3.56
LAR0.40_0.00	0.3626	333.6	01Jan2017, 14:00	3.84
MRT0.00	0.4202	397.6	01Jan2017, 13:44	3.50
MRT0.00A	0.1647	163.0	01Jan2017, 13:41	3.46
MRT0.66	0.2555	239.6	01Jan2017, 13:32	3.55
MRT0.66A	0.2030	235.5	01Jan2017, 13:32	3.66
MRT0.66B	0.0376	46.0	01Jan2017, 13:30	3.76
MRT0.66C	0.0149	19.0	01Jan2017, 13:31	4.08
MRT0.66_0.00	0.2555	237.3	01Jan2017, 13:47	3.53
ORT0.28	0.7836	717.2	01Jan2017, 13:53	3.37
ORT0.28A	0.1786	172.9	01Jan2017, 13:39	3.25
ORT0.95	0.6050	586.6	01Jan2017, 13:39	3.40
ORT0.95A	0.1851	190.6	01Jan2017, 13:34	3.25
ORT0.95_0.28	0.6050	581.8	01Jan2017, 13:56	3.40

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	418.6	01Jan2017, 13:39	3.46
ORT1.38A	0.1910	199.1	01Jan2017, 13:35	3.35
ORT1.38_0.95	0.4199	417.2	01Jan2017, 13:46	3.46
ORT2.04	0.2289	236.4	01Jan2017, 13:39	3.56
ORT2.04A	0.2289	236.4	01Jan2017, 13:39	3.56
ORT2.04_1.38	0.2289	235.9	01Jan2017, 13:49	3.56
Pond 0	0.1946	189.3	01Jan2017, 13:47	3.56
Pond 1	0.2012	217.2	01Jan2017, 13:33	3.35
Pond 10	0.0122	9.4	01Jan2017, 13:38	3.52
Pond 11	0.0236	19.8	01Jan2017, 13:36	3.56
Pond 12	0.0172	5.3	01Jan2017, 14:00	3.56
Pond 13	0.0603	62.8	01Jan2017, 13:39	3.45
Pond 14	0.1379	148.2	01Jan2017, 13:38	3.56
Pond 15	0.0477	11.2	01Jan2017, 15:02	3.97
Pond 16	0.3346	146.9	01Jan2017, 13:58	4.23
Pond 17	0.0528	15.7	01Jan2017, 14:27	4.83
Pond 18	0.1638	52.3	01Jan2017, 15:35	4.83
Pond 19	0.0053	5.6	01Jan2017, 13:38	5.62
Pond 2	0.0580	41.2	01Jan2017, 13:59	3.56
Pond 20	0.0077	10.3	01Jan2017, 13:31	4.83
Pond 21	0.0298	45.1	01Jan2017, 13:30	5.28

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	11.2	01Jan2017, 13:31	5.17
Pond 23	0.0036	5.6	01Jan2017, 13:30	5.62
Pond 24	0.0045	2.9	01Jan2017, 13:40	5.62
Pond 25	0.2547	307.7	01Jan2017, 13:33	3.87
Pond 26	0.0144	8.7	01Jan2017, 13:40	5.62
Pond 27	0.1245	66.1	01Jan2017, 14:07	3.55
Pond 28	0.1251	126.3	01Jan2017, 13:50	3.71
Pond 29	0.1091	142.2	01Jan2017, 13:49	4.31
Pond 3	0.1861	0.0	01Jan2017, 01:00	0.00
Pond 30	0.0039	2.2	01Jan2017, 13:37	4.39
Pond 31	0.3448	146.0	01Jan2017, 15:09	4.66
Pond 32	0.0626	65.8	01Jan2017, 13:54	5.62
Pond 33	0.0149	2.4	01Jan2017, 15:32	3.94
Pond 34	0.0376	3.3	01Jan2017, 19:03	2.79
Pond 35	0.0294	27.1	01Jan2017, 13:34	3.26
Pond 36	0.0175	25.5	01Jan2017, 13:32	5.06
Pond 37	0.1287	126.7	01Jan2017, 13:56	3.97
Pond 38	0.2037	24.7	01Jan2017, 17:06	0.90
Pond 39	0.0234	26.2	01Jan2017, 13:33	3.46
Pond 4	0.2023	145.2	01Jan2017, 13:47	3.05
Pond 40	0.0832	7.5	01Jan2017, 19:24	3.11

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	6.0	01Jan2017, 13:44	4.40
Pond 42	0.0367	36.8	01Jan2017, 13:35	3.56
Pond 43	0.0103	15.6	01Jan2017, 13:32	5.39
Pond 44	0.1294	136.3	01Jan2017, 13:43	3.65
Pond 45	0.1457	162.6	01Jan2017, 13:37	3.66
Pond 46	0.0187	16.6	01Jan2017, 13:38	5.28
Pond 47	0.0275	7.9	01Jan2017, 14:11	4.47
Pond 48	0.0456	60.3	01Jan2017, 13:31	3.46
Pond 49	0.0256	36.6	01Jan2017, 13:33	4.94
Pond 5	0.0343	33.7	01Jan2017, 13:36	3.16
Pond 50	0.0073	6.7	01Jan2017, 14:07	4.14
Pond 51	0.0721	62.5	01Jan2017, 13:43	3.68
Pond 52	0.0497	46.8	01Jan2017, 13:41	3.36
Pond 53	0.0896	109.3	01Jan2017, 13:35	3.97
Pond 54	0.2164	100.1	01Jan2017, 14:19	3.76
Pond 55	0.0163	15.6	01Jan2017, 13:34	3.02
Pond 56	0.0231	35.8	01Jan2017, 13:30	5.62
Pond 57	0.0112	13.4	01Jan2017, 13:31	3.66
Pond 58	0.0280	9.3	01Jan2017, 13:58	2.67
Pond 6	0.4472	131.2	01Jan2017, 14:33	3.66
Pond 7	0.0064	5.3	01Jan2017, 13:45	5.73

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	39.9	01Jan2017, 13:35	3.56
Pond 9	0.0281	9.5	01Jan2017, 14:03	3.56
RIR0.00	6.5684	4408.2	01Jan2017, 14:45	3.46
RIR0.00A	0.0647	70.9	01Jan2017, 13:54	4.72
RIR0.32	6.5037	4481.7	01Jan2017, 14:35	3.44
RIR0.32A	0.5587	443.0	01Jan2017, 13:59	3.45
RIR0.32_0.00	6.5037	4375.0	01Jan2017, 14:45	3.44
RIR0.65	5.9450	4207.4	01Jan2017, 14:29	3.44
RIR0.65A	0.1896	230.6	01Jan2017, 13:32	3.87
RIR0.65_0.32	5.9450	4187.1	01Jan2017, 14:37	3.44
RIR0.86	5.7554	4188.9	01Jan2017, 14:25	3.43
RIR0.86A	0.2984	266.8	01Jan2017, 13:49	3.45
RIR0.86_0.65	5.7554	4176.0	01Jan2017, 14:29	3.43
RIR1.24	5.4570	4080.7	01Jan2017, 14:19	3.43
RIR1.24A	0.0980	104.9	01Jan2017, 13:32	3.26
RIR1.24_0.86	5.4570	4040.6	01Jan2017, 14:26	3.43
RIR1.34	5.3590	4063.9	01Jan2017, 14:19	3.43
RIR1.52	4.5754	3565.2	01Jan2017, 14:22	3.44
RIR1.62	1.8861	1392.0	01Jan2017, 14:20	3.42
RIR1.62A	0.5008	402.1	01Jan2017, 14:01	3.56
RIR2.60	1.3853	1061.4	01Jan2017, 13:58	3.37

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	321.1	01Jan2017, 13:38	3.45
RIR2.60_1.62	1.3853	1048.6	01Jan2017, 14:26	3.37
RIR3.38	1.0728	895.7	01Jan2017, 13:51	3.35
RIR3.38A	1.0434	875.3	01Jan2017, 13:52	3.35
RIR3.38B	0.0294	32.7	01Jan2017, 13:30	3.26
RIR3.38_2.60	1.0728	882.2	01Jan2017, 14:07	3.34
SHCT0.00	3.0470	1791.6	01Jan2017, 14:00	2.35
SHCT0.00A	0.9966	557.3	01Jan2017, 13:55	2.29
SHCT1.59	2.0504	1246.9	01Jan2017, 13:51	2.38
SHCT1.59A	2.0504	1246.9	01Jan2017, 13:51	2.38
SHCT1.59_0.00	2.0504	1245.7	01Jan2017, 14:02	2.38
SHC0.00	6.4942	3177.9	01Jan2017, 15:05	2.59
SHC0.00A	0.0458	40.9	01Jan2017, 13:41	3.06
SHC0.23	6.4484	3292.7	01Jan2017, 14:54	2.59
SHC0.23A	0.6386	413.9	01Jan2017, 14:25	3.55
SHC0.23_0.00	6.4484	3170.4	01Jan2017, 15:05	2.59
SHC1.60	5.8098	3154.0	01Jan2017, 14:13	2.49
SHC1.60A	0.2628	253.9	01Jan2017, 13:37	3.15
SHC1.60_0.23	5.8098	2943.8	01Jan2017, 14:56	2.48
SHC2.06	5.5470	3081.8	01Jan2017, 14:05	2.46
SHC2.06A	0.2828	176.1	01Jan2017, 13:42	2.11

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	3062.9	01Jan2017, 14:14	2.46
SHC2.56	5.2642	2979.5	01Jan2017, 14:01	2.48
SHC2.56A	0.4506	346.1	01Jan2017, 13:47	2.86
SHC2.56_2.06	5.2642	2974.5	01Jan2017, 14:06	2.48
SHC3.11	1.7666	931.6	01Jan2017, 14:08	2.60
SHC3.11A	0.2775	321.8	01Jan2017, 13:32	3.66
SHC3.11_2.56	1.7666	931.3	01Jan2017, 14:12	2.60
SHC3.92	1.4891	851.3	01Jan2017, 13:56	2.40
SHC3.92A	0.6934	389.8	01Jan2017, 13:51	2.20
SHC3.92B	0.7957	470.7	01Jan2017, 14:00	2.57
SHC3.92_3.11	1.4891	847.5	01Jan2017, 14:11	2.40
SRT0.50	2.6893	2177.1	01Jan2017, 14:24	3.46
SRT0.50A	0.4294	316.6	01Jan2017, 14:07	3.45
SRT1.29	2.2599	1902.9	01Jan2017, 14:12	3.46
SRT1.29A	0.3191	233.5	01Jan2017, 14:05	3.35
SRT1.29_0.50	2.2599	1888.0	01Jan2017, 14:25	3.46
SRT2.06	1.9408	1687.5	01Jan2017, 13:59	3.48
SRT2.06A	0.4839	426.5	01Jan2017, 13:52	3.56
SRT2.06_1.29	1.9408	1674.5	01Jan2017, 14:13	3.48
SRT2.55	1.4569	1276.3	01Jan2017, 13:53	3.45
SRT2.55A	0.3465	344.4	01Jan2017, 13:41	3.45

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	1272.6	01Jan2017, 14:01	3.45
SRT3.00	1.1104	1003.5	01Jan2017, 13:51	3.45
SRT3.00A	0.7468	654.0	01Jan2017, 13:51	3.45
SRT3.00_2.55	1.1104	999.3	01Jan2017, 13:59	3.45
SRT3.38	0.3636	351.2	01Jan2017, 13:43	3.45
SRT3.38A	0.3636	351.2	01Jan2017, 13:43	3.45
SRT3.38_3.00	0.3636	350.2	01Jan2017, 13:53	3.45
SSRTA0.00	0.4007	393.5	01Jan2017, 13:53	3.69
SSRTA0.00A	0.2628	264.1	01Jan2017, 13:45	3.76
SSRTA0.59	0.1379	148.2	01Jan2017, 13:38	3.56
SSRTA0.59A	0.1379	148.5	01Jan2017, 13:36	3.56
SSRTA0.59_0.00	0.1379	145.4	01Jan2017, 13:58	3.56
SSRT0.00	1.3182	1142.7	01Jan2017, 14:01	3.62
SSRT0.00A	0.2236	209.5	01Jan2017, 13:47	3.56
SSRT0.46	1.0946	968.6	01Jan2017, 13:51	3.63
SSRT0.46A	0.1893	209.0	01Jan2017, 13:36	3.66
SSRT0.46_0.00	1.0946	959.4	01Jan2017, 14:04	3.63
SSRT0.77	0.9053	830.2	01Jan2017, 13:51	3.62
SSRT0.77A	0.2520	252.6	01Jan2017, 13:44	3.66
SSRT0.77B	0.0603	66.0	01Jan2017, 13:33	3.46
SSRT0.77_0.46	0.9053	828.0	01Jan2017, 13:57	3.62

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	158.6	01Jan2017, 13:37	3.50
SSRT1.34A	0.1112	116.2	01Jan2017, 13:37	3.46
SSRT1.34B	0.0172	20.2	01Jan2017, 13:31	3.56
SSRT1.34C	0.0236	27.7	01Jan2017, 13:31	3.56
SSRT1.34D	0.0122	14.3	01Jan2017, 13:31	3.56
SSRT1.34E	0.0281	32.2	01Jan2017, 13:32	3.56
SSRT1.34_0.77	0.1923	155.5	01Jan2017, 14:01	3.49
SSR0.00	4.8444	3394.9	01Jan2017, 14:19	3.48
SSR0.00A	0.0601	69.8	01Jan2017, 13:31	3.56
SSR0.22	4.7843	3388.3	01Jan2017, 14:17	3.48
SSR0.22A	0.2501	282.0	01Jan2017, 13:40	3.97
SSR0.22_0.00	4.7843	3384.9	01Jan2017, 14:20	3.48
SSR0.85	4.5342	3281.8	01Jan2017, 14:10	3.45
SSR0.85_0.22	4.5342	3269.6	01Jan2017, 14:18	3.45
SSR0.87	3.2160	2187.9	01Jan2017, 14:13	3.38
SSR0.87A	0.3806	311.0	01Jan2017, 14:02	3.66
SSR1.06	2.8354	1896.2	01Jan2017, 14:11	3.34
SSR1.06A	0.2647	265.3	01Jan2017, 13:44	3.66
SSR1.06_0.87	2.8354	1893.0	01Jan2017, 14:15	3.34
SSR1.71	2.5707	1738.9	01Jan2017, 14:00	3.31
SSR1.71A	0.3665	314.4	01Jan2017, 14:02	3.87

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	1731.1	01Jan2017, 14:14	3.31
SSR1.89	2.2042	1432.6	01Jan2017, 13:54	3.22
SSR1.89A	0.3178	320.0	01Jan2017, 13:47	3.87
SSR1.89B	0.0231	36.0	01Jan2017, 13:30	5.62
SSR1.89_1.71	2.2042	1425.0	01Jan2017, 13:59	3.22
SSR2.33	1.8633	1116.3	01Jan2017, 13:47	3.08
SSR2.33A	0.1750	213.8	01Jan2017, 13:33	3.97
SSR2.33B	0.0381	44.7	01Jan2017, 13:31	3.56
SSR2.33_1.89	1.8633	1113.6	01Jan2017, 13:58	3.08
SSR2.70	1.6502	976.4	01Jan2017, 13:48	2.97
SSR2.70A	0.4613	419.6	01Jan2017, 13:48	3.45
SSR2.70B	0.0112	13.6	01Jan2017, 13:30	3.66
SSR2.70C	0.0064	10.0	01Jan2017, 13:30	5.74
SSR2.70D	0.0343	35.8	01Jan2017, 13:32	3.16
SSR2.70E	0.4472	463.2	01Jan2017, 13:41	3.66
SSR2.70_2.33	1.6502	974.6	01Jan2017, 13:56	2.97
SSR3.20	0.6898	399.4	01Jan2017, 13:45	2.16
SSR3.20A	0.1108	104.8	01Jan2017, 13:39	3.16
SSR3.20B	0.2023	203.6	01Jan2017, 13:34	3.16
SSR3.20_2.70	0.6898	399.1	01Jan2017, 13:50	2.16
SSR3.70	0.3767	161.9	01Jan2017, 13:38	1.40

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	161.9	01Jan2017, 13:38	2.77
SSR3.70B	0.1861	155.8	01Jan2017, 13:35	2.57
SSR3.70_3.20	0.3767	160.7	01Jan2017, 13:52	1.40
WOR0.00	2.8951	1932.1	01Jan2017, 14:36	3.36
WOR0.00A	0.0359	40.1	01Jan2017, 13:32	3.46
WOR0.32	2.8592	1932.2	01Jan2017, 14:30	3.36
WOR0.32A	0.1901	149.0	01Jan2017, 13:56	3.25
WOR0.32_0.00	2.8592	1926.9	01Jan2017, 14:36	3.36
WOR0.76	2.6691	1955.0	01Jan2017, 14:14	3.37
WOR0.76A	0.3131	341.8	01Jan2017, 13:39	3.76
WOR0.76_0.32	2.6691	1836.1	01Jan2017, 14:32	3.37
WOR1.59	2.3560	1841.4	01Jan2017, 14:02	3.32
WOR1.59A	0.4536	442.4	01Jan2017, 13:48	3.76
WOR1.59B	0.7600	539.5	01Jan2017, 14:08	3.35
WOR1.59_0.76	2.3560	1813.4	01Jan2017, 14:17	3.32
WOR1.64	1.1424	916.8	01Jan2017, 14:05	3.12
WOR1.64A	0.2551	241.2	01Jan2017, 13:49	3.66
WOR2.33	0.8873	758.1	01Jan2017, 13:42	2.98
WOR2.33A	0.3233	282.8	01Jan2017, 13:44	3.15
WOR2.33_1.64	0.8873	713.8	01Jan2017, 14:08	2.97
WOR3.00	0.5640	476.7	01Jan2017, 13:41	2.89

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	337.0	01Jan2017, 13:44	3.45
WOR3.67	0.2110	142.0	01Jan2017, 13:33	1.94
WOR3.67A	0.2110	142.0	01Jan2017, 13:33	1.94
WOR3.67_3.00	0.2110	141.6	01Jan2017, 13:40	1.94

Project: ChiquesCreek Simulation Run: 100YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 100YR_24HR
Compute Time: 31Jan2017, 15:40:03 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	1208.5	01Jan2017, 14:37	3.63
BER0.00A	0.1087	119.8	01Jan2017, 13:48	4.45
BER0.64	1.7391	1182.0	01Jan2017, 14:19	3.57
BER0.64A	0.3111	385.6	01Jan2017, 13:39	4.56
BER0.64_0.00	1.7391	1161.4	01Jan2017, 14:41	3.58
BER1.05	1.4280	1065.0	01Jan2017, 14:10	3.35
BER1.05A	0.2790	298.6	01Jan2017, 13:50	4.45
BER1.05_0.64	1.4280	1037.6	01Jan2017, 14:25	3.36
BER1.30	1.1490	838.2	01Jan2017, 14:02	3.09
BER1.30A	0.5289	479.8	01Jan2017, 13:52	3.78
BER1.30_1.05	1.1490	821.7	01Jan2017, 14:14	3.08
BER1.95	0.6201	401.9	01Jan2017, 13:47	2.50
BER1.95A	0.6201	401.9	01Jan2017, 13:47	2.50
BER1.95_1.30	0.6201	396.1	01Jan2017, 14:09	2.49
BOR0.00	6.6030	4748.3	01Jan2017, 14:34	3.83
BOR0.00A	0.0062	8.6	01Jan2017, 13:30	4.56
BOR0.10	6.5968	4931.7	01Jan2017, 14:31	3.84

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	230.8	01Jan2017, 13:58	4.45
BOR0.10_0.00	6.5968	4747.2	01Jan2017, 14:34	3.83
BOR0.68	1.6208	1209.0	01Jan2017, 14:13	3.31
BOR0.68A	0.2555	273.5	01Jan2017, 13:50	4.45
BOR0.68_0.10	1.6208	1183.1	01Jan2017, 14:31	3.32
BOR1.20	1.3653	1007.9	01Jan2017, 14:02	3.10
BOR1.20A	0.5429	460.1	01Jan2017, 14:04	4.00
BOR1.20_0.68	1.3653	997.8	01Jan2017, 14:16	3.10
BOR2.07	0.8224	555.0	01Jan2017, 13:44	2.50
BOR2.07A	0.8224	555.0	01Jan2017, 13:44	2.50
BOR2.07_1.20	0.8224	548.7	01Jan2017, 14:01	2.50
CHC10.68	50.2637	10192.8	01Jan2017, 20:33	4.13
CHC10.68A	0.7377	815.4	01Jan2017, 13:55	4.89
CHC10.68B	0.0477	58.7	01Jan2017, 13:45	4.90
CHC10.68C	0.1180	130.2	01Jan2017, 13:51	4.67
CHC10.68D	0.1638	188.9	01Jan2017, 14:05	5.82
CHC10.68E	0.0528	82.1	01Jan2017, 13:34	5.82
CHC10.68_9.40	50.2637	10167.9	01Jan2017, 21:02	4.11
CHC11.99	49.1437	10097.6	01Jan2017, 20:04	4.12
CHC11.99_10.68	49.1437	10075.3	01Jan2017, 20:36	4.11
CHC12.01	46.4709	9812.0	01Jan2017, 20:21	4.08

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	192.6	01Jan2017, 13:31	4.56
CHC12.65	46.3306	10035.7	01Jan2017, 19:31	4.10
CHC12.65_12.01	46.3306	9802.9	01Jan2017, 20:22	4.08
CHC12.67	45.3853	9914.6	01Jan2017, 19:35	4.09
CHC12.67A	0.5547	368.1	01Jan2017, 14:55	4.67
CHC13.89	44.8306	9906.1	01Jan2017, 18:52	4.09
CHC13.89_12.67	44.8306	9834.2	01Jan2017, 19:37	4.08
CHC13.90	41.9107	9479.6	01Jan2017, 18:59	4.07
CHC13.90A	2.4712	730.0	01Jan2017, 18:59	4.51
CHC16.25	39.4395	9515.1	01Jan2017, 16:56	4.08
CHC16.25A	0.7783	488.0	01Jan2017, 15:04	4.67
CHC16.25_13.90	39.4395	8749.6	01Jan2017, 18:59	4.04
CHC17.08	38.6612	9585.9	01Jan2017, 16:25	4.07
CHC17.08A	0.5852	486.1	01Jan2017, 14:25	4.78
CHC17.08B	0.3448	445.4	01Jan2017, 13:59	6.40
CHC17.08_16.25	38.6612	9264.5	01Jan2017, 16:59	4.07
CHC17.73	37.7312	9485.9	01Jan2017, 16:01	4.05
CHC17.73A	0.3870	383.6	01Jan2017, 14:06	4.90
CHC17.73B	0.0626	104.4	01Jan2017, 13:34	6.64
CHC17.73_17.08	37.7312	9268.5	01Jan2017, 16:27	4.05
CHC18.09	37.2816	9560.0	01Jan2017, 15:47	4.04

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	168.5	01Jan2017, 13:47	4.00
CHC18.09_17.73	37.2816	9366.2	01Jan2017, 16:02	4.04
CHC18.61	36.6951	9736.2	01Jan2017, 15:30	4.05
CHC18.61A	0.5761	646.3	01Jan2017, 13:40	4.11
CHC18.61_18.09	36.6951	9451.7	01Jan2017, 15:47	4.04
CHC19.32	36.1190	10151.6	01Jan2017, 15:02	4.05
CHC19.32_18.61	36.1190	9623.4	01Jan2017, 15:30	4.04
CHC19.35	29.5506	7580.2	01Jan2017, 19:04	3.98
CHC19.35A	0.3523	327.0	01Jan2017, 14:14	4.90
CHC19.35B	0.0175	28.6	01Jan2017, 13:31	6.05
CHC1.28	63.3656	10588.0	02Jan2017, 00:34	3.90
CHC1.28A	0.8402	368.8	01Jan2017, 16:00	4.22
CHC20.02	29.1808	7567.9	01Jan2017, 18:45	3.97
CHC20.02A	0.3588	430.0	01Jan2017, 13:54	5.35
CHC20.02_19.35	29.1808	7531.4	01Jan2017, 19:04	3.97
CHC20.55	28.8220	7574.9	01Jan2017, 18:24	3.96
CHC20.55_20.02	28.8220	7519.7	01Jan2017, 18:46	3.96
CHC20.57	23.2797	6678.8	01Jan2017, 18:37	3.84
CHC20.57A	0.5512	448.9	01Jan2017, 14:46	5.58
CHC21.28	22.7285	6647.9	01Jan2017, 18:00	3.81
CHC21.28A	0.3509	408.0	01Jan2017, 14:02	5.70

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	31.6	01Jan2017, 13:30	6.28
CHC21.28C	0.0073	8.0	01Jan2017, 14:00	5.13
CHC21.28D	0.0224	34.4	01Jan2017, 13:31	5.36
CHC21.28E	0.0497	62.7	01Jan2017, 13:33	4.22
CHC21.28F	0.1457	196.2	01Jan2017, 13:32	4.56
CHC21.28_20.57	22.7285	6575.3	01Jan2017, 18:39	3.80
CHC21.59	22.1338	6614.0	01Jan2017, 17:50	3.77
CHC21.59A	0.2001	229.2	01Jan2017, 13:52	4.90
CHC21.59B	0.0256	41.2	01Jan2017, 13:32	5.93
CHC21.59C	0.0275	43.8	01Jan2017, 13:31	5.70
CHC21.59D	0.0896	127.2	01Jan2017, 13:32	4.90
CHC21.59_21.28	22.1338	6559.6	01Jan2017, 18:01	3.77
CHC22.01	21.7910	6618.6	01Jan2017, 17:36	3.75
CHC22.01A	1.2726	1715.0	01Jan2017, 13:31	4.44
CHC22.01B	0.0456	69.0	01Jan2017, 13:30	5.13
CHC22.01_21.59	21.7910	6563.2	01Jan2017, 17:50	3.75
CHC23.04	20.4728	6514.0	01Jan2017, 17:10	3.71
CHC23.04A	1.8763	1142.8	01Jan2017, 14:56	4.32
CHC23.04B	0.2164	268.7	01Jan2017, 13:41	4.67
CHC23.04_22.01	20.4728	6448.5	01Jan2017, 17:37	3.71
CHC24.53	18.3801	6136.4	01Jan2017, 16:33	3.64

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	5967.6	01Jan2017, 17:16	3.64
CHC24.63	18.3801	6136.4	01Jan2017, 16:33	3.64
CHC24.64	11.7771	4725.9	01Jan2017, 16:45	3.53
CHC24.64A	0.2517	155.0	01Jan2017, 14:36	3.78
CHC25.53	11.5254	5378.3	01Jan2017, 16:01	3.55
CHC25.53A	0.6693	604.4	01Jan2017, 14:05	4.33
CHC25.53B	0.0163	20.6	01Jan2017, 13:30	4.00
CHC25.53_24.64	11.5254	4668.5	01Jan2017, 16:46	3.52
CHC26.30	10.8398	5332.2	01Jan2017, 15:40	3.51
CHC26.30A	0.8065	422.3	01Jan2017, 15:20	4.22
CHC26.30_25.53	10.8398	5215.1	01Jan2017, 16:02	3.51
CHC27.38	10.0333	5684.9	01Jan2017, 14:57	3.48
CHC27.38_26.30	10.0333	4922.4	01Jan2017, 15:41	3.45
CHC27.39	3.5391	1757.6	01Jan2017, 14:41	3.70
CHC27.39A	0.3314	323.6	01Jan2017, 13:57	4.33
CHC28.26	3.2077	1634.7	01Jan2017, 14:19	3.62
CHC28.26_27.39	3.2077	1589.3	01Jan2017, 14:47	3.63
CHC28.31	3.2077	1634.7	01Jan2017, 14:19	3.62
CHC28.31A	0.0950	118.7	01Jan2017, 13:35	4.34
CHC28.31B	0.7915	759.8	01Jan2017, 13:56	4.22
CHC28.67	2.3212	1222.9	01Jan2017, 14:58	3.39

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	507.2	01Jan2017, 13:57	3.34
CHC28.67_28.31	2.3212	1219.9	01Jan2017, 15:07	3.39
CHC29.91	1.6558	1039.1	01Jan2017, 14:27	3.40
CHC29.91A	0.6097	455.1	01Jan2017, 13:53	3.13
CHC29.91_28.67	1.6558	1027.4	01Jan2017, 15:03	3.40
CHC30.94	1.0461	779.7	01Jan2017, 14:05	3.56
CHC30.94A	1.0461	779.7	01Jan2017, 14:05	3.56
CHC30.94_29.91	1.0461	775.7	01Jan2017, 14:37	3.56
CHC3.39	62.5254	10546.5	01Jan2017, 23:46	3.94
CHC3.39A	1.8419	1771.1	01Jan2017, 13:53	4.10
CHC3.39_1.28	62.5254	10531.5	02Jan2017, 00:36	3.90
CHC4.62	60.6835	11074.7	01Jan2017, 22:37	4.08
CHC4.62A	0.1505	190.6	01Jan2017, 13:36	4.45
CHC4.62B	0.1946	240.8	01Jan2017, 13:38	4.45
CHC4.62_3.39	60.6835	10455.1	01Jan2017, 23:47	3.93
CHC4.97	60.3384	11107.1	01Jan2017, 22:21	4.09
CHC4.97A	0.4693	331.6	01Jan2017, 14:32	4.22
CHC4.97B	0.0580	77.1	01Jan2017, 13:37	4.79
CHC4.97C	0.2012	255.5	01Jan2017, 13:32	4.22
CHC4.97_4.62	60.3384	11056.0	01Jan2017, 22:37	4.08
CHC5.97	59.6099	11077.9	01Jan2017, 22:04	4.11

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	1048.5	01Jan2017, 14:06	4.55
CHC5.97_4.97	59.6099	11063.1	01Jan2017, 22:22	4.09
CHC7.47	58.4785	11043.3	01Jan2017, 21:29	4.13
CHC7.47_5.97	58.4785	11007.6	01Jan2017, 22:06	4.10
CHC7.48	53.6341	10629.1	01Jan2017, 21:41	4.11
CHC7.48A	2.2128	733.1	01Jan2017, 18:03	4.53
CHC9.40	51.4213	10258.1	01Jan2017, 20:59	4.12
CHC9.40A	1.1576	969.0	01Jan2017, 14:18	4.55
CHC9.40_7.47	51.4213	10190.5	01Jan2017, 21:56	4.09
DER0.00	2.9199	2213.7	01Jan2017, 14:54	4.42
DER0.00A	0.1924	243.6	01Jan2017, 13:36	4.45
DER0.52	2.7275	2184.5	01Jan2017, 14:41	4.42
DER0.52A	0.5165	587.6	01Jan2017, 13:48	4.67
DER0.52_0.00	2.7275	2173.1	01Jan2017, 14:53	4.42
DER1.10	2.2110	1992.1	01Jan2017, 14:24	4.36
DER1.10A	0.3712	411.2	01Jan2017, 13:51	4.67
DER1.10_0.52	2.2110	1962.0	01Jan2017, 14:45	4.36
DER1.76	1.8398	1742.8	01Jan2017, 14:09	4.30
DER1.76A	0.5078	497.7	01Jan2017, 13:52	4.11
DER1.76_1.10	1.8398	1733.3	01Jan2017, 14:28	4.30
DER2.22	1.3320	1325.0	01Jan2017, 14:04	4.37

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	653.8	01Jan2017, 14:02	4.22
DER2.22_1.76	1.3320	1320.0	01Jan2017, 14:14	4.37
DER2.93	0.6085	676.5	01Jan2017, 13:49	4.56
DER2.93A	0.6085	676.5	01Jan2017, 13:49	4.56
DER2.93_2.22	0.6085	672.4	01Jan2017, 14:05	4.55
DORT0.34	1.6920	1538.1	01Jan2017, 14:07	4.47
DORT0.34A	0.0357	48.0	01Jan2017, 13:31	4.45
DORT0.34B	0.0234	30.8	01Jan2017, 13:31	4.34
DORT0.54	1.6329	1523.1	01Jan2017, 14:04	4.48
DORT0.54A	0.2058	244.9	01Jan2017, 13:43	4.56
DORT0.54B	0.0280	30.1	01Jan2017, 13:33	3.46
DORT0.54C	0.0058	8.8	01Jan2017, 13:32	5.36
DORT0.54D	0.0832	95.4	01Jan2017, 13:50	4.79
DORT0.54E	0.0367	50.1	01Jan2017, 13:30	4.45
DORT0.54_0.34	1.6329	1515.9	01Jan2017, 14:08	4.48
DORT1.15	1.2734	1303.9	01Jan2017, 13:54	4.52
DORT1.15A	0.4022	518.6	01Jan2017, 13:37	4.67
DORT1.15B	0.0103	17.5	01Jan2017, 13:30	6.40
DORT1.15_0.54	1.2734	1295.0	01Jan2017, 14:06	4.53
DORT1.58	0.8609	951.3	01Jan2017, 13:54	4.43
DORT1.58A	0.4931	554.3	01Jan2017, 13:46	4.44

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	945.7	01Jan2017, 14:04	4.43
DORT2.41	0.3678	449.0	01Jan2017, 13:39	4.41
DORT2.41A	0.2384	286.9	01Jan2017, 13:38	4.33
DORT2.41B	0.1294	164.4	01Jan2017, 13:37	4.56
DORT2.41_1.58	0.3678	444.1	01Jan2017, 14:03	4.42
DOR0.00	5.5423	4003.4	01Jan2017, 14:58	4.45
DOR0.00A	0.0475	64.8	01Jan2017, 13:39	5.13
DOR0.24	5.4948	4089.4	01Jan2017, 14:47	4.45
DOR0.24A	0.1218	156.1	01Jan2017, 13:40	4.79
DOR0.24B	0.1287	154.8	01Jan2017, 13:47	4.90
DOR0.24_0.00	5.4948	3991.7	01Jan2017, 14:58	4.45
DOR0.44A	0.5212	555.4	01Jan2017, 13:57	4.78
DOR0.44_0.24	5.2443	3996.6	01Jan2017, 14:48	4.43
DOR1.21	4.7231	3862.3	01Jan2017, 14:19	4.40
DOR1.21A	0.2430	235.8	01Jan2017, 14:06	4.78
DOR1.21B	0.2037	261.8	01Jan2017, 13:38	4.67
DOR1.21_0.44	4.7231	3726.0	01Jan2017, 14:46	4.39
DOR1.23	4.2764	3637.5	01Jan2017, 14:20	4.50
DOR1.23A	0.2095	258.8	01Jan2017, 13:45	4.90
DOR1.45	4.0669	3516.3	01Jan2017, 14:14	4.48
DOR1.45_1.23	4.0669	3495.9	01Jan2017, 14:21	4.48

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	2048.1	01Jan2017, 14:21	4.49
DOR1.60A	0.5501	622.1	01Jan2017, 13:47	4.56
DOR2.40	1.8248	1725.1	01Jan2017, 14:08	4.47
DOR2.40A	0.4594	473.1	01Jan2017, 13:56	4.56
DOR2.40_1.60	1.8248	1706.7	01Jan2017, 14:28	4.47
DOR2.81	1.3654	1293.6	01Jan2017, 14:00	4.44
DOR2.81A	0.2367	274.2	01Jan2017, 13:49	4.78
DOR2.81_2.40	1.3654	1284.9	01Jan2017, 14:12	4.44
DOR3.06	1.1287	1045.1	01Jan2017, 13:56	4.37
DOR3.06A	0.3648	410.4	01Jan2017, 13:46	4.45
DOR3.06B	0.7639	682.2	01Jan2017, 14:06	4.33
DOR3.06_2.81	1.1287	1042.6	01Jan2017, 14:04	4.37
DOR.44	5.2443	4014.4	01Jan2017, 14:43	4.43
ERRR0.57_0.00	1.1576	1172.4	01Jan2017, 14:13	4.80
ERRT0.00	1.2906	1297.2	01Jan2017, 14:11	4.89
ERRT0.00A	0.1098	142.8	01Jan2017, 13:48	5.47
ERRT0.00B	0.0077	12.6	01Jan2017, 13:30	5.82
ERRT0.00C	0.0074	12.8	01Jan2017, 13:30	6.64
ERRT0.00D	0.0036	6.2	01Jan2017, 13:30	6.64
ERRT0.00E	0.0045	7.8	01Jan2017, 13:30	6.64
ERRT0.57	1.1576	1178.6	01Jan2017, 14:02	4.80

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	220.4	01Jan2017, 14:32	4.78
ERRT0.61	0.8788	997.0	01Jan2017, 14:00	4.81
ERRT0.61A	0.4551	470.1	01Jan2017, 14:02	4.90
ERRT1.62	0.4237	539.2	01Jan2017, 13:34	4.72
ERRT1.62A	0.1546	180.9	01Jan2017, 13:43	4.45
ERRT1.62B	0.2547	363.7	01Jan2017, 13:31	4.78
ERRT1.62C	0.0144	24.8	01Jan2017, 13:30	6.64
ERRT1.62_0.61	0.4237	527.4	01Jan2017, 14:00	4.72
ERR0.00	2.6728	2595.3	01Jan2017, 14:14	4.74
ERR0.00A	0.0718	90.5	01Jan2017, 13:35	4.34
ERR0.00B	0.0053	9.1	01Jan2017, 13:30	6.64
ERR0.23	2.5957	2570.8	01Jan2017, 14:10	4.75
ERR0.23A	0.1922	234.4	01Jan2017, 13:39	4.45
ERR0.23B	0.0298	50.3	01Jan2017, 13:30	6.28
ERR0.23_0.00	2.5957	2561.5	01Jan2017, 14:14	4.75
ERR0.26	1.3051	1275.7	01Jan2017, 14:08	4.62
ERR0.88	1.0831	1141.7	01Jan2017, 13:59	4.61
ERR0.88A	0.5048	483.1	01Jan2017, 14:06	4.67
ERR0.88_0.23	1.0831	1136.1	01Jan2017, 14:12	4.61
ERR1.33	0.5783	672.1	01Jan2017, 13:45	4.56
ERR1.33A	0.5783	672.1	01Jan2017, 13:45	4.56

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	668.7	01Jan2017, 13:56	4.55
LAR0.00	0.9453	735.5	01Jan2017, 14:09	4.78
LAR0.00A	0.5827	442.1	01Jan2017, 14:38	4.78
LAR0.40	0.3626	387.7	01Jan2017, 13:47	4.78
LAR0.40A	0.0039	6.8	01Jan2017, 13:30	6.76
LAR0.40B	0.1091	168.7	01Jan2017, 13:39	6.28
LAR0.40C	0.1251	159.5	01Jan2017, 13:40	4.79
LAR0.40D	0.1245	154.1	01Jan2017, 13:38	4.45
LAR0.40_0.00	0.3626	387.1	01Jan2017, 13:56	4.78
MRT0.00	0.4202	469.3	01Jan2017, 13:43	4.37
MRT0.00A	0.1647	193.3	01Jan2017, 13:41	4.34
MRT0.66	0.2555	279.2	01Jan2017, 13:32	4.40
MRT0.66A	0.2030	274.1	01Jan2017, 13:32	4.56
MRT0.66B	0.0376	53.1	01Jan2017, 13:30	4.67
MRT0.66C	0.0149	21.8	01Jan2017, 13:31	5.01
MRT0.66_0.00	0.2555	277.4	01Jan2017, 13:45	4.39
ORT0.28	0.7836	863.9	01Jan2017, 13:49	4.24
ORT0.28A	0.1786	206.2	01Jan2017, 13:38	4.11
ORT0.95	0.6050	694.1	01Jan2017, 13:39	4.27
ORT0.95A	0.1851	225.7	01Jan2017, 13:34	4.11
ORT0.95_0.28	0.6050	689.7	01Jan2017, 13:53	4.27

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	493.0	01Jan2017, 13:39	4.34
ORT1.38A	0.1910	235.3	01Jan2017, 13:35	4.22
ORT1.38_0.95	0.4199	491.5	01Jan2017, 13:46	4.34
ORT2.04	0.2289	279.1	01Jan2017, 13:39	4.45
ORT2.04A	0.2289	279.1	01Jan2017, 13:39	4.45
ORT2.04_1.38	0.2289	278.4	01Jan2017, 13:50	4.45
Pond 0	0.1946	226.0	01Jan2017, 13:46	4.45
Pond 1	0.2012	255.5	01Jan2017, 13:33	4.22
Pond 10	0.0122	13.7	01Jan2017, 13:36	4.38
Pond 11	0.0236	21.5	01Jan2017, 13:37	4.45
Pond 12	0.0172	14.8	01Jan2017, 13:39	4.45
Pond 13	0.0603	74.9	01Jan2017, 13:38	4.33
Pond 14	0.1379	174.4	01Jan2017, 13:37	4.45
Pond 15	0.0477	30.2	01Jan2017, 14:24	4.90
Pond 16	0.3346	169.8	01Jan2017, 13:57	5.17
Pond 17	0.0528	16.5	01Jan2017, 14:31	5.82
Pond 18	0.1638	107.0	01Jan2017, 14:56	5.82
Pond 19	0.0053	5.9	01Jan2017, 13:39	6.64
Pond 2	0.0580	61.5	01Jan2017, 13:52	4.46
Pond 20	0.0077	12.5	01Jan2017, 13:30	5.82
Pond 21	0.0298	50.2	01Jan2017, 13:30	6.28

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	12.8	01Jan2017, 13:30	6.19
Pond 23	0.0036	6.2	01Jan2017, 13:30	6.64
Pond 24	0.0045	5.1	01Jan2017, 13:36	6.64
Pond 25	0.2547	356.3	01Jan2017, 13:33	4.78
Pond 26	0.0144	9.1	01Jan2017, 13:42	6.64
Pond 27	0.1245	71.0	01Jan2017, 14:11	4.44
Pond 28	0.1251	150.8	01Jan2017, 13:49	4.63
Pond 29	0.1091	167.2	01Jan2017, 13:44	5.31
Pond 3	0.1861	0.0	01Jan2017, 01:00	0.00
Pond 30	0.0039	5.4	01Jan2017, 13:32	5.41
Pond 31	0.3448	166.6	01Jan2017, 15:10	5.67
Pond 32	0.0626	68.8	01Jan2017, 13:56	6.64
Pond 33	0.0149	3.5	01Jan2017, 14:19	4.78
Pond 34	0.0376	5.8	01Jan2017, 16:32	3.39
Pond 35	0.0294	30.5	01Jan2017, 13:34	4.11
Pond 36	0.0175	28.6	01Jan2017, 13:32	6.05
Pond 37	0.1287	152.5	01Jan2017, 13:52	4.89
Pond 38	0.2037	50.0	01Jan2017, 14:43	1.81
Pond 39	0.0234	30.7	01Jan2017, 13:33	4.34
Pond 4	0.2023	162.4	01Jan2017, 13:49	3.90
Pond 40	0.0832	14.1	01Jan2017, 16:49	3.84

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	8.0	01Jan2017, 13:40	5.36
Pond 42	0.0367	44.0	01Jan2017, 13:35	4.45
Pond 43	0.0103	17.4	01Jan2017, 13:31	6.40
Pond 44	0.1294	162.6	01Jan2017, 13:41	4.55
Pond 45	0.1457	190.7	01Jan2017, 13:37	4.56
Pond 46	0.0187	17.5	01Jan2017, 13:38	6.28
Pond 47	0.0275	17.1	01Jan2017, 13:53	5.38
Pond 48	0.0456	68.8	01Jan2017, 13:31	4.38
Pond 49	0.0256	41.2	01Jan2017, 13:33	5.93
Pond 5	0.0343	40.3	01Jan2017, 13:36	4.00
Pond 50	0.0073	8.0	01Jan2017, 14:03	5.06
Pond 51	0.0721	91.9	01Jan2017, 13:37	4.58
Pond 52	0.0497	62.3	01Jan2017, 13:35	4.22
Pond 53	0.0896	126.3	01Jan2017, 13:35	4.90
Pond 54	0.2164	120.6	01Jan2017, 14:20	4.66
Pond 55	0.0163	19.8	01Jan2017, 13:33	3.87
Pond 56	0.0231	39.7	01Jan2017, 13:30	6.64
Pond 57	0.0112	15.6	01Jan2017, 13:30	4.56
Pond 58	0.0280	22.1	01Jan2017, 13:44	3.46
Pond 6	0.4472	139.1	01Jan2017, 14:38	4.56
Pond 7	0.0064	5.6	01Jan2017, 13:46	6.75

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	47.9	01Jan2017, 13:34	4.45
Pond 9	0.0281	35.9	01Jan2017, 13:36	4.45
RIR0.00	6.5684	5427.1	01Jan2017, 14:40	4.33
RIR0.00A	0.0647	81.4	01Jan2017, 13:54	5.70
RIR0.32	6.5037	5491.9	01Jan2017, 14:31	4.32
RIR0.32A	0.5587	532.9	01Jan2017, 13:59	4.33
RIR0.32_0.00	6.5037	5384.4	01Jan2017, 14:41	4.32
RIR0.65	5.9450	5131.2	01Jan2017, 14:26	4.32
RIR0.65A	0.1896	266.4	01Jan2017, 13:32	4.78
RIR0.65_0.32	5.9450	5110.0	01Jan2017, 14:33	4.32
RIR0.86	5.7554	5105.2	01Jan2017, 14:22	4.30
RIR0.86A	0.2984	318.8	01Jan2017, 13:49	4.33
RIR0.86_0.65	5.7554	5091.5	01Jan2017, 14:26	4.30
RIR1.24	5.4570	4953.1	01Jan2017, 14:16	4.30
RIR1.24A	0.0980	123.5	01Jan2017, 13:32	4.11
RIR1.24_0.86	5.4570	4914.0	01Jan2017, 14:24	4.30
RIR1.34	5.3590	4931.1	01Jan2017, 14:17	4.31
RIR1.52	4.5754	4323.6	01Jan2017, 14:20	4.32
RIR1.62	1.8861	1694.8	01Jan2017, 14:18	4.29
RIR1.62A	0.5008	481.9	01Jan2017, 14:00	4.44
RIR2.60	1.3853	1284.6	01Jan2017, 13:57	4.24

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	379.6	01Jan2017, 13:38	4.33
RIR2.60_1.62	1.3853	1270.3	01Jan2017, 14:23	4.24
RIR3.38	1.0728	1078.2	01Jan2017, 13:51	4.21
RIR3.38A	1.0434	1052.3	01Jan2017, 13:51	4.22
RIR3.38B	0.0294	38.2	01Jan2017, 13:30	4.11
RIR3.38_2.60	1.0728	1063.1	01Jan2017, 14:07	4.21
SHCT0.00	3.0470	2270.2	01Jan2017, 13:59	3.09
SHCT0.00A	0.9966	711.0	01Jan2017, 13:54	3.02
SHCT1.59	2.0504	1575.1	01Jan2017, 13:50	3.12
SHCT1.59A	2.0504	1575.1	01Jan2017, 13:50	3.12
SHCT1.59_0.00	2.0504	1573.4	01Jan2017, 14:02	3.12
SHC0.00	6.4942	4004.5	01Jan2017, 15:00	3.36
SHC0.00A	0.0458	49.2	01Jan2017, 13:40	3.89
SHC0.23	6.4484	4124.7	01Jan2017, 14:50	3.36
SHC0.23A	0.6386	500.4	01Jan2017, 14:24	4.44
SHC0.23_0.00	6.4484	3995.0	01Jan2017, 15:00	3.35
SHC1.60	5.8098	3884.6	01Jan2017, 14:12	3.24
SHC1.60A	0.2628	303.1	01Jan2017, 13:36	4.00
SHC1.60_0.23	5.8098	3686.8	01Jan2017, 14:52	3.24
SHC2.06	5.5470	3783.3	01Jan2017, 14:05	3.21
SHC2.06A	0.2828	223.9	01Jan2017, 13:41	2.82

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	3768.7	01Jan2017, 14:14	3.21
SHC2.56	5.2642	3653.2	01Jan2017, 14:03	3.23
SHC2.56A	0.4506	424.0	01Jan2017, 13:47	3.67
SHC2.56_2.06	5.2642	3648.9	01Jan2017, 14:08	3.23
SHC3.11	1.7666	1159.1	01Jan2017, 14:13	3.37
SHC3.11A	0.2775	374.5	01Jan2017, 13:32	4.56
SHC3.11_2.56	1.7666	1158.7	01Jan2017, 14:18	3.37
SHC3.92	1.4891	1080.0	01Jan2017, 13:55	3.15
SHC3.92A	0.6934	498.9	01Jan2017, 13:51	2.92
SHC3.92B	0.7957	591.9	01Jan2017, 14:00	3.34
SHC3.92_3.11	1.4891	1074.9	01Jan2017, 14:17	3.14
SRT0.50	2.6893	2632.6	01Jan2017, 14:21	4.34
SRT0.50A	0.4294	382.1	01Jan2017, 14:06	4.33
SRT1.29	2.2599	2293.0	01Jan2017, 14:10	4.34
SRT1.29A	0.3191	282.8	01Jan2017, 14:04	4.22
SRT1.29_0.50	2.2599	2275.5	01Jan2017, 14:22	4.34
SRT2.06	1.9408	2028.7	01Jan2017, 13:57	4.36
SRT2.06A	0.4839	508.7	01Jan2017, 13:52	4.44
SRT2.06_1.29	1.9408	2014.1	01Jan2017, 14:11	4.36
SRT2.55	1.4569	1534.3	01Jan2017, 13:52	4.33
SRT2.55A	0.3465	408.5	01Jan2017, 13:40	4.33

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	1530.0	01Jan2017, 13:59	4.33
SRT3.00	1.1104	1198.3	01Jan2017, 13:51	4.33
SRT3.00A	0.7468	782.4	01Jan2017, 13:50	4.33
SRT3.00_2.55	1.1104	1193.9	01Jan2017, 13:58	4.33
SRT3.38	0.3636	417.4	01Jan2017, 13:42	4.33
SRT3.38A	0.3636	417.4	01Jan2017, 13:42	4.33
SRT3.38_3.00	0.3636	416.4	01Jan2017, 13:52	4.33
SSRTA0.00	0.4007	476.3	01Jan2017, 13:49	4.59
SSRTA0.00A	0.2628	311.2	01Jan2017, 13:45	4.67
SSRTA0.59	0.1379	174.4	01Jan2017, 13:37	4.45
SSRTA0.59A	0.1379	174.6	01Jan2017, 13:36	4.45
SSRTA0.59_0.00	0.1379	172.5	01Jan2017, 13:56	4.45
SSRT0.00	1.3182	1396.2	01Jan2017, 14:00	4.51
SSRT0.00A	0.2236	249.0	01Jan2017, 13:47	4.45
SSRT0.46	1.0946	1193.8	01Jan2017, 13:49	4.53
SSRT0.46A	0.1893	244.7	01Jan2017, 13:36	4.56
SSRT0.46_0.00	1.0946	1173.4	01Jan2017, 14:02	4.52
SSRT0.77	0.9053	1006.9	01Jan2017, 13:47	4.52
SSRT0.77A	0.2520	298.2	01Jan2017, 13:43	4.56
SSRT0.77B	0.0603	77.5	01Jan2017, 13:33	4.34
SSRT0.77_0.46	0.9053	1005.0	01Jan2017, 13:53	4.52

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	220.6	01Jan2017, 13:38	4.38
SSRT1.34A	0.1112	137.2	01Jan2017, 13:36	4.34
SSRT1.34B	0.0172	23.4	01Jan2017, 13:30	4.45
SSRT1.34C	0.0236	32.1	01Jan2017, 13:30	4.45
SSRT1.34D	0.0122	16.6	01Jan2017, 13:30	4.45
SSRT1.34E	0.0281	37.6	01Jan2017, 13:32	4.45
SSRT1.34_0.77	0.1923	206.8	01Jan2017, 14:02	4.37
SSR0.00	4.8444	4134.4	01Jan2017, 14:16	4.34
SSR0.00A	0.0601	81.2	01Jan2017, 13:31	4.45
SSR0.22	4.7843	4124.9	01Jan2017, 14:13	4.33
SSR0.22A	0.2501	328.2	01Jan2017, 13:39	4.90
SSR0.22_0.00	4.7843	4121.3	01Jan2017, 14:16	4.33
SSR0.85	4.5342	3981.4	01Jan2017, 14:07	4.30
SSR0.85_0.22	4.5342	3966.8	01Jan2017, 14:15	4.30
SSR0.87	3.2160	2633.5	01Jan2017, 14:10	4.22
SSR0.87A	0.3806	371.4	01Jan2017, 14:01	4.56
SSR1.06	2.8354	2277.5	01Jan2017, 14:07	4.17
SSR1.06A	0.2647	313.2	01Jan2017, 13:43	4.56
SSR1.06_0.87	2.8354	2273.5	01Jan2017, 14:11	4.17
SSR1.71	2.5707	2072.2	01Jan2017, 13:57	4.14
SSR1.71A	0.3665	372.5	01Jan2017, 14:01	4.78

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	2063.3	01Jan2017, 14:10	4.14
SSR1.89	2.2042	1711.4	01Jan2017, 13:51	4.03
SSR1.89A	0.3178	376.0	01Jan2017, 13:47	4.78
SSR1.89B	0.0231	39.9	01Jan2017, 13:30	6.64
SSR1.89_1.71	2.2042	1702.4	01Jan2017, 13:57	4.03
SSR2.33	1.8633	1331.9	01Jan2017, 13:43	3.87
SSR2.33A	0.1750	246.8	01Jan2017, 13:33	4.90
SSR2.33B	0.0381	51.9	01Jan2017, 13:30	4.45
SSR2.33_1.89	1.8633	1326.8	01Jan2017, 13:54	3.87
SSR2.70	1.6502	1142.8	01Jan2017, 13:48	3.74
SSR2.70A	0.4613	500.8	01Jan2017, 13:47	4.33
SSR2.70B	0.0112	15.7	01Jan2017, 13:30	4.56
SSR2.70C	0.0064	11.1	01Jan2017, 13:30	6.76
SSR2.70D	0.0343	42.3	01Jan2017, 13:32	4.00
SSR2.70E	0.4472	545.5	01Jan2017, 13:41	4.56
SSR2.70_2.33	1.6502	1140.9	01Jan2017, 13:55	3.74
SSR3.20	0.6898	471.6	01Jan2017, 13:45	2.77
SSR3.20A	0.1108	125.5	01Jan2017, 13:38	4.00
SSR3.20B	0.2023	241.9	01Jan2017, 13:34	4.00
SSR3.20_2.70	0.6898	471.3	01Jan2017, 13:50	2.77
SSR3.70	0.3767	196.8	01Jan2017, 13:37	1.80

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	196.8	01Jan2017, 13:37	3.56
SSR3.70B	0.1861	190.0	01Jan2017, 13:34	3.35
SSR3.70_3.20	0.3767	195.6	01Jan2017, 13:51	1.80
WOR0.00	2.8951	2382.9	01Jan2017, 14:32	4.22
WOR0.00A	0.0359	46.9	01Jan2017, 13:32	4.34
WOR0.32	2.8592	2383.2	01Jan2017, 14:26	4.22
WOR0.32A	0.1901	180.4	01Jan2017, 13:55	4.11
WOR0.32_0.00	2.8592	2376.6	01Jan2017, 14:32	4.22
WOR0.76	2.6691	2388.1	01Jan2017, 14:11	4.24
WOR0.76A	0.3131	400.2	01Jan2017, 13:38	4.67
WOR0.76_0.32	2.6691	2256.5	01Jan2017, 14:28	4.23
WOR1.59	2.3560	2236.1	01Jan2017, 14:00	4.18
WOR1.59A	0.4536	521.9	01Jan2017, 13:47	4.67
WOR1.59B	0.7600	654.3	01Jan2017, 14:07	4.22
WOR1.59_0.76	2.3560	2204.1	01Jan2017, 14:14	4.18
WOR1.64	1.1424	1117.5	01Jan2017, 14:03	3.96
WOR1.64A	0.2551	285.8	01Jan2017, 13:48	4.56
WOR2.33	0.8873	915.8	01Jan2017, 13:41	3.80
WOR2.33A	0.3233	340.7	01Jan2017, 13:44	4.00
WOR2.33_1.64	0.8873	867.5	01Jan2017, 14:06	3.79
WOR3.00	0.5640	576.7	01Jan2017, 13:41	3.69

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	400.9	01Jan2017, 13:43	4.33
WOR3.67	0.2110	178.7	01Jan2017, 13:33	2.61
WOR3.67A	0.2110	178.7	01Jan2017, 13:33	2.61
WOR3.67_3.00	0.2110	178.2	01Jan2017, 13:39	2.61

Project: ChiquesCreek Simulation Run: 200YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 200YR_24HR
Compute Time: 31Jan2017, 15:43:59 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	1500.0	01Jan2017, 14:36	4.56
BER0.00A	0.1087	139.1	01Jan2017, 13:47	5.47
BER0.64	1.7391	1480.2	01Jan2017, 14:16	4.49
BER0.64A	0.3111	443.3	01Jan2017, 13:39	5.59
BER0.64_0.00	1.7391	1441.5	01Jan2017, 14:38	4.50
BER1.05	1.4280	1322.3	01Jan2017, 14:07	4.25
BER1.05A	0.2790	347.5	01Jan2017, 13:50	5.47
BER1.05_0.64	1.4280	1289.2	01Jan2017, 14:21	4.25
BER1.30	1.1490	1038.8	01Jan2017, 14:00	3.96
BER1.30A	0.5289	571.4	01Jan2017, 13:52	4.74
BER1.30_1.05	1.1490	1023.5	01Jan2017, 14:11	3.95
BER1.95	0.6201	505.3	01Jan2017, 13:46	3.30
BER1.95A	0.6201	505.3	01Jan2017, 13:46	3.30
BER1.95_1.30	0.6201	499.3	01Jan2017, 14:06	3.29
BOR0.00	6.6030	5784.7	01Jan2017, 14:32	4.78
BOR0.00A	0.0062	9.8	01Jan2017, 13:30	5.59
BOR0.10	6.5968	5983.1	01Jan2017, 14:29	4.79

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	269.8	01Jan2017, 13:57	5.47
BOR0.10_0.00	6.5968	5783.6	01Jan2017, 14:32	4.78
BOR0.68	1.6208	1476.5	01Jan2017, 14:13	4.20
BOR0.68A	0.2555	318.3	01Jan2017, 13:50	5.47
BOR0.68_0.10	1.6208	1446.3	01Jan2017, 14:30	4.20
BOR1.20	1.3653	1234.6	01Jan2017, 14:02	3.96
BOR1.20A	0.5429	547.6	01Jan2017, 14:03	4.98
BOR1.20_0.68	1.3653	1226.3	01Jan2017, 14:16	3.97
BOR2.07	0.8224	694.8	01Jan2017, 13:44	3.29
BOR2.07A	0.8224	694.8	01Jan2017, 13:44	3.29
BOR2.07_1.20	0.8224	687.3	01Jan2017, 14:02	3.29
CHC10.68	50.2637	12801.0	01Jan2017, 20:41	5.09
CHC10.68A	0.7377	939.1	01Jan2017, 13:54	5.95
CHC10.68B	0.0477	67.2	01Jan2017, 13:45	5.96
CHC10.68C	0.1180	150.6	01Jan2017, 13:51	5.71
CHC10.68D	0.1638	213.5	01Jan2017, 14:05	6.93
CHC10.68E	0.0528	91.3	01Jan2017, 13:34	6.93
CHC10.68_9.40	50.2637	12778.4	01Jan2017, 21:07	5.08
CHC11.99	49.1437	12689.7	01Jan2017, 20:14	5.09
CHC11.99_10.68	49.1437	12669.4	01Jan2017, 20:45	5.07
CHC12.01	46.4709	12369.9	01Jan2017, 20:41	5.04

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	218.7	01Jan2017, 13:31	5.59
CHC12.65	46.3306	12540.1	01Jan2017, 19:44	5.07
CHC12.65_12.01	46.3306	12359.1	01Jan2017, 20:41	5.04
CHC12.67	45.3853	12401.9	01Jan2017, 19:55	5.05
CHC12.67A	0.5547	434.9	01Jan2017, 14:54	5.71
CHC13.89	44.8306	12338.8	01Jan2017, 19:05	5.06
CHC13.89_12.67	44.8306	12310.7	01Jan2017, 20:03	5.04
CHC13.90	41.9107	11878.9	01Jan2017, 20:12	5.03
CHC13.90A	2.4712	882.3	01Jan2017, 18:57	5.53
CHC16.25	39.4395	11712.6	01Jan2017, 16:47	5.04
CHC16.25A	0.7783	577.4	01Jan2017, 15:03	5.71
CHC16.25_13.90	39.4395	11056.3	01Jan2017, 20:31	5.00
CHC17.08	38.6612	11767.6	01Jan2017, 16:17	5.04
CHC17.08A	0.5852	568.4	01Jan2017, 14:25	5.83
CHC17.08B	0.3448	495.9	01Jan2017, 13:59	7.53
CHC17.08_16.25	38.6612	11396.6	01Jan2017, 16:50	5.03
CHC17.73	37.7312	11642.4	01Jan2017, 15:54	5.02
CHC17.73A	0.3870	444.3	01Jan2017, 14:06	5.95
CHC17.73B	0.0626	114.5	01Jan2017, 13:34	7.78
CHC17.73_17.08	37.7312	11384.2	01Jan2017, 16:19	5.01
CHC18.09	37.2816	11723.6	01Jan2017, 15:41	5.01

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	198.4	01Jan2017, 13:47	4.98
CHC18.09_17.73	37.2816	11488.3	01Jan2017, 15:55	5.00
CHC18.61	36.6951	11935.6	01Jan2017, 15:24	5.01
CHC18.61A	0.5761	753.6	01Jan2017, 13:40	5.10
CHC18.61_18.09	36.6951	11583.0	01Jan2017, 15:41	5.00
CHC19.32	36.1190	12449.1	01Jan2017, 15:00	5.01
CHC19.32_18.61	36.1190	11794.0	01Jan2017, 15:24	5.01
CHC19.35	29.5506	9685.3	01Jan2017, 18:42	4.94
CHC19.35A	0.3523	379.8	01Jan2017, 14:14	5.95
CHC19.35B	0.0175	31.6	01Jan2017, 13:31	7.17
CHC1.28	63.3656	13325.9	02Jan2017, 00:08	4.82
CHC1.28A	0.8402	445.7	01Jan2017, 15:59	5.22
CHC20.02	29.1808	9680.0	01Jan2017, 18:24	4.93
CHC20.02A	0.3588	489.1	01Jan2017, 13:54	6.44
CHC20.02_19.35	29.1808	9621.9	01Jan2017, 18:42	4.92
CHC20.55	28.8220	9709.6	01Jan2017, 18:02	4.92
CHC20.55_20.02	28.8220	9618.1	01Jan2017, 18:24	4.91
CHC20.57	23.2797	8536.4	01Jan2017, 18:14	4.78
CHC20.57A	0.5512	516.0	01Jan2017, 14:46	6.68
CHC21.28	22.7285	8508.2	01Jan2017, 17:38	4.74
CHC21.28A	0.3509	461.8	01Jan2017, 14:02	6.80

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	34.7	01Jan2017, 13:30	7.41
CHC21.28C	0.0073	9.2	01Jan2017, 13:59	6.20
CHC21.28D	0.0224	38.4	01Jan2017, 13:31	6.44
CHC21.28E	0.0497	72.1	01Jan2017, 13:33	5.23
CHC21.28F	0.1457	223.5	01Jan2017, 13:32	5.59
CHC21.28_20.57	22.7285	8399.7	01Jan2017, 18:16	4.73
CHC21.59	22.1338	8479.7	01Jan2017, 17:26	4.70
CHC21.59A	0.2001	263.5	01Jan2017, 13:51	5.96
CHC21.59B	0.0256	45.6	01Jan2017, 13:32	7.05
CHC21.59C	0.0275	48.6	01Jan2017, 13:31	6.81
CHC21.59D	0.0896	143.7	01Jan2017, 13:32	5.96
CHC21.59_21.28	22.1338	8393.7	01Jan2017, 17:38	4.70
CHC22.01	21.7910	8484.9	01Jan2017, 17:11	4.68
CHC22.01A	1.2726	1950.8	01Jan2017, 13:31	5.46
CHC22.01B	0.0456	77.1	01Jan2017, 13:30	6.20
CHC22.01_21.59	21.7910	8414.1	01Jan2017, 17:26	4.68
CHC23.04	20.4728	8328.0	01Jan2017, 16:48	4.64
CHC23.04A	1.8763	1365.4	01Jan2017, 14:56	5.33
CHC23.04B	0.2164	308.4	01Jan2017, 13:40	5.71
CHC23.04_22.01	20.4728	8261.4	01Jan2017, 17:13	4.63
CHC24.53	18.3801	7770.8	01Jan2017, 16:17	4.56

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	7587.8	01Jan2017, 16:56	4.55
CHC24.63	18.3801	7770.8	01Jan2017, 16:17	4.56
CHC24.64	11.7771	5924.7	01Jan2017, 16:33	4.43
CHC24.64A	0.2517	188.1	01Jan2017, 14:35	4.74
CHC25.53	11.5254	6719.6	01Jan2017, 15:52	4.47
CHC25.53A	0.6693	711.6	01Jan2017, 14:04	5.34
CHC25.53B	0.0163	23.6	01Jan2017, 13:30	4.99
CHC25.53_24.64	11.5254	5848.4	01Jan2017, 16:33	4.42
CHC26.30	10.8398	6657.1	01Jan2017, 15:33	4.42
CHC26.30A	0.8065	508.2	01Jan2017, 15:19	5.22
CHC26.30_25.53	10.8398	6510.8	01Jan2017, 15:53	4.41
CHC27.38	10.0333	7039.4	01Jan2017, 14:53	4.39
CHC27.38_26.30	10.0333	6156.9	01Jan2017, 15:34	4.35
CHC27.39	3.5391	2200.4	01Jan2017, 14:37	4.64
CHC27.39A	0.3314	379.4	01Jan2017, 13:56	5.35
CHC28.26	3.2077	2032.7	01Jan2017, 14:14	4.56
CHC28.26_27.39	3.2077	1975.9	01Jan2017, 14:41	4.57
CHC28.31	3.2077	2032.7	01Jan2017, 14:14	4.56
CHC28.31A	0.0950	136.7	01Jan2017, 13:35	5.35
CHC28.31B	0.7915	893.6	01Jan2017, 13:56	5.22
CHC28.67	2.3212	1547.5	01Jan2017, 14:50	4.30

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	616.9	01Jan2017, 13:57	4.25
CHC28.67_28.31	2.3212	1544.7	01Jan2017, 14:58	4.30
CHC29.91	1.6558	1291.4	01Jan2017, 14:23	4.32
CHC29.91A	0.6097	557.3	01Jan2017, 13:53	4.01
CHC29.91_28.67	1.6558	1278.4	01Jan2017, 14:57	4.32
CHC30.94	1.0461	944.4	01Jan2017, 14:05	4.49
CHC30.94A	1.0461	944.4	01Jan2017, 14:05	4.49
CHC30.94_29.91	1.0461	940.1	01Jan2017, 14:34	4.49
CHC3.39	62.5254	13272.0	01Jan2017, 23:26	4.86
CHC3.39A	1.8419	2086.9	01Jan2017, 13:53	5.09
CHC3.39_1.28	62.5254	13252.2	02Jan2017, 00:10	4.81
CHC4.62	60.6835	13911.9	01Jan2017, 22:28	5.02
CHC4.62A	0.1505	218.9	01Jan2017, 13:36	5.47
CHC4.62B	0.1946	277.2	01Jan2017, 13:37	5.47
CHC4.62_3.39	60.6835	13157.3	01Jan2017, 23:27	4.86
CHC4.97	60.3384	13944.6	01Jan2017, 22:12	5.04
CHC4.97A	0.4693	395.6	01Jan2017, 14:31	5.22
CHC4.97B	0.0580	87.9	01Jan2017, 13:36	5.84
CHC4.97C	0.2012	293.6	01Jan2017, 13:32	5.23
CHC4.97_4.62	60.3384	13888.9	01Jan2017, 22:28	5.02
CHC5.97	59.6099	13905.7	01Jan2017, 21:57	5.06

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	1226.8	01Jan2017, 14:06	5.58
CHC5.97_4.97	59.6099	13889.9	01Jan2017, 22:13	5.03
CHC7.47	58.4785	13853.8	01Jan2017, 21:26	5.09
CHC7.47_5.97	58.4785	13819.3	01Jan2017, 21:59	5.05
CHC7.48	53.6341	13356.0	01Jan2017, 21:38	5.06
CHC7.48A	2.2128	883.6	01Jan2017, 18:01	5.56
CHC9.40	51.4213	12886.5	01Jan2017, 21:03	5.09
CHC9.40A	1.1576	1138.9	01Jan2017, 14:18	5.58
CHC9.40_7.47	51.4213	12817.8	01Jan2017, 21:52	5.04
DER0.00	2.9199	2643.1	01Jan2017, 14:50	5.44
DER0.00A	0.1924	279.7	01Jan2017, 13:36	5.47
DER0.52	2.7275	2608.5	01Jan2017, 14:37	5.44
DER0.52A	0.5165	678.5	01Jan2017, 13:48	5.71
DER0.52_0.00	2.7275	2595.8	01Jan2017, 14:49	5.43
DER1.10	2.2110	2358.8	01Jan2017, 14:22	5.38
DER1.10A	0.3712	475.5	01Jan2017, 13:51	5.71
DER1.10_0.52	2.2110	2325.8	01Jan2017, 14:42	5.37
DER1.76	1.8398	2053.4	01Jan2017, 14:07	5.31
DER1.76A	0.5078	586.0	01Jan2017, 13:52	5.10
DER1.76_1.10	1.8398	2042.7	01Jan2017, 14:27	5.31
DER2.22	1.3320	1550.1	01Jan2017, 14:03	5.39

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	771.6	01Jan2017, 14:02	5.22
DER2.22_1.76	1.3320	1544.8	01Jan2017, 14:13	5.39
DER2.93	0.6085	783.8	01Jan2017, 13:48	5.59
DER2.93A	0.6085	783.8	01Jan2017, 13:48	5.59
DER2.93_2.22	0.6085	779.3	01Jan2017, 14:04	5.58
DORT0.34	1.6920	1871.5	01Jan2017, 14:04	5.50
DORT0.34A	0.0357	54.7	01Jan2017, 13:31	5.47
DORT0.34B	0.0234	35.2	01Jan2017, 13:31	5.35
DORT0.54	1.6329	1851.7	01Jan2017, 14:00	5.50
DORT0.54A	0.2058	282.5	01Jan2017, 13:42	5.59
DORT0.54B	0.0280	35.4	01Jan2017, 13:33	4.38
DORT0.54C	0.0058	9.8	01Jan2017, 13:32	6.44
DORT0.54D	0.0832	109.9	01Jan2017, 13:49	5.83
DORT0.54E	0.0367	56.9	01Jan2017, 13:30	5.47
DORT0.54_0.34	1.6329	1841.4	01Jan2017, 14:04	5.50
DORT1.15	1.2734	1572.8	01Jan2017, 13:51	5.55
DORT1.15A	0.4022	593.5	01Jan2017, 13:37	5.71
DORT1.15B	0.0103	19.2	01Jan2017, 13:30	7.53
DORT1.15_0.54	1.2734	1563.1	01Jan2017, 14:03	5.55
DORT1.58	0.8609	1120.8	01Jan2017, 13:52	5.45
DORT1.58A	0.4931	642.9	01Jan2017, 13:46	5.47

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	1115.4	01Jan2017, 14:01	5.46
DORT2.41	0.3678	518.6	01Jan2017, 13:39	5.43
DORT2.41A	0.2384	331.7	01Jan2017, 13:38	5.35
DORT2.41B	0.1294	188.7	01Jan2017, 13:37	5.59
DORT2.41_1.58	0.3678	514.0	01Jan2017, 14:01	5.44
DOR0.00	5.5423	4935.6	01Jan2017, 14:52	5.49
DOR0.00A	0.0475	73.4	01Jan2017, 13:39	6.20
DOR0.24	5.4948	5057.2	01Jan2017, 14:42	5.48
DOR0.24A	0.1218	178.4	01Jan2017, 13:39	5.83
DOR0.24B	0.1287	177.5	01Jan2017, 13:47	5.96
DOR0.24_0.00	5.4948	4921.6	01Jan2017, 14:52	5.48
DOR0.44A	0.5212	642.4	01Jan2017, 13:56	5.83
DOR0.44_0.24	5.2443	4938.4	01Jan2017, 14:43	5.46
DOR1.21	4.7231	4772.8	01Jan2017, 14:14	5.43
DOR1.21A	0.2430	274.0	01Jan2017, 14:06	5.83
DOR1.21B	0.2037	299.6	01Jan2017, 13:38	5.71
DOR1.21_0.44	4.7231	4585.9	01Jan2017, 14:41	5.42
DOR1.23	4.2764	4363.1	01Jan2017, 14:16	5.53
DOR1.23A	0.2095	296.1	01Jan2017, 13:44	5.95
DOR1.45	4.0669	4202.1	01Jan2017, 14:10	5.51
DOR1.45_1.23	4.0669	4179.8	01Jan2017, 14:18	5.51

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	2429.4	01Jan2017, 14:19	5.51
DOR1.60A	0.5501	719.9	01Jan2017, 13:47	5.59
DOR2.40	1.8248	2024.4	01Jan2017, 14:07	5.49
DOR2.40A	0.4594	550.5	01Jan2017, 13:56	5.59
DOR2.40_1.60	1.8248	2004.2	01Jan2017, 14:26	5.49
DOR2.81	1.3654	1516.1	01Jan2017, 14:00	5.46
DOR2.81A	0.2367	315.6	01Jan2017, 13:48	5.83
DOR2.81_2.40	1.3654	1506.9	01Jan2017, 14:11	5.46
DOR3.06	1.1287	1227.6	01Jan2017, 13:56	5.38
DOR3.06A	0.3648	476.0	01Jan2017, 13:46	5.47
DOR3.06B	0.7639	803.6	01Jan2017, 14:05	5.34
DOR3.06_2.81	1.1287	1224.8	01Jan2017, 14:03	5.38
DOR.44	5.2443	4965.3	01Jan2017, 14:38	5.46
ERRR0.57_0.00	1.1576	1351.2	01Jan2017, 14:11	5.85
ERRT0.00	1.2906	1498.0	01Jan2017, 14:09	5.94
ERRT0.00A	0.1098	161.5	01Jan2017, 13:47	6.56
ERRT0.00B	0.0077	13.9	01Jan2017, 13:30	6.93
ERRT0.00C	0.0074	14.0	01Jan2017, 13:30	7.78
ERRT0.00D	0.0036	6.8	01Jan2017, 13:30	7.78
ERRT0.00E	0.0045	8.5	01Jan2017, 13:30	7.78
ERRT0.57	1.1576	1357.2	01Jan2017, 14:01	5.85

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	258.2	01Jan2017, 14:32	5.83
ERRT0.61	0.8788	1146.6	01Jan2017, 13:59	5.86
ERRT0.61A	0.4551	543.3	01Jan2017, 14:02	5.95
ERRT1.62	0.4237	618.5	01Jan2017, 13:33	5.77
ERRT1.62A	0.1546	209.3	01Jan2017, 13:42	5.47
ERRT1.62B	0.2547	410.4	01Jan2017, 13:31	5.83
ERRT1.62C	0.0144	27.2	01Jan2017, 13:30	7.78
ERRT1.62_0.61	0.4237	605.6	01Jan2017, 13:57	5.76
ERR0.00	2.6728	3016.2	01Jan2017, 14:12	5.79
ERR0.00A	0.0718	104.1	01Jan2017, 13:34	5.35
ERR0.00B	0.0053	10.0	01Jan2017, 13:30	7.78
ERR0.23	2.5957	2983.0	01Jan2017, 14:08	5.80
ERR0.23A	0.1922	270.2	01Jan2017, 13:39	5.47
ERR0.23B	0.0298	55.2	01Jan2017, 13:30	7.41
ERR0.23_0.00	2.5957	2973.3	01Jan2017, 14:13	5.80
ERR0.26	1.3051	1486.4	01Jan2017, 14:07	5.66
ERR0.88	1.0831	1323.5	01Jan2017, 13:59	5.64
ERR0.88A	0.5048	563.1	01Jan2017, 14:05	5.71
ERR0.88_0.23	1.0831	1317.7	01Jan2017, 14:11	5.64
ERR1.33	0.5783	776.4	01Jan2017, 13:44	5.59
ERR1.33A	0.5783	776.4	01Jan2017, 13:44	5.59

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	772.8	01Jan2017, 13:55	5.58
LAR0.00	0.9453	843.9	01Jan2017, 14:10	5.83
LAR0.00A	0.5827	518.6	01Jan2017, 14:37	5.83
LAR0.40	0.3626	439.8	01Jan2017, 13:45	5.84
LAR0.40A	0.0039	7.4	01Jan2017, 13:30	7.90
LAR0.40B	0.1091	186.7	01Jan2017, 13:39	7.41
LAR0.40C	0.1251	182.5	01Jan2017, 13:40	5.83
LAR0.40D	0.1245	177.4	01Jan2017, 13:37	5.47
LAR0.40_0.00	0.3626	438.7	01Jan2017, 13:54	5.84
MRT0.00	0.4202	525.4	01Jan2017, 13:46	5.37
MRT0.00A	0.1647	224.0	01Jan2017, 13:40	5.35
MRT0.66	0.2555	318.7	01Jan2017, 13:32	5.42
MRT0.66A	0.2030	312.1	01Jan2017, 13:32	5.59
MRT0.66B	0.0376	60.0	01Jan2017, 13:30	5.71
MRT0.66C	0.0149	24.5	01Jan2017, 13:31	6.08
MRT0.66_0.00	0.2555	316.5	01Jan2017, 13:55	5.38
ORT0.28	0.7836	1009.6	01Jan2017, 13:48	5.24
ORT0.28A	0.1786	239.8	01Jan2017, 13:38	5.10
ORT0.95	0.6050	804.5	01Jan2017, 13:39	5.28
ORT0.95A	0.1851	260.8	01Jan2017, 13:34	5.10
ORT0.95_0.28	0.6050	800.2	01Jan2017, 13:52	5.28

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	569.4	01Jan2017, 13:38	5.36
ORT1.38A	0.1910	271.5	01Jan2017, 13:34	5.23
ORT1.38_0.95	0.4199	567.8	01Jan2017, 13:46	5.36
ORT2.04	0.2289	321.7	01Jan2017, 13:39	5.47
ORT2.04A	0.2289	321.7	01Jan2017, 13:39	5.47
ORT2.04_1.38	0.2289	321.0	01Jan2017, 13:51	5.47
Pond 0	0.1946	263.2	01Jan2017, 13:45	5.47
Pond 1	0.2012	293.5	01Jan2017, 13:33	5.22
Pond 10	0.0122	16.7	01Jan2017, 13:35	5.37
Pond 11	0.0236	35.8	01Jan2017, 13:33	5.47
Pond 12	0.0172	26.6	01Jan2017, 13:31	5.47
Pond 13	0.0603	85.8	01Jan2017, 13:38	5.35
Pond 14	0.1379	200.4	01Jan2017, 13:37	5.47
Pond 15	0.0477	49.2	01Jan2017, 14:10	5.96
Pond 16	0.3346	253.8	01Jan2017, 14:37	6.24
Pond 17	0.0528	17.2	01Jan2017, 14:34	6.93
Pond 18	0.1638	160.9	01Jan2017, 14:39	6.93
Pond 19	0.0053	7.8	01Jan2017, 13:37	7.78
Pond 2	0.0580	81.5	01Jan2017, 13:45	5.50
Pond 20	0.0077	13.9	01Jan2017, 13:30	6.93
Pond 21	0.0298	55.2	01Jan2017, 13:30	7.41

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	14.0	01Jan2017, 13:30	7.32
Pond 23	0.0036	6.8	01Jan2017, 13:30	7.78
Pond 24	0.0045	6.9	01Jan2017, 13:34	7.78
Pond 25	0.2547	409.3	01Jan2017, 13:32	5.83
Pond 26	0.0144	9.4	01Jan2017, 13:47	7.78
Pond 27	0.1245	75.5	01Jan2017, 14:15	5.47
Pond 28	0.1251	179.1	01Jan2017, 13:45	5.68
Pond 29	0.1091	185.9	01Jan2017, 13:42	6.43
Pond 3	0.1861	5.1	02Jan2017, 01:16	0.11
Pond 30	0.0039	6.9	01Jan2017, 13:31	6.55
Pond 31	0.3448	185.9	01Jan2017, 15:11	6.80
Pond 32	0.0626	71.1	01Jan2017, 13:59	7.78
Pond 33	0.0149	5.1	01Jan2017, 14:14	5.77
Pond 34	0.0376	19.8	01Jan2017, 13:57	4.37
Pond 35	0.0294	41.6	01Jan2017, 13:32	5.11
Pond 36	0.0175	31.6	01Jan2017, 13:32	7.17
Pond 37	0.1287	175.9	01Jan2017, 13:51	5.95
Pond 38	0.2037	183.0	01Jan2017, 14:04	2.85
Pond 39	0.0234	35.1	01Jan2017, 13:33	5.35
Pond 4	0.2023	183.2	01Jan2017, 13:50	4.88
Pond 40	0.0832	43.1	01Jan2017, 14:45	4.82

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	9.4	01Jan2017, 13:38	6.44
Pond 42	0.0367	51.9	01Jan2017, 13:34	5.47
Pond 43	0.0103	19.1	01Jan2017, 13:31	7.53
Pond 44	0.1294	187.3	01Jan2017, 13:40	5.58
Pond 45	0.1457	217.9	01Jan2017, 13:36	5.59
Pond 46	0.0187	22.6	01Jan2017, 13:37	7.41
Pond 47	0.0275	35.1	01Jan2017, 13:42	6.44
Pond 48	0.0456	76.9	01Jan2017, 13:30	5.45
Pond 49	0.0256	45.6	01Jan2017, 13:33	7.05
Pond 5	0.0343	46.9	01Jan2017, 13:36	4.99
Pond 50	0.0073	9.2	01Jan2017, 14:03	6.13
Pond 51	0.0721	108.9	01Jan2017, 13:35	5.61
Pond 52	0.0497	72.0	01Jan2017, 13:34	5.23
Pond 53	0.0896	142.7	01Jan2017, 13:35	5.96
Pond 54	0.2164	142.6	01Jan2017, 14:20	5.71
Pond 55	0.0163	23.2	01Jan2017, 13:32	4.85
Pond 56	0.0231	43.5	01Jan2017, 13:30	7.78
Pond 57	0.0112	17.7	01Jan2017, 13:30	5.59
Pond 58	0.0280	33.8	01Jan2017, 13:37	4.38
Pond 6	0.4472	146.6	01Jan2017, 14:43	5.59
Pond 7	0.0064	5.8	01Jan2017, 13:49	7.89

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	55.8	01Jan2017, 13:34	5.47
Pond 9	0.0281	42.8	01Jan2017, 13:32	5.47
RIR0.00	6.5684	6490.8	01Jan2017, 14:36	5.34
RIR0.00A	0.0647	91.8	01Jan2017, 13:54	6.81
RIR0.32	6.5037	6551.8	01Jan2017, 14:27	5.33
RIR0.32A	0.5587	625.6	01Jan2017, 13:59	5.34
RIR0.32_0.00	6.5037	6436.7	01Jan2017, 14:37	5.33
RIR0.65	5.9450	6093.2	01Jan2017, 14:23	5.33
RIR0.65A	0.1896	301.5	01Jan2017, 13:32	5.83
RIR0.65_0.32	5.9450	6071.0	01Jan2017, 14:29	5.33
RIR0.86	5.7554	6058.1	01Jan2017, 14:19	5.31
RIR0.86A	0.2984	371.8	01Jan2017, 13:48	5.35
RIR0.86_0.65	5.7554	6043.6	01Jan2017, 14:23	5.31
RIR1.24	5.4570	5858.6	01Jan2017, 14:14	5.31
RIR1.24A	0.0980	142.0	01Jan2017, 13:31	5.11
RIR1.24_0.86	5.4570	5814.6	01Jan2017, 14:21	5.31
RIR1.34	5.3590	5828.6	01Jan2017, 14:14	5.32
RIR1.52	4.5754	5108.2	01Jan2017, 14:18	5.33
RIR1.62	1.8861	2013.5	01Jan2017, 14:15	5.30
RIR1.62A	0.5008	564.2	01Jan2017, 14:00	5.47
RIR2.60	1.3853	1517.6	01Jan2017, 13:56	5.24

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	438.4	01Jan2017, 13:37	5.35
RIR2.60_1.62	1.3853	1502.1	01Jan2017, 14:21	5.24
RIR3.38	1.0728	1262.1	01Jan2017, 13:51	5.21
RIR3.38A	1.0434	1234.0	01Jan2017, 13:51	5.22
RIR3.38B	0.0294	43.7	01Jan2017, 13:30	5.11
RIR3.38_2.60	1.0728	1245.7	01Jan2017, 14:06	5.21
SHCT0.00	3.0470	2774.8	01Jan2017, 14:00	3.96
SHCT0.00A	0.9966	875.5	01Jan2017, 13:54	3.89
SHCT1.59	2.0504	1923.6	01Jan2017, 13:50	4.00
SHCT1.59A	2.0504	1923.6	01Jan2017, 13:50	4.00
SHCT1.59_0.00	2.0504	1921.1	01Jan2017, 14:02	4.00
SHC0.00	6.4942	4951.8	01Jan2017, 14:56	4.26
SHC0.00A	0.0458	57.8	01Jan2017, 13:40	4.86
SHC0.23	6.4484	5086.8	01Jan2017, 14:47	4.26
SHC0.23A	0.6386	591.2	01Jan2017, 14:24	5.46
SHC0.23_0.00	6.4484	4940.3	01Jan2017, 14:56	4.25
SHC1.60	5.8098	4807.3	01Jan2017, 14:13	4.14
SHC1.60A	0.2628	353.0	01Jan2017, 13:36	4.98
SHC1.60_0.23	5.8098	4556.6	01Jan2017, 14:49	4.13
SHC2.06	5.5470	4695.6	01Jan2017, 14:06	4.10
SHC2.06A	0.2828	274.3	01Jan2017, 13:41	3.66

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	4667.2	01Jan2017, 14:14	4.10
SHC2.56	5.2642	4534.1	01Jan2017, 14:03	4.12
SHC2.56A	0.4506	504.7	01Jan2017, 13:46	4.62
SHC2.56_2.06	5.2642	4526.8	01Jan2017, 14:07	4.12
SHC3.11	1.7666	1433.2	01Jan2017, 14:10	4.27
SHC3.11A	0.2775	426.5	01Jan2017, 13:32	5.59
SHC3.11_2.56	1.7666	1432.8	01Jan2017, 14:15	4.27
SHC3.92	1.4891	1324.2	01Jan2017, 13:54	4.03
SHC3.92A	0.6934	615.7	01Jan2017, 13:50	3.77
SHC3.92B	0.7957	721.1	01Jan2017, 13:59	4.25
SHC3.92_3.11	1.4891	1319.0	01Jan2017, 14:15	4.03
SRT0.50	2.6893	3099.4	01Jan2017, 14:19	5.35
SRT0.50A	0.4294	450.2	01Jan2017, 14:06	5.34
SRT1.29	2.2599	2690.8	01Jan2017, 14:09	5.35
SRT1.29A	0.3191	334.1	01Jan2017, 14:04	5.22
SRT1.29_0.50	2.2599	2671.8	01Jan2017, 14:20	5.35
SRT2.06	1.9408	2374.9	01Jan2017, 13:56	5.37
SRT2.06A	0.4839	592.5	01Jan2017, 13:51	5.47
SRT2.06_1.29	1.9408	2359.4	01Jan2017, 14:09	5.37
SRT2.55	1.4569	1795.9	01Jan2017, 13:51	5.34
SRT2.55A	0.3465	472.9	01Jan2017, 13:40	5.35

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	1791.2	01Jan2017, 13:58	5.34
SRT3.00	1.1104	1396.5	01Jan2017, 13:50	5.34
SRT3.00A	0.7468	913.4	01Jan2017, 13:50	5.34
SRT3.00_2.55	1.1104	1391.7	01Jan2017, 13:57	5.34
SRT3.38	0.3636	484.3	01Jan2017, 13:42	5.35
SRT3.38A	0.3636	484.3	01Jan2017, 13:42	5.35
SRT3.38_3.00	0.3636	483.4	01Jan2017, 13:51	5.35
SSRTA0.00	0.4007	550.9	01Jan2017, 13:48	5.63
SSRTA0.00A	0.2628	358.4	01Jan2017, 13:45	5.71
SSRTA0.59	0.1379	200.4	01Jan2017, 13:37	5.47
SSRTA0.59A	0.1379	200.6	01Jan2017, 13:36	5.47
SSRTA0.59_0.00	0.1379	198.5	01Jan2017, 13:54	5.47
SSRT0.00	1.3182	1657.0	01Jan2017, 13:59	5.54
SSRT0.00A	0.2236	289.0	01Jan2017, 13:47	5.47
SSRT0.46	1.0946	1406.2	01Jan2017, 13:48	5.56
SSRT0.46A	0.1893	280.3	01Jan2017, 13:35	5.59
SSRT0.46_0.00	1.0946	1395.2	01Jan2017, 14:02	5.55
SSRT0.77	0.9053	1209.2	01Jan2017, 13:51	5.55
SSRT0.77A	0.2520	344.2	01Jan2017, 13:43	5.59
SSRT0.77B	0.0603	88.9	01Jan2017, 13:33	5.35
SSRT0.77_0.46	0.9053	1205.2	01Jan2017, 13:56	5.55

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	278.7	01Jan2017, 13:33	5.39
SSRT1.34A	0.1112	158.2	01Jan2017, 13:36	5.35
SSRT1.34B	0.0172	26.6	01Jan2017, 13:30	5.47
SSRT1.34C	0.0236	36.5	01Jan2017, 13:30	5.47
SSRT1.34D	0.0122	18.9	01Jan2017, 13:30	5.47
SSRT1.34E	0.0281	42.8	01Jan2017, 13:31	5.47
SSRT1.34_0.77	0.1923	268.3	01Jan2017, 13:54	5.39
SSR0.00	4.8444	4879.0	01Jan2017, 14:13	5.33
SSR0.00A	0.0601	92.4	01Jan2017, 13:31	5.47
SSR0.22	4.7843	4865.5	01Jan2017, 14:11	5.32
SSR0.22A	0.2501	374.0	01Jan2017, 13:39	5.95
SSR0.22_0.00	4.7843	4861.5	01Jan2017, 14:13	5.32
SSR0.85	4.5342	4680.2	01Jan2017, 14:05	5.29
SSR0.85_0.22	4.5342	4665.2	01Jan2017, 14:12	5.29
SSR0.87	3.2160	3057.1	01Jan2017, 14:08	5.19
SSR0.87A	0.3806	433.5	01Jan2017, 14:01	5.59
SSR1.06	2.8354	2636.4	01Jan2017, 14:05	5.14
SSR1.06A	0.2647	361.5	01Jan2017, 13:43	5.59
SSR1.06_0.87	2.8354	2631.5	01Jan2017, 14:09	5.14
SSR1.71	2.5707	2378.8	01Jan2017, 13:55	5.09
SSR1.71A	0.3665	431.9	01Jan2017, 14:01	5.83

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	2369.6	01Jan2017, 14:08	5.09
SSR1.89	2.2042	1963.2	01Jan2017, 13:50	4.97
SSR1.89A	0.3178	432.3	01Jan2017, 13:46	5.83
SSR1.89B	0.0231	43.6	01Jan2017, 13:30	7.78
SSR1.89_1.71	2.2042	1952.9	01Jan2017, 13:54	4.97
SSR2.33	1.8633	1521.6	01Jan2017, 13:41	4.78
SSR2.33A	0.1750	279.2	01Jan2017, 13:33	5.96
SSR2.33B	0.0381	59.0	01Jan2017, 13:30	5.47
SSR2.33_1.89	1.8633	1514.2	01Jan2017, 13:51	4.78
SSR2.70	1.6502	1292.1	01Jan2017, 13:50	4.64
SSR2.70A	0.4613	583.4	01Jan2017, 13:47	5.34
SSR2.70B	0.0112	17.8	01Jan2017, 13:30	5.59
SSR2.70C	0.0064	12.1	01Jan2017, 13:30	7.90
SSR2.70D	0.0343	48.8	01Jan2017, 13:32	4.98
SSR2.70E	0.4472	628.0	01Jan2017, 13:40	5.59
SSR2.70_2.33	1.6502	1290.5	01Jan2017, 13:57	4.64
SSR3.20	0.6898	543.1	01Jan2017, 13:46	3.50
SSR3.20A	0.1108	146.3	01Jan2017, 13:38	4.98
SSR3.20B	0.2023	280.3	01Jan2017, 13:33	4.98
SSR3.20_2.70	0.6898	541.0	01Jan2017, 13:58	3.50
SSR3.70	0.3767	232.7	01Jan2017, 13:37	2.33

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	232.7	01Jan2017, 13:37	4.50
SSR3.70B	0.1861	225.1	01Jan2017, 13:34	4.26
SSR3.70_3.20	0.3767	231.1	01Jan2017, 13:53	2.33
WOR0.00	2.8951	2855.7	01Jan2017, 14:28	5.22
WOR0.00A	0.0359	53.7	01Jan2017, 13:32	5.35
WOR0.32	2.8592	2855.3	01Jan2017, 14:23	5.22
WOR0.32A	0.1901	212.8	01Jan2017, 13:55	5.10
WOR0.32_0.00	2.8592	2848.0	01Jan2017, 14:28	5.21
WOR0.76	2.6691	2838.5	01Jan2017, 14:09	5.23
WOR0.76A	0.3131	458.3	01Jan2017, 13:38	5.71
WOR0.76_0.32	2.6691	2695.5	01Jan2017, 14:25	5.22
WOR1.59	2.3560	2642.1	01Jan2017, 13:59	5.17
WOR1.59A	0.4536	602.3	01Jan2017, 13:47	5.71
WOR1.59B	0.7600	774.1	01Jan2017, 14:07	5.22
WOR1.59_0.76	2.3560	2607.0	01Jan2017, 14:13	5.17
WOR1.64	1.1424	1324.3	01Jan2017, 14:01	4.93
WOR1.64A	0.2551	331.0	01Jan2017, 13:48	5.59
WOR2.33	0.8873	1077.2	01Jan2017, 13:41	4.75
WOR2.33A	0.3233	399.9	01Jan2017, 13:43	4.98
WOR2.33_1.64	0.8873	1026.0	01Jan2017, 14:04	4.74
WOR3.00	0.5640	679.4	01Jan2017, 13:40	4.62

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	465.6	01Jan2017, 13:43	5.35
WOR3.67	0.2110	217.0	01Jan2017, 13:32	3.42
WOR3.67A	0.2110	217.0	01Jan2017, 13:32	3.42
WOR3.67_3.00	0.2110	216.6	01Jan2017, 13:39	3.42

Project: ChiquesCreek Simulation Run: 500YR

Start of Run: 01Jan2017, 01:00 Basin Model: ExistingConditions
End of Run: 02Jan2017, 13:00 Meteorologic Model: 500YR_24HR
Compute Time: 31Jan2017, 15:27:43 Control Specifications: 24HR_STORM

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BER0.00	1.8478	1937.2	01Jan2017, 14:32	6.04
BER0.00A	0.1087	165.7	01Jan2017, 13:47	7.08
BER0.64	1.7391	1907.8	01Jan2017, 14:12	5.97
BER0.64A	0.3111	521.6	01Jan2017, 13:38	7.21
BER0.64_0.00	1.7391	1856.1	01Jan2017, 14:34	5.97
BER1.05	1.4280	1678.7	01Jan2017, 14:04	5.70
BER1.05A	0.2790	414.8	01Jan2017, 13:50	7.07
BER1.05_0.64	1.4280	1643.2	01Jan2017, 14:18	5.70
BER1.30	1.1490	1322.9	01Jan2017, 13:58	5.37
BER1.30A	0.5289	700.1	01Jan2017, 13:51	6.26
BER1.30_1.05	1.1490	1307.1	01Jan2017, 14:08	5.37
BER1.95	0.6201	656.0	01Jan2017, 13:46	4.60
BER1.95A	0.6201	656.0	01Jan2017, 13:46	4.60
BER1.95_1.30	0.6201	649.6	01Jan2017, 14:04	4.60
BOR0.00	6.6030	7296.6	01Jan2017, 14:29	6.29
BOR0.00A	0.0062	11.3	01Jan2017, 13:30	7.21
BOR0.10	6.5968	7530.4	01Jan2017, 14:26	6.30

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BOR0.10A	0.2331	324.0	01Jan2017, 13:57	7.08
BOR0.10_0.00	6.5968	7295.3	01Jan2017, 14:29	6.29
BOR0.68	1.6208	1870.4	01Jan2017, 14:10	5.64
BOR0.68A	0.2555	379.9	01Jan2017, 13:50	7.07
BOR0.68_0.10	1.6208	1834.6	01Jan2017, 14:26	5.63
BOR1.20	1.3653	1559.8	01Jan2017, 14:00	5.37
BOR1.20A	0.5429	671.0	01Jan2017, 14:03	6.53
BOR1.20_0.68	1.3653	1551.1	01Jan2017, 14:13	5.37
BOR2.07	0.8224	897.8	01Jan2017, 13:43	4.60
BOR2.07A	0.8224	897.8	01Jan2017, 13:43	4.60
BOR2.07_1.20	0.8224	890.6	01Jan2017, 13:59	4.60
CHC10.68	50.2637	17105.5	01Jan2017, 20:37	6.62
CHC10.68A	0.7377	1108.6	01Jan2017, 13:54	7.60
CHC10.68B	0.0477	78.7	01Jan2017, 13:44	7.61
CHC10.68C	0.1180	178.6	01Jan2017, 13:51	7.34
CHC10.68D	0.1638	247.0	01Jan2017, 14:05	8.64
CHC10.68E	0.0528	103.5	01Jan2017, 13:34	8.64
CHC10.68_9.40	50.2637	17066.4	01Jan2017, 20:58	6.59
CHC11.99	49.1437	16981.7	01Jan2017, 20:12	6.61
CHC11.99_10.68	49.1437	16945.0	01Jan2017, 20:39	6.60
CHC12.01	46.4709	16550.3	01Jan2017, 20:28	6.57

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC12.01A	0.1403	253.6	01Jan2017, 13:31	7.21
CHC12.65	46.3306	16760.4	01Jan2017, 20:02	6.60
CHC12.65_12.01	46.3306	16536.1	01Jan2017, 20:28	6.57
CHC12.67	45.3853	16596.3	01Jan2017, 20:08	6.58
CHC12.67A	0.5547	530.5	01Jan2017, 14:53	7.34
CHC13.89	44.8306	16528.3	01Jan2017, 19:45	6.59
CHC13.89_12.67	44.8306	16483.6	01Jan2017, 20:12	6.57
CHC13.90	41.9107	15962.6	01Jan2017, 19:57	6.56
CHC13.90A	2.4712	1111.3	01Jan2017, 18:55	7.14
CHC16.25	39.4395	15191.0	01Jan2017, 16:38	6.57
CHC16.25A	0.7783	706.0	01Jan2017, 15:02	7.33
CHC16.25_13.90	39.4395	14897.5	01Jan2017, 20:04	6.52
CHC17.08	38.6612	15154.0	01Jan2017, 16:09	6.57
CHC17.08A	0.5852	684.3	01Jan2017, 14:25	7.47
CHC17.08B	0.3448	564.7	01Jan2017, 13:59	9.27
CHC17.08_16.25	38.6612	14893.7	01Jan2017, 19:21	6.56
CHC17.73	37.7312	14975.4	01Jan2017, 15:47	6.54
CHC17.73A	0.3870	528.3	01Jan2017, 14:06	7.60
CHC17.73B	0.0626	128.0	01Jan2017, 13:34	9.52
CHC17.73_17.08	37.7312	14687.4	01Jan2017, 19:03	6.54
CHC18.09	37.2816	15054.2	01Jan2017, 15:34	6.53

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC18.09A	0.1663	239.8	01Jan2017, 13:46	6.54
CHC18.09_17.73	37.2816	14767.0	01Jan2017, 15:48	6.53
CHC18.61	36.6951	15319.2	01Jan2017, 15:18	6.54
CHC18.61A	0.5761	900.6	01Jan2017, 13:40	6.67
CHC18.61_18.09	36.6951	14869.2	01Jan2017, 15:34	6.53
CHC19.32	36.1190	15965.0	01Jan2017, 14:56	6.54
CHC19.32_18.61	36.1190	15133.9	01Jan2017, 15:18	6.53
CHC19.35	29.5506	13048.9	01Jan2017, 18:16	6.46
CHC19.35A	0.3523	453.3	01Jan2017, 14:14	7.60
CHC19.35B	0.0175	35.6	01Jan2017, 13:31	8.90
CHC1.28	63.3656	17752.3	01Jan2017, 23:32	6.27
CHC1.28A	0.8402	559.2	01Jan2017, 15:57	6.80
CHC20.02	29.1808	13052.8	01Jan2017, 17:59	6.45
CHC20.02A	0.3588	569.4	01Jan2017, 13:54	8.12
CHC20.02_19.35	29.1808	12961.1	01Jan2017, 18:16	6.44
CHC20.55	28.8220	13114.8	01Jan2017, 17:39	6.43
CHC20.55_20.02	28.8220	12968.8	01Jan2017, 17:59	6.43
CHC20.57	23.2797	11497.7	01Jan2017, 17:49	6.27
CHC20.57A	0.5512	610.3	01Jan2017, 14:46	8.38
CHC21.28	22.7285	11480.5	01Jan2017, 17:13	6.23
CHC21.28A	0.3509	535.3	01Jan2017, 14:02	8.51

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC21.28B	0.0187	38.7	01Jan2017, 13:30	9.15
CHC21.28C	0.0073	10.8	01Jan2017, 13:59	7.87
CHC21.28D	0.0224	43.7	01Jan2017, 13:31	8.13
CHC21.28E	0.0497	84.9	01Jan2017, 13:32	6.81
CHC21.28F	0.1457	260.2	01Jan2017, 13:32	7.21
CHC21.28_20.57	22.7285	11306.4	01Jan2017, 17:50	6.22
CHC21.59	22.1338	11478.7	01Jan2017, 16:59	6.19
CHC21.59A	0.2001	310.3	01Jan2017, 13:51	7.61
CHC21.59B	0.0256	51.4	01Jan2017, 13:32	8.77
CHC21.59C	0.0275	54.9	01Jan2017, 13:30	8.52
CHC21.59D	0.0896	165.9	01Jan2017, 13:32	7.61
CHC21.59_21.28	22.1338	11323.6	01Jan2017, 17:14	6.18
CHC22.01	21.7910	11517.2	01Jan2017, 16:42	6.17
CHC22.01A	1.2726	2267.2	01Jan2017, 13:31	7.06
CHC22.01B	0.0456	88.0	01Jan2017, 13:30	7.87
CHC22.01_21.59	21.7910	11389.2	01Jan2017, 17:00	6.16
CHC23.04	20.4728	11281.9	01Jan2017, 16:20	6.12
CHC23.04A	1.8763	1686.9	01Jan2017, 14:55	6.92
CHC23.04B	0.2164	362.4	01Jan2017, 13:40	7.34
CHC23.04_22.01	20.4728	11204.6	01Jan2017, 16:43	6.11
CHC24.53	18.3801	10395.3	01Jan2017, 15:57	6.03

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC24.53_23.04	18.3801	10190.6	01Jan2017, 16:32	6.02
CHC24.63	18.3801	10395.3	01Jan2017, 15:57	6.03
CHC24.64	11.7771	7769.1	01Jan2017, 16:18	5.88
CHC24.64A	0.2517	236.2	01Jan2017, 14:35	6.27
CHC25.53	11.5254	8746.3	01Jan2017, 15:43	5.93
CHC25.53A	0.6693	861.6	01Jan2017, 14:04	6.94
CHC25.53B	0.0163	27.8	01Jan2017, 13:30	6.54
CHC25.53_24.64	11.5254	7662.3	01Jan2017, 16:19	5.88
CHC26.30	10.8398	8656.7	01Jan2017, 15:25	5.88
CHC26.30A	0.8065	633.8	01Jan2017, 15:17	6.80
CHC26.30_25.53	10.8398	8466.0	01Jan2017, 15:44	5.87
CHC27.38	10.0333	9126.6	01Jan2017, 14:53	5.86
CHC27.38_26.30	10.0333	8025.8	01Jan2017, 15:26	5.81
CHC27.39	3.5391	2837.9	01Jan2017, 14:31	6.14
CHC27.39A	0.3314	456.9	01Jan2017, 13:56	6.94
CHC28.26	3.2077	2632.6	01Jan2017, 14:40	6.06
CHC28.26_27.39	3.2077	2590.5	01Jan2017, 15:01	6.06
CHC28.31	3.2077	2632.6	01Jan2017, 14:40	6.06
CHC28.31A	0.0950	161.0	01Jan2017, 13:35	6.94
CHC28.31B	0.7915	1080.1	01Jan2017, 13:55	6.80
CHC28.67	2.3212	2037.0	01Jan2017, 14:42	5.76

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC28.67A	0.6654	773.8	01Jan2017, 13:56	5.71
CHC28.67_28.31	2.3212	2034.5	01Jan2017, 14:49	5.76
CHC29.91	1.6558	1659.1	01Jan2017, 14:20	5.79
CHC29.91A	0.6097	703.8	01Jan2017, 13:52	5.44
CHC29.91_28.67	1.6558	1644.3	01Jan2017, 14:51	5.78
CHC30.94	1.0461	1180.1	01Jan2017, 14:04	5.98
CHC30.94A	1.0461	1180.1	01Jan2017, 14:04	5.98
CHC30.94_29.91	1.0461	1175.3	01Jan2017, 14:31	5.99
CHC3.39	62.5254	17673.7	01Jan2017, 22:54	6.33
CHC3.39A	1.8419	2526.9	01Jan2017, 13:52	6.65
CHC3.39_1.28	62.5254	17645.9	01Jan2017, 23:34	6.27
CHC4.62	60.6835	18549.3	01Jan2017, 22:07	6.52
CHC4.62A	0.1505	257.3	01Jan2017, 13:35	7.08
CHC4.62B	0.1946	326.7	01Jan2017, 13:37	7.08
CHC4.62_3.39	60.6835	17517.8	01Jan2017, 22:56	6.32
CHC4.97	60.3384	18594.7	01Jan2017, 21:53	6.54
CHC4.97A	0.4693	487.0	01Jan2017, 14:30	6.80
CHC4.97B	0.0580	102.4	01Jan2017, 13:36	7.48
CHC4.97C	0.2012	345.0	01Jan2017, 13:32	6.81
CHC4.97_4.62	60.3384	18518.6	01Jan2017, 22:07	6.51
CHC5.97	59.6099	18543.6	01Jan2017, 21:40	6.56

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CHC5.97A	1.1314	1475.5	01Jan2017, 14:06	7.20
CHC5.97_4.97	59.6099	18520.6	01Jan2017, 21:54	6.53
CHC7.47	58.4785	18474.7	01Jan2017, 21:13	6.60
CHC7.47_5.97	58.4785	18427.8	01Jan2017, 21:41	6.55
CHC7.48	53.6341	17813.8	01Jan2017, 21:24	6.57
CHC7.48A	2.2128	1108.6	01Jan2017, 17:59	7.17
CHC9.40	51.4213	17211.3	01Jan2017, 20:55	6.61
CHC9.40A	1.1576	1377.9	01Jan2017, 14:18	7.20
CHC9.40_7.47	51.4213	17100.6	01Jan2017, 21:35	6.54
DER0.00	2.9199	3271.5	01Jan2017, 14:44	7.03
DER0.00A	0.1924	328.8	01Jan2017, 13:35	7.08
DER0.52	2.7275	3230.0	01Jan2017, 14:33	7.03
DER0.52A	0.5165	802.7	01Jan2017, 13:48	7.34
DER0.52_0.00	2.7275	3214.1	01Jan2017, 14:44	7.03
DER1.10	2.2110	2885.1	01Jan2017, 14:19	6.96
DER1.10A	0.3712	563.8	01Jan2017, 13:50	7.34
DER1.10_0.52	2.2110	2845.7	01Jan2017, 14:38	6.95
DER1.76	1.8398	2486.3	01Jan2017, 14:06	6.90
DER1.76A	0.5078	708.8	01Jan2017, 13:51	6.67
DER1.76_1.10	1.8398	2476.3	01Jan2017, 14:23	6.89
DER2.22	1.3320	1862.0	01Jan2017, 14:02	6.98

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DER2.22A	0.7235	936.6	01Jan2017, 14:01	6.80
DER2.22_1.76	1.3320	1856.4	01Jan2017, 14:12	6.98
DER2.93	0.6085	930.8	01Jan2017, 13:48	7.20
DER2.93A	0.6085	930.8	01Jan2017, 13:48	7.20
DER2.93_2.22	0.6085	926.1	01Jan2017, 14:03	7.20
DORT0.34	1.6920	2320.0	01Jan2017, 14:00	7.10
DORT0.34A	0.0357	63.6	01Jan2017, 13:31	7.08
DORT0.34B	0.0234	41.2	01Jan2017, 13:31	6.94
DORT0.54	1.6329	2288.6	01Jan2017, 13:56	7.11
DORT0.54A	0.2058	333.7	01Jan2017, 13:42	7.21
DORT0.54B	0.0280	42.7	01Jan2017, 13:32	5.86
DORT0.54C	0.0058	11.2	01Jan2017, 13:32	8.13
DORT0.54D	0.0832	129.7	01Jan2017, 13:49	7.47
DORT0.54E	0.0367	66.1	01Jan2017, 13:30	7.08
DORT0.54_0.34	1.6329	2277.8	01Jan2017, 14:01	7.11
DORT1.15	1.2734	1926.6	01Jan2017, 13:48	7.17
DORT1.15A	0.4022	694.4	01Jan2017, 13:37	7.34
DORT1.15B	0.0103	21.4	01Jan2017, 13:30	9.27
DORT1.15_0.54	1.2734	1916.1	01Jan2017, 13:59	7.16
DORT1.58	0.8609	1343.9	01Jan2017, 13:50	7.06
DORT1.58A	0.4931	764.4	01Jan2017, 13:45	7.07

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DORT1.58_1.15	0.8609	1339.1	01Jan2017, 13:58	7.06
DORT2.41	0.3678	612.5	01Jan2017, 13:38	7.03
DORT2.41A	0.2384	392.4	01Jan2017, 13:38	6.94
DORT2.41B	0.1294	221.4	01Jan2017, 13:36	7.21
DORT2.41_1.58	0.3678	608.1	01Jan2017, 13:59	7.04
DOR0.00	5.5423	6239.2	01Jan2017, 14:46	7.11
DOR0.00A	0.0475	85.0	01Jan2017, 13:38	7.87
DOR0.24	5.4948	6368.7	01Jan2017, 14:36	7.10
DOR0.24A	0.1218	208.7	01Jan2017, 13:39	7.47
DOR0.24B	0.1287	208.3	01Jan2017, 13:46	7.61
DOR0.24_0.00	5.4948	6221.1	01Jan2017, 14:46	7.10
DOR0.44A	0.5212	761.9	01Jan2017, 13:56	7.47
DOR0.44_0.24	5.2443	6205.9	01Jan2017, 14:37	7.07
DOR1.21	4.7231	5909.5	01Jan2017, 14:13	7.04
DOR1.21A	0.2430	327.0	01Jan2017, 14:06	7.47
DOR1.21B	0.2037	350.8	01Jan2017, 13:37	7.34
DOR1.21_0.44	4.7231	5728.3	01Jan2017, 14:36	7.03
DOR1.23	4.2764	5403.6	01Jan2017, 14:15	7.14
DOR1.23A	0.2095	346.8	01Jan2017, 13:44	7.60
DOR1.45	4.0669	5197.8	01Jan2017, 14:10	7.11
DOR1.45_1.23	4.0669	5174.2	01Jan2017, 14:16	7.11

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DOR1.60	2.3749	2965.6	01Jan2017, 14:17	7.12
DOR1.60A	0.5501	853.8	01Jan2017, 13:46	7.20
DOR2.40	1.8248	2440.8	01Jan2017, 14:06	7.10
DOR2.40A	0.4594	657.6	01Jan2017, 13:55	7.21
DOR2.40_1.60	1.8248	2418.9	01Jan2017, 14:25	7.10
DOR2.81	1.3654	1826.0	01Jan2017, 14:00	7.06
DOR2.81A	0.2367	372.2	01Jan2017, 13:48	7.47
DOR2.81_2.40	1.3654	1816.2	01Jan2017, 14:10	7.06
DOR3.06	1.1287	1482.5	01Jan2017, 13:56	6.98
DOR3.06A	0.3648	566.0	01Jan2017, 13:45	7.07
DOR3.06B	0.7639	973.7	01Jan2017, 14:05	6.93
DOR3.06_2.81	1.1287	1479.5	01Jan2017, 14:03	6.98
DOR.44	5.2443	6233.9	01Jan2017, 14:33	7.08
ERRR0.57_0.00	1.1576	1590.2	01Jan2017, 14:09	7.49
ERRT0.00	1.2906	1767.5	01Jan2017, 14:07	7.59
ERRT0.00A	0.1098	186.6	01Jan2017, 13:47	8.26
ERRT0.00B	0.0077	15.6	01Jan2017, 13:30	8.64
ERRT0.00C	0.0074	15.5	01Jan2017, 13:30	9.52
ERRT0.00D	0.0036	7.6	01Jan2017, 13:30	9.52
ERRT0.00E	0.0045	9.4	01Jan2017, 13:30	9.52
ERRT0.57	1.1576	1597.3	01Jan2017, 13:59	7.49

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERRT0.57A	0.2788	311.6	01Jan2017, 14:31	7.47
ERRT0.61	0.8788	1344.6	01Jan2017, 13:57	7.50
ERRT0.61A	0.4551	644.4	01Jan2017, 14:01	7.60
ERRT1.62	0.4237	720.4	01Jan2017, 13:32	7.40
ERRT1.62A	0.1546	248.0	01Jan2017, 13:42	7.08
ERRT1.62B	0.2547	472.7	01Jan2017, 13:30	7.47
ERRT1.62C	0.0144	30.2	01Jan2017, 13:30	9.52
ERRT1.62_0.61	0.4237	706.1	01Jan2017, 13:55	7.39
ERR0.00	2.6728	3598.3	01Jan2017, 14:09	7.42
ERR0.00A	0.0718	122.5	01Jan2017, 13:34	6.94
ERR0.00B	0.0053	11.1	01Jan2017, 13:30	9.52
ERR0.23	2.5957	3551.3	01Jan2017, 14:06	7.43
ERR0.23A	0.1922	318.9	01Jan2017, 13:38	7.08
ERR0.23B	0.0298	61.7	01Jan2017, 13:30	9.15
ERR0.23_0.00	2.5957	3540.8	01Jan2017, 14:10	7.43
ERR0.26	1.3051	1787.1	01Jan2017, 14:04	7.28
ERR0.88	1.0831	1574.1	01Jan2017, 13:58	7.27
ERR0.88A	0.5048	674.2	01Jan2017, 14:05	7.34
ERR0.88_0.23	1.0831	1569.2	01Jan2017, 14:09	7.26
ERR1.33	0.5783	918.8	01Jan2017, 13:44	7.20
ERR1.33A	0.5783	918.8	01Jan2017, 13:44	7.20

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ERR1.33_0.88	0.5783	915.1	01Jan2017, 13:55	7.20
LAR0.00	0.9453	988.0	01Jan2017, 14:07	7.48
LAR0.00A	0.5827	627.1	01Jan2017, 14:37	7.47
LAR0.40	0.3626	503.4	01Jan2017, 13:42	7.50
LAR0.40A	0.0039	8.2	01Jan2017, 13:30	9.65
LAR0.40B	0.1091	210.6	01Jan2017, 13:39	9.15
LAR0.40C	0.1251	213.4	01Jan2017, 13:39	7.47
LAR0.40D	0.1245	209.1	01Jan2017, 13:37	7.08
LAR0.40_0.00	0.3626	502.9	01Jan2017, 13:50	7.50
MRT0.00	0.4202	675.1	01Jan2017, 13:50	6.97
MRT0.00A	0.1647	265.7	01Jan2017, 13:40	6.94
MRT0.66	0.2555	439.7	01Jan2017, 13:35	7.03
MRT0.66A	0.2030	363.1	01Jan2017, 13:32	7.21
MRT0.66B	0.0376	69.3	01Jan2017, 13:30	7.34
MRT0.66C	0.0149	28.2	01Jan2017, 13:31	7.74
MRT0.66_0.00	0.2555	434.3	01Jan2017, 13:53	6.98
ORT0.28	0.7836	1212.8	01Jan2017, 13:47	6.83
ORT0.28A	0.1786	285.7	01Jan2017, 13:37	6.67
ORT0.95	0.6050	959.4	01Jan2017, 13:39	6.87
ORT0.95A	0.1851	308.5	01Jan2017, 13:33	6.67
ORT0.95_0.28	0.6050	955.1	01Jan2017, 13:51	6.87

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
ORT1.38	0.4199	677.3	01Jan2017, 13:39	6.95
ORT1.38A	0.1910	320.6	01Jan2017, 13:34	6.81
ORT1.38_0.95	0.4199	675.6	01Jan2017, 13:45	6.95
ORT2.04	0.2289	379.8	01Jan2017, 13:38	7.08
ORT2.04A	0.2289	379.8	01Jan2017, 13:38	7.08
ORT2.04_1.38	0.2289	379.1	01Jan2017, 13:49	7.07
Pond 0	0.1946	312.4	01Jan2017, 13:45	7.08
Pond 1	0.2012	345.0	01Jan2017, 13:32	6.81
Pond 10	0.0122	20.6	01Jan2017, 13:34	6.96
Pond 11	0.0236	42.4	01Jan2017, 13:31	7.08
Pond 12	0.0172	30.9	01Jan2017, 13:31	7.08
Pond 13	0.0603	101.2	01Jan2017, 13:38	6.94
Pond 14	0.1379	235.6	01Jan2017, 13:36	7.08
Pond 15	0.0477	70.9	01Jan2017, 13:59	7.61
Pond 16	0.3346	372.7	01Jan2017, 14:21	7.91
Pond 17	0.0528	18.2	01Jan2017, 15:25	8.64
Pond 18	0.1638	224.5	01Jan2017, 14:24	8.64
Pond 19	0.0053	10.0	01Jan2017, 13:35	9.52
Pond 2	0.0580	100.5	01Jan2017, 13:41	7.12
Pond 20	0.0077	15.6	01Jan2017, 13:30	8.64
Pond 21	0.0298	61.7	01Jan2017, 13:30	9.15

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 22	0.0074	15.5	01Jan2017, 13:30	9.07
Pond 23	0.0036	7.5	01Jan2017, 13:30	9.52
Pond 24	0.0045	8.7	01Jan2017, 13:33	9.52
Pond 25	0.2547	472.2	01Jan2017, 13:31	7.47
Pond 26	0.0144	9.9	01Jan2017, 14:01	9.52
Pond 27	0.1245	81.0	01Jan2017, 14:20	7.07
Pond 28	0.1251	213.1	01Jan2017, 13:41	7.32
Pond 29	0.1091	209.8	01Jan2017, 13:42	8.16
Pond 3	0.1861	31.5	01Jan2017, 18:44	1.58
Pond 30	0.0039	8.1	01Jan2017, 13:31	8.30
Pond 31	0.3448	210.7	01Jan2017, 15:14	8.54
Pond 32	0.0626	74.5	01Jan2017, 14:03	9.52
Pond 33	0.0149	23.1	01Jan2017, 13:40	7.35
Pond 34	0.0376	65.0	01Jan2017, 13:34	5.91
Pond 35	0.0294	50.6	01Jan2017, 13:31	6.68
Pond 36	0.0175	35.5	01Jan2017, 13:32	8.90
Pond 37	0.1287	206.9	01Jan2017, 13:50	7.59
Pond 38	0.2037	338.0	01Jan2017, 13:44	4.48
Pond 39	0.0234	41.0	01Jan2017, 13:32	6.94
Pond 4	0.2023	215.4	01Jan2017, 13:51	6.43
Pond 40	0.0832	99.7	01Jan2017, 14:16	6.38

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 41	0.0058	11.0	01Jan2017, 13:36	8.13
Pond 42	0.0367	64.1	01Jan2017, 13:33	7.08
Pond 43	0.0103	21.4	01Jan2017, 13:31	9.28
Pond 44	0.1294	220.3	01Jan2017, 13:39	7.20
Pond 45	0.1457	255.2	01Jan2017, 13:36	7.21
Pond 46	0.0187	35.6	01Jan2017, 13:34	9.15
Pond 47	0.0275	50.5	01Jan2017, 13:37	8.08
Pond 48	0.0456	87.8	01Jan2017, 13:30	7.12
Pond 49	0.0256	51.4	01Jan2017, 13:32	8.77
Pond 5	0.0343	55.0	01Jan2017, 13:36	6.54
Pond 50	0.0073	10.8	01Jan2017, 14:02	7.79
Pond 51	0.0721	127.5	01Jan2017, 13:34	7.22
Pond 52	0.0497	84.7	01Jan2017, 13:34	6.81
Pond 53	0.0896	165.7	01Jan2017, 13:33	7.61
Pond 54	0.2164	186.1	01Jan2017, 14:18	7.33
Pond 55	0.0163	27.5	01Jan2017, 13:32	6.41
Pond 56	0.0231	48.4	01Jan2017, 13:30	9.53
Pond 57	0.0112	20.5	01Jan2017, 13:30	7.21
Pond 58	0.0280	42.3	01Jan2017, 13:35	5.86
Pond 6	0.4472	156.2	01Jan2017, 14:55	7.21
Pond 7	0.0064	5.9	01Jan2017, 13:54	9.64

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
Pond 8	0.0381	67.8	01Jan2017, 13:32	7.08
Pond 9	0.0281	49.9	01Jan2017, 13:32	7.08
RIR0.00	6.5684	8001.4	01Jan2017, 14:32	6.93
RIR0.00A	0.0647	105.8	01Jan2017, 13:54	8.52
RIR0.32	6.5037	8057.2	01Jan2017, 14:23	6.92
RIR0.32A	0.5587	754.7	01Jan2017, 13:58	6.94
RIR0.32_0.00	6.5037	7931.5	01Jan2017, 14:32	6.92
RIR0.65	5.9450	7458.5	01Jan2017, 14:19	6.92
RIR0.65A	0.1896	348.4	01Jan2017, 13:31	7.47
RIR0.65_0.32	5.9450	7434.3	01Jan2017, 14:25	6.92
RIR0.86	5.7554	7406.1	01Jan2017, 14:16	6.90
RIR0.86A	0.2984	444.8	01Jan2017, 13:48	6.94
RIR0.86_0.65	5.7554	7390.3	01Jan2017, 14:20	6.90
RIR1.24	5.4570	7136.7	01Jan2017, 14:11	6.90
RIR1.24A	0.0980	167.0	01Jan2017, 13:31	6.67
RIR1.24_0.86	5.4570	7086.8	01Jan2017, 14:18	6.90
RIR1.34	5.3590	7092.3	01Jan2017, 14:12	6.91
RIR1.52	4.5754	6198.1	01Jan2017, 14:15	6.92
RIR1.62	1.8861	2457.9	01Jan2017, 14:13	6.89
RIR1.62A	0.5008	678.6	01Jan2017, 14:00	7.07
RIR2.60	1.3853	1843.7	01Jan2017, 13:54	6.82

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
RIR2.60A	0.3125	518.2	01Jan2017, 13:37	6.94
RIR2.60_1.62	1.3853	1825.8	01Jan2017, 14:18	6.82
RIR3.38	1.0728	1515.3	01Jan2017, 13:50	6.79
RIR3.38A	1.0434	1485.5	01Jan2017, 13:50	6.80
RIR3.38B	0.0294	51.1	01Jan2017, 13:30	6.68
RIR3.38_2.60	1.0728	1497.9	01Jan2017, 14:05	6.79
SHCT0.00	3.0470	3493.2	01Jan2017, 14:01	5.38
SHCT0.00A	0.9966	1112.7	01Jan2017, 13:53	5.30
SHCT1.59	2.0504	2421.6	01Jan2017, 13:49	5.42
SHCT1.59A	2.0504	2421.6	01Jan2017, 13:49	5.42
SHCT1.59_0.00	2.0504	2418.1	01Jan2017, 14:04	5.42
SHC0.00	6.4942	6345.2	01Jan2017, 14:53	5.71
SHC0.00A	0.0458	69.6	01Jan2017, 13:39	6.40
SHC0.23	6.4484	6500.4	01Jan2017, 14:44	5.71
SHC0.23A	0.6386	719.9	01Jan2017, 14:23	7.07
SHC0.23_0.00	6.4484	6330.7	01Jan2017, 14:53	5.70
SHC1.60	5.8098	6146.4	01Jan2017, 14:12	5.58
SHC1.60A	0.2628	421.0	01Jan2017, 13:36	6.54
SHC1.60_0.23	5.8098	5839.9	01Jan2017, 14:46	5.56
SHC2.06	5.5470	5989.2	01Jan2017, 14:05	5.53
SHC2.06A	0.2828	346.4	01Jan2017, 13:40	5.03

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SHC2.06_1.60	5.5470	5960.9	01Jan2017, 14:13	5.53
SHC2.56	5.2642	5777.1	01Jan2017, 14:03	5.56
SHC2.56A	0.4506	617.8	01Jan2017, 13:46	6.13
SHC2.56_2.06	5.2642	5767.8	01Jan2017, 14:07	5.56
SHC3.11	1.7666	1833.2	01Jan2017, 14:08	5.73
SHC3.11A	0.2775	496.2	01Jan2017, 13:32	7.21
SHC3.11_2.56	1.7666	1832.5	01Jan2017, 14:13	5.73
SHC3.92	1.4891	1675.5	01Jan2017, 13:54	5.46
SHC3.92A	0.6934	783.7	01Jan2017, 13:50	5.16
SHC3.92B	0.7957	906.1	01Jan2017, 13:58	5.71
SHC3.92_3.11	1.4891	1670.0	01Jan2017, 14:13	5.46
SRT0.50	2.6893	3746.0	01Jan2017, 14:17	6.94
SRT0.50A	0.4294	545.7	01Jan2017, 14:06	6.94
SRT1.29	2.2599	3239.7	01Jan2017, 14:07	6.95
SRT1.29A	0.3191	406.1	01Jan2017, 14:04	6.81
SRT1.29_0.50	2.2599	3219.8	01Jan2017, 14:18	6.94
SRT2.06	1.9408	2851.9	01Jan2017, 13:55	6.97
SRT2.06A	0.4839	708.2	01Jan2017, 13:51	7.07
SRT2.06_1.29	1.9408	2835.0	01Jan2017, 14:08	6.97
SRT2.55	1.4569	2156.2	01Jan2017, 13:50	6.94
SRT2.55A	0.3465	560.9	01Jan2017, 13:39	6.94

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SRT2.55_2.06	1.4569	2150.9	01Jan2017, 13:57	6.94
SRT3.00	1.1104	1669.0	01Jan2017, 13:50	6.94
SRT3.00A	0.7468	1094.3	01Jan2017, 13:49	6.93
SRT3.00_2.55	1.1104	1664.1	01Jan2017, 13:56	6.94
SRT3.38	0.3636	575.8	01Jan2017, 13:41	6.94
SRT3.38A	0.3636	575.8	01Jan2017, 13:41	6.94
SRT3.38_3.00	0.3636	574.9	01Jan2017, 13:50	6.94
SSRTA0.00	0.4007	651.5	01Jan2017, 13:47	7.25
SSRTA0.00A	0.2628	422.7	01Jan2017, 13:44	7.34
SSRTA0.59	0.1379	235.6	01Jan2017, 13:36	7.08
SSRTA0.59A	0.1379	235.7	01Jan2017, 13:35	7.08
SSRTA0.59_0.00	0.1379	233.8	01Jan2017, 13:53	7.08
SSRT0.00	1.3182	2051.8	01Jan2017, 13:57	7.15
SSRT0.00A	0.2236	343.9	01Jan2017, 13:46	7.08
SSRT0.46	1.0946	1757.5	01Jan2017, 13:45	7.17
SSRT0.46A	0.1893	328.3	01Jan2017, 13:35	7.21
SSRT0.46_0.00	1.0946	1728.5	01Jan2017, 13:58	7.17
SSRT0.77	0.9053	1475.2	01Jan2017, 13:45	7.16
SSRT0.77A	0.2520	406.6	01Jan2017, 13:43	7.21
SSRT0.77B	0.0603	104.3	01Jan2017, 13:33	6.94
SSRT0.77_0.46	0.9053	1473.3	01Jan2017, 13:50	7.16

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSRT1.34	0.1923	328.8	01Jan2017, 13:32	6.99
SSRT1.34A	0.1112	186.6	01Jan2017, 13:36	6.94
SSRT1.34B	0.0172	30.9	01Jan2017, 13:30	7.08
SSRT1.34C	0.0236	42.4	01Jan2017, 13:30	7.08
SSRT1.34D	0.0122	21.9	01Jan2017, 13:30	7.08
SSRT1.34E	0.0281	49.9	01Jan2017, 13:31	7.08
SSRT1.34_0.77	0.1923	325.2	01Jan2017, 13:48	7.00
SSR0.00	4.8444	5892.5	01Jan2017, 14:10	6.93
SSR0.00A	0.0601	107.5	01Jan2017, 13:31	7.08
SSR0.22	4.7843	5870.0	01Jan2017, 14:08	6.93
SSR0.22A	0.2501	435.7	01Jan2017, 13:38	7.60
SSR0.22_0.00	4.7843	5865.8	01Jan2017, 14:10	6.93
SSR0.85	4.5342	5621.2	01Jan2017, 14:02	6.89
SSR0.85_0.22	4.5342	5604.3	01Jan2017, 14:09	6.89
SSR0.87	3.2160	3628.9	01Jan2017, 14:07	6.79
SSR0.87A	0.3806	519.7	01Jan2017, 14:01	7.21
SSR1.06	2.8354	3121.0	01Jan2017, 14:04	6.73
SSR1.06A	0.2647	427.1	01Jan2017, 13:43	7.21
SSR1.06_0.87	2.8354	3116.8	01Jan2017, 14:08	6.73
SSR1.71	2.5707	2806.9	01Jan2017, 13:57	6.68
SSR1.71A	0.3665	513.9	01Jan2017, 14:01	7.47

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR1.71_1.06	2.5707	2798.6	01Jan2017, 14:08	6.68
SSR1.89	2.2042	2304.7	01Jan2017, 13:51	6.55
SSR1.89A	0.3178	509.0	01Jan2017, 13:46	7.47
SSR1.89B	0.0231	48.5	01Jan2017, 13:30	9.52
SSR1.89_1.71	2.2042	2296.9	01Jan2017, 13:55	6.55
SSR2.33	1.8633	1786.2	01Jan2017, 13:45	6.36
SSR2.33A	0.1750	322.5	01Jan2017, 13:32	7.61
SSR2.33B	0.0381	68.5	01Jan2017, 13:30	7.08
SSR2.33_1.89	1.8633	1782.6	01Jan2017, 13:54	6.36
SSR2.70	1.6502	1539.2	01Jan2017, 13:49	6.21
SSR2.70A	0.4613	696.9	01Jan2017, 13:46	6.94
SSR2.70B	0.0112	20.5	01Jan2017, 13:30	7.21
SSR2.70C	0.0064	13.5	01Jan2017, 13:30	9.65
SSR2.70D	0.0343	57.6	01Jan2017, 13:31	6.54
SSR2.70E	0.4472	740.0	01Jan2017, 13:40	7.21
SSR2.70_2.33	1.6502	1537.1	01Jan2017, 13:56	6.21
SSR3.20	0.6898	652.4	01Jan2017, 13:45	5.02
SSR3.20A	0.1108	175.0	01Jan2017, 13:37	6.54
SSR3.20B	0.2023	332.7	01Jan2017, 13:33	6.54
SSR3.20_2.70	0.6898	651.0	01Jan2017, 13:55	5.02
SSR3.70	0.3767	282.4	01Jan2017, 13:37	3.81

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
SSR3.70A	0.1906	282.4	01Jan2017, 13:37	5.99
SSR3.70B	0.1861	273.8	01Jan2017, 13:34	5.72
SSR3.70_3.20	0.3767	280.8	01Jan2017, 13:53	3.81
WOR0.00	2.8951	3523.3	01Jan2017, 14:25	6.79
WOR0.00A	0.0359	62.8	01Jan2017, 13:31	6.94
WOR0.32	2.8592	3521.3	01Jan2017, 14:20	6.79
WOR0.32A	0.1901	258.1	01Jan2017, 13:54	6.67
WOR0.32_0.00	2.8592	3513.3	01Jan2017, 14:25	6.78
WOR0.76	2.6691	3469.5	01Jan2017, 14:07	6.81
WOR0.76A	0.3131	536.8	01Jan2017, 13:37	7.34
WOR0.76_0.32	2.6691	3314.2	01Jan2017, 14:21	6.79
WOR1.59	2.3560	3205.4	01Jan2017, 13:58	6.74
WOR1.59A	0.4536	711.9	01Jan2017, 13:47	7.34
WOR1.59B	0.7600	942.6	01Jan2017, 14:06	6.80
WOR1.59_0.76	2.3560	3167.5	01Jan2017, 14:11	6.74
WOR1.64	1.1424	1611.4	01Jan2017, 13:59	6.47
WOR1.64A	0.2551	392.9	01Jan2017, 13:47	7.21
WOR2.33	0.8873	1302.5	01Jan2017, 13:40	6.27
WOR2.33A	0.3233	481.8	01Jan2017, 13:43	6.54
WOR2.33_1.64	0.8873	1247.1	01Jan2017, 14:02	6.26
WOR3.00	0.5640	822.5	01Jan2017, 13:40	6.12

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
WOR3.00A	0.3530	554.1	01Jan2017, 13:42	6.94
WOR3.67	0.2110	271.3	01Jan2017, 13:32	4.75
WOR3.67A	0.2110	271.3	01Jan2017, 13:32	4.75
WOR3.67_3.00	0.2110	270.8	01Jan2017, 13:39	4.75

APPENDIX D



Road Crossings in HEC-RAS Models

HEC-RAS Station	Name	Details
Chiques Creek		
160193	Private Drive	Triple 36" round CMP pipes in concrete headwall.
157883	PA Turnpike	Single 16.0 ft. wide by 10.0 ft. high concrete arch in concrete headwall.
151421	Cider Press Road	Single span concrete/stone bridge with stone headwall. Total span is 15.0 feet.
149524	Pinch Road	Single span concrete bridge with concrete headwall. Total span is 16.0 feet.
146191	Private Drive	Single 10 ft. round corrugated metal pipe projecting from fill.
146071	Private Drive	Single span concrete bridge with concrete headwall. Total span is 14.0 feet.
138875	Lebanon Road	Single span concrete bridge with concrete headwall. Total span is 58 feet.
129492	Elizabethtown Rd	Main opening data is a single span concrete bridge with span of 13.0 feet. Right bank culvert three 6.0' x 4.0' CMP ellipses, headwall upstream, projecting from fill downstream.
127172	Private Drive	Dual span cast-in-place irregular concrete bridge, total span is 27.0 feet. Irregular concrete pier, 4 ft. at bottom, 1 ft. at top.
124003	Aband. Railroad	Single span metal bridge. Skewed opening size is 36.0 feet.
121646	Hernley Road	Single span concrete bridge with stone headwall. Total span is 38.0 feet.
116569	Aband. Railroad	Multi-span concrete/metal bridge/ Total span is 119 feet. Three piers. Center pier is 4.0' round concrete pier. Others are 2.5 ft. triangular nosed concrete piers.
116189	Hamaker Road	Single span concrete bridge with concrete headwall. Total span is 46.0 feet.
113967	Shearers Bridge	Single span wooden bridge. Total span is 70.0 feet. Erected 1971.
112443	Weir	Single concrete weir, 3 ft.wide.
112338	High Street	Total span is 96.0 feet. Two 3.0' traingular nosed piers.
110532	Oak Street	Single span concrete/metal bridge with metal truss. Total span is 42.0 feet.
109700	Steigel Street	Total span is 50 feet skewed. 2.0' triangular nosed pier.
109032	Railroad	Dual span metal/wood bridge with 9.0'-10.0' stone pier. Total span is 130 feet. Built in 1926.
108342	Fruitville Pike	Dual span concrete bridge on skew. Total opening is 112 feet wide. 3.0 feet round pier in center.
107908	Main Street	Dual span concrete bridge with 3.0' triangular nosed pier. Total span is 123.0 feet, skewed. Built in 1954.
105700	Eby Street	Single span concrete bridge with concrete headwalls. Total span is 47.0 feet.
103385	Railroad	Single span metal/concrete bridge. Total span is 61.0 feet.
101750	Rettew Lane	Dual span concrete bridge. Total span is 103 feet. 3.0' round concrete pier.
98254	Sun Hill Road	Single span wood covered bridge. Total span is 83.0 feet. Built in 1874.
95505	Mill Road	Single span perched concrete bridge. Total span is 60.0 feet.
93607	Private Drive	Single span perched wood bridge. Total span is 32.5 feet.
90194	Auction Road	Single span arched concrete bridge. Total span is 68.0 feet.
86023	Weir	Single stone/ concrete weir, 2 ft.wide.
86011	Footbridge	Single span metal bridge, total span at top is 55.5 feet.
85783	Colebrook Road	Dual span concrete bridge, total span is 124.0 feet. 4.0' hammerhead pier. Culvert on left low lying area is a 24" CMP projecting from fill.
72393	Erisman Road	Single span wood covered bridge. Total span is 75.0 feet. Stone headwalls.
62886	Footbridge	Single span wood bridge.
62032	U.S. Route 283	Concrete arch modeled as culvert, 98 ft. wide by 20.0 feet high.
60291	Weir	Single stone/ concrete weir, 3 ft.wide.
60065	Chiques Road	Concrete arch. Span is 58 feet, height is 17 ft. upstream and 17.5 ft. downstream. Concrete headwalls. Built in 1921.
57147	Old Harrisburg Pike	Dual span concrete bridge. Total span is 92.0 feet. 3.0' triangular nosed pier in center.
56354	Railroad	Twin stone arches. Left arch is 60 ft. wide by 28' high. Right arch is 60' wide by 34' high. Stone 90-degree headwalls.
51577	Weir	ingle stone/ concrete weir, 4 ft.wide.
51305	Eby Chiques Rd	Dual span stone/concrete bridge with concrete headwalls. Total span is 81.0 ft. Pier is circular, 2.0' wide.
49631	Newcomer Road	Dual span concrete bridge with concrete headwalls. Total span is 75.0 ft. Pier is circular, 3.0' wide.
39875	Weir	Single stone/ concrete weir, 4 ft.wide.
39551	Garfield Road	Main opening is single span concrete bridge, total span is 81.5 ft. Built in 2011. Right bank culvert is twin 5.0' round concrete pipes in concrete headwall.
38829	Old Mill Building	Upstream is 14' x 6.5' concrete box, changes to 14.0' x 7.0' stone arch, modeled as downstream since opening is smaller. Building over culvert.
38616	Garfield Road	Dual span concrete bridge with concrete headwalls. 3.0' triangular nosed pier. Total span is 74.0 ft.
32803	Weir	Single stone/ concrete weir, 2 ft.wide.
32240	Weir	Single stone/ concrete weir, 2 ft.wide.
31530	Siegrist Road	Single span wood truss bridge with stone headwalls. Total span in 88.1 ft. Built in 1885.
24369	Bridge Valley Rd	Single span wood truss bridge with stone headwalls. Total span in 88.0 ft. Built in 1869.
17869	Kinderhook Road	Twin span concrete bridge on skew. Flow total opening is 102.0 feet, with 2.5 ft. concrete hammerhead pier in center
17247	Weir	Single concrete weir, 3 ft.wide. 10 ft. low flow notch in center.
6380	Marietta Avenue	Dual span concrete bridge with concrete headwalls. Total span is 102.5 feet. Pier in center is 3.0' to 2.5' triangular nosed. Built in 1941.
959	Chiques Hill Rd	Twin span concrete bridge on skew. Flow total opening is 72.6 feet, with 4 ft. concrete pier in center. Unskewed opening is 204.0 feet. Old abutments to remain.
555	River Trail	Triple span concrete bridge with two tiangular nosed piers. Total span is 110.8 ft. Piers are 5.0' at base and 2.5' at top. On right bank, 7.5' by 7.5' concrete opening. Built in 2014.
128	Railroad	Triple span stone arches with 6.0' wide traingular nosed piers. Arches are 39.0 feet wide and 22.0 feet high in center, 10 ft. higher at piers.
Behm Run		

HEC-RAS Station	Name	Details
7928	Private Drive	Two 30" HDPES and one 6" PVC pipes projecting from fill.
6795	Mountain Road	Single 9.8' span concrete bridge with 45 degree concrete headwalls.
6647	Private Drive	Single 36" RCP projecting from fill.
5484	Abandoned Railroad	Single concrete arch, odd shape, 15'x10'. Mitered to fill slope.
3341	Newport Road	Single 24'x3.5' concrete box culvert with 45 degree concrete headwalls.
Boyers Run		
6321	Private Drive	Two CMP pipes projecting from fill (one 34"x30" ellipse and one 18" circular).
3581	Boyer Road	Single 6.5'x5.0' CMP ellipse projecting from fill with flared end section.
1910	Abandoned Railroad	Single span 15.0'x10.0' concrete bridge with 90 degree concrete headwall and a 6.0'x7.0' concrete box culvert with a 90 degree concrete headwall.
774	Newport Road	Single span 12.0'x5.0' concrete bridge with 45 degree concrete headwalls.
Dellinger Run		
11660	Fairview Road	Single span 25.0'x7.0' bridge with 180 degree concrete headwalls.
10930	Private Drive	Single span 20.0'x4.5' bridge with concrete headwalls.
9216	Mount Joy Road	Single 6.0'x3.0' CMP arch projecting from fill.
5776	Weaver Road	Single span 11.5'x5.5' concrete bridge with 90 degree concrete headwalls.
89	Auction Road	Single 30.0'x5.0' concrete box culvert with 180 degree concrete headwalls.
Doe Run		
14800	Private Drive	Twin 36"x32" CMP ellipses in concrete headwall.
12584	Doe Run Road	Single 9.5'x5.5' concrete box culvert in 45 degree concrete headwalls.
8382	Private Drive	Single 8.5' span concrete bridge with straight concrete headwalls.
6415	Penryn Road	Four 6.0'x4.8' CMP ellipses in concrete headwall. On left bank, twin 3.0'x2.0' CMP ellipses with concrete headwall on upstream side, projecting from fill on downstream side.
2289	Private Drive	PSingle 10.0' span concrete bridge with straight concrete headwalls. 48" cast iron pipe projecting from fill on left bank.
1232	Oak Street	Single 19.0' span concrete bridge with 45 degree concrete headwall. On left bank, 5.5'x3.0' CMP ellipse projecting from fill.
1125	Railroad	Dual span concrete bridge with concrete headwalls. Total span 26.5', skewed.
962	Railroad	Dual span concrete bridge with 45 degree concrete headwalls. Total span 26.0', skewed.
Doe Run Tributary		
6025	Cool Spring Road	Single 12.0' span concrete bridge with 45 degree concrete headwalls.
1746	Doe Run Road	Single 22.0' span concrete bridge with 45 degree concrete headwalls.
Erisman Run		
6759	Mount Joy Road	Single 62"x43" CMP ellipse projecting from fill.
6570	Private Drive	Single 15.8' span concrete bridge with metal rail.
4618	Rohrer Road	Single 40"x26" CMP ellipse projecting from fill.
87	Auction Road	Single 10.0'x5.0' concrete box culvert with 45 degree concrete headwalls.
Orchard Road Tributary		
7250	Private Drive	Single 36" CMP, switches to 30" smooth HDPE on downstream side.
5310	Private Drive	Estimated single 4.0'x3.0' concrete box culvert with 45 degree headwalls.
1428	Old Line Road	Single 12.0'x7.0' concrete box culvert with 45 degree headwalls.
957	Hernley Road	Single 12.0'x6.0' concrete box culvert with headwall.
Rife Run		
13683	Rife Run Road	Single 20' x 9' CMP arch culvert in concrete headwall. Concrete bottom with 0.3 ft. low flow notch.
8509	Hernley Road	Single 19.5' x 5.0' concrete box culvert in concrete headwall.
6486	Private Drive	Single span concrete bridge. Total span is 18 ft.
4479	Old Line Road	Single span concrete bridge. Total span is 39 ft.
1683	High Street	Dual span concrete bridge with 2.5 ft. triangular nosed pier. Total span is 59.5 feet.
546	Footbridge	Wood bridge, total span is 135 ft. Center pier is 16 ft. wide mound of dirt/stone. Right bank, six 0.7 ft. round wood piers.
Shearers Creek		
10769	Pennsylvania Turnpike	Single 47.44'x17.0' concrete arch culvert with concrete headwalls.
9658	Private Drive	Estimated single 16.0' span concrete bridge with 45 degree concrete headwalls.
8429	Mountain Road	Single 24.0' span concrete bridge with 45 degree concrete headwalls.
1173	Lebanon Road	Single 59.0' span concrete bridge with 45 degree concrete headwalls.
Shumaker Road Tributary		
15482	Private Drive	Two CMP pipes (one 18" and one 24") projecting from fill.
13462	Private Drive	Single 8.5' span concrete bridge with concrete headwalls.
11080	Private Drive	Single 8.5' span concrete bridge with concrete headwalls and concrete rail.
8497	Private Drive	Twin 60" RCPs in 45 degree concrete headwalls.
4409	Shumaker Road	Single 26.0' span concrete bridge with 180 degree concrete headwalls.
226	Hernley Road	12.0'x6.0' concrete box culvert with 180 degree headwalls.

HEC-RAS Station	Name	Details
Silver Spring Run		
14017	Marietta Avenue	Single 14.0'x4.8' concrete box culvert in 45 degree concrete headwall.
13812	Private Drive	Single 9.5'x3.3' concrete box culvert in concrete headwall. Grate on top.
12066	Silver Spring Road	Single 8.0' span concrete box culvert. Height 3.0' on upstream side, 4.0' on downstream.
9722	Meadow Spring Road	Twin concrete arches in concrete headwalls. one 5.5'x3.0', another 4.0'x2.5' (2.0' high on downstream side)
8652	Silver Spring Road	Concrete arch in concrete headwalls, 5.5'x4.0' (5.0' high on downstream side).
5576	Private Drive	Main culvert is a 48" cast iron culvert in stone headwalls. Far right bank culvert is a 24" smooth HDPE with flared end section.
1164	Private Drive	Dual span stone/concrete bridge with stone headwalls. Total span in 24.5'.
346	Prospect Road	22.5'x10.0' concrete box culvert with 45 degree headwalls.
Silver Spring Run Tributary		
2428	Eby Chiques Road	Single 10.0'x4.3' concrete box culvert with concrete rail and 45 degree headwalls.
1763	Private Drive	Single perched 48" crushed cast iron circular culvert.
181	Quarry Road	Single 8.0' span concrete bridge with straight concrete headwall.
White Oak Run		
8632	Airy Hill Road	Single 10' span concrete bridge with 45 degree concrete headwalls.
8374	Locust Grove Road	Single 7.5' span concrete bridge with 45 degree concrete headwalls.
6779	Private Drive	Twin 5.0' cast iron pipes projecting from fill.
3996	Gish Road	Single 10.0'x4.0' concrete box culvert in straight concrete headwalls.
1649	Abandoned Railro	Double 10.0'x9.5' concrete box culvert in concrete headwalls.
501	Newport Road	Single 16.0'x3.0' concrete box culvert with 45 degree concrete headwalls.

APPENDIX E



HEC-RAS Modeling Notes

CHIQUES CREEK FLOOD RESILIENCY STUDY
HEC-RAS MODELING NOTES

Behm Run

- Bridge 5484- Secondary culvert on left bank not included due to area being ineffective flow.

Boyers Run

- None

Chiques Creek

- Bridge 959- All data from PENNDOT construction plans S-34756 dated August 2015, as bridge was under construction at time of study.

Dellinger Run

- None

Doe Run

- None

Doe Run Tributary

- None

Erisman Run

- None

Orchard Road Tributary

- None

Rife Run

- From XS 112-1575, elevation data from "Grading Plan-Logan Park-Rife Run Floodplain Restoration", completed after DEM development.

- Bridge 8509- Right bank culvert not included as it is ineffective flow.

Shearers Creek

- None

Shearers Creek Tributary

- None

Shumaker Road Tributary

- None

Silver Spring Run

- None

Silver Spring Run Tributary

- None

APPENDIX F



Floodway Data Tables

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
60	60	236	4,670	3.6	258.7	255.4[2]	255.4	0.0
164	164	209	3,504	5.2	258.7	255.6[2]	255.6	0.0
517	517	478	3,794	4.2	258.7	256.1[2]	256.1	0.0
607	607	568	3,995	4.0	258.7	257.0[2]	257.0	0.0
858	858	265	2,172	8.3	258.7	257.2	257.2	0.0
1076	1,076	266	2,685	6.5	259.0	259.0	259.0	0.0
1604	1,604	362	3,913	3.9	261.1	261.1	261.2	0.1
2230	2,230	261	2,903	5.2	261.6	261.6	261.7	0.1
2938	2,938	243	2,909	5.2	262.2	262.2	262.4	0.2
3357	3,357	407	4,269	3.5	263.1	263.1	263.3	0.2
3914	3,914	343	3,619	4.2	263.4	263.4	263.7	0.3
4400	4,400	324	3,776	4.0	264.5	264.5	264.7	0.2
4908	4,908	353	3,936	3.8	264.8	264.8	265.1	0.3
5439	5,439	504	5,211	2.9	265.3	265.3	265.6	0.3
5905	5,905	528	5,350	2.8	265.5	265.5	265.8	0.3
6339	6,339	125	1,876	8.1	265.5	265.5	265.8	0.3
6424	6,424	125	1,908	8.1	265.9	265.9	266.2	0.3
6904	6,904	218	2,174	4.9	267.4	267.4	267.6	0.2
7474-18906[3]								
19596	19,596	312	3,448	3.1	291.3	291.3	291.4	0.1
19986	19,986	351	3,857	2.7	291.5	291.5	291.7	0.2

[1] Feet above confluence with the Susquehanna River

[2] Elevation computed without consideration of backwater effects from the Susquehanna River

[3] Floodway not computed/shown for this cross section

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
20444	20,444	444	4,981	2.1	291.7	291.7	291.9	0.2
20967	20,967	482	4,855	2.2	291.8	291.8	292.0	0.2
21510	21,510	466	4,232	2.5	292.0	292.0	292.2	0.2
22151	22,151	124	1,218	9.1	292.1	292.1	292.2	0.1
22799	22,799	552	5,329	2.1	293.4	293.4	293.6	0.2
23311	23,311	637	6,160	1.8	293.5	293.5	293.7	0.2
23791	23,791	543	4,535	2.4	293.5	293.5	293.8	0.3
24340	24,340	382	3,621	3.1	293.7	293.7	293.9	0.2
24861	24,861	315	3,435	3.2	294.1	294.1	294.4	0.3
25270	25,270	323	3,380	3.3	294.3	294.3	294.6	0.3
25611	25,611	457	3,949	2.8	294.5	294.5	294.8	0.3
26232	26,232	446	3,907	2.8	294.8	294.8	295.1	0.3
26867	26,867	200	1,931	5.8	294.9	294.9	295.1	0.2
27201	27,201	124	1,453	7.7	295.1	295.1	295.4	0.3
27842	27,842	158	1,610	6.9	296.4	296.4	296.7	0.3
28138	28,138	161	1,775	6.3	297.1	297.1	297.5	0.4
28854	28,854	159	1,778	6.2	298.5	298.5	298.8	0.3
29605	29,605	168	2,145	5.2	299.7	299.7	300.0	0.3
30092	30,092	231	2,550	4.4	300.4	300.4	300.7	0.3
30447	30,447	248	2,335	4.7	300.7	300.7	300.9	0.2
31043	31,043	172	1,916	5.8	301.6	301.6	301.9	0.3

[1] Feet above confluence with the Susquehanna River

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
31498	31,498	301	2,997	3.7	302.7	302.7	303.1	0.3
31558	31,558	301	2,634	4.2	303.0	303.0	303.4	0.4
32117	32,117	258	2,586	4.3	303.6	303.6	304.0	0.4
32599	32,599	159	1,595	7.0	304.3	304.3	304.7	0.4
32982	32,982	175	1,601	6.9	305.6	305.6	305.9	0.3
33479	33,479	181	1,895	5.9	308.0	308.0	308.3	0.3
34203-51257[2]								
51405	51,405	249	1,941	5.3	328.0	328.0	328.4	0.4
51607	51,607	210	2,115	4.9	328.3	328.3	328.6	0.3
52053	52,053	158	1,814	5.7	328.7	328.7	329.0	0.3
52504	52,504	153	1,804	5.7	329.1	329.1	329.4	0.3
53049	53,049	156	1,969	5.2	329.8	329.8	330.2	0.4
53408	53,408	234	2,583	4.0	330.3	330.3	330.7	0.4
54021	54,021	220	2,375	4.3	330.7	330.7	331.0	0.3
54720	54,720	258	2,535	4.0	331.5	331.5	331.8	0.3
55196	55,196	156	1,715	5.9	331.6	331.6	331.9	0.3
55590	55,590	110	1,346	7.6	331.9	331.9	332.3	0.4
56104	56,104	169	1,908	5.3	333.4	333.4	333.7	0.3
56527	56,527	186	2,204	4.6	334.8	334.8	335.0	0.2
57093	57,093	116	1,537	6.6	335.1	335.1	335.4	0.3
57310	57,310	173	2,157	4.7	335.6	335.6	335.9	0.3

[1] Feet above confluence with the Susquehanna River

[2] Floodway not computed/shown for this cross section

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
57843	57,843	177	2,178	4.6	336.3	336.3	336.5	0.2
58180	58,180	244	2,959	3.4	336.7	336.7	337.0	0.3
58785	58,785	159	1,771	5.7	336.9	336.9	337.2	0.3
59174	59,174	233	2,756	3.7	337.8	337.8	338.0	0.2
59728	59,728	196	2,310	4.4	338.1	338.1	338.4	0.3
60017	60,017	84	1,159	8.8	338.1	338.1	338.4	0.3
60102	60,102	95	1,506	6.7	340.1	340.1	340.2	0.1
60316	60,316	177	1,550	6.5	340.7	340.7	341.3	0.6
60983	60,983	219	2,034	5.0	342.9	342.9	343.3	0.4
61505	61,505	294	2,854	3.5	343.8	343.8	344.2	0.4
61952	61,952	130	1,465	6.9	344.1	344.1	344.5	0.4
62214	62,214	243	2,977	3.4	345.9	345.9	346.3	0.4
62746	62,746	237	2,455	4.1	346.3	346.3	346.6	0.3
62907	62,907	209	2,124	4.8	346.7	346.7	346.9	0.2
63117	63,117	305	3,415	3.0	347.5	347.5	347.8	0.3
63503	63,503	438	5,105	1.9	347.8	347.8	348.1	0.3
64167	64,167	267	2,922	3.4	348.1	348.1	348.3	0.2
64890	64,890	297	3,343	3.0	348.5	348.5	348.7	0.2
65468	65,468	168	2,080	4.8	348.5	348.5	348.8	0.3
65875	65,875	320	3,390	3.0	349.0	349.0	349.3	0.3
66256	66,256	190	2,134	4.7	349.1	349.1	349.3	0.2

[1] Feet above confluence with the Susquehanna River

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
66848	66,848	355	3,856	2.6	349.7	349.7	349.9	0.2
67426	67,426	207	2,160	4.6	349.8	349.8	350.0	0.2
68109	68,109	318	2,706	3.7	350.4	350.4	350.7	0.3
68451	68,451	418	3,670	2.7	350.8	350.8	351.0	0.2
69178	69,178	188	1,917	5.2	351.0	351.0	351.2	0.2
69765	69,765	187	1,834	5.4	351.9	351.9	352.1	0.2
70292	70,292	314	2,568	3.9	352.7	352.7	352.9	0.2
70874	70,874	299	3,022	3.3	353.5	353.5	353.8	0.3
71231	71,231	376	3,485	2.8	354.0	354.0	354.3	0.3
71785	71,785	429	3,431	2.9	354.4	354.4	354.6	0.2
72364	72,364	291	2,055	4.8	354.8	354.8	355.0	0.2
72423	72,423	325	2,559	3.9	355.3	355.3	356.0	0.7
73063	73,063	500	4,750	2.1	355.9	355.9	356.6	0.7
73520	73,520	461	3,747	2.5	356.0	356.0	356.7	0.7
74090	74,090	286	2,031	4.7	356.4	356.4	356.9	0.5
74615	74,615	286	2,222	4.3	357.2	357.2	357.7	0.5
75192	75,192	487	3,708	2.6	358.4	358.4	358.7	0.3
75873	75,873	348	2,418	3.9	358.9	358.9	359.2	0.3
76630	76,630	291	2,550	3.7	360.4	360.4	360.7	0.3
77271	77,271	289	2,589	3.7	361.2	361.2	361.6	0.4
78047	78,047	802	5,960	1.6	361.9	361.9	362.2	0.3

[1] Feet above confluence with the Susquehanna River

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
78613	78,613	853	5,909	1.6	362.0	362.0	362.3	0.3
79236	79,236	526	4,083	2.3	362.2	362.2	362.6	0.4
79584	79,584	451	3,313	2.9	362.4	362.4	362.7	0.3
80097	80,097	302	2,178	4.4	362.8	362.8	363.1	0.3
80537	80,537	286	2,385	4.0	363.5	363.5	363.8	0.3
80918	80,918	327	2,070	4.6	363.9	363.9	364.1	0.2
81362	81,362	425	2,769	3.4	365.1	365.1	365.3	0.2
81743	81,743	312	2,485	3.8	365.4	365.4	365.6	0.2
82179	82,179	358	2,803	3.4	365.9	365.9	366.1	0.2
82723	82,723	378	2,842	3.4	366.5	366.5	366.7	0.2
83090	83,090	238	2,288	4.2	367.1	367.1	367.3	0.2
83678	83,678	449	3,657	2.6	368.1	368.1	368.3	0.2
84028	84,028	322	2,621	3.6	368.3	368.3	368.6	0.3
84497	84,497	358	3,171	3.0	369.1	369.1	369.3	0.2
84892	84,892	350	3,413	2.8	369.5	369.5	369.7	0.2
85279	85,279	773	6,430	1.6	369.8	369.8	370.0	0.2
85737	85,737	872	6,695	1.6	369.8	369.8	370.1	0.3
85828-104213 [2]								
104871	104,871	431	4,343	1.7	395.1	395.1	395.3	0.2
105184	105,184	350	3,566	2.1	395.2	395.2	395.4	0.2
105669	105,669	566	5,177	1.5	395.4	395.4	395.5	0.1

[1] Feet above confluence with the Susquehanna River

[2] Floodway not computed/shown for this cross section

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
106103	106,103	541	3,137	2.4	395.5	395.5	395.6	0.1
106584	106,584	356	2,924	2.6	395.7	395.7	395.8	0.1
107182	107,182	440	2,395	3.2	396.0	396.0	396.2	0.2
107475	107,475	640	3,458	2.5	396.5	396.5	396.7	0.2
107950	107,950	782	3,230	2.4	396.9	396.9	397.3	0.4
108295	108,295	579	3,655	2.1	397.3	397.3	397.6	0.3
108384	108,384	657	4,449	1.7	397.5	397.5	397.8	0.3
108987	108,987	326	1,850	3.6	397.5	397.5	397.8	0.3
109060	109,060	346	2,275	2.9	398.9	398.9	399.1	0.2
109541	109,541	488	3,676	1.8	399.1	399.1	399.3	0.2
109993	109,993	458	3,456	1.9	399.1	399.1	399.4	0.3
110423	110,423	442	2,650	2.5	399.2	399.2	399.5	0.3
110853	110,853	118	777	8.6	399.3	399.3	399.6	0.3
111366	111,366	233	1,571	6.0	400.6	400.6	400.9	0.3
111765	111,765	458	3,604	3.1	401.9	401.9	402.2	0.3
112299	112,299	253	1,890	3.5	402.5	402.5	402.8	0.3
112411-137089 [2]								
137552	137,552	376	2,620	2.1	439.6	439.6	439.8	0.2
138163	138,163	457	2,572	2.1	440.2	440.2	440.4	0.2
138644	138,644	488	2,602	2.1	440.5	440.5	440.8	0.3
138830	138,830	213	1,201	4.4	441.6	441.6	442.0	0.4

[1] Feet above confluence with the Susquehanna River

[2] Floodway not computed/shown for this cross section

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
138937	138,937	213	1,837	2.9	443.7	443.7	444.2	0.5
139650	139,650	413	3,135	1.7	443.9	443.9	444.6	0.7
139930	139,930	374	2,709	2.0	444.0	444.0	444.7	0.7
140437	140,437	306	2,147	2.5	444.4	444.4	445.0	0.6
140990	140,990	331	2,313	2.3	445.3	445.3	445.7	0.5
141364	141,364	361	2,659	2.0	446.0	446.0	446.5	0.5
141692	141,692	232	1,672	3.2	446.6	446.6	447.0	0.4
142035	142,035	239	1,877	2.8	447.5	447.5	447.8	0.3
142662	142,662	324	2,507	2.1	448.4	448.4	448.7	0.3
143120	143,120	327	2,419	2.2	449.0	449.0	449.2	0.2
143688	143,688	377	2,642	2.0	449.8	449.8	450.1	0.3
144197	144,197	451	2,721	2.1	450.3	450.3	450.6	0.3
144562	144,562	429	2,478	2.3	450.8	450.8	451.0	0.2
145076	145,076	329	1,655	1.1	451.5	451.5	451.7	0.2
145470	145,470	286	1,388	1.3	451.6	451.6	451.9	0.3
146092-163433[2]								

[1] Feet above confluence with the Susquehanna River

[2] Floodway not computed/shown for this cross section

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE [1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
412	412	493	1,914	3.0	392.8	387.9[2]	388.0	0.1
825	825	188	1,131	4.9	392.8	388.5[2]	388.7	0.2
1395	1,395	359	1,923	2.9	392.8	389.5[2]	389.9	0.4
1636	1,636	222	783	7.0	392.8	389.4[2]	389.8	0.4
1745	1,745	226	1,339	4.1	392.8	391.6[2]	392.3	0.7
2146	2,146	355	1,984	2.6	392.8	392.1[2]	392.9	0.8
2600	2,600	416	1,807	2.8	392.8	392.5[2]	393.2	0.7
3085	3,085	269	1,115	4.6	393.6	393.6	394.1	0.5
3520	3,520	229	969	5.3	395.1	395.1	395.6	0.5
3947	3,947	226	905	5.6	396.6	396.6	397.1	0.5
4444	4,444	261	777	6.6	399.1	399.1	399.2	0.1
4532	4,532	208	2,324	2.2	405.3	405.3	406.0	0.7
5004	5,004	296	2,312	2.2	405.5	405.5	406.2	0.7
5457	5,457	264	1,601	3.2	405.9	405.9	406.6	0.7
6022	6,022	182	1,130	4.5	407.1	407.1	407.6	0.5
6457	6,457	249	1,284	3.9	408.4	408.4	409.0	0.6
6512	6,512	249	1,822	2.7	410.1	410.1	410.9	0.8
6926	6,926	347	2,112	2.3	410.4	410.4	411.2	0.8
7472	7,472	277	1,358	3.2	410.8	410.8	411.5	0.7
7912	7,912	203	931	4.6	411.5	411.5	412.1	0.6
8478	8,478	135	491	3.5	412.6	412.6	413.2	0.6
8536-17813[3]								

[1] Feet above confluence with Chiques Creek

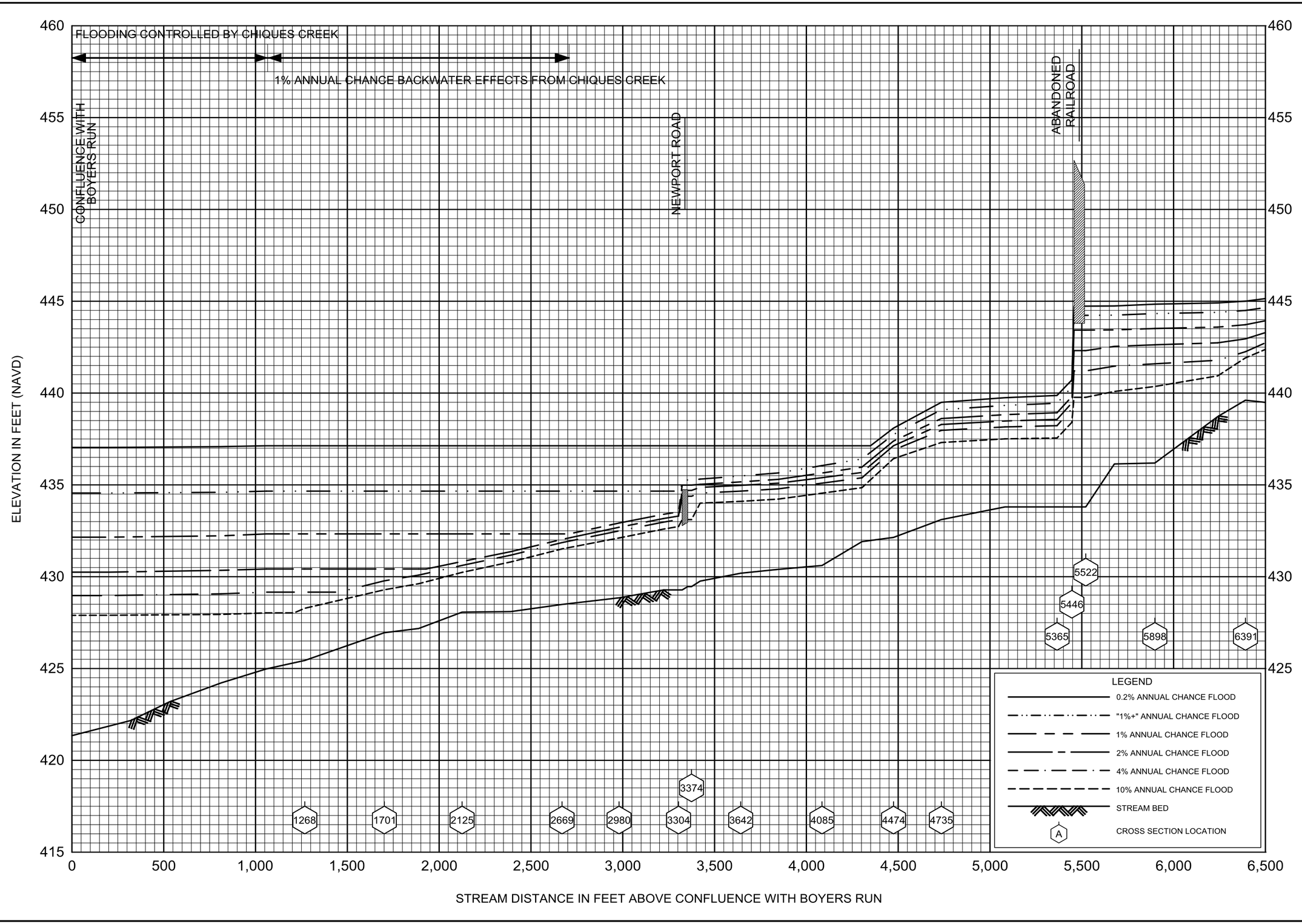
[2] Elevation computed without consideration of backwater effects from Chiques Creek

[3] Floodway not computed/shown for this cross section

APPENDIX G



Flood Profiles



FLOOD PROFILES

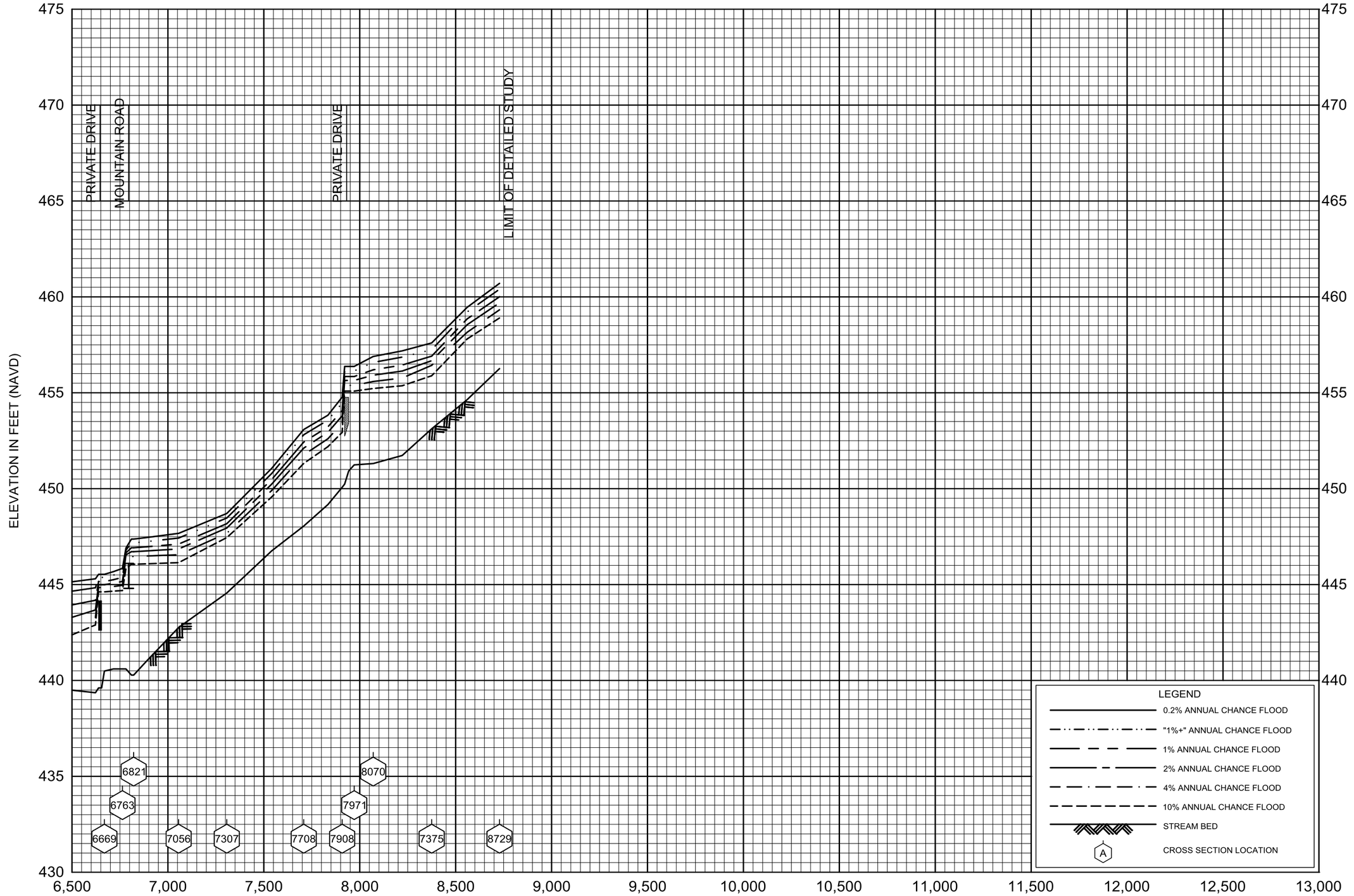
BEHM RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

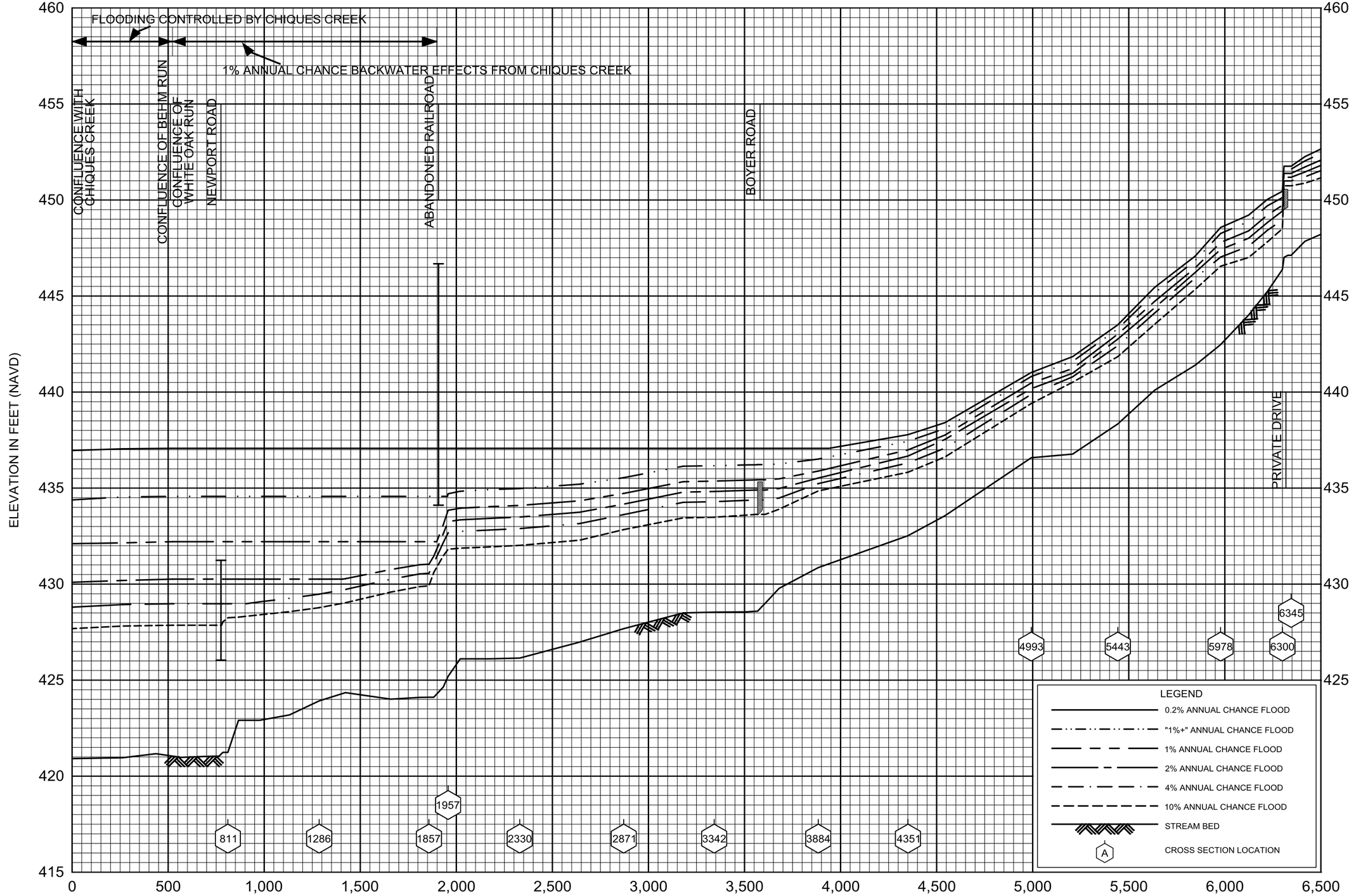
BEHM RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

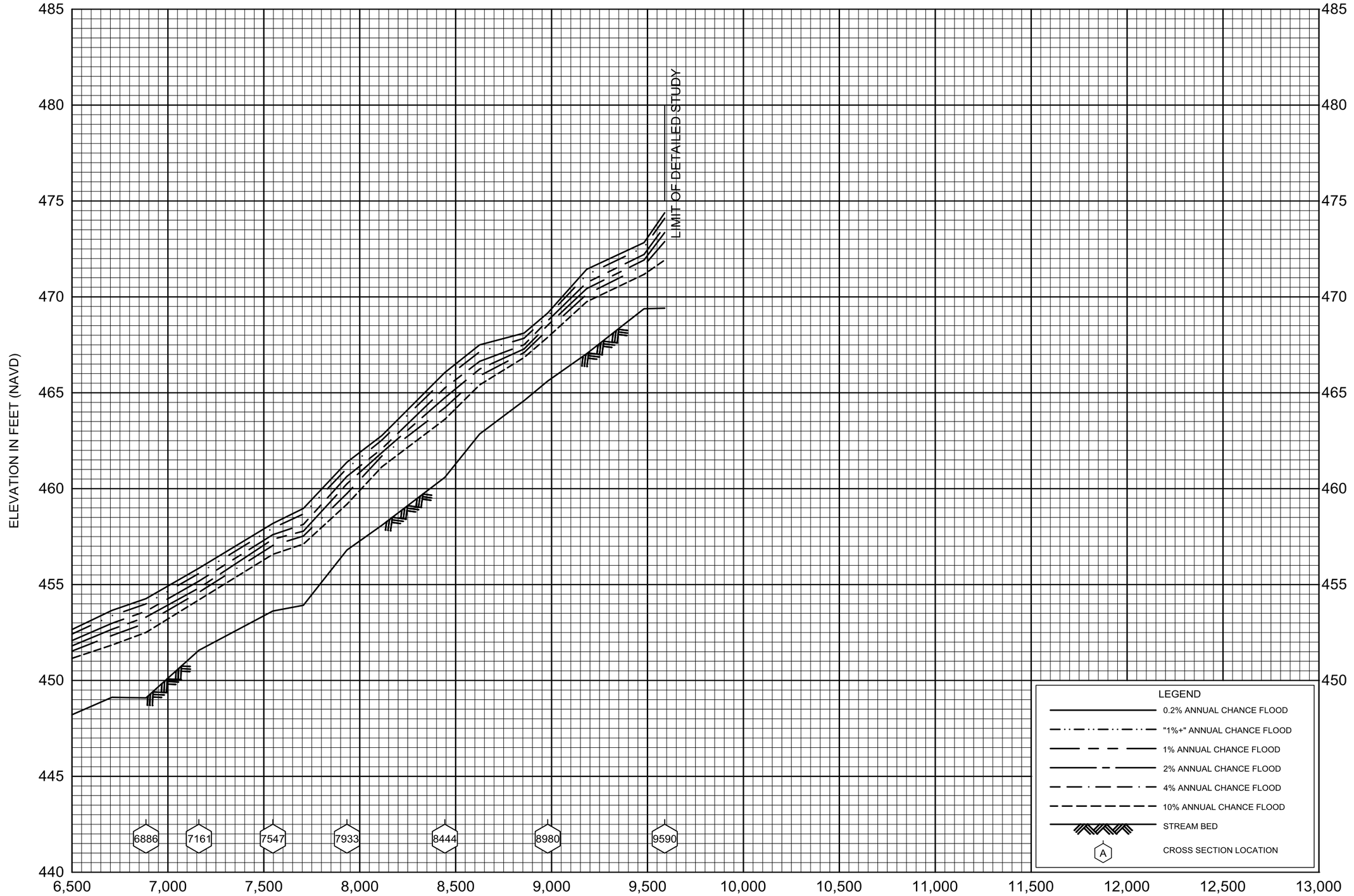
BOYERS RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

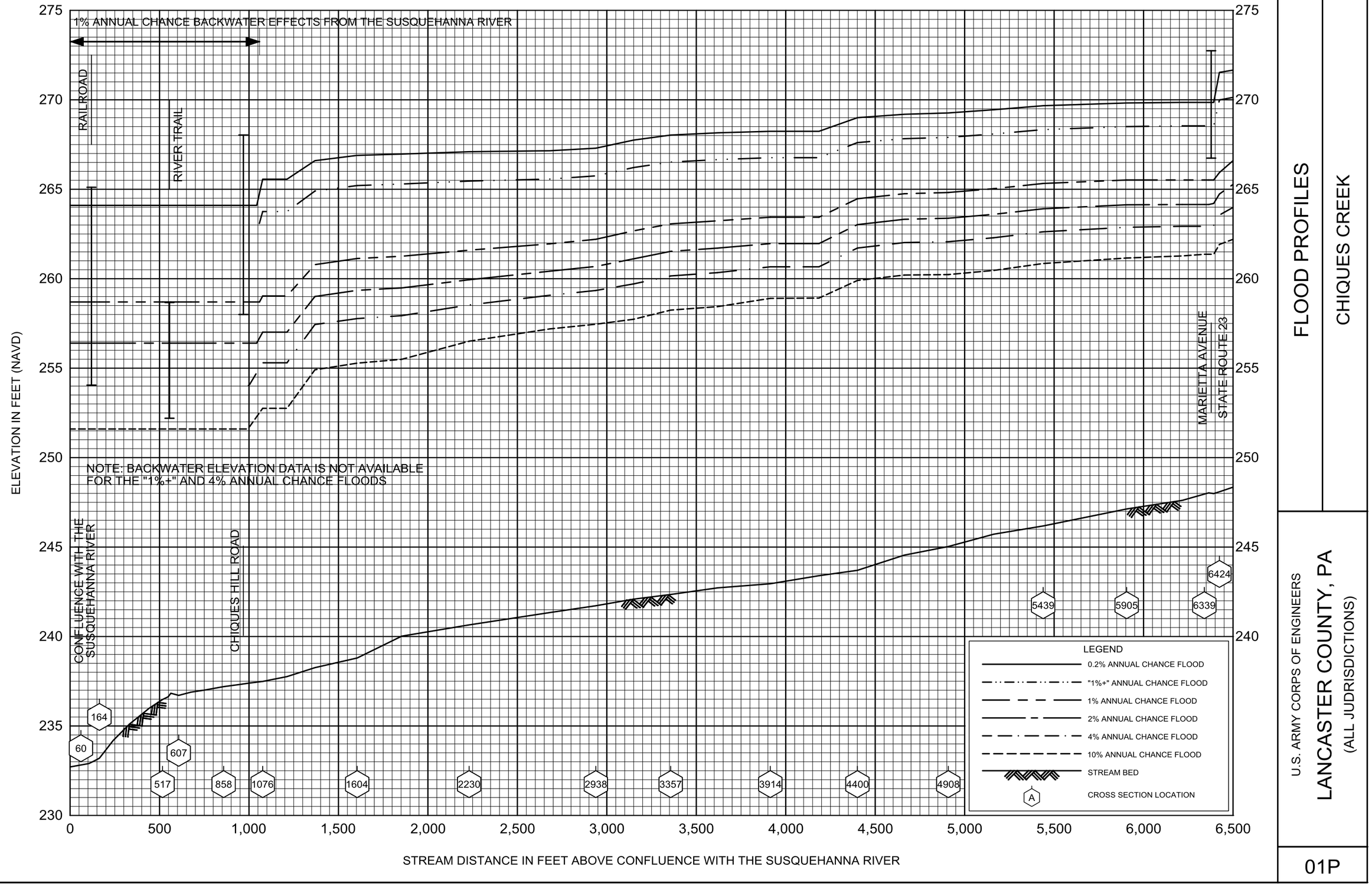
BOYERS RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

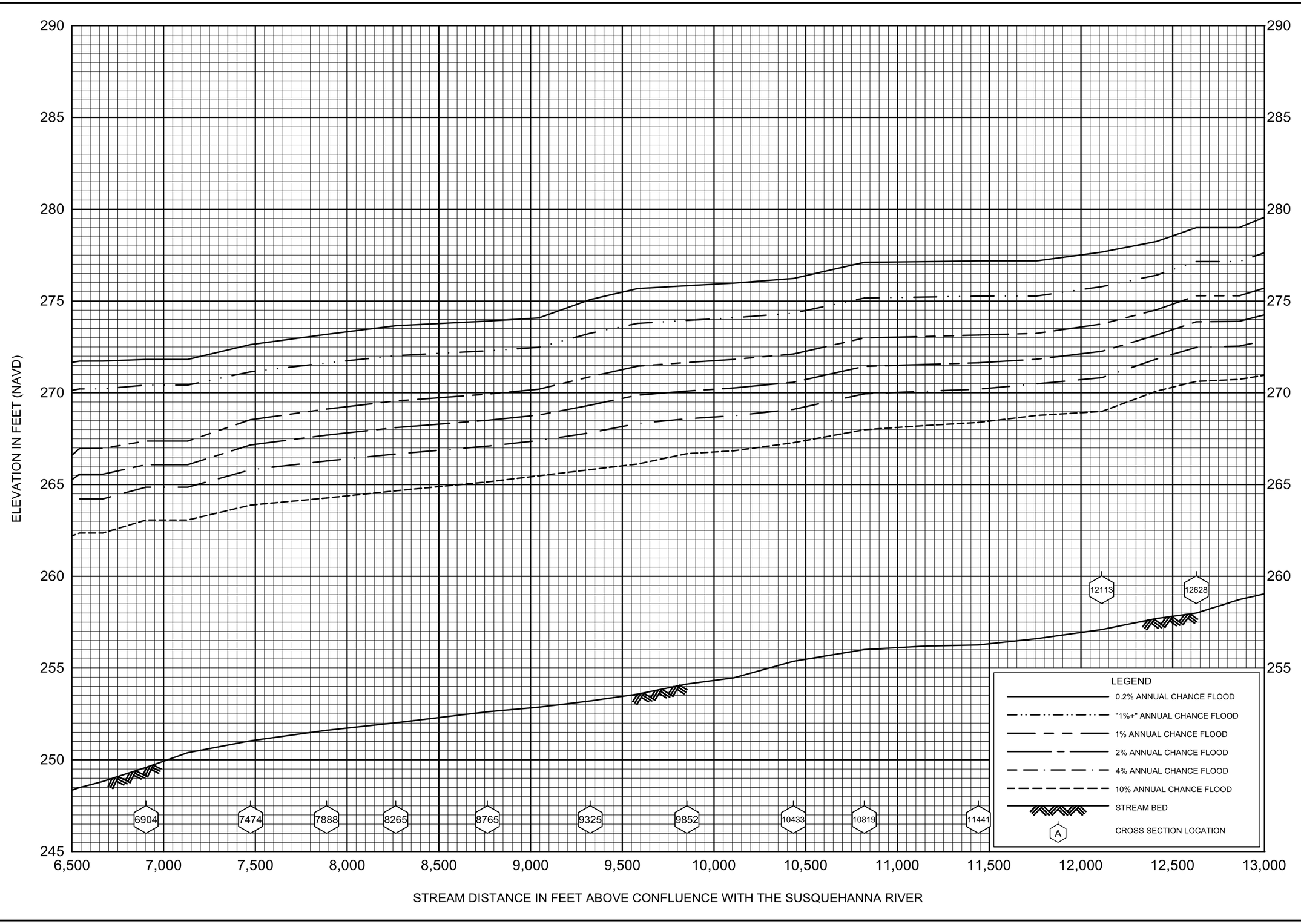
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

01P



FLOOD PROFILES

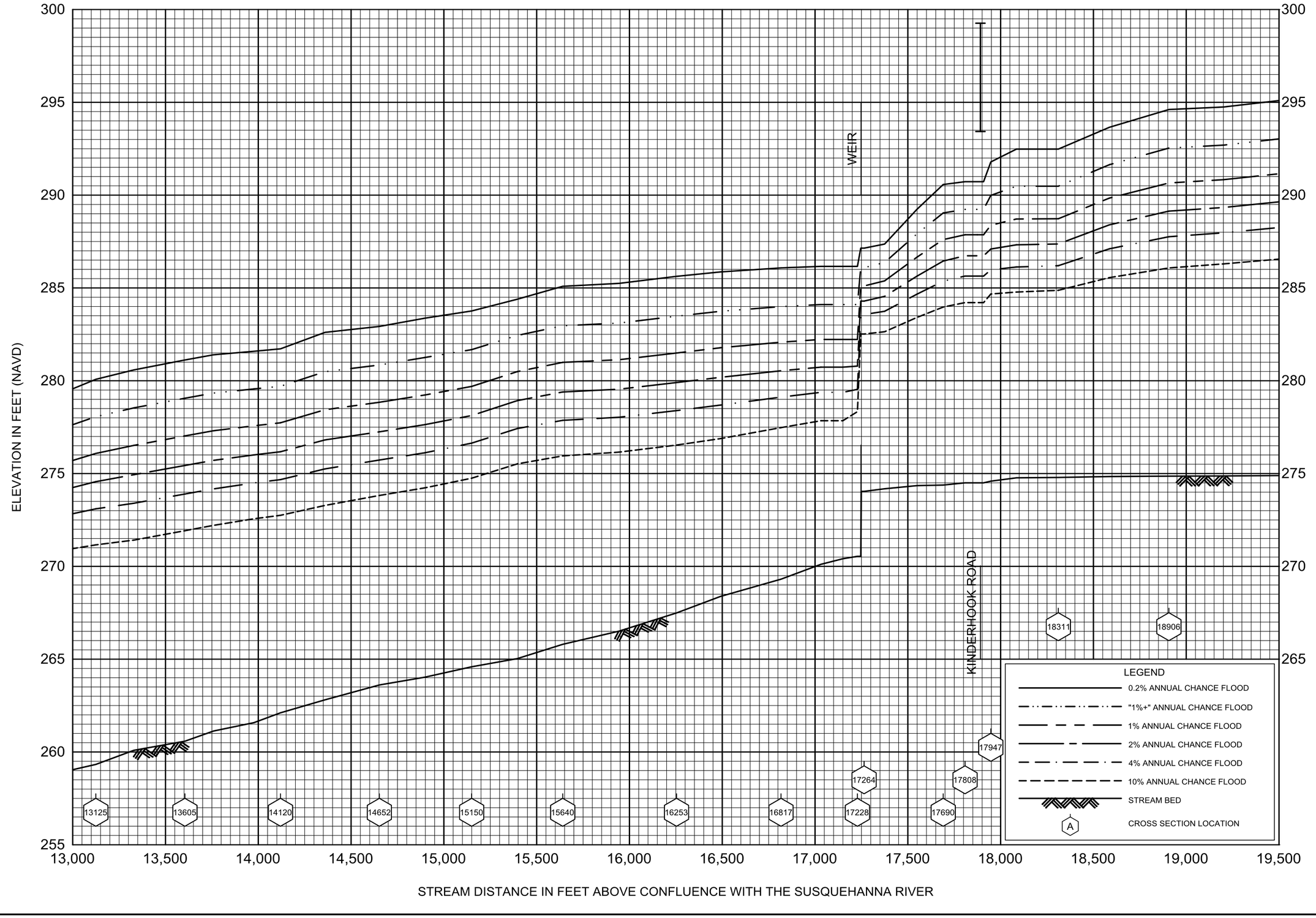
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

02P



FLOOD PROFILES

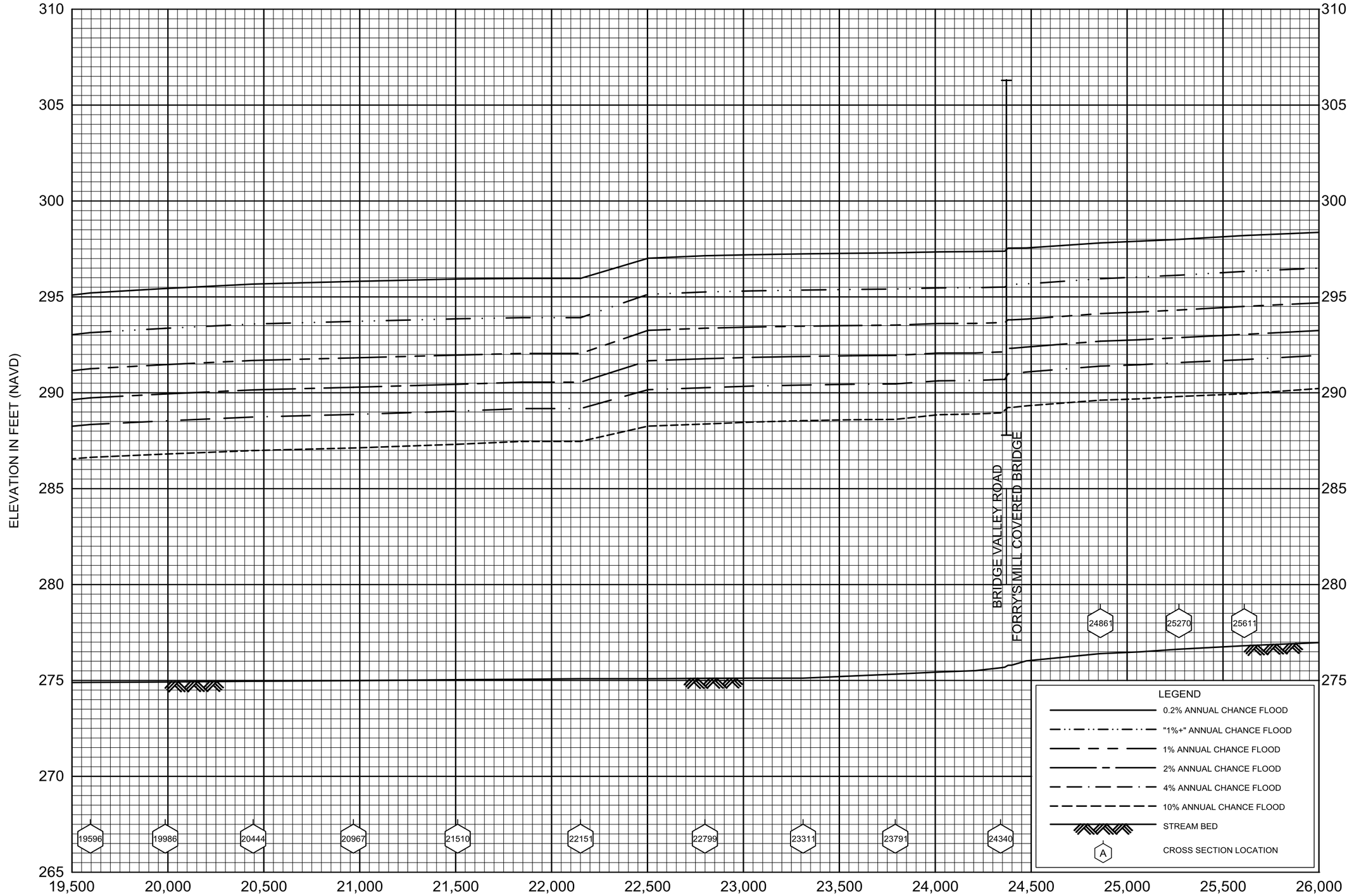
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

03P



FLOOD PROFILES

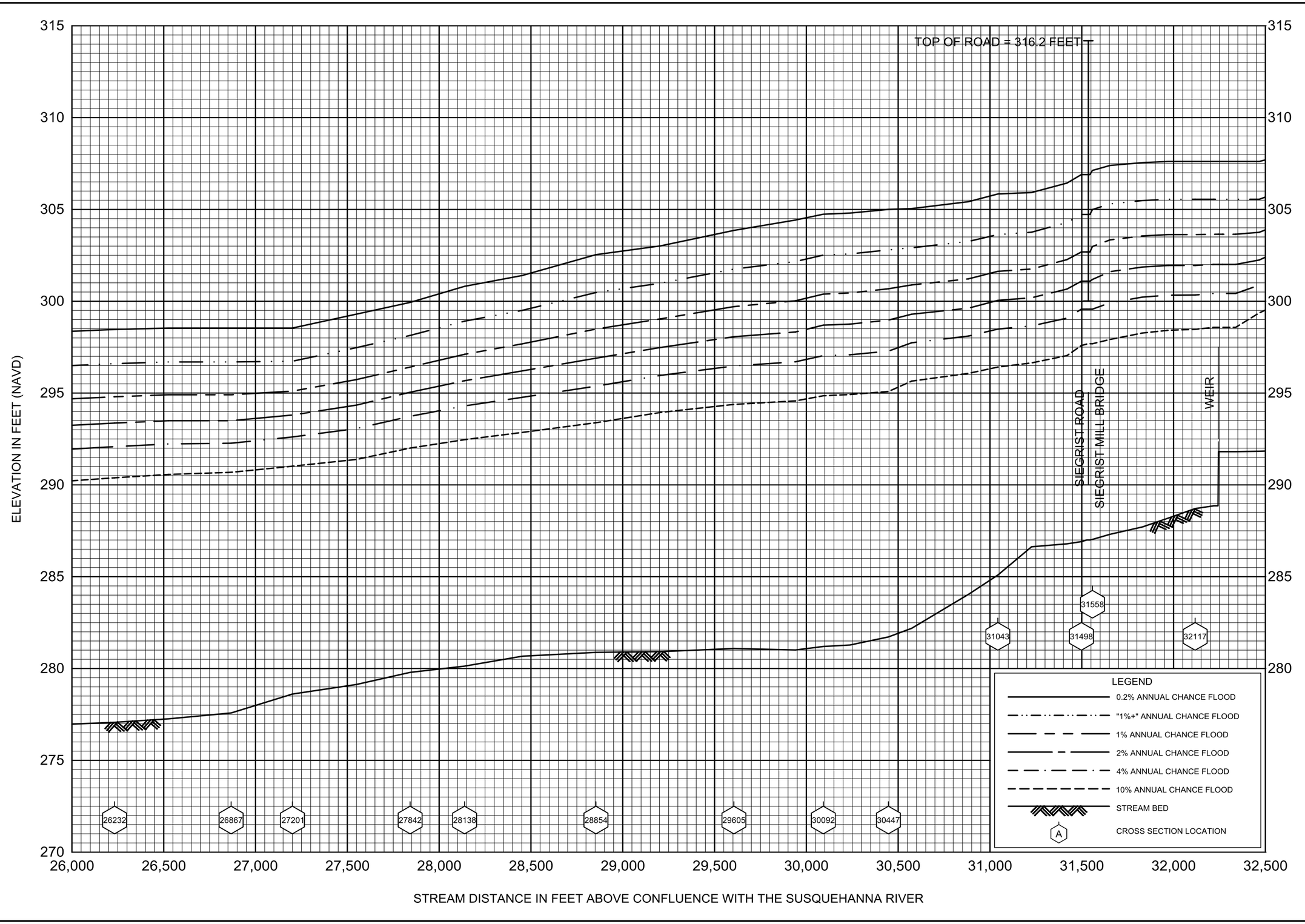
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

04P



FLOOD PROFILES

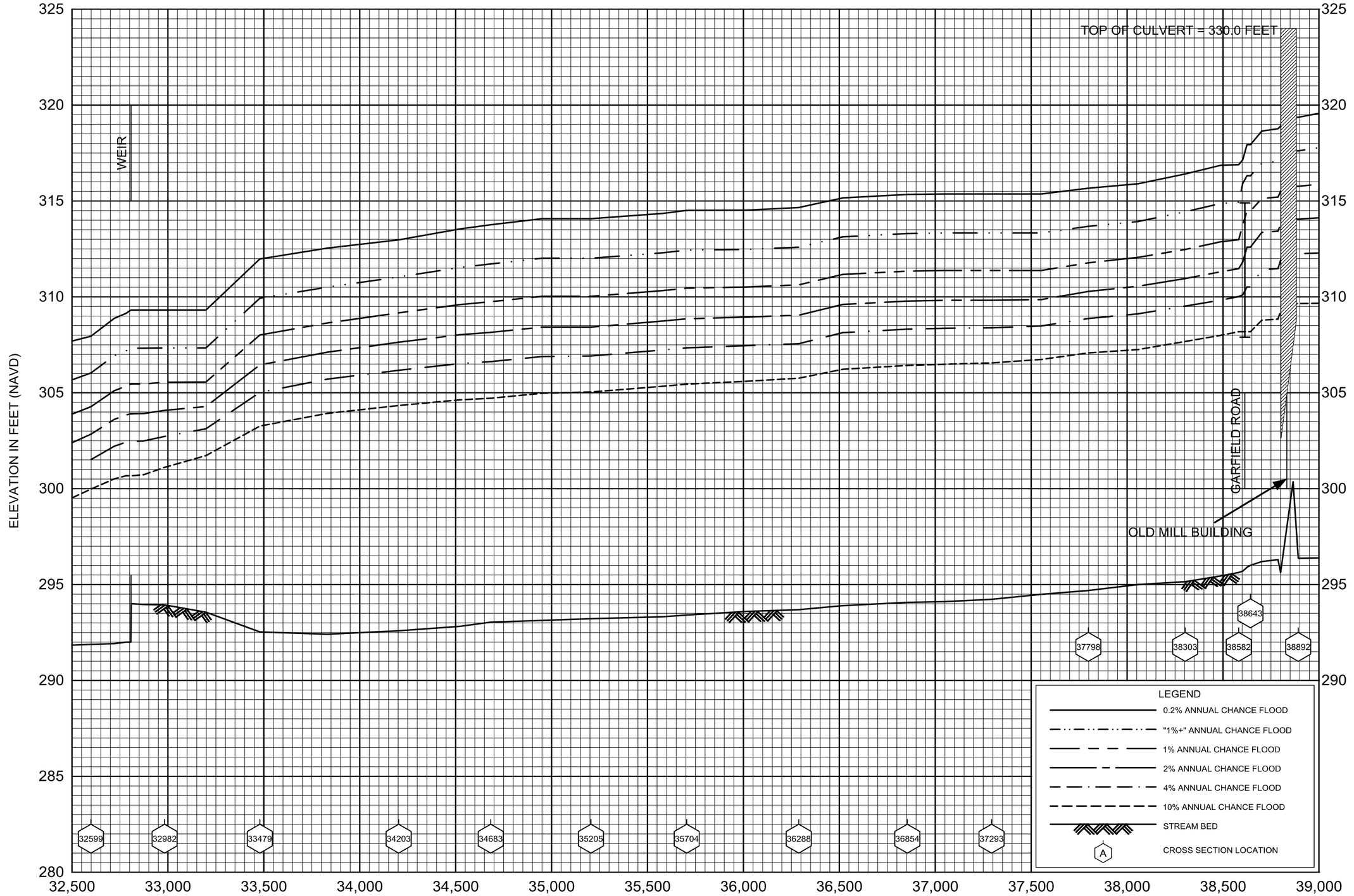
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

05P



FLOOD PROFILES

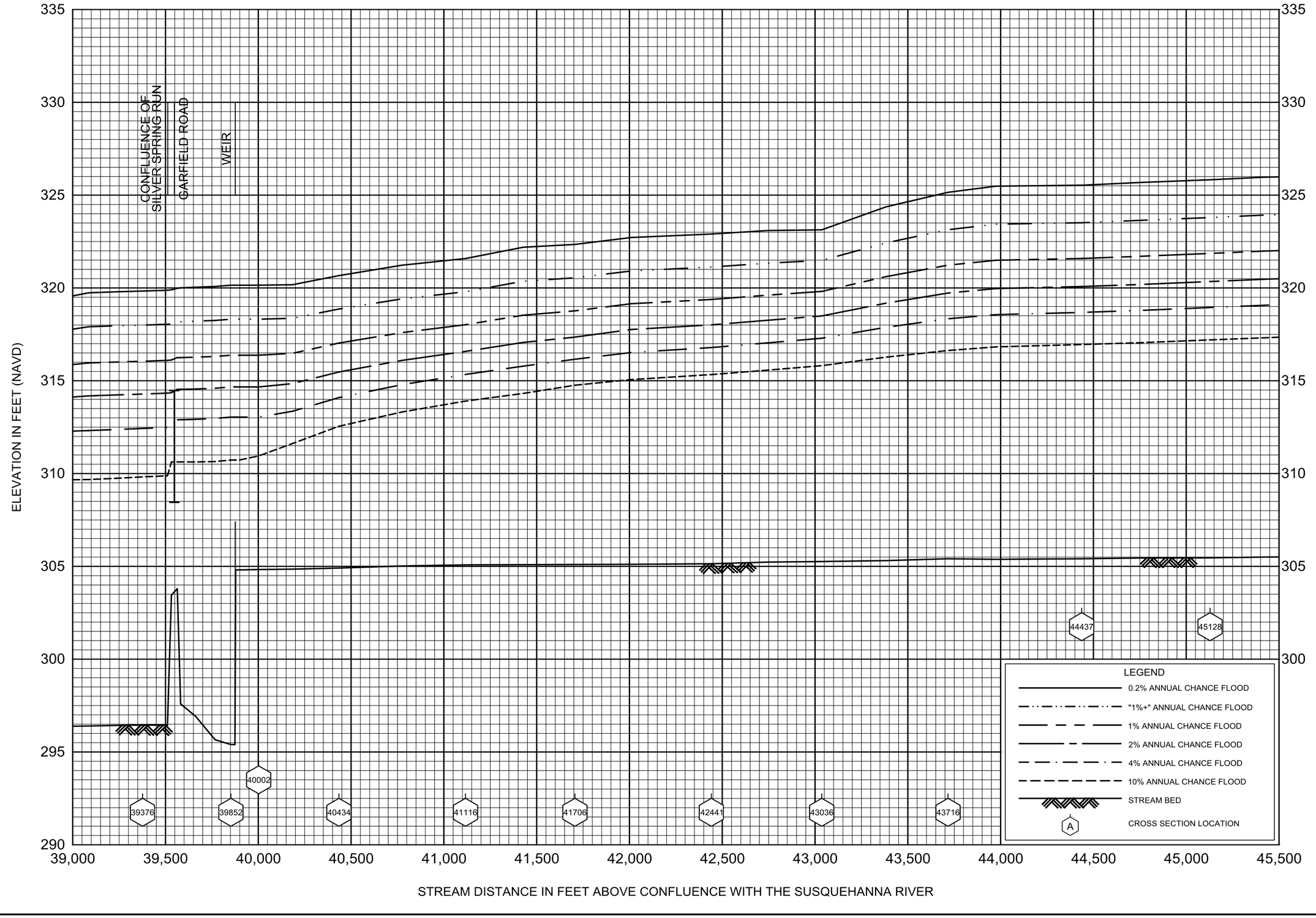
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

06P



FLOOD PROFILES

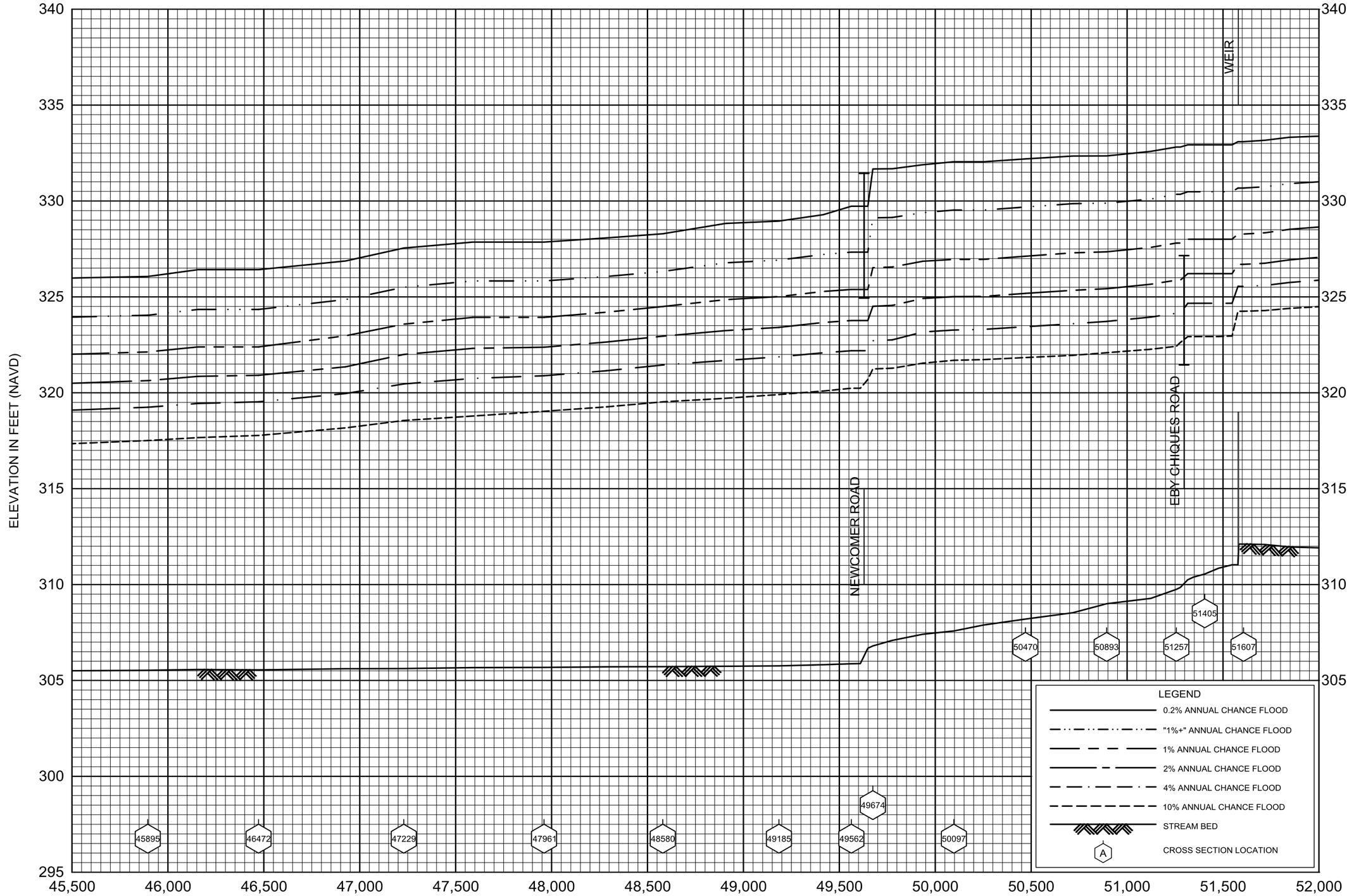
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

07P



FLOOD PROFILES

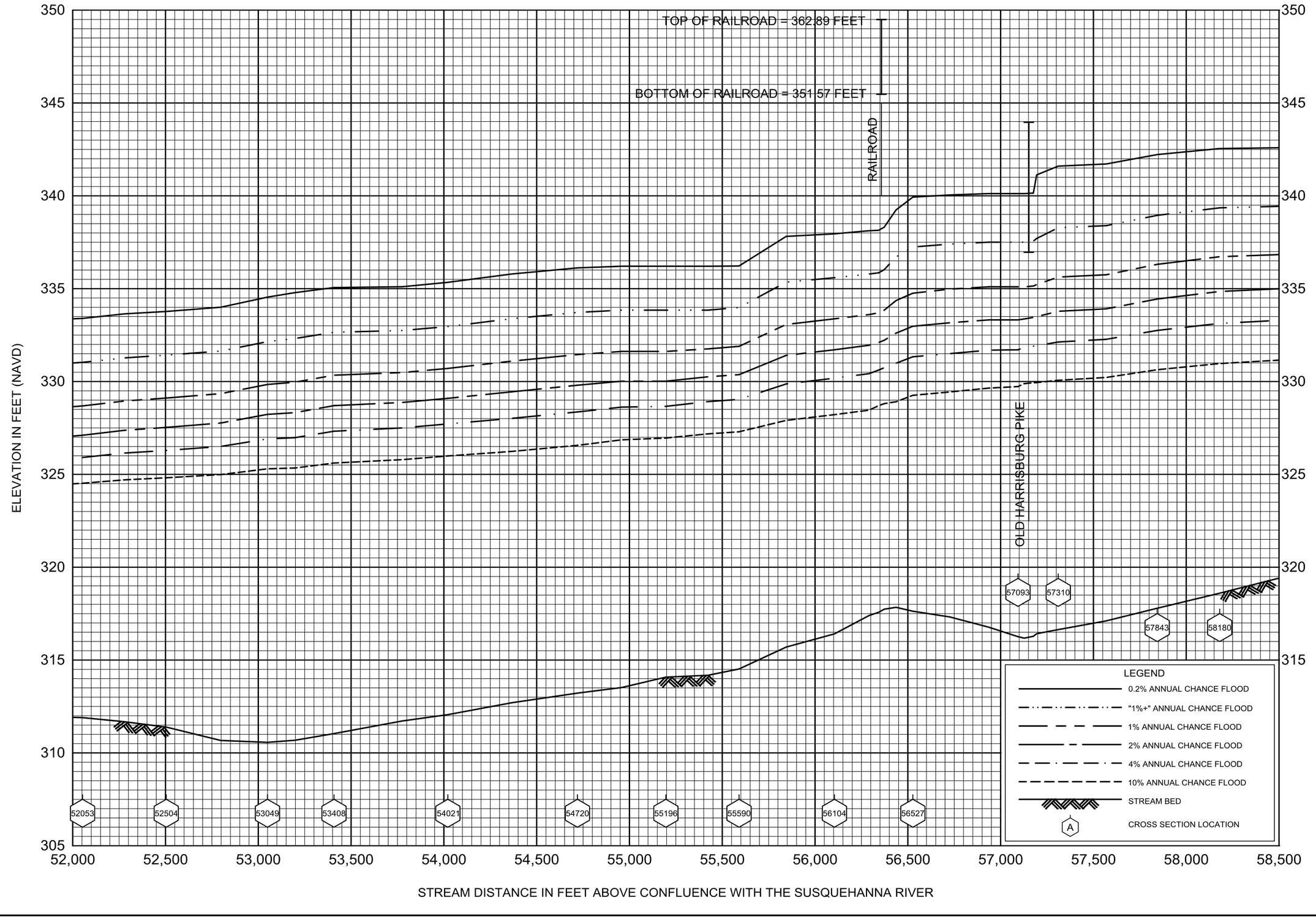
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

08P



FLOOD PROFILES

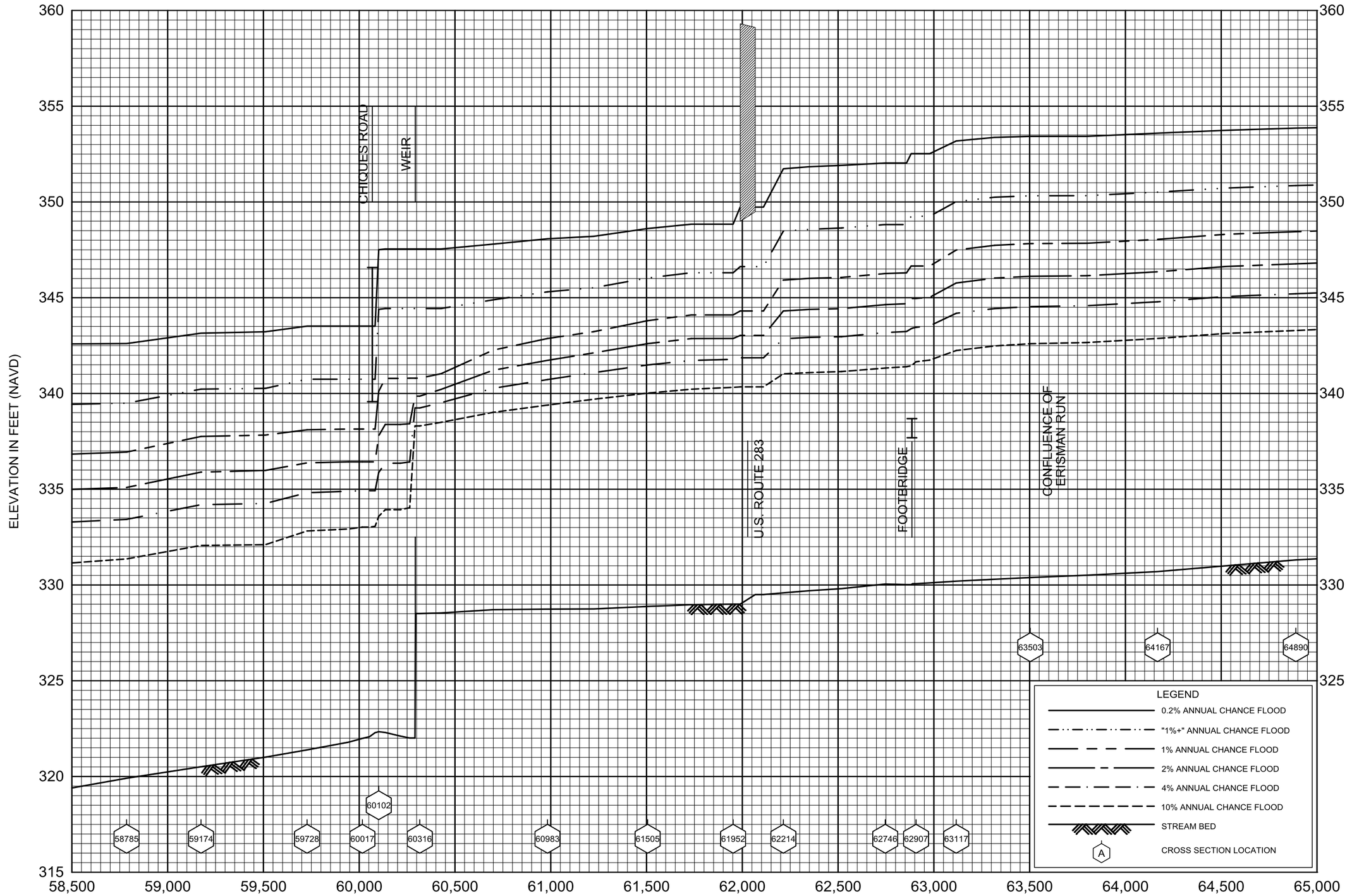
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

09P



FLOOD PROFILES

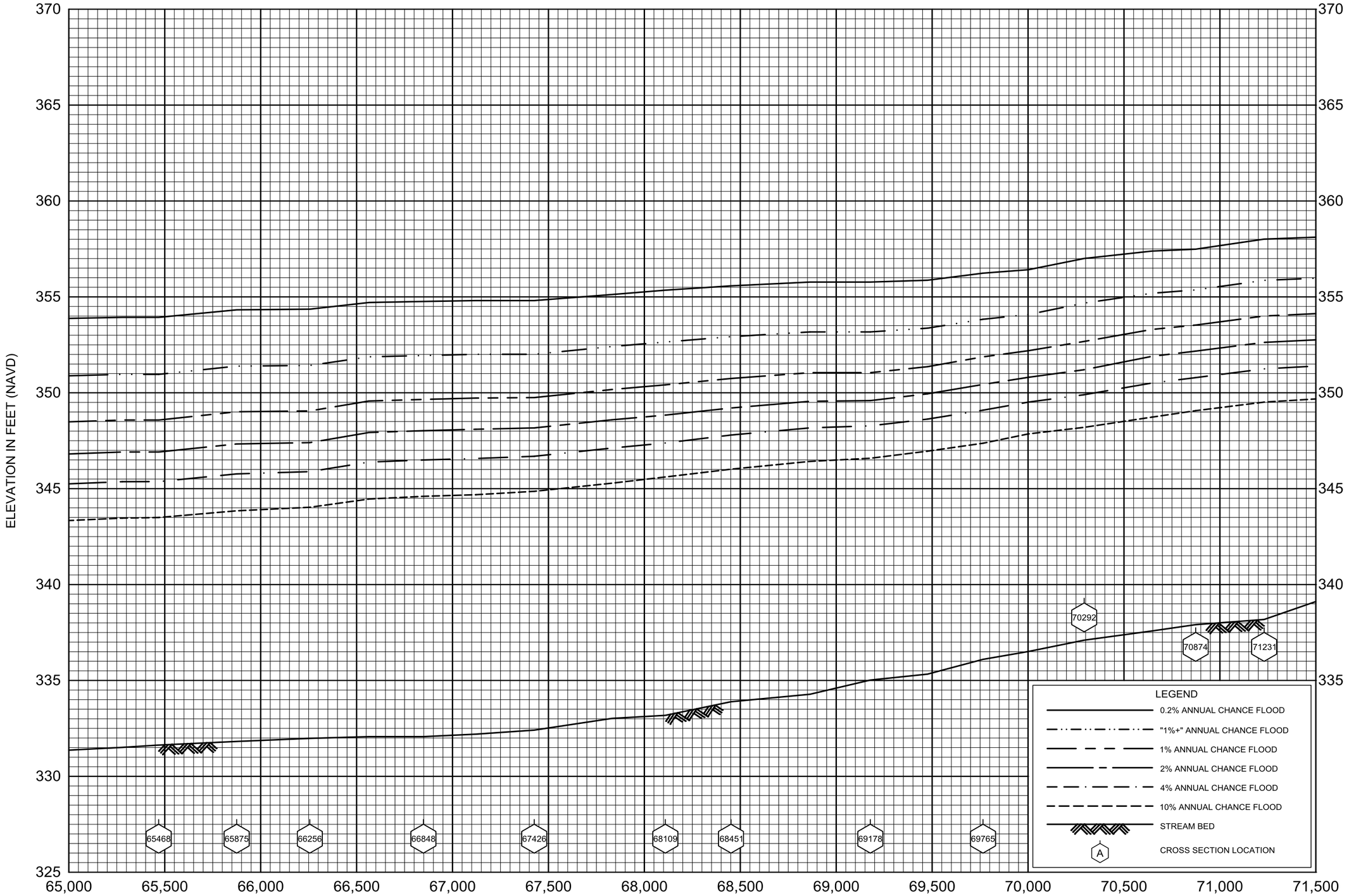
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

10P



FLOOD PROFILES

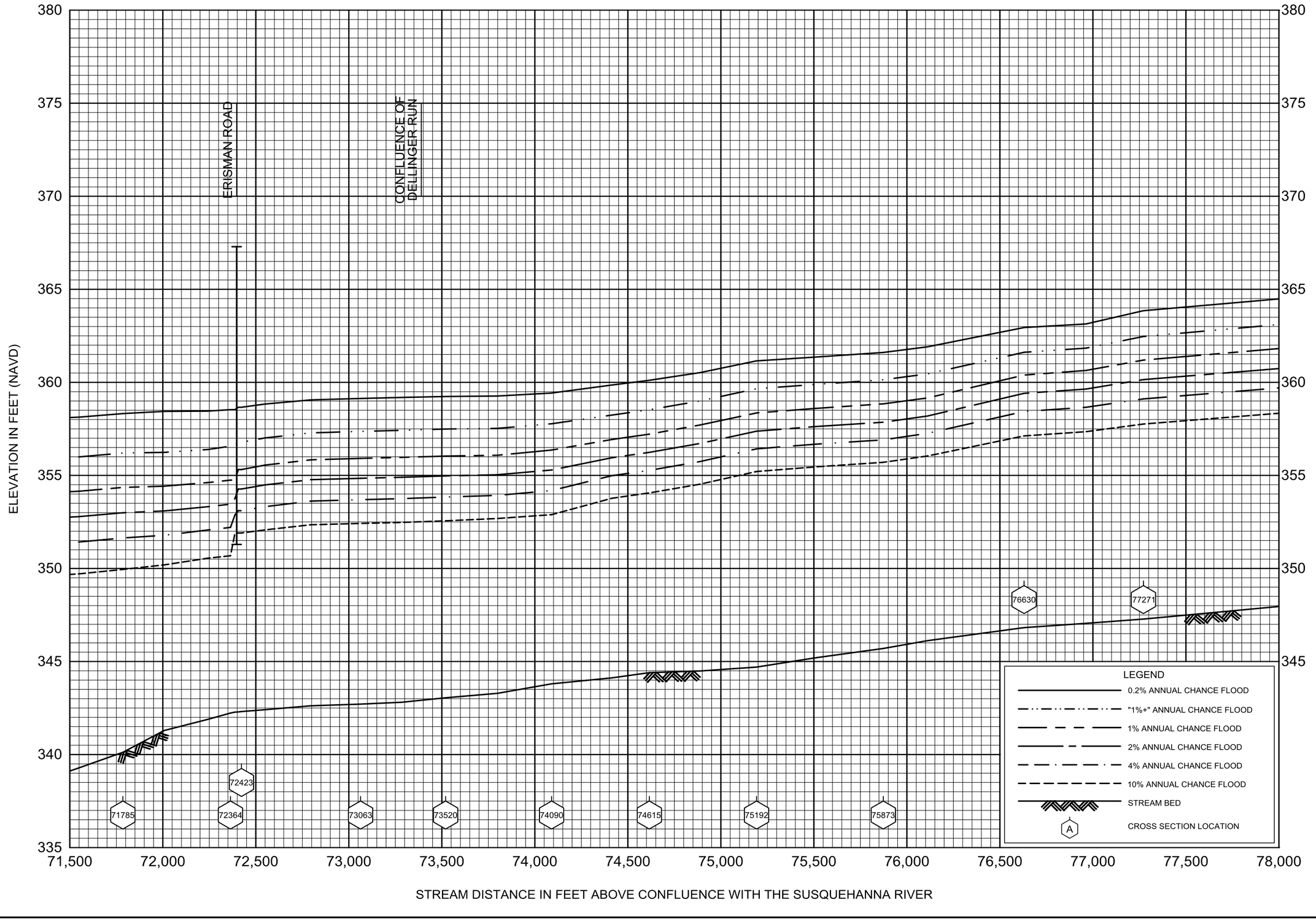
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

11P



FLOOD PROFILES

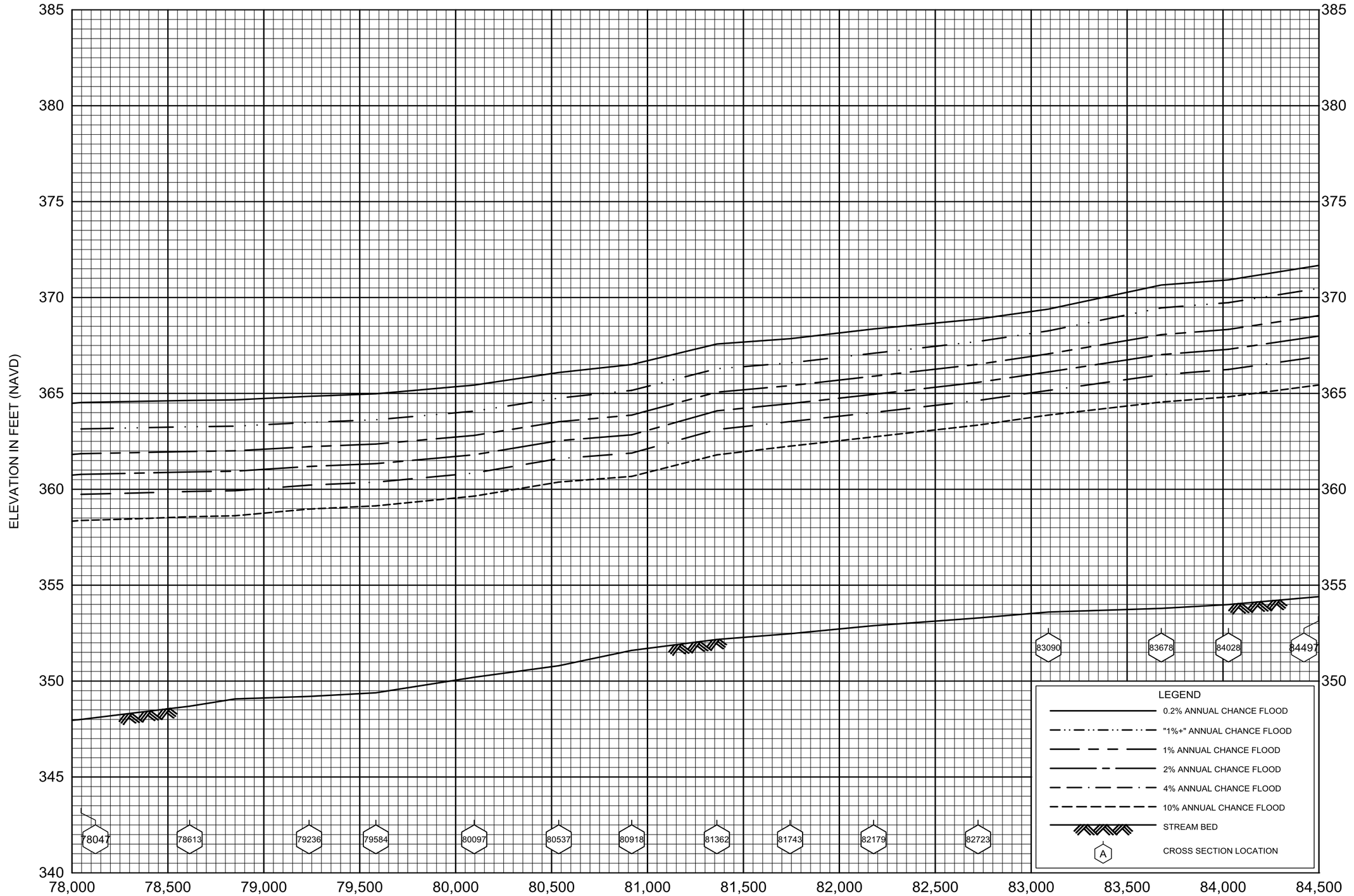
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

12P



FLOOD PROFILES

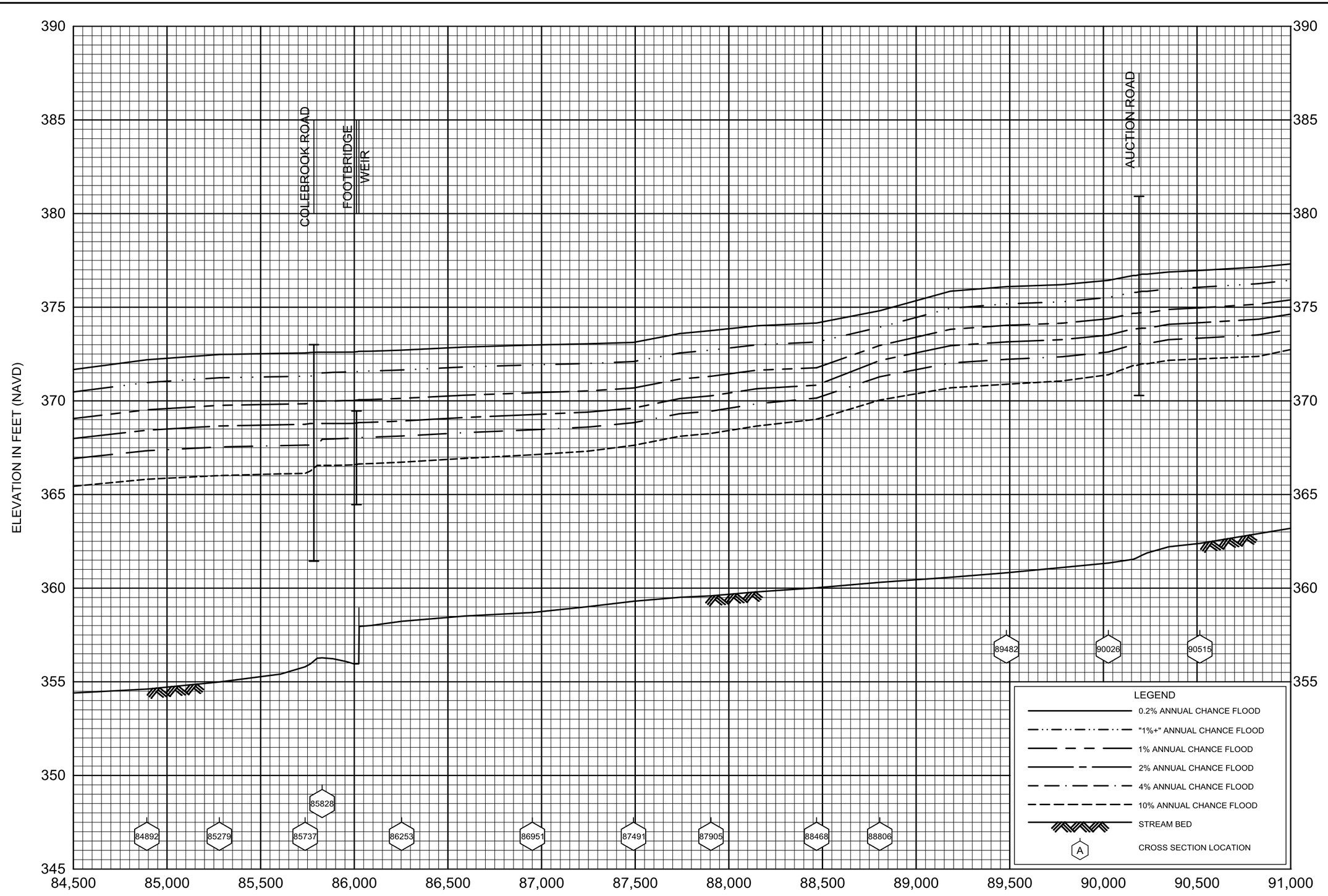
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

13P



FLOOD PROFILES

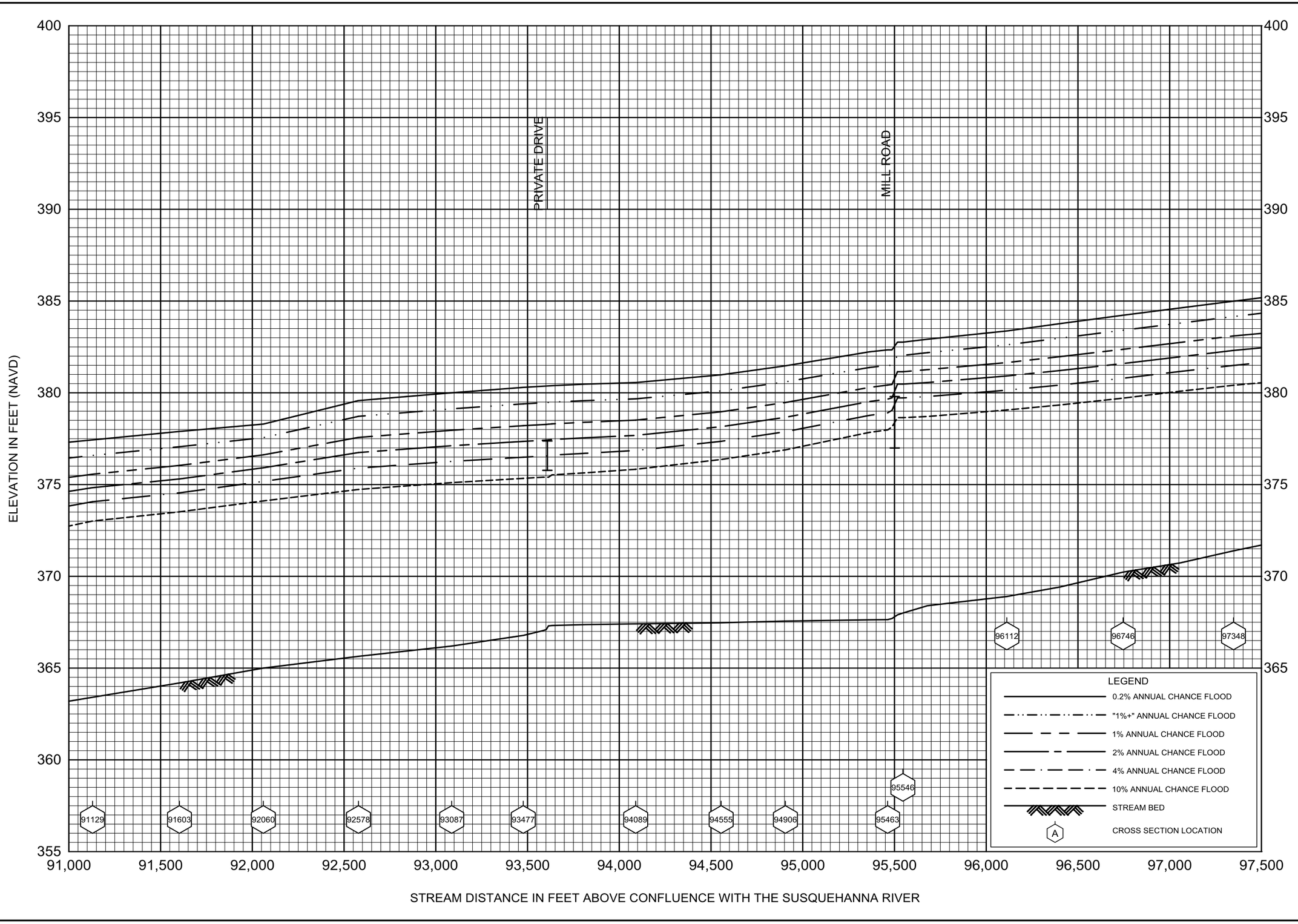
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

14P



FLOOD PROFILES

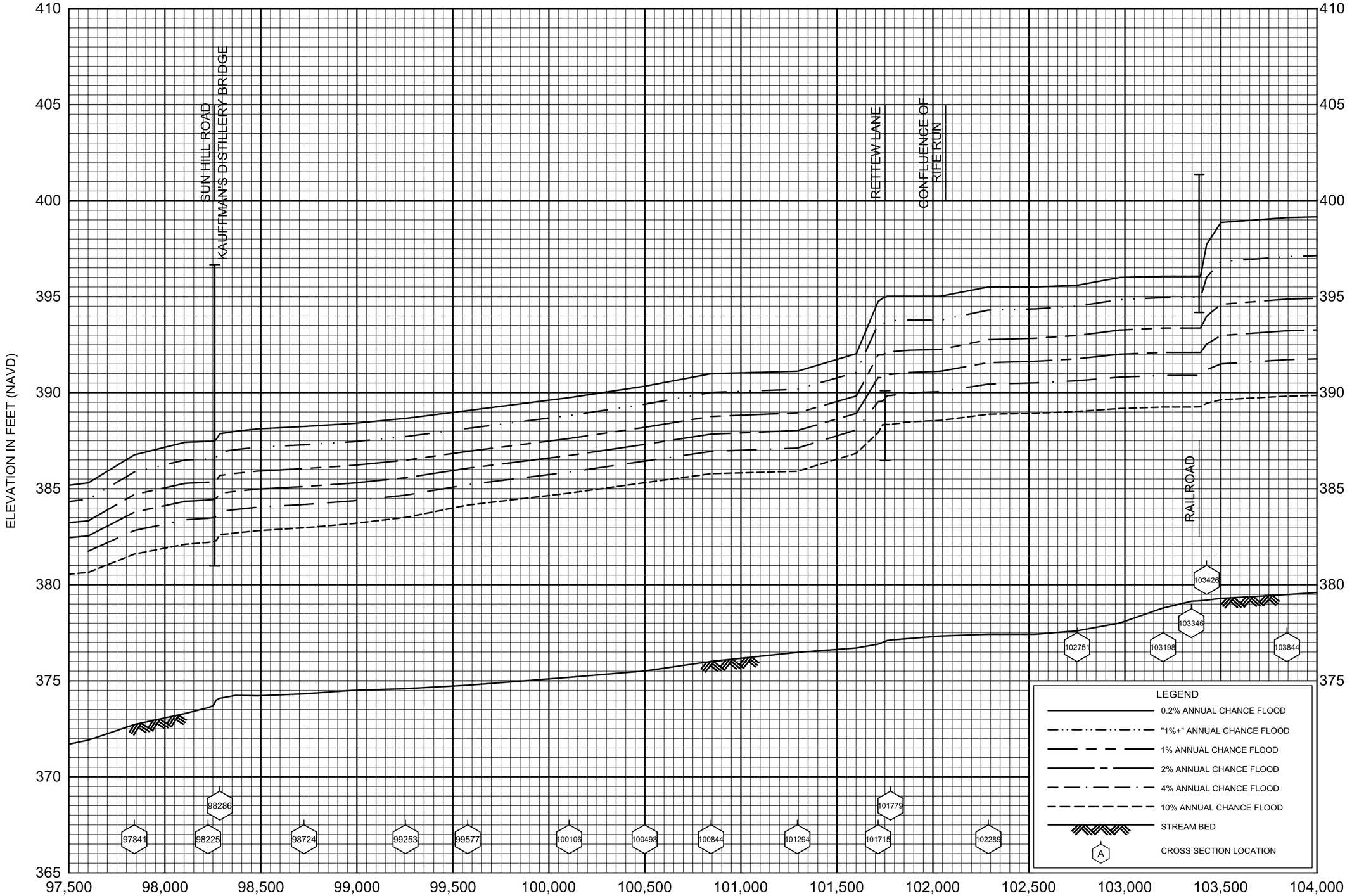
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

15P



FLOOD PROFILES

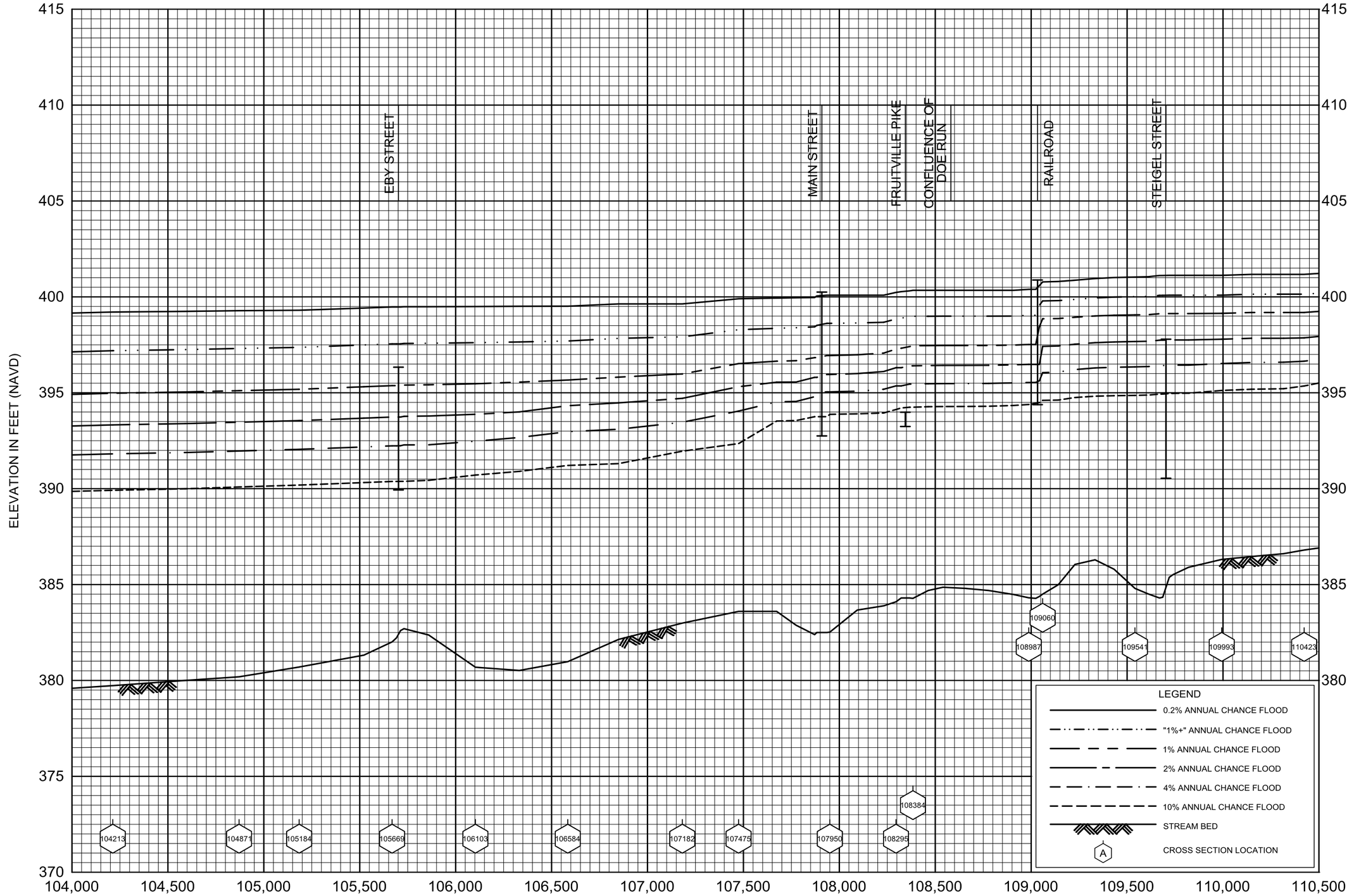
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

16P



FLOOD PROFILES

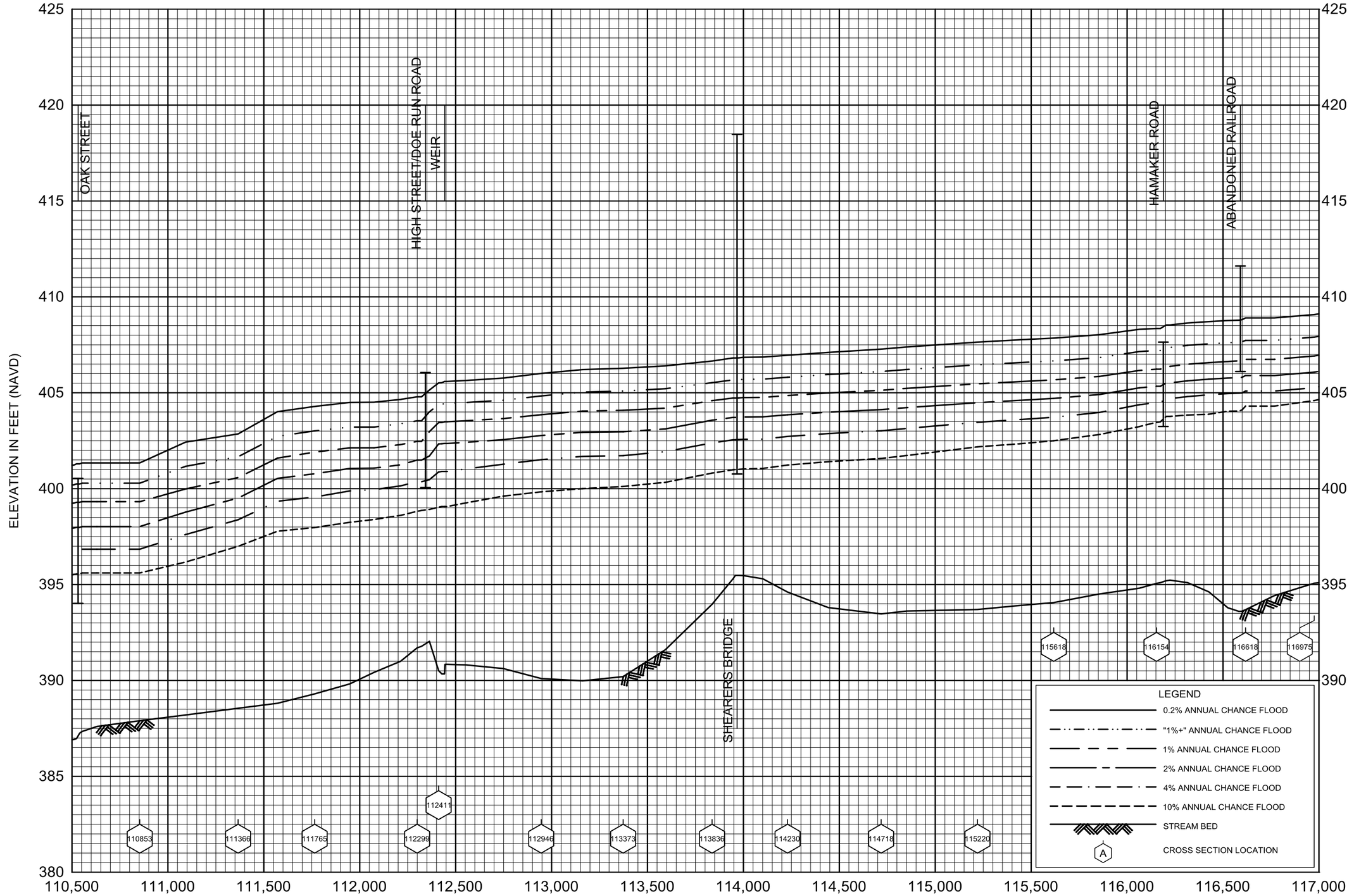
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

17P



FLOOD PROFILES

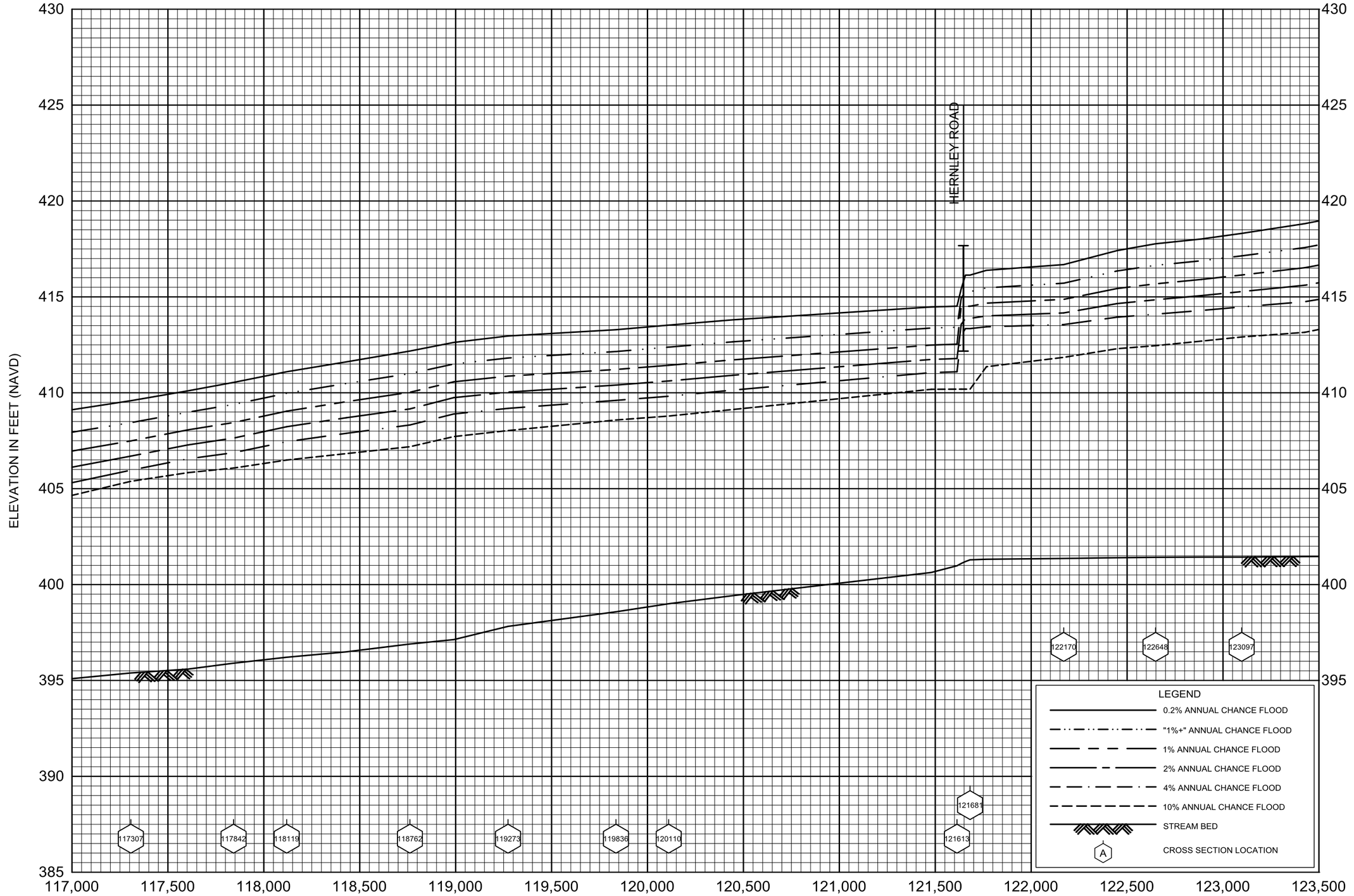
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

18P



FLOOD PROFILES

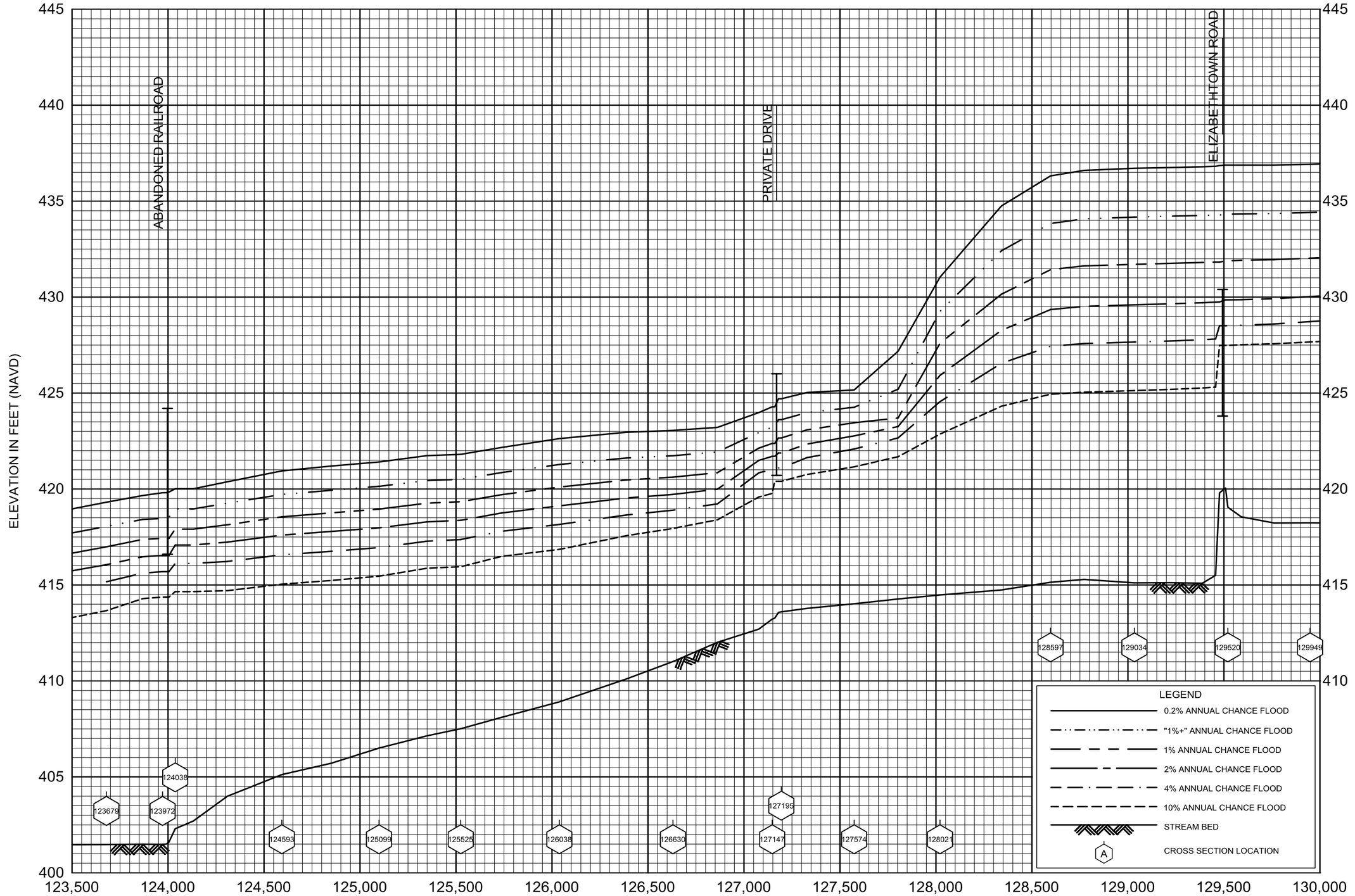
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

19P



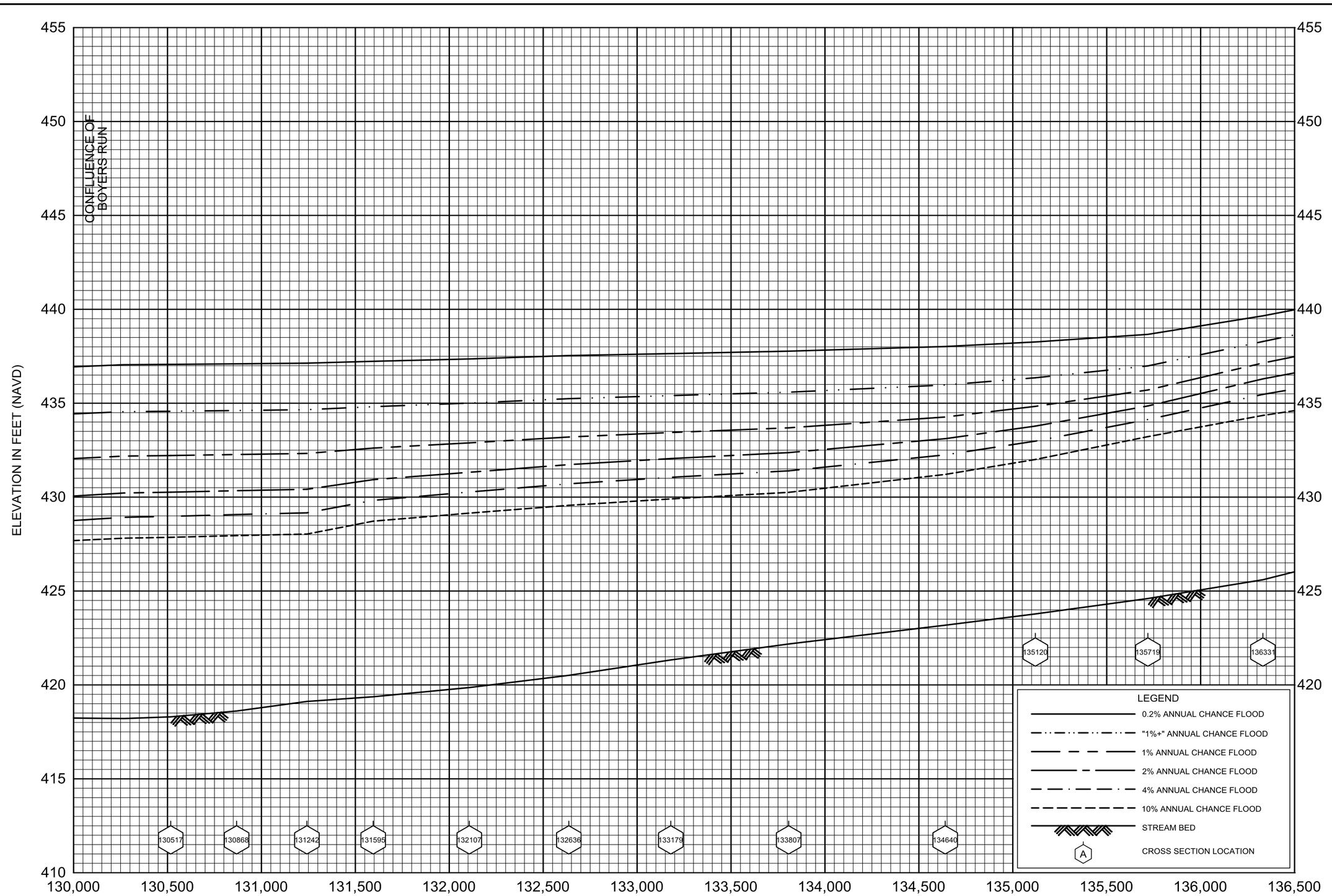
FLOOD PROFILES

CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)



FLOOD PROFILES

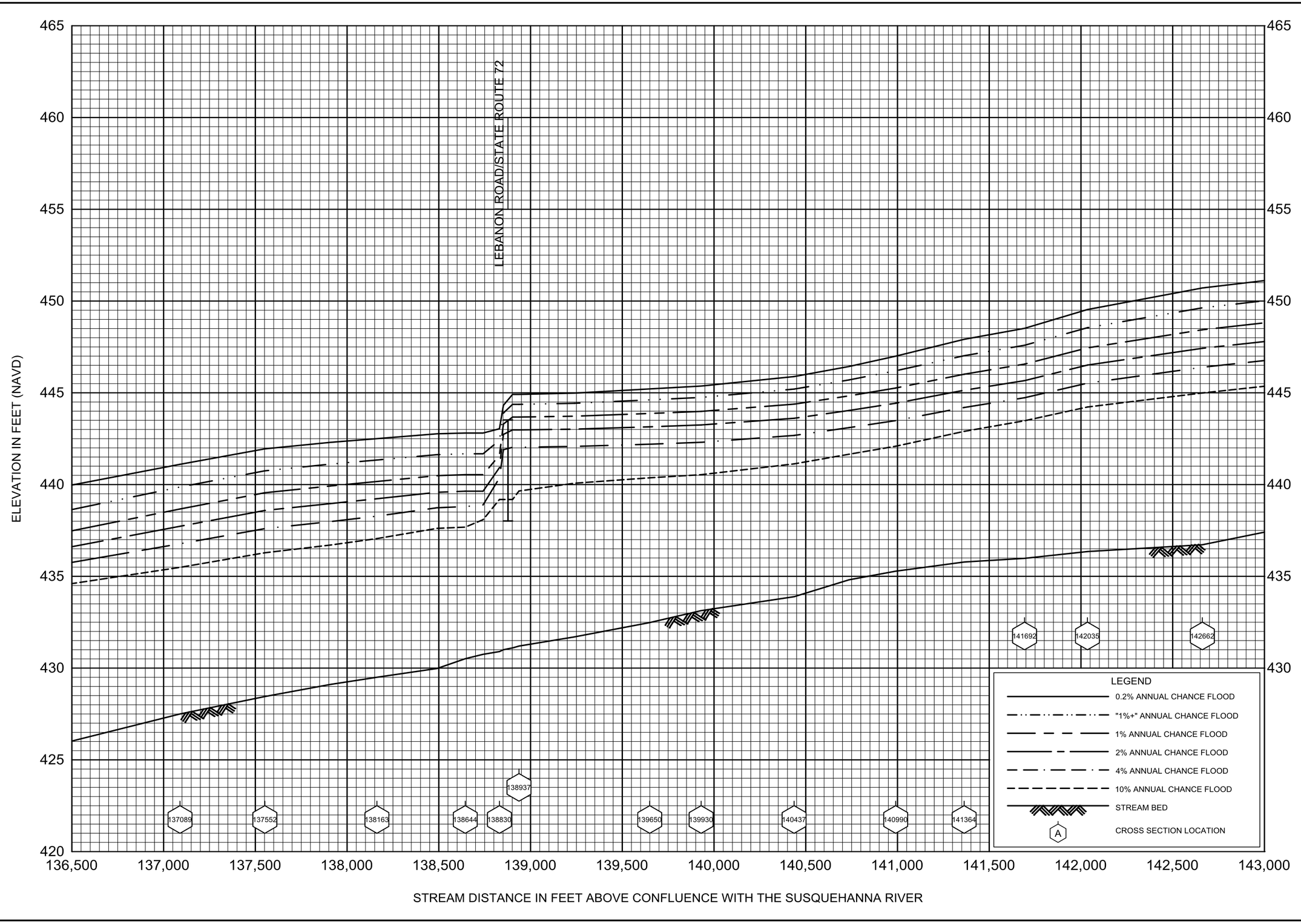
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

21P



FLOOD PROFILES

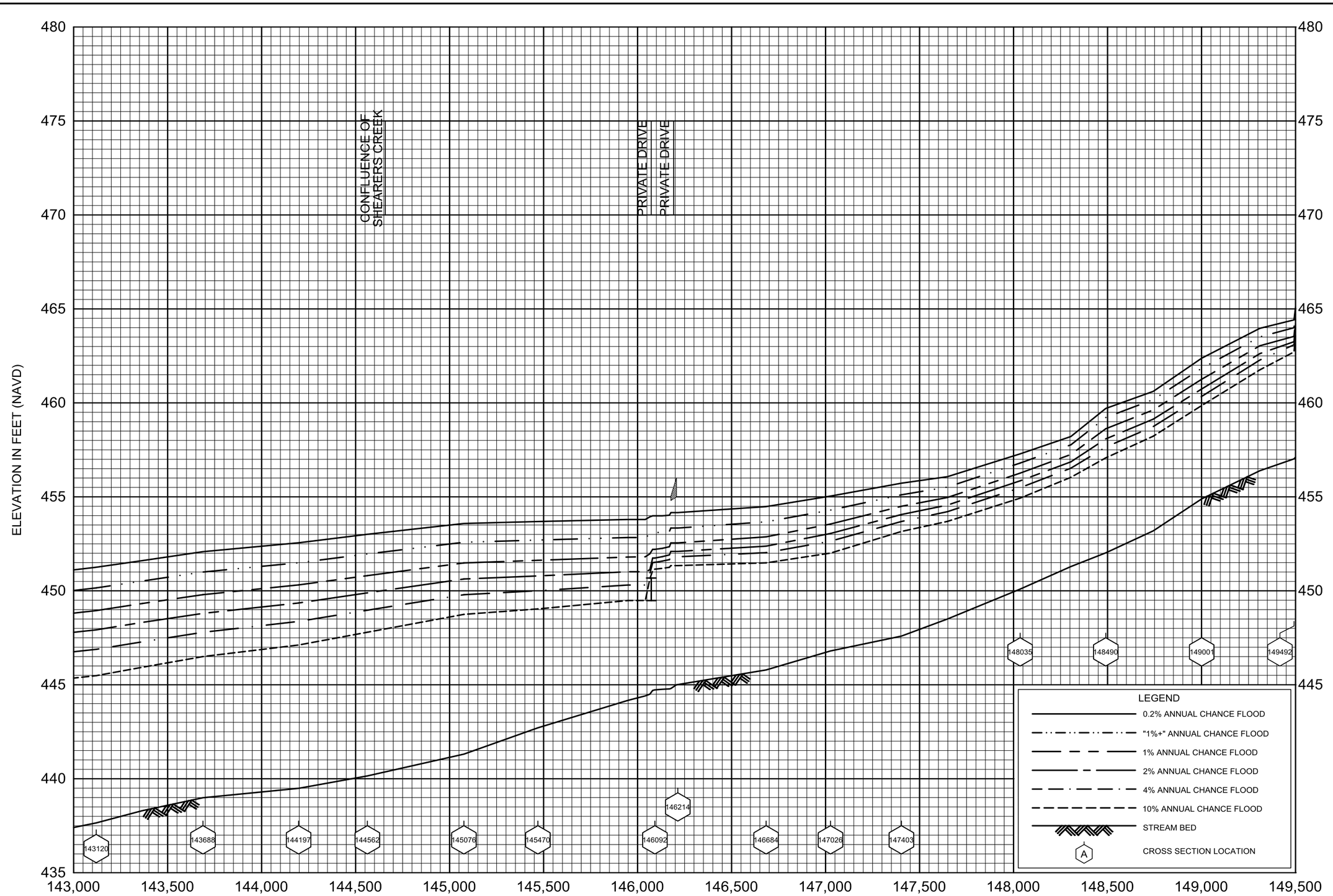
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

22P



FLOOD PROFILES

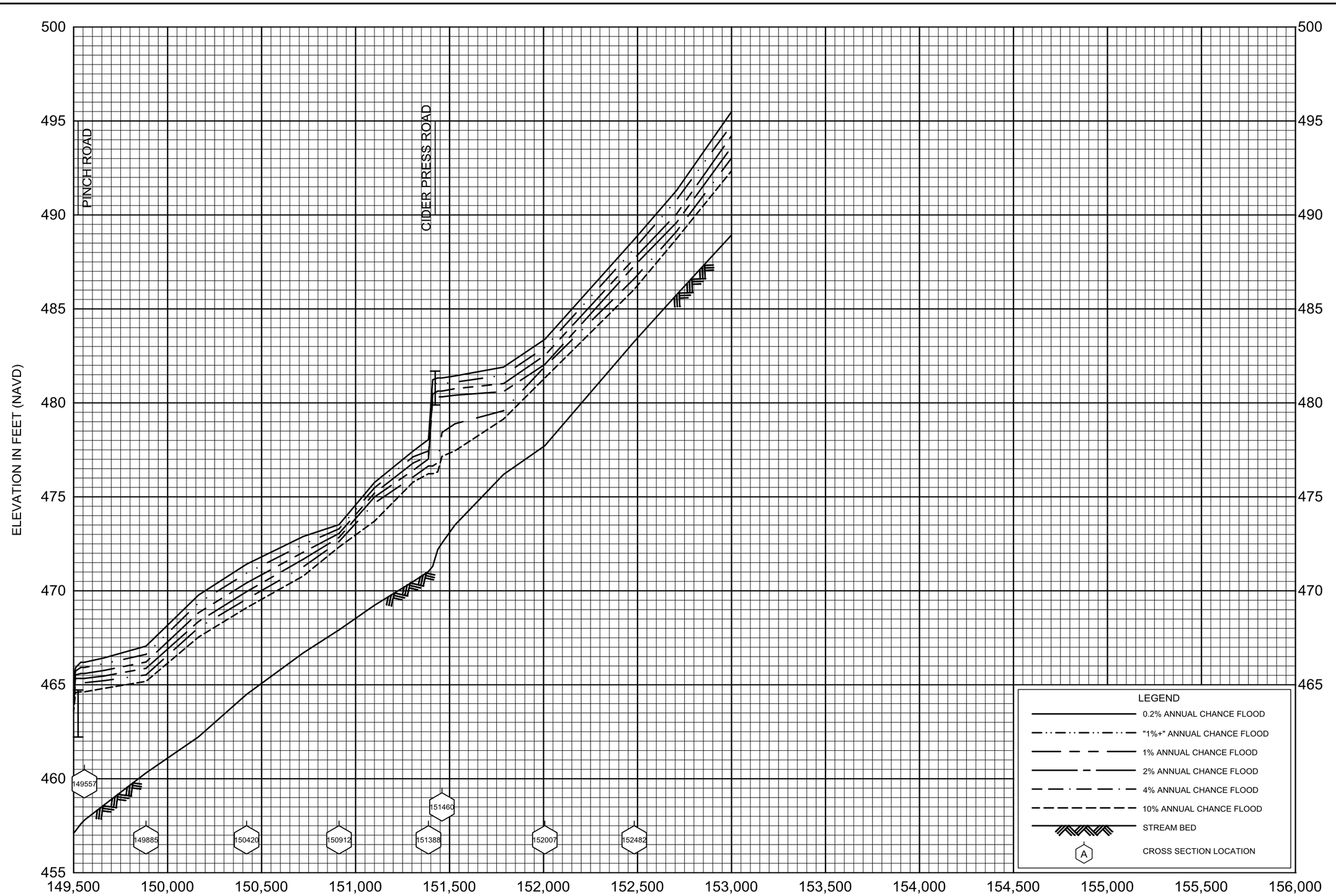
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

23P



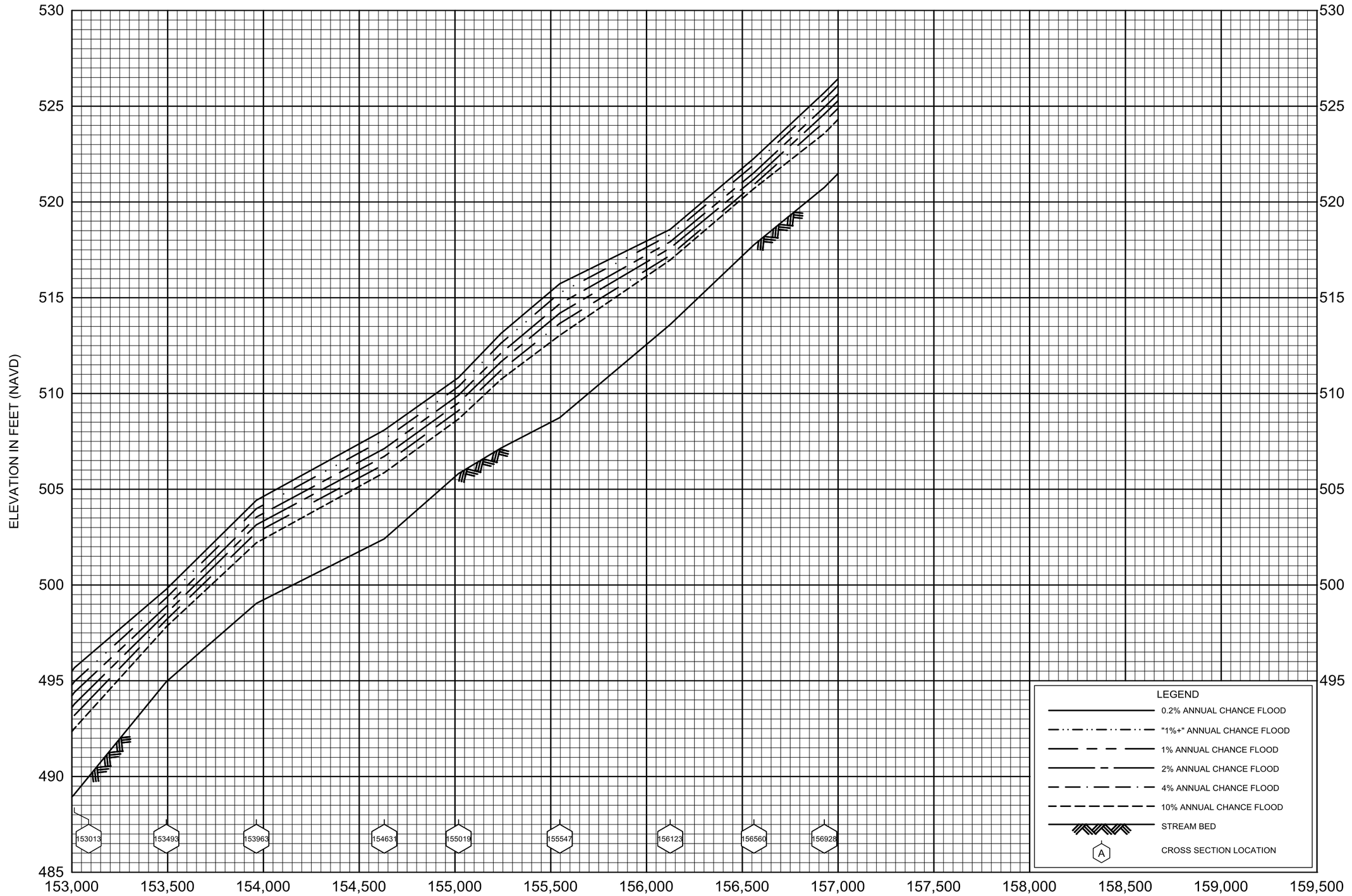
FLOOD PROFILES

CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)



FLOOD PROFILES

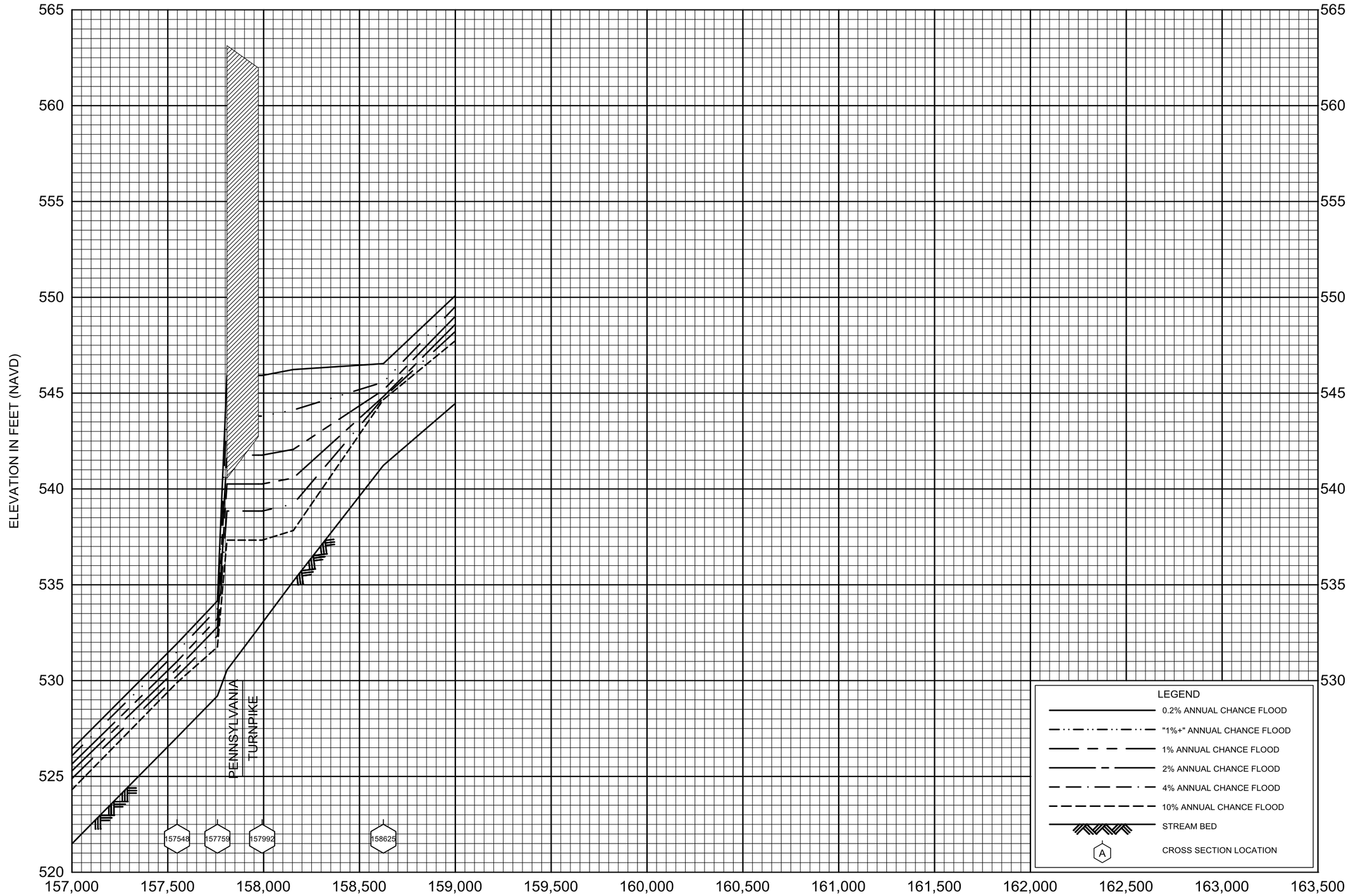
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

25P



FLOOD PROFILES

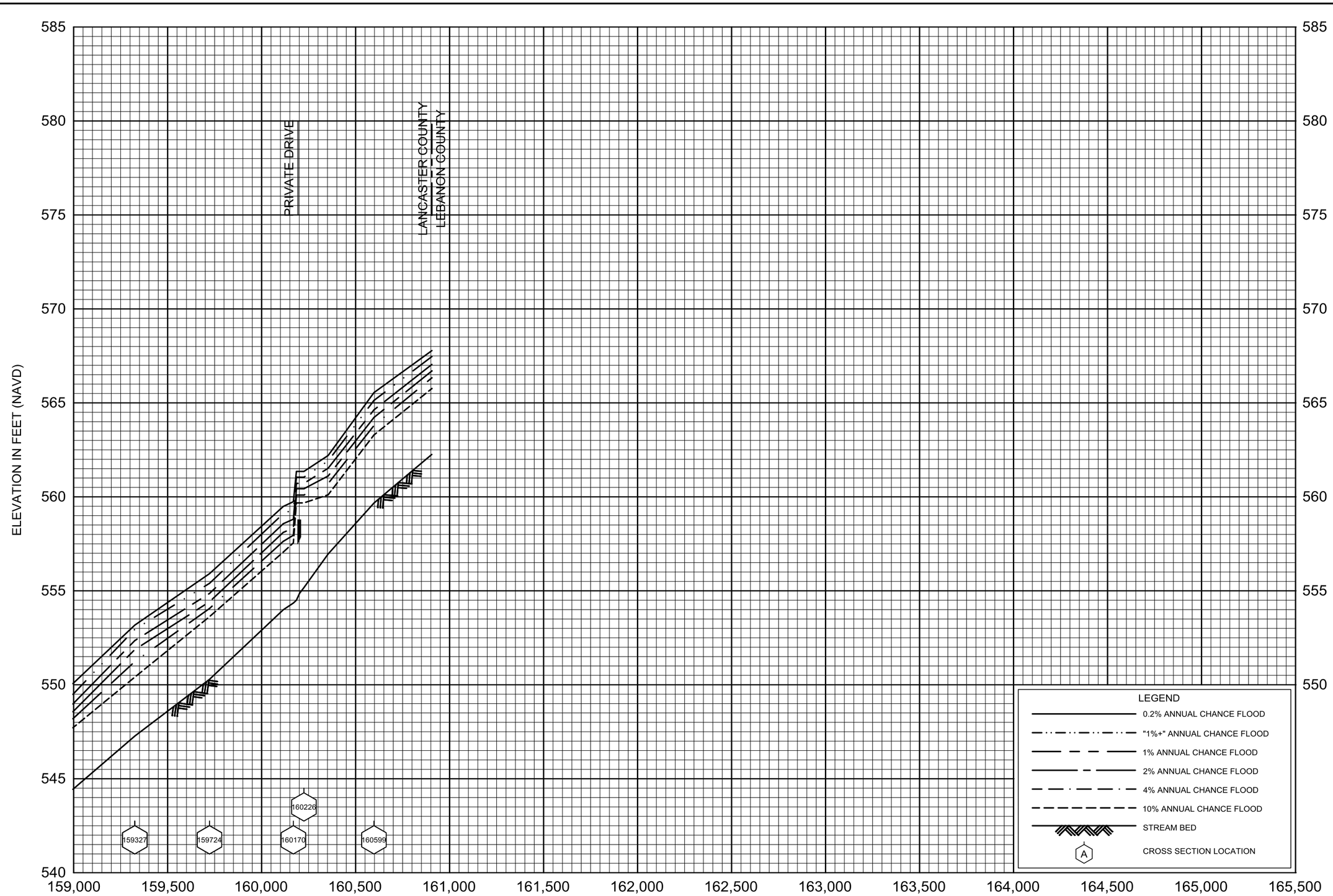
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

26P



FLOOD PROFILES

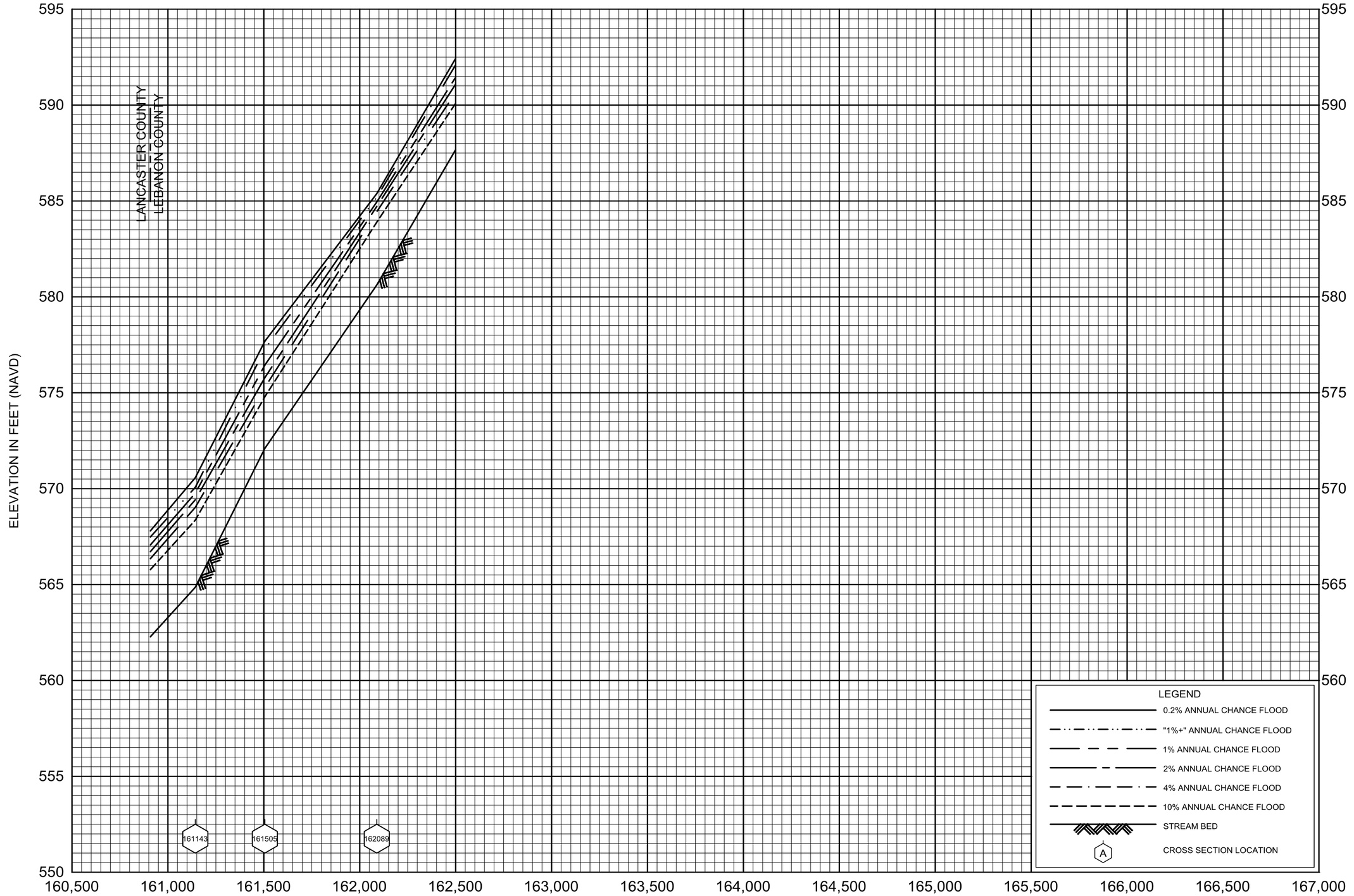
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JUDRISDICTIONS)

27P



FLOOD PROFILES

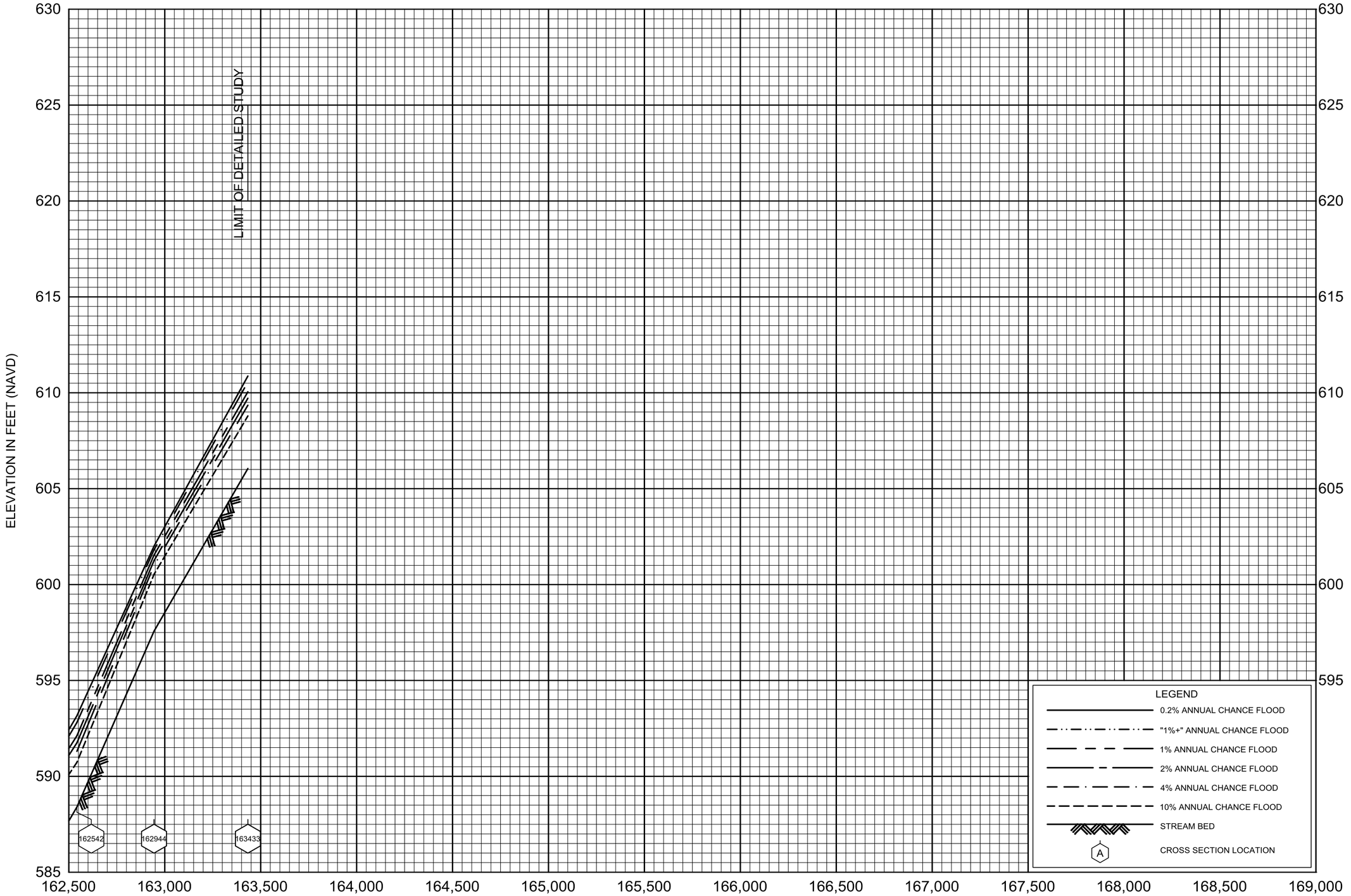
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LEBANON COUNTY, PA

(ALL JUDRISDICTIONS)

01P



FLOOD PROFILES

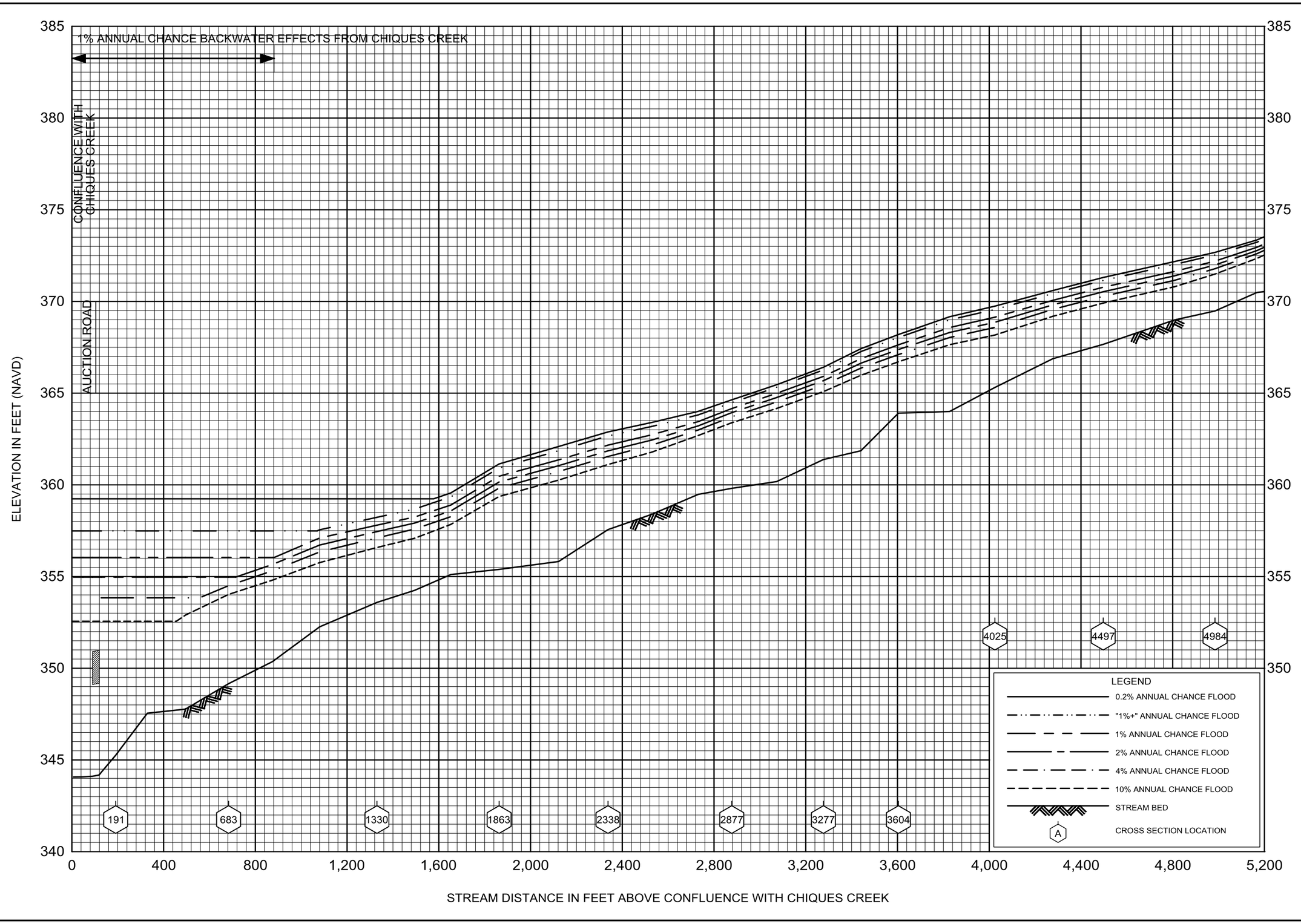
CHIQUES CREEK

U.S. ARMY CORPS OF ENGINEERS

LEBANON COUNTY, PA

(ALL JUDRISDICTIONS)

02P



FLOOD PROFILES

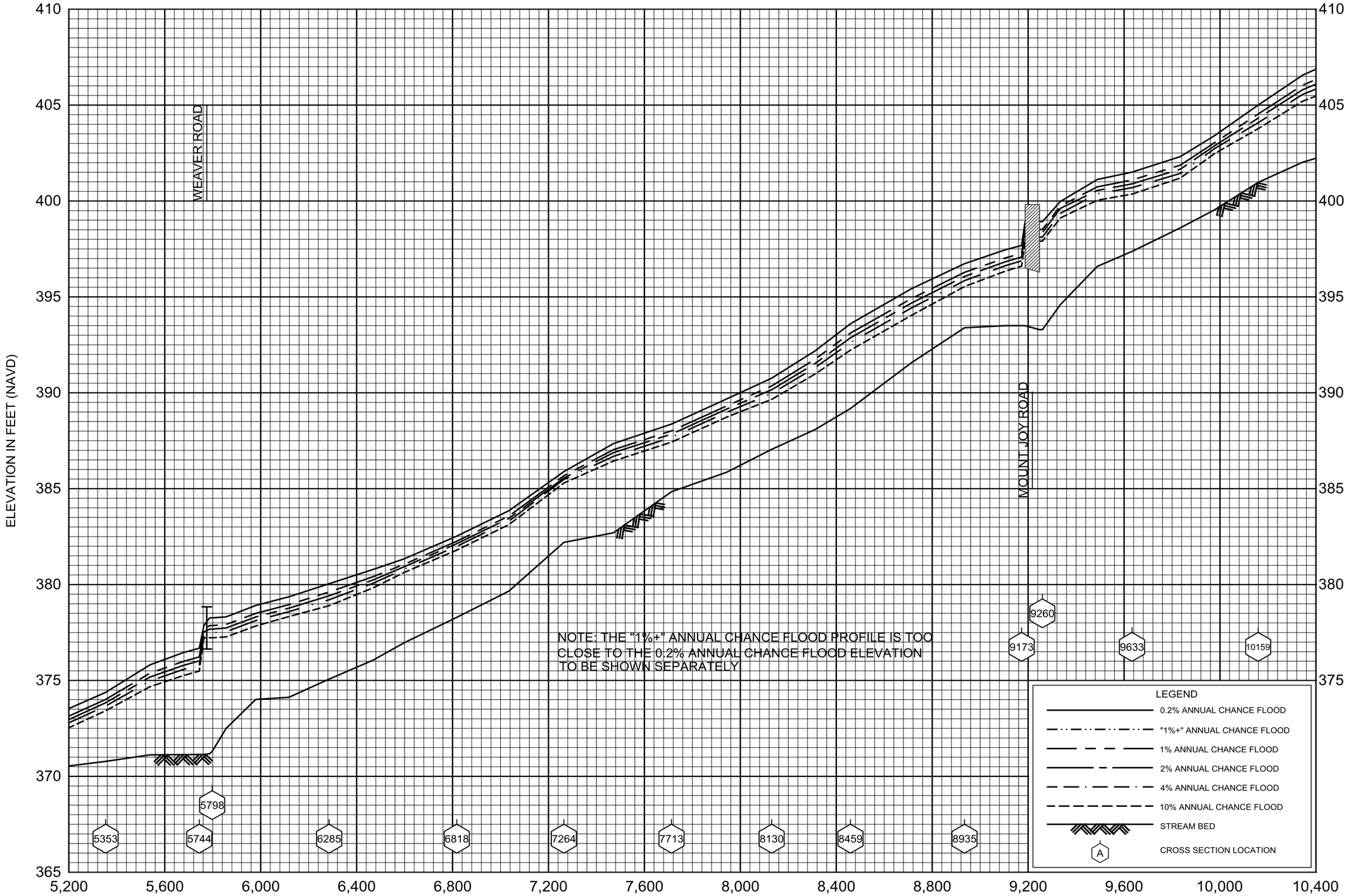
DELLINGER RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

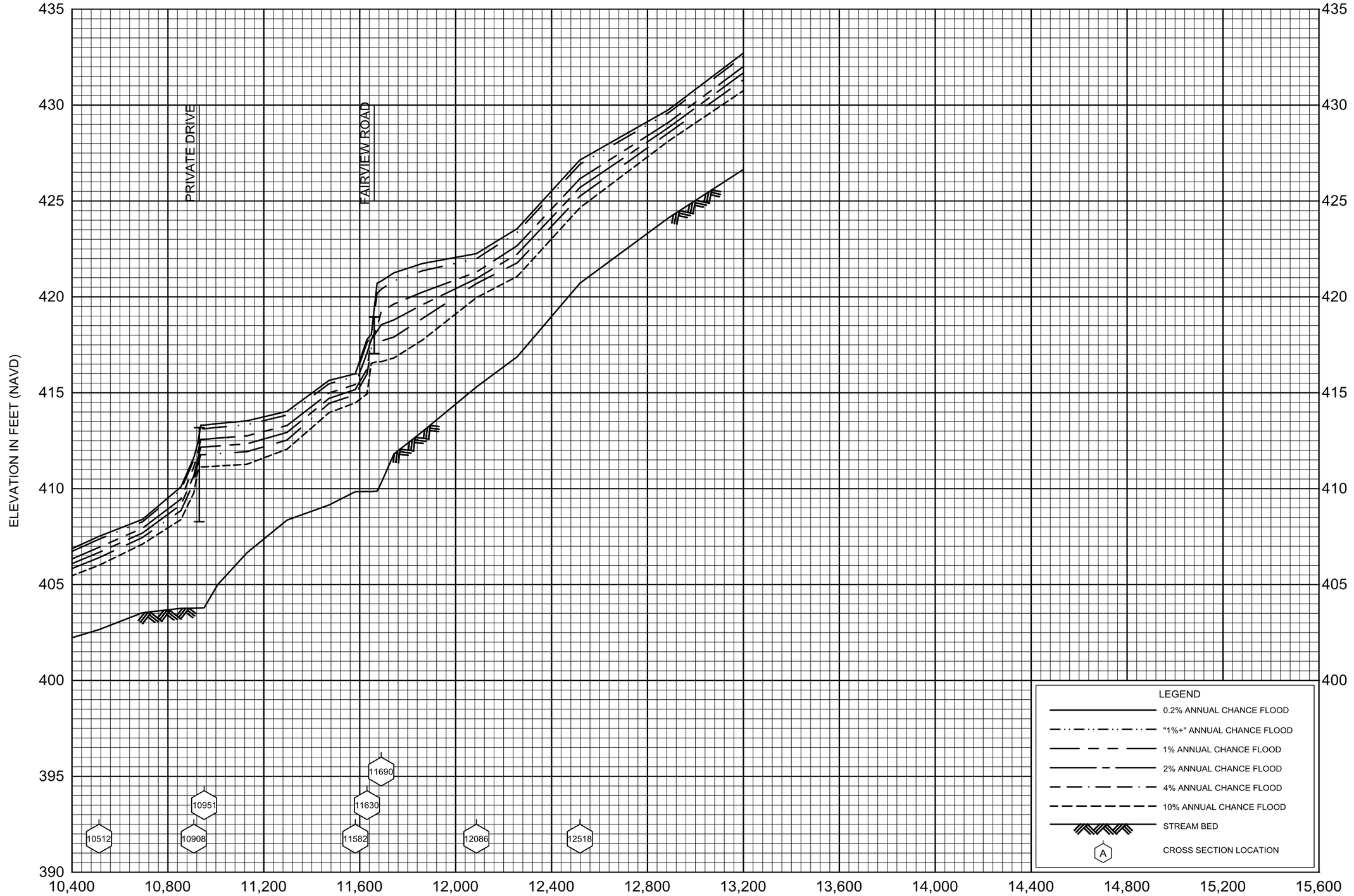
DELLINGER RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

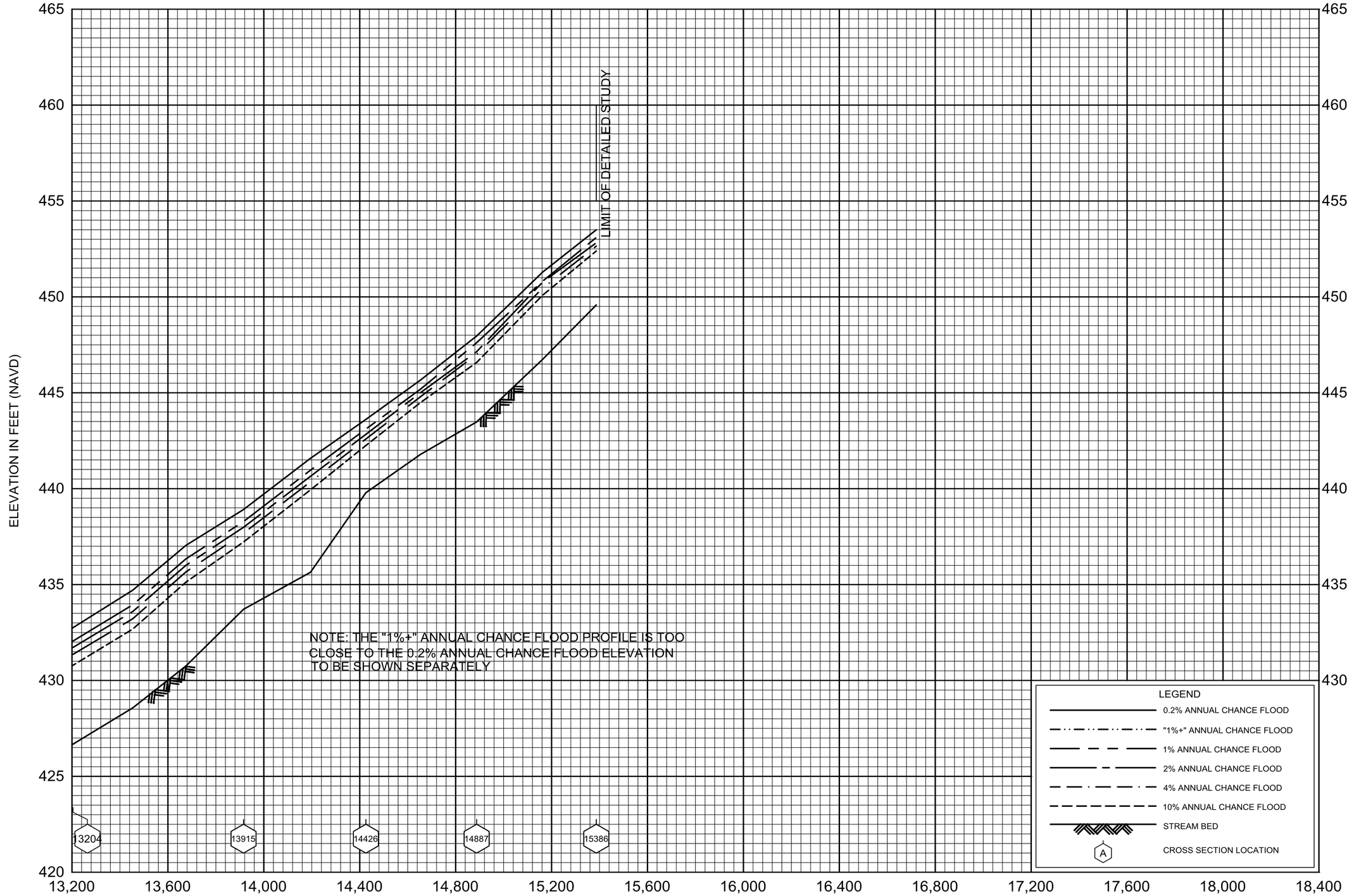
DELLINGER RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

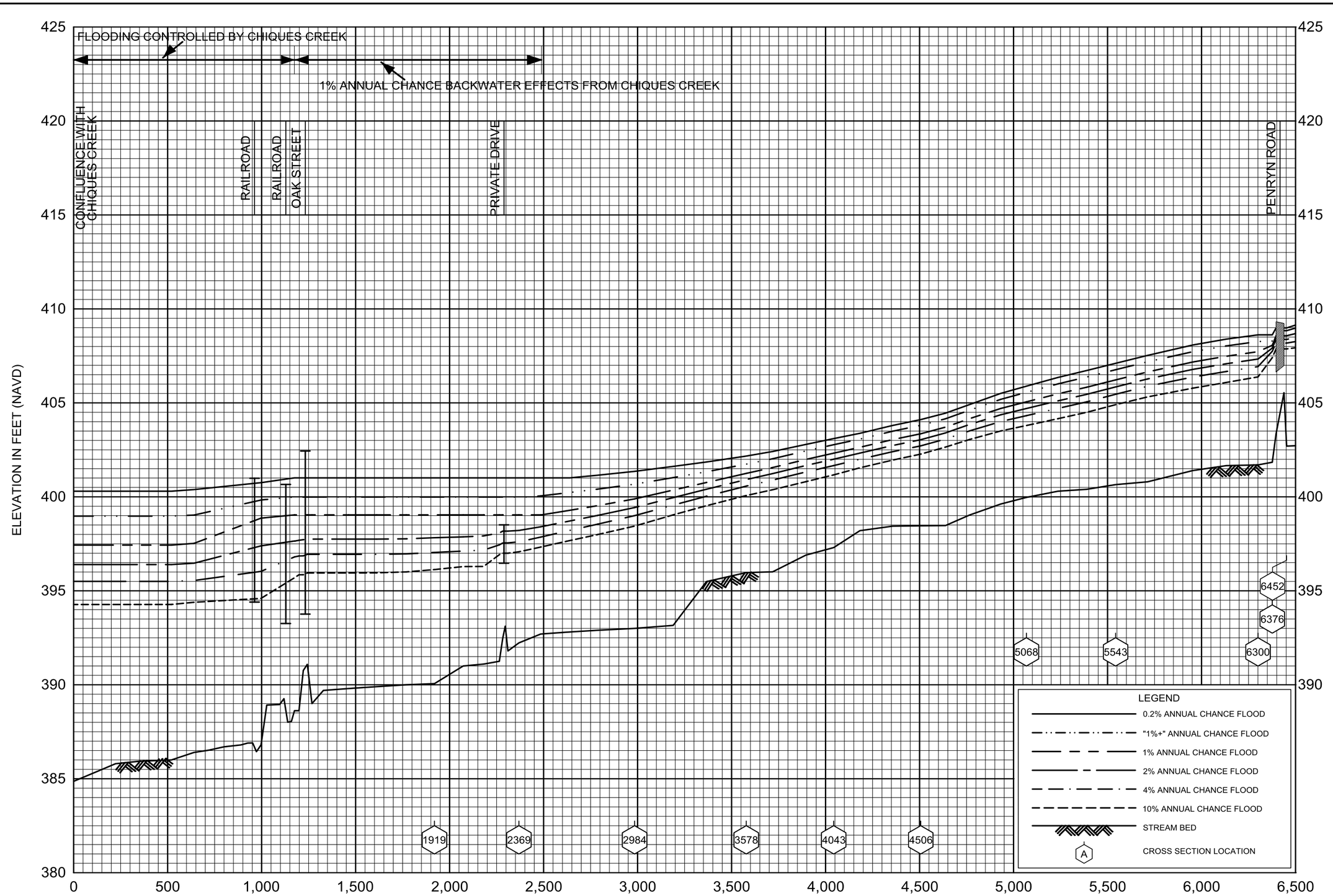
DELLINGER RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

04P



FLOOD PROFILES

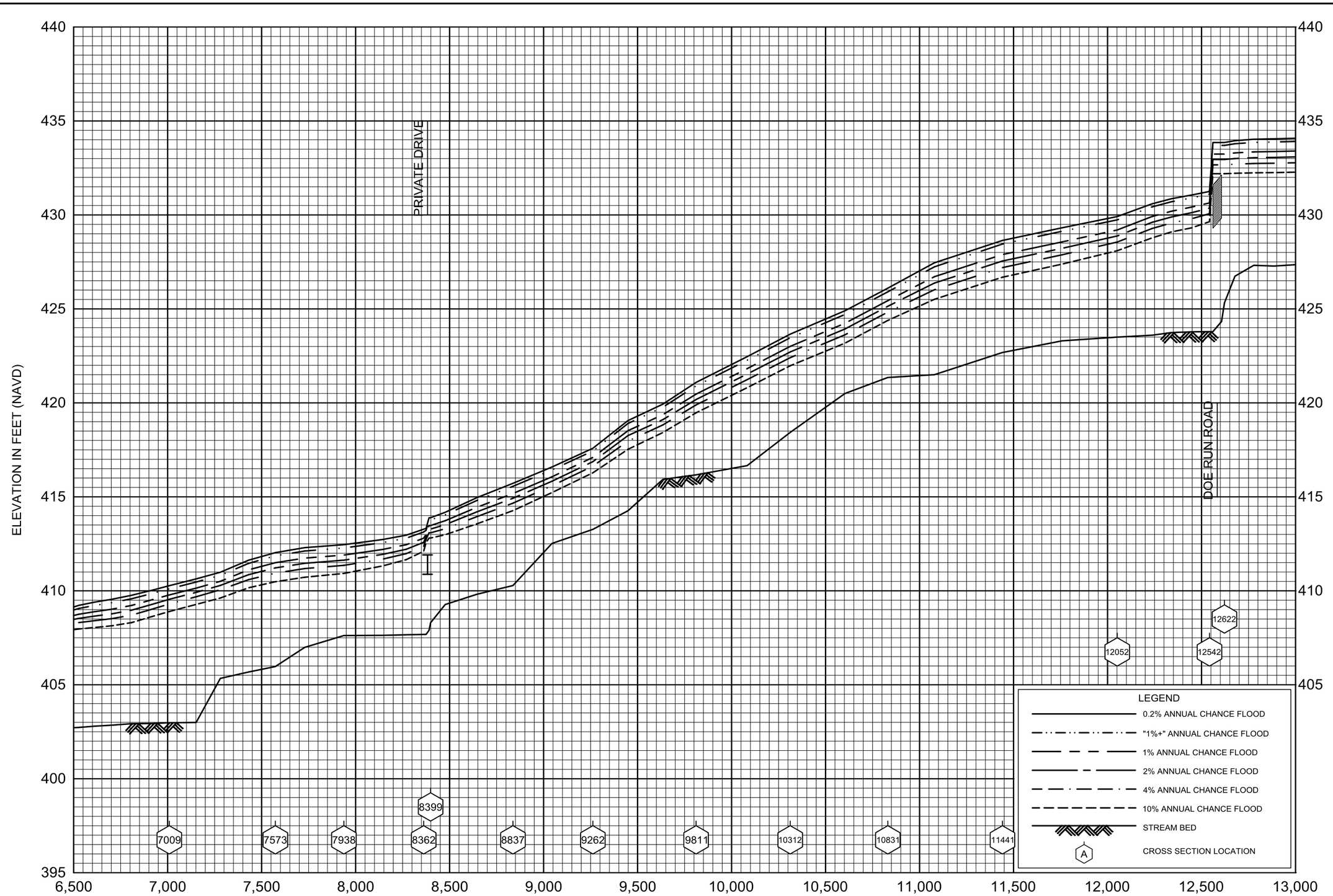
DOE RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

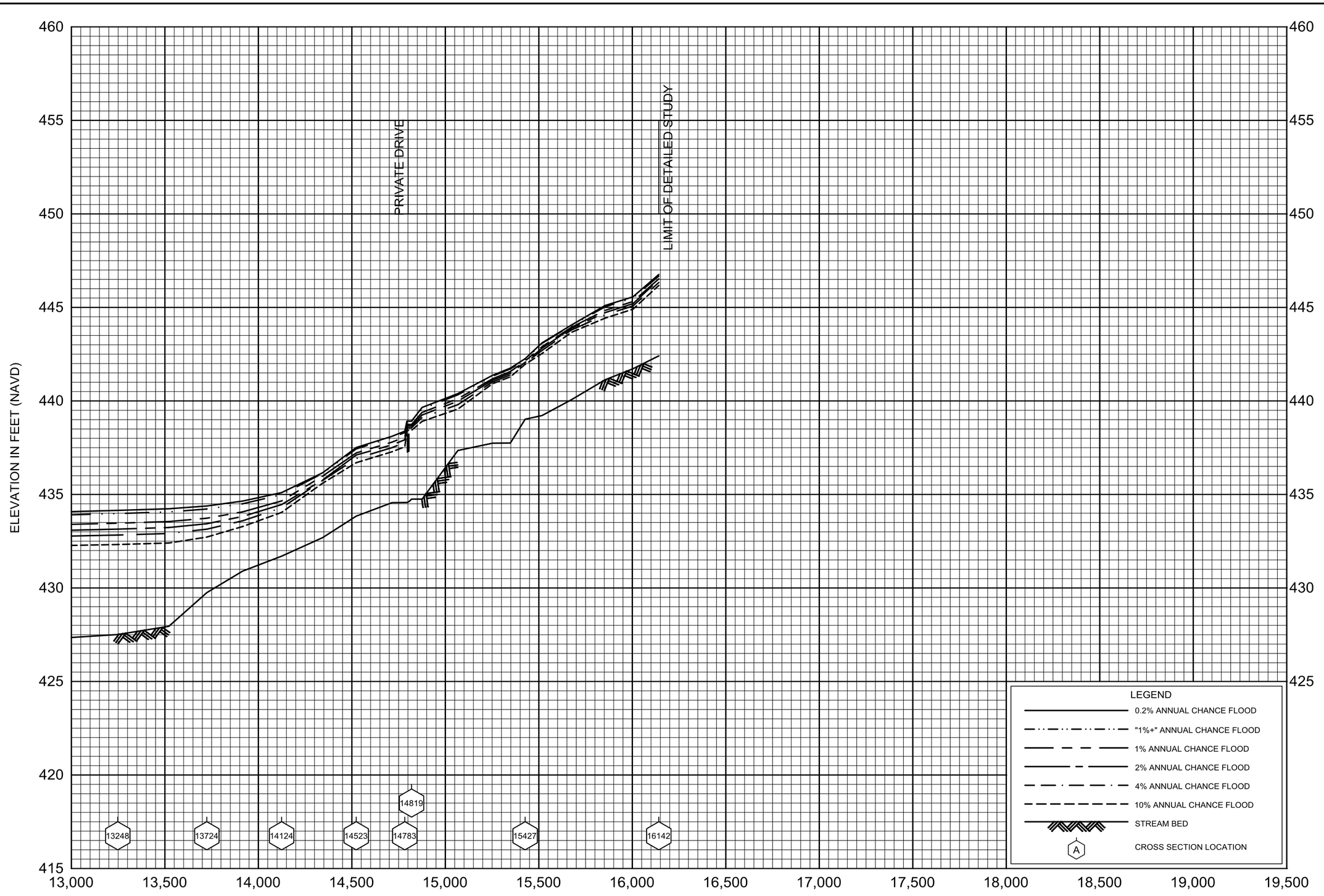
DOE RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

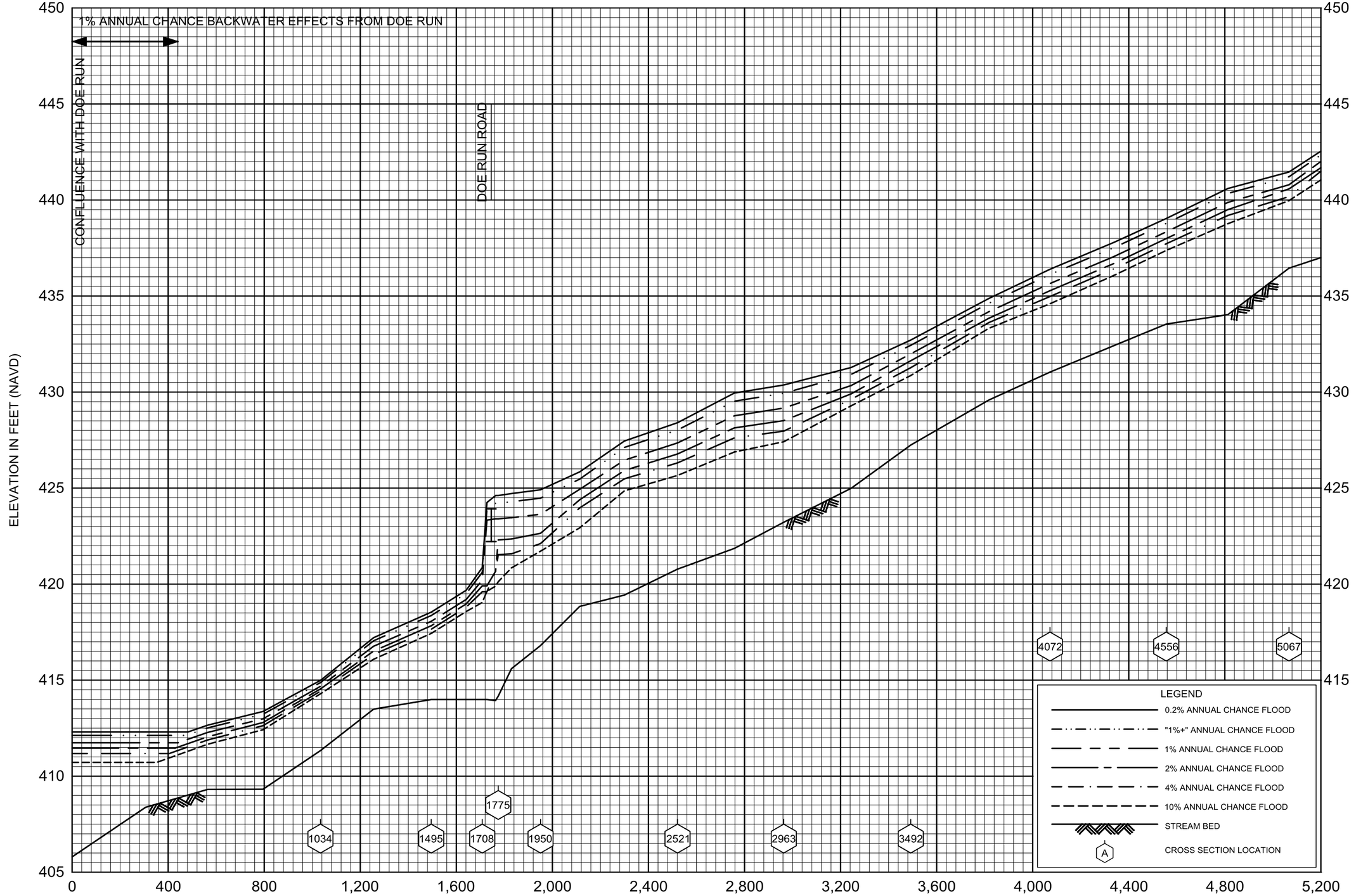
DOE RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

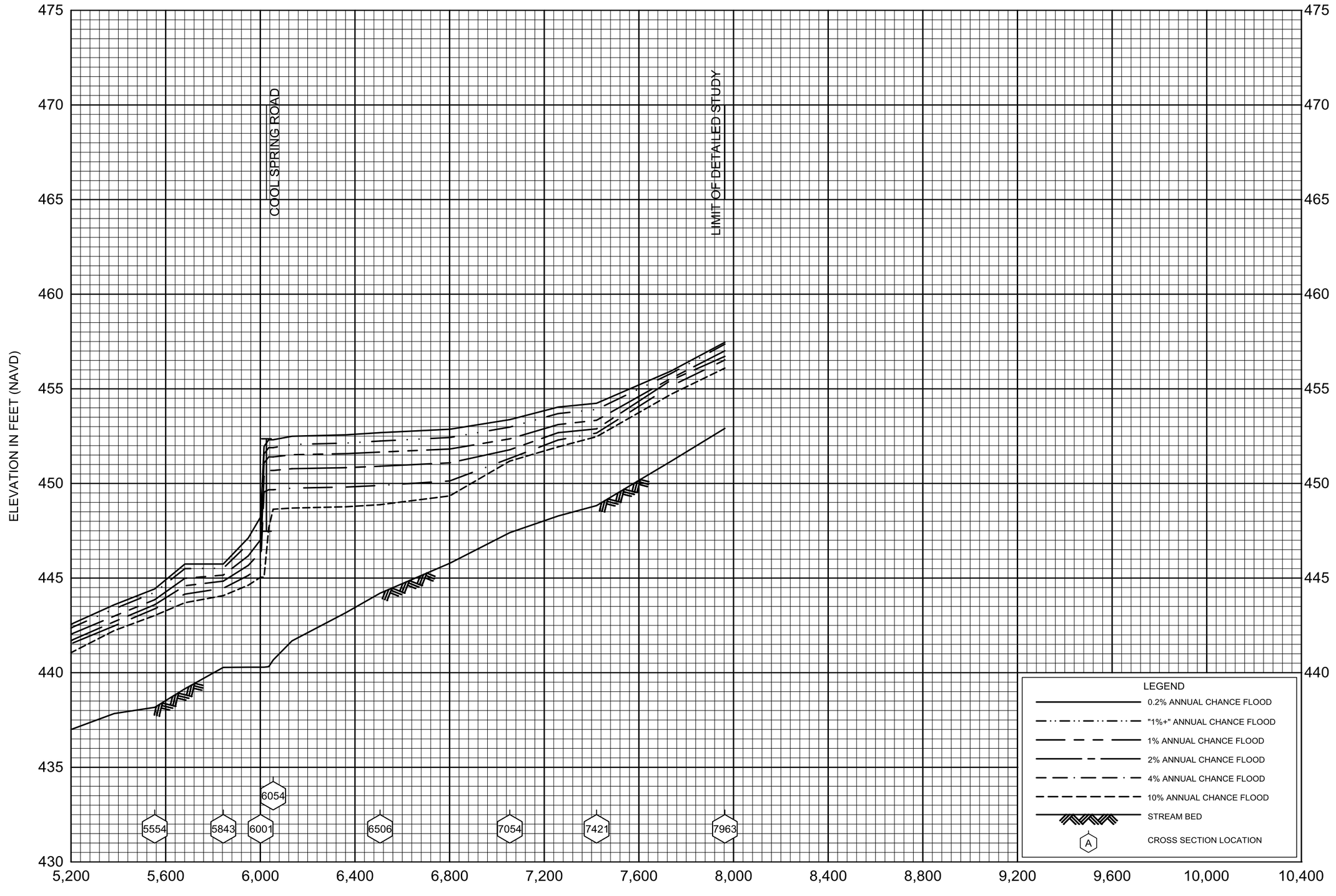
DOE RUN TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

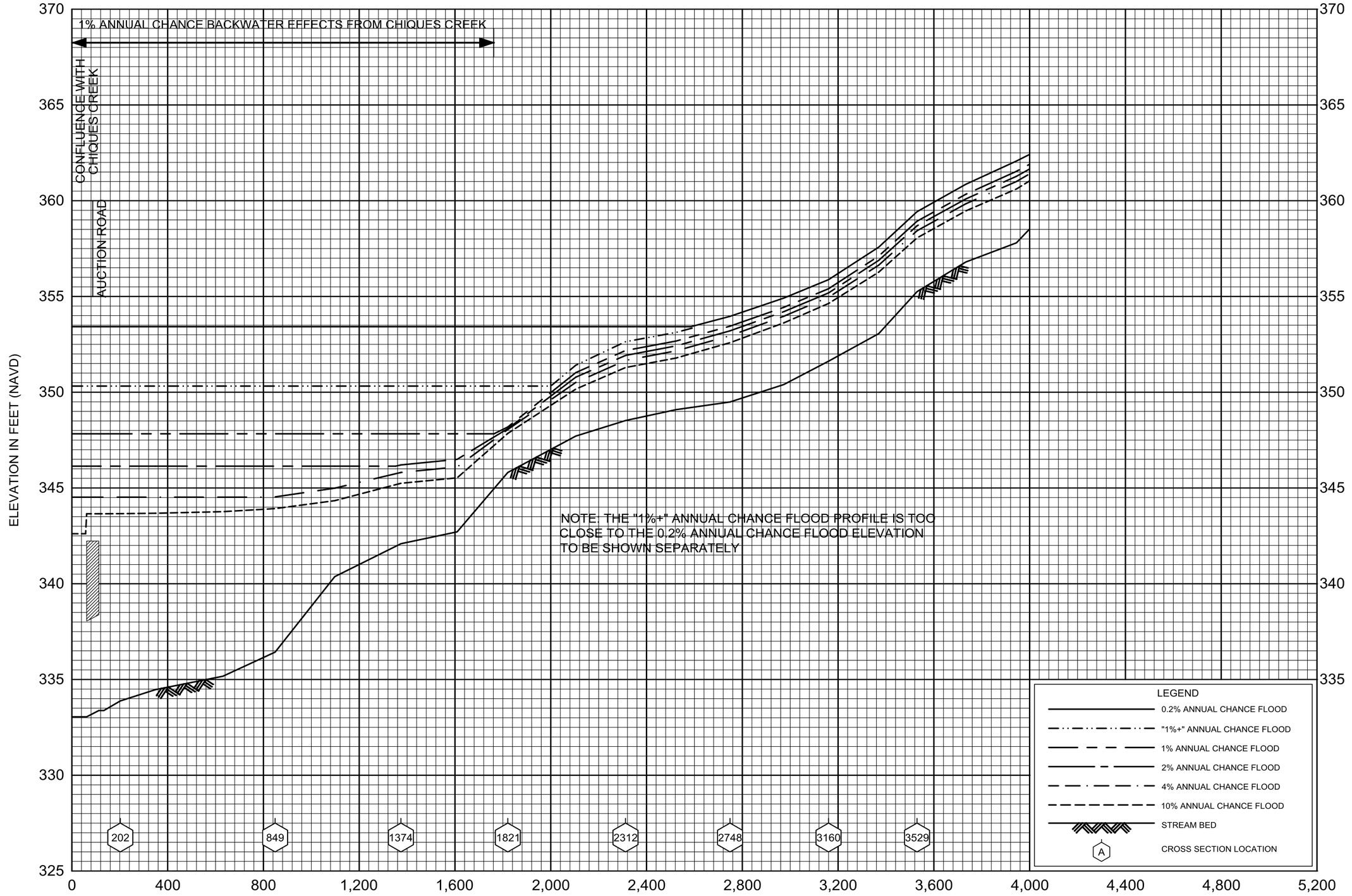
DOE RUN TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

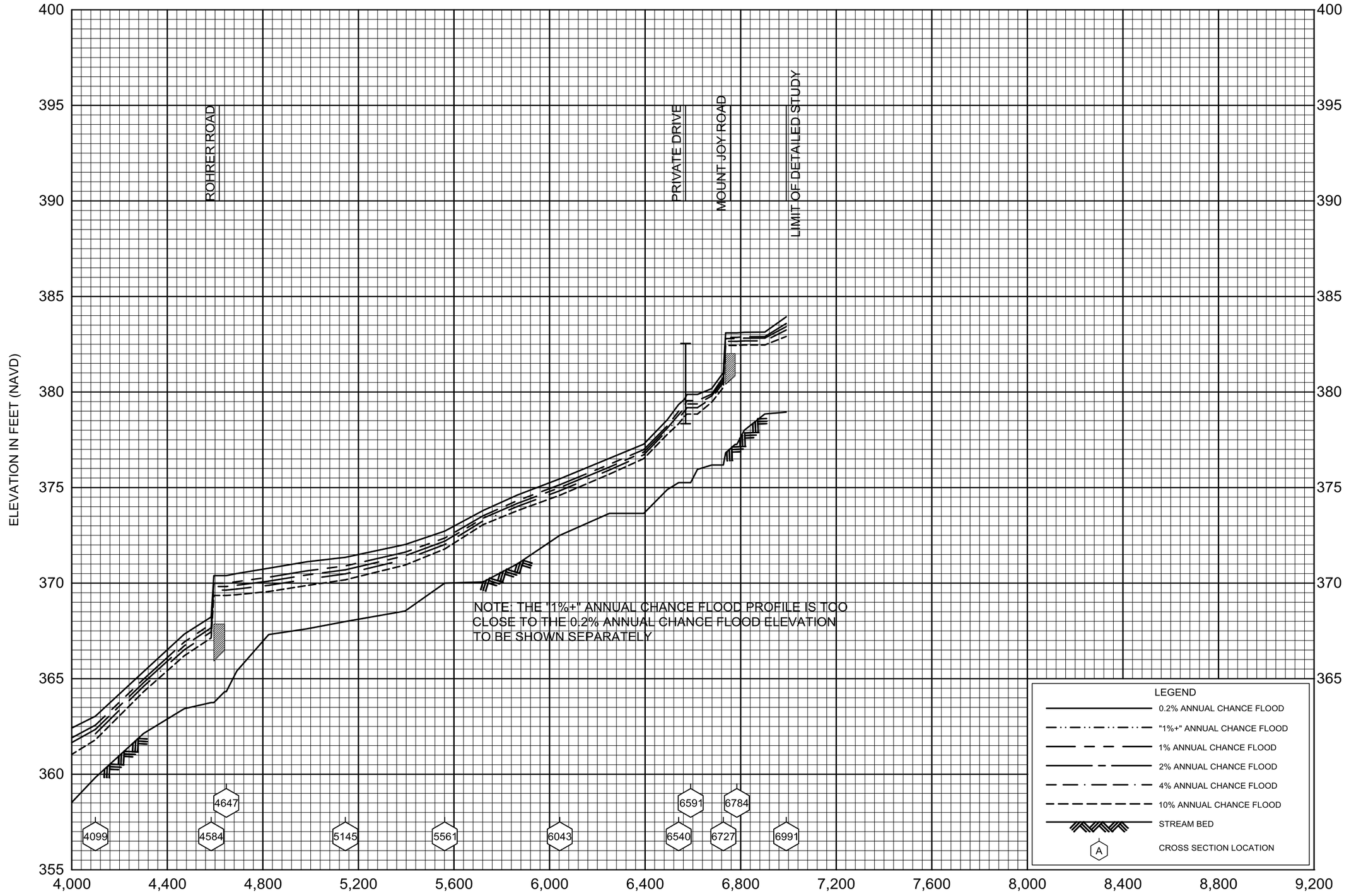
ERISMAN RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

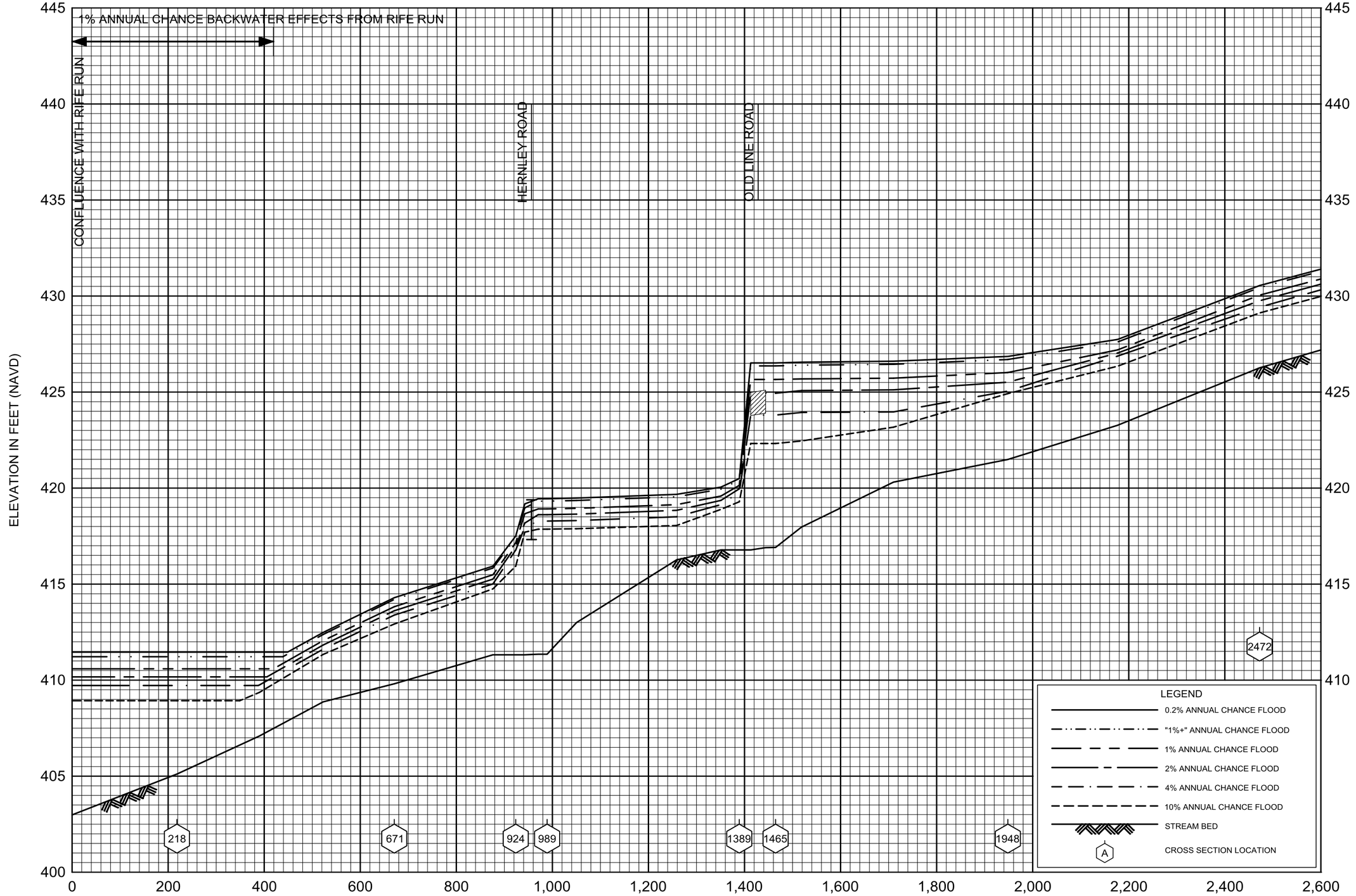
ERISMAN RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

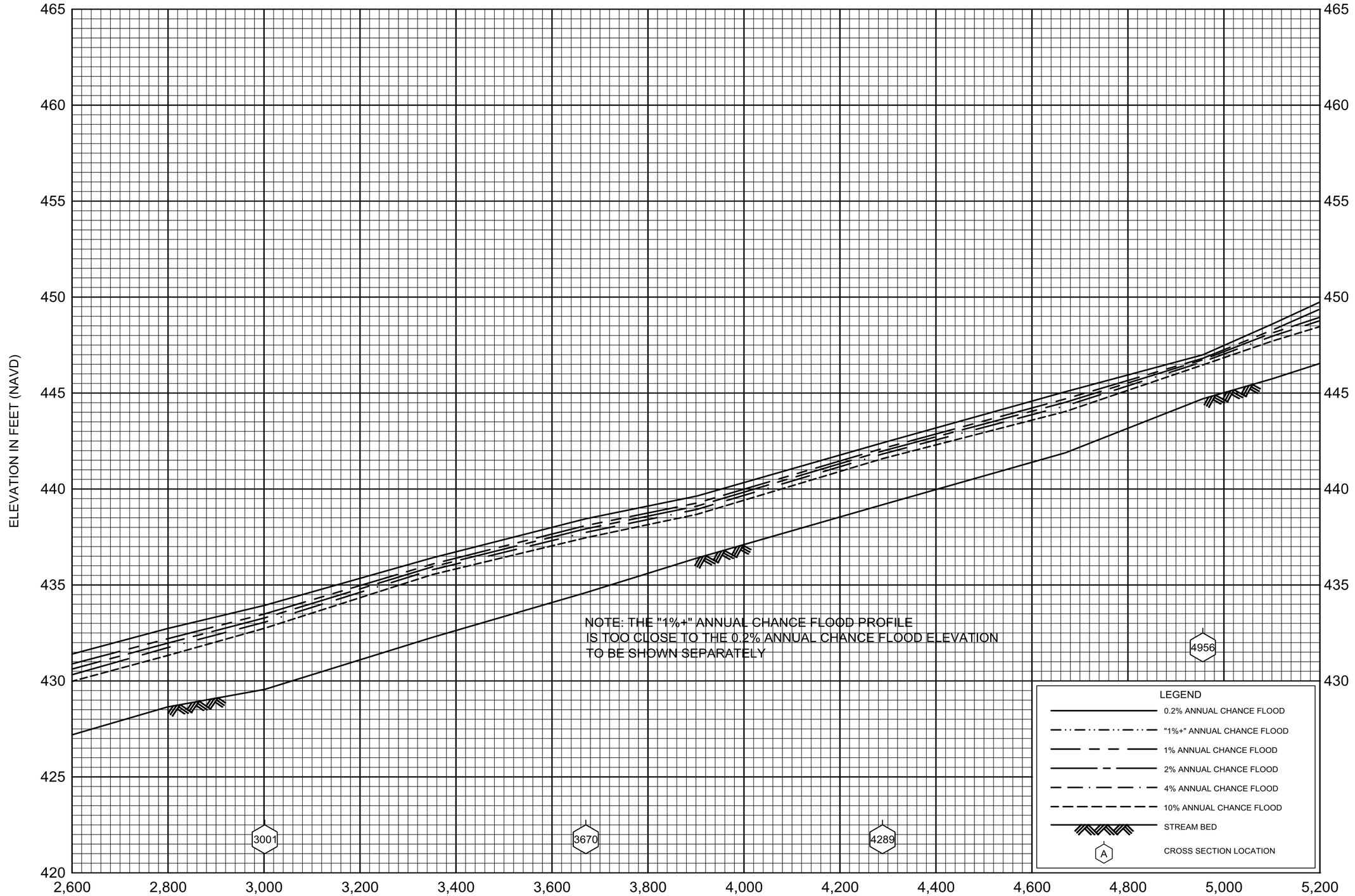
ORCHARD ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

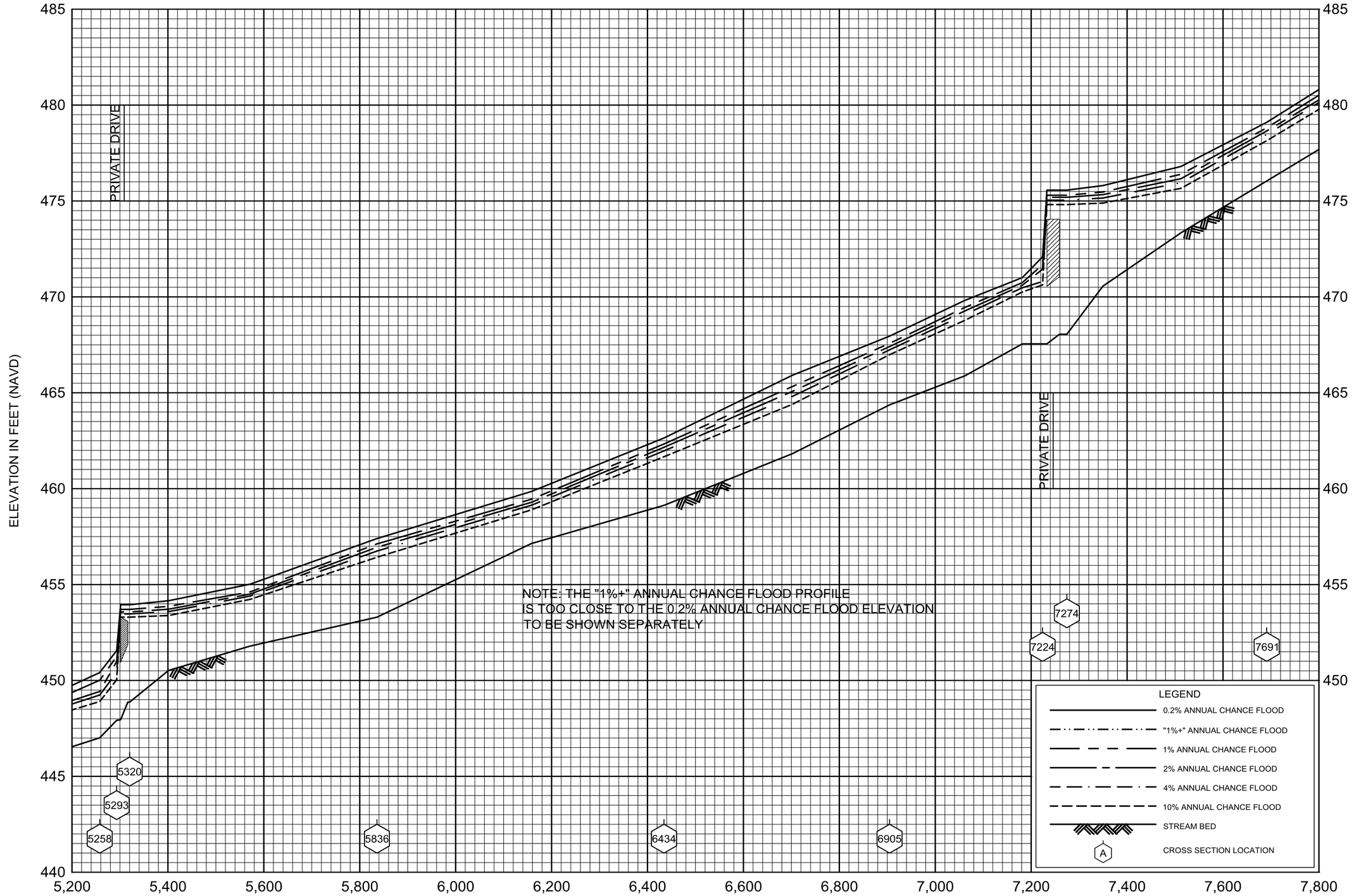
ORCHARD ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

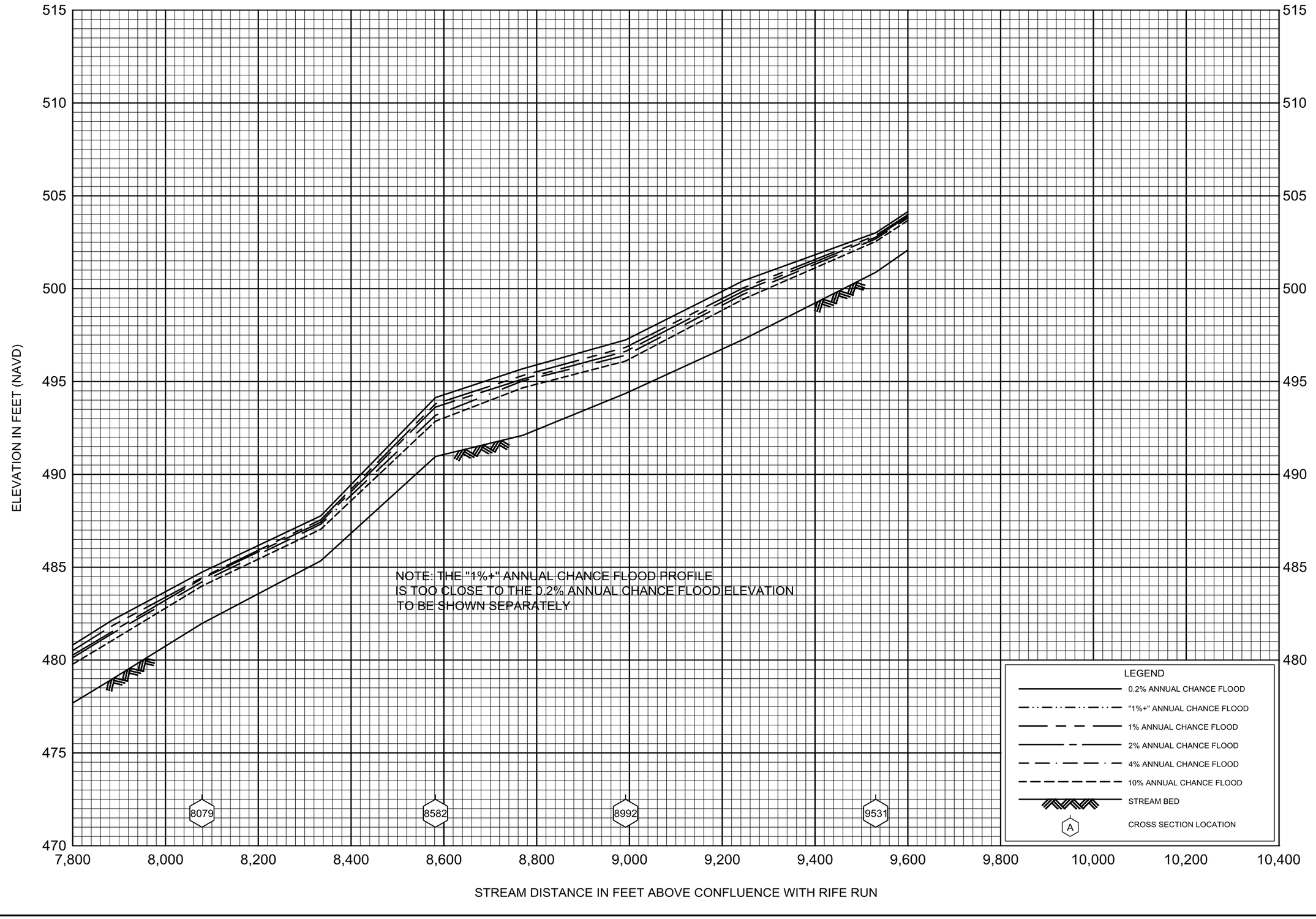
ORCHARD ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

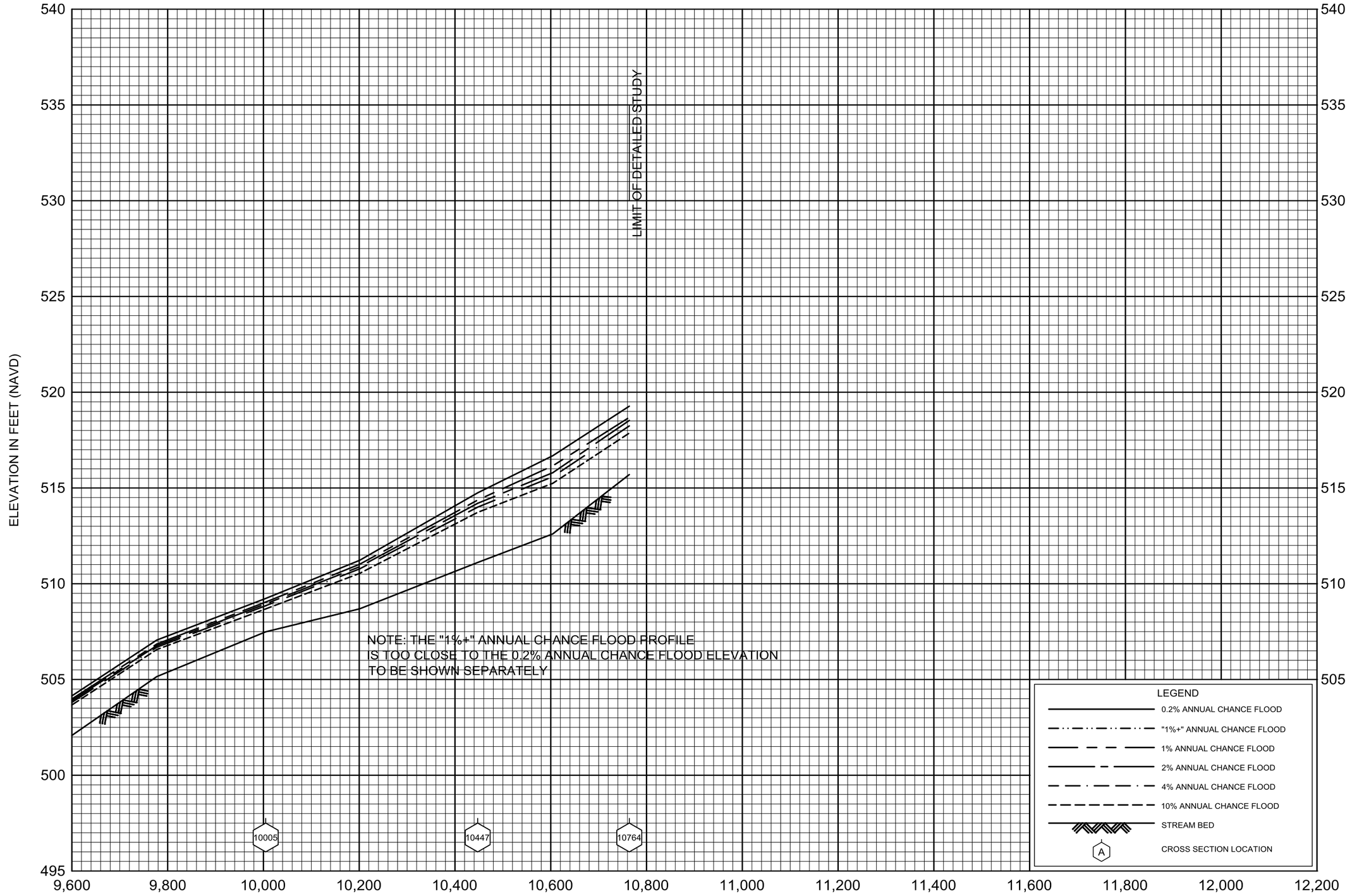
ORCHARD ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

04P



FLOOD PROFILES

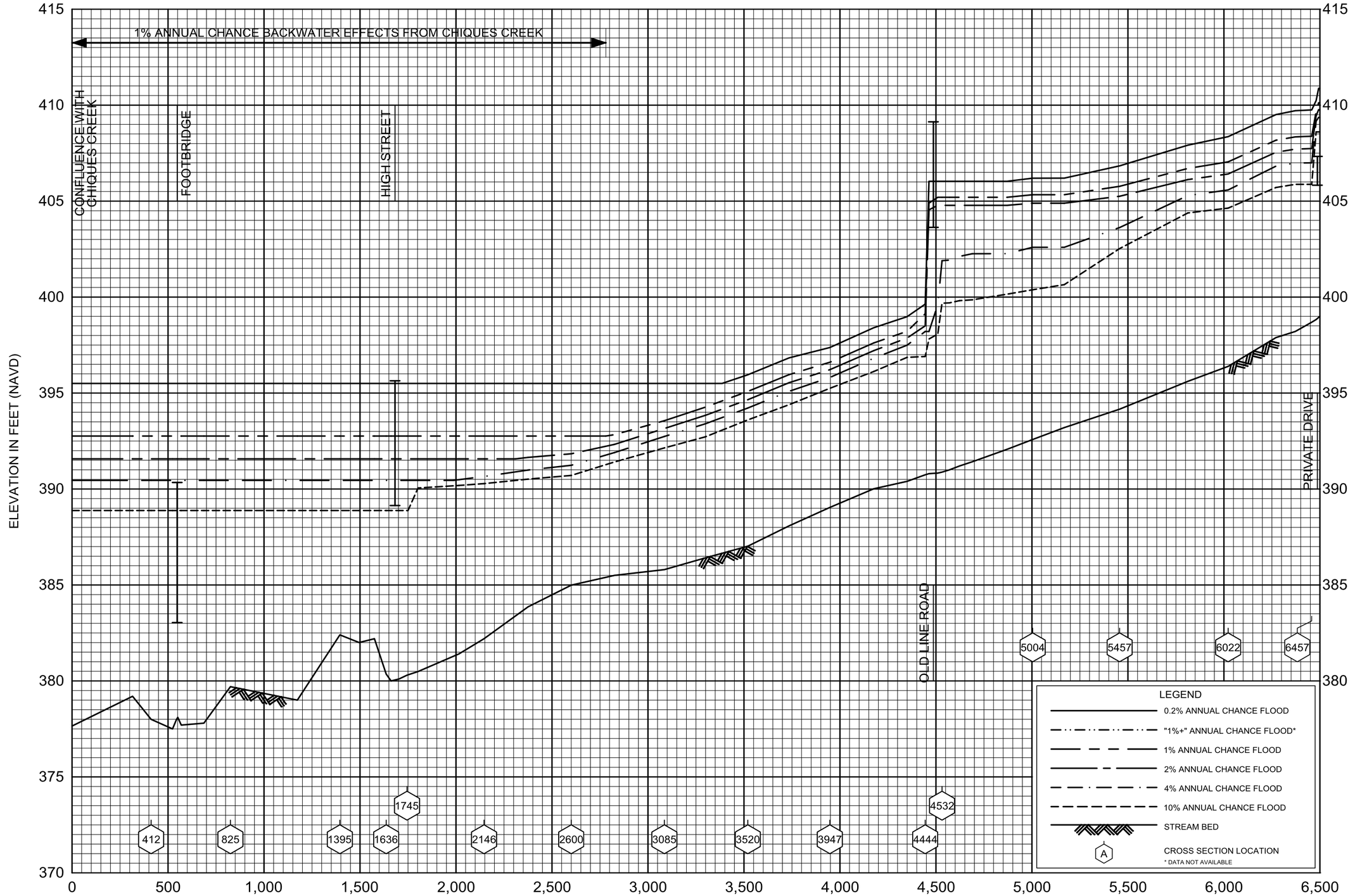
ORCHARD ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

05P



FLOOD PROFILES

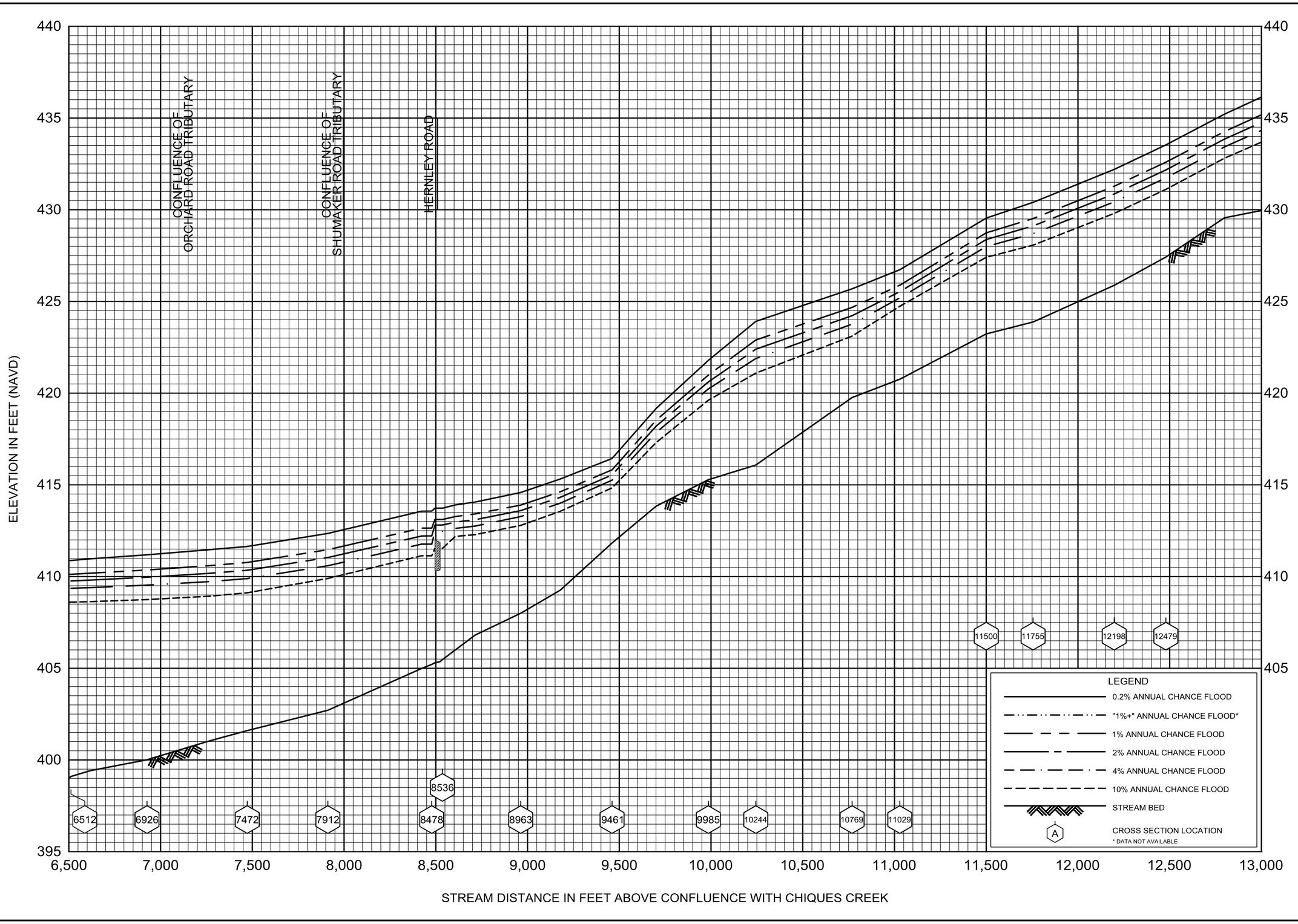
RIFE RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

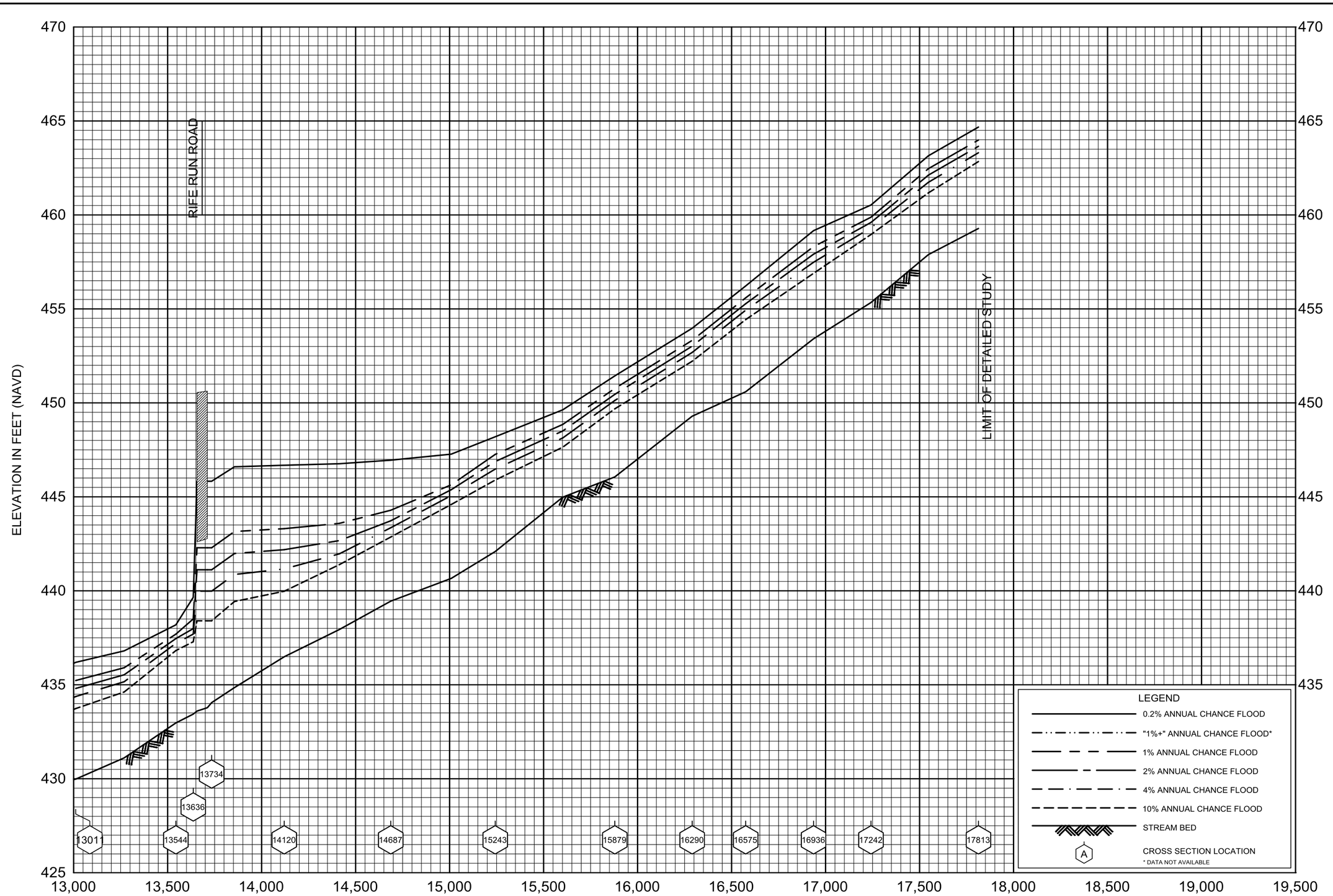
RIFE RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

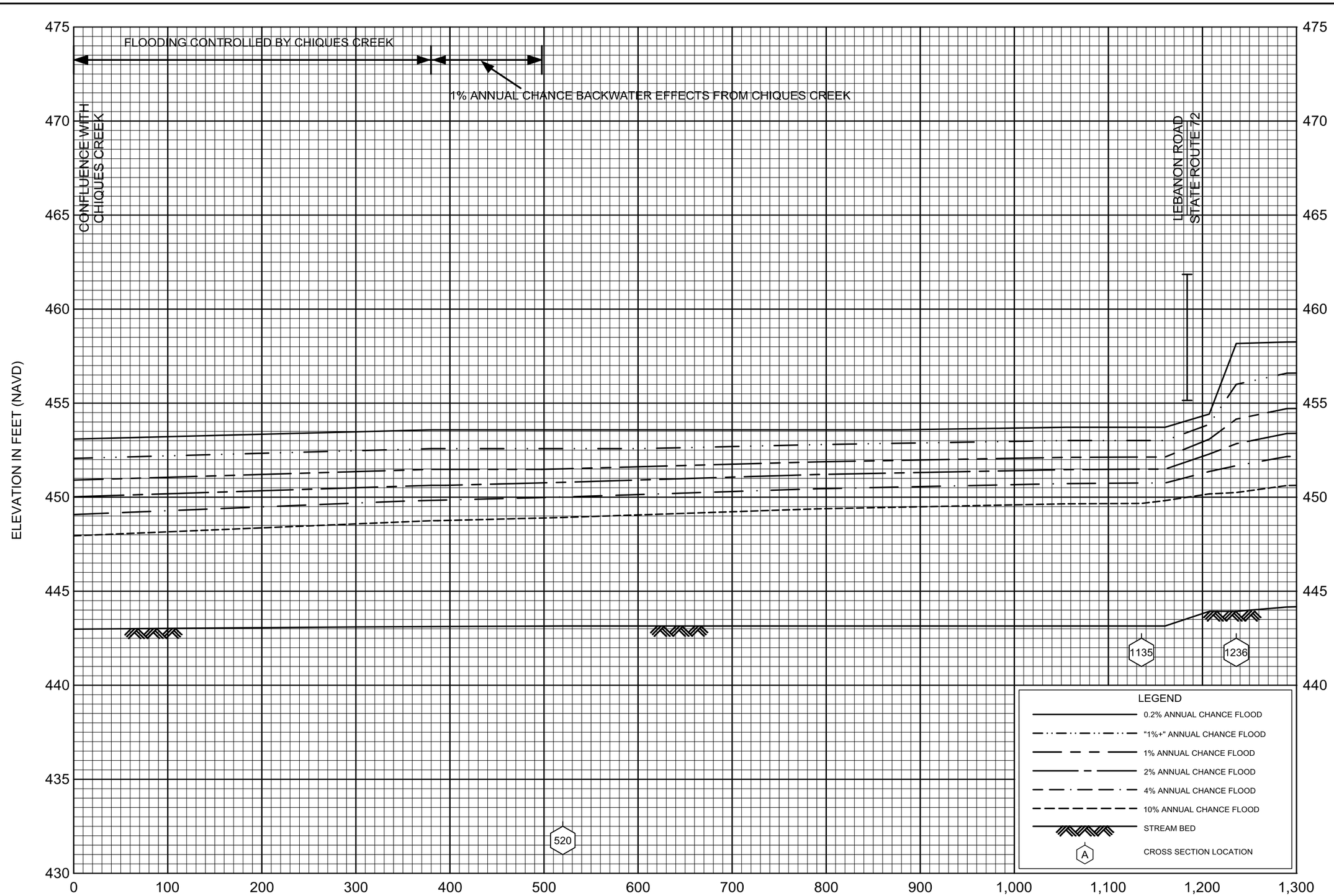
RIFE RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

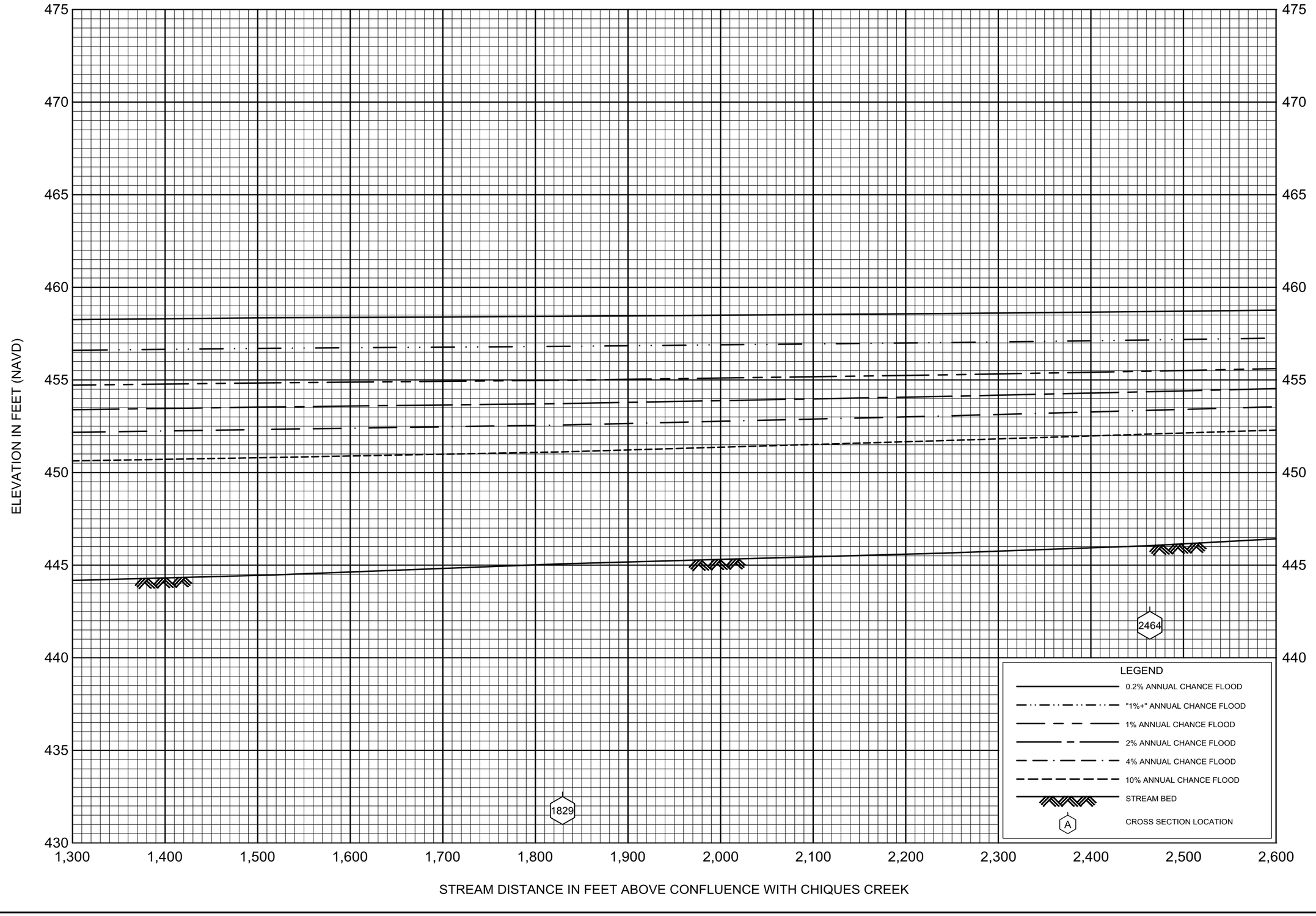
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

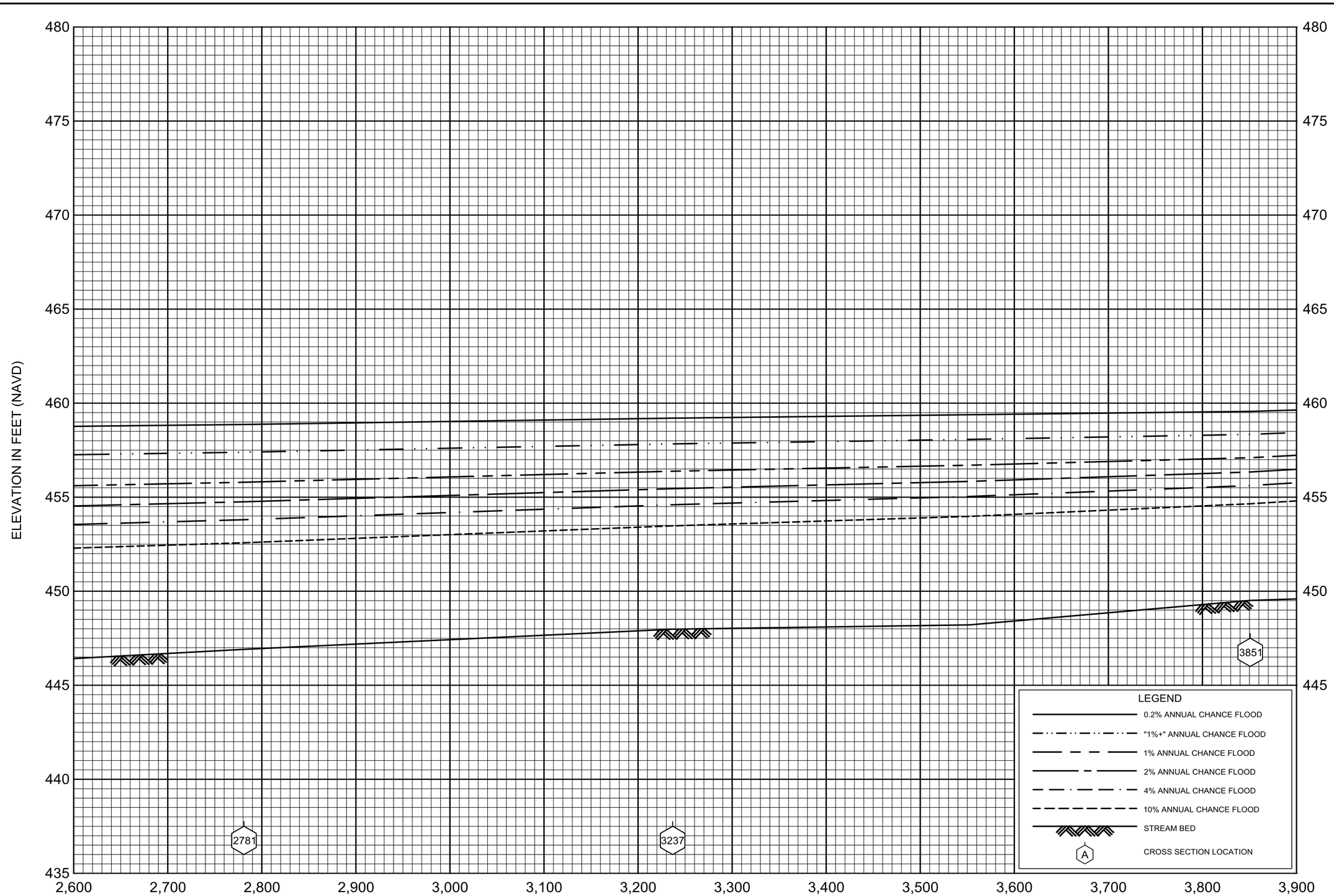
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

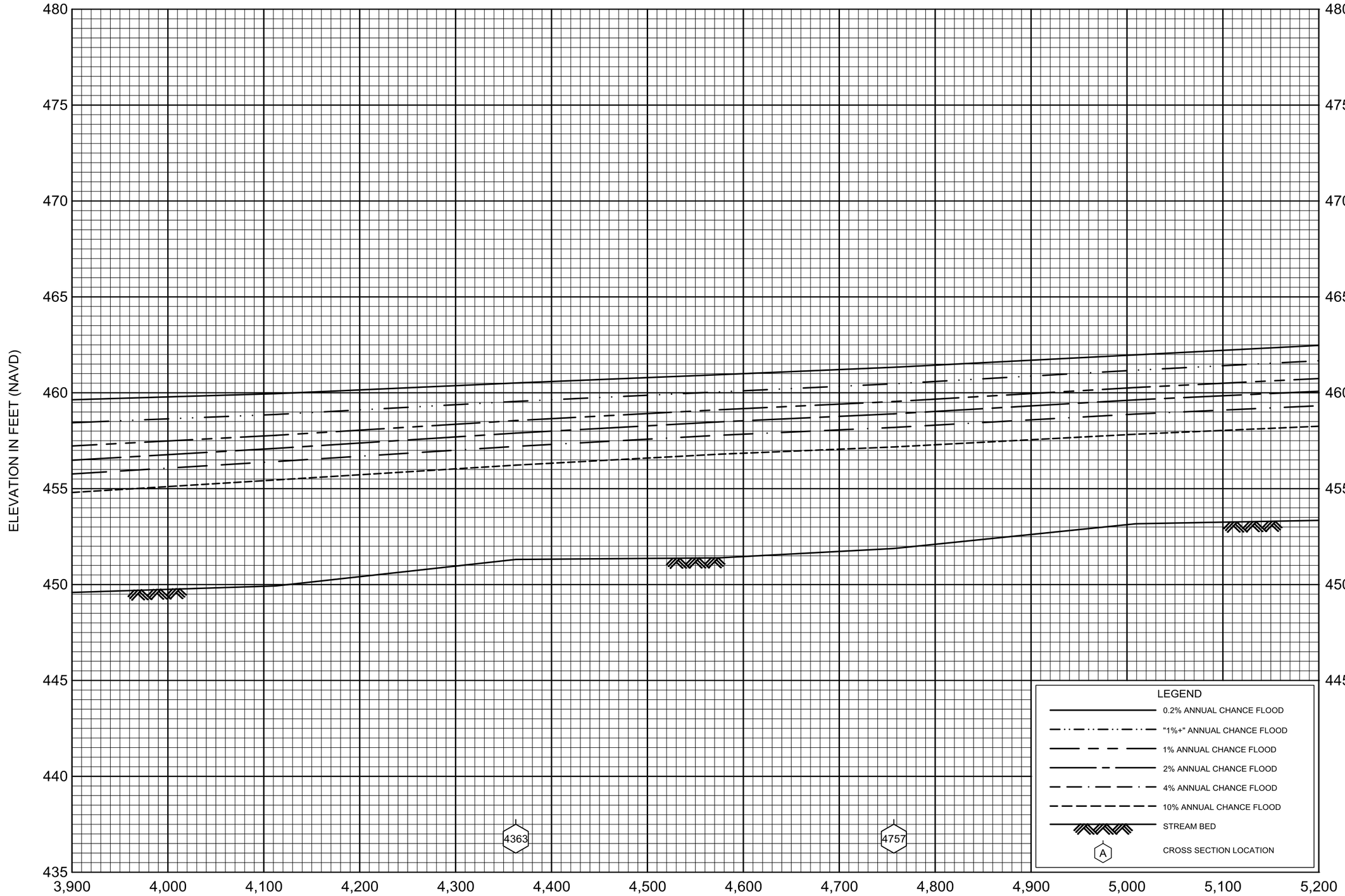
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

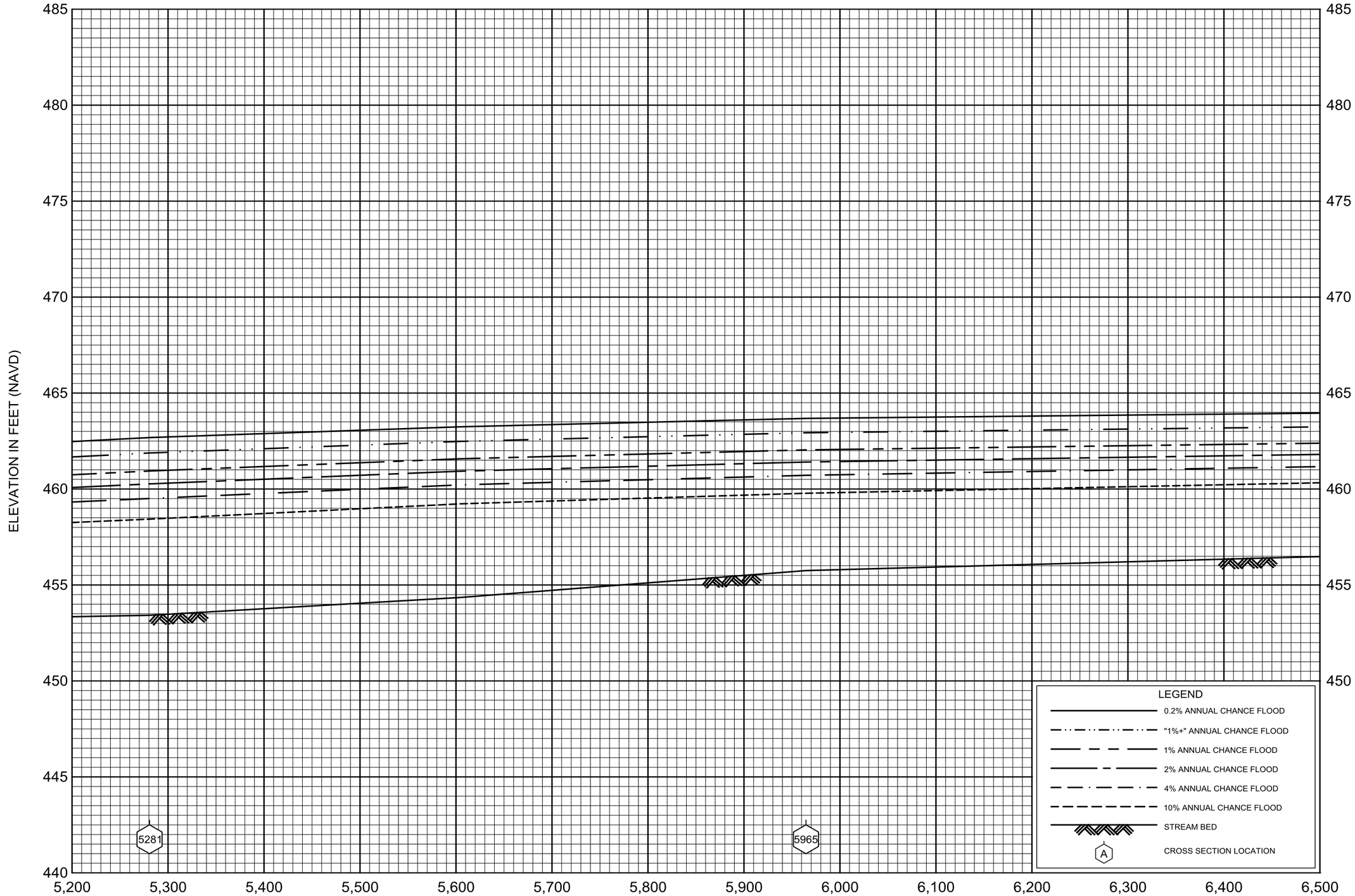
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

04P



FLOOD PROFILES

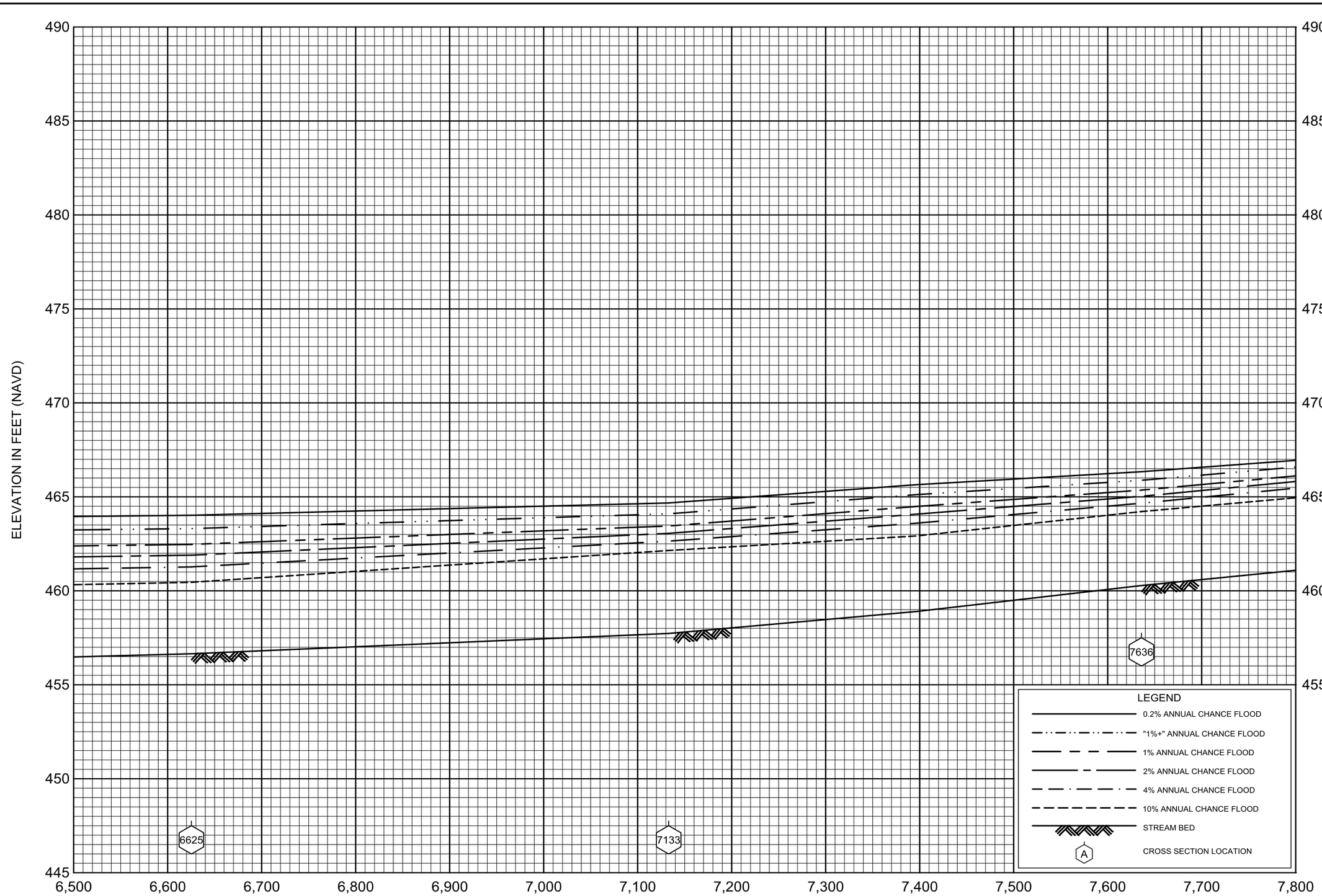
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

05P



FLOOD PROFILES

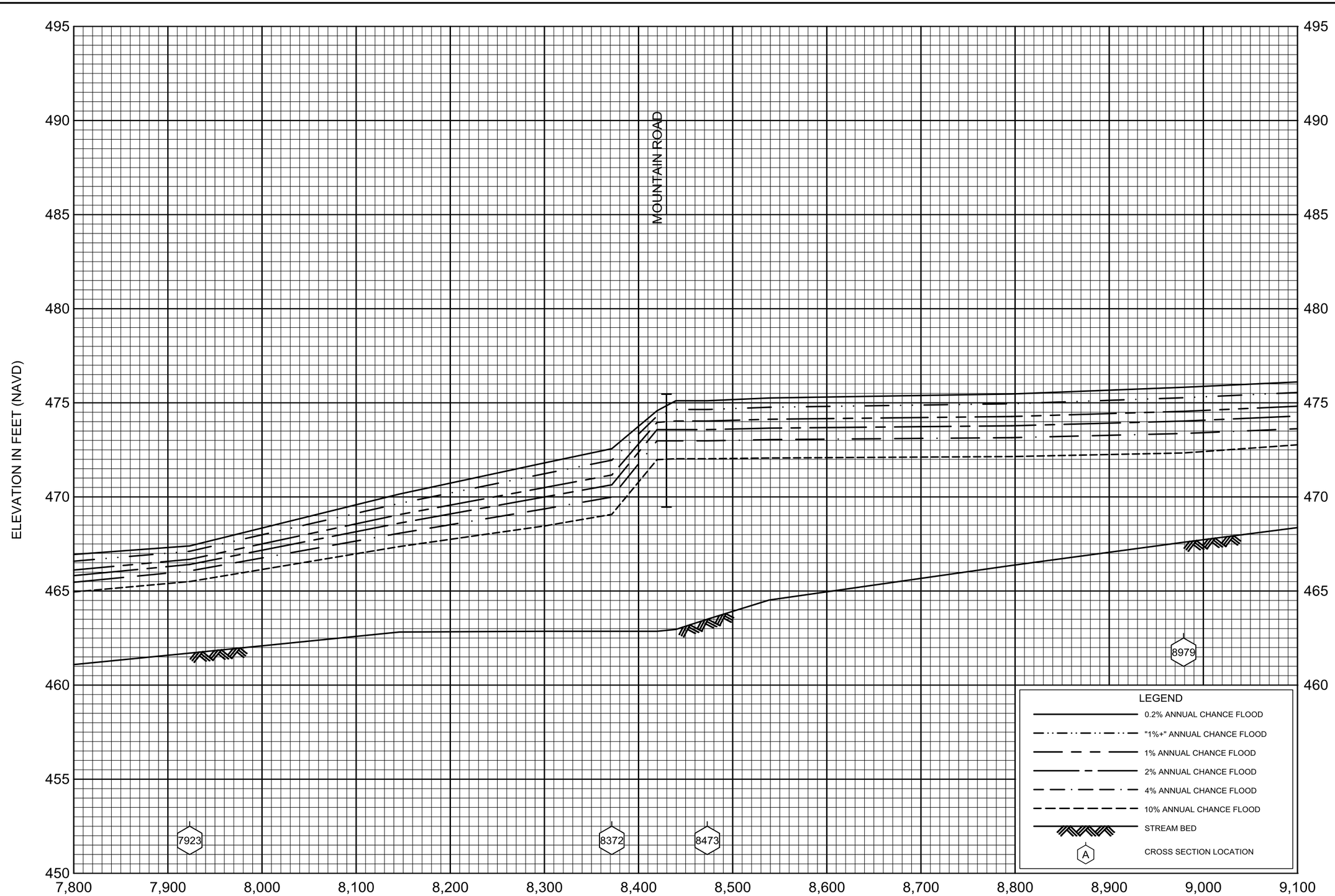
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

06P



FLOOD PROFILES

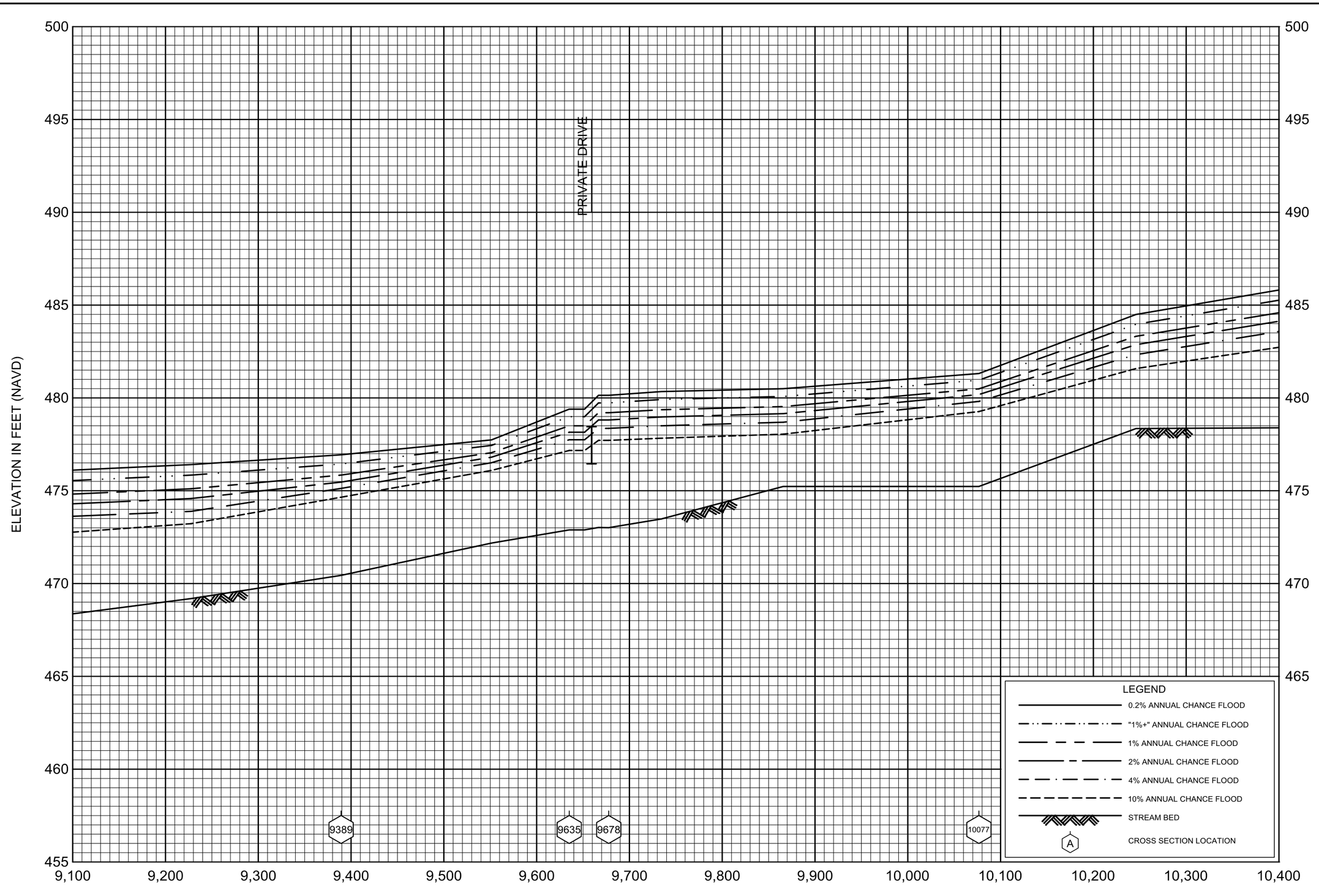
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

07P



FLOOD PROFILES

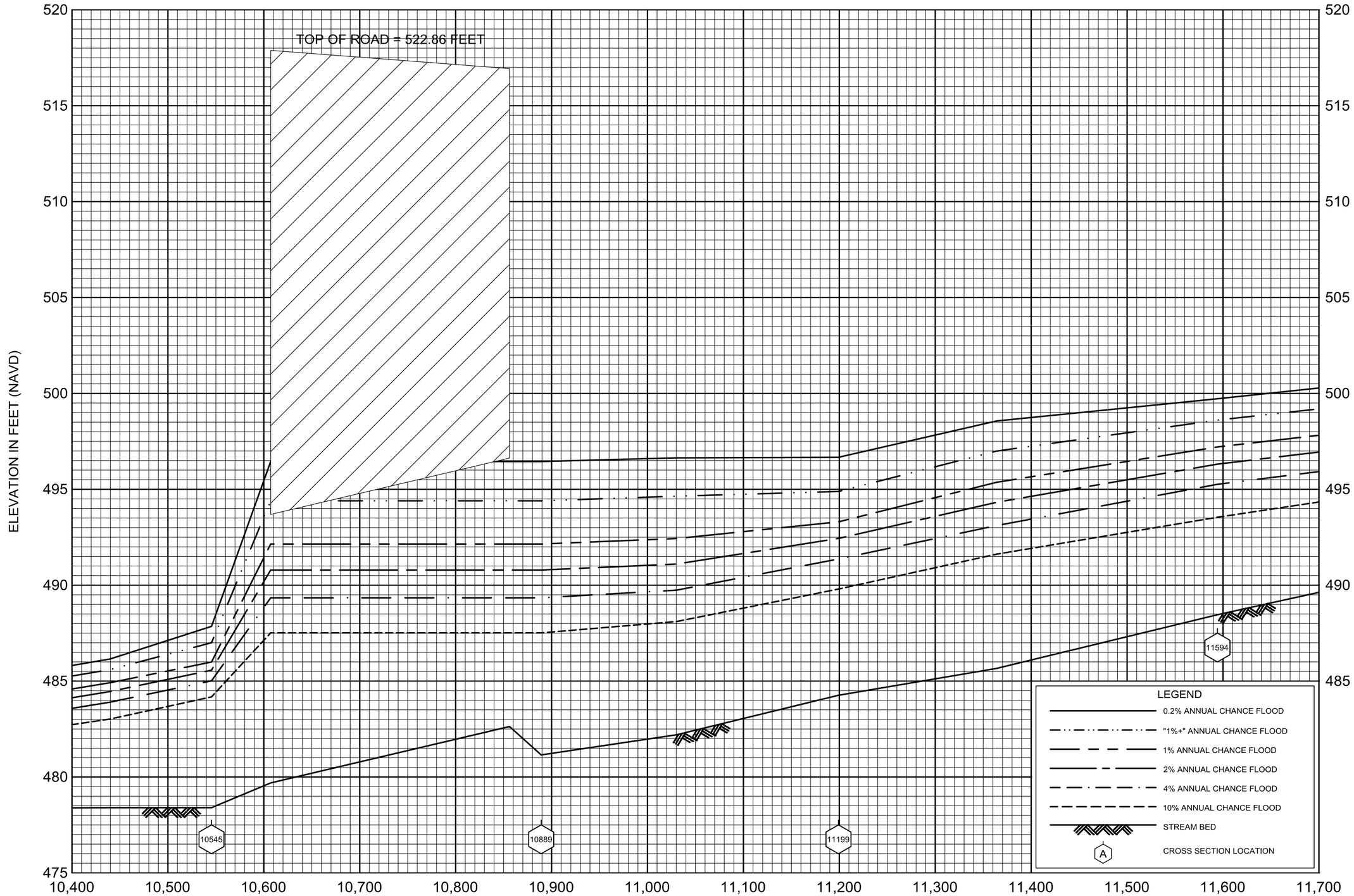
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

08P



FLOOD PROFILES

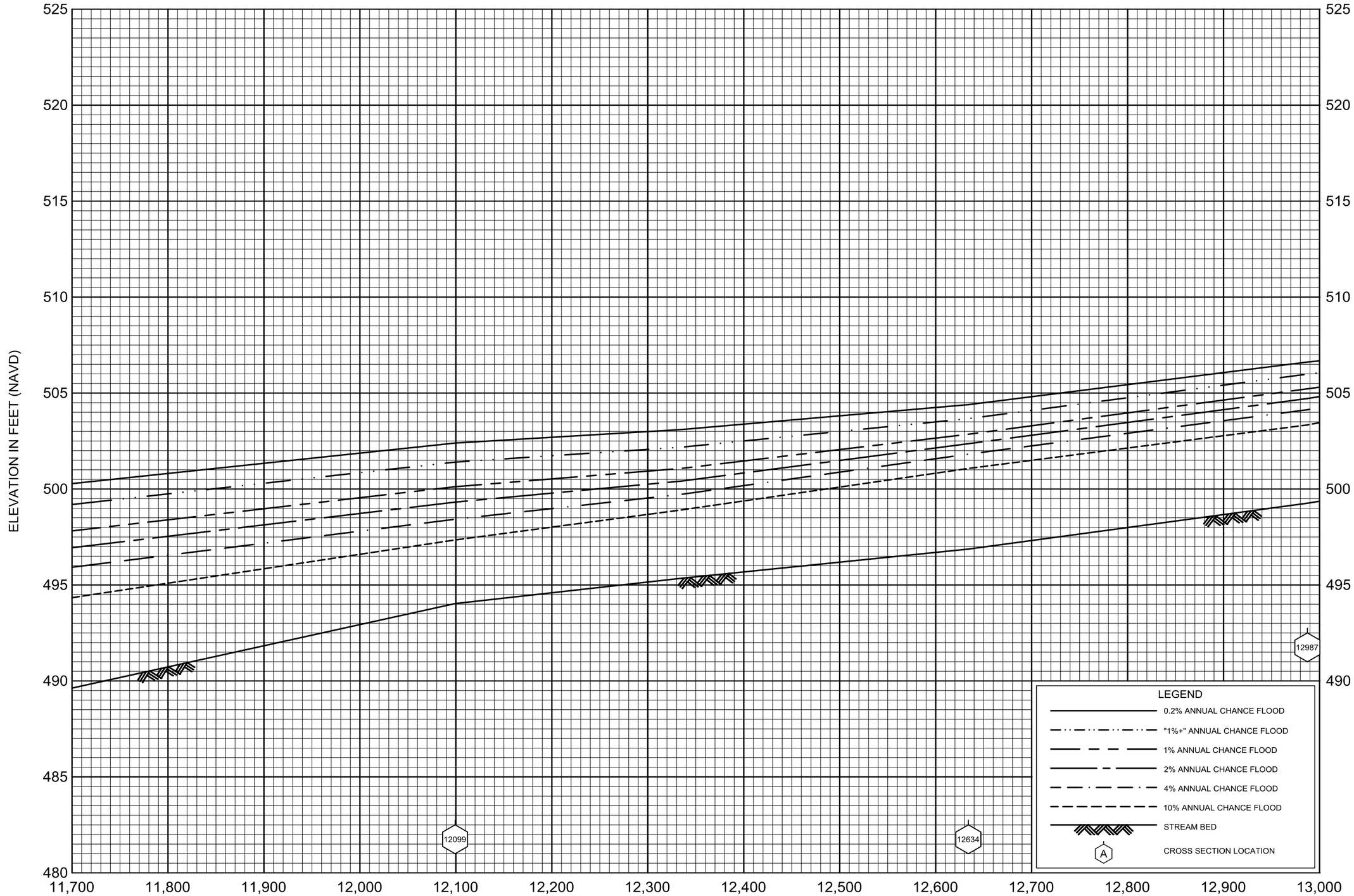
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

09P



FLOOD PROFILES

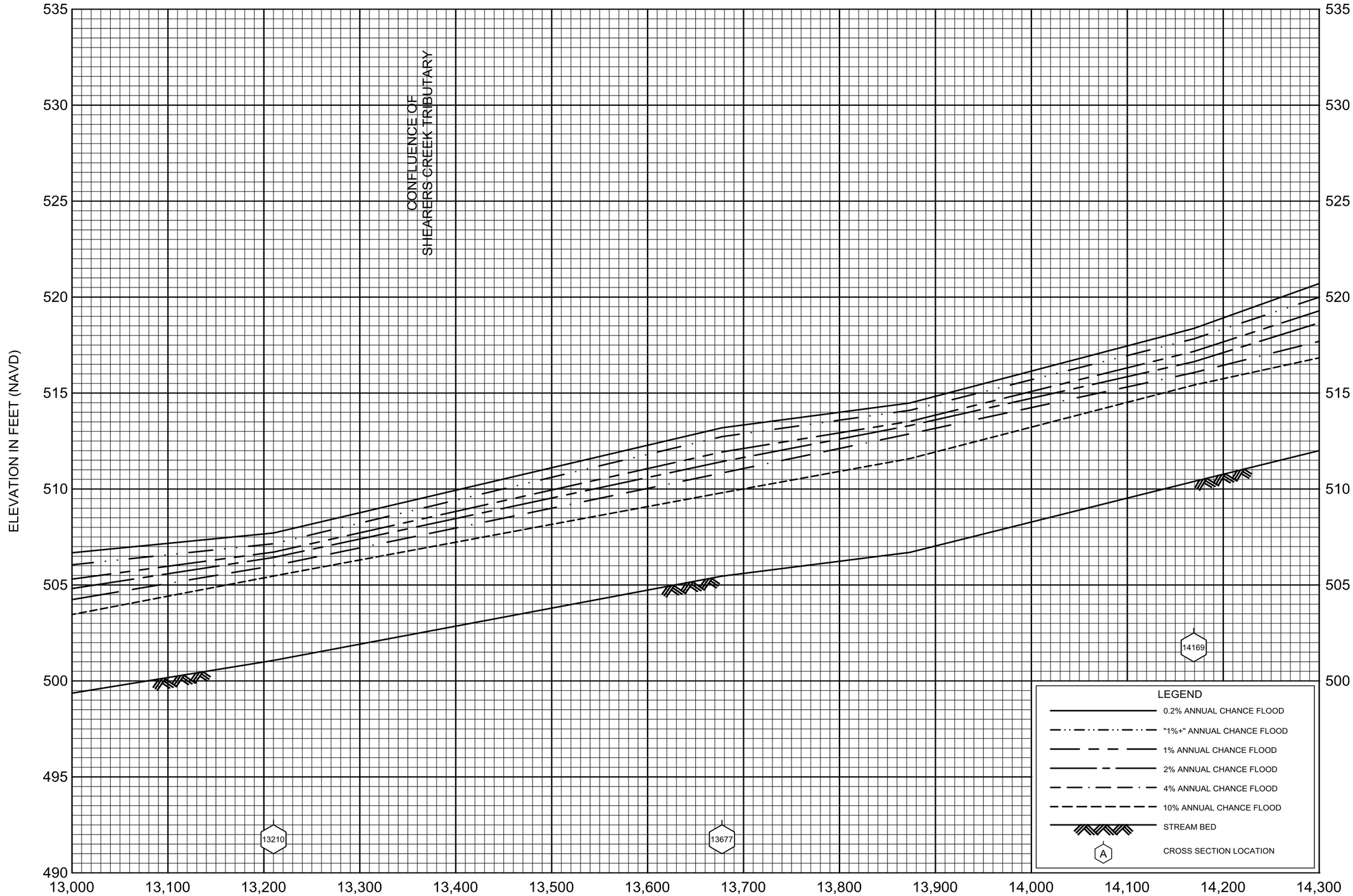
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

10P



FLOOD PROFILES

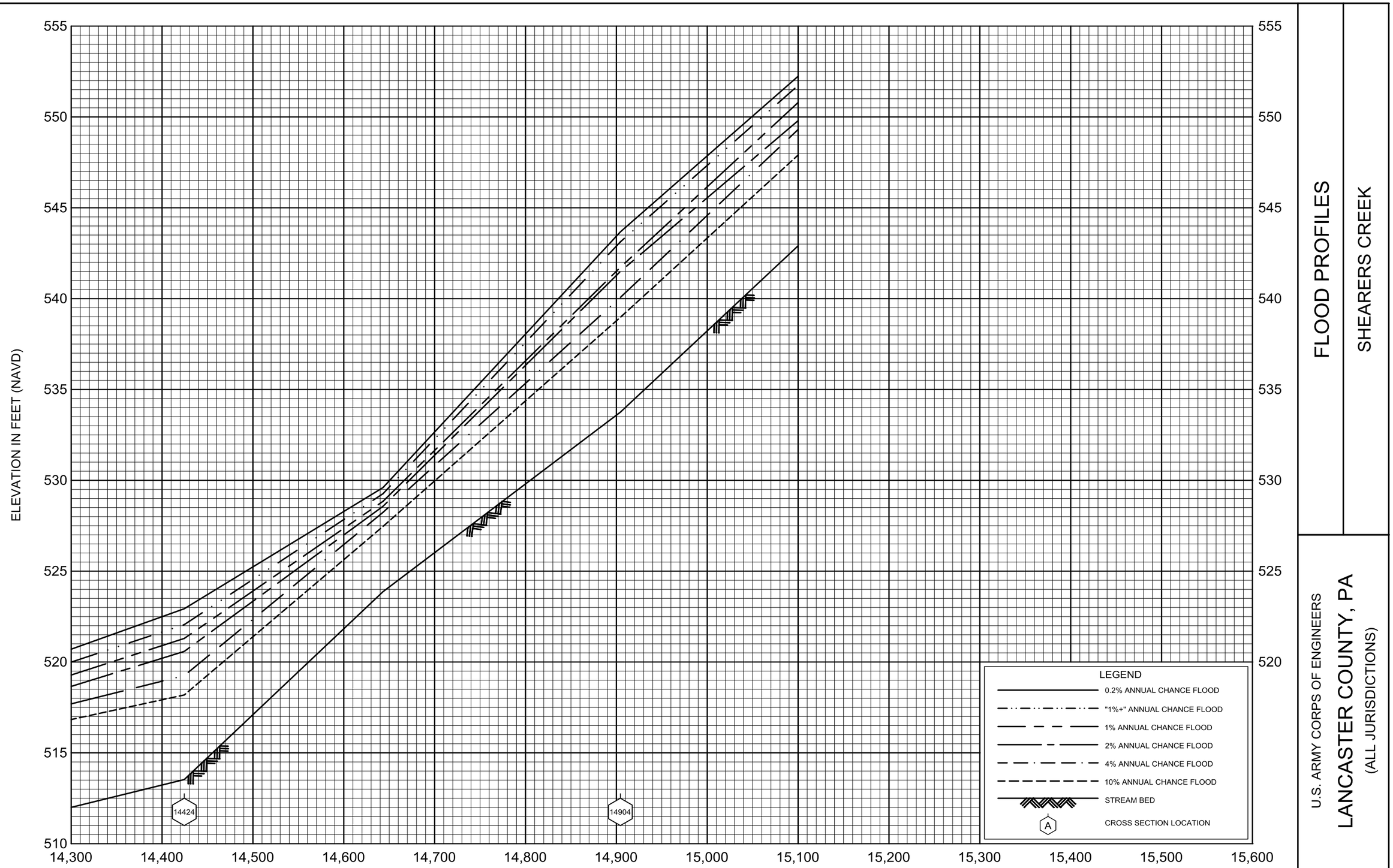
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

11P



FLOOD PROFILES

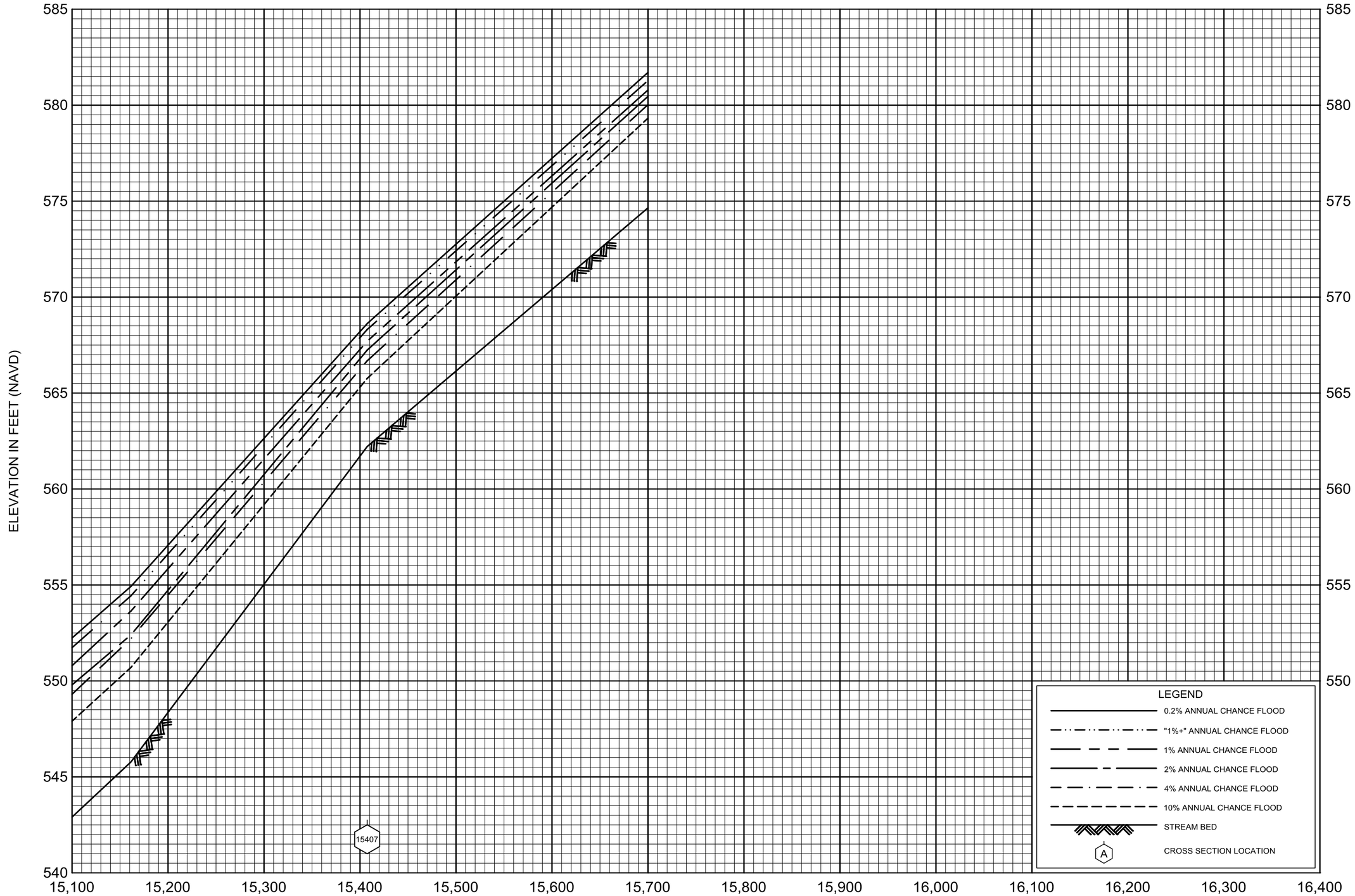
SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

12P



FLOOD PROFILES

SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

13P

ELEVATION IN FEET (NAVD)

610
605
600
595
590
585
580
575
570
565

15700

15,700 15,800 15,900 16,000 16,100 16,200 16,300 16,400 16,500 16,600 16,700 16,800 16,900 17,000

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH CHIQUES CREEK

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- "1%+" ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

FLOOD PROFILES

SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

ELEVATION IN FEET (NAVD)

635
630
625
620
615
610
605
600
595
590

LIMIT OF DETAILED STUDY

16363

16,000 16,100 16,200 16,300 16,400 16,500 16,600 16,700 16,800 16,900 17,000 17,100 17,200 17,300

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH CHIQUES CREEK

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- "1%+" ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

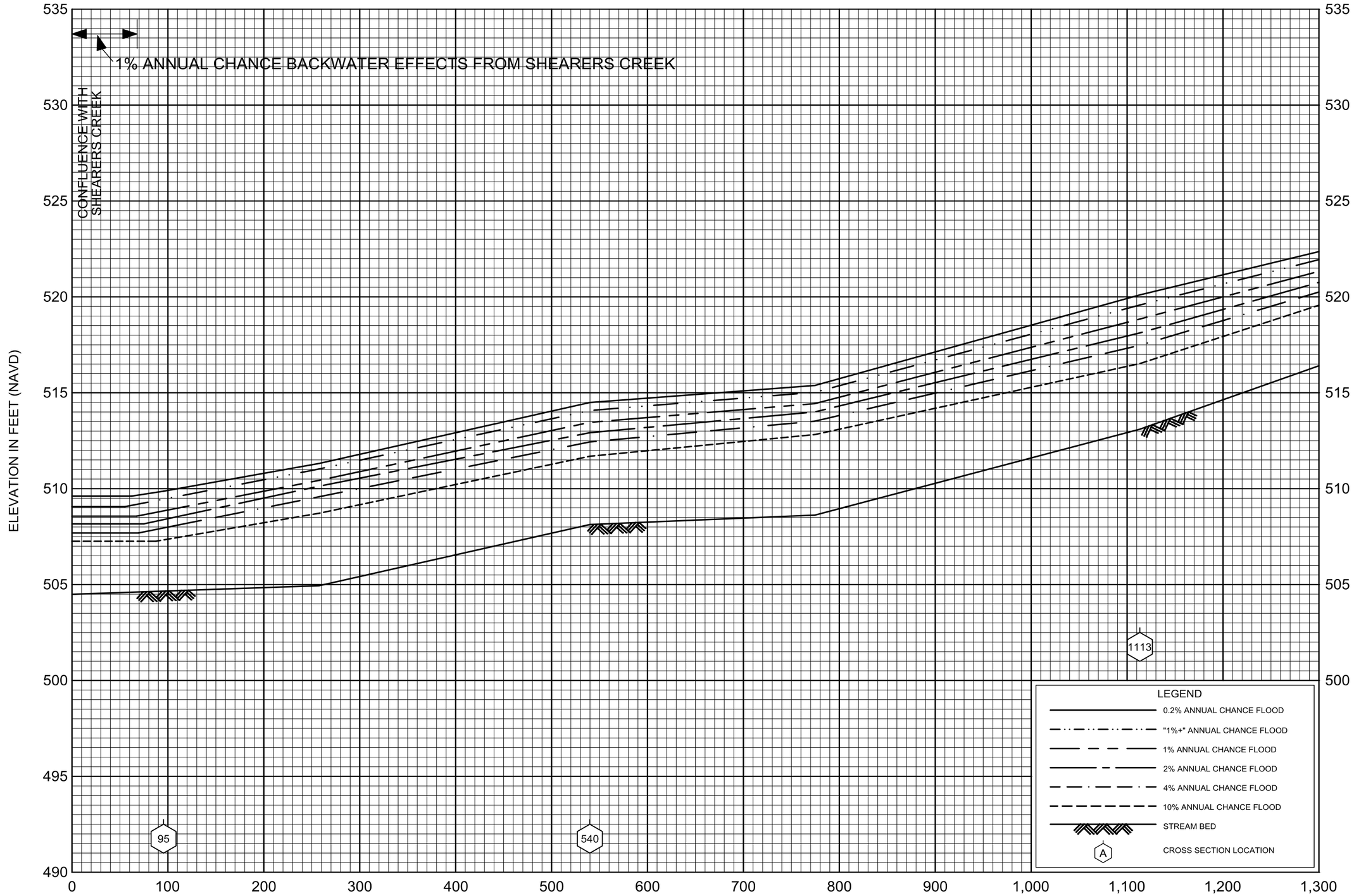
FLOOD PROFILES

SHEARERS CREEK

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)



FLOOD PROFILES

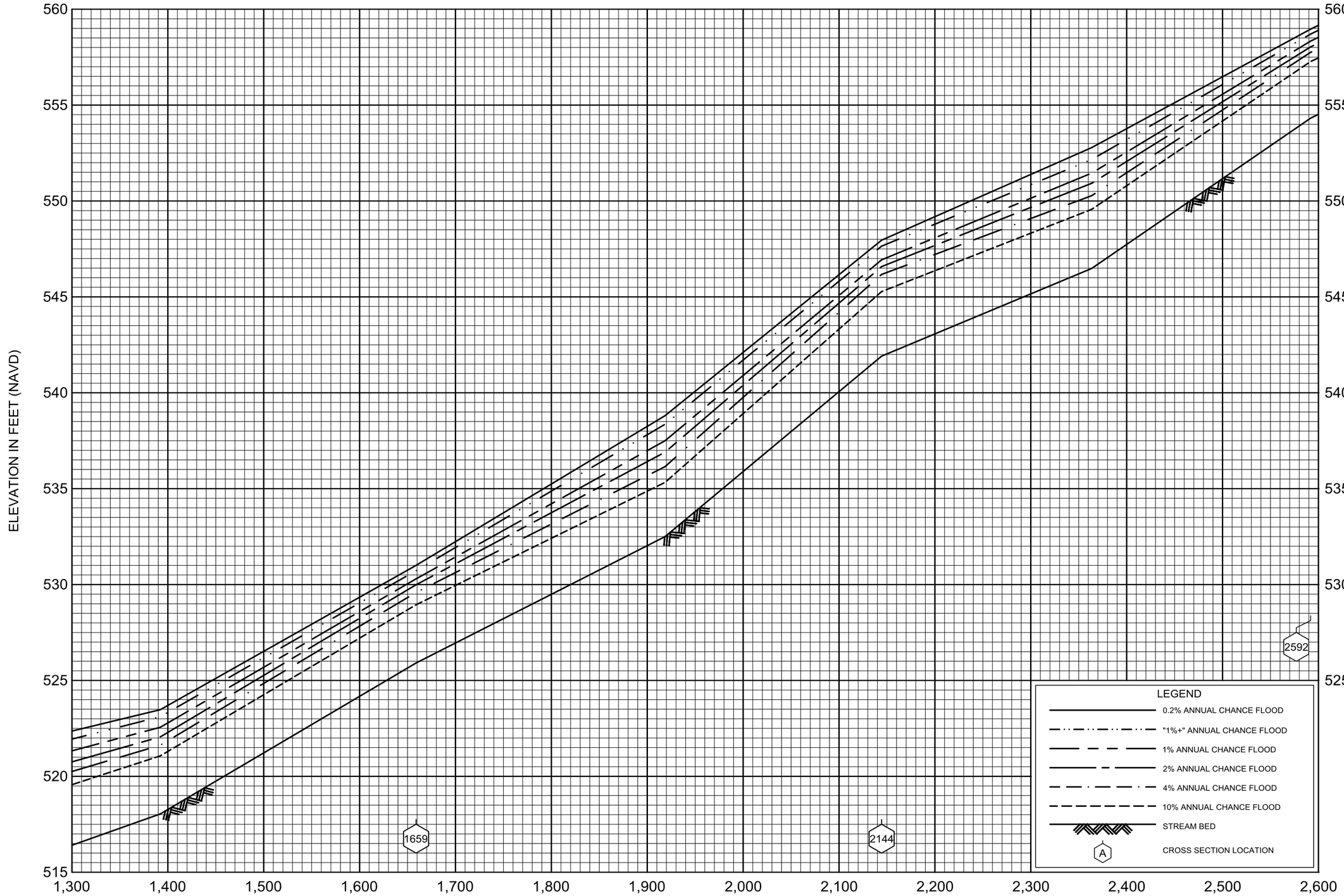
SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

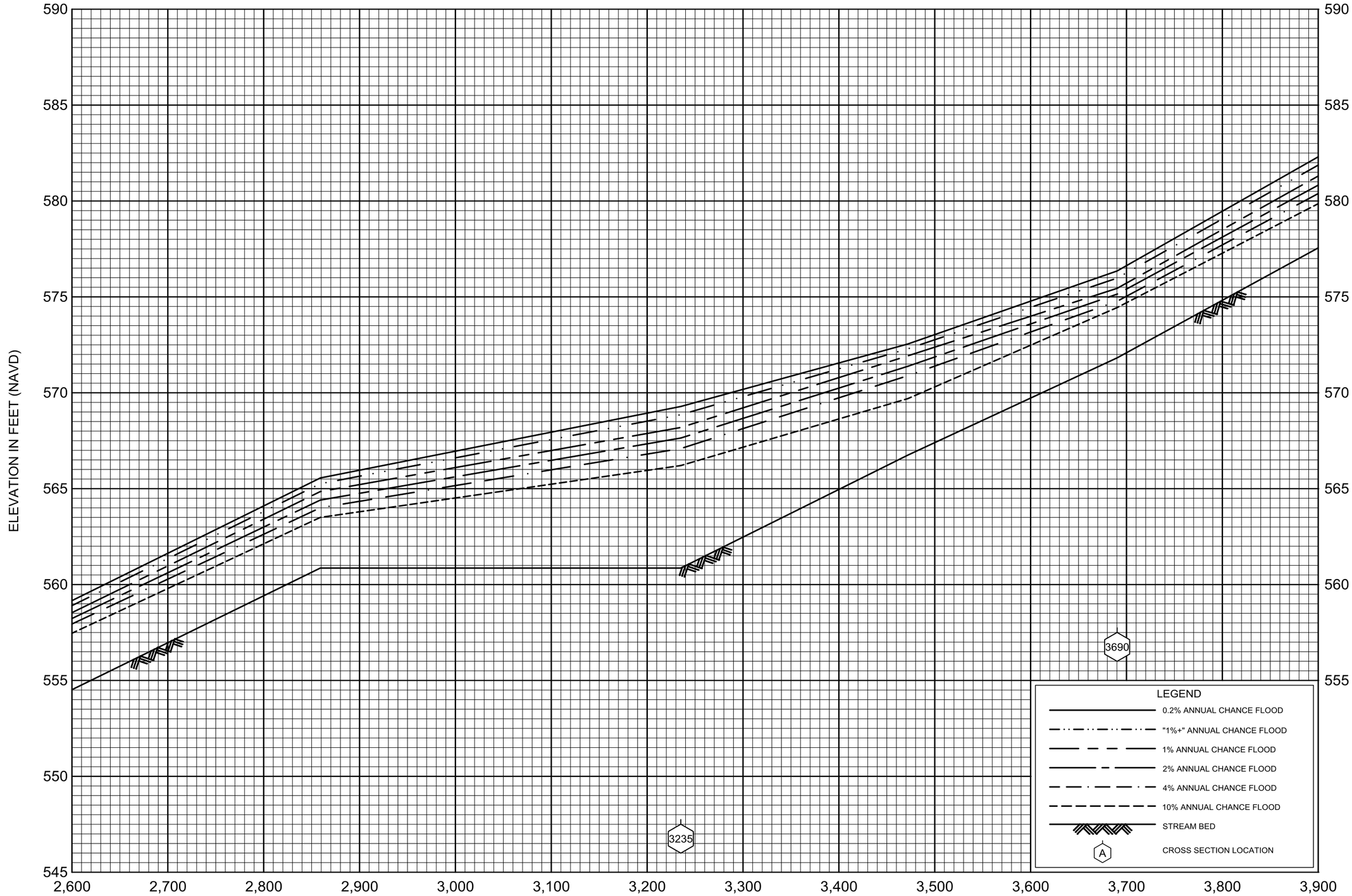
SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

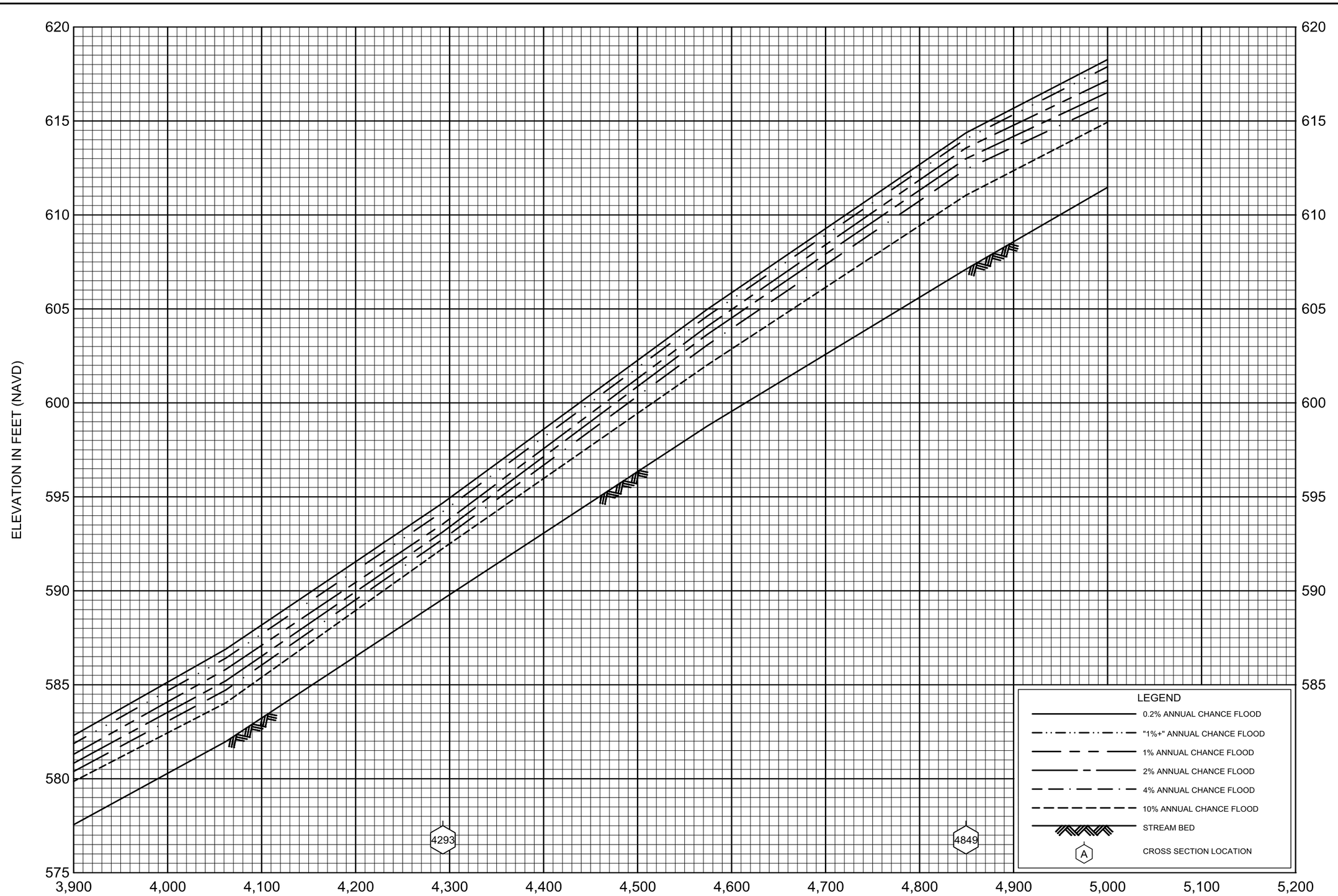
SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

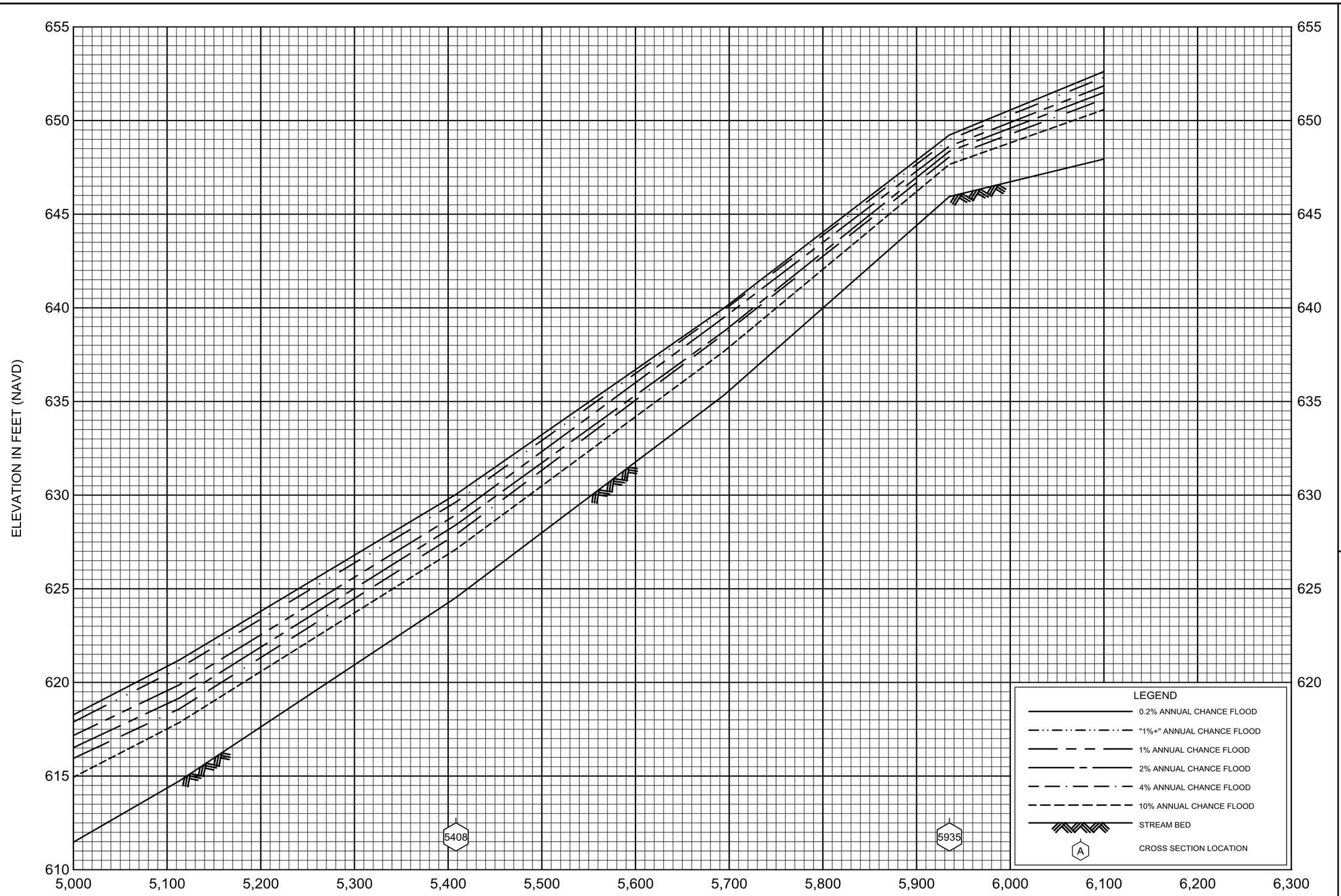
SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

04P



FLOOD PROFILES

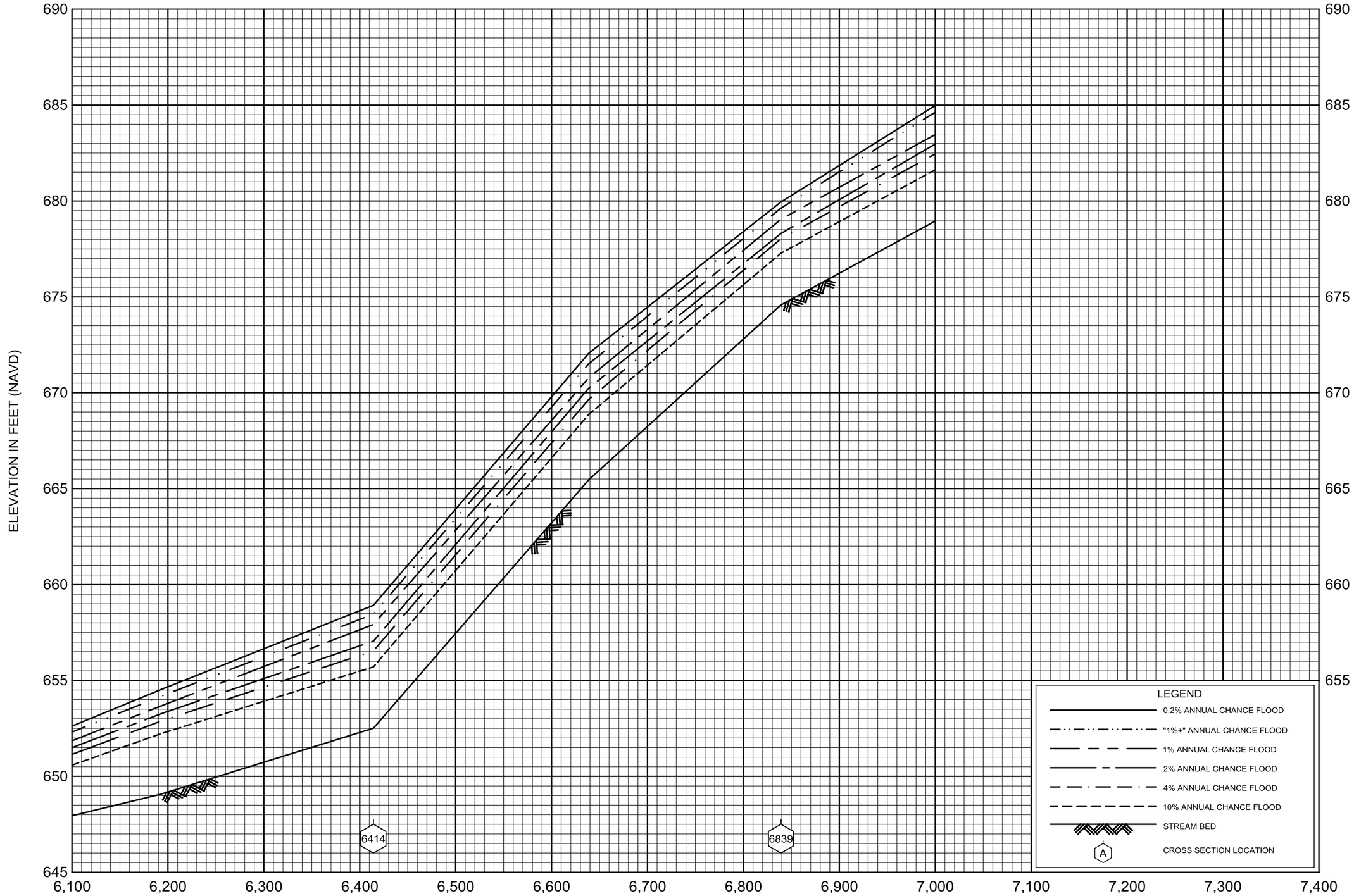
SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

05P



FLOOD PROFILES

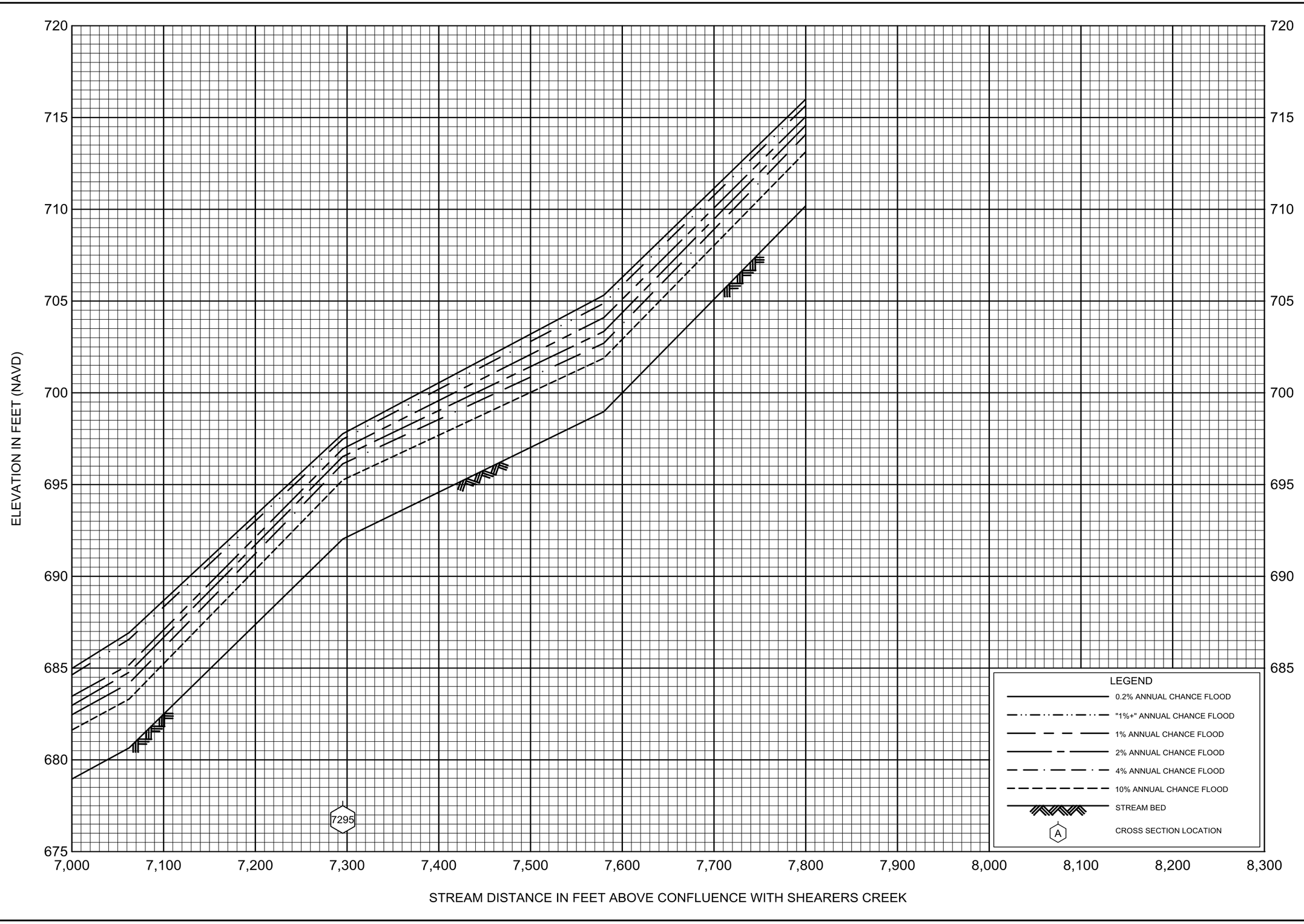
SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

06P



FLOOD PROFILES

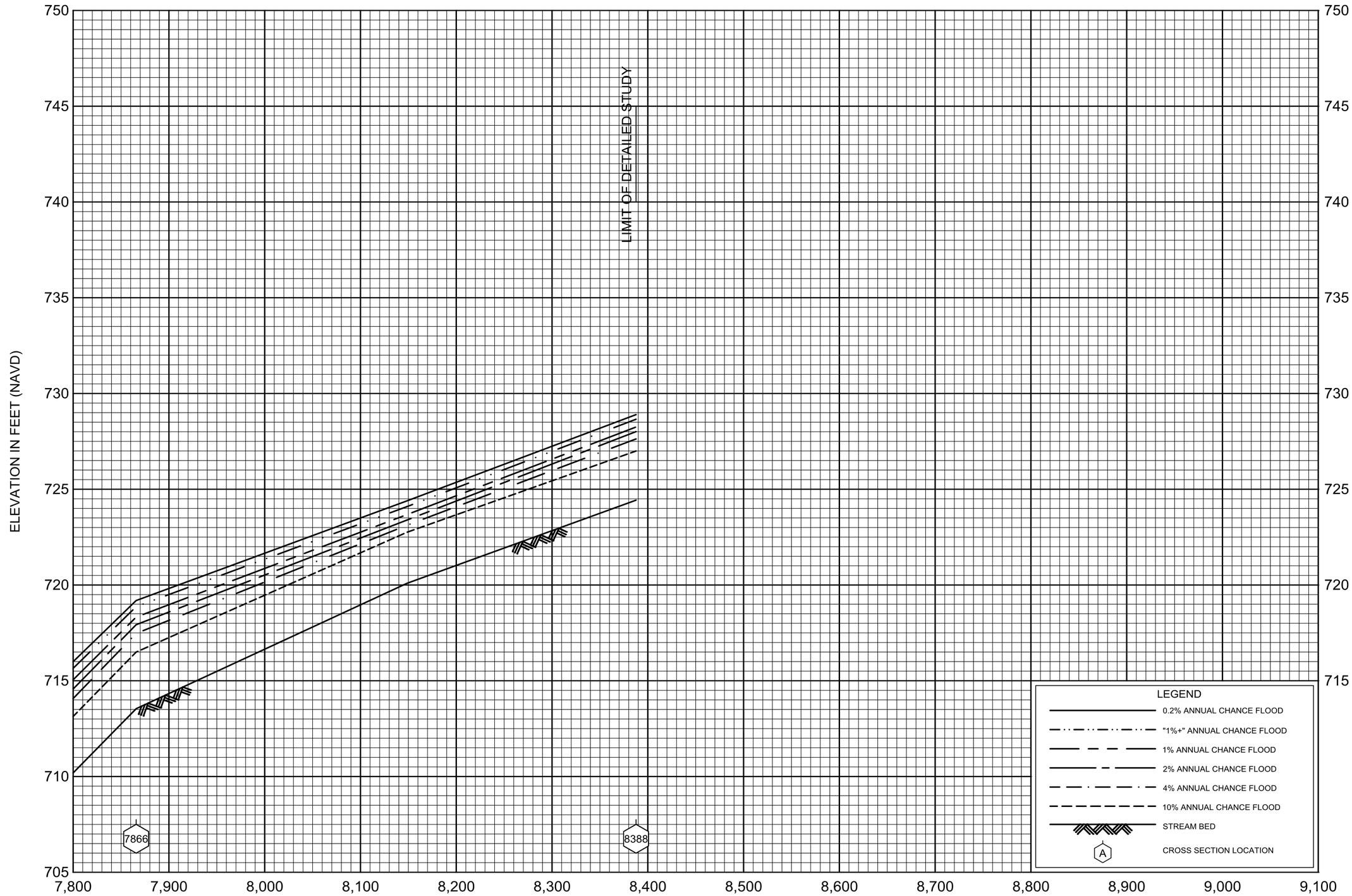
SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

07P



FLOOD PROFILES

SHEARERS CREEK TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

08P

FLOODING CONTROLLED BY RIFE RUN

1% ANNUAL CHANCE BACKWATER EFFECTS FROM RIFE RUN

CONFLUENCE WITH RIFE RUN

HERNLEY ROAD

SHUMAKER ROAD

ELEVATION IN FEET (NAVD)

445
440
435
430
425
420
415
410
405
400

0
500
1,000
1,500
2,000
2,500
3,000
3,500
4,000
4,500
5,000
5,500
6,000
6,500

STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH RIFE RUN

445
978
1653
2251
2740
3183
3489
4076
4371
4445
4884
5222
5708
6097

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- "1%+" ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

FLOOD PROFILES

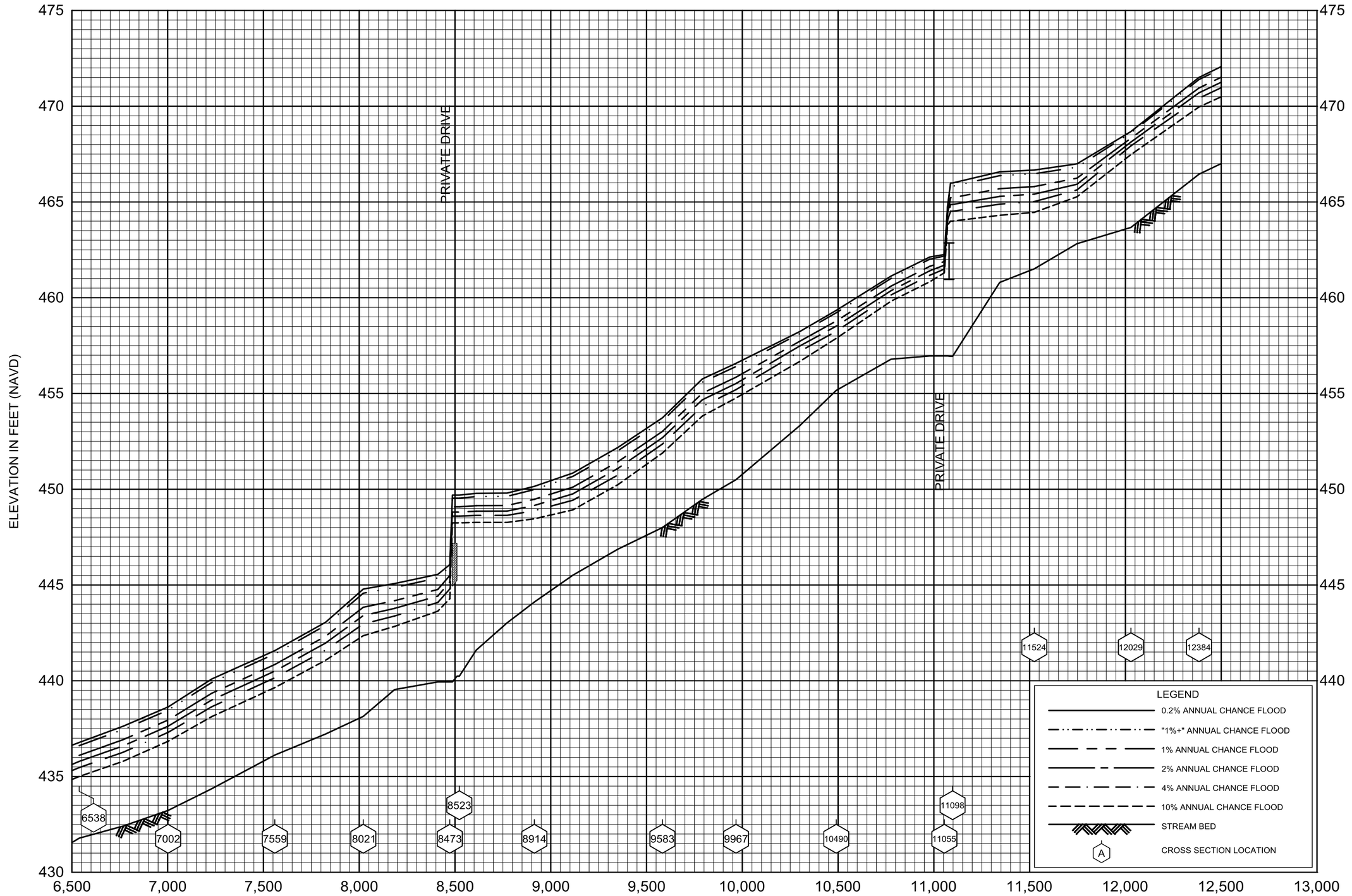
SHUMAKER ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

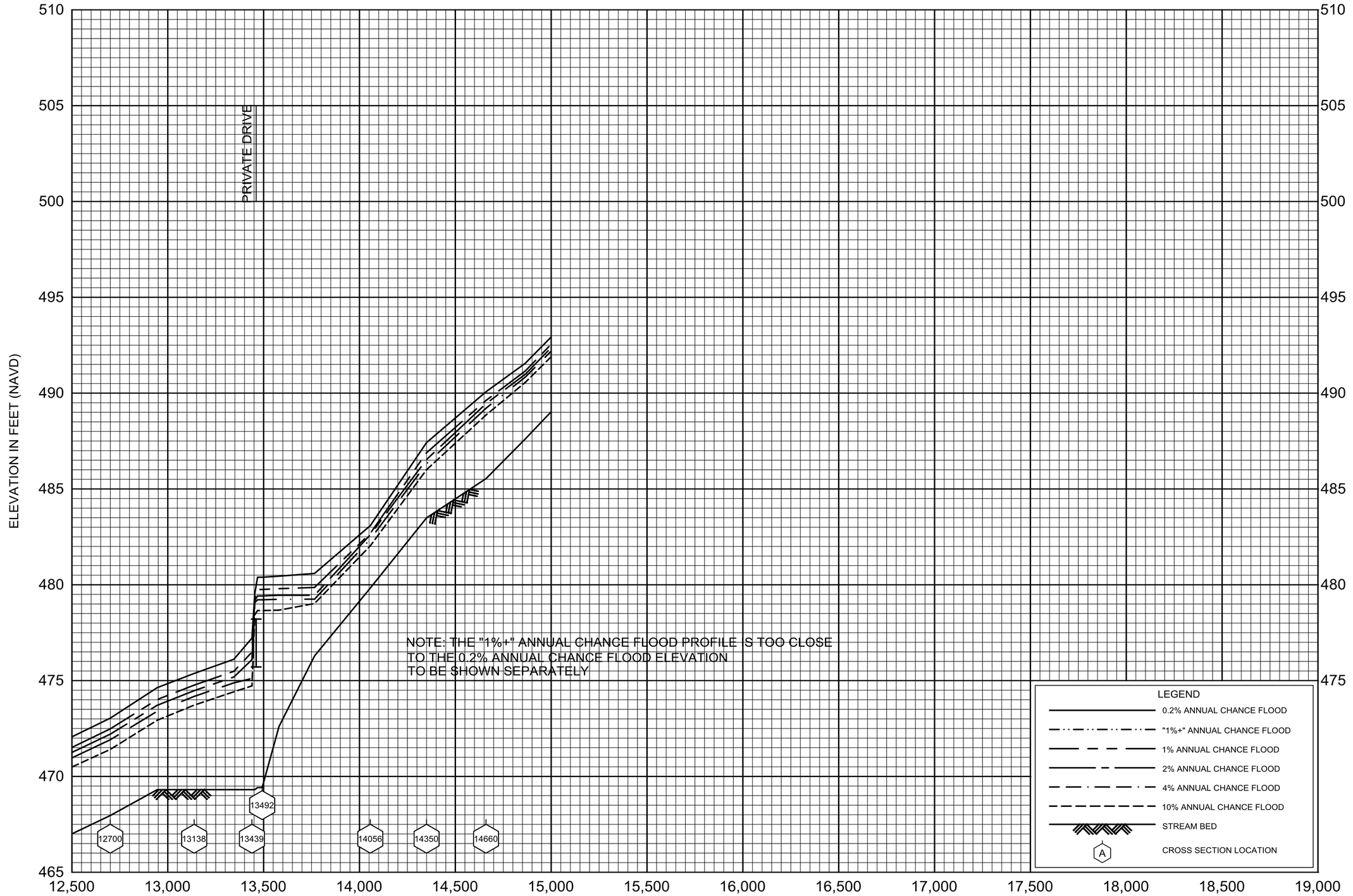
SHUMAKER ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

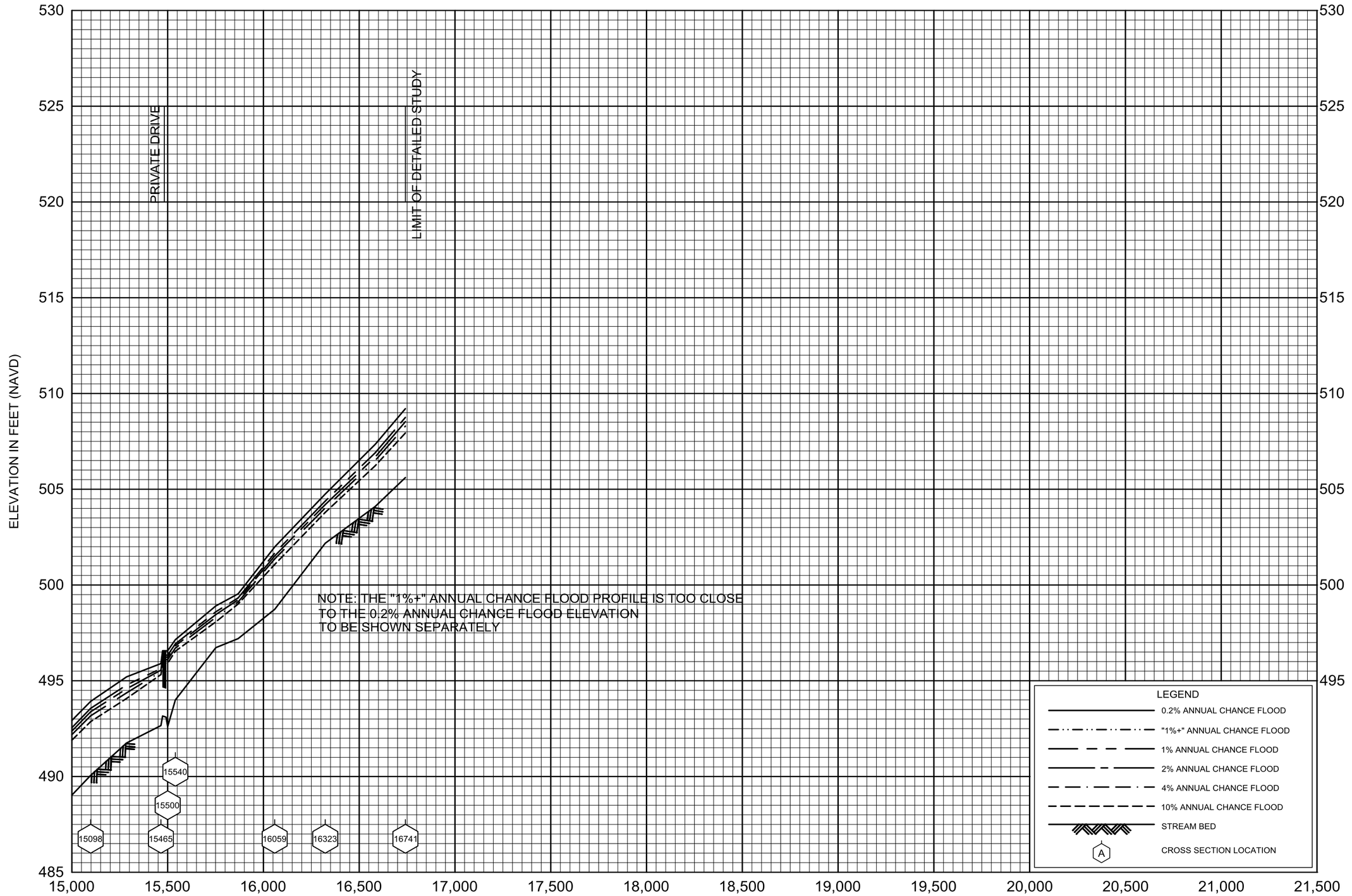
SHUMAKER ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

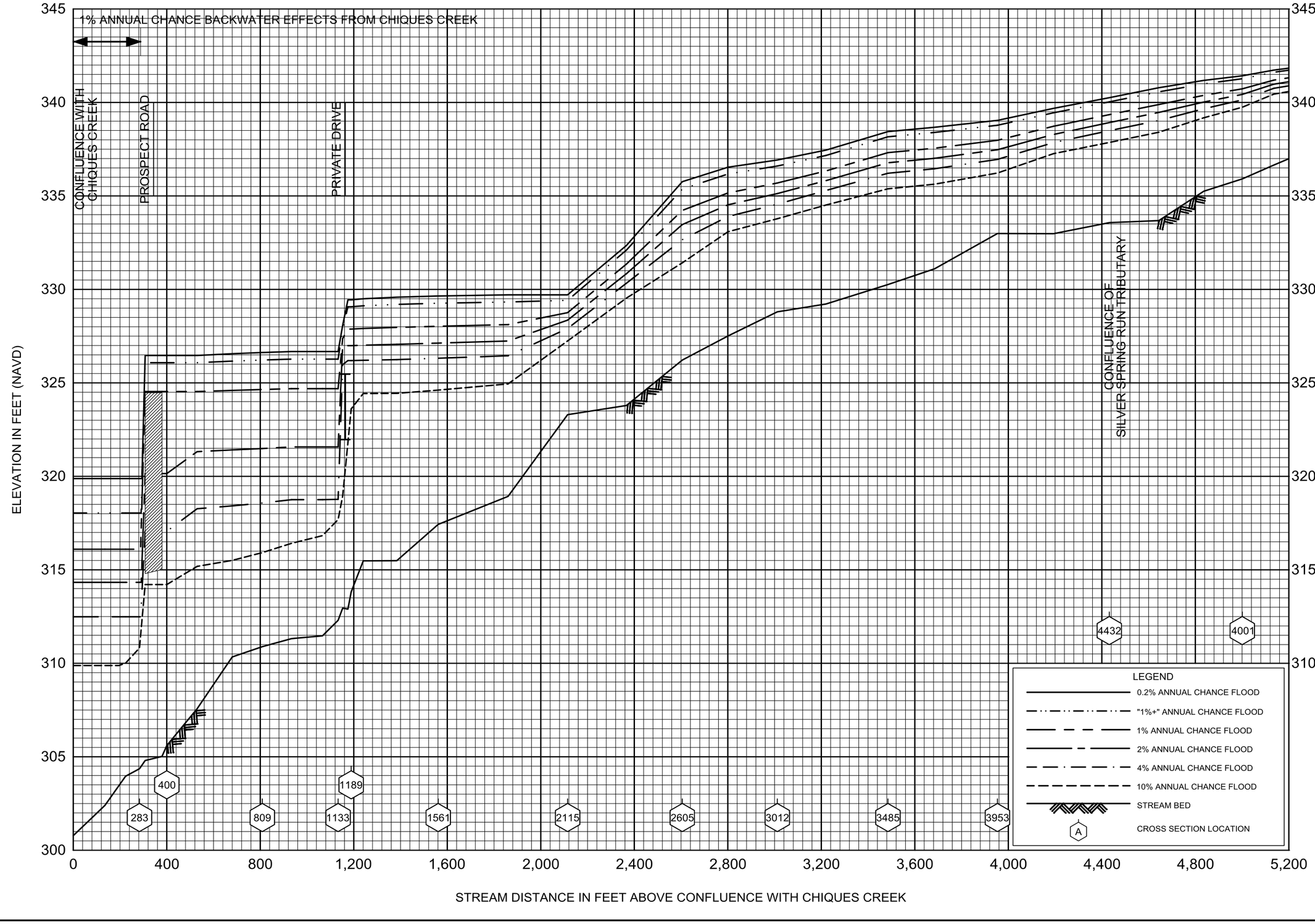
SHUMAKER ROAD TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

04P



FLOOD PROFILES

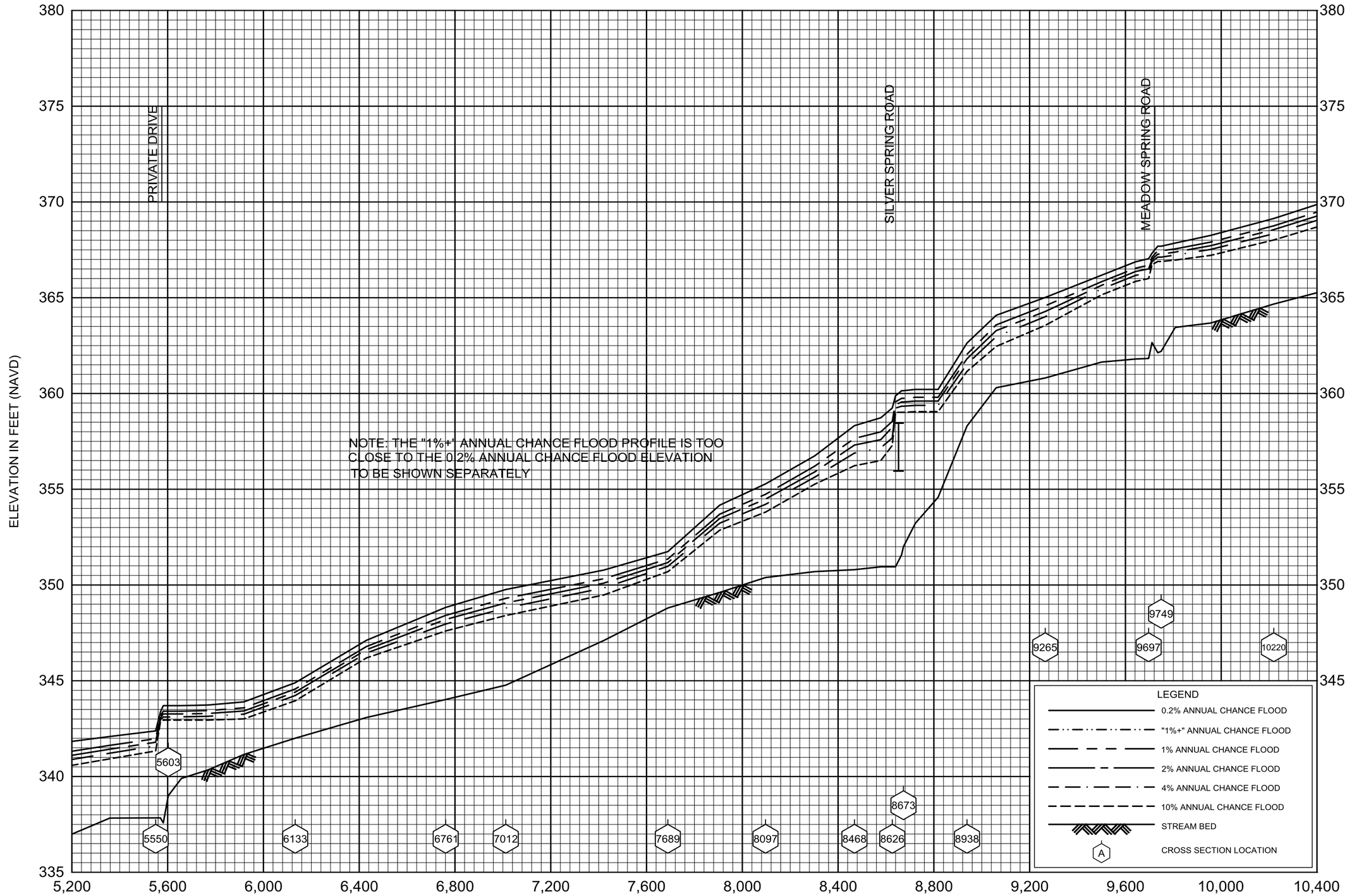
SILVER SPRING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

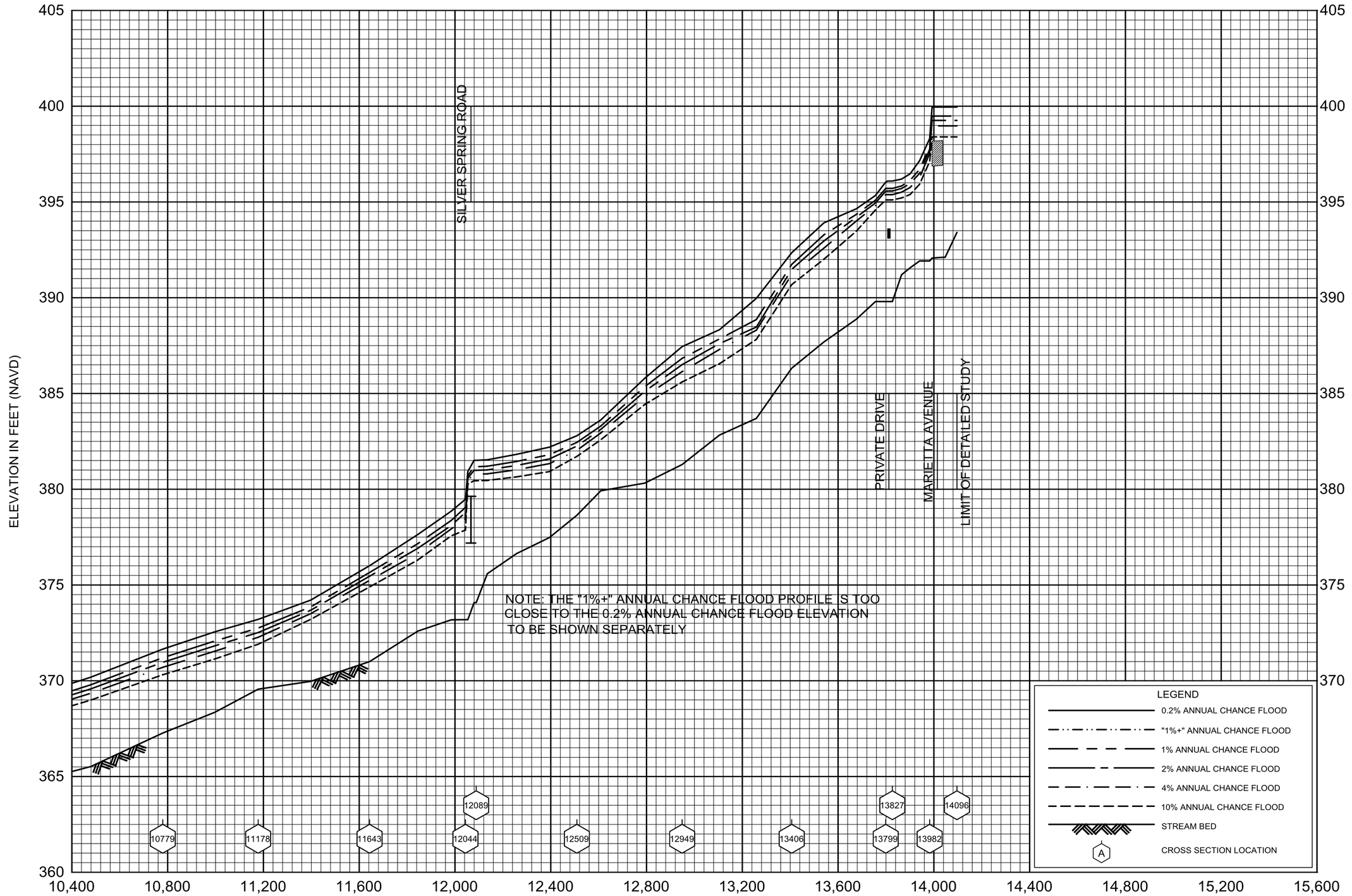
SILVER SPRING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P



FLOOD PROFILES

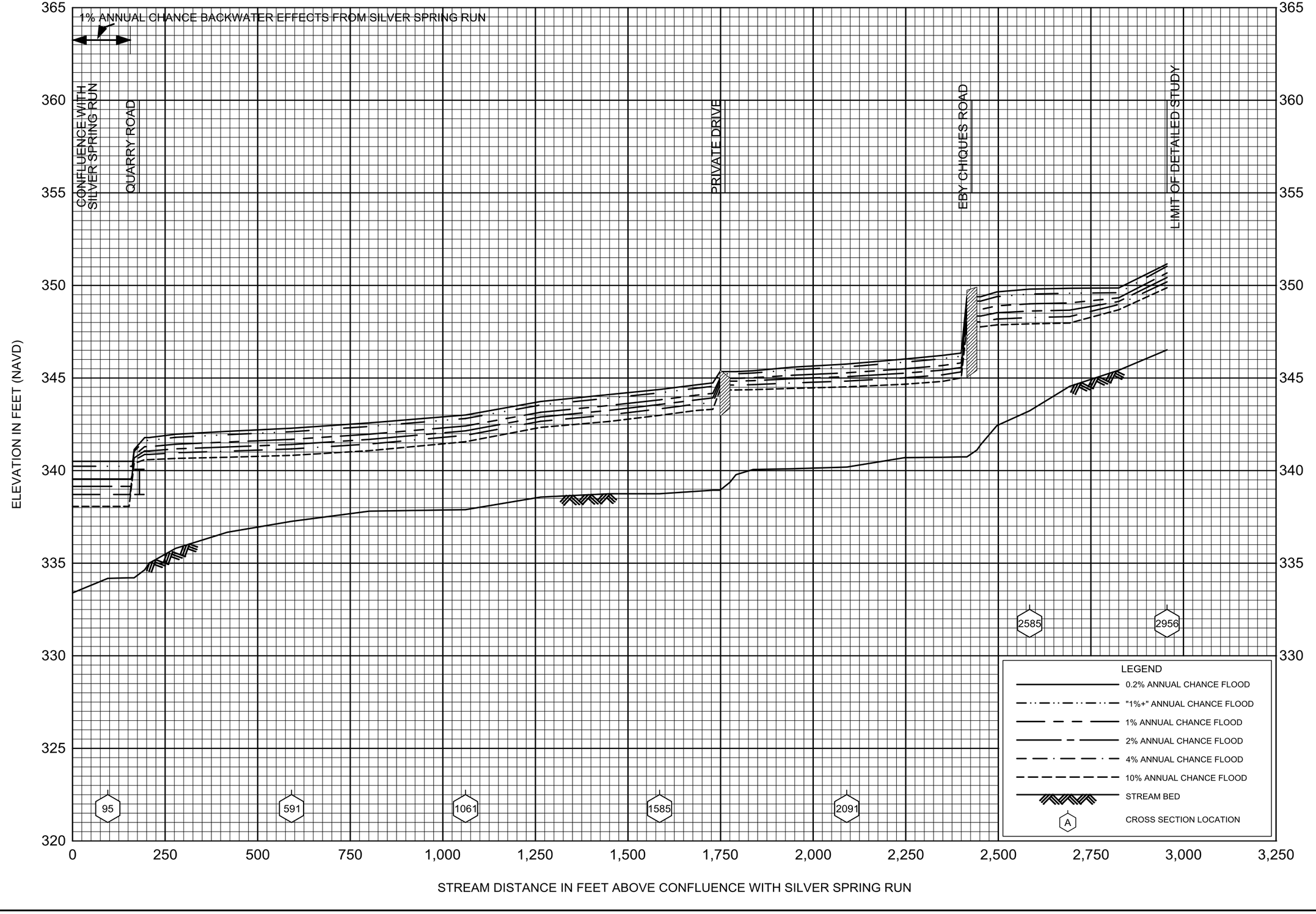
SILVER SPRING RUN

FEDERAL EMERGENCY MANAGEMENT AGENCY

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

03P



FLOOD PROFILES

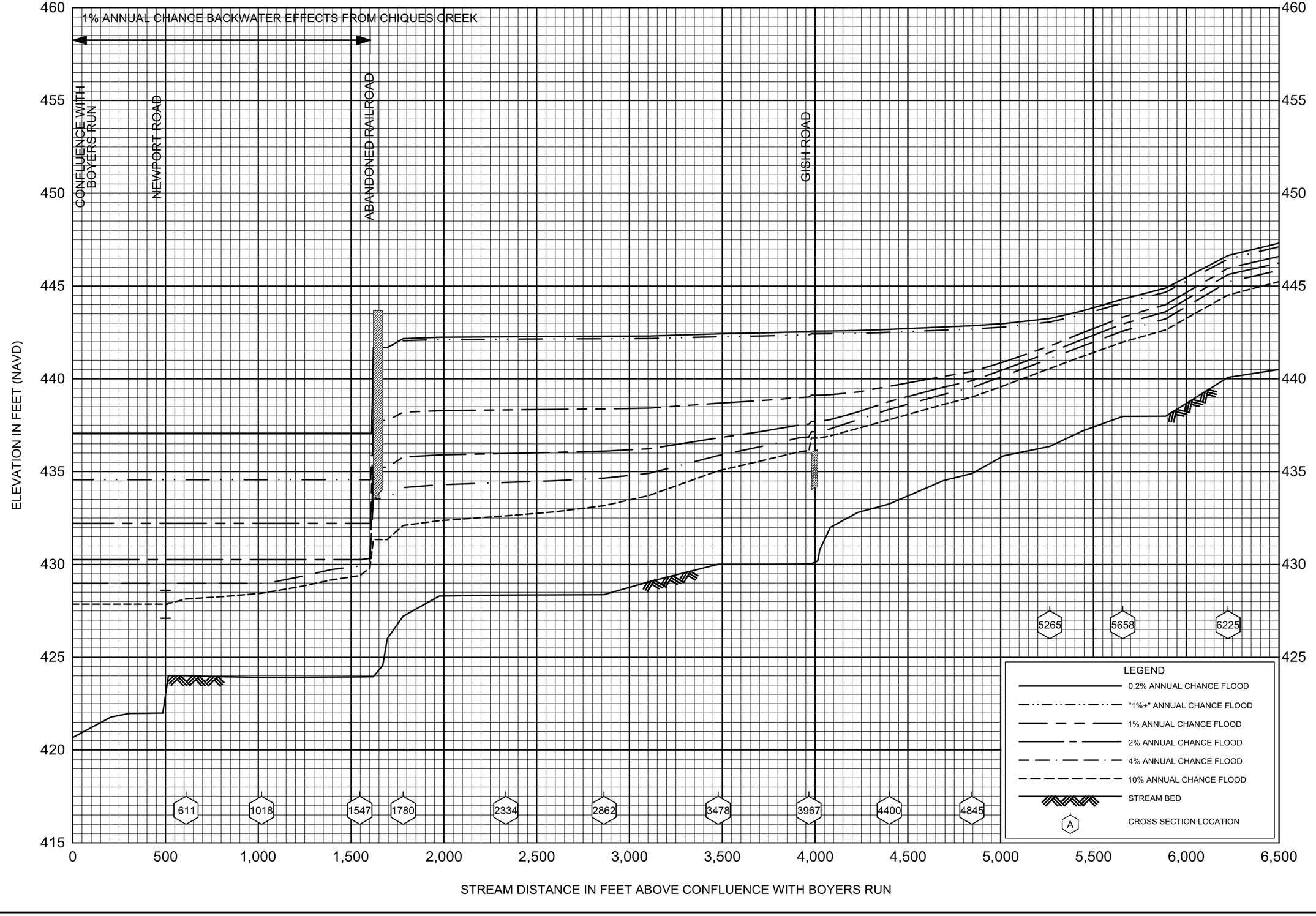
SILVER SPRING RUN TRIBUTARY

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

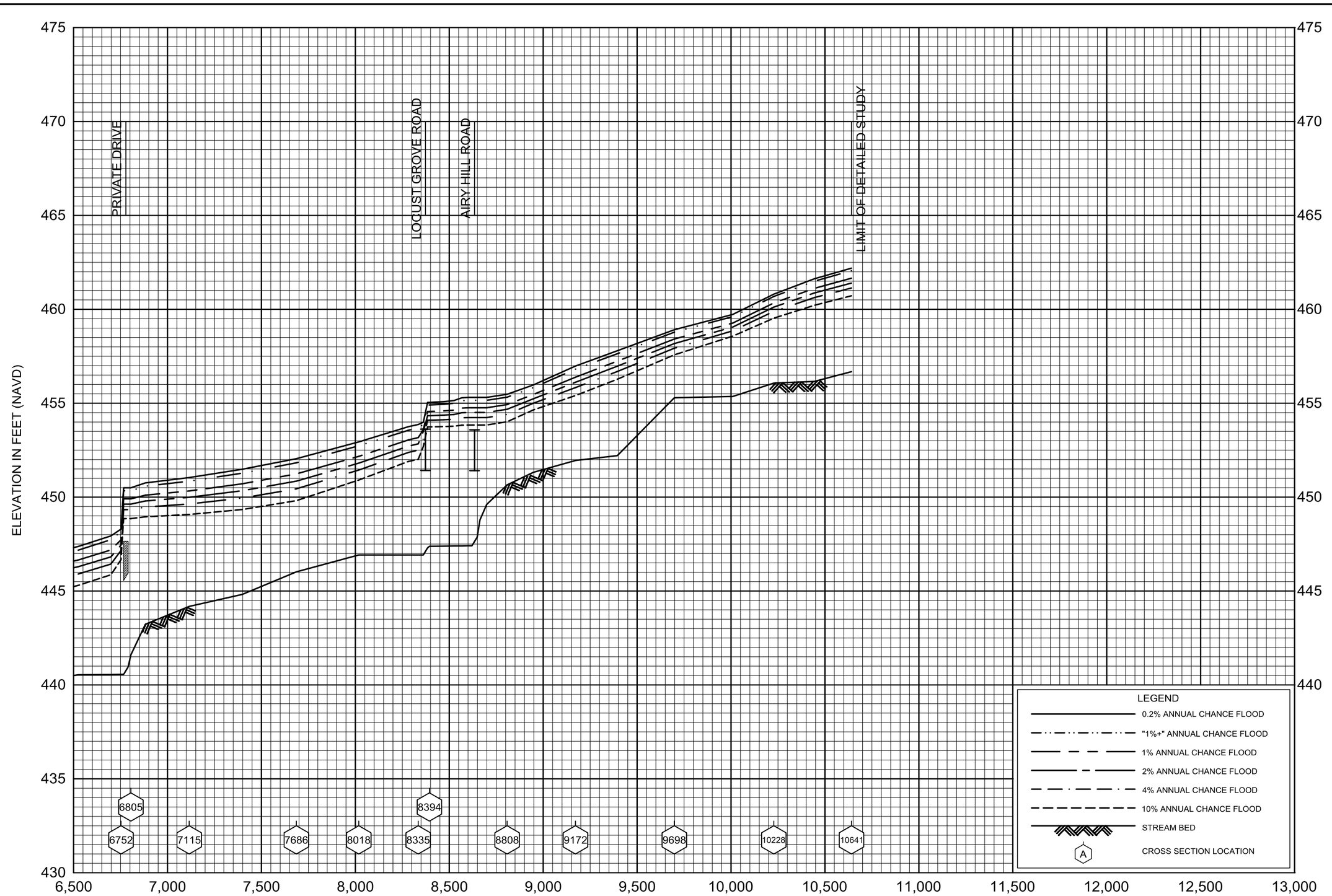
WHITE OAK RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

01P



FLOOD PROFILES

WHITE OAK RUN

U.S. ARMY CORPS OF ENGINEERS

LANCASTER COUNTY, PA

(ALL JURISDICTIONS)

02P

APPENDIX H



HEC-RAS Output Tables

HEC-RAS Plan: Existing River: BehmRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8729	2YR	98.00	456.26	458.11	458.11	458.42	0.015833	4.82	36.69	84.28	0.69
USACE	8729	5YR	219.00	456.26	458.56	458.56	458.91	0.017699	6.05	86.69	130.11	0.77
USACE	8729	10YR	330.00	456.26	458.90		459.20	0.014490	6.11	134.94	143.69	0.71
USACE	8729	25YR	488.00	456.26	459.33		459.57	0.011243	6.03	198.37	164.67	0.65
USACE	8729	50YR	662.00	456.26	459.69		459.92	0.009981	6.17	259.09	171.38	0.62
USACE	8729	100YR	838.00	456.26	460.01		460.24	0.009208	6.33	314.43	176.62	0.61
USACE	8729	100YRPLUS	1096.00	456.26	460.40		460.64	0.008781	6.65	385.67	188.41	0.60
USACE	8729	200YR	1039.00	456.26	460.31		460.56	0.008890	6.59	369.92	185.73	0.60
USACE	8729	500YR	1323.00	456.26	460.71		460.96	0.008487	6.89	444.64	196.26	0.60
USACE	8729	SEPT2011	502.00	456.26	459.36		459.60	0.011112	6.04	203.56	165.17	0.64
USACE	8560	2YR	98.00	454.64	456.52		456.65	0.006617	3.39	47.77	64.73	0.46
USACE	8560	5YR	219.00	454.64	457.35	456.62	457.47	0.004605	3.70	126.51	106.71	0.41
USACE	8560	10YR	330.00	454.64	457.80		457.94	0.004393	4.04	179.95	134.89	0.41
USACE	8560	25YR	488.00	454.64	458.15		458.32	0.005289	4.77	228.57	143.57	0.46
USACE	8560	50YR	662.00	454.64	458.55		458.73	0.005386	5.19	287.95	159.36	0.48
USACE	8560	100YR	838.00	454.64	458.85		459.06	0.005706	5.63	339.20	177.46	0.50
USACE	8560	100YRPLUS	1096.00	454.64	459.21		459.45	0.006063	6.15	404.73	184.57	0.52
USACE	8560	200YR	1039.00	454.64	459.15		459.38	0.005892	6.01	393.29	183.27	0.51
USACE	8560	500YR	1323.00	454.64	459.45		459.72	0.006706	6.70	450.90	196.44	0.55
USACE	8560	SEPT2011	502.00	454.64	458.19		458.36	0.005318	4.82	233.13	144.35	0.46
USACE	8375	2YR	98.00	453.12	454.78		455.02	0.012289	3.94	26.08	26.98	0.60
USACE	8375	5YR	219.00	453.12	455.24	455.11	455.84	0.021327	6.33	39.66	31.65	0.83
USACE	8375	10YR	330.00	453.12	455.89	455.89	456.51	0.015465	6.62	71.64	85.59	0.75
USACE	8375	25YR	488.00	453.12	456.43	456.43	456.93	0.011428	6.51	138.78	145.39	0.66
USACE	8375	50YR	662.00	453.12	456.67	456.67	457.24	0.012945	7.30	174.49	149.96	0.72
USACE	8375	100YR	838.00	453.12	456.91	456.91	457.51	0.013394	7.78	210.70	155.26	0.74
USACE	8375	100YRPLUS	1096.00	453.12	457.24	457.17	457.85	0.013124	8.19	263.63	161.90	0.74
USACE	8375	200YR	1039.00	453.12	457.14	457.12	457.77	0.013849	8.26	247.48	159.91	0.76
USACE	8375	500YR	1323.00	453.12	457.60		458.14	0.011336	8.08	322.32	169.28	0.70
USACE	8375	SEPT2011	502.00	453.12	456.46	456.46	456.95	0.011474	6.56	142.47	145.89	0.67
USACE	8221	2YR	98.00	451.73	454.54		454.57	0.001045	1.64	106.72	143.68	0.19
USACE	8221	5YR	219.00	451.73	455.04		455.09	0.001545	2.27	185.03	163.46	0.24
USACE	8221	10YR	330.00	451.73	455.37		455.43	0.001819	2.65	239.28	169.66	0.26
USACE	8221	25YR	488.00	451.73	455.77		455.84	0.002014	3.03	309.28	177.92	0.28
USACE	8221	50YR	662.00	451.73	456.13		456.22	0.002186	3.37	375.17	185.03	0.30
USACE	8221	100YR	838.00	451.73	456.45		456.54	0.002351	3.68	434.10	192.15	0.32
USACE	8221	100YRPLUS	1096.00	451.73	456.86		456.97	0.002474	4.02	515.35	199.09	0.33
USACE	8221	200YR	1039.00	451.73	456.77		456.88	0.002461	3.95	497.48	197.75	0.33
USACE	8221	500YR	1323.00	451.73	457.18		457.31	0.002553	4.27	580.71	203.65	0.34
USACE	8221	SEPT2011	502.00	451.73	455.80		455.87	0.002032	3.06	314.82	178.59	0.29
USACE	8070	2YR	98.00	451.31	454.49		454.50	0.000239	0.92	216.25	155.79	0.10
USACE	8070	5YR	219.00	451.31	454.94		454.95	0.000545	1.53	287.74	167.46	0.15
USACE	8070	10YR	330.00	451.31	455.22		455.25	0.000788	1.95	336.16	171.38	0.18
USACE	8070	25YR	488.00	451.31	455.59		455.63	0.001043	2.39	399.76	177.52	0.21
USACE	8070	50YR	662.00	451.31	455.92		455.97	0.001283	2.79	459.16	182.94	0.24
USACE	8070	100YR	838.00	451.31	456.20		456.26	0.001514	3.16	511.12	188.50	0.26
USACE	8070	100YRPLUS	1096.00	451.31	456.58		456.66	0.001735	3.57	585.51	196.05	0.28
USACE	8070	200YR	1039.00	451.31	456.50		456.57	0.001708	3.51	568.55	194.65	0.28
USACE	8070	500YR	1323.00	451.31	456.89		456.99	0.001857	3.85	646.89	200.95	0.30
USACE	8070	SEPT2011	502.00	451.31	455.62		455.65	0.001065	2.42	404.72	177.98	0.21
USACE	7971	2YR	98.00	451.24	454.46	452.16	454.47	0.000267	1.04	188.96	114.10	0.10
USACE	7971	5YR	219.00	451.24	454.85	452.62	454.88	0.000755	1.89	235.22	125.66	0.18
USACE	7971	10YR	330.00	451.24	455.09	452.96	455.13	0.001246	2.53	263.93	131.92	0.23
USACE	7971	25YR	488.00	451.24	455.39	453.34	455.46	0.001866	3.26	301.44	138.99	0.29
USACE	7971	50YR	662.00	451.24	455.64	453.85	455.75	0.002546	3.96	334.48	146.35	0.34
USACE	7971	100YR	838.00	451.24	455.85	454.13	456.00	0.003261	4.63	361.12	152.38	0.38
USACE	7971	100YRPLUS	1096.00	451.24	456.14	454.67	456.34	0.004139	5.43	399.65	159.25	0.44
USACE	7971	200YR	1039.00	451.24	456.07	454.61	456.26	0.003991	5.28	390.28	157.90	0.43
USACE	7971	500YR	1323.00	451.24	456.37	454.94	456.62	0.004809	6.05	431.23	164.77	0.48
USACE	7971	SEPT2011	502.00	451.24	455.41	453.34	455.49	0.001924	3.32	304.21	139.51	0.29
USACE	7928 Private Drive		Culvert									
USACE	7908	2YR	98.00	450.07	451.82	450.94	451.89	0.002983	2.31	49.44	36.10	0.31
USACE	7908	5YR	219.00	450.07	452.50	451.50	452.67	0.004442	3.53	76.13	41.85	0.40
USACE	7908	10YR	330.00	450.07	452.93	451.91	453.20	0.005546	4.41	95.81	50.04	0.46
USACE	7908	25YR	488.00	450.07	453.42	452.40	453.79	0.006502	5.31	126.46	73.12	0.51
USACE	7908	50YR	662.00	450.07	453.80	452.93	454.27	0.007512	6.13	155.46	88.78	0.56
USACE	7908	100YR	838.00	450.07	454.07	453.51	454.65	0.008725	6.93	179.71	106.83	0.61
USACE	7908	100YRPLUS	1096.00	450.07	454.46	454.01	455.16	0.009584	7.74	217.43	127.63	0.65
USACE	7908	200YR	1039.00	450.07	454.38	453.90	455.05	0.009393	7.56	209.42	121.93	0.65
USACE	7908	500YR	1323.00	450.07	454.77	454.38	455.54	0.010018	8.28	249.19	138.56	0.68
USACE	7908	SEPT2011	502.00	450.07	453.46	452.44	453.84	0.006522	5.36	129.54	73.95	0.52
USACE	7834	2YR	98.00	449.17	451.22	451.07	451.45	0.012058	4.32	34.22	59.24	0.61
USACE	7834	5YR	219.00	449.17	451.84	451.59	452.13	0.011658	5.32	67.94	82.24	0.64
USACE	7834	10YR	330.00	449.17	452.19	451.93	452.56	0.013076	6.22	90.16	98.46	0.69
USACE	7834	25YR	488.00	449.17	452.60	452.26	453.07	0.014400	7.22	121.45	121.57	0.74
USACE	7834	50YR	662.00	449.17	452.94	452.53	453.48	0.015255	7.99	152.14	136.75	0.78

HEC-RAS Plan: Existing River: BoyersRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9590	2YR	114.00	469.41	470.83	470.77	471.29	0.017800	5.52	22.23	23.56	0.89
USACE	9590	5YR	250.00	469.41	471.52	471.52	472.24	0.016142	7.14	41.93	31.97	0.92
USACE	9590	10YR	375.00	469.41	471.92	471.92	472.91	0.017486	8.46	55.37	35.51	0.99
USACE	9590	25YR	600.00	469.41	472.88	472.88	473.77	0.010901	8.46	112.69	96.20	0.83
USACE	9590	50YR	789.00	469.41	473.35	473.35	474.23	0.009687	8.73	151.03	155.99	0.80
USACE	9590	100YR	1008.00	469.41	473.68	473.68	474.68	0.010393	9.56	177.84	184.66	0.84
USACE	9590	100YRPLUS	1318.00	469.41	474.10	474.10	475.26	0.011068	10.53	211.83	201.16	0.88
USACE	9590	200YR	1235.00	469.41	473.99	473.99	475.11	0.010930	10.30	202.98	196.84	0.87
USACE	9590	500YR	1560.00	469.41	474.38	474.38	475.68	0.011511	11.20	235.57	223.60	0.91
USACE	9590	SEPT2011	596.00	469.41	472.88	472.88	473.76	0.010868	8.43	112.12	95.72	0.83
USACE	9482	2YR	114.00	469.38	470.34		470.39	0.003221	1.50	60.16	74.86	0.35
USACE	9482	5YR	250.00	469.38	470.84		470.93	0.003200	2.23	109.31	131.01	0.39
USACE	9482	10YR	375.00	469.38	471.17		471.27	0.003074	2.63	154.67	143.27	0.40
USACE	9482	25YR	600.00	469.38	471.63		471.75	0.003277	3.31	229.49	176.76	0.43
USACE	9482	50YR	789.00	469.38	471.92		472.06	0.003231	3.62	281.92	189.11	0.44
USACE	9482	100YR	1008.00	469.38	472.21		472.37	0.003222	3.94	338.28	198.01	0.45
USACE	9482	100YRPLUS	1318.00	469.38	472.59		472.76	0.003223	4.34	415.33	213.28	0.46
USACE	9482	200YR	1235.00	469.38	472.50		472.67	0.003210	4.24	396.29	209.89	0.46
USACE	9482	500YR	1560.00	469.38	472.83		473.02	0.003239	4.60	468.19	221.43	0.47
USACE	9482	SEPT2011	596.00	469.38	471.63		471.75	0.003275	3.30	228.41	176.56	0.43
USACE	9183	2YR	114.00	467.04	469.00	468.87	469.15	0.006377	4.04	48.37	70.32	0.58
USACE	9183	5YR	250.00	467.04	469.50	469.28	469.69	0.006413	4.91	90.99	109.67	0.61
USACE	9183	10YR	375.00	467.04	469.75	469.54	469.99	0.007435	5.72	120.41	124.48	0.67
USACE	9183	25YR	600.00	467.04	470.13	469.88	470.42	0.007459	6.37	169.94	131.43	0.69
USACE	9183	50YR	789.00	467.04	470.43	470.08	470.74	0.007305	6.77	210.69	142.66	0.70
USACE	9183	100YR	1008.00	467.04	470.74	470.28	471.07	0.006959	7.07	256.68	151.17	0.69
USACE	9183	100YRPLUS	1318.00	467.04	471.15	470.56	471.50	0.006441	7.36	321.42	168.55	0.68
USACE	9183	200YR	1235.00	467.04	471.06	470.50	471.40	0.006576	7.30	305.20	163.14	0.68
USACE	9183	500YR	1560.00	467.04	471.44	470.76	471.80	0.005997	7.46	368.48	185.78	0.66
USACE	9183	SEPT2011	596.00	467.04	470.13	469.87	470.41	0.007463	6.36	169.08	131.30	0.69
USACE	8980	2YR	114.00	465.61	467.25	467.25	467.49	0.011237	4.81	40.53	84.09	0.75
USACE	8980	5YR	250.00	465.61	467.58	467.57	467.92	0.013482	6.16	71.04	94.97	0.86
USACE	8980	10YR	375.00	465.61	467.89		468.22	0.011362	6.37	101.72	102.04	0.81
USACE	8980	25YR	600.00	465.61	468.27	468.12	468.66	0.011088	7.11	141.73	106.95	0.83
USACE	8980	50YR	789.00	465.61	468.52	468.35	468.98	0.011478	7.74	168.44	109.63	0.86
USACE	8980	100YR	1008.00	465.61	468.75	468.55	469.30	0.012293	8.50	194.48	112.95	0.90
USACE	8980	100YRPLUS	1318.00	465.61	469.00	468.84	469.69	0.014130	9.65	222.95	116.82	0.98
USACE	8980	200YR	1235.00	465.61	468.94	468.76	469.59	0.013664	9.36	215.65	115.82	0.96
USACE	8980	500YR	1560.00	465.61	469.16	469.05	469.98	0.015719	10.52	241.17	119.19	1.04
USACE	8980	SEPT2011	596.00	465.61	468.27	468.12	468.66	0.011081	7.09	141.12	106.89	0.83
USACE	8857	2YR	114.00	464.59	466.30	466.07	466.40	0.006219	3.46	56.27	117.77	0.55
USACE	8857	5YR	250.00	464.59	466.69		466.81	0.005786	4.03	110.70	146.99	0.56
USACE	8857	10YR	375.00	464.59	466.84		467.02	0.007901	4.99	132.56	151.65	0.67
USACE	8857	25YR	600.00	464.59	467.09		467.35	0.009611	6.03	172.96	161.80	0.75
USACE	8857	50YR	789.00	464.59	467.29		467.59	0.010269	6.62	204.37	167.05	0.79
USACE	8857	100YR	1008.00	464.59	467.51		467.85	0.010280	7.06	241.62	172.59	0.80
USACE	8857	100YRPLUS	1318.00	464.59	467.84		468.20	0.009095	7.25	300.93	178.36	0.77
USACE	8857	200YR	1235.00	464.59	467.75		468.11	0.009432	7.22	284.76	176.84	0.78
USACE	8857	500YR	1560.00	464.59	468.11		468.48	0.008100	7.28	349.39	182.55	0.74
USACE	8857	SEPT2011	596.00	464.59	467.09		467.34	0.009595	6.02	172.25	161.68	0.75
USACE	8625	2YR	114.00	462.85	464.65	464.45	464.88	0.007115	4.21	39.11	82.74	0.61
USACE	8625	5YR	250.00	462.85	465.07	465.06	465.32	0.007636	5.15	94.53	156.35	0.66
USACE	8625	10YR	375.00	462.85	465.41	465.24	465.60	0.005343	4.83	150.91	215.24	0.57
USACE	8625	25YR	600.00	462.85	465.88	465.49	466.04	0.003918	4.70	236.56	233.99	0.51
USACE	8625	50YR	789.00	462.85	466.23	465.67	466.38	0.003228	4.63	302.90	241.45	0.47
USACE	8625	100YR	1008.00	462.85	466.64	465.83	466.78	0.002612	4.53	380.90	247.54	0.43
USACE	8625	100YRPLUS	1318.00	462.85	467.14	466.03	467.28	0.002184	4.53	480.28	256.78	0.40
USACE	8625	200YR	1235.00	462.85	467.01	465.98	467.15	0.002267	4.52	454.97	254.38	0.41
USACE	8625	500YR	1560.00	462.85	467.50	466.17	467.64	0.001961	4.55	553.79	261.61	0.39
USACE	8625	SEPT2011	596.00	462.85	465.88	465.49	466.03	0.003932	4.70	235.21	233.84	0.51
USACE	8444	2YR	114.00	460.59	462.36	462.36	462.97	0.016377	6.44	19.59	17.15	0.93
USACE	8444	5YR	250.00	460.59	463.26	463.26	463.78	0.009275	6.66	57.28	52.23	0.76
USACE	8444	10YR	375.00	460.59	463.62	463.62	464.25	0.010305	7.70	76.14	55.27	0.82
USACE	8444	25YR	600.00	460.59	464.22	464.11	464.93	0.009676	8.52	111.37	60.54	0.82
USACE	8444	50YR	789.00	460.59	464.74	464.46	465.44	0.008336	8.71	144.21	65.80	0.78
USACE	8444	100YR	1008.00	460.59	465.25	464.81	465.97	0.007550	9.00	179.43	72.65	0.76
USACE	8444	100YRPLUS	1318.00	460.59	465.73	465.34	466.54	0.007667	9.71	215.15	134.40	0.78
USACE	8444	200YR	1235.00	460.59	465.70	465.22	466.43	0.006924	9.20	213.10	134.14	0.74
USACE	8444	500YR	1560.00	460.59	466.06	465.67	466.94	0.007708	10.18	240.68	137.59	0.79
USACE	8444	SEPT2011	596.00	460.59	464.21	464.11	464.92	0.009716	8.52	110.64	60.44	0.82
USACE	8115	2YR	114.00	458.09	459.97		460.11	0.005269	3.65	49.28	44.34	0.51
USACE	8115	5YR	250.00	458.09	460.67		460.90	0.005804	4.87	81.29	47.86	0.56
USACE	8115	10YR	375.00	458.09	461.14		461.45	0.006288	5.74	104.89	55.22	0.61
USACE	8115	25YR	600.00	458.09	461.70		462.15	0.007772	7.21	144.55	82.30	0.70
USACE	8115	50YR	789.00	458.09	461.88		462.51	0.010522	8.69	159.42	84.84	0.82
USACE	8115	100YR	1008.00	458.09	462.08	461.97	462.91	0.013223	10.11	176.93	91.43	0.92
USACE	8115	100YRPLUS	1318.00	458.09	462.53	462.53	463.44	0.013512	11.03	225.85	120.69	0.95
USACE	8115	200YR	1235.00	458.09	462.32	462.14	463.33	0.015456	11.39	201.31	112.78	1.01
USACE	8115	500YR	1560.00	458.09	462.77	462.77	463.77	0.014271	11.76	255.48	131.32	0.99
USACE	8115	SEPT2011	596.00	458.09	461.70		462.14	0.007720	7.18	144.16	82.24	0.69
USACE	7933	2YR	114.00	456.80	458.40	458.40	458.73	0.011310	5.08	31.31	48.23	0.77

HEC-RAS Plan: Existing River: BoyersRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	7933	5YR	250.00	456.80	458.88	458.88	459.35	0.012906	6.62	56.15	56.79	0.86
USACE	7933	10YR	375.00	456.80	459.19	459.19	459.79	0.013890	7.63	74.69	61.10	0.92
USACE	7933	25YR	600.00	456.80	459.75	459.72	460.38	0.012152	8.32	121.09	115.75	0.89
USACE	7933	50YR	789.00	456.80	460.25	460.20	460.75	0.008559	7.83	188.95	141.61	0.77
USACE	7933	100YR	1008.00	456.80	460.64	460.42	461.08	0.007072	7.68	243.55	163.93	0.71
USACE	7933	100YRPLUS	1318.00	456.80	461.06	460.66	461.51	0.006514	7.92	302.68	225.28	0.70
USACE	7933	200YR	1235.00	456.80	460.95	460.60	461.39	0.006686	7.88	286.76	216.53	0.70
USACE	7933	500YR	1560.00	456.80	461.38	460.85	461.83	0.005998	8.01	349.25	240.94	0.68
USACE	7933	SEPT2011	596.00	456.80	459.73	459.68	460.37	0.012255	8.33	119.68	114.93	0.89
USACE	7706	2YR	114.00	453.92	455.96		456.11	0.003411	3.19	38.51	34.10	0.44
USACE	7706	5YR	250.00	453.92	456.71		456.99	0.003959	4.41	67.57	42.17	0.50
USACE	7706	10YR	375.00	453.92	457.11		457.51	0.004929	5.44	85.14	46.82	0.57
USACE	7706	25YR	600.00	453.92	457.53	457.08	458.25	0.007492	7.37	111.13	70.50	0.72
USACE	7706	50YR	789.00	453.92	457.78	457.78	458.71	0.009135	8.55	129.46	74.21	0.81
USACE	7706	100YR	1008.00	453.92	458.14	458.14	459.18	0.009551	9.32	156.56	80.33	0.84
USACE	7706	100YRPLUS	1318.00	453.92	458.68	458.68	459.75	0.008745	9.74	204.46	96.20	0.82
USACE	7706	200YR	1235.00	453.92	458.56	458.56	459.62	0.008777	9.58	193.32	93.57	0.82
USACE	7706	500YR	1560.00	453.92	458.97	458.97	460.12	0.008938	10.27	233.36	103.49	0.84
USACE	7706	SEPT2011	596.00	453.92	457.52	457.08	458.23	0.007459	7.34	110.68	70.36	0.72
USACE	7547	2YR	114.00	453.62	455.48	454.97	455.59	0.002959	2.91	52.34	51.72	0.40
USACE	7547	5YR	250.00	453.62	456.27	455.46	456.42	0.002828	3.71	107.62	95.84	0.42
USACE	7547	10YR	375.00	453.62	456.58	455.84	456.78	0.003623	4.55	141.99	124.29	0.49
USACE	7547	25YR	600.00	453.62	457.04	456.31	457.27	0.003788	5.17	201.88	165.91	0.51
USACE	7547	50YR	789.00	453.62	457.36	456.84	457.62	0.003717	5.47	247.11	182.44	0.52
USACE	7547	100YR	1008.00	453.62	457.60	457.06	457.91	0.004192	6.07	280.84	187.76	0.55
USACE	7547	100YRPLUS	1318.00	453.62	457.94	457.35	458.30	0.004462	6.64	330.30	195.25	0.58
USACE	7547	200YR	1235.00	453.62	457.85	457.29	458.20	0.004413	6.50	317.16	193.28	0.57
USACE	7547	500YR	1560.00	453.62	458.18	457.53	458.58	0.004621	7.02	366.04	200.06	0.60
USACE	7547	SEPT2011	596.00	453.62	457.03	456.49	457.27	0.003782	5.16	200.98	165.57	0.51
USACE	7161	2YR	114.00	451.57	453.12	453.12	453.49	0.012814	5.20	28.66	42.43	0.81
USACE	7161	5YR	250.00	451.57	453.56	453.56	454.19	0.016760	7.24	48.47	48.61	0.97
USACE	7161	10YR	375.00	451.57	454.20	454.20	454.66	0.009311	6.67	99.70	108.34	0.76
USACE	7161	25YR	600.00	451.57	454.60	454.60	455.09	0.009369	7.41	149.23	133.37	0.79
USACE	7161	50YR	789.00	451.57	454.82	454.81	455.37	0.010206	8.15	179.76	143.57	0.83
USACE	7161	100YR	1008.00	451.57	455.18		455.68	0.008581	8.06	232.95	152.33	0.78
USACE	7161	100YRPLUS	1318.00	451.57	455.58		456.08	0.007818	8.29	295.42	162.27	0.75
USACE	7161	200YR	1235.00	451.57	455.48		455.98	0.007932	8.20	279.60	158.29	0.76
USACE	7161	500YR	1560.00	451.57	455.85		456.36	0.007467	8.49	341.62	171.14	0.75
USACE	7161	SEPT2011	596.00	451.57	454.59	454.59	455.08	0.009381	7.40	148.34	133.23	0.79
USACE	6886	2YR	114.00	449.09	451.63	450.45	451.71	0.001280	2.31	59.66	54.26	0.28
USACE	6886	5YR	250.00	449.09	452.16	451.13	452.33	0.002322	3.61	99.77	88.60	0.39
USACE	6886	10YR	375.00	449.09	452.50	451.79	452.73	0.002872	4.34	130.67	93.43	0.44
USACE	6886	25YR	600.00	449.09	452.99	452.40	453.30	0.003537	5.32	179.01	107.11	0.50
USACE	6886	50YR	789.00	449.09	453.30	452.70	453.68	0.004021	6.01	215.10	123.06	0.54
USACE	6886	100YR	1008.00	449.09	453.61	452.99	454.05	0.004421	6.63	254.74	136.66	0.57
USACE	6886	100YRPLUS	1318.00	449.09	453.99	453.45	454.48	0.004651	7.22	308.98	165.49	0.60
USACE	6886	200YR	1235.00	449.09	453.89	453.34	454.37	0.004619	7.09	294.80	162.51	0.59
USACE	6886	500YR	1560.00	449.09	454.26	453.78	454.79	0.004738	7.57	347.79	176.35	0.61
USACE	6886	SEPT2011	596.00	449.09	452.98	452.39	453.29	0.003527	5.31	178.20	106.76	0.50
USACE	6708	2YR	114.00	449.12	450.90	450.90	451.20	0.009595	4.98	37.49	87.10	0.72
USACE	6708	5YR	250.00	449.12	451.47	451.33	451.69	0.006472	5.07	98.41	118.40	0.62
USACE	6708	10YR	375.00	449.12	451.84	451.56	452.04	0.005394	5.17	145.66	133.01	0.58
USACE	6708	25YR	600.00	449.12	452.34	451.85	452.55	0.004845	5.55	217.95	154.47	0.57
USACE	6708	50YR	789.00	449.12	452.67	452.11	452.88	0.004558	5.77	269.02	165.30	0.56
USACE	6708	100YR	1008.00	449.12	452.98	452.30	453.21	0.004404	6.03	319.02	175.94	0.56
USACE	6708	100YRPLUS	1318.00	449.12	453.38	452.61	453.63	0.004267	6.36	382.79	190.80	0.56
USACE	6708	200YR	1235.00	449.12	453.27	452.55	453.52	0.004317	6.29	365.80	187.68	0.56
USACE	6708	500YR	1560.00	449.12	453.65	452.76	453.93	0.004232	6.62	427.32	197.97	0.57
USACE	6708	SEPT2011	596.00	449.12	452.34	451.85	452.54	0.004860	5.55	216.58	154.08	0.57
USACE	6417	2YR	114.00	447.85	450.24	449.09	450.29	0.000909	1.91	83.97	73.67	0.23
USACE	6417	5YR	250.00	447.85	450.62	449.82	450.73	0.001883	3.08	135.07	151.85	0.35
USACE	6417	10YR	375.00	447.85	450.88	450.15	451.02	0.002425	3.73	173.62	172.28	0.40
USACE	6417	25YR	600.00	447.85	451.21	450.74	451.41	0.003250	4.66	224.16	178.91	0.47
USACE	6417	50YR	789.00	447.85	451.46	450.96	451.70	0.003635	5.20	262.97	185.33	0.50
USACE	6417	100YR	1008.00	447.85	451.72	451.17	452.00	0.003960	5.71	303.28	197.25	0.53
USACE	6417	100YRPLUS	1318.00	447.85	452.04	451.43	452.37	0.004359	6.34	352.65	206.70	0.57
USACE	6417	200YR	1235.00	447.85	451.97	451.36	452.29	0.004161	6.12	342.78	204.64	0.55
USACE	6417	500YR	1560.00	447.85	452.26	451.60	452.63	0.004616	6.77	387.42	217.48	0.59
USACE	6417	SEPT2011	596.00	447.85	451.21	450.73	451.41	0.003205	4.63	224.19	178.92	0.47
USACE	6345	2YR	114.00	447.12	450.19	448.66	450.23	0.000551	1.65	105.62	151.88	0.19
USACE	6345	5YR	250.00	447.12	450.53	449.30	450.61	0.001232	2.68	151.37	182.59	0.28
USACE	6345	10YR	375.00	447.12	450.74	449.89	450.86	0.001806	3.41	185.78	190.93	0.35
USACE	6345	25YR	600.00	447.12	450.99	450.51	451.20	0.002835	4.51	225.48	196.38	0.44
USACE	6345	50YR	789.00	447.12	451.18	450.55	451.44	0.003527	5.22	255.61	200.81	0.50
USACE	6345	100YR	1008.00	447.12	451.39	450.96	451.70	0.004162	5.89	288.09	217.08	0.55
USACE	6345	100YRPLUS	1318.00	447.12	451.61	451.21	452.02	0.005128	6.80	324.18	222.27	0.61
USACE	6345	200YR	1235.00	447.12	451.61	451.15	451.97	0.004442	6.34	325.76	222.50	0.57
USACE	6345	500YR	1560.00	447.12	451.76	451.39	452.24	0.005784	7.42	350.11	226.29	0.65
USACE	6345	SEPT2011	596.00	447.12	451.00	450.50	451.20	0.002774	4.46	226.22	196.47	0.44
USACE	6321 Private Drive		Culvert									

HEC-RAS Plan: Existing River: BoyersRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6300	2YR	114.00	446.38	447.61	447.41	447.80	0.009098	3.87	42.70	52.71	0.66
USACE	6300	5YR	250.00	446.38	448.13	447.87	448.48	0.009919	5.29	71.65	57.01	0.74
USACE	6300	10YR	375.00	446.38	448.50	448.22	448.97	0.010440	6.24	93.20	60.16	0.79
USACE	6300	25YR	600.00	446.38	448.96	448.74	449.68	0.012393	7.82	122.58	86.83	0.89
USACE	6300	50YR	789.00	446.38	449.42	449.42	450.15	0.010522	8.10	168.91	108.12	0.84
USACE	6300	100YR	1008.00	446.38	449.72	449.72	450.55	0.011021	8.86	203.18	120.19	0.88
USACE	6300	100YRPLUS	1318.00	446.38	450.12	450.10	451.02	0.010807	9.49	250.12	155.62	0.88
USACE	6300	200YR	1235.00	446.38	450.00	450.00	450.90	0.011156	9.42	235.86	147.05	0.89
USACE	6300	500YR	1560.00	446.38	450.45	450.32	451.35	0.009997	9.68	289.45	173.13	0.86
USACE	6300	SEPT2011	596.00	446.38	448.95	448.73	449.67	0.012373	7.80	121.93	86.09	0.89
USACE	6223	2YR	114.00	445.25	446.72	446.48	446.93	0.013933	3.80	32.77	42.93	0.63
USACE	6223	5YR	250.00	445.25	447.35	447.07	447.63	0.011338	4.61	71.69	76.85	0.61
USACE	6223	10YR	375.00	445.25	447.83	447.42	448.11	0.009448	4.92	113.22	105.32	0.58
USACE	6223	25YR	600.00	445.25	448.43	447.96	448.72	0.007763	5.23	177.89	118.12	0.55
USACE	6223	50YR	789.00	445.25	448.84	448.21	449.14	0.007270	5.53	221.84	128.00	0.54
USACE	6223	100YR	1008.00	445.25	449.22	448.47	449.56	0.007156	5.91	264.41	135.93	0.55
USACE	6223	100YRPLUS	1318.00	445.25	449.70	448.78	450.09	0.007128	6.41	317.48	145.55	0.56
USACE	6223	200YR	1235.00	445.25	449.58	448.70	449.96	0.007129	6.28	303.88	143.12	0.55
USACE	6223	500YR	1560.00	445.25	450.04	449.01	450.47	0.007158	6.76	354.77	152.28	0.56
USACE	6223	SEPT2011	596.00	445.25	448.42	447.95	448.71	0.007807	5.23	176.64	117.78	0.55
USACE	6124	2YR	114.00	444.01	445.59		445.74	0.010426	3.11	39.13	37.45	0.46
USACE	6124	5YR	250.00	444.01	446.59		446.76	0.006614	3.49	89.31	61.60	0.40
USACE	6124	10YR	375.00	444.01	447.01		447.24	0.007931	4.24	118.47	81.52	0.44
USACE	6124	25YR	600.00	444.01	447.59		447.90	0.008761	5.04	171.50	98.13	0.48
USACE	6124	50YR	789.00	444.01	448.01		448.35	0.008806	5.45	214.19	106.55	0.49
USACE	6124	100YR	1008.00	444.01	448.39		448.77	0.009004	5.87	255.69	110.95	0.50
USACE	6124	100YRPLUS	1318.00	444.01	448.88		449.30	0.008990	6.30	310.96	115.58	0.51
USACE	6124	200YR	1235.00	444.01	448.75		449.16	0.009035	6.20	296.30	114.50	0.51
USACE	6124	500YR	1560.00	444.01	449.21		449.67	0.009029	6.60	350.07	118.50	0.52
USACE	6124	SEPT2011	596.00	444.01	447.55		447.86	0.009250	5.13	166.66	97.07	0.49
USACE	5978	2YR	158.00	442.47	444.89		444.99	0.003340	3.03	86.47	59.68	0.36
USACE	5978	5YR	335.00	442.47	446.08		446.19	0.002652	3.59	191.25	137.30	0.34
USACE	5978	10YR	464.00	442.47	446.55		446.66	0.002349	3.69	258.29	144.73	0.33
USACE	5978	25YR	724.00	442.47	447.03		447.19	0.003041	4.53	333.12	162.76	0.38
USACE	5978	50YR	960.00	442.47	447.42		447.60	0.003223	4.95	398.93	169.12	0.40
USACE	5978	100YR	1209.00	442.47	447.79		447.99	0.003352	5.30	461.88	173.80	0.41
USACE	5978	100YRPLUS	1581.00	442.47	448.26		448.49	0.003556	5.79	544.21	179.41	0.43
USACE	5978	200YR	1477.00	442.47	448.14		448.36	0.003489	5.65	522.76	177.94	0.43
USACE	5978	500YR	1870.00	442.47	448.57		448.84	0.003744	6.16	600.78	184.14	0.45
USACE	5978	SEPT2011	695.00	442.47	446.97		447.13	0.003017	4.48	324.54	162.19	0.38
USACE	5846	2YR	158.00	441.40	443.88		444.29	0.008404	5.27	33.06	21.96	0.66
USACE	5846	5YR	335.00	441.40	444.90	444.43	445.56	0.008227	6.89	61.11	69.63	0.70
USACE	5846	10YR	464.00	441.40	445.35	444.90	446.07	0.008185	7.54	102.36	110.97	0.72
USACE	5846	25YR	724.00	441.40	445.94	445.94	446.56	0.006971	7.75	173.69	126.81	0.68
USACE	5846	50YR	960.00	441.40	446.23	446.23	446.93	0.007785	8.57	210.70	131.12	0.73
USACE	5846	100YR	1209.00	441.40	446.47	446.44	447.27	0.008714	9.40	242.89	135.39	0.78
USACE	5846	100YRPLUS	1581.00	441.40	446.85	446.85	447.73	0.009152	10.17	298.49	150.36	0.81
USACE	5846	200YR	1477.00	441.40	446.77	446.77	447.61	0.008939	9.93	285.49	148.91	0.80
USACE	5846	500YR	1870.00	441.40	447.08	447.08	448.03	0.009668	10.77	333.10	154.15	0.84
USACE	5846	SEPT2011	695.00	441.40	445.90	445.90	446.51	0.006877	7.64	168.47	125.94	0.67
USACE	5635	2YR	158.00	440.10	442.28		442.52	0.007893	3.97	42.57	28.25	0.51
USACE	5635	5YR	335.00	440.10	443.04		443.54	0.010805	5.82	67.70	41.98	0.63
USACE	5635	10YR	464.00	440.10	443.54	442.97	444.10	0.010205	6.36	102.95	109.22	0.63
USACE	5635	25YR	724.00	440.10	444.12	444.12	444.65	0.009320	6.81	198.52	182.76	0.62
USACE	5635	50YR	960.00	440.10	444.39	444.37	444.97	0.010059	7.42	248.96	184.84	0.66
USACE	5635	100YR	1209.00	440.10	444.73		445.26	0.009337	7.55	310.96	187.45	0.64
USACE	5635	100YRPLUS	1581.00	440.10	445.17		445.68	0.008576	7.72	394.41	190.89	0.62
USACE	5635	200YR	1477.00	440.10	445.05		445.57	0.008725	7.66	372.53	190.04	0.63
USACE	5635	500YR	1870.00	440.10	445.45		445.97	0.008379	7.93	449.53	193.00	0.62
USACE	5635	SEPT2011	695.00	440.10	444.08	444.08	444.61	0.009235	6.73	191.38	182.47	0.62
USACE	5443	2YR	158.00	438.34	440.86		441.14	0.006592	4.72	62.53	77.22	0.58
USACE	5443	5YR	335.00	438.34	441.62		441.94	0.006177	5.65	126.86	94.00	0.60
USACE	5443	10YR	464.00	438.34	441.84		442.29	0.008314	6.90	149.07	117.88	0.70
USACE	5443	25YR	724.00	438.34	442.41	442.20	442.86	0.007828	7.51	246.23	207.49	0.70
USACE	5443	50YR	960.00	438.34	442.76	442.55	443.22	0.007909	8.03	323.93	232.62	0.72
USACE	5443	100YR	1209.00	438.34	443.02	442.81	443.53	0.008648	8.76	384.86	243.29	0.76
USACE	5443	100YRPLUS	1581.00	438.34	443.29		443.90	0.009975	9.82	453.32	250.07	0.82
USACE	5443	200YR	1477.00	438.34	443.22	443.06	443.80	0.009674	9.56	434.46	248.47	0.81
USACE	5443	500YR	1870.00	438.34	443.50		444.15	0.010649	10.46	505.38	255.96	0.85
USACE	5443	SEPT2011	695.00	438.34	442.37	442.15	442.81	0.007779	7.43	236.80	200.23	0.70
USACE	5208	2YR	158.00	436.77	439.25	438.74	439.59	0.006489	5.00	39.77	31.50	0.60
USACE	5208	5YR	335.00	436.77	440.16	440.16	440.54	0.005631	5.88	117.06	188.32	0.59
USACE	5208	10YR	464.00	436.77	440.51	440.51	440.81	0.004669	5.75	187.18	293.87	0.55
USACE	5208	25YR	724.00	436.77	440.80	440.80	441.19	0.006398	7.10	255.15	310.56	0.65
USACE	5208	50YR	960.00	436.77	440.98	440.98	441.43	0.007393	7.88	301.66	317.18	0.70
USACE	5208	100YR	1209.00	436.77	441.23	441.13	441.65	0.007212	8.10	362.65	324.30	0.70
USACE	5208	100YRPLUS	1581.00	436.77	441.60	441.37	441.98	0.006374	8.06	457.97	330.17	0.67
USACE	5208	200YR	1477.00	436.77	441.50	441.31	441.89	0.006544	8.05	432.93	328.86	0.67
USACE	5208	500YR	1870.00	436.77	441.85	441.51	442.22	0.006047	8.14	522.78	333.65	0.66
USACE	5208	SEPT2011	695.00	436.77	440.77	440.77	441.16	0.006296	7.00	248.32	309.49	0.64
USACE	4993	2YR	158.00	436.58	438.39		438.49	0.003623	3.10	82.53	98.58	0.43

HEC-RAS Plan: Existing River: BoyersRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4993	5YR	335.00	436.58	439.07		439.18	0.003130	3.62	170.37	164.21	0.42
USACE	4993	10YR	464.00	436.58	439.40		439.51	0.002755	3.72	228.29	191.83	0.40
USACE	4993	25YR	724.00	436.58	439.88		440.00	0.002698	4.11	331.35	229.55	0.41
USACE	4993	50YR	960.00	436.58	440.18		440.32	0.002883	4.52	402.59	248.78	0.43
USACE	4993	100YR	1209.00	436.58	440.47		440.62	0.002890	4.78	478.70	265.79	0.44
USACE	4993	100YRPLUS	1581.00	436.58	440.81		440.98	0.003070	5.22	570.68	281.68	0.46
USACE	4993	200YR	1477.00	436.58	440.73		440.90	0.002974	5.07	548.77	277.60	0.45
USACE	4993	500YR	1870.00	436.58	441.02		441.21	0.003309	5.60	630.54	293.51	0.48
USACE	4993	SEPT2011	695.00	436.58	439.83		439.95	0.002706	4.08	320.75	227.47	0.41
USACE	4543	2YR	158.00	433.56	435.83	435.68	436.10	0.008438	4.87	51.25	54.79	0.65
USACE	4543	5YR	335.00	433.56	436.41	436.21	436.83	0.010052	6.44	87.41	86.33	0.74
USACE	4543	10YR	464.00	433.56	436.62	436.62	437.18	0.012480	7.60	106.42	95.45	0.84
USACE	4543	25YR	724.00	433.56	437.08	437.08	437.70	0.012424	8.47	154.20	121.21	0.86
USACE	4543	50YR	960.00	433.56	437.53	437.53	438.08	0.010205	8.43	226.25	207.86	0.80
USACE	4543	100YR	1209.00	433.56	437.76	437.76	438.34	0.010614	8.96	270.27	237.49	0.82
USACE	4543	100YRPLUS	1581.00	433.56	438.10	438.04	438.67	0.010072	9.26	343.26	267.59	0.81
USACE	4543	200YR	1477.00	433.56	437.99	437.98	438.58	0.010651	9.35	318.69	262.37	0.83
USACE	4543	500YR	1870.00	433.56	438.41	438.20	438.92	0.008683	9.03	412.03	299.90	0.76
USACE	4543	SEPT2011	695.00	433.56	437.04	437.04	437.65	0.012429	8.38	148.83	118.05	0.86
USACE	4351	2YR	158.00	432.52	435.02	434.46	435.13	0.003077	3.09	74.38	134.92	0.41
USACE	4351	5YR	335.00	432.52	435.52	435.13	435.68	0.003605	3.97	150.10	207.35	0.47
USACE	4351	10YR	464.00	432.52	435.83	435.45	435.97	0.003192	4.06	200.86	216.46	0.45
USACE	4351	25YR	724.00	432.52	436.31	435.72	436.46	0.002959	4.40	286.68	240.59	0.45
USACE	4351	50YR	960.00	432.52	436.67	435.90	436.84	0.002921	4.71	355.17	260.52	0.45
USACE	4351	100YR	1209.00	432.52	436.99	436.10	437.17	0.002886	4.97	420.45	274.20	0.46
USACE	4351	100YRPLUS	1581.00	432.52	437.44	436.35	437.64	0.002787	5.27	517.59	292.89	0.46
USACE	4351	200YR	1477.00	432.52	437.31	436.27	437.51	0.002848	5.22	490.07	289.51	0.46
USACE	4351	500YR	1870.00	432.52	437.78	436.52	437.99	0.002614	5.38	596.26	303.54	0.45
USACE	4351	SEPT2011	695.00	432.52	436.26	435.69	436.41	0.002985	4.36	277.31	238.08	0.45
USACE	3884	2YR	158.00	430.86	433.80		433.90	0.002268	3.17	94.17	127.85	0.37
USACE	3884	5YR	335.00	430.86	434.60		434.67	0.001382	3.03	221.54	181.70	0.30
USACE	3884	10YR	464.00	430.86	434.85		434.93	0.001596	3.43	267.80	191.67	0.33
USACE	3884	25YR	724.00	430.86	435.23		435.34	0.001973	4.09	344.39	208.08	0.37
USACE	3884	50YR	960.00	430.86	435.52		435.65	0.002215	4.56	406.27	220.81	0.40
USACE	3884	100YR	1209.00	430.86	435.89		436.02	0.002104	4.71	489.58	235.50	0.40
USACE	3884	100YRPLUS	1581.00	430.86	436.51		436.64	0.001650	4.56	643.04	256.18	0.36
USACE	3884	200YR	1477.00	430.86	436.33		436.46	0.001787	4.63	596.61	250.96	0.37
USACE	3884	500YR	1870.00	430.86	436.97		437.09	0.001407	4.47	764.82	271.10	0.34
USACE	3884	SEPT2011	695.00	430.86	435.22		435.32	0.001872	3.98	340.71	207.46	0.36
USACE	3680	2YR	158.00	429.78	433.03		433.26	0.004490	4.32	48.97	35.91	0.50
USACE	3680	5YR	335.00	429.78	433.45	433.24	434.03	0.009691	7.08	69.98	94.79	0.75
USACE	3680	10YR	464.00	429.78	433.90	433.90	434.30	0.007075	6.69	138.78	200.12	0.66
USACE	3680	25YR	724.00	429.78	434.48		434.73	0.004756	6.12	274.86	254.41	0.55
USACE	3680	50YR	960.00	429.78	434.98		435.13	0.002937	5.22	406.40	275.28	0.44
USACE	3680	100YR	1209.00	429.78	435.48		435.60	0.001993	4.63	550.79	295.75	0.37
USACE	3680	100YRPLUS	1581.00	429.78	436.26		436.34	0.001199	3.97	789.07	319.84	0.30
USACE	3680	200YR	1477.00	429.78	436.04		436.13	0.001367	4.13	720.22	313.48	0.31
USACE	3680	500YR	1870.00	429.78	436.77		436.85	0.000939	3.72	957.81	330.57	0.27
USACE	3680	SEPT2011	695.00	429.78	434.36		434.68	0.005817	6.63	245.15	246.56	0.61
USACE	3608	2YR	158.00	429.00	432.94	431.42	433.04	0.001236	2.61	81.98	171.91	0.28
USACE	3608	5YR	335.00	429.00	433.30	432.29	433.51	0.002582	4.10	139.84	211.15	0.41
USACE	3608	10YR	464.00	429.00	433.58	433.21	433.80	0.002744	4.47	191.81	238.86	0.43
USACE	3608	25YR	724.00	429.00	434.35	433.64	434.48	0.001635	3.96	351.01	317.52	0.34
USACE	3608	50YR	960.00	429.00	434.84	433.87	434.97	0.001424	3.99	468.86	363.61	0.33
USACE	3608	100YR	1209.00	429.00	435.43	434.06	435.49	0.000693	3.02	812.56	394.80	0.23
USACE	3608	100YRPLUS	1581.00	429.00	436.22	434.32	436.27	0.000472	2.73	1111.68	415.27	0.20
USACE	3608	200YR	1477.00	429.00	436.00	434.16	436.05	0.000523	2.81	1026.79	411.23	0.21
USACE	3608	500YR	1870.00	429.00	436.75	434.48	436.79	0.000395	2.65	1314.57	422.62	0.18
USACE	3608	SEPT2011	695.00	429.00	434.22	433.59	434.37	0.001858	4.14	322.59	309.02	0.37
USACE	3581 Boyer Road		Culvert									
USACE	3559	2YR	158.00	428.59	432.40	431.20	432.55	0.002086	3.20	54.72	43.06	0.36
USACE	3559	5YR	335.00	428.59	433.13	432.10	433.32	0.002431	4.10	147.52	187.82	0.40
USACE	3559	10YR	464.00	428.59	433.63	433.03	433.75	0.001537	3.59	259.83	258.10	0.33
USACE	3559	25YR	724.00	428.59	434.38	433.46	434.44	0.000782	2.89	471.05	312.58	0.24
USACE	3559	50YR	960.00	428.59	434.90	433.72	434.95	0.000568	2.65	638.44	338.02	0.21
USACE	3559	100YR	1209.00	428.59	435.42	433.88	435.47	0.000424	2.45	822.13	357.21	0.18
USACE	3559	100YRPLUS	1581.00	428.59	436.21	434.07	436.25	0.000294	2.23	1115.41	386.02	0.16
USACE	3559	200YR	1477.00	428.59	435.98	434.02	436.02	0.000329	2.30	1025.28	377.65	0.16
USACE	3559	500YR	1870.00	428.59	436.75	434.30	436.78	0.000247	2.16	1326.42	404.88	0.14
USACE	3559	SEPT2011	695.00	428.59	434.24	433.43	434.31	0.000933	3.09	426.38	295.42	0.26
USACE	3502	2YR	158.00	428.55	432.18		432.39	0.002863	4.05	59.67	63.52	0.41
USACE	3502	5YR	335.00	428.55	433.01		433.18	0.002441	4.40	170.28	204.54	0.40
USACE	3502	10YR	464.00	428.55	433.59		433.66	0.001136	3.30	312.30	271.27	0.28
USACE	3502	25YR	724.00	428.55	434.36		434.40	0.000580	2.62	542.10	323.03	0.20
USACE	3502	50YR	960.00	428.55	434.88		434.91	0.000444	2.45	718.42	351.62	0.18
USACE	3502	100YR	1209.00	428.55	435.41		435.44	0.000345	2.29	910.42	369.22	0.16
USACE	3502	100YRPLUS	1581.00	428.55	436.20		436.23	0.000250	2.11	1216.45	400.72	0.14
USACE	3502	200YR	1477.00	428.55	435.97		436.00	0.000277	2.17	1122.46	392.67	0.15
USACE	3502	500YR	1870.00	428.55	436.74		436.77	0.000213	2.04	1435.94	416.87	0.13
USACE	3502	SEPT2011	695.00	428.55	434.21		434.25	0.000702	2.83	494.06	313.87	0.22

HEC-RAS Plan: Existing River: BoyersRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3342	2YR	158.00	428.54	432.10	430.95	432.15	0.000685	2.11	126.84	85.80	0.21
USACE	3342	5YR	335.00	428.54	432.87	431.77	432.93	0.000856	2.73	225.38	185.73	0.24
USACE	3342	10YR	464.00	428.54	433.48	431.83	433.53	0.000560	2.44	361.74	252.11	0.20
USACE	3342	25YR	724.00	428.54	434.29	432.24	434.32	0.000365	2.20	580.08	289.56	0.17
USACE	3342	50YR	960.00	428.54	434.82	432.73	434.86	0.000315	2.18	738.99	309.02	0.16
USACE	3342	100YR	1209.00	428.54	435.36	433.02	435.40	0.000268	2.13	910.16	323.52	0.15
USACE	3342	100YRPLUS	1581.00	428.54	436.17	433.37	436.20	0.000212	2.05	1177.63	343.88	0.13
USACE	3342	200YR	1477.00	428.54	435.93	433.26	435.96	0.000229	2.08	1095.84	338.22	0.14
USACE	3342	500YR	1870.00	428.54	436.70	433.53	436.74	0.000189	2.03	1365.52	351.45	0.13
USACE	3342	SEPT2011	695.00	428.54	434.13	432.19	434.17	0.000427	2.33	533.68	281.20	0.18
USACE	3181	2YR	158.00	428.50	432.07	430.11	432.08	0.000200	1.20	245.92	190.85	0.12
USACE	3181	5YR	335.00	428.50	432.83	430.84	432.85	0.000254	1.56	404.05	225.79	0.14
USACE	3181	10YR	464.00	428.50	433.45	431.35	433.47	0.000207	1.55	549.03	239.81	0.13
USACE	3181	25YR	724.00	428.50	434.26	431.78	434.28	0.000196	1.68	757.91	276.61	0.13
USACE	3181	50YR	960.00	428.50	434.79	432.01	434.81	0.000197	1.79	906.16	281.57	0.13
USACE	3181	100YR	1209.00	428.50	435.33	432.18	435.36	0.000189	1.86	1065.13	321.89	0.13
USACE	3181	100YRPLUS	1581.00	428.50	436.14	432.47	436.17	0.000167	1.89	1331.42	337.56	0.12
USACE	3181	200YR	1477.00	428.50	435.90	432.40	435.92	0.000175	1.89	1250.63	332.40	0.13
USACE	3181	500YR	1870.00	428.50	436.68	432.65	436.71	0.000157	1.92	1526.53	381.45	0.12
USACE	3181	SEPT2011	695.00	428.50	434.09	431.76	434.11	0.000218	1.73	711.95	275.03	0.13
USACE	2871	2YR	729.00	427.68	431.65	430.76	431.78	0.002102	4.15	324.78	214.99	0.39
USACE	2871	5YR	1347.00	427.68	432.28	431.41	432.48	0.002766	5.31	469.16	243.36	0.46
USACE	2871	10YR	1990.00	427.68	432.84	431.84	433.09	0.003120	6.13	619.13	311.38	0.50
USACE	2871	25YR	3103.00	427.68	433.62	432.39	433.91	0.003100	6.76	882.08	362.49	0.51
USACE	2871	50YR	3979.00	427.68	434.17	432.66	434.46	0.002864	6.92	1076.89	371.36	0.49
USACE	2871	100YR	4932.00	427.68	434.72	433.26	435.02	0.002648	7.05	1276.97	376.72	0.48
USACE	2871	100YRPLUS	6450.00	427.68	435.54	433.75	435.86	0.002395	7.25	1574.03	427.92	0.47
USACE	2871	200YR	5983.00	427.68	435.30	433.64	435.61	0.002462	7.18	1485.23	394.98	0.47
USACE	2871	500YR	7530.00	427.68	436.09	434.01	436.42	0.002245	7.35	1773.67	534.58	0.46
USACE	2871	SEPT2011	2841.00	427.68	433.45	432.28	433.73	0.003154	6.67	820.91	351.73	0.51
USACE	2641	2YR	729.00	426.98	430.93	430.77	431.15	0.003652	5.21	304.62	300.68	0.50
USACE	2641	5YR	1347.00	426.98	431.68	431.13	431.85	0.002631	5.07	535.18	311.52	0.44
USACE	2641	10YR	1990.00	426.98	432.29	431.42	432.45	0.002293	5.18	728.97	334.48	0.42
USACE	2641	25YR	3103.00	426.98	433.15	431.83	433.33	0.001873	5.24	1029.42	350.29	0.39
USACE	2641	50YR	3979.00	426.98	433.74	432.11	433.93	0.001677	5.31	1237.61	355.30	0.38
USACE	2641	100YR	4932.00	426.98	434.34	432.36	434.54	0.001524	5.38	1450.51	362.06	0.36
USACE	2641	100YRPLUS	6450.00	426.98	435.20	432.76	435.43	0.001347	5.48	1776.44	397.24	0.35
USACE	2641	200YR	5983.00	426.98	434.95	432.66	435.16	0.001397	5.46	1675.79	384.61	0.35
USACE	2641	500YR	7530.00	426.98	435.78	433.00	436.02	0.001244	5.53	2008.19	412.81	0.34
USACE	2641	SEPT2011	2841.00	426.98	432.96	431.74	433.13	0.001952	5.23	963.17	349.07	0.40
USACE	2330	2YR	729.00	426.15	430.69	429.59	430.72	0.000571	2.31	607.42	423.70	0.20
USACE	2330	5YR	1347.00	426.15	431.42	429.96	431.47	0.000616	2.68	864.40	440.27	0.22
USACE	2330	10YR	1990.00	426.15	432.02	430.23	432.08	0.000643	2.97	1077.52	454.13	0.23
USACE	2330	25YR	3103.00	426.15	432.89	430.65	432.98	0.000658	3.32	1400.61	516.54	0.24
USACE	2330	50YR	3979.00	426.15	433.49	430.88	433.59	0.000658	3.53	1623.98	554.77	0.24
USACE	2330	100YR	4932.00	426.15	434.10	431.10	434.22	0.000652	3.73	1848.93	607.34	0.24
USACE	2330	100YRPLUS	6450.00	426.15	434.98	431.43	435.12	0.000644	3.99	2175.86	676.80	0.24
USACE	2330	200YR	5983.00	426.15	434.72	431.34	434.85	0.000646	3.91	2078.82	653.54	0.24
USACE	2330	500YR	7530.00	426.15	435.56	431.66	435.72	0.000637	4.15	2392.61	716.98	0.25
USACE	2330	SEPT2011	2841.00	426.15	432.70	430.56	432.78	0.000657	3.25	1328.93	508.97	0.23
USACE	2170	2YR	729.00	426.11	430.61	429.51	430.64	0.000521	2.22	676.53	424.46	0.19
USACE	2170	5YR	1347.00	426.11	431.34	429.86	431.37	0.000542	2.53	990.82	445.76	0.20
USACE	2170	10YR	1990.00	426.11	431.94	430.13	431.98	0.000554	2.77	1261.39	507.91	0.21
USACE	2170	25YR	3103.00	426.11	432.82	430.46	432.87	0.000547	3.04	1673.32	571.26	0.21
USACE	2170	50YR	3979.00	426.11	433.42	430.68	433.49	0.000540	3.21	1957.52	641.97	0.22
USACE	2170	100YR	4932.00	426.11	434.03	430.89	434.11	0.000530	3.37	2244.07	701.90	0.22
USACE	2170	100YRPLUS	6450.00	426.11	434.92	431.19	435.02	0.000517	3.59	2660.67	797.09	0.22
USACE	2170	200YR	5983.00	426.11	434.66	431.10	434.75	0.000520	3.52	2537.00	771.07	0.22
USACE	2170	500YR	7530.00	426.11	435.51	431.38	435.62	0.000508	3.72	2936.96	855.66	0.22
USACE	2170	SEPT2011	2841.00	426.11	432.62	430.40	432.68	0.000550	2.99	1582.14	553.74	0.21
USACE	2020	2YR	729.00	426.11	430.56	429.06	430.58	0.000272	1.63	804.47	480.54	0.14
USACE	2020	5YR	1347.00	426.11	431.28	429.43	431.31	0.000335	2.02	1094.72	490.98	0.16
USACE	2020	10YR	1990.00	426.11	431.87	429.69	431.91	0.000375	2.31	1335.41	498.66	0.18
USACE	2020	25YR	3103.00	426.11	432.75	430.04	432.80	0.000412	2.67	1690.45	573.91	0.19
USACE	2020	50YR	3979.00	426.11	433.35	430.26	433.42	0.000429	2.90	1934.64	636.43	0.20
USACE	2020	100YR	4932.00	426.11	433.95	430.47	434.04	0.000440	3.11	2180.95	683.53	0.20
USACE	2020	100YRPLUS	6450.00	426.11	434.84	430.79	434.94	0.000450	3.39	2539.14	752.07	0.21
USACE	2020	200YR	5983.00	426.11	434.57	430.69	434.67	0.000447	3.30	2432.82	731.95	0.20
USACE	2020	500YR	7530.00	426.11	435.42	431.01	435.54	0.000453	3.56	2776.77	799.90	0.21
USACE	2020	SEPT2011	2841.00	426.11	432.55	429.96	432.60	0.000405	2.60	1611.99	555.34	0.19
USACE	1957	2YR	729.00	425.20	430.54	428.16	430.56	0.000355	1.69	750.03	474.90	0.13
USACE	1957	5YR	1347.00	425.20	431.24	429.05	431.28	0.000513	2.22	983.36	512.26	0.16
USACE	1957	10YR	1990.00	425.20	431.82	429.40	431.87	0.000620	2.60	1176.21	541.44	0.18
USACE	1957	25YR	3103.00	425.20	432.67	430.00	432.76	0.000729	3.07	1460.52	599.56	0.20
USACE	1957	50YR	3979.00	425.20	433.26	430.29	433.37	0.000784	3.36	1655.74	631.37	0.21
USACE	1957	100YR	4932.00	425.20	433.85	430.55	433.99	0.000823	3.62	1852.64	667.61	0.22
USACE	1957	100YRPLUS	6450.00	425.20	434.71	430.93	434.88	0.000865	3.96	2138.59	719.59	0.23
USACE	1957	200YR	5983.00	425.20	434.45	430.82	434.62	0.000854	3.86	2053.76	702.86	0.23
USACE	1957	500YR	7530.00	425.20	435.27	431.18	435.48	0.000883	4.17	2328.21	748.16	0.24
USACE	1957	SEPT2011	2841.00	425.20	432.48	429.88	432.56	0.000709	2.98	1397.72	583.60	0.20
USACE	1910 Abandoned Railro		Mult Open									

HEC-RAS Plan: Existing River: BoyersRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1857	2YR	729.00	424.11	428.90	428.90	429.26	0.003830	6.01	260.68	344.79	0.53
USACE	1857	5YR	1347.00	424.11	429.44	429.32	429.82	0.004475	7.05	419.63	416.05	0.58
USACE	1857	10YR	1990.00	424.11	429.91	429.66	430.27	0.004194	7.29	571.84	482.48	0.57
USACE	1857	25YR	3103.00	424.11	430.56	430.06	430.93	0.003891	7.61	794.53	542.99	0.56
USACE	1857	50YR	3979.00	424.11	431.03	430.32	431.40	0.003590	7.71	961.45	582.17	0.55
USACE	1857	100YR	4932.00	424.11	431.54	430.59	431.92	0.003223	7.69	1141.39	602.88	0.52
USACE	1857	100YRPLUS	6450.00	424.11	432.33	430.95	432.72	0.002722	7.62	1422.74	651.95	0.49
USACE	1857	200YR	5983.00	424.11	432.10	430.84	432.48	0.002844	7.62	1339.63	644.64	0.50
USACE	1857	500YR	7530.00	424.11	432.90	431.18	433.29	0.002412	7.53	1624.22	676.80	0.47
USACE	1857	SEPT2011	2841.00	424.11	430.42	429.98	430.78	0.003950	7.54	745.06	528.13	0.56
USACE	1808	2YR	729.00	424.10	428.82	428.52	428.96	0.002950	4.85	371.38	384.79	0.44
USACE	1808	5YR	1347.00	424.10	429.40	428.91	429.53	0.002700	5.11	610.17	444.79	0.43
USACE	1808	10YR	1990.00	424.10	429.87	429.16	430.00	0.002474	5.23	823.42	483.13	0.42
USACE	1808	25YR	3103.00	424.10	430.53	429.51	430.68	0.002255	5.44	1131.94	518.00	0.41
USACE	1808	50YR	3979.00	424.10	431.01	429.73	431.17	0.002074	5.52	1361.12	544.88	0.40
USACE	1808	100YR	4932.00	424.10	431.53	429.94	431.69	0.001859	5.53	1612.84	569.14	0.38
USACE	1808	100YRPLUS	6450.00	424.10	432.34	430.24	432.51	0.001568	5.49	2015.16	622.67	0.36
USACE	1808	200YR	5983.00	424.10	432.10	430.15	432.27	0.001640	5.49	1895.22	607.87	0.36
USACE	1808	500YR	7530.00	424.10	432.92	430.42	433.10	0.001390	5.44	2309.80	662.98	0.34
USACE	1808	SEPT2011	2841.00	424.10	430.39	429.43	430.53	0.002295	5.40	1063.81	511.79	0.41
USACE	1659	2YR	729.00	424.01	428.56	427.92	428.62	0.001640	3.55	504.30	411.81	0.32
USACE	1659	5YR	1347.00	424.01	429.12	428.23	429.19	0.001777	4.04	738.79	426.42	0.34
USACE	1659	10YR	1990.00	424.01	429.59	428.52	429.67	0.001858	4.41	941.10	449.43	0.35
USACE	1659	25YR	3103.00	424.01	430.26	428.82	430.36	0.001849	4.79	1260.43	504.16	0.36
USACE	1659	50YR	3979.00	424.01	430.76	429.03	430.88	0.001707	4.88	1520.23	526.31	0.35
USACE	1659	100YR	4932.00	424.01	431.31	429.23	431.43	0.001516	4.87	1814.14	543.60	0.33
USACE	1659	100YRPLUS	6450.00	424.01	432.16	429.57	432.29	0.001265	4.82	2290.57	574.87	0.31
USACE	1659	200YR	5983.00	424.01	431.91	429.47	432.04	0.001325	4.82	2148.45	565.86	0.32
USACE	1659	500YR	7530.00	424.01	432.76	429.78	432.90	0.001120	4.78	2645.59	602.54	0.30
USACE	1659	SEPT2011	2841.00	424.01	430.11	428.76	430.21	0.001864	4.73	1187.02	491.88	0.36
USACE	1423	2YR	729.00	424.35	427.99		428.09	0.003087	4.53	395.17	395.28	0.45
USACE	1423	5YR	1347.00	424.35	428.57		428.67	0.002713	4.76	634.58	427.63	0.44
USACE	1423	10YR	1990.00	424.35	429.03		429.15	0.002617	5.06	836.32	448.00	0.44
USACE	1423	25YR	3103.00	424.35	429.72		429.86	0.002428	5.40	1156.46	476.42	0.43
USACE	1423	50YR	3979.00	424.35	430.28		430.43	0.002129	5.43	1429.93	498.90	0.41
USACE	1423	100YR	4932.00	424.35	430.89		431.04	0.001869	5.46	1740.58	530.73	0.39
USACE	1423	100YRPLUS	6450.00	424.35	431.82		431.96	0.001529	5.44	2259.27	579.12	0.36
USACE	1423	200YR	5983.00	424.35	431.55		431.69	0.001620	5.45	2105.10	568.39	0.37
USACE	1423	500YR	7530.00	424.35	432.47		432.61	0.001291	5.31	2654.91	629.35	0.34
USACE	1423	SEPT2011	2841.00	424.35	429.56		429.70	0.002479	5.33	1081.88	469.75	0.43
USACE	1286	2YR	729.00	423.92	427.74	426.99	427.79	0.001502	3.23	498.76	403.91	0.31
USACE	1286	5YR	1347.00	423.92	428.32	427.34	428.38	0.001597	3.71	749.12	459.10	0.33
USACE	1286	10YR	1990.00	423.92	428.77	427.57	428.85	0.001693	4.11	962.81	481.83	0.35
USACE	1286	25YR	3103.00	423.92	429.48	427.93	429.57	0.001680	4.53	1318.97	530.83	0.36
USACE	1286	50YR	3979.00	423.92	430.07	428.15	430.17	0.001467	4.56	1645.61	566.96	0.34
USACE	1286	100YR	4932.00	423.92	430.71	428.37	430.82	0.001241	4.50	2016.49	602.22	0.32
USACE	1286	100YRPLUS	6450.00	423.92	431.68	428.68	431.78	0.000994	4.43	2588.84	670.50	0.29
USACE	1286	200YR	5983.00	423.92	431.40	428.60	431.50	0.001047	4.43	2423.28	653.92	0.30
USACE	1286	500YR	7530.00	423.92	432.35	428.89	432.46	0.000867	4.39	2995.70	716.45	0.28
USACE	1286	SEPT2011	2841.00	423.92	429.32	427.85	429.41	0.001701	4.46	1233.69	517.17	0.36
USACE	1132	2YR	729.00	423.19	427.59	426.73	427.62	0.000799	2.61	628.63	428.83	0.24
USACE	1132	5YR	1347.00	423.19	428.14	427.01	428.18	0.001018	3.22	867.15	442.61	0.27
USACE	1132	10YR	1990.00	423.19	428.57	427.24	428.63	0.001200	3.73	1059.56	454.32	0.30
USACE	1132	25YR	3103.00	423.19	429.26	427.52	429.35	0.001278	4.22	1399.96	529.58	0.32
USACE	1132	50YR	3979.00	423.19	429.88	427.79	429.98	0.001125	4.25	1740.64	566.47	0.30
USACE	1132	100YR	4932.00	423.19	430.55	428.00	430.64	0.000977	4.25	2114.97	601.17	0.29
USACE	1132	100YRPLUS	6450.00	423.19	431.55	428.30	431.64	0.000819	4.27	2693.13	641.46	0.27
USACE	1132	200YR	5983.00	423.19	431.26	428.22	431.36	0.000855	4.25	2525.85	629.53	0.27
USACE	1132	500YR	7530.00	423.19	432.24	428.51	432.33	0.000733	4.27	3107.06	684.25	0.26
USACE	1132	SEPT2011	2841.00	423.19	429.10	427.47	429.18	0.001283	4.14	1314.16	512.30	0.32
USACE	977	2YR	729.00	422.91	427.50	426.37	427.52	0.000506	2.11	724.20	421.38	0.19
USACE	977	5YR	1347.00	422.91	428.01	426.66	428.05	0.000775	2.83	941.77	437.20	0.24
USACE	977	10YR	1990.00	422.91	428.40	426.87	428.46	0.001008	3.42	1117.63	451.05	0.27
USACE	977	25YR	3103.00	422.91	429.08	427.20	429.16	0.001166	4.01	1428.97	473.33	0.30
USACE	977	50YR	3979.00	422.91	429.72	427.43	429.81	0.001080	4.15	1739.15	500.78	0.29
USACE	977	100YR	4932.00	422.91	430.40	427.64	430.49	0.000976	4.24	2095.09	533.86	0.29
USACE	977	100YRPLUS	6450.00	422.91	431.42	427.95	431.52	0.000837	4.30	2659.70	575.45	0.27
USACE	977	200YR	5983.00	422.91	431.13	427.86	431.22	0.000871	4.28	2494.59	565.58	0.27
USACE	977	500YR	7530.00	422.91	432.12	428.15	432.22	0.000745	4.30	3073.08	602.02	0.26
USACE	977	SEPT2011	2841.00	422.91	428.91	427.13	428.99	0.001151	3.91	1352.49	467.24	0.30
USACE	866	2YR	729.00	422.91	427.45	426.03	427.47	0.000461	1.96	724.37	392.57	0.18
USACE	866	5YR	1347.00	422.91	427.92	426.35	427.96	0.000785	2.76	914.17	410.60	0.24
USACE	866	10YR	1990.00	422.91	428.28	426.64	428.34	0.001082	3.42	1065.25	423.42	0.28
USACE	866	25YR	3103.00	422.91	428.93	427.04	429.02	0.001365	4.20	1356.94	471.50	0.32
USACE	866	50YR	3979.00	422.91	429.58	427.28	429.68	0.001206	4.26	1674.58	497.26	0.31
USACE	866	100YR	4932.00	422.91	430.28	427.50	430.38	0.001036	4.26	2031.68	519.13	0.29
USACE	866	100YRPLUS	6450.00	422.91	431.32	427.86	431.42	0.000842	4.23	2605.40	591.06	0.27
USACE	866	200YR	5983.00	422.91	431.03	427.75	431.13	0.000885	4.23	2432.80	577.34	0.27
USACE	866	500YR	7530.00	422.91	432.04	428.08	432.14	0.000695	4.08	3042.92	630.36	0.25
USACE	866	SEPT2011	2841.00	422.91	428.77	426.96	428.85	0.001355	4.10	1281.51	465.04	0.32

HEC-RAS Plan: Existing River: BoyersRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	811	2YR	729.00	421.24	427.43	426.11	427.45	0.000211	1.60	930.22	404.00	0.12
USACE	811	5YR	1347.00	421.24	427.90	426.12	427.92	0.000404	2.33	1123.80	435.76	0.17
USACE	811	10YR	1990.00	421.24	428.25	426.15	428.29	0.000594	2.93	1284.25	469.06	0.20
USACE	811	25YR	3103.00	421.24	428.89	426.51	428.95	0.000724	3.45	1600.51	515.89	0.23
USACE	811	50YR	3979.00	421.24	429.55	426.78	429.62	0.000620	3.39	1957.11	556.61	0.22
USACE	811	100YR	4932.00	421.24	430.26	426.94	430.33	0.000503	3.24	2358.93	574.03	0.20
USACE	811	100YRPLUS	6450.00	421.24	431.30	427.44	431.38	0.000391	3.09	2969.35	594.55	0.18
USACE	811	200YR	5983.00	421.24	431.01	427.14	431.08	0.000414	3.11	2794.49	589.69	0.18
USACE	811	500YR	7530.00	421.24	432.03	427.59	432.10	0.000334	3.00	3403.85	608.44	0.17
USACE	811	SEPT2011	2841.00	421.24	428.73	426.43	428.79	0.000721	3.39	1517.54	511.62	0.23
USACE	774 Newport Road		Bridge									
USACE	743	2YR	729.00	421.04	426.06	425.18	426.13	0.000990	3.20	509.48	379.71	0.27
USACE	743	5YR	1347.00	421.04	426.85	425.67	426.93	0.000916	3.44	828.77	423.85	0.27
USACE	743	10YR	1990.00	421.04	427.55	426.05	427.63	0.000774	3.45	1136.13	473.34	0.25
USACE	743	25YR	3103.00	421.04	428.63	426.50	428.70	0.000595	3.39	1681.15	530.58	0.23
USACE	743	50YR	3979.00	421.04	429.38	426.78	429.45	0.000513	3.37	2088.00	556.16	0.21
USACE	743	100YR	4932.00	421.04	430.13	427.02	430.21	0.000450	3.36	2513.13	573.89	0.20
USACE	743	100YRPLUS	6450.00	421.04	431.21	427.35	431.29	0.000391	3.39	3147.74	605.61	0.19
USACE	743	200YR	5983.00	421.04	430.91	427.25	430.98	0.000402	3.37	2966.32	596.74	0.20
USACE	743	500YR	7530.00	421.04	431.94	427.58	432.03	0.000357	3.40	3607.88	649.53	0.19
USACE	743	SEPT2011	2841.00	421.04	428.44	426.41	428.51	0.000596	3.33	1583.59	523.50	0.23
USACE	703	2YR	729.00	421.03	426.02	425.46	426.08	0.001343	3.64	553.63	481.10	0.31
USACE	703	5YR	1347.00	421.03	426.82	426.31	426.88	0.000950	3.44	964.26	553.09	0.27
USACE	703	10YR	1990.00	421.03	427.54	426.07	427.58	0.000710	3.25	1370.71	581.73	0.24
USACE	703	25YR	3103.00	421.03	428.62	426.38	428.67	0.000513	3.09	2022.36	625.82	0.21
USACE	703	50YR	3979.00	421.03	429.37	426.59	429.42	0.000433	3.05	2494.38	649.01	0.19
USACE	703	100YR	4932.00	421.03	430.12	426.78	430.18	0.000379	3.03	2976.41	667.13	0.18
USACE	703	100YRPLUS	6450.00	421.03	431.20	427.11	431.26	0.000330	3.07	3674.50	697.91	0.18
USACE	703	200YR	5983.00	421.03	430.90	427.03	430.96	0.000339	3.04	3477.74	686.51	0.18
USACE	703	500YR	7530.00	421.03	431.94	427.28	432.01	0.000303	3.09	4159.22	884.87	0.17
USACE	703	SEPT2011	2841.00	421.03	428.43	426.31	428.48	0.000516	3.05	1907.38	618.88	0.21
USACE	567	2YR	729.00	420.98	425.83	425.17	425.90	0.001324	3.43	503.27	638.64	0.30
USACE	567	5YR	1347.00	420.98	426.69	425.61	426.74	0.000951	3.31	904.96	773.49	0.26
USACE	567	10YR	1990.00	420.98	427.43	425.85	427.48	0.000735	3.20	1291.11	846.88	0.24
USACE	567	25YR	3103.00	420.98	428.54	426.24	428.59	0.000525	3.05	1925.25	938.28	0.21
USACE	567	50YR	3979.00	420.98	429.31	426.50	429.36	0.000430	2.96	2381.93	956.36	0.19
USACE	567	100YR	4932.00	420.98	430.07	426.71	430.13	0.000367	2.92	2839.08	1017.77	0.18
USACE	567	100YRPLUS	6450.00	420.98	431.16	426.97	431.22	0.000321	2.96	3503.05	1265.14	0.17
USACE	567	200YR	5983.00	420.98	430.86	426.92	430.91	0.000331	2.94	3314.37	1167.17	0.17
USACE	567	500YR	7530.00	420.98	431.90	427.22	431.96	0.000293	2.98	3979.95	1457.66	0.17
USACE	567	SEPT2011	2841.00	420.98	428.36	426.18	428.40	0.000531	3.01	1814.09	935.02	0.21
USACE	436	2YR	703.00	421.17	425.70	424.95	425.75	0.000902	2.94	585.49	1178.57	0.26
USACE	436	5YR	1303.00	421.17	426.62	425.44	426.65	0.000515	2.54	1093.22	1681.42	0.20
USACE	436	10YR	1910.00	421.17	427.38	425.60	427.41	0.000390	2.43	1529.66	1882.79	0.18
USACE	436	25YR	2969.00	421.17	428.51	425.97	428.54	0.000286	2.35	2209.28	1967.39	0.16
USACE	436	50YR	3816.00	421.17	429.28	426.16	429.31	0.000249	2.35	2673.71	2078.42	0.15
USACE	436	100YR	4748.00	421.17	430.05	426.34	430.09	0.000224	2.38	3136.55	2137.49	0.14
USACE	436	100YRPLUS	6209.00	421.17	431.14	426.59	431.18	0.000201	2.45	3792.26	2211.70	0.14
USACE	436	200YR	5785.00	421.17	430.83	426.52	430.87	0.000207	2.43	3608.77	2193.80	0.14
USACE	436	500YR	7297.00	421.17	431.88	426.77	431.93	0.000190	2.50	4240.07	2249.82	0.14
USACE	436	SEPT2011	2778.00	421.17	428.32	425.92	428.35	0.000299	2.36	2095.63	1936.82	0.16
USACE	263	2YR	703.00	420.96	425.55	424.66	425.59	0.000895	2.92	604.50	434.86	0.25
USACE	263	5YR	1303.00	420.96	426.50	424.97	426.54	0.000779	3.10	955.09	471.76	0.24
USACE	263	10YR	1910.00	420.96	427.27	425.21	427.32	0.000724	3.28	1260.04	492.23	0.23
USACE	263	25YR	2969.00	420.96	428.41	425.56	428.46	0.000667	3.52	1721.32	505.41	0.23
USACE	263	50YR	3816.00	420.96	429.18	425.82	429.25	0.000647	3.71	2041.51	515.49	0.23
USACE	263	100YR	4748.00	420.96	429.95	426.05	430.02	0.000629	3.90	2365.42	532.98	0.23
USACE	263	100YRPLUS	6209.00	420.96	431.04	426.40	431.12	0.000611	4.15	2829.17	564.09	0.23
USACE	263	200YR	5785.00	420.96	430.73	426.29	430.81	0.000615	4.08	2698.48	557.03	0.23
USACE	263	500YR	7297.00	420.96	431.78	426.63	431.87	0.000597	4.31	3149.76	570.54	0.23
USACE	263	SEPT2011	2778.00	420.96	428.22	425.50	428.27	0.000674	3.48	1643.65	503.10	0.23
USACE	81	2YR	703.00	420.95	425.41	424.17	425.44	0.000701	2.46	589.06	335.88	0.22
USACE	81	5YR	1303.00	420.95	426.36	424.61	426.40	0.000700	2.83	911.21	341.08	0.22
USACE	81	10YR	1910.00	420.95	427.14	424.88	427.19	0.000701	3.12	1177.14	349.65	0.23
USACE	81	25YR	2969.00	420.95	428.28	425.26	428.34	0.000700	3.52	1589.76	372.57	0.24
USACE	81	50YR	3816.00	420.95	429.05	425.52	429.12	0.000701	3.78	1880.50	379.59	0.24
USACE	81	100YR	4748.00	420.95	429.82	425.77	429.90	0.000700	4.02	2173.27	383.24	0.24
USACE	81	100YRPLUS	6209.00	420.95	430.90	426.15	431.00	0.000700	4.36	2591.70	388.19	0.25
USACE	81	200YR	5785.00	420.95	430.60	426.03	430.69	0.000701	4.27	2474.13	386.85	0.25
USACE	81	500YR	7297.00	420.95	431.64	426.40	431.75	0.000700	4.58	2880.25	391.52	0.25
USACE	81	SEPT2011	2778.00	420.95	428.09	425.20	428.15	0.000701	3.45	1519.42	368.80	0.24

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	163433	2YR	110.00	606.05	607.87	607.62	608.13	0.024171	4.18	29.81	33.26	0.69
USACE	163433	5YR	217.00	606.05	608.43		608.81	0.023908	5.16	51.57	44.93	0.72
USACE	163433	10YR	314.00	606.05	608.79	608.51	609.27	0.023747	5.89	69.58	54.85	0.74
USACE	163433	25YR	484.00	606.05	609.35	609.02	609.95	0.022247	6.74	107.10	79.21	0.75
USACE	163433	50YR	625.00	606.05	609.72	609.52	610.36	0.020868	7.15	137.59	96.01	0.74
USACE	163433	100YR	780.00	606.05	610.05	609.66	610.77	0.021009	7.72	173.07	110.21	0.76
USACE	163433	100YRPLUS	1020.00	606.05	610.57	610.33	611.28	0.018356	7.97	233.68	133.10	0.73
USACE	163433	200YR	944.00	606.05	610.43	610.19	611.13	0.018713	7.84	216.04	119.90	0.73
USACE	163433	500YR	1180.00	606.05	610.87	610.42	611.61	0.017766	8.26	277.48	148.92	0.72
USACE	163433	SEPT2011	339.00	606.05	608.87	608.59	609.38	0.023841	6.06	74.06	57.33	0.75
USACE	162944	2YR	110.00	597.57	599.60	599.17	599.76	0.012974	3.42	42.07	47.40	0.51
USACE	162944	5YR	217.00	597.57	600.19	599.70	600.41	0.013467	4.14	78.10	71.82	0.55
USACE	162944	10YR	314.00	597.57	600.53	600.07	600.80	0.013864	4.72	104.51	82.60	0.57
USACE	162944	25YR	484.00	597.57	600.99	600.47	601.36	0.015169	5.63	146.74	100.25	0.62
USACE	162944	50YR	625.00	597.57	601.25	600.77	601.68	0.016608	6.27	172.65	102.45	0.66
USACE	162944	100YR	780.00	597.57	601.54	600.87	602.02	0.016936	6.76	202.61	105.18	0.67
USACE	162944	100YRPLUS	1020.00	597.57	601.81	601.46	602.44	0.020264	7.82	231.82	108.54	0.75
USACE	162944	200YR	944.00	597.57	601.71	601.37	602.30	0.019656	7.55	221.23	107.33	0.73
USACE	162944	500YR	1180.00	597.57	602.00	601.65	602.70	0.021513	8.35	252.87	118.82	0.78
USACE	162944	SEPT2011	339.00	597.57	600.61	600.13	600.89	0.013882	4.85	111.29	85.37	0.58
USACE	162542	2YR	110.00	588.40	589.78	589.78	590.25	0.055899	5.49	20.05	21.85	1.01
USACE	162542	5YR	217.00	588.40	590.34	590.34	590.99	0.050364	6.46	33.62	26.72	1.01
USACE	162542	10YR	314.00	588.40	590.73	590.73	591.51	0.045946	7.07	44.77	30.92	1.00
USACE	162542	25YR	484.00	588.40	591.30	591.30	592.25	0.037426	7.86	66.43	47.99	0.95
USACE	162542	50YR	625.00	588.40	591.75	591.75	592.74	0.031308	8.16	90.46	57.41	0.90
USACE	162542	100YR	780.00	588.40	592.12	592.08	593.21	0.029483	8.66	112.53	62.58	0.89
USACE	162542	100YRPLUS	1020.00	588.40	592.81	592.65	593.86	0.022562	8.71	162.67	81.50	0.81
USACE	162542	200YR	944.00	588.40	592.63	592.33	593.67	0.023640	8.62	148.36	78.15	0.82
USACE	162542	500YR	1180.00	588.40	593.16	592.95	594.22	0.020819	8.90	192.23	87.52	0.79
USACE	162542	SEPT2011	339.00	588.40	590.81	590.81	591.63	0.045461	7.26	47.22	31.79	1.00
USACE	162089	2YR	110.00	580.62	582.83		582.94	0.006862	2.57	42.87	31.55	0.38
USACE	162089	5YR	217.00	580.62	583.47		583.65	0.007548	3.45	69.00	54.08	0.42
USACE	162089	10YR	314.00	580.62	583.89		584.13	0.007776	3.97	101.19	86.19	0.44
USACE	162089	25YR	484.00	580.62	584.44		584.73	0.008114	4.63	150.05	93.38	0.47
USACE	162089	50YR	625.00	580.62	584.72		585.08	0.009362	5.27	176.38	96.83	0.51
USACE	162089	100YR	780.00	580.62	584.95	584.29	585.40	0.010965	5.96	199.16	99.86	0.56
USACE	162089	100YRPLUS	1020.00	580.62	585.19	584.67	585.82	0.014171	7.09	224.07	103.47	0.64
USACE	162089	200YR	944.00	580.62	585.10	584.57	585.68	0.013471	6.80	214.50	102.10	0.62
USACE	162089	500YR	1180.00	580.62	585.38	584.90	586.11	0.015537	7.67	244.38	108.50	0.68
USACE	162089	SEPT2011	339.00	580.62	583.97		584.22	0.008015	4.11	107.76	87.23	0.45
USACE	161505	2YR	110.00	572.10	573.75	573.74	574.26	0.052550	5.73	19.19	18.47	0.99
USACE	161505	5YR	217.00	572.10	574.43	574.43	575.02	0.040865	6.29	39.87	41.27	0.92
USACE	161505	10YR	314.00	572.10	574.79	574.79	575.47	0.039170	6.88	56.79	51.18	0.93
USACE	161505	25YR	484.00	572.10	575.28	575.28	576.10	0.036130	7.79	82.52	55.27	0.93
USACE	161505	50YR	625.00	572.10	575.79	575.60	576.57	0.026976	7.74	111.70	58.96	0.83
USACE	161505	100YR	780.00	572.10	576.44	575.90	577.18	0.019655	7.63	155.60	80.96	0.73
USACE	161505	100YRPLUS	1020.00	572.10	577.29		577.93	0.013644	7.39	237.62	119.33	0.63
USACE	161505	200YR	944.00	572.10	577.07		577.72	0.014564	7.36	213.12	105.29	0.65
USACE	161505	500YR	1180.00	572.10	577.69		578.31	0.012222	7.43	289.72	140.07	0.61
USACE	161505	SEPT2011	339.00	572.10	574.90	574.90	575.58	0.036526	6.92	62.28	52.49	0.90
USACE	161143	2YR	146.00	564.86	566.98		567.20	0.011430	3.81	38.34	24.68	0.54
USACE	161143	5YR	276.00	564.86	567.81		568.14	0.010058	4.57	61.03	29.91	0.54
USACE	161143	10YR	401.00	564.86	568.36		568.79	0.010186	5.31	78.40	34.47	0.56
USACE	161143	25YR	603.00	564.86	569.03		569.64	0.010904	6.34	104.32	43.46	0.60
USACE	161143	50YR	808.00	564.86	569.42		570.27	0.013246	7.51	122.55	48.73	0.67
USACE	161143	100YR	1039.00	564.86	569.76	569.28	570.89	0.015998	8.73	139.97	53.01	0.75
USACE	161143	100YRPLUS	1359.00	564.86	570.07	569.98	571.67	0.020971	10.48	156.76	56.26	0.87
USACE	161143	200YR	1291.00	564.86	570.04	569.85	571.51	0.019471	10.05	154.88	55.92	0.84
USACE	161143	500YR	1659.00	564.86	570.57	570.57	572.35	0.020802	11.20	186.18	60.59	0.88
USACE	161143	SEPT2011	494.00	564.86	568.69		569.21	0.010445	5.80	90.64	38.73	0.58
USACE	160907	2YR	146.00	562.26	564.58	563.78	564.77	0.009282	3.54	41.20	25.11	0.49
USACE	160907	5YR	276.00	562.26	565.28	564.46	565.60	0.011617	4.54	60.83	35.37	0.56
USACE	160907	10YR	401.00	562.26	565.76	564.97	566.20	0.011913	5.30	77.44	64.37	0.59
USACE	160907	25YR	603.00	562.26	566.33	565.60	566.90	0.012313	6.18	119.37	144.57	0.62
USACE	160907	50YR	808.00	562.26	566.70	566.40	567.25	0.011657	6.49	210.03	205.67	0.62
USACE	160907	100YR	1039.00	562.26	567.05	566.91	567.58	0.011128	6.76	285.90	227.84	0.61
USACE	160907	100YRPLUS	1359.00	562.26	567.46	567.24	567.97	0.010268	6.96	384.45	241.68	0.60
USACE	160907	200YR	1291.00	562.26	567.37	567.17	567.89	0.010640	6.98	361.08	239.09	0.61
USACE	160907	500YR	1659.00	562.26	567.78	567.47	568.29	0.010036	7.23	462.10	250.51	0.60
USACE	160907	SEPT2011	494.00	562.26	566.05	565.29	566.56	0.012124	5.76	96.11	109.92	0.61
USACE	160599	2YR	146.00	559.67	562.16		562.26	0.007082	2.61	55.86	44.39	0.41
USACE	160599	5YR	276.00	559.67	562.86		563.01	0.006157	3.13	88.11	103.88	0.41
USACE	160599	10YR	401.00	559.67	563.29		563.50	0.006426	3.66	113.58	151.54	0.43
USACE	160599	25YR	603.00	559.67	563.79		564.07	0.006838	4.31	160.76	252.99	0.46
USACE	160599	50YR	808.00	559.67	564.22		564.55	0.006866	4.76	209.70	347.56	0.47
USACE	160599	100YR	1039.00	559.67	564.63		564.99	0.006875	5.16	266.28	376.13	0.48
USACE	160599	100YRPLUS	1359.00	559.67	565.13		565.54	0.006842	5.62	343.31	413.55	0.49
USACE	160599	200YR	1291.00	559.67	565.02		565.41	0.006791	5.49	325.09	405.42	0.49

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	160599	500YR	1659.00	559.67	565.55		565.97	0.006551	5.86	412.14	422.81	0.49
USACE	160599	SEPT2011	494.00	559.67	563.54		563.78	0.006673	3.99	135.66	168.08	0.45
USACE	160355	2YR	146.00	556.96	558.95		559.36	0.023363	5.13	28.74	22.27	0.76
USACE	160355	5YR	276.00	556.96	559.53	559.35	560.24	0.026035	6.80	43.06	27.88	0.85
USACE	160355	10YR	401.00	556.96	560.11	560.11	560.86	0.020836	7.21	73.65	71.86	0.79
USACE	160355	25YR	603.00	556.96	560.71	560.71	561.48	0.018098	7.73	124.78	96.30	0.77
USACE	160355	50YR	808.00	556.96	561.11	561.11	561.95	0.018180	8.39	166.12	109.10	0.78
USACE	160355	100YR	1039.00	556.96	561.52	561.52	562.41	0.017877	8.95	213.72	119.97	0.79
USACE	160355	100YRPLUS	1359.00	556.96	561.91	561.91	562.91	0.019035	9.83	261.58	125.49	0.83
USACE	160355	200YR	1291.00	556.96	561.84	561.84	562.81	0.018628	9.62	252.89	124.54	0.82
USACE	160355	500YR	1659.00	556.96	562.20	562.20	563.33	0.020652	10.68	298.32	130.14	0.87
USACE	160355	SEPT2011	494.00	556.96	560.42	560.42	561.18	0.018959	7.43	98.62	87.16	0.77
USACE	160226	2YR	146.00	555.17	558.76	557.26	558.79	0.001146	1.69	154.36	116.57	0.19
USACE	160226	5YR	276.00	555.17	559.38	557.74	559.42	0.001502	2.23	234.68	143.38	0.22
USACE	160226	10YR	401.00	555.17	559.68	558.12	559.74	0.002016	2.74	278.91	150.47	0.26
USACE	160226	25YR	603.00	555.17	560.10	558.58	560.19	0.002573	3.34	343.59	158.34	0.30
USACE	160226	50YR	808.00	555.17	560.43	558.90	560.55	0.003067	3.85	398.63	171.97	0.33
USACE	160226	100YR	1039.00	555.17	560.72	559.19	560.87	0.003812	4.48	449.29	179.55	0.37
USACE	160226	100YRPLUS	1359.00	555.17	561.04	559.61	561.24	0.004571	5.14	508.74	184.26	0.41
USACE	160226	200YR	1291.00	555.17	560.97	559.55	561.16	0.004477	5.04	494.37	183.08	0.41
USACE	160226	500YR	1659.00	555.17	561.35	559.87	561.59	0.005064	5.64	566.66	191.45	0.44
USACE	160226	SEPT2011	494.00	555.17	559.90	558.23	559.98	0.002230	3.01	313.23	154.87	0.27
USACE	160193 Private Drive		Culvert									
USACE	160170	2YR	146.00	554.35	556.74		556.91	0.007227	3.34	44.23	27.80	0.44
USACE	160170	5YR	276.00	554.35	557.23		557.59	0.011267	4.86	63.03	51.41	0.57
USACE	160170	10YR	401.00	554.35	557.55	557.04	558.08	0.014374	6.00	83.95	77.24	0.66
USACE	160170	25YR	603.00	554.35	557.96	557.86	558.70	0.017511	7.29	118.98	95.36	0.74
USACE	160170	50YR	808.00	554.35	558.34	558.29	559.19	0.018451	8.10	158.89	115.77	0.78
USACE	160170	100YR	1039.00	554.35	558.81	558.81	559.62	0.016058	8.25	222.29	153.40	0.74
USACE	160170	100YRPLUS	1359.00	554.35	559.33	559.24	560.06	0.013813	8.32	309.20	197.97	0.70
USACE	160170	200YR	1291.00	554.35	559.22	559.17	559.97	0.014381	8.34	290.20	185.86	0.71
USACE	160170	500YR	1659.00	554.35	559.74		560.42	0.012239	8.32	385.94	229.56	0.67
USACE	160170	SEPT2011	494.00	554.35	557.75	557.52	558.39	0.016171	6.67	99.66	85.81	0.70
USACE	160116	2YR	146.00	553.99	556.12		556.33	0.016692	4.09	55.69	84.12	0.64
USACE	160116	5YR	276.00	553.99	556.63		556.85	0.013224	4.56	111.06	123.88	0.60
USACE	160116	10YR	401.00	553.99	557.06		557.26	0.010195	4.61	168.02	143.41	0.54
USACE	160116	25YR	603.00	553.99	557.63		557.81	0.007566	4.62	253.44	152.64	0.49
USACE	160116	50YR	808.00	553.99	558.11		558.29	0.006540	4.77	327.36	157.76	0.46
USACE	160116	100YR	1039.00	553.99	558.57		558.77	0.006316	5.12	403.55	175.26	0.47
USACE	160116	100YRPLUS	1359.00	553.99	559.11		559.32	0.005896	5.41	500.26	183.93	0.46
USACE	160116	200YR	1291.00	553.99	559.00		559.21	0.005957	5.35	480.95	182.56	0.46
USACE	160116	500YR	1659.00	553.99	559.49		559.73	0.006180	5.86	572.00	195.68	0.48
USACE	160116	SEPT2011	494.00	553.99	557.32		557.52	0.008904	4.64	207.21	149.35	0.52
USACE	159724	2YR	146.00	550.29	552.43	551.60	552.58	0.006347	3.09	48.10	30.59	0.41
USACE	159724	5YR	276.00	550.29	553.19	552.16	553.43	0.006568	4.00	78.70	57.48	0.45
USACE	159724	10YR	401.00	550.29	553.62	552.60	553.96	0.007556	4.78	109.50	77.63	0.49
USACE	159724	25YR	603.00	550.29	554.06	553.34	554.57	0.009931	6.00	145.53	95.04	0.58
USACE	159724	50YR	808.00	550.29	554.42	553.88	555.07	0.011661	6.95	181.70	105.98	0.63
USACE	159724	100YR	1039.00	550.29	554.86	554.42	555.59	0.011826	7.55	231.02	116.37	0.65
USACE	159724	100YRPLUS	1359.00	550.29	555.40	554.93	556.23	0.012077	8.27	303.62	202.33	0.67
USACE	159724	200YR	1291.00	550.29	555.29	554.81	556.11	0.012105	8.15	288.14	189.57	0.67
USACE	159724	500YR	1659.00	550.29	555.91	555.36	556.71	0.010834	8.39	380.38	230.25	0.65
USACE	159724	SEPT2011	494.00	550.29	553.86	552.87	554.26	0.008429	5.31	127.95	80.93	0.52
USACE	159327	2YR	146.00	547.27	549.53	548.96	549.64	0.008411	3.24	82.27	109.44	0.46
USACE	159327	5YR	276.00	547.27	549.99	549.51	550.16	0.010173	4.19	128.65	156.95	0.53
USACE	159327	10YR	401.00	547.27	550.41	549.76	550.59	0.009056	4.50	176.34	189.37	0.51
USACE	159327	25YR	603.00	547.27	551.23	550.16	551.40	0.006022	4.47	280.75	249.76	0.44
USACE	159327	50YR	808.00	547.27	551.87	550.42	552.03	0.004890	4.54	379.69	268.54	0.41
USACE	159327	100YR	1039.00	547.27	552.35	550.72	552.53	0.004872	4.91	457.16	290.59	0.42
USACE	159327	100YRPLUS	1359.00	547.27	552.95	551.06	553.15	0.004826	5.32	557.14	315.02	0.42
USACE	159327	200YR	1291.00	547.27	552.83	550.96	553.03	0.004827	5.24	537.05	311.38	0.42
USACE	159327	500YR	1659.00	547.27	553.17	551.48	553.44	0.005938	6.08	595.82	321.57	0.47
USACE	159327	SEPT2011	494.00	547.27	550.74	549.93	550.92	0.007849	4.57	215.67	201.77	0.49
USACE	158625	2YR	146.00	541.23	543.52	543.06	543.69	0.009106	3.55	57.15	59.65	0.49
USACE	158625	5YR	276.00	541.23	544.29	543.56	544.49	0.007070	4.04	113.53	106.07	0.46
USACE	158625	10YR	401.00	541.23	544.66	543.82	544.92	0.007951	4.72	146.51	117.56	0.50
USACE	158625	25YR	603.00	541.23	544.75	544.48	545.28	0.015610	6.75	154.78	137.85	0.70
USACE	158625	50YR	808.00	541.23	544.82	544.82	545.69	0.025343	8.74	160.88	151.37	0.90
USACE	158625	100YR	1039.00	541.23	545.16	545.16	546.15	0.026106	9.54	192.16	247.78	0.93
USACE	158625	100YRPLUS	1359.00	541.23	545.57	545.57	546.73	0.027079	10.51	230.57	281.06	0.96
USACE	158625	200YR	1291.00	541.23	545.48	545.48	546.61	0.027113	10.35	222.10	278.82	0.96
USACE	158625	500YR	1659.00	541.23	546.54	545.92	547.38	0.015510	9.29	323.22	313.92	0.76
USACE	158625	SEPT2011	494.00	541.23	544.81	544.27	545.14	0.009641	5.38	159.80	149.50	0.55
USACE	158155	2YR	146.00	535.19	536.74	536.50	537.12	0.024285	4.95	29.47	22.23	0.76
USACE	158155	5YR	276.00	535.19	537.12	537.11	537.94	0.039408	7.25	38.08	23.09	1.00
USACE	158155	10YR	401.00	535.19	537.83	537.60	538.66	0.026899	7.28	55.11	24.70	0.86

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	158155	25YR	603.00	535.19	539.21	538.54	539.70	0.009602	5.94	153.94	184.50	0.55
USACE	158155	50YR	808.00	535.19	540.57	539.14	540.84	0.004051	4.78	288.14	202.28	0.38
USACE	158155	100YR	1039.00	535.19	542.07	539.54	542.24	0.002122	4.12	443.94	398.45	0.29
USACE	158155	100YRPLUS	1359.00	535.19	544.12	540.00	544.24	0.001115	3.59	670.47	428.04	0.22
USACE	158155	200YR	1291.00	535.19	543.69	539.90	543.82	0.001253	3.67	622.81	420.76	0.23
USACE	158155	500YR	1659.00	535.19	546.23	540.36	546.33	0.000669	3.22	903.43	461.95	0.17
USACE	158155	SEPT2011	494.00	535.19	538.44	537.91	539.16	0.017754	6.88	84.76	147.47	0.72
USACE	157992	2YR	146.00	533.00	534.98	534.36	535.14	0.006679	3.28	48.47	90.61	0.46
USACE	157992	5YR	276.00	533.00	536.27	534.89	536.42	0.002942	3.25	96.27	273.81	0.34
USACE	157992	10YR	401.00	533.00	537.33	535.28	537.49	0.002091	3.37	135.52	318.54	0.30
USACE	157992	25YR	603.00	533.00	538.85	535.80	539.03	0.001541	3.60	191.74	359.90	0.27
USACE	157992	50YR	808.00	533.00	540.26	536.27	540.46	0.001262	3.80	243.94	399.27	0.26
USACE	157992	100YR	1039.00	533.00	541.77	536.76	541.99	0.001063	3.98	299.68	426.76	0.24
USACE	157992	100YRPLUS	1359.00	533.00	543.80	537.37	544.04	0.000870	4.16	375.00	471.73	0.23
USACE	157992	200YR	1291.00	533.00	543.37	537.24	543.61	0.000906	4.13	359.09	464.44	0.23
USACE	157992	500YR	1659.00	533.00	545.92	537.88	546.17	0.000694	4.21	453.40	549.11	0.21
USACE	157992	SEPT2011	494.00	533.00	538.04	535.52	538.22	0.001786	3.49	162.01	345.40	0.29
USACE	157883 PA Turnpike		Culvert									
USACE	157759	2YR	146.00	529.20	530.84	530.37	530.99	0.008451	3.11	47.42	49.07	0.50
USACE	157759	5YR	276.00	529.20	531.36	530.80	531.62	0.009323	4.09	68.67	68.77	0.55
USACE	157759	10YR	401.00	529.20	531.76	531.13	532.11	0.009786	4.81	85.75	73.99	0.58
USACE	157759	25YR	603.00	529.20	532.34	531.59	532.82	0.009613	5.61	112.10	88.09	0.60
USACE	157759	50YR	808.00	529.20	532.80	532.02	533.42	0.010122	6.39	132.67	111.43	0.63
USACE	157759	100YR	1039.00	529.20	533.24	532.44	534.02	0.010710	7.18	152.55	119.55	0.67
USACE	157759	100YRPLUS	1359.00	529.20	533.75	532.95	534.76	0.011625	8.17	175.70	128.12	0.71
USACE	157759	200YR	1291.00	529.20	533.66	532.85	534.61	0.011364	7.96	171.40	126.12	0.70
USACE	157759	500YR	1659.00	529.20	534.16	533.41	535.39	0.012588	9.06	193.92	144.83	0.75
USACE	157759	SEPT2011	494.00	529.20	531.97	531.36	532.41	0.010726	5.37	95.29	79.51	0.62
USACE	157548	2YR	146.00	527.04	528.82	528.29	528.99	0.010776	3.32	44.64	48.45	0.51
USACE	157548	5YR	276.00	527.04	529.47	528.81	529.70	0.008722	3.93	90.10	92.67	0.49
USACE	157548	10YR	401.00	527.04	529.90	529.26	530.16	0.008308	4.37	133.55	107.37	0.50
USACE	157548	25YR	603.00	527.04	530.25	529.75	530.63	0.010665	5.42	172.91	117.24	0.58
USACE	157548	50YR	808.00	527.04	530.62	530.09	531.08	0.011266	6.06	217.79	126.36	0.61
USACE	157548	100YR	1039.00	527.04	531.00	530.44	531.53	0.011621	6.66	269.65	144.83	0.63
USACE	157548	100YRPLUS	1359.00	527.04	531.51	530.77	532.11	0.011523	7.25	353.24	182.55	0.64
USACE	157548	200YR	1291.00	527.04	531.41	530.74	532.00	0.011597	7.16	335.57	178.10	0.64
USACE	157548	500YR	1659.00	527.04	531.94	531.15	532.58	0.011242	7.67	441.80	229.35	0.64
USACE	157548	SEPT2011	494.00	527.04	530.30	529.50	530.54	0.006641	4.33	178.69	118.18	0.46
USACE	156928	2YR	146.00	520.76	522.77		522.96	0.008847	3.56	51.15	49.77	0.48
USACE	156928	5YR	276.00	520.76	523.25	522.80	523.55	0.011433	4.77	92.88	119.33	0.57
USACE	156928	10YR	401.00	520.76	523.58	523.32	523.95	0.012471	5.48	137.18	150.52	0.61
USACE	156928	25YR	603.00	520.76	524.19		524.50	0.009439	5.51	235.04	175.06	0.55
USACE	156928	50YR	808.00	520.76	524.59		524.91	0.009098	5.87	310.20	191.61	0.55
USACE	156928	100YR	1039.00	520.76	524.95		525.29	0.009090	6.26	380.32	205.06	0.56
USACE	156928	100YRPLUS	1359.00	520.76	525.37		525.76	0.009506	6.85	471.66	225.99	0.58
USACE	156928	200YR	1291.00	520.76	525.30		525.67	0.009372	6.73	455.57	221.14	0.58
USACE	156928	500YR	1659.00	520.76	525.71		526.15	0.009998	7.40	553.66	250.34	0.61
USACE	156928	SEPT2011	494.00	520.76	523.59	523.57	524.14	0.018427	6.68	139.18	150.83	0.74
USACE	156560	2YR	146.00	517.76	519.78		519.89	0.008023	3.10	90.13	133.21	0.45
USACE	156560	5YR	276.00	517.76	520.31		520.43	0.006682	3.48	164.89	150.03	0.43
USACE	156560	10YR	401.00	517.76	520.70		520.82	0.006235	3.78	225.06	163.12	0.43
USACE	156560	25YR	603.00	517.76	520.91		521.11	0.009576	4.95	260.00	171.80	0.54
USACE	156560	50YR	808.00	517.76	521.19		521.45	0.010658	5.60	312.96	202.74	0.58
USACE	156560	100YR	1039.00	517.76	521.53		521.81	0.010890	6.09	386.62	233.67	0.60
USACE	156560	100YRPLUS	1359.00	517.76	521.94		522.25	0.010524	6.49	494.84	273.85	0.60
USACE	156560	200YR	1291.00	517.76	521.86		522.16	0.010671	6.43	471.73	272.01	0.60
USACE	156560	500YR	1659.00	517.76	522.27		522.59	0.010202	6.77	586.75	283.04	0.60
USACE	156560	SEPT2011	494.00	517.76	521.15		521.25	0.004243	3.50	305.03	195.79	0.37
USACE	156123	2YR	146.00	513.60	515.84	515.20	516.06	0.009267	3.82	44.70	82.03	0.50
USACE	156123	5YR	276.00	513.60	516.49	515.92	516.81	0.009895	4.85	83.39	182.58	0.54
USACE	156123	10YR	401.00	513.60	516.97	516.44	517.35	0.009777	5.43	121.07	230.77	0.56
USACE	156123	25YR	603.00	513.60	517.21	517.00	517.43	0.007467	5.00	314.08	256.95	0.49
USACE	156123	50YR	808.00	513.60	517.59	517.01	517.79	0.006760	5.13	412.60	262.05	0.48
USACE	156123	100YR	1039.00	513.60	517.92	517.33	518.13	0.006729	5.43	500.40	268.74	0.48
USACE	156123	100YRPLUS	1359.00	513.60	518.28	517.54	518.52	0.007161	5.94	600.24	281.71	0.51
USACE	156123	200YR	1291.00	513.60	518.22	517.49	518.45	0.006997	5.82	582.50	279.68	0.50
USACE	156123	500YR	1659.00	513.60	518.57	517.73	518.83	0.007564	6.37	681.09	288.48	0.53
USACE	156123	SEPT2011	494.00	513.60	516.70	516.70	517.49	0.022301	7.70	99.39	217.09	0.83
USACE	155547	2YR	146.00	508.74	511.75		511.91	0.005751	3.21	48.96	32.51	0.40
USACE	155547	5YR	276.00	508.74	512.56		512.76	0.005392	3.88	110.90	99.09	0.41
USACE	155547	10YR	401.00	508.74	513.04		513.28	0.005607	4.39	162.67	119.21	0.43
USACE	155547	25YR	603.00	508.74	513.66		513.94	0.005705	4.97	249.68	161.06	0.44
USACE	155547	50YR	808.00	508.74	514.19		514.50	0.005728	5.42	352.80	235.31	0.45
USACE	155547	100YR	1039.00	508.74	514.68		514.98	0.005385	5.63	479.33	295.25	0.45
USACE	155547	100YRPLUS	1359.00	508.74	515.25		515.52	0.004804	5.72	663.44	345.14	0.43
USACE	155547	200YR	1291.00	508.74	515.14		515.42	0.004955	5.73	626.15	341.82	0.43
USACE	155547	500YR	1659.00	508.74	515.73		515.97	0.004276	5.71	834.68	373.60	0.41

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	155547	SEPT2011	494.00	508.74	513.47		513.70	0.004793	4.41	220.32	143.66	0.40
USACE	155240	2YR	183.00	507.15	509.77		509.96	0.006940	3.60	56.24	48.01	0.44
USACE	155240	5YR	325.00	507.15	510.34	509.48	510.67	0.008637	4.73	99.98	110.11	0.51
USACE	155240	10YR	460.00	507.15	510.74	510.07	511.11	0.009044	5.31	146.83	123.46	0.54
USACE	155240	25YR	684.00	507.15	511.21	510.81	511.66	0.009945	6.13	207.60	133.28	0.58
USACE	155240	50YR	933.00	507.15	511.65	511.19	512.17	0.010494	6.82	269.13	144.30	0.61
USACE	155240	100YR	1223.00	507.15	512.10	511.58	512.69	0.010887	7.47	337.35	161.01	0.63
USACE	155240	100YRPLUS	1599.00	507.15	512.63	511.99	513.30	0.011452	8.25	429.66	198.27	0.66
USACE	155240	200YR	1548.00	507.15	512.55	511.92	513.19	0.011151	8.06	414.62	193.22	0.65
USACE	155240	500YR	2037.00	507.15	513.14	512.40	513.86	0.011509	8.83	537.19	223.58	0.67
USACE	155240	SEPT2011	650.00	507.15	511.15	510.75	511.59	0.009789	6.01	199.21	131.42	0.57
USACE	155019	2YR	183.00	505.82	507.86		508.08	0.010664	3.96	72.00	112.58	0.53
USACE	155019	5YR	325.00	505.82	508.36		508.60	0.009746	4.50	141.37	149.24	0.53
USACE	155019	10YR	460.00	505.82	508.67		508.94	0.010283	5.04	189.42	163.70	0.56
USACE	155019	25YR	684.00	505.82	509.11		509.40	0.010036	5.54	263.73	170.29	0.57
USACE	155019	50YR	933.00	505.82	509.51		509.84	0.010074	6.05	333.61	176.30	0.58
USACE	155019	100YR	1223.00	505.82	509.91		510.28	0.010309	6.59	405.85	185.59	0.60
USACE	155019	100YRPLUS	1599.00	505.82	510.36		510.78	0.010635	7.22	491.87	198.53	0.62
USACE	155019	200YR	1548.00	505.82	510.30		510.71	0.010610	7.14	480.29	196.85	0.62
USACE	155019	500YR	2037.00	505.82	510.83		511.30	0.010885	7.84	592.01	220.26	0.64
USACE	155019	SEPT2011	650.00	505.82	509.04		509.33	0.010140	5.49	252.43	169.36	0.57
USACE	154631	2YR	183.00	502.41	504.99	504.18	505.12	0.005699	3.17	92.20	128.67	0.40
USACE	154631	5YR	325.00	502.41	505.55	504.78	505.72	0.005879	3.81	150.46	177.68	0.42
USACE	154631	10YR	460.00	502.41	505.87	505.17	506.03	0.005788	4.08	248.61	221.90	0.43
USACE	154631	25YR	684.00	502.41	506.30	505.60	506.48	0.006019	4.57	347.50	237.37	0.44
USACE	154631	50YR	933.00	502.41	506.71	505.96	506.92	0.006046	4.96	449.93	255.46	0.45
USACE	154631	100YR	1223.00	502.41	507.12	506.19	507.34	0.006074	5.33	556.23	267.22	0.46
USACE	154631	100YRPLUS	1599.00	502.41	507.61	506.48	507.84	0.005930	5.68	690.28	282.63	0.47
USACE	154631	200YR	1548.00	502.41	507.55	506.48	507.77	0.005934	5.63	673.21	280.74	0.47
USACE	154631	500YR	2037.00	502.41	508.09	506.83	508.33	0.005897	6.05	829.25	295.67	0.47
USACE	154631	SEPT2011	650.00	502.41	506.25	505.52	506.43	0.005919	4.49	335.11	235.53	0.44
USACE	153963	2YR	183.00	499.04	501.33		501.44	0.005619	2.85	98.60	104.62	0.39
USACE	153963	5YR	325.00	499.04	501.85		501.99	0.005789	3.45	169.80	152.77	0.41
USACE	153963	10YR	460.00	499.04	502.20		502.36	0.005774	3.81	234.16	210.72	0.42
USACE	153963	25YR	684.00	499.04	502.74		502.91	0.005310	4.15	359.84	241.56	0.42
USACE	153963	50YR	933.00	499.04	503.14		503.33	0.005358	4.52	459.08	253.92	0.43
USACE	153963	100YR	1223.00	499.04	503.54		503.74	0.005385	4.87	562.90	262.68	0.43
USACE	153963	100YRPLUS	1599.00	499.04	503.98		504.21	0.005626	5.35	681.28	278.79	0.45
USACE	153963	200YR	1548.00	499.04	503.93		504.15	0.005592	5.29	666.48	277.48	0.45
USACE	153963	500YR	2037.00	499.04	504.42		504.67	0.005773	5.78	806.13	288.14	0.47
USACE	153963	SEPT2011	650.00	499.04	502.67		502.84	0.005442	4.13	341.88	239.70	0.42
USACE	153493	2YR	183.00	494.95	497.02	496.81	497.32	0.015388	4.55	58.00	89.69	0.63
USACE	153493	5YR	325.00	494.95	497.51	497.33	497.86	0.014755	5.31	113.08	131.89	0.64
USACE	153493	10YR	460.00	494.95	497.82		498.20	0.015075	5.87	154.51	141.31	0.67
USACE	153493	25YR	684.00	494.95	498.18	497.95	498.70	0.017990	7.05	210.51	176.41	0.74
USACE	153493	50YR	933.00	494.95	498.52	498.08	499.07	0.018148	7.64	271.99	183.52	0.76
USACE	153493	100YR	1223.00	494.95	498.89	498.57	499.48	0.018139	8.23	341.88	199.48	0.78
USACE	153493	100YRPLUS	1599.00	494.95	499.33		499.93	0.016876	8.59	432.20	208.58	0.76
USACE	153493	200YR	1548.00	494.95	499.27		499.87	0.017098	8.56	419.72	207.59	0.77
USACE	153493	500YR	2037.00	494.95	499.78		500.40	0.016138	9.03	529.39	220.07	0.76
USACE	153493	SEPT2011	650.00	494.95	498.12	497.95	498.61	0.017511	6.85	199.67	171.22	0.73
USACE	153013	2YR	183.00	489.07	491.29		491.52	0.009713	3.91	49.76	36.83	0.51
USACE	153013	5YR	325.00	489.07	491.99		492.33	0.009271	4.77	86.91	75.98	0.53
USACE	153013	10YR	460.00	489.07	492.50	491.70	492.87	0.008606	5.20	144.08	128.76	0.53
USACE	153013	25YR	684.00	489.07	493.19		493.54	0.007114	5.42	238.53	145.27	0.50
USACE	153013	50YR	933.00	489.07	493.78	492.98	494.14	0.006599	5.75	328.08	161.96	0.49
USACE	153013	100YR	1223.00	489.07	494.39		494.76	0.006135	6.07	433.51	186.21	0.48
USACE	153013	100YRPLUS	1599.00	489.07	494.95		495.35	0.006129	6.52	540.76	195.99	0.49
USACE	153013	200YR	1548.00	489.07	494.89		495.28	0.006102	6.45	527.89	195.07	0.49
USACE	153013	500YR	2037.00	489.07	495.67		496.08	0.005728	6.84	691.00	227.04	0.48
USACE	153013	SEPT2011	650.00	489.07	493.10		493.45	0.007252	5.38	225.52	144.23	0.50
USACE	152708	2YR	183.00	485.75	487.81		488.10	0.013097	4.30	42.54	29.44	0.63
USACE	152708	5YR	325.00	485.75	488.35		488.82	0.014598	5.53	59.57	34.51	0.70
USACE	152708	10YR	460.00	485.75	488.73	488.34	489.38	0.015917	6.50	74.84	50.66	0.75
USACE	152708	25YR	684.00	485.75	489.12	489.03	490.11	0.020014	8.10	95.89	55.76	0.87
USACE	152708	50YR	933.00	485.75	489.60	489.60	490.82	0.020597	9.14	123.66	62.05	0.90
USACE	152708	100YR	1223.00	485.75	490.05	490.05	491.54	0.021408	10.19	153.44	69.05	0.94
USACE	152708	100YRPLUS	1599.00	485.75	490.80	490.80	492.33	0.017880	10.54	211.41	84.80	0.89
USACE	152708	200YR	1548.00	485.75	490.69	490.69	492.23	0.018469	10.54	202.39	82.57	0.90
USACE	152708	500YR	2037.00	485.75	491.30	491.30	493.11	0.018896	11.65	256.07	93.77	0.93
USACE	152708	SEPT2011	650.00	485.75	489.06	488.94	490.01	0.019670	7.90	92.43	54.99	0.86
USACE	152482	2YR	183.00	483.26	485.02		485.24	0.012182	3.77	48.48	38.80	0.60
USACE	152482	5YR	325.00	483.26	485.63		485.93	0.011013	4.43	73.71	49.97	0.60
USACE	152482	10YR	460.00	483.26	486.04		486.41	0.010548	4.95	105.48	99.62	0.60
USACE	152482	25YR	684.00	483.26	486.61		487.03	0.009126	5.40	167.41	118.30	0.58
USACE	152482	50YR	933.00	483.26	487.29		487.68	0.006680	5.38	255.75	139.41	0.52
USACE	152482	100YR	1223.00	483.26	487.68		488.15	0.007313	6.06	313.05	164.58	0.55

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	152482	100YRPLUS	1599.00	483.26	488.20		488.74	0.007361	6.63	410.34	199.12	0.57
USACE	152482	200YR	1548.00	483.26	488.14		488.67	0.007400	6.58	397.62	197.49	0.57
USACE	152482	500YR	2037.00	483.26	488.69		489.27	0.007274	7.09	511.77	214.77	0.57
USACE	152482	SEPT2011	650.00	483.26	486.54		486.95	0.009134	5.31	159.49	116.23	0.58
USACE	152007	2YR	183.00	477.72	480.17		480.41	0.008600	4.04	52.91	39.11	0.53
USACE	152007	5YR	325.00	477.72	480.80		481.17	0.009192	5.09	79.23	44.94	0.58
USACE	152007	10YR	460.00	477.72	481.33	480.58	481.78	0.009016	5.75	105.10	56.77	0.59
USACE	152007	25YR	684.00	477.72	481.93	481.19	482.53	0.009749	6.77	176.11	142.36	0.63
USACE	152007	50YR	933.00	477.72	482.05	481.48	483.01	0.015401	8.69	192.42	144.51	0.80
USACE	152007	100YR	1223.00	477.72	482.53	482.53	483.44	0.013856	8.95	264.08	152.15	0.77
USACE	152007	100YRPLUS	1599.00	477.72	482.95	482.95	483.95	0.014409	9.73	329.37	159.17	0.80
USACE	152007	200YR	1548.00	477.72	482.90	482.90	483.89	0.014284	9.62	321.55	158.50	0.80
USACE	152007	500YR	2037.00	477.72	483.38	481.41	484.46	0.014775	10.46	399.74	167.55	0.82
USACE	152007	SEPT2011	650.00	477.72	481.87	481.08	482.46	0.009722	6.68	166.53	141.12	0.63
USACE	151787	2YR	183.00	476.19	478.36		478.55	0.008145	3.58	53.01	48.21	0.50
USACE	151787	5YR	325.00	476.19	478.91		479.20	0.008572	4.43	92.20	85.93	0.54
USACE	151787	10YR	460.00	476.19	479.14	478.78	479.56	0.011330	5.46	113.47	98.12	0.63
USACE	151787	25YR	684.00	476.19	479.58	479.31	480.13	0.012262	6.39	161.88	125.34	0.68
USACE	151787	50YR	933.00	476.19	480.60		480.92	0.005551	5.30	310.33	175.54	0.48
USACE	151787	100YR	1223.00	476.19	481.02		481.38	0.005649	5.74	388.80	189.28	0.49
USACE	151787	100YRPLUS	1599.00	476.19	481.47		481.86	0.005745	6.20	475.04	195.37	0.51
USACE	151787	200YR	1548.00	476.19	481.41		481.79	0.005800	6.17	461.93	194.47	0.51
USACE	151787	500YR	2037.00	476.19	481.90		482.33	0.005967	6.70	560.24	200.78	0.52
USACE	151787	SEPT2011	650.00	476.19	479.48	479.21	480.02	0.012788	6.36	148.90	117.24	0.69
USACE	151529	2YR	183.00	473.51	475.68	475.31	476.05	0.011569	4.90	37.38	24.06	0.69
USACE	151529	5YR	325.00	473.51	476.63	475.93	477.04	0.008068	5.19	70.09	67.15	0.61
USACE	151529	10YR	460.00	473.51	477.45	476.51	477.78	0.004630	4.85	146.51	119.07	0.49
USACE	151529	25YR	684.00	473.51	478.89	477.27	479.06	0.001824	3.93	312.60	196.98	0.33
USACE	151529	50YR	933.00	473.51	480.41	477.79	480.48	0.000674	2.90	731.44	236.25	0.21
USACE	151529	100YR	1223.00	473.51	480.75	478.19	480.85	0.000880	3.44	814.63	244.87	0.24
USACE	151529	100YRPLUS	1599.00	473.51	481.10	478.62	481.24	0.001161	4.09	901.84	252.77	0.28
USACE	151529	200YR	1548.00	473.51	481.04	478.57	481.17	0.001140	4.03	886.51	252.32	0.27
USACE	151529	500YR	2037.00	473.51	481.43	479.07	481.61	0.001470	4.75	985.89	255.01	0.32
USACE	151529	SEPT2011	650.00	473.51	478.69	477.21	478.88	0.002004	4.00	289.52	195.35	0.34
USACE	151460	2YR	183.00	472.54	475.03	474.50	475.34	0.008462	4.50	41.06	34.13	0.60
USACE	151460	5YR	325.00	472.54	476.30	475.14	476.60	0.003935	4.44	76.68	50.24	0.45
USACE	151460	10YR	460.00	472.54	477.15	475.62	477.50	0.003310	4.81	100.51	76.30	0.43
USACE	151460	25YR	684.00	472.54	478.42	476.27	478.84	0.002735	5.28	136.04	148.16	0.41
USACE	151460	50YR	933.00	472.54	480.32	476.90	480.42	0.000682	3.25	576.87	223.43	0.22
USACE	151460	100YR	1223.00	472.54	480.63	477.54	480.77	0.000939	3.93	633.68	231.88	0.26
USACE	151460	100YRPLUS	1599.00	472.54	481.02	478.33	481.16	0.000950	4.09	827.11	239.66	0.26
USACE	151460	200YR	1548.00	472.54	480.97	478.21	481.10	0.000929	4.03	813.11	238.29	0.26
USACE	151460	500YR	2037.00	472.54	481.33	479.16	481.51	0.001245	4.80	900.72	250.48	0.30
USACE	151460	SEPT2011	650.00	472.54	478.24	476.17	478.65	0.002792	5.21	131.03	142.14	0.41
USACE	151421 Cider Press Road		Bridge									
USACE	151388	2YR	183.00	471.03	474.61	473.08	474.75	0.002567	2.97	61.64	26.89	0.34
USACE	151388	5YR	325.00	471.03	475.68	473.82	475.86	0.002114	3.45	103.56	58.26	0.33
USACE	151388	10YR	460.00	471.03	476.23	474.37	476.46	0.002314	3.99	133.34	77.28	0.36
USACE	151388	25YR	684.00	471.03	476.64	475.16	477.01	0.003359	5.14	156.75	92.35	0.44
USACE	151388	50YR	933.00	471.03	477.02	475.91	477.53	0.004336	6.18	197.86	108.23	0.50
USACE	151388	100YR	1223.00	471.03	477.17	476.50	477.95	0.006455	7.70	213.60	139.28	0.62
USACE	151388	100YRPLUS	1599.00	471.03	477.44	477.41	478.41	0.007982	8.88	274.95	160.77	0.69
USACE	151388	200YR	1548.00	471.03	477.41	477.38	478.34	0.007758	8.71	269.32	157.19	0.68
USACE	151388	500YR	2037.00	471.03	478.05	478.05	478.90	0.006759	8.81	393.35	217.37	0.65
USACE	151388	SEPT2011	650.00	471.03	476.75	475.04	477.05	0.002735	4.72	174.72	95.32	0.40
USACE	151306	2YR	183.00	470.49	474.03	473.13	474.36	0.007057	4.60	39.76	18.31	0.55
USACE	151306	5YR	325.00	470.49	475.08	473.99	475.51	0.006783	5.23	65.25	44.40	0.56
USACE	151306	10YR	460.00	470.49	475.79	474.66	476.15	0.004894	5.18	123.27	147.34	0.49
USACE	151306	25YR	684.00	470.49	476.06	475.95	476.58	0.006880	6.46	156.69	158.93	0.59
USACE	151306	50YR	933.00	470.49	476.41	476.21	477.03	0.007783	7.31	205.64	210.64	0.64
USACE	151306	100YR	1223.00	470.49	476.80	476.80	477.27	0.006331	7.01	325.61	259.25	0.59
USACE	151306	100YRPLUS	1599.00	470.49	477.13	476.99	477.59	0.006125	7.23	414.03	272.82	0.58
USACE	151306	200YR	1548.00	470.49	477.06	476.96	477.54	0.006441	7.34	395.16	270.48	0.60
USACE	151306	500YR	2037.00	470.49	477.44	477.22	477.90	0.006182	7.57	498.54	282.26	0.59
USACE	151306	SEPT2011	650.00	470.49	476.54	475.90	476.79	0.003105	4.71	227.19	227.19	0.41
USACE	151100	2YR	183.00	469.23	472.60	471.68	472.92	0.006928	4.58	39.97	18.14	0.54
USACE	151100	5YR	325.00	469.23	473.68	472.53	474.11	0.006785	5.24	62.01	22.66	0.56
USACE	151100	10YR	460.00	469.23	473.70	473.19	474.55	0.013247	7.36	62.53	23.89	0.78
USACE	151100	25YR	684.00	469.23	474.67	474.67	475.17	0.006813	6.37	172.97	190.80	0.58
USACE	151100	50YR	933.00	469.23	474.99	474.99	475.49	0.006911	6.78	242.27	226.30	0.60
USACE	151100	100YR	1223.00	469.23	475.20	475.20	475.78	0.008106	7.60	290.74	245.05	0.65
USACE	151100	100YRPLUS	1599.00	469.23	475.48	475.48	476.09	0.008591	8.17	364.83	276.01	0.68
USACE	151100	200YR	1548.00	469.23	475.48	475.48	476.05	0.008090	7.92	364.09	275.87	0.66
USACE	151100	500YR	2037.00	469.23	475.76	475.76	476.38	0.008755	8.59	446.43	294.68	0.69
USACE	151100	SEPT2011	650.00	469.23	474.00	473.90	475.37	0.019336	9.39	69.56	85.84	0.95
USACE	150912	2YR	183.00	467.92	470.88	470.35	471.31	0.010780	5.24	34.93	18.47	0.67

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	150912	5YR	325.00	467.92	471.48	471.14	472.23	0.015332	6.97	46.62	20.81	0.82
USACE	150912	10YR	460.00	467.92	472.33	472.33	472.70	0.006545	5.49	140.59	200.74	0.56
USACE	150912	25YR	684.00	467.92	472.62	472.62	473.02	0.007190	6.13	203.82	235.20	0.60
USACE	150912	50YR	933.00	467.92	472.84	472.84	473.28	0.008156	6.82	257.11	252.08	0.64
USACE	150912	100YR	1223.00	467.92	473.05	473.05	473.53	0.008964	7.43	312.12	268.97	0.68
USACE	150912	100YRPLUS	1599.00	467.92	473.30	473.30	473.81	0.009613	8.03	382.15	296.26	0.71
USACE	150912	200YR	1548.00	467.92	473.27	473.27	473.78	0.009421	7.92	375.47	295.03	0.71
USACE	150912	500YR	2037.00	467.92	473.52	473.52	474.08	0.010290	8.62	450.30	310.86	0.74
USACE	150912	SEPT2011	650.00	467.92	472.57	472.57	472.97	0.007282	6.10	191.63	229.04	0.60
USACE	150722	2YR	183.00	466.70	469.51		469.76	0.006010	4.06	46.52	31.54	0.51
USACE	150722	5YR	325.00	466.70	470.32		470.59	0.004814	4.45	109.02	144.51	0.48
USACE	150722	10YR	460.00	466.70	470.79		471.00	0.003523	4.25	199.34	225.44	0.42
USACE	150722	25YR	684.00	466.70	471.28		471.44	0.002737	4.13	317.50	251.12	0.38
USACE	150722	50YR	933.00	466.70	471.68		471.83	0.002445	4.19	420.53	262.22	0.37
USACE	150722	100YR	1223.00	466.70	472.06		472.21	0.002391	4.40	521.73	280.13	0.37
USACE	150722	100YRPLUS	1599.00	466.70	472.47		472.63	0.002380	4.66	642.92	304.48	0.37
USACE	150722	200YR	1548.00	466.70	472.42		472.58	0.002391	4.63	627.32	303.17	0.37
USACE	150722	500YR	2037.00	466.70	472.89		473.06	0.002313	4.86	774.16	320.59	0.37
USACE	150722	SEPT2011	650.00	466.70	471.22		471.38	0.002802	4.13	301.85	249.07	0.39
USACE	150420	2YR	183.00	464.49	467.85		468.04	0.005281	3.54	51.75	23.21	0.42
USACE	150420	5YR	325.00	464.49	468.68		469.00	0.005825	4.50	76.33	47.53	0.46
USACE	150420	10YR	460.00	464.49	469.10	467.94	469.53	0.007058	5.40	113.24	131.12	0.52
USACE	150420	25YR	684.00	464.49	469.56	468.98	470.11	0.008293	6.37	186.10	175.86	0.57
USACE	150420	50YR	933.00	464.49	469.95	469.76	470.56	0.008907	7.05	259.35	203.04	0.60
USACE	150420	100YR	1223.00	464.49	470.42	470.15	471.00	0.008321	7.30	360.66	229.60	0.59
USACE	150420	100YRPLUS	1599.00	464.49	470.94		471.48	0.007602	7.48	483.03	245.99	0.58
USACE	150420	200YR	1548.00	464.49	470.84		471.40	0.007942	7.55	459.31	241.11	0.59
USACE	150420	500YR	2037.00	464.49	471.42		471.95	0.007307	7.78	602.79	253.76	0.57
USACE	150420	SEPT2011	650.00	464.49	469.50	468.54	470.04	0.008155	6.25	175.79	174.07	0.57
USACE	150164	2YR	275.00	462.23	466.02		466.35	0.007659	4.63	60.05	33.99	0.51
USACE	150164	5YR	549.00	462.23	467.13	466.48	467.47	0.005890	5.17	201.18	193.51	0.48
USACE	150164	10YR	738.00	462.23	467.54	467.05	467.87	0.005779	5.49	285.64	218.27	0.48
USACE	150164	25YR	1016.00	462.23	468.04	467.49	468.36	0.005416	5.74	397.23	228.75	0.47
USACE	150164	50YR	1264.00	462.23	468.37	467.74	468.70	0.005536	6.08	473.16	234.09	0.48
USACE	150164	100YR	1635.00	462.23	468.83		469.18	0.005539	6.46	585.37	246.71	0.49
USACE	150164	100YRPLUS	2138.00	462.23	469.36		469.72	0.005574	6.90	716.22	253.16	0.50
USACE	150164	200YR	2033.00	462.23	469.27		469.62	0.005473	6.77	694.43	252.06	0.50
USACE	150164	500YR	2633.00	462.23	469.77		470.17	0.005852	7.40	823.53	260.95	0.52
USACE	150164	SEPT2011	963.00	462.23	467.92	467.41	468.26	0.005670	5.78	371.17	226.45	0.48
USACE	149885	2YR	275.00	460.31	464.09	463.09	464.47	0.006010	4.94	66.53	79.67	0.53
USACE	149885	5YR	549.00	460.31	464.75	464.57	465.42	0.009112	7.03	135.61	138.88	0.68
USACE	149885	10YR	738.00	460.31	465.18	465.18	465.87	0.008822	7.51	205.26	180.58	0.68
USACE	149885	25YR	1016.00	460.31	465.53	465.53	466.32	0.009995	8.47	269.93	192.21	0.73
USACE	149885	50YR	1264.00	460.31	465.88	465.88	466.66	0.009684	8.80	341.28	211.26	0.73
USACE	149885	100YR	1635.00	460.31	466.21	466.21	467.07	0.010501	9.61	413.28	218.05	0.77
USACE	149885	100YRPLUS	2138.00	460.31	466.62	466.58	467.55	0.011119	10.45	503.66	224.73	0.81
USACE	149885	200YR	2033.00	460.31	466.51	466.51	467.45	0.011341	10.40	479.68	222.95	0.81
USACE	149885	500YR	2633.00	460.31	467.06		467.98	0.010711	10.82	603.77	233.48	0.80
USACE	149885	SEPT2011	963.00	460.31	465.51	465.51	466.24	0.009259	8.12	265.82	191.53	0.71
USACE	149661	2YR	275.00	458.60	462.96	461.82	463.23	0.004871	4.36	91.52	175.50	0.47
USACE	149661	5YR	549.00	458.60	464.36	463.32	464.48	0.001801	3.52	294.44	224.83	0.31
USACE	149661	10YR	738.00	458.60	464.81	463.62	464.88	0.001158	3.03	512.67	229.79	0.25
USACE	149661	25YR	1016.00	458.60	465.22	463.99	465.30	0.001348	3.46	607.92	233.51	0.28
USACE	149661	50YR	1264.00	458.60	465.47	464.22	465.57	0.001597	3.90	666.34	235.54	0.30
USACE	149661	100YR	1635.00	458.60	465.76	464.50	465.90	0.001998	4.52	736.07	238.31	0.34
USACE	149661	100YRPLUS	2138.00	458.60	466.12	464.52	466.30	0.002470	5.25	822.24	241.96	0.38
USACE	149661	200YR	2033.00	458.60	466.05	464.51	466.23	0.002370	5.10	805.88	241.32	0.38
USACE	149661	500YR	2633.00	458.60	466.43	464.77	466.65	0.002895	5.88	897.10	244.88	0.42
USACE	149661	SEPT2011	963.00	458.60	465.14	463.93	465.23	0.001317	3.39	590.55	232.92	0.27
USACE	149557	2YR	275.00	457.80	462.53	461.16	462.79	0.003645	4.18	73.21	49.22	0.42
USACE	149557	5YR	549.00	457.80	463.66	462.38	464.10	0.004381	5.65	115.21	254.81	0.49
USACE	149557	10YR	738.00	457.80	464.62	463.00	464.73	0.001316	3.56	398.99	282.19	0.28
USACE	149557	25YR	1016.00	457.80	465.11	463.66	465.18	0.000966	3.24	675.18	292.95	0.24
USACE	149557	50YR	1264.00	457.80	465.34	464.21	465.42	0.001150	3.62	742.84	297.00	0.26
USACE	149557	100YR	1635.00	457.80	465.60	464.33	465.72	0.001446	4.19	821.60	302.94	0.30
USACE	149557	100YRPLUS	2138.00	457.80	465.92	464.67	466.07	0.001802	4.83	920.80	314.13	0.34
USACE	149557	200YR	2033.00	457.80	465.86	464.60	466.01	0.001726	4.70	902.04	312.21	0.33
USACE	149557	500YR	2633.00	457.80	466.20	464.72	466.38	0.002115	5.39	1008.81	327.07	0.37
USACE	149557	SEPT2011	963.00	457.80	465.04	463.55	465.10	0.000948	3.18	653.95	291.80	0.24
USACE	149524 Pinch Road		Bridge									
USACE	149492	2YR	275.00	457.02	461.35	460.41	461.83	0.008485	5.61	49.02	18.61	0.61
USACE	149492	5YR	549.00	457.02	462.16	461.79	463.25	0.015222	8.39	65.88	128.72	0.84
USACE	149492	10YR	738.00	457.02	462.71	462.71	463.18	0.007430	6.54	214.80	251.46	0.60
USACE	149492	25YR	1016.00	457.02	463.09	463.09	463.51	0.006888	6.72	331.55	345.92	0.59
USACE	149492	50YR	1264.00	457.02	463.25	463.25	463.70	0.007490	7.20	388.85	352.34	0.62
USACE	149492	100YR	1635.00	457.02	463.54	463.43	463.96	0.007282	7.41	491.82	400.50	0.62
USACE	149492	100YRPLUS	2138.00	457.02	464.00	463.69	464.33	0.005902	7.12	682.44	462.60	0.56

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	149492	200YR	2033.00	457.02	463.91	463.65	464.25	0.006053	7.12	642.91	458.51	0.57
USACE	149492	500YR	2633.00	457.02	464.42	463.86	464.68	0.004608	6.64	863.14	473.05	0.51
USACE	149492	SEPT2011	963.00	457.02	462.95	462.95	463.44	0.007992	7.07	283.91	320.96	0.63
USACE	149310	2YR	275.00	456.39	460.43	459.18	460.69	0.004068	4.16	80.53	115.97	0.44
USACE	149310	5YR	549.00	456.39	461.37	460.67	461.66	0.003783	4.88	198.16	216.31	0.45
USACE	149310	10YR	738.00	456.39	461.76	461.22	461.95	0.002839	4.52	346.61	259.59	0.39
USACE	149310	25YR	1016.00	456.39	462.28	461.70	462.45	0.002478	4.57	489.18	283.82	0.38
USACE	149310	50YR	1264.00	456.39	462.62	461.72	462.79	0.002421	4.74	591.78	318.63	0.38
USACE	149310	100YR	1635.00	456.39	463.04	462.03	463.23	0.002572	5.16	731.28	345.19	0.39
USACE	149310	100YRPLUS	2138.00	456.39	463.51	462.32	463.70	0.002551	5.44	898.57	361.44	0.40
USACE	149310	200YR	2033.00	456.39	463.41	462.16	463.61	0.002567	5.40	863.99	358.99	0.40
USACE	149310	500YR	2633.00	456.39	463.97	462.59	464.16	0.002435	5.59	1068.16	378.75	0.39
USACE	149310	SEPT2011	963.00	456.39	462.20	461.56	462.37	0.002461	4.51	467.55	279.15	0.37
USACE	149001	2YR	275.00	454.89	458.59	457.70	459.01	0.007466	5.22	52.71	51.96	0.58
USACE	149001	5YR	549.00	454.89	459.49	458.87	460.03	0.007856	6.41	132.14	93.73	0.62
USACE	149001	10YR	738.00	454.89	459.86	459.56	460.51	0.008775	7.26	172.27	135.82	0.67
USACE	149001	25YR	1016.00	454.89	460.34	459.93	461.11	0.009323	8.14	247.02	164.50	0.70
USACE	149001	50YR	1264.00	454.89	460.74	459.93	461.49	0.008895	8.44	315.49	188.49	0.70
USACE	149001	100YR	1635.00	454.89	461.26	459.93	461.94	0.007868	8.53	417.20	202.07	0.67
USACE	149001	100YRPLUS	2138.00	454.89	461.84	461.46	462.49	0.007102	8.71	537.07	215.96	0.65
USACE	149001	200YR	2033.00	454.89	461.72	461.39	462.37	0.007242	8.68	512.39	207.64	0.65
USACE	149001	500YR	2633.00	454.89	462.38	461.75	463.01	0.006618	8.94	663.82	241.81	0.63
USACE	149001	SEPT2011	963.00	454.89	460.26	459.93	461.02	0.009418	8.06	232.71	160.67	0.70
USACE	148743	2YR	275.00	453.19	456.78		457.15	0.006889	4.97	65.54	58.38	0.57
USACE	148743	5YR	549.00	453.19	457.75	457.12	458.21	0.006247	5.94	157.78	126.32	0.57
USACE	148743	10YR	738.00	453.19	458.23		458.66	0.005587	6.13	218.46	129.91	0.55
USACE	148743	25YR	1016.00	453.19	458.74		459.20	0.005492	6.61	286.40	135.62	0.56
USACE	148743	50YR	1264.00	453.19	459.13		459.63	0.005515	7.02	341.72	144.28	0.57
USACE	148743	100YR	1635.00	453.19	459.62		460.17	0.005694	7.61	414.66	155.19	0.59
USACE	148743	100YRPLUS	2138.00	453.19	460.17		460.79	0.005882	8.26	502.27	162.38	0.60
USACE	148743	200YR	2033.00	453.19	460.07		460.67	0.005798	8.11	485.81	160.51	0.60
USACE	148743	500YR	2633.00	453.19	460.61		461.32	0.006265	8.95	574.98	169.75	0.63
USACE	148743	SEPT2011	963.00	453.19	458.65		459.10	0.005494	6.52	274.33	134.51	0.56
USACE	148490	2YR	275.00	452.02	455.62		455.86	0.003731	4.06	77.39	54.10	0.43
USACE	148490	5YR	549.00	452.02	456.60		456.95	0.003989	5.13	147.97	90.14	0.47
USACE	148490	10YR	738.00	452.02	457.07		457.47	0.004143	5.66	197.36	118.19	0.48
USACE	148490	25YR	1016.00	452.02	457.65		458.05	0.003949	6.01	273.17	144.60	0.48
USACE	148490	50YR	1264.00	452.02	458.08		458.49	0.003832	6.28	341.86	170.17	0.48
USACE	148490	100YR	1635.00	452.02	458.62		459.04	0.003685	6.57	441.27	198.35	0.48
USACE	148490	100YRPLUS	2138.00	452.02	459.22		459.65	0.003595	6.93	570.08	230.01	0.48
USACE	148490	200YR	2033.00	452.02	459.10		459.53	0.003637	6.88	543.43	225.77	0.48
USACE	148490	500YR	2633.00	452.02	459.70		460.14	0.003496	7.17	685.07	244.90	0.48
USACE	148490	SEPT2011	963.00	452.02	457.55		457.95	0.003993	5.96	258.65	139.73	0.48
USACE	148305	2YR	275.00	451.29	454.95		455.18	0.003626	3.85	88.45	76.53	0.42
USACE	148305	5YR	549.00	451.29	455.69		456.10	0.005256	5.48	159.98	118.63	0.53
USACE	148305	10YR	738.00	451.29	456.04		456.54	0.005998	6.25	202.48	123.52	0.57
USACE	148305	25YR	1016.00	451.29	456.52		457.12	0.006421	7.03	263.77	128.77	0.61
USACE	148305	50YR	1264.00	451.29	456.86		457.54	0.006927	7.69	308.71	147.39	0.64
USACE	148305	100YR	1635.00	451.29	457.25		458.06	0.007735	8.59	371.28	165.78	0.68
USACE	148305	100YRPLUS	2138.00	451.29	457.77		458.66	0.008061	9.37	460.09	182.92	0.71
USACE	148305	200YR	2033.00	451.29	457.68		458.55	0.007916	9.19	444.01	178.95	0.70
USACE	148305	500YR	2633.00	451.29	458.21		459.16	0.008167	9.94	543.41	193.22	0.72
USACE	148305	SEPT2011	963.00	451.29	456.45		457.02	0.006246	6.85	254.59	127.99	0.60
USACE	148035	2YR	304.00	450.09	453.87		454.14	0.004011	4.31	92.17	107.04	0.45
USACE	148035	5YR	535.00	450.09	454.54		454.84	0.003976	4.94	209.81	207.88	0.46
USACE	148035	10YR	733.00	450.09	454.93		455.21	0.003811	5.19	292.49	218.00	0.46
USACE	148035	25YR	1097.00	450.09	455.48		455.76	0.003681	5.57	415.85	228.45	0.46
USACE	148035	50YR	1389.00	450.09	455.85		456.13	0.003640	5.84	501.23	235.50	0.47
USACE	148035	100YR	1758.00	450.09	456.26		456.55	0.003637	6.16	599.44	246.03	0.47
USACE	148035	100YRPLUS	2299.00	450.09	456.80		457.11	0.003654	6.59	738.08	269.14	0.48
USACE	148035	200YR	2200.00	450.09	456.70		457.02	0.003657	6.52	712.99	265.39	0.48
USACE	148035	500YR	2838.00	450.09	457.29		457.61	0.003565	6.87	874.77	288.62	0.48
USACE	148035	SEPT2011	1042.00	450.09	455.41		455.68	0.003688	5.51	398.88	226.97	0.46
USACE	147648	2YR	304.00	448.50	452.78		452.95	0.002335	3.51	128.82	165.52	0.35
USACE	147648	5YR	535.00	448.50	453.35		453.57	0.002729	4.24	242.59	219.25	0.39
USACE	147648	10YR	733.00	448.50	453.69		453.93	0.002962	4.69	318.71	230.17	0.41
USACE	147648	25YR	1097.00	448.50	454.21		454.46	0.003156	5.24	441.61	243.39	0.43
USACE	147648	50YR	1389.00	448.50	454.56		454.83	0.003239	5.57	527.91	250.11	0.44
USACE	147648	100YR	1758.00	448.50	454.97		455.25	0.003284	5.91	630.89	259.29	0.45
USACE	147648	100YRPLUS	2299.00	448.50	455.52		455.82	0.003219	6.25	777.80	271.39	0.45
USACE	147648	200YR	2200.00	448.50	455.42		455.71	0.003240	6.20	750.80	268.93	0.45
USACE	147648	500YR	2838.00	448.50	456.07		456.37	0.003027	6.43	931.51	285.38	0.45
USACE	147648	SEPT2011	1042.00	448.50	454.14		454.39	0.003140	5.17	424.23	242.14	0.43
USACE	147403	2YR	304.00	447.59	452.11	450.76	452.31	0.003109	3.92	146.09	221.53	0.39
USACE	147403	5YR	535.00	447.59	452.83	452.18	452.97	0.002291	3.86	345.19	293.05	0.34
USACE	147403	10YR	733.00	447.59	453.16	452.49	453.29	0.002380	4.15	443.40	307.73	0.36
USACE	147403	25YR	1097.00	447.59	453.69	452.88	453.82	0.002346	4.46	612.87	332.01	0.36

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	147403	50YR	1389.00	447.59	454.06	453.09	454.19	0.002265	4.60	738.12	344.25	0.36
USACE	147403	100YR	1758.00	447.59	454.50	453.31	454.63	0.002128	4.71	891.76	356.77	0.35
USACE	147403	100YRPLUS	2299.00	447.59	455.11	453.59	455.24	0.001902	4.78	1114.70	371.71	0.34
USACE	147403	200YR	2200.00	447.59	455.00	453.51	455.12	0.001948	4.77	1073.44	369.40	0.34
USACE	147403	500YR	2838.00	447.59	455.73	453.83	455.85	0.001642	4.73	1347.98	383.46	0.32
USACE	147403	SEPT2011	1042.00	447.59	453.61	452.83	453.75	0.002357	4.42	588.10	328.67	0.36
USACE	147026	2YR	304.00	446.80	450.74	449.49	451.02	0.003720	4.31	81.49	58.63	0.44
USACE	147026	5YR	535.00	446.80	451.52	450.37	451.86	0.003929	5.16	235.22	296.16	0.47
USACE	147026	10YR	733.00	446.80	452.01	451.61	452.28	0.003217	5.06	383.56	305.70	0.43
USACE	147026	25YR	1097.00	446.80	452.64	452.01	452.88	0.002885	5.25	579.87	313.07	0.42
USACE	147026	50YR	1389.00	446.80	453.05	452.25	453.28	0.002803	5.46	708.99	317.64	0.42
USACE	147026	100YR	1758.00	446.80	453.55	452.51	453.78	0.002619	5.60	870.45	326.79	0.41
USACE	147026	100YRPLUS	2299.00	446.80	454.29	452.83	454.49	0.002238	5.61	1123.19	352.18	0.39
USACE	147026	200YR	2200.00	446.80	454.16	452.77	454.36	0.002310	5.62	1075.33	348.22	0.39
USACE	147026	500YR	2838.00	446.80	455.04	453.10	455.22	0.001878	5.52	1392.10	369.26	0.36
USACE	147026	SEPT2011	1042.00	446.80	452.55	451.96	452.79	0.002926	5.23	552.19	312.09	0.42
USACE	146684	2YR	304.00	445.79	449.89		450.04	0.002145	3.19	143.16	161.80	0.33
USACE	146684	5YR	535.00	445.79	451.00		451.10	0.001269	3.03	388.54	243.79	0.27
USACE	146684	10YR	733.00	445.79	451.49		451.59	0.001282	3.29	510.36	251.55	0.27
USACE	146684	25YR	1097.00	445.79	452.03		452.17	0.001583	3.95	648.52	257.69	0.31
USACE	146684	50YR	1389.00	445.79	452.38		452.54	0.001810	4.41	738.47	261.46	0.33
USACE	146684	100YR	1758.00	445.79	452.87		453.06	0.001879	4.76	869.40	267.53	0.35
USACE	146684	100YRPLUS	2299.00	445.79	453.67		453.86	0.001749	5.00	1087.30	277.44	0.34
USACE	146684	200YR	2200.00	445.79	453.52		453.71	0.001781	4.97	1045.81	275.40	0.34
USACE	146684	500YR	2838.00	445.79	454.48		454.67	0.001577	5.12	1316.80	289.41	0.33
USACE	146684	SEPT2011	1042.00	445.79	451.95		452.09	0.001552	3.87	627.79	256.84	0.31
USACE	146214	2YR	304.00	445.01	449.78	446.28	449.80	0.000153	1.08	349.63	234.32	0.09
USACE	146214	5YR	535.00	445.01	450.88	446.76	450.90	0.000175	1.35	596.93	261.66	0.10
USACE	146214	10YR	733.00	445.01	451.34	447.10	451.38	0.000227	1.63	702.85	268.44	0.12
USACE	146214	25YR	1097.00	445.01	451.81	447.64	451.87	0.000363	2.17	811.00	275.49	0.16
USACE	146214	50YR	1389.00	445.01	452.10	448.02	452.18	0.000479	2.57	877.63	283.73	0.18
USACE	146214	100YR	1758.00	445.01	452.55	448.46	452.66	0.000576	2.95	983.87	290.25	0.20
USACE	146214	100YRPLUS	2299.00	445.01	453.34	449.06	453.47	0.000626	3.31	1171.53	300.42	0.21
USACE	146214	200YR	2200.00	445.01	453.19	448.96	453.31	0.000622	3.26	1135.37	298.15	0.21
USACE	146214	500YR	2838.00	445.01	454.16	449.95	454.31	0.000627	3.55	1369.83	316.74	0.22
USACE	146214	SEPT2011	1042.00	445.01	451.74	447.57	451.80	0.000344	2.10	794.56	273.69	0.15
USACE	146191 Private Drive		Culvert									
USACE	146169	2YR	304.00	444.78	449.37	447.02	449.48	0.001045	2.65	126.39	95.02	0.24
USACE	146169	5YR	535.00	444.78	450.79	447.74	450.89	0.000730	2.75	398.74	270.76	0.21
USACE	146169	10YR	733.00	444.78	451.25	448.26	451.37	0.000849	3.14	513.53	278.57	0.23
USACE	146169	25YR	1097.00	444.78	451.66	449.13	451.83	0.001287	4.05	617.59	284.82	0.29
USACE	146169	50YR	1389.00	444.78	451.91	450.29	452.14	0.001644	4.70	682.63	287.68	0.33
USACE	146169	100YR	1758.00	444.78	452.35	450.85	452.61	0.001826	5.18	795.90	291.78	0.35
USACE	146169	100YRPLUS	2299.00	444.78	453.16	451.29	453.42	0.001695	5.39	1011.29	301.17	0.35
USACE	146169	200YR	2200.00	444.78	452.99	451.23	453.25	0.001752	5.39	965.77	298.28	0.35
USACE	146169	500YR	2838.00	444.78	454.02	451.68	454.26	0.001492	5.43	1239.93	308.95	0.33
USACE	146169	SEPT2011	1042.00	444.78	451.60	448.97	451.77	0.001224	3.92	602.94	284.18	0.28
USACE	146131	2YR	304.00	444.76	449.23		449.41	0.001738	3.44	120.47	90.53	0.31
USACE	146131	5YR	535.00	444.76	450.73		450.85	0.001037	3.31	391.56	250.55	0.25
USACE	146131	10YR	733.00	444.76	451.19		451.33	0.001148	3.68	509.04	256.10	0.27
USACE	146131	25YR	1097.00	444.76	451.58		451.79	0.001726	4.72	609.15	261.56	0.33
USACE	146131	50YR	1389.00	444.76	451.82		452.08	0.002200	5.46	671.22	263.60	0.38
USACE	146131	100YR	1758.00	444.76	452.26		452.55	0.002365	5.92	788.34	266.72	0.40
USACE	146131	100YRPLUS	2299.00	444.76	453.11		453.38	0.002061	5.97	1018.50	271.77	0.38
USACE	146131	200YR	2200.00	444.76	452.93		453.21	0.002154	6.01	969.87	270.77	0.39
USACE	146131	500YR	2838.00	444.76	453.99		454.23	0.001791	5.98	1260.32	285.00	0.36
USACE	146131	SEPT2011	1042.00	444.76	451.53		451.72	0.001645	4.58	594.95	261.08	0.33
USACE	146092	2YR	304.00	444.73	449.16	447.18	449.34	0.001815	3.39	91.90	58.73	0.31
USACE	146092	5YR	535.00	444.73	450.69	447.99	450.82	0.001059	3.27	365.37	257.27	0.25
USACE	146092	10YR	733.00	444.73	451.15	448.56	451.30	0.001176	3.65	481.28	264.06	0.27
USACE	146092	25YR	1097.00	444.73	451.51	450.14	451.74	0.001815	4.72	573.70	270.69	0.34
USACE	146092	50YR	1389.00	444.73	451.74	450.39	452.02	0.002290	5.44	650.48	276.48	0.38
USACE	146092	100YR	1758.00	444.73	452.19	451.06	452.49	0.002422	5.86	775.38	282.33	0.40
USACE	146092	100YRPLUS	2299.00	444.73	453.07	451.49	453.33	0.002026	5.82	1028.87	294.88	0.37
USACE	146092	200YR	2200.00	444.73	452.89	451.41	453.16	0.002126	5.87	975.32	289.25	0.38
USACE	146092	500YR	2838.00	444.73	453.96	451.84	454.19	0.001704	5.75	1299.55	311.66	0.35
USACE	146092	SEPT2011	1042.00	444.73	451.46	450.02	451.68	0.001722	4.57	560.69	269.92	0.33
USACE	146071 Private Drive		Bridge									
USACE	146041	2YR	304.00	444.41	448.61	446.81	448.80	0.002223	3.50	86.72	29.49	0.34
USACE	146041	5YR	535.00	444.41	449.11	447.66	449.57	0.004209	5.30	100.40	52.64	0.48
USACE	146041	10YR	733.00	444.41	449.48	448.24	450.16	0.005462	6.42	133.07	130.89	0.55
USACE	146041	25YR	1097.00	444.41	450.31	450.01	450.82	0.003576	5.86	302.40	247.71	0.46
USACE	146041	50YR	1389.00	444.41	451.01	450.27	451.39	0.002095	4.89	488.76	282.48	0.36
USACE	146041	100YR	1758.00	444.41	451.81	450.56	452.07	0.001310	4.22	728.36	323.45	0.29
USACE	146041	100YRPLUS	2299.00	444.41	452.83	451.09	453.06	0.000721	3.45	1066.89	338.43	0.22
USACE	146041	200YR	2200.00	444.41	452.63	451.03	452.87	0.000805	3.58	999.34	335.64	0.23

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	146041	500YR	2838.00	444.41	453.79	451.46	453.98	0.000492	3.09	1401.24	362.73	0.19
USACE	146041	SEPT2011	1042.00	444.41	450.11	448.90	450.70	0.004395	6.32	255.10	235.34	0.51
USACE	145948	2YR	304.00	444.17	448.38	446.70	448.58	0.002678	3.51	87.07	176.21	0.37
USACE	145948	5YR	535.00	444.17	449.01	447.57	449.14	0.002012	3.47	264.62	214.23	0.33
USACE	145948	10YR	733.00	444.17	449.48	448.15	449.61	0.001771	3.55	373.59	235.72	0.31
USACE	145948	25YR	1097.00	444.17	450.31	448.95	450.41	0.001350	3.51	576.47	254.37	0.28
USACE	145948	50YR	1389.00	444.17	451.01	449.20	451.10	0.001030	3.36	761.36	268.04	0.25
USACE	145948	100YR	1758.00	444.17	451.80	449.46	451.88	0.000843	3.32	977.68	286.32	0.23
USACE	145948	100YRPLUS	2299.00	444.17	452.84	449.78	452.91	0.000681	3.31	1289.90	317.86	0.22
USACE	145948	200YR	2200.00	444.17	452.63	449.73	452.71	0.000714	3.32	1226.48	308.49	0.22
USACE	145948	500YR	2838.00	444.17	453.80	450.07	453.87	0.000566	3.27	1606.92	341.93	0.20
USACE	145948	SEPT2011	1042.00	444.17	450.11	448.90	450.22	0.001549	3.65	525.84	250.87	0.30
USACE	145470	2YR	304.00	442.71	447.67		447.76	0.001159	2.65	209.96	237.45	0.25
USACE	145470	5YR	535.00	442.71	448.44		448.52	0.001030	2.84	417.59	298.46	0.24
USACE	145470	10YR	733.00	442.71	449.04		449.10	0.000837	2.79	605.09	330.45	0.22
USACE	145470	25YR	1097.00	442.71	450.00		450.05	0.000596	2.65	937.06	355.58	0.19
USACE	145470	50YR	1389.00	442.71	450.79		450.83	0.000456	2.52	1229.81	387.95	0.17
USACE	145470	100YR	1758.00	442.71	451.62		451.66	0.000373	2.46	1563.64	416.22	0.16
USACE	145470	100YRPLUS	2299.00	442.71	452.70		452.73	0.000305	2.43	2031.40	450.38	0.15
USACE	145470	200YR	2200.00	442.71	452.49		452.52	0.000320	2.45	1937.14	443.69	0.15
USACE	145470	500YR	2838.00	442.71	453.69		453.72	0.000257	2.40	2491.76	483.63	0.14
USACE	145470	SEPT2011	1042.00	442.71	449.74		449.80	0.000709	2.81	845.47	348.43	0.21
USACE	145076	2YR	304.00	441.31	447.29	444.56	447.37	0.000915	2.52	248.34	259.13	0.22
USACE	145076	5YR	535.00	441.31	448.08	445.64	448.16	0.000934	2.87	485.45	434.05	0.23
USACE	145076	10YR	733.00	441.31	448.75	446.83	448.81	0.000760	2.82	701.39	481.76	0.21
USACE	145076	25YR	1097.00	441.31	449.79	447.50	449.85	0.000587	2.78	1076.08	768.43	0.19
USACE	145076	50YR	1389.00	441.31	450.63	447.95	450.67	0.000465	2.68	1386.90	970.17	0.17
USACE	145076	100YR	1758.00	441.31	451.48	448.21	451.53	0.000405	2.69	1719.63	1023.72	0.16
USACE	145076	100YRPLUS	2299.00	441.31	452.58	448.55	452.62	0.000352	2.72	2164.35	1080.40	0.16
USACE	145076	200YR	2200.00	441.31	452.37	448.49	452.41	0.000365	2.73	2076.83	1070.30	0.16
USACE	145076	500YR	2838.00	441.31	453.58	448.80	453.62	0.000317	2.77	2571.56	1114.85	0.15
USACE	145076	SEPT2011	1042.00	441.31	449.49	447.35	449.55	0.000710	2.96	964.48	740.60	0.21
USACE	144562	2YR	707.00	440.15	445.86	444.36	446.18	0.004048	4.93	291.37	467.51	0.46
USACE	144562	5YR	1366.00	440.15	446.95	446.31	447.17	0.002819	4.91	753.22	694.49	0.40
USACE	144562	10YR	2084.00	440.15	447.80	446.78	447.98	0.002342	4.99	1146.23	729.55	0.37
USACE	144562	25YR	3368.00	440.15	448.97	447.33	449.14	0.002036	5.29	1717.65	761.71	0.36
USACE	144562	50YR	4494.00	440.15	449.89	447.64	450.06	0.001824	5.45	2186.09	787.07	0.35
USACE	144562	100YR	5685.00	440.15	450.81	448.07	450.98	0.001659	5.61	2666.09	812.36	0.34
USACE	144562	100YRPLUS	7435.00	440.15	451.96	448.50	452.14	0.001503	5.81	3298.62	890.54	0.33
USACE	144562	200YR	7039.00	440.15	451.74	448.42	451.91	0.001511	5.73	3174.80	866.31	0.33
USACE	144562	500YR	9127.00	440.15	453.01	448.90	453.18	0.001364	5.92	3909.55	941.08	0.32
USACE	144562	SEPT2011	2911.00	440.15	448.67	447.15	448.84	0.001936	5.01	1572.18	748.18	0.35
USACE	144197	2YR	707.00	439.49	445.04	442.67	445.22	0.001700	3.57	346.07	331.47	0.31
USACE	144197	5YR	1366.00	439.49	446.24	444.63	446.41	0.001544	4.03	798.25	430.25	0.31
USACE	144197	10YR	2084.00	439.49	447.12	445.55	447.30	0.001521	4.43	1218.70	513.76	0.31
USACE	144197	25YR	3368.00	439.49	448.37	446.21	448.54	0.001349	4.72	1846.27	566.12	0.31
USACE	144197	50YR	4494.00	439.49	449.35	446.89	449.52	0.001231	4.90	2338.49	639.76	0.30
USACE	144197	100YR	5685.00	439.49	450.31	447.33	450.48	0.001133	5.05	2823.08	778.83	0.29
USACE	144197	100YRPLUS	7435.00	439.49	451.49	447.80	451.67	0.001091	5.37	3419.39	926.64	0.29
USACE	144197	200YR	7039.00	439.49	451.28	447.69	451.45	0.001077	5.26	3310.90	898.73	0.29
USACE	144197	500YR	9127.00	439.49	452.56	448.20	452.74	0.001053	5.62	3961.52	1108.74	0.29
USACE	144197	SEPT2011	2911.00	439.49	448.13	446.08	448.28	0.001214	4.38	1725.14	563.20	0.29
USACE	143688	2YR	637.00	438.99	444.39		444.49	0.001143	3.11	516.72	355.44	0.26
USACE	143688	5YR	1339.00	438.99	445.59		445.70	0.001203	3.74	969.59	394.59	0.28
USACE	143688	10YR	1996.00	438.99	446.50		446.61	0.001137	4.02	1330.75	400.56	0.28
USACE	143688	25YR	3130.00	438.99	447.79		447.91	0.001090	4.43	1854.67	413.20	0.28
USACE	143688	50YR	4160.00	438.99	448.80		448.93	0.001066	4.74	2296.13	474.27	0.28
USACE	143688	100YR	5332.00	438.99	449.79		449.93	0.001013	4.97	2787.24	509.10	0.28
USACE	143688	100YRPLUS	6973.00	438.99	451.00		451.14	0.000965	5.23	3418.28	537.81	0.28
USACE	143688	200YR	6657.00	438.99	450.79		450.92	0.000971	5.18	3303.40	532.03	0.28
USACE	143688	500YR	8657.00	438.99	452.08		452.23	0.000934	5.48	4018.84	573.39	0.28
USACE	143688	SEPT2011	2921.00	438.99	447.57		447.69	0.001094	4.35	1763.34	409.29	0.28
USACE	143365	2YR	637.00	438.30	443.68		443.88	0.003811	4.21	313.58	261.26	0.38
USACE	143365	5YR	1339.00	438.30	444.97		445.14	0.002926	4.50	667.64	291.57	0.35
USACE	143365	10YR	1996.00	438.30	445.93		446.10	0.002573	4.74	963.49	319.22	0.34
USACE	143365	25YR	3130.00	438.30	447.28		447.45	0.002174	4.99	1413.20	337.25	0.33
USACE	143365	50YR	4160.00	438.30	448.32		448.49	0.001985	5.21	1765.04	342.69	0.32
USACE	143365	100YR	5332.00	438.30	449.32		449.51	0.001912	5.52	2112.85	350.56	0.32
USACE	143365	100YRPLUS	6973.00	438.30	450.52		450.73	0.001922	5.99	2550.49	387.01	0.32
USACE	143365	200YR	6657.00	438.30	450.30		450.51	0.001932	5.93	2467.82	380.58	0.32
USACE	143365	500YR	8657.00	438.30	451.61		451.83	0.001869	6.31	2981.62	407.02	0.33
USACE	143365	SEPT2011	2921.00	438.30	447.05		447.22	0.002235	4.96	1335.28	335.97	0.33
USACE	143120	2YR	637.00	437.65	443.10		443.22	0.001888	3.06	422.01	325.75	0.28
USACE	143120	5YR	1339.00	437.65	444.50		444.61	0.001570	3.45	892.14	349.31	0.27
USACE	143120	10YR	1996.00	437.65	445.49		445.61	0.001533	3.83	1249.81	383.81	0.27
USACE	143120	25YR	3130.00	437.65	446.89		447.02	0.001401	4.20	1821.74	416.42	0.27
USACE	143120	50YR	4160.00	437.65	447.92		448.08	0.001432	4.62	2277.73	466.96	0.28

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	143120	100YR	5332.00	437.65	448.95		449.11	0.001381	4.89	2769.29	492.57	0.28
USACE	143120	100YRPLUS	6973.00	437.65	450.15		450.33	0.001353	5.24	3430.65	575.36	0.28
USACE	143120	200YR	6657.00	437.65	449.94		450.11	0.001359	5.18	3306.06	566.87	0.28
USACE	143120	500YR	8657.00	437.65	451.25		451.44	0.001321	5.53	4092.12	622.72	0.28
USACE	143120	SEPT2011	2921.00	437.65	446.65		446.78	0.001427	4.14	1721.93	414.03	0.27
USACE	142662	2YR	637.00	436.72	442.60		442.67	0.000839	2.35	524.29	329.25	0.19
USACE	142662	5YR	1339.00	436.72	444.01		444.10	0.000937	2.96	998.19	346.62	0.21
USACE	142662	10YR	1996.00	436.72	444.99		445.09	0.000986	3.36	1356.93	386.56	0.22
USACE	142662	25YR	3130.00	436.72	446.39		446.52	0.001044	3.90	1915.03	409.44	0.24
USACE	142662	50YR	4160.00	436.72	447.42		447.57	0.001065	4.25	2343.03	429.24	0.24
USACE	142662	100YR	5332.00	436.72	448.43		448.60	0.001128	4.68	2791.75	458.62	0.25
USACE	142662	100YRPLUS	6973.00	436.72	449.63		449.82	0.001169	5.12	3350.70	476.11	0.26
USACE	142662	200YR	6657.00	436.72	449.41		449.60	0.001160	5.03	3248.77	472.75	0.26
USACE	142662	500YR	8657.00	436.72	450.71		450.92	0.001216	5.53	3882.84	500.41	0.27
USACE	142662	SEPT2011	2921.00	436.72	446.14		446.27	0.001053	3.84	1813.87	407.55	0.24
USACE	142035	2YR	637.00	436.35	442.05		442.12	0.000958	2.51	508.76	247.05	0.20
USACE	142035	5YR	1339.00	436.35	443.32		443.44	0.001298	3.43	827.29	256.24	0.25
USACE	142035	10YR	1996.00	436.35	444.23		444.38	0.001489	4.04	1063.97	267.25	0.27
USACE	142035	25YR	3130.00	436.35	445.53		445.73	0.001725	4.88	1420.74	282.08	0.30
USACE	142035	50YR	4160.00	436.35	446.51		446.75	0.001827	5.42	1700.76	286.02	0.32
USACE	142035	100YR	5332.00	436.35	447.45		447.73	0.001960	5.99	1970.29	289.49	0.33
USACE	142035	100YRPLUS	6973.00	436.35	448.55		448.89	0.002154	6.73	2290.78	293.51	0.36
USACE	142035	200YR	6657.00	436.35	448.35		448.69	0.002116	6.59	2233.39	292.80	0.35
USACE	142035	500YR	8657.00	436.35	449.54		449.95	0.002327	7.40	2583.03	296.96	0.37
USACE	142035	SEPT2011	2921.00	436.35	445.30		445.49	0.001649	4.69	1358.37	280.73	0.29
USACE	141692	2YR	637.00	435.98	441.49		441.63	0.002474	3.57	402.01	242.86	0.32
USACE	141692	5YR	1339.00	435.98	442.64		442.82	0.002881	4.56	683.48	247.88	0.35
USACE	141692	10YR	1996.00	435.98	443.48		443.69	0.003051	5.19	895.70	261.14	0.37
USACE	141692	25YR	3130.00	435.98	444.73		444.99	0.003083	5.92	1232.61	276.83	0.39
USACE	141692	50YR	4160.00	435.98	445.66		445.97	0.003252	6.59	1495.28	284.51	0.41
USACE	141692	100YR	5332.00	435.98	446.56		446.91	0.003335	7.16	1753.12	288.39	0.42
USACE	141692	100YRPLUS	6973.00	435.98	447.59		448.00	0.003565	7.95	2051.31	292.75	0.44
USACE	141692	200YR	6657.00	435.98	447.41		447.81	0.003513	7.80	1998.71	291.87	0.44
USACE	141692	500YR	8657.00	435.98	448.51		448.99	0.003781	8.68	2323.37	297.25	0.46
USACE	141692	SEPT2011	2921.00	435.98	444.52		444.77	0.003070	5.79	1174.89	273.58	0.39
USACE	141364	2YR	637.00	435.78	440.90		440.95	0.001713	2.62	664.50	388.02	0.25
USACE	141364	5YR	1339.00	435.78	442.05		442.11	0.001619	3.11	1119.92	401.22	0.26
USACE	141364	10YR	1996.00	435.78	442.90		442.96	0.001588	3.46	1461.78	406.37	0.26
USACE	141364	25YR	3130.00	435.78	444.20		444.27	0.001481	3.86	1996.66	419.86	0.26
USACE	141364	50YR	4160.00	435.78	445.14		445.22	0.001491	4.24	2397.76	435.61	0.27
USACE	141364	100YR	5332.00	435.78	446.01		446.12	0.001620	4.75	2784.32	445.57	0.29
USACE	141364	100YRPLUS	6973.00	435.78	447.02		447.15	0.001731	5.29	3235.86	450.88	0.30
USACE	141364	200YR	6657.00	435.78	446.85		446.97	0.001702	5.19	3157.54	449.70	0.30
USACE	141364	500YR	8657.00	435.78	447.92		448.07	0.001877	5.86	3644.08	463.34	0.32
USACE	141364	SEPT2011	2921.00	435.78	443.99		444.06	0.001486	3.79	1907.12	417.00	0.26
USACE	140990	2YR	637.00	435.28	439.99		440.10	0.003181	3.52	434.06	286.50	0.35
USACE	140990	5YR	1339.00	435.28	441.21		441.33	0.002762	4.08	827.18	351.57	0.34
USACE	140990	10YR	1996.00	435.28	442.09		442.22	0.002570	4.44	1143.57	373.12	0.34
USACE	140990	25YR	3130.00	435.28	443.49		443.61	0.002118	4.72	1685.21	398.01	0.32
USACE	140990	50YR	4160.00	435.28	444.43		444.57	0.002050	5.07	2066.53	408.04	0.32
USACE	140990	100YR	5332.00	435.28	445.26		445.43	0.002135	5.54	2407.94	416.98	0.34
USACE	140990	100YRPLUS	6973.00	435.28	446.20		446.40	0.002324	6.20	2814.24	443.90	0.36
USACE	140990	200YR	6657.00	435.28	446.04		446.24	0.002270	6.06	2745.37	439.86	0.35
USACE	140990	500YR	8657.00	435.28	447.00		447.24	0.002622	6.96	3172.56	454.35	0.38
USACE	140990	SEPT2011	2921.00	435.28	443.26		443.39	0.002160	4.66	1597.10	395.85	0.32
USACE	140736	2YR	637.00	434.81	439.57		439.63	0.001057	2.36	622.79	355.79	0.21
USACE	140736	5YR	1339.00	434.81	440.78		440.86	0.001182	2.98	1065.52	378.11	0.23
USACE	140736	10YR	1996.00	434.81	441.65		441.74	0.001240	3.39	1401.24	392.31	0.25
USACE	140736	25YR	3130.00	434.81	443.10		443.20	0.001132	3.75	1984.97	411.46	0.24
USACE	140736	50YR	4160.00	434.81	444.04		444.15	0.001197	4.17	2382.13	440.82	0.25
USACE	140736	100YR	5332.00	434.81	444.83		444.97	0.001319	4.66	2739.92	457.00	0.27
USACE	140736	100YRPLUS	6973.00	434.81	445.70		445.89	0.001582	5.42	3145.89	474.53	0.30
USACE	140736	200YR	6657.00	434.81	445.56		445.74	0.001535	5.28	3078.61	472.69	0.30
USACE	140736	500YR	8657.00	434.81	446.43		446.66	0.001799	6.05	3496.89	483.99	0.33
USACE	140736	SEPT2011	2921.00	434.81	442.88		442.97	0.001130	3.67	1893.04	409.10	0.24
USACE	140437	2YR	637.00	433.89	439.12		439.22	0.001895	3.06	412.73	253.15	0.28
USACE	140437	5YR	1339.00	433.89	440.26		440.39	0.002142	3.87	713.48	281.11	0.31
USACE	140437	10YR	1996.00	433.89	441.13		441.27	0.002086	4.25	967.66	304.95	0.31
USACE	140437	25YR	3130.00	433.89	442.68		442.81	0.001572	4.32	1497.49	370.37	0.28
USACE	140437	50YR	4160.00	433.89	443.61		443.76	0.001541	4.63	1859.86	413.24	0.28
USACE	140437	100YR	5332.00	433.89	444.38		444.55	0.001620	5.04	2189.58	444.03	0.29
USACE	140437	100YRPLUS	6973.00	433.89	445.20		445.40	0.001774	5.59	2560.59	461.30	0.31
USACE	140437	200YR	6657.00	433.89	445.07		445.26	0.001730	5.47	2501.01	458.65	0.31
USACE	140437	500YR	8657.00	433.89	445.89		446.12	0.001947	6.12	2879.54	474.64	0.33
USACE	140437	SEPT2011	2921.00	433.89	442.45		442.58	0.001601	4.27	1413.82	360.59	0.28
USACE	139930	2YR	637.00	433.13	438.32		438.41	0.001391	2.95	414.78	312.30	0.27
USACE	139930	5YR	1339.00	433.13	439.56		439.64	0.001092	3.19	829.66	367.54	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	139930	10YR	1996.00	433.13	440.54		440.61	0.000881	3.24	1210.66	406.76	0.24
USACE	139930	25YR	3130.00	433.13	442.30		442.36	0.000546	3.04	1976.45	457.11	0.19
USACE	139930	50YR	4160.00	433.13	443.25		443.32	0.000537	3.26	2419.89	477.91	0.20
USACE	139930	100YR	5332.00	433.13	443.99		444.07	0.000596	3.64	2779.84	501.52	0.21
USACE	139930	100YRPLUS	6973.00	433.13	444.75		444.85	0.000699	4.15	3168.47	519.37	0.23
USACE	139930	200YR	6657.00	433.13	444.63		444.74	0.000673	4.04	3109.51	516.53	0.23
USACE	139930	500YR	8657.00	433.13	445.37		445.50	0.000809	4.64	3493.53	530.00	0.25
USACE	139930	SEPT2011	2921.00	433.13	442.06		442.12	0.000559	3.01	1867.77	451.92	0.20
USACE	139650	2YR	637.00	432.48	438.00		438.07	0.001048	2.74	472.93	354.65	0.24
USACE	139650	5YR	1339.00	432.48	439.35		439.40	0.000705	2.72	983.02	404.94	0.21
USACE	139650	10YR	1996.00	432.48	440.37		440.42	0.000563	2.73	1410.95	431.50	0.19
USACE	139650	25YR	3130.00	432.48	442.20		442.24	0.000356	2.57	2288.09	511.10	0.16
USACE	139650	50YR	4160.00	432.48	443.15		443.19	0.000357	2.77	2781.55	529.28	0.16
USACE	139650	100YR	5332.00	432.48	443.87		443.93	0.000401	3.09	3173.51	549.40	0.17
USACE	139650	100YRPLUS	6973.00	432.48	444.61		444.69	0.000484	3.56	3588.89	572.02	0.19
USACE	139650	200YR	6657.00	432.48	444.51		444.58	0.000463	3.46	3527.01	568.68	0.19
USACE	139650	500YR	8657.00	432.48	445.21		445.31	0.000574	4.02	3935.37	590.19	0.21
USACE	139650	SEPT2011	2921.00	432.48	441.96		442.00	0.000362	2.54	2165.26	504.68	0.16
USACE	139239	2YR	637.00	431.70	437.41	435.41	437.55	0.001547	3.43	322.61	341.17	0.29
USACE	139239	5YR	1339.00	431.70	439.00	437.43	439.08	0.000837	3.12	734.91	372.60	0.23
USACE	139239	10YR	1996.00	431.70	440.07	437.83	440.16	0.000707	3.21	1014.18	392.60	0.22
USACE	139239	25YR	3130.00	431.70	442.08	438.34	442.12	0.000256	2.29	2212.24	428.56	0.14
USACE	139239	50YR	4160.00	431.70	443.02	438.73	443.07	0.000275	2.54	2626.82	453.08	0.14
USACE	139239	100YR	5332.00	431.70	443.73	439.11	443.79	0.000322	2.88	2953.39	471.45	0.16
USACE	139239	100YRPLUS	6973.00	431.70	444.43	439.58	444.51	0.000403	3.36	3290.23	485.90	0.18
USACE	139239	200YR	6657.00	431.70	444.33	439.50	444.41	0.000383	3.26	3242.03	484.10	0.17
USACE	139239	500YR	8657.00	431.70	444.98	440.02	445.09	0.000494	3.84	3563.93	500.45	0.20
USACE	139239	SEPT2011	2921.00	431.70	441.83	438.26	441.87	0.000280	2.35	1947.05	423.94	0.14
USACE	138937	2YR	637.00	431.20	437.19	433.83	437.26	0.000553	2.22	316.13	363.99	0.18
USACE	138937	5YR	1339.00	431.20	438.67	435.09	438.83	0.000827	3.28	461.68	437.86	0.23
USACE	138937	10YR	1996.00	431.20	439.65	436.11	439.88	0.001036	4.05	557.39	487.58	0.27
USACE	138937	25YR	3130.00	431.20	442.03	437.22	442.06	0.000147	1.85	2334.02	706.94	0.11
USACE	138937	50YR	4160.00	431.20	442.98	437.98	443.01	0.000133	1.88	3327.59	743.11	0.10
USACE	138937	100YR	5332.00	431.20	443.68	438.74	443.72	0.000158	2.13	3736.10	786.34	0.11
USACE	138937	100YRPLUS	6973.00	431.20	444.37	439.67	444.42	0.000199	2.50	4154.84	823.97	0.13
USACE	138937	200YR	6657.00	431.20	444.27	439.50	444.32	0.000189	2.42	4095.70	820.38	0.12
USACE	138937	500YR	8657.00	431.20	444.91	440.52	444.98	0.000246	2.86	4490.26	850.08	0.14
USACE	138937	SEPT2011	2921.00	431.20	441.39	437.03	441.67	0.000960	4.51	728.09	663.37	0.27
USACE	138875 Lebanon Road		Bridge									
USACE	138830	2YR	637.00	430.90	437.02	433.89	437.18	0.001248	3.22	208.63	103.91	0.27
USACE	138830	5YR	1339.00	430.90	438.52	435.46	438.81	0.001696	4.55	348.47	214.42	0.33
USACE	138830	10YR	1996.00	430.90	439.19	436.56	439.64	0.002390	5.79	412.25	257.06	0.40
USACE	138830	25YR	3130.00	430.90	440.36	438.32	440.68	0.001805	5.61	977.01	366.93	0.35
USACE	138830	50YR	4160.00	430.90	440.92	439.13	441.30	0.002083	6.31	1191.12	421.05	0.38
USACE	138830	100YR	5332.00	430.90	441.60	439.81	442.01	0.002198	6.82	1470.12	494.19	0.40
USACE	138830	100YRPLUS	6973.00	430.90	442.41	440.45	442.84	0.002225	7.27	1859.06	565.80	0.41
USACE	138830	200YR	6657.00	430.90	442.37	440.39	442.77	0.002093	7.03	1836.90	565.43	0.39
USACE	138830	500YR	8657.00	430.90	443.04	441.08	443.49	0.002254	7.62	2174.14	571.55	0.41
USACE	138830	SEPT2011	2921.00	430.90	440.18	438.12	440.50	0.001792	5.50	915.72	349.49	0.35
USACE	138741	2YR	637.00	430.75	436.18	435.12	436.82	0.007123	6.47	105.89	52.82	0.60
USACE	138741	5YR	1339.00	430.75	437.32	437.32	438.30	0.008827	8.67	209.84	118.60	0.70
USACE	138741	10YR	1996.00	430.75	438.09	438.09	439.11	0.008503	9.41	324.18	194.34	0.71
USACE	138741	25YR	3130.00	430.75	438.89	438.89	440.10	0.009407	10.85	460.88	236.99	0.76
USACE	138741	50YR	4160.00	430.75	439.49	439.49	440.71	0.009392	11.52	655.65	259.90	0.77
USACE	138741	100YR	5332.00	430.75	439.98	439.98	441.35	0.010355	12.65	784.68	277.24	0.82
USACE	138741	100YRPLUS	6973.00	430.75	440.94	440.94	442.23	0.009195	12.95	1100.69	393.84	0.79
USACE	138741	200YR	6657.00	430.75	440.57	440.56	442.08	0.010975	13.72	965.29	361.24	0.86
USACE	138741	500YR	8657.00	430.75	442.48	441.47	443.15	0.004512	10.15	1740.35	539.95	0.57
USACE	138741	SEPT2011	2921.00	430.75	438.77	438.77	439.94	0.009179	10.58	440.20	233.22	0.75
USACE	138644	2YR	637.00	430.51	435.85	434.39	436.23	0.003986	5.28	156.67	300.86	0.46
USACE	138644	5YR	1339.00	430.51	436.89	436.54	437.25	0.003750	5.97	396.23	454.54	0.47
USACE	138644	10YR	1996.00	430.51	437.68	436.99	437.96	0.002857	5.74	635.04	527.72	0.42
USACE	138644	25YR	3130.00	430.51	438.80	437.61	439.02	0.001995	5.39	990.09	546.83	0.36
USACE	138644	50YR	4160.00	430.51	439.64	437.95	439.70	0.000581	3.14	2206.15	590.90	0.20
USACE	138644	100YR	5332.00	430.51	440.54	438.28	440.61	0.000495	3.11	2746.41	603.98	0.19
USACE	138644	100YRPLUS	6973.00	430.51	441.68	438.70	441.75	0.000425	3.13	3439.45	614.58	0.18
USACE	138644	200YR	6657.00	430.51	441.47	438.61	441.54	0.000435	3.12	3310.64	612.22	0.18
USACE	138644	500YR	8657.00	430.51	442.81	439.07	442.88	0.000369	3.14	4146.75	634.28	0.17
USACE	138644	SEPT2011	2921.00	430.51	438.61	437.53	438.83	0.002106	5.43	928.04	538.79	0.37
USACE	138491	2YR	637.00	429.98	435.74	433.40	435.84	0.001179	2.99	362.98	511.24	0.26
USACE	138491	5YR	1339.00	429.98	436.84	435.37	436.92	0.000929	3.09	857.48	583.45	0.24
USACE	138491	10YR	1996.00	429.98	437.61	436.06	437.69	0.000797	3.14	1222.54	593.76	0.22
USACE	138491	25YR	3130.00	429.98	438.74	436.54	438.81	0.000684	3.26	1761.67	613.01	0.21
USACE	138491	50YR	4160.00	429.98	439.58	436.86	439.63	0.000387	2.64	2760.96	621.14	0.16
USACE	138491	100YR	5332.00	429.98	440.49	437.14	440.54	0.000357	2.72	3328.09	629.37	0.16
USACE	138491	100YRPLUS	6973.00	429.98	441.63	437.51	441.69	0.000331	2.84	4053.65	639.47	0.16
USACE	138491	200YR	6657.00	429.98	441.42	437.45	441.47	0.000335	2.82	3918.98	637.65	0.16

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	138491	500YR	8657.00	429.98	442.77	437.83	442.83	0.000304	2.92	4785.88	648.99	0.15
USACE	138491	SEPT2011	2921.00	429.98	438.54	436.48	438.61	0.000705	3.24	1665.48	610.98	0.22
USACE	138163	2YR	637.00	429.50	435.09		435.32	0.002218	4.20	315.71	309.96	0.35
USACE	138163	5YR	1339.00	429.50	436.20		436.44	0.002382	5.06	722.17	403.00	0.38
USACE	138163	10YR	1996.00	429.50	437.06		437.28	0.002150	5.30	1089.93	451.62	0.37
USACE	138163	25YR	3130.00	429.50	438.28		438.47	0.001775	5.42	1675.42	516.16	0.35
USACE	138163	50YR	4160.00	429.50	439.23		439.39	0.001515	5.42	2190.05	548.52	0.33
USACE	138163	100YR	5332.00	429.50	440.17		440.32	0.001353	5.49	2712.55	567.04	0.31
USACE	138163	100YRPLUS	6973.00	429.50	441.34		441.49	0.001213	5.62	3392.92	596.06	0.30
USACE	138163	200YR	6657.00	429.50	441.12		441.28	0.001236	5.59	3265.19	591.01	0.31
USACE	138163	500YR	8657.00	429.50	442.50		442.65	0.001074	5.67	4104.26	625.36	0.29
USACE	138163	SEPT2011	2921.00	429.50	438.06		438.25	0.001860	5.44	1563.35	502.68	0.35
USACE	137910	2YR	638.00	429.11	434.53		434.72	0.002358	3.89	352.83	421.98	0.36
USACE	137910	5YR	1339.00	429.11	435.78		435.91	0.001591	3.88	922.02	470.29	0.31
USACE	137910	10YR	2006.00	429.11	436.70		436.82	0.001304	3.94	1366.57	502.84	0.29
USACE	137910	25YR	3146.00	429.11	437.98		438.09	0.001081	4.09	2042.95	548.67	0.27
USACE	137910	50YR	4188.00	429.11	438.96		439.06	0.000961	4.20	2591.43	568.07	0.26
USACE	137910	100YR	5378.00	429.11	439.92		440.03	0.000891	4.36	3148.28	594.61	0.25
USACE	137910	100YRPLUS	7033.00	429.11	441.11		441.22	0.000822	4.54	3871.87	620.20	0.25
USACE	137910	200YR	6720.00	429.11	440.90		441.00	0.000835	4.51	3736.60	615.82	0.25
USACE	137910	500YR	8746.00	429.11	442.30		442.41	0.000746	4.65	4623.58	646.67	0.24
USACE	137910	SEPT2011	2921.00	429.11	437.75		437.86	0.001112	4.06	1918.62	541.05	0.27
USACE	137552	2YR	638.00	428.45	433.80		433.97	0.001863	3.80	383.08	333.11	0.32
USACE	137552	5YR	1339.00	428.45	435.29		435.41	0.001274	3.84	947.91	402.75	0.28
USACE	137552	10YR	2006.00	428.45	436.28		436.40	0.001126	4.01	1356.42	419.17	0.27
USACE	137552	25YR	3146.00	428.45	437.60		437.72	0.001053	4.36	1918.05	435.61	0.27
USACE	137552	50YR	4188.00	428.45	438.59		438.72	0.001045	4.69	2364.36	459.11	0.27
USACE	137552	100YR	5378.00	428.45	439.55		439.69	0.001039	5.01	2812.40	469.09	0.28
USACE	137552	100YRPLUS	7033.00	428.45	440.75		440.90	0.001030	5.37	3378.26	478.03	0.28
USACE	137552	200YR	6720.00	428.45	440.53		440.68	0.001034	5.31	3273.20	476.45	0.28
USACE	137552	500YR	8746.00	428.45	441.95		442.11	0.000994	5.65	3956.56	488.22	0.28
USACE	137552	SEPT2011	2921.00	428.45	437.37		437.48	0.001057	4.29	1817.79	432.21	0.27
USACE	137089	2YR	638.00	427.50	432.96		433.16	0.001669	3.70	253.19	196.91	0.31
USACE	137089	5YR	1339.00	427.50	434.51		434.74	0.001640	4.49	616.91	258.45	0.33
USACE	137089	10YR	2006.00	427.50	435.49		435.75	0.001691	5.05	882.53	284.78	0.34
USACE	137089	25YR	3146.00	427.50	436.77		437.08	0.001765	5.78	1270.29	314.98	0.36
USACE	137089	50YR	4188.00	427.50	437.73		438.07	0.001832	6.34	1583.76	340.18	0.37
USACE	137089	100YR	5378.00	427.50	438.67		439.04	0.001859	6.82	1910.48	353.40	0.38
USACE	137089	100YRPLUS	7033.00	427.50	439.87		440.26	0.001812	7.26	2348.98	379.86	0.38
USACE	137089	200YR	6720.00	427.50	439.64		440.03	0.001827	7.19	2264.74	375.32	0.38
USACE	137089	500YR	8746.00	427.50	441.10		441.50	0.001684	7.50	2831.61	400.13	0.37
USACE	137089	SEPT2011	2921.00	427.50	436.55		436.85	0.001749	5.65	1200.48	311.22	0.35
USACE	136331	2YR	638.00	425.60	432.05		432.18	0.000999	2.98	280.27	208.86	0.24
USACE	136331	5YR	1339.00	425.60	433.47		433.67	0.001251	3.98	624.23	254.21	0.28
USACE	136331	10YR	2006.00	425.60	434.35		434.60	0.001451	4.68	851.52	264.57	0.31
USACE	136331	25YR	3146.00	425.60	435.47		435.80	0.001740	5.66	1155.27	277.59	0.35
USACE	136331	50YR	4188.00	425.60	436.29		436.69	0.001950	6.39	1388.82	287.89	0.38
USACE	136331	100YR	5378.00	425.60	437.14		437.60	0.002107	7.05	1636.26	296.65	0.40
USACE	136331	100YRPLUS	7033.00	425.60	438.28		438.81	0.002189	7.73	1981.58	313.34	0.41
USACE	136331	200YR	6720.00	425.60	438.08		438.59	0.002156	7.58	1919.07	305.07	0.41
USACE	136331	500YR	8746.00	425.60	439.65		440.18	0.001972	7.94	2426.79	337.46	0.40
USACE	136331	SEPT2011	2921.00	425.60	435.29		435.60	0.001675	5.47	1104.33	275.50	0.34
USACE	135719	2YR	638.00	424.60	431.33	428.19	431.49	0.001297	3.29	274.23	202.37	0.27
USACE	135719	5YR	1339.00	424.60	432.53	429.92	432.78	0.001761	4.48	607.53	300.01	0.33
USACE	135719	10YR	2006.00	424.60	433.22	431.78	433.54	0.002180	5.37	819.40	324.20	0.37
USACE	135719	25YR	3146.00	424.60	434.13	432.70	434.54	0.002621	6.43	1122.52	341.65	0.42
USACE	135719	50YR	4188.00	424.60	434.85	433.32	435.31	0.002820	7.10	1375.13	356.87	0.44
USACE	135719	100YR	5378.00	424.60	435.70	433.85	436.18	0.002773	7.53	1685.45	373.90	0.44
USACE	135719	100YRPLUS	7033.00	424.60	436.99	434.49	437.44	0.002412	7.68	2180.20	398.52	0.42
USACE	135719	200YR	6720.00	424.60	436.77	434.39	437.22	0.002449	7.63	2094.79	394.17	0.43
USACE	135719	500YR	8746.00	424.60	438.67	435.07	439.04	0.001767	7.28	2883.26	437.60	0.37
USACE	135719	SEPT2011	2921.00	424.60	434.03	432.56	434.40	0.002434	6.14	1087.48	338.95	0.40
USACE	135120	2YR	638.00	423.78	430.35	427.97	430.53	0.002011	3.72	255.25	190.04	0.33
USACE	135120	5YR	1339.00	423.78	431.32	430.40	431.54	0.002466	4.75	497.70	314.89	0.37
USACE	135120	10YR	2006.00	423.78	432.00	431.02	432.21	0.002175	4.85	721.04	379.63	0.36
USACE	135120	25YR	3146.00	423.78	432.98	431.68	433.18	0.001848	4.97	1053.61	506.90	0.34
USACE	135120	50YR	4188.00	423.78	433.78	432.02	433.99	0.001640	5.05	1340.38	586.70	0.32
USACE	135120	100YR	5378.00	423.78	434.83	432.35	435.03	0.001277	4.86	1733.53	670.98	0.29
USACE	135120	100YRPLUS	7033.00	423.78	436.35	432.76	436.53	0.000912	4.58	2323.76	768.77	0.25
USACE	135120	200YR	6720.00	423.78	436.12	432.69	436.30	0.000942	4.58	2228.35	758.04	0.26
USACE	135120	500YR	8746.00	423.78	438.26	433.14	438.41	0.000593	4.15	3124.58	838.88	0.21
USACE	135120	SEPT2011	2921.00	423.78	433.09	431.60	433.24	0.001445	4.44	1090.28	516.37	0.30
USACE	134640	2YR	596.00	423.18	429.71	427.39	429.79	0.001107	2.93	411.86	296.05	0.25
USACE	134640	5YR	1184.00	423.18	430.51	429.38	430.62	0.001408	3.70	650.95	303.41	0.28
USACE	134640	10YR	1773.00	423.18	431.21	429.83	431.33	0.001441	4.07	867.30	312.50	0.29
USACE	134640	25YR	2770.00	423.18	432.25	430.31	432.39	0.001396	4.46	1200.34	326.47	0.30
USACE	134640	50YR	3671.00	423.18	433.11	430.66	433.26	0.001319	4.68	1487.31	339.73	0.29

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	134640	100YR	4726.00	423.18	434.27	431.01	434.42	0.001203	4.90	1906.04	463.38	0.29
USACE	134640	100YRPLUS	6181.00	423.18	435.97	431.44	436.10	0.000825	4.56	2614.46	593.85	0.25
USACE	134640	200YR	5925.00	423.18	435.72	431.37	435.85	0.000859	4.58	2506.89	578.50	0.25
USACE	134640	500YR	7769.00	423.18	438.02	431.87	438.13	0.000543	4.15	3510.60	680.99	0.21
USACE	134640	SEPT2011	2737.00	423.18	432.51	430.30	432.62	0.001121	4.09	1284.43	330.46	0.27
USACE	133807	2YR	596.00	422.18	428.18		428.41	0.002821	4.25	260.49	327.40	0.38
USACE	133807	5YR	1184.00	422.18	429.41		429.51	0.001373	3.57	701.76	370.06	0.28
USACE	133807	10YR	1773.00	422.18	430.25		430.34	0.001093	3.54	1026.09	393.98	0.26
USACE	133807	25YR	2770.00	422.18	431.40		431.49	0.000941	3.69	1489.23	424.46	0.25
USACE	133807	50YR	3671.00	422.18	432.37		432.46	0.000799	3.71	1910.20	443.12	0.23
USACE	133807	100YR	4726.00	422.18	433.69		433.77	0.000588	3.53	2512.57	466.15	0.20
USACE	133807	100YRPLUS	6181.00	422.18	435.59		435.65	0.000402	3.30	3438.55	506.45	0.17
USACE	133807	200YR	5925.00	422.18	435.32		435.38	0.000416	3.30	3303.24	501.35	0.18
USACE	133807	500YR	7769.00	422.18	437.77		437.83	0.000271	3.05	4575.89	538.11	0.15
USACE	133807	SEPT2011	2737.00	422.18	431.91		431.97	0.000616	3.13	1708.25	434.56	0.20
USACE	133179	2YR	596.00	421.33	427.85		427.89	0.000341	1.82	534.04	348.15	0.14
USACE	133179	5YR	1184.00	421.33	429.06		429.11	0.000355	2.15	971.17	367.94	0.15
USACE	133179	10YR	1773.00	421.33	429.90		429.96	0.000380	2.43	1285.37	388.09	0.16
USACE	133179	25YR	2770.00	421.33	431.05		431.12	0.000399	2.75	1742.28	408.33	0.17
USACE	133179	50YR	3671.00	421.33	432.05		432.12	0.000381	2.90	2160.80	427.81	0.17
USACE	133179	100YR	4726.00	421.33	433.44		433.51	0.000309	2.87	2767.93	445.92	0.16
USACE	133179	100YRPLUS	6181.00	421.33	435.41		435.46	0.000234	2.80	3671.94	472.56	0.14
USACE	133179	200YR	5925.00	421.33	435.13		435.19	0.000238	2.79	3543.35	469.41	0.14
USACE	133179	500YR	7769.00	421.33	437.64		437.69	0.000173	2.69	4760.53	500.37	0.12
USACE	133179	SEPT2011	2737.00	421.33	431.68		431.73	0.000262	2.34	2004.40	422.42	0.14
USACE	132636	2YR	596.00	420.51	427.51		427.60	0.000879	2.79	360.74	243.40	0.22
USACE	132636	5YR	1184.00	420.51	428.73		428.82	0.000833	3.15	703.82	304.77	0.23
USACE	132636	10YR	1773.00	420.51	429.56		429.66	0.000837	3.44	968.47	328.98	0.23
USACE	132636	25YR	2770.00	420.51	430.71		430.81	0.000817	3.77	1359.79	354.14	0.23
USACE	132636	50YR	3671.00	420.51	431.73		431.84	0.000742	3.89	1747.89	423.90	0.23
USACE	132636	100YR	4726.00	420.51	433.20		433.29	0.000533	3.64	2423.08	480.68	0.20
USACE	132636	100YRPLUS	6181.00	420.51	435.24		435.31	0.000351	3.33	3485.51	566.73	0.17
USACE	132636	200YR	5925.00	420.51	434.96		435.03	0.000363	3.33	3329.53	553.02	0.17
USACE	132636	500YR	7769.00	420.51	437.54		437.59	0.000222	2.96	4867.28	635.38	0.14
USACE	132636	SEPT2011	2737.00	420.51	431.47		431.54	0.000479	3.07	1642.46	388.39	0.18
USACE	132107	2YR	596.00	419.86	427.15	423.76	427.21	0.000621	2.43	438.02	225.84	0.19
USACE	132107	5YR	1184.00	419.86	428.35	426.08	428.42	0.000701	2.95	731.71	264.03	0.20
USACE	132107	10YR	1773.00	419.86	429.15	426.72	429.24	0.000781	3.37	947.89	274.67	0.22
USACE	132107	25YR	2770.00	419.86	430.27	427.46	430.38	0.000842	3.85	1263.72	286.95	0.23
USACE	132107	50YR	3671.00	419.86	431.32	427.91	431.44	0.000782	4.01	1570.40	296.62	0.23
USACE	132107	100YR	4726.00	419.86	432.89	428.35	433.00	0.000587	3.85	2043.64	307.05	0.20
USACE	132107	100YRPLUS	6181.00	419.86	435.01	428.88	435.11	0.000433	3.71	2713.41	329.39	0.18
USACE	132107	200YR	5925.00	419.86	434.72	428.80	434.82	0.000441	3.69	2620.89	326.84	0.18
USACE	132107	500YR	7769.00	419.86	437.36	429.36	437.45	0.000323	3.58	3523.00	383.93	0.16
USACE	132107	SEPT2011	2737.00	419.86	431.23	427.43	431.30	0.000458	3.05	1542.38	295.75	0.18
USACE	131595	2YR	596.00	419.37	426.78	422.87	426.86	0.000732	2.61	406.56	294.35	0.20
USACE	131595	5YR	1184.00	419.37	427.96	424.50	428.05	0.000772	3.07	776.51	322.93	0.22
USACE	131595	10YR	1773.00	419.37	428.72	426.72	428.83	0.000852	3.48	1026.29	332.81	0.23
USACE	131595	25YR	2770.00	419.37	429.83	427.45	429.95	0.000891	3.93	1402.20	346.69	0.24
USACE	131595	50YR	3671.00	419.37	430.93	427.86	431.05	0.000783	4.01	1796.20	364.51	0.23
USACE	131595	100YR	4726.00	419.37	432.61	428.26	432.71	0.000553	3.76	2426.36	385.26	0.20
USACE	131595	100YRPLUS	6181.00	419.37	434.82	428.74	434.90	0.000383	3.54	3429.37	504.25	0.17
USACE	131595	200YR	5925.00	419.37	434.53	428.66	434.61	0.000394	3.54	3285.83	495.01	0.17
USACE	131595	500YR	7769.00	419.37	437.23	429.18	437.30	0.000255	3.23	4734.56	755.03	0.14
USACE	131595	SEPT2011	2737.00	419.37	431.01	427.43	431.08	0.000415	2.93	1826.35	365.39	0.17
USACE	131242	2YR	596.00	419.12	426.17	423.29	426.43	0.002208	4.16	211.24	238.09	0.34
USACE	131242	5YR	1184.00	419.12	427.31	425.18	427.59	0.002363	4.97	559.36	321.63	0.36
USACE	131242	10YR	1773.00	419.12	428.03	427.06	428.33	0.002515	5.55	796.17	337.77	0.38
USACE	131242	25YR	2770.00	419.12	429.16	427.71	429.45	0.002364	5.98	1204.08	379.41	0.38
USACE	131242	50YR	3671.00	419.12	430.42	428.19	430.64	0.001751	5.69	1707.62	437.83	0.34
USACE	131242	100YR	4726.00	419.12	432.33	428.67	432.46	0.000929	4.72	2630.58	733.53	0.25
USACE	131242	100YRPLUS	6181.00	419.12	434.66	429.21	434.74	0.000524	4.04	3873.44	904.98	0.20
USACE	131242	200YR	5925.00	419.12	434.36	429.06	434.45	0.000547	4.06	3709.42	889.86	0.20
USACE	131242	500YR	7769.00	419.12	437.13	429.64	437.19	0.000322	3.55	5288.34	987.94	0.16
USACE	131242	SEPT2011	2737.00	419.12	430.77	427.70	430.88	0.000791	3.93	1869.77	512.69	0.23
USACE	130868	2YR	596.00	418.61	426.10	422.00	426.12	0.000300	1.69	614.38	561.04	0.13
USACE	130868	5YR	1184.00	418.61	427.25	423.56	427.28	0.000285	1.88	1042.52	630.23	0.13
USACE	130868	10YR	1773.00	418.61	427.95	425.41	427.99	0.000330	2.17	1316.97	735.72	0.14
USACE	130868	25YR	2770.00	418.61	429.07	426.05	429.12	0.000333	2.41	1782.79	823.02	0.15
USACE	130868	50YR	3671.00	418.61	430.34	426.35	430.39	0.000263	2.36	2330.23	871.25	0.14
USACE	130868	100YR	4726.00	418.61	432.27	426.66	432.31	0.000168	2.13	3192.77	926.20	0.11
USACE	130868	100YRPLUS	6181.00	418.61	434.61	427.01	434.65	0.000117	2.01	4293.40	1052.39	0.10
USACE	130868	200YR	5925.00	418.61	434.32	426.96	434.35	0.000119	2.00	4151.76	1027.02	0.10
USACE	130868	500YR	7769.00	418.61	437.10	427.37	437.13	0.000086	1.93	5515.24	1212.14	0.08
USACE	130868	SEPT2011	2737.00	418.61	430.74	426.03	430.76	0.000118	1.62	2505.22	882.13	0.09
USACE	130517	2YR	596.00	418.30	426.03	422.12	426.04	0.000158	1.32	849.62	404.79	0.10
USACE	130517	5YR	1184.00	418.30	427.18	424.44	427.20	0.000172	1.56	1320.08	412.22	0.10

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	130517	10YR	1773.00	418.30	427.86	425.08	427.88	0.000213	1.84	1601.89	415.24	0.12
USACE	130517	25YR	2770.00	418.30	428.98	425.51	429.01	0.000235	2.12	2068.14	545.07	0.13
USACE	130517	50YR	3671.00	418.30	430.26	425.78	430.30	0.000199	2.13	2613.96	760.40	0.12
USACE	130517	100YR	4726.00	418.30	432.21	426.06	432.25	0.000142	2.03	3484.12	1064.63	0.10
USACE	130517	100YRPLUS	6181.00	418.30	434.57	426.38	434.60	0.000110	2.01	4637.29	1311.79	0.09
USACE	130517	200YR	5925.00	418.30	434.28	426.34	434.31	0.000106	1.94	4485.05	1273.17	0.09
USACE	130517	500YR	7769.00	418.30	437.07	426.71	437.10	0.000080	1.91	6021.26	1427.13	0.08
USACE	130517	SEPT2011	2737.00	418.30	430.70	425.50	430.72	0.000089	1.47	2804.57	815.24	0.08
USACE	130269	2YR	596.00	418.21	425.99	422.05	426.00	0.000134	1.24	915.72	733.42	0.09
USACE	130269	5YR	1184.00	418.21	427.14	423.76	427.16	0.000145	1.45	1406.54	797.68	0.09
USACE	130269	10YR	1773.00	418.21	427.81	424.07	427.83	0.000182	1.71	1694.76	804.10	0.11
USACE	130269	25YR	2770.00	418.21	428.92	425.34	428.95	0.000201	1.96	2173.08	852.67	0.11
USACE	130269	50YR	3671.00	418.21	430.22	425.62	430.25	0.000169	1.96	2732.99	875.77	0.11
USACE	130269	100YR	4726.00	418.21	432.18	425.87	432.21	0.000116	1.81	3587.78	917.20	0.09
USACE	130269	100YRPLUS	6181.00	418.21	434.55	426.22	434.58	0.000087	1.76	4624.60	966.56	0.08
USACE	130269	200YR	5925.00	418.21	434.25	426.17	434.28	0.000087	1.74	4494.97	958.74	0.08
USACE	130269	500YR	7769.00	418.21	437.05	426.51	437.08	0.000069	1.74	5737.66	1059.34	0.07
USACE	130269	SEPT2011	2737.00	418.21	430.69	425.32	430.70	0.000074	1.34	2934.85	883.61	0.07
USACE	129949	2YR	929.00	418.24	425.88		425.92	0.000347	2.20	732.92	270.33	0.16
USACE	129949	5YR	1580.00	418.24	427.02		427.07	0.000357	2.50	1043.69	274.84	0.16
USACE	129949	10YR	2256.00	418.24	427.66		427.73	0.000455	2.98	1219.59	277.38	0.19
USACE	129949	25YR	3584.00	418.24	428.72		428.83	0.000590	3.68	1516.07	281.83	0.22
USACE	129949	50YR	4753.00	418.24	430.02		430.14	0.000533	3.83	1887.92	289.92	0.21
USACE	129949	100YR	6136.00	418.24	432.03		432.13	0.000393	3.70	2497.45	312.39	0.19
USACE	129949	100YRPLUS	8025.00	418.24	434.41		434.52	0.000297	3.62	3256.72	323.61	0.17
USACE	129949	200YR	7771.00	418.24	434.12		434.22	0.000306	3.62	3161.10	322.41	0.17
USACE	129949	500YR	10395.00	418.24	436.92		437.03	0.000254	3.71	4084.64	340.83	0.16
USACE	129949	SEPT2011	5082.00	418.24	430.51		430.62	0.000506	3.84	2029.15	302.00	0.21
USACE	129761	2YR	929.00	418.23	425.82		425.86	0.000338	2.24	730.86	269.20	0.16
USACE	129761	5YR	1580.00	418.23	426.95		427.01	0.000359	2.58	1039.52	273.87	0.17
USACE	129761	10YR	2256.00	418.23	427.57		427.64	0.000468	3.10	1208.82	276.50	0.19
USACE	129761	25YR	3584.00	418.23	428.60		428.71	0.000622	3.87	1496.63	283.24	0.22
USACE	129761	50YR	4753.00	418.23	429.92		430.04	0.000554	3.99	1888.30	305.15	0.22
USACE	129761	100YR	6136.00	418.23	431.95		432.06	0.000392	3.78	2519.16	314.68	0.19
USACE	129761	100YRPLUS	8025.00	418.23	434.35		434.46	0.000301	3.72	3286.83	324.11	0.17
USACE	129761	200YR	7771.00	418.23	434.06		434.16	0.000309	3.72	3190.57	323.01	0.17
USACE	129761	500YR	10395.00	418.23	436.87		436.98	0.000257	3.81	4112.23	332.50	0.16
USACE	129761	SEPT2011	5082.00	418.23	430.41		430.52	0.000505	3.93	2038.66	307.66	0.21
USACE	129590	2YR	929.00	418.55	425.74	423.22	425.79	0.000430	2.45	625.98	318.89	0.18
USACE	129590	5YR	1580.00	418.55	426.91	424.02	426.95	0.000261	2.15	1232.06	328.85	0.14
USACE	129590	10YR	2256.00	418.55	427.52	424.58	427.57	0.000341	2.60	1432.46	334.66	0.16
USACE	129590	25YR	3584.00	418.55	428.53	425.48	428.61	0.000454	3.25	1784.23	354.73	0.19
USACE	129590	50YR	4753.00	418.55	429.86	425.89	429.95	0.000396	3.34	2266.35	371.42	0.18
USACE	129590	100YR	6136.00	418.55	431.92	425.90	431.99	0.000276	3.15	3047.28	387.49	0.16
USACE	129590	100YRPLUS	8025.00	418.55	434.34	426.32	434.41	0.000211	3.10	3999.55	400.47	0.14
USACE	129590	200YR	7771.00	418.55	434.04	426.26	434.11	0.000216	3.10	3880.18	398.97	0.14
USACE	129590	500YR	10395.00	418.55	436.86	426.84	436.93	0.000179	3.18	5026.15	415.50	0.14
USACE	129590	SEPT2011	5082.00	418.55	430.36	425.89	430.44	0.000360	3.28	2452.21	375.99	0.18
USACE	129520	2YR	929.00	419.05	425.45	423.22	425.69	0.001561	4.39	254.93	231.58	0.33
USACE	129520	5YR	1580.00	419.05	426.85	424.25	426.92	0.000488	2.86	959.70	292.35	0.19
USACE	129520	10YR	2256.00	419.05	427.44	425.03	427.53	0.000630	3.44	1137.62	317.39	0.22
USACE	129520	25YR	3584.00	419.05	428.43	426.35	428.56	0.000791	4.19	1475.75	362.10	0.25
USACE	129520	50YR	4753.00	419.05	429.79	426.07	429.91	0.000617	4.09	2003.48	409.83	0.23
USACE	129520	100YR	6136.00	419.05	431.89	426.24	431.97	0.000347	3.49	2945.03	477.69	0.18
USACE	129520	100YRPLUS	8025.00	419.05	434.32	426.99	434.39	0.000212	3.09	4156.33	558.42	0.14
USACE	129520	200YR	7771.00	419.05	434.02	426.85	434.10	0.000223	3.12	3990.95	537.06	0.15
USACE	129520	500YR	10395.00	419.05	436.85	427.57	436.91	0.000149	2.88	5657.07	615.68	0.12
USACE	129520	SEPT2011	5082.00	419.05	430.30	426.18	430.41	0.000532	3.93	2219.57	431.35	0.22
USACE	129492 Elizabethtown Rd		Mult Open									
USACE	129456	2YR	929.00	415.50	422.00	418.28	422.09	0.000467	2.51	465.50	290.15	0.19
USACE	129456	5YR	1580.00	415.50	423.80	419.25	423.85	0.000271	2.30	1393.84	318.12	0.15
USACE	129456	10YR	2256.00	415.50	425.31	420.02	425.37	0.000246	2.48	1875.12	319.37	0.15
USACE	129456	25YR	3584.00	415.50	427.82	421.19	427.89	0.000221	2.78	2680.42	328.63	0.14
USACE	129456	50YR	4753.00	415.50	429.74	422.03	429.81	0.000205	2.96	3360.65	366.73	0.14
USACE	129456	100YR	6136.00	415.50	431.83	422.92	431.91	0.000186	3.11	4156.50	401.75	0.14
USACE	129456	100YRPLUS	8025.00	415.50	434.27	423.51	434.36	0.000166	3.24	5155.97	488.05	0.14
USACE	129456	200YR	7771.00	415.50	433.97	423.51	434.05	0.000168	3.23	5028.75	469.26	0.14
USACE	129456	500YR	10395.00	415.50	436.81	424.04	436.90	0.000155	3.42	6219.62	562.56	0.13
USACE	129456	SEPT2011	5082.00	415.50	430.25	422.25	430.33	0.000199	2.99	3549.69	370.21	0.14
USACE	129387	2YR	929.00	415.09	421.94	419.05	422.05	0.000825	2.76	450.37	265.62	0.22
USACE	129387	5YR	1580.00	415.09	423.75	419.89	423.83	0.000483	2.62	1102.68	278.90	0.18
USACE	129387	10YR	2256.00	415.09	425.26	420.69	425.34	0.000406	2.76	1530.15	285.24	0.17
USACE	129387	25YR	3584.00	415.09	427.78	421.84	427.86	0.000337	3.02	2267.22	314.23	0.16
USACE	129387	50YR	4753.00	415.09	429.71	422.60	429.79	0.000290	3.12	2912.34	341.93	0.16
USACE	129387	100YR	6136.00	415.09	431.80	423.37	431.89	0.000243	3.17	3641.85	366.71	0.15
USACE	129387	100YRPLUS	8025.00	415.09	434.25	423.81	434.34	0.000211	3.28	4513.75	489.23	0.14
USACE	129387	200YR	7771.00	415.09	433.95	423.72	434.04	0.000214	3.26	4403.67	483.97	0.14

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	129387	500YR	10395.00	415.09	436.79	424.56	436.89	0.000196	3.46	5435.71	564.25	0.14
USACE	129387	SEPT2011	5082.00	415.09	430.22	422.80	430.31	0.000277	3.14	3089.12	344.50	0.15
USACE	129223	2YR	929.00	415.12	421.85	419.09	421.92	0.000600	2.69	731.20	214.84	0.20
USACE	129223	5YR	1580.00	415.12	423.67	419.86	423.74	0.000528	3.03	1176.08	261.97	0.19
USACE	129223	10YR	2256.00	415.12	425.19	420.42	425.27	0.000477	3.25	1582.92	273.82	0.19
USACE	129223	25YR	3584.00	415.12	427.71	421.28	427.80	0.000416	3.57	2324.72	325.00	0.18
USACE	129223	50YR	4753.00	415.12	429.65	421.89	429.74	0.000363	3.70	2969.24	341.02	0.18
USACE	129223	100YR	6136.00	415.12	431.76	423.22	431.85	0.000307	3.74	3712.41	370.80	0.17
USACE	129223	100YRPLUS	8025.00	415.12	434.22	423.63	434.31	0.000265	3.83	4611.21	465.05	0.16
USACE	129223	200YR	7771.00	415.12	433.91	423.54	434.00	0.000269	3.81	4497.63	460.81	0.16
USACE	129223	500YR	10395.00	415.12	436.75	424.41	436.85	0.000265	4.17	5604.88	618.82	0.16
USACE	129223	SEPT2011	5082.00	415.12	430.17	422.03	430.26	0.000350	3.72	3146.71	345.53	0.17
USACE	129034	2YR	929.00	415.11	421.78	417.73	421.83	0.000339	2.17	806.21	231.14	0.15
USACE	129034	5YR	1580.00	415.11	423.60	418.93	423.66	0.000317	2.48	1268.77	272.43	0.15
USACE	129034	10YR	2256.00	415.11	425.13	419.94	425.20	0.000305	2.73	1707.30	306.81	0.15
USACE	129034	25YR	3584.00	415.11	427.66	420.88	427.74	0.000280	3.05	2514.57	328.02	0.15
USACE	129034	50YR	4753.00	415.11	429.60	421.51	429.68	0.000267	3.28	3179.68	350.15	0.15
USACE	129034	100YR	6136.00	415.11	431.71	422.17	431.80	0.000243	3.44	3956.36	391.72	0.15
USACE	129034	100YRPLUS	8025.00	415.11	434.17	422.97	434.26	0.000222	3.61	5011.00	469.81	0.15
USACE	129034	200YR	7771.00	415.11	433.86	422.86	433.95	0.000225	3.59	4875.44	466.51	0.15
USACE	129034	500YR	10395.00	415.11	436.71	423.85	436.81	0.000201	3.74	6145.15	538.06	0.14
USACE	129034	SEPT2011	5082.00	415.11	430.11	421.67	430.20	0.000261	3.33	3361.61	353.39	0.15
USACE	128772	2YR	929.00	415.29	421.68	417.95	421.73	0.000409	2.27	831.14	234.82	0.16
USACE	128772	5YR	1580.00	415.29	423.51	418.89	423.57	0.000371	2.58	1293.72	261.74	0.16
USACE	128772	10YR	2256.00	415.29	425.05	419.72	425.11	0.000352	2.84	1703.17	272.58	0.16
USACE	128772	25YR	3584.00	415.29	427.58	420.60	427.66	0.000326	3.20	2406.43	282.23	0.16
USACE	128772	50YR	4753.00	415.29	429.52	421.23	429.61	0.000312	3.46	2961.02	289.76	0.16
USACE	128772	100YR	6136.00	415.29	431.63	421.89	431.72	0.000297	3.71	3580.52	298.52	0.16
USACE	128772	100YRPLUS	8025.00	415.29	434.08	422.84	434.19	0.000298	4.09	4332.13	343.03	0.17
USACE	128772	200YR	7771.00	415.29	433.77	422.74	433.88	0.000296	4.03	4235.77	334.09	0.17
USACE	128772	500YR	10395.00	415.29	436.60	423.67	436.74	0.000304	4.50	5163.78	381.33	0.17
USACE	128772	SEPT2011	5082.00	415.29	430.04	421.48	430.13	0.000308	3.53	3111.51	291.89	0.16
USACE	128597	2YR	929.00	415.14	421.62		421.67	0.000359	2.14	722.91	253.28	0.15
USACE	128597	5YR	1580.00	415.14	423.43		423.50	0.000397	2.68	997.92	276.87	0.17
USACE	128597	10YR	2256.00	415.14	424.94		425.04	0.000429	3.14	1234.93	288.19	0.18
USACE	128597	25YR	3584.00	415.14	427.44		427.58	0.000463	3.82	1643.47	306.82	0.20
USACE	128597	50YR	4753.00	415.14	429.35		429.53	0.000479	4.29	1970.22	321.56	0.20
USACE	128597	100YR	6136.00	415.14	431.43		431.65	0.000488	4.76	2341.66	340.86	0.21
USACE	128597	100YRPLUS	8025.00	415.14	433.84		434.11	0.000511	5.35	2810.48	375.81	0.22
USACE	128597	200YR	7771.00	415.14	433.53		433.80	0.000510	5.29	2749.83	374.27	0.22
USACE	128597	500YR	10395.00	415.14	436.32		436.65	0.000536	5.97	3320.67	389.72	0.23
USACE	128597	SEPT2011	5082.00	415.14	429.86		430.05	0.000482	4.41	2059.65	325.77	0.21
USACE	128341	2YR	929.00	414.74	421.30		421.49	0.001362	3.58	276.97	260.73	0.26
USACE	128341	5YR	1580.00	414.74	422.96		423.29	0.001721	4.72	368.08	272.21	0.30
USACE	128341	10YR	2256.00	414.74	424.32		424.80	0.002010	5.68	447.66	281.28	0.33
USACE	128341	25YR	3584.00	414.74	426.55		427.30	0.002358	7.12	591.97	297.12	0.37
USACE	128341	50YR	4753.00	414.74	428.27		429.22	0.002524	8.10	716.92	311.91	0.39
USACE	128341	100YR	6136.00	414.74	430.15		431.31	0.002614	9.01	882.98	342.09	0.41
USACE	128341	100YRPLUS	8025.00	414.74	432.41		433.75	0.002592	9.86	1142.67	368.26	0.42
USACE	128341	200YR	7771.00	414.74	432.12		433.45	0.002603	9.77	1108.16	366.17	0.42
USACE	128341	500YR	10395.00	414.74	434.75		436.27	0.002592	10.73	1434.99	384.58	0.43
USACE	128341	SEPT2011	5082.00	414.74	428.72		429.73	0.002562	8.34	753.59	319.50	0.40
USACE	128021	2YR	929.00	414.48	420.51		420.86	0.002979	4.76	202.08	329.29	0.37
USACE	128021	5YR	1580.00	414.48	421.84		422.46	0.003970	6.40	262.85	338.90	0.44
USACE	128021	10YR	2256.00	414.48	422.86		423.80	0.004912	7.84	312.90	345.17	0.50
USACE	128021	25YR	3584.00	414.48	424.55		426.07	0.006159	10.05	401.87	355.65	0.58
USACE	128021	50YR	4753.00	414.48	425.92		427.88	0.006683	11.47	479.70	366.39	0.62
USACE	128021	100YR	6136.00	414.48	427.60	424.75	429.93	0.006650	12.62	581.87	391.83	0.63
USACE	128021	100YRPLUS	8025.00	414.48	429.26	426.50	432.28	0.007338	14.42	696.89	441.05	0.68
USACE	128021	200YR	7771.00	414.48	428.97	426.27	431.96	0.007443	14.33	674.32	439.66	0.68
USACE	128021	500YR	10395.00	414.48	431.04	428.46	434.72	0.007809	16.12	839.54	447.90	0.72
USACE	128021	SEPT2011	5082.00	414.48	426.31		428.37	0.006737	11.80	502.60	370.26	0.63
USACE	127803	2YR	929.00	414.27	419.88	417.45	420.19	0.003021	4.47	210.22	327.61	0.36
USACE	127803	5YR	1580.00	414.27	420.96	418.58	421.54	0.004369	6.16	264.19	339.81	0.45
USACE	127803	10YR	2256.00	414.27	421.68	419.51	422.62	0.005961	7.79	303.05	386.21	0.54
USACE	127803	25YR	3584.00	414.27	422.66	421.13	424.41	0.009320	10.69	358.55	440.13	0.69
USACE	127803	50YR	4753.00	414.27	423.25	422.37	425.86	0.012610	13.08	394.00	476.99	0.81
USACE	127803	100YR	6136.00	414.27	423.70	423.70	427.56	0.017454	15.94	421.59	510.71	0.96
USACE	127803	100YRPLUS	8025.00	414.27	425.20	425.20	429.79	0.016951	17.50	521.00	593.03	0.97
USACE	127803	200YR	7771.00	414.27	425.11	425.11	429.50	0.016402	17.11	514.80	591.74	0.96
USACE	127803	500YR	10395.00	414.27	427.18	427.18	432.27	0.015075	18.60	686.00	646.88	0.95
USACE	127803	SEPT2011	5082.00	414.27	423.38	422.70	426.26	0.013662	13.75	401.76	484.32	0.85
USACE	127574	2YR	929.00	414.02	419.47	417.14	419.67	0.001573	3.72	291.70	277.76	0.31
USACE	127574	5YR	1580.00	414.02	420.49	418.20	420.81	0.002017	4.82	400.15	355.87	0.36
USACE	127574	10YR	2256.00	414.02	421.16	419.10	421.61	0.002585	5.89	476.70	364.98	0.42
USACE	127574	25YR	3584.00	414.02	422.08	420.32	422.84	0.003676	7.71	589.59	375.85	0.51
USACE	127574	50YR	4753.00	414.02	422.77	421.15	423.78	0.004435	9.00	676.97	383.26	0.57

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	127574	100YR	6136.00	414.02	423.45	421.97	424.76	0.005217	10.32	768.15	390.05	0.62
USACE	127574	100YRPLUS	8025.00	414.02	424.26	422.98	425.96	0.006130	11.88	878.90	419.02	0.69
USACE	127574	200YR	7771.00	414.02	424.17	422.85	425.81	0.005994	11.67	865.80	414.81	0.68
USACE	127574	500YR	10395.00	414.02	425.16	424.08	427.33	0.007017	13.52	1007.28	475.27	0.75
USACE	127574	SEPT2011	5082.00	414.02	422.94	421.35	424.02	0.004632	9.33	699.75	385.12	0.58
USACE	127328	2YR	929.00	413.78	419.09		419.26	0.001715	3.87	413.56	311.41	0.32
USACE	127328	5YR	1580.00	413.78	420.12		420.32	0.001746	4.47	625.94	365.50	0.33
USACE	127328	10YR	2256.00	413.78	420.76		421.01	0.002008	5.15	770.07	376.95	0.36
USACE	127328	25YR	3584.00	413.78	421.64		422.00	0.002549	6.34	972.21	392.48	0.42
USACE	127328	50YR	4753.00	413.78	422.34		422.78	0.002783	7.06	1136.84	402.52	0.45
USACE	127328	100YR	6136.00	413.78	423.08		423.60	0.002990	7.77	1310.81	413.89	0.47
USACE	127328	100YRPLUS	8025.00	413.78	423.98		424.61	0.003212	8.61	1526.97	425.38	0.49
USACE	127328	200YR	7771.00	413.78	423.88		424.49	0.003166	8.49	1501.80	423.88	0.49
USACE	127328	500YR	10395.00	413.78	425.03		425.77	0.003416	9.53	1787.13	445.56	0.52
USACE	127328	SEPT2011	5082.00	413.78	422.53		422.99	0.002834	7.24	1180.26	405.06	0.45
USACE	127195	2YR	929.00	413.60	418.06	417.63	418.72	0.007349	6.86	210.79	217.01	0.63
USACE	127195	5YR	1580.00	413.60	419.27	418.69	419.86	0.005440	7.14	411.57	330.51	0.57
USACE	127195	10YR	2256.00	413.60	420.22	419.55	420.65	0.003796	6.72	645.35	377.84	0.49
USACE	127195	25YR	3584.00	413.60	421.10	420.27	421.61	0.004151	7.72	854.81	392.03	0.53
USACE	127195	50YR	4753.00	413.60	421.87	420.74	422.41	0.003921	8.08	1041.86	404.69	0.52
USACE	127195	100YR	6136.00	413.60	422.66	421.21	423.24	0.003826	8.53	1230.72	418.12	0.52
USACE	127195	100YRPLUS	8025.00	413.60	423.61	421.78	424.25	0.003737	9.07	1484.95	443.87	0.53
USACE	127195	200YR	7771.00	413.60	423.51	421.70	424.13	0.003713	8.97	1457.20	440.68	0.52
USACE	127195	500YR	10395.00	413.60	424.70	422.38	425.42	0.003581	9.56	1782.87	467.02	0.53
USACE	127195	SEPT2011	5082.00	413.60	422.07	420.86	422.62	0.003883	8.18	1089.77	408.02	0.52
USACE	127172 Private Drive		Bridge									
USACE	127147	2YR	929.00	413.22	417.84	416.37	418.24	0.004116	5.24	247.62	198.55	0.47
USACE	127147	5YR	1580.00	413.22	418.93	417.85	419.38	0.003811	5.97	480.37	273.56	0.48
USACE	127147	10YR	2256.00	413.22	419.77	418.68	420.24	0.003607	6.45	693.28	326.24	0.48
USACE	127147	25YR	3584.00	413.22	421.02	419.66	421.54	0.003455	7.21	1019.09	387.27	0.48
USACE	127147	50YR	4753.00	413.22	421.70	420.25	422.34	0.003926	8.18	1196.81	399.14	0.52
USACE	127147	100YR	6136.00	413.22	422.38	420.85	423.15	0.004445	9.20	1374.01	416.44	0.56
USACE	127147	100YRPLUS	8025.00	413.22	423.22	421.55	424.15	0.004900	10.31	1624.85	447.18	0.60
USACE	127147	200YR	7771.00	413.22	423.12	421.46	424.02	0.004843	10.17	1594.30	442.12	0.60
USACE	127147	500YR	10395.00	413.22	424.28	422.32	425.29	0.004850	11.03	1961.60	488.67	0.61
USACE	127147	SEPT2011	5082.00	413.22	421.88	420.39	422.54	0.004048	8.43	1242.22	403.06	0.53
USACE	127077	2YR	929.00	412.70	417.67		417.96	0.002532	4.31	228.52	144.96	0.38
USACE	127077	5YR	1580.00	412.70	418.73		419.11	0.002721	5.22	492.02	336.09	0.41
USACE	127077	10YR	2256.00	412.70	419.58		419.98	0.002589	5.65	739.15	356.86	0.41
USACE	127077	25YR	3584.00	412.70	420.84		421.29	0.002555	6.38	1110.16	384.03	0.42
USACE	127077	50YR	4753.00	412.70	421.49		422.04	0.002986	7.30	1303.63	397.20	0.46
USACE	127077	100YR	6136.00	412.70	422.13		422.81	0.003452	8.27	1497.54	406.87	0.50
USACE	127077	100YRPLUS	8025.00	412.70	422.94		423.77	0.003893	9.34	1747.19	421.69	0.54
USACE	127077	200YR	7771.00	412.70	422.84		423.65	0.003827	9.19	1716.96	419.39	0.53
USACE	127077	500YR	10395.00	412.70	423.98		424.92	0.004028	10.19	2107.92	493.10	0.56
USACE	127077	SEPT2011	5082.00	412.70	421.65		422.24	0.003096	7.54	1353.38	399.99	0.47
USACE	126862	2YR	929.00	412.01	417.13		417.43	0.002382	4.45	234.77	129.33	0.37
USACE	126862	5YR	1580.00	412.01	417.88		418.42	0.003663	6.12	363.97	212.23	0.48
USACE	126862	10YR	2256.00	412.01	418.40	417.30	419.19	0.004915	7.56	489.29	266.08	0.56
USACE	126862	25YR	3584.00	412.01	419.22	418.78	420.38	0.006521	9.54	755.02	383.11	0.66
USACE	126862	50YR	4753.00	412.01	419.99	419.81	421.10	0.006064	9.92	1056.00	396.93	0.65
USACE	126862	100YR	6136.00	412.01	420.85		421.86	0.005352	10.04	1401.03	406.24	0.62
USACE	126862	100YRPLUS	8025.00	412.01	421.93		422.85	0.004602	10.12	1851.32	424.02	0.59
USACE	126862	200YR	7771.00	412.01	421.83		422.74	0.004594	10.04	1806.85	422.69	0.59
USACE	126862	500YR	10395.00	412.01	423.21		424.04	0.003863	10.12	2403.83	441.05	0.55
USACE	126862	SEPT2011	5082.00	412.01	420.16	419.92	421.27	0.006076	10.08	1123.07	398.46	0.65
USACE	126630	2YR	929.00	411.01	416.78		416.95	0.001583	3.35	392.82	399.30	0.30
USACE	126630	5YR	1580.00	411.01	417.45		417.70	0.002126	4.32	669.18	418.62	0.36
USACE	126630	10YR	2256.00	411.01	417.94		418.25	0.002542	5.06	876.54	429.53	0.40
USACE	126630	25YR	3584.00	411.01	418.90		419.24	0.002591	5.73	1311.59	476.37	0.41
USACE	126630	50YR	4753.00	411.01	419.72		420.05	0.002330	5.92	1714.49	500.47	0.40
USACE	126630	100YR	6136.00	411.01	420.62		420.93	0.002052	6.04	2172.01	515.01	0.38
USACE	126630	100YRPLUS	8025.00	411.01	421.73		422.04	0.001803	6.19	2762.61	543.42	0.37
USACE	126630	200YR	7771.00	411.01	421.63		421.93	0.001792	6.13	2706.41	541.31	0.37
USACE	126630	500YR	10395.00	411.01	423.05		423.35	0.001537	6.28	3495.13	567.65	0.35
USACE	126630	SEPT2011	5082.00	411.01	419.88		420.22	0.002358	6.05	1795.78	503.74	0.40
USACE	126387	2YR	929.00	410.10	416.35	414.06	416.55	0.001680	4.01	424.99	432.15	0.32
USACE	126387	5YR	1580.00	410.10	417.07	416.32	417.23	0.001573	4.24	794.09	585.14	0.31
USACE	126387	10YR	2256.00	410.10	417.57	416.75	417.73	0.001561	4.47	1071.66	631.66	0.32
USACE	126387	25YR	3584.00	410.10	418.64	417.25	418.77	0.001150	4.27	1668.06	695.34	0.28
USACE	126387	50YR	4753.00	410.10	419.53	417.55	419.64	0.000928	4.15	2160.55	719.04	0.26
USACE	126387	100YR	6136.00	410.10	420.47	417.85	420.58	0.000786	4.11	2684.95	744.38	0.24
USACE	126387	100YRPLUS	8025.00	410.10	421.62	418.20	421.73	0.000683	4.14	3325.54	768.06	0.23
USACE	126387	200YR	7771.00	410.10	421.51	418.15	421.62	0.000677	4.10	3267.67	765.78	0.23
USACE	126387	500YR	10395.00	410.10	422.96	418.57	423.07	0.000596	4.20	4079.19	787.50	0.22
USACE	126387	SEPT2011	5082.00	410.10	419.69	417.63	419.81	0.000934	4.22	2251.12	724.00	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	126038	2YR	1105.00	408.91	415.20		415.65	0.003743	5.61	275.43	214.88	0.47
USACE	126038	5YR	1729.00	408.91	416.16		416.50	0.002773	5.49	585.45	421.88	0.41
USACE	126038	10YR	2326.00	408.91	416.85		417.10	0.002073	5.13	890.77	448.58	0.36
USACE	126038	25YR	3739.00	408.91	418.15		418.33	0.001379	4.76	1480.33	456.16	0.31
USACE	126038	50YR	4998.00	408.91	419.12		419.28	0.001137	4.69	1923.82	460.86	0.28
USACE	126038	100YR	6514.00	408.91	420.10		420.26	0.001016	4.77	2379.59	470.49	0.27
USACE	126038	100YRPLUS	8519.00	408.91	421.28		421.45	0.000909	4.88	2938.13	479.48	0.26
USACE	126038	200YR	8328.00	408.91	421.17		421.34	0.000916	4.86	2887.83	478.72	0.26
USACE	126038	500YR	11282.00	408.91	422.63		422.82	0.000858	5.13	3593.17	492.10	0.26
USACE	126038	SEPT2011	5239.00	408.91	419.29		419.45	0.001106	4.68	2002.63	461.66	0.28
USACE	125737	2YR	1105.00	408.10	414.67	412.11	414.89	0.001574	4.13	415.16	270.71	0.31
USACE	125737	5YR	1729.00	408.10	415.79	413.12	415.95	0.001112	3.93	722.96	278.82	0.27
USACE	125737	10YR	2326.00	408.10	416.49	414.80	416.65	0.001065	4.12	919.17	284.33	0.27
USACE	125737	25YR	3739.00	408.10	417.80	415.49	417.98	0.001040	4.55	1298.64	295.78	0.27
USACE	125737	50YR	4998.00	408.10	418.75	415.95	418.96	0.001054	4.91	1585.21	308.05	0.28
USACE	125737	100YR	6514.00	408.10	419.70	416.43	419.95	0.001113	5.38	1890.76	329.40	0.29
USACE	125737	100YRPLUS	8519.00	408.10	420.86	416.97	421.14	0.001168	5.91	2293.11	366.04	0.31
USACE	125737	200YR	8328.00	408.10	420.75	416.92	421.03	0.001167	5.87	2255.24	363.40	0.31
USACE	125737	500YR	11282.00	408.10	422.16	417.64	422.51	0.001277	6.64	2806.19	423.08	0.33
USACE	125737	SEPT2011	5239.00	408.10	418.92	416.04	419.13	0.001058	4.98	1637.30	310.87	0.28
USACE	125525	2YR	1105.00	407.51	414.11		414.46	0.002499	4.80	255.24	101.24	0.39
USACE	125525	5YR	1729.00	407.51	415.20		415.59	0.002391	5.38	473.35	260.05	0.39
USACE	125525	10YR	2326.00	407.51	415.95		416.31	0.002136	5.51	679.52	286.42	0.38
USACE	125525	25YR	3739.00	407.51	417.37		417.68	0.001711	5.61	1109.15	313.65	0.35
USACE	125525	50YR	4998.00	407.51	418.37		418.67	0.001530	5.74	1426.84	320.19	0.34
USACE	125525	100YR	6514.00	407.51	419.34		419.66	0.001469	6.02	1740.02	325.96	0.33
USACE	125525	100YRPLUS	8519.00	407.51	420.51		420.86	0.001394	6.31	2124.81	332.50	0.33
USACE	125525	200YR	8328.00	407.51	420.40		420.75	0.001399	6.28	2090.03	331.94	0.33
USACE	125525	500YR	11282.00	407.51	421.81		422.21	0.001398	6.79	2561.02	339.80	0.34
USACE	125525	SEPT2011	5239.00	407.51	418.54		418.85	0.001507	5.77	1482.71	321.20	0.33
USACE	125349	2YR	1105.00	407.14	413.98		414.14	0.000975	3.21	394.57	245.45	0.25
USACE	125349	5YR	1729.00	407.14	415.13		415.28	0.000868	3.45	723.55	317.72	0.24
USACE	125349	10YR	2326.00	407.14	415.87		416.03	0.000842	3.66	972.15	347.33	0.24
USACE	125349	25YR	3739.00	407.14	417.28		417.44	0.000780	3.97	1490.00	385.29	0.24
USACE	125349	50YR	4998.00	407.14	418.29		418.45	0.000740	4.16	1883.71	395.96	0.24
USACE	125349	100YR	6514.00	407.14	419.26		419.45	0.000740	4.44	2273.67	404.72	0.24
USACE	125349	100YRPLUS	8519.00	407.14	420.44		420.64	0.000727	4.72	2756.78	415.44	0.24
USACE	125349	200YR	8328.00	407.14	420.33		420.54	0.000728	4.70	2712.98	414.47	0.24
USACE	125349	500YR	11282.00	407.14	421.74		421.98	0.000785	5.26	3317.51	450.66	0.26
USACE	125349	SEPT2011	5239.00	407.14	418.46		418.63	0.000735	4.20	1953.32	397.50	0.24
USACE	125099	2YR	1105.00	406.50	413.56	410.58	413.81	0.001758	4.20	380.48	203.08	0.32
USACE	125099	5YR	1729.00	406.50	414.69	411.77	414.97	0.001689	4.69	742.44	421.91	0.33
USACE	125099	10YR	2326.00	406.50	415.46	412.79	415.73	0.001610	4.95	1039.70	453.54	0.33
USACE	125099	25YR	3739.00	406.50	416.95	414.78	417.18	0.001335	5.11	1819.85	507.17	0.31
USACE	125099	50YR	4998.00	406.50	417.98	415.42	418.21	0.001259	5.36	2347.59	517.20	0.30
USACE	125099	100YR	6514.00	406.50	418.95	415.99	419.20	0.001273	5.74	2857.95	529.56	0.31
USACE	125099	100YRPLUS	8519.00	406.50	420.14	416.63	420.40	0.001255	6.12	3493.84	541.20	0.31
USACE	125099	200YR	8328.00	406.50	420.03	416.58	420.29	0.001256	6.09	3436.42	540.22	0.31
USACE	125099	500YR	11282.00	406.50	421.41	417.33	421.72	0.001371	6.85	4191.95	566.32	0.33
USACE	125099	SEPT2011	5239.00	406.50	418.16	415.51	418.39	0.001251	5.40	2439.89	518.95	0.30
USACE	124850	2YR	1105.00	405.71	413.17	409.74	413.39	0.001539	3.93	430.37	365.25	0.30
USACE	124850	5YR	1729.00	405.71	414.43	410.85	414.60	0.001121	3.85	1021.64	512.71	0.27
USACE	124850	10YR	2326.00	405.71	415.23	411.92	415.39	0.001002	3.94	1442.01	533.43	0.26
USACE	124850	25YR	3739.00	405.71	416.75	414.15	416.89	0.000862	4.14	2266.10	549.32	0.25
USACE	124850	50YR	4998.00	405.71	417.79	414.69	417.93	0.000840	4.40	2838.21	555.27	0.25
USACE	124850	100YR	6514.00	405.71	418.76	415.20	418.92	0.000876	4.79	3378.20	561.52	0.26
USACE	124850	100YRPLUS	8519.00	405.71	419.93	415.75	420.12	0.000920	5.25	4049.64	584.30	0.27
USACE	124850	200YR	8328.00	405.71	419.83	415.71	420.01	0.000920	5.22	3987.44	584.03	0.27
USACE	124850	500YR	11282.00	405.71	421.20	416.39	421.41	0.000981	5.80	4789.73	587.48	0.28
USACE	124850	SEPT2011	5239.00	405.71	417.97	414.78	418.11	0.000839	4.45	2937.44	556.31	0.25
USACE	124593	2YR	1105.00	405.12	412.93		413.08	0.000880	3.23	551.32	264.70	0.23
USACE	124593	5YR	1729.00	405.12	414.23		414.36	0.000729	3.36	1167.92	507.14	0.22
USACE	124593	10YR	2326.00	405.12	415.04		415.17	0.000703	3.54	1581.48	516.00	0.22
USACE	124593	25YR	3739.00	405.12	416.57		416.70	0.000674	3.89	2379.37	528.18	0.22
USACE	124593	50YR	4998.00	405.12	417.60		417.74	0.000694	4.22	2927.39	535.06	0.23
USACE	124593	100YR	6514.00	405.12	418.55		418.71	0.000756	4.66	3439.12	541.13	0.24
USACE	124593	100YRPLUS	8519.00	405.12	419.72		419.90	0.000803	5.12	4075.14	551.69	0.25
USACE	124593	200YR	8328.00	405.12	419.61		419.79	0.000799	5.08	4017.21	550.11	0.25
USACE	124593	500YR	11282.00	405.12	420.94		421.17	0.000915	5.82	4766.10	569.04	0.27
USACE	124593	SEPT2011	5239.00	405.12	417.78		417.92	0.000699	4.28	3022.36	536.25	0.23
USACE	124309	2YR	1105.00	403.99	412.63		412.81	0.000972	3.59	442.04	176.46	0.25
USACE	124309	5YR	1729.00	403.99	413.91		414.11	0.000993	4.09	863.46	393.64	0.26
USACE	124309	10YR	2326.00	403.99	414.70		414.92	0.001022	4.43	1181.67	408.49	0.27
USACE	124309	25YR	3739.00	403.99	416.22		416.45	0.001028	4.97	1816.27	423.82	0.28
USACE	124309	50YR	4998.00	403.99	417.23		417.49	0.001084	5.44	2247.54	431.06	0.29
USACE	124309	100YR	6514.00	403.99	418.14		418.43	0.001213	6.06	2639.79	438.23	0.31
USACE	124309	100YRPLUS	8519.00	403.99	419.26		419.60	0.001309	6.69	3137.91	448.26	0.33
USACE	124309	200YR	8328.00	403.99	419.16		419.49	0.001300	6.63	3092.51	447.06	0.33

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	124309	500YR	11282.00	403.99	420.38		420.81	0.001583	7.77	3653.45	478.79	0.36
USACE	124309	SEPT2011	5239.00	403.99	417.41		417.66	0.001095	5.52	2322.09	432.31	0.29
USACE	124132	2YR	1105.00	402.70	412.62	406.54	412.69	0.000305	2.15	528.48	141.41	0.14
USACE	124132	5YR	1729.00	402.70	413.88	407.51	413.98	0.000383	2.69	875.64	293.23	0.17
USACE	124132	10YR	2326.00	402.70	414.64	408.31	414.78	0.000472	3.17	1103.90	304.41	0.19
USACE	124132	25YR	3739.00	402.70	416.10	409.86	416.31	0.000624	4.03	1564.49	325.90	0.22
USACE	124132	50YR	4998.00	402.70	417.05	410.91	417.33	0.000757	4.71	1882.23	344.23	0.25
USACE	124132	100YR	6514.00	402.70	417.86	411.93	418.24	0.000960	5.55	2173.05	377.39	0.28
USACE	124132	100YRPLUS	8519.00	402.70	418.90	413.99	419.37	0.001138	6.38	2578.89	406.49	0.31
USACE	124132	200YR	8328.00	402.70	418.81	413.87	419.27	0.001123	6.31	2540.98	403.36	0.31
USACE	124132	500YR	11282.00	402.70	419.89	415.23	420.53	0.001460	7.59	3007.05	450.14	0.36
USACE	124132	SEPT2011	5239.00	402.70	417.21	411.07	417.50	0.000782	4.83	1937.84	348.28	0.25
USACE	124038	2YR	1105.00	402.30	412.63	405.58	412.65	0.000090	1.28	865.62	289.55	0.08
USACE	124038	5YR	1729.00	402.30	413.89	406.32	413.93	0.000130	1.70	1216.83	468.88	0.10
USACE	124038	10YR	2326.00	402.30	414.65	406.92	414.72	0.000168	2.04	1530.45	485.24	0.11
USACE	124038	25YR	3739.00	402.30	416.12	408.05	416.22	0.000239	2.67	2155.69	528.35	0.14
USACE	124038	50YR	4998.00	402.30	417.08	408.81	417.21	0.000299	3.16	2591.28	568.92	0.16
USACE	124038	100YR	6514.00	402.30	417.91	409.61	418.09	0.000379	3.71	2982.90	581.74	0.18
USACE	124038	100YRPLUS	8519.00	402.30	418.96	410.55	419.19	0.000457	4.29	3485.78	599.82	0.20
USACE	124038	200YR	8328.00	402.30	418.87	410.46	419.09	0.000450	4.24	3440.11	598.12	0.20
USACE	124038	500YR	11282.00	402.30	420.01	411.71	420.26	0.000511	4.76	4708.38	624.07	0.22
USACE	124038	SEPT2011	5239.00	402.30	417.24	408.94	417.38	0.000310	3.24	2667.66	572.46	0.16
USACE	124003 Aband. Railroad		Bridge									
USACE	123972	2YR	1105.00	401.48	412.52	404.50	412.55	0.000092	1.33	835.70	291.25	0.08
USACE	123972	5YR	1729.00	401.48	413.69	405.30	413.74	0.000143	1.81	1091.54	504.78	0.10
USACE	123972	10YR	2326.00	401.48	414.37	405.93	414.44	0.000196	2.22	1340.40	522.08	0.12
USACE	123972	25YR	3739.00	401.48	415.69	407.19	415.82	0.000299	2.98	1856.91	562.39	0.16
USACE	123972	50YR	4998.00	401.48	416.54	408.17	416.71	0.000393	3.58	2218.89	597.19	0.18
USACE	123972	100YR	6514.00	401.48	417.43	409.17	417.66	0.000486	4.18	2621.57	618.49	0.20
USACE	123972	100YRPLUS	8519.00	401.48	418.46	410.34	418.76	0.000589	4.84	3113.32	648.02	0.23
USACE	123972	200YR	8328.00	401.48	418.37	410.24	418.66	0.000579	4.77	3067.14	641.51	0.22
USACE	123972	500YR	11282.00	401.48	419.81	411.62	420.05	0.000511	4.79	4984.44	687.29	0.21
USACE	123972	SEPT2011	5239.00	401.48	416.68	408.34	416.87	0.000409	3.69	2284.64	601.34	0.18
USACE	123868	2YR	1105.00	401.49	412.47	405.10	412.53	0.000209	1.95	649.81	231.57	0.12
USACE	123868	5YR	1729.00	401.49	413.62	406.06	413.71	0.000285	2.49	1023.35	368.03	0.14
USACE	123868	10YR	2326.00	401.49	414.29	406.84	414.40	0.000361	2.94	1285.99	409.61	0.16
USACE	123868	25YR	3739.00	401.49	415.62	408.41	415.77	0.000468	3.63	1860.02	459.72	0.19
USACE	123868	50YR	4998.00	401.49	416.47	409.61	416.66	0.000553	4.14	2261.99	478.99	0.21
USACE	123868	100YR	6514.00	401.49	417.37	410.91	417.59	0.000625	4.62	2701.05	492.67	0.23
USACE	123868	100YRPLUS	8519.00	401.49	418.42	413.34	418.67	0.000700	5.15	3223.81	521.91	0.24
USACE	123868	200YR	8328.00	401.49	418.32	413.25	418.57	0.000693	5.10	3174.49	514.82	0.24
USACE	123868	500YR	11282.00	401.49	419.66	414.86	419.96	0.000778	5.74	3894.82	551.70	0.26
USACE	123868	SEPT2011	5239.00	401.49	416.62	409.84	416.82	0.000566	4.23	2334.73	481.46	0.21
USACE	123679	2YR	1105.00	401.47	411.81	408.65	412.37	0.003721	6.29	232.99	138.89	0.43
USACE	123679	5YR	1729.00	401.47	412.87	410.88	413.52	0.004080	7.26	524.42	317.85	0.46
USACE	123679	10YR	2326.00	401.47	413.66	412.54	414.21	0.003617	7.30	790.12	353.20	0.44
USACE	123679	25YR	3739.00	401.47	415.17	413.91	415.57	0.002848	7.22	1362.75	405.06	0.40
USACE	123679	50YR	4998.00	401.47	416.06	414.49	416.45	0.002754	7.51	1734.36	426.57	0.40
USACE	123679	100YR	6514.00	401.47	416.99	415.00	417.37	0.002659	7.79	2142.29	448.34	0.40
USACE	123679	100YRPLUS	8519.00	401.47	418.05	415.70	418.43	0.002582	8.13	2628.15	470.40	0.40
USACE	123679	200YR	8328.00	401.47	417.96	415.64	418.34	0.002573	8.08	2583.92	465.54	0.40
USACE	123679	500YR	11282.00	401.47	419.31	416.32	419.71	0.002518	8.54	3250.56	502.28	0.40
USACE	123679	SEPT2011	5239.00	401.47	416.21	414.60	416.60	0.002737	7.56	1801.40	430.05	0.40
USACE	123427	2YR	1105.00	401.46	411.20	407.26	411.57	0.002406	5.03	272.67	174.32	0.36
USACE	123427	5YR	1729.00	401.46	412.29	408.82	412.67	0.002388	5.57	663.30	370.89	0.37
USACE	123427	10YR	2326.00	401.46	413.15	410.55	413.47	0.002054	5.57	1003.64	410.05	0.35
USACE	123427	25YR	3739.00	401.46	414.75	412.79	415.00	0.001632	5.60	1687.67	443.39	0.32
USACE	123427	50YR	4998.00	401.46	415.61	413.38	415.88	0.001719	6.08	2076.90	463.63	0.33
USACE	123427	100YR	6514.00	401.46	416.52	413.94	416.81	0.001768	6.52	2508.62	483.60	0.34
USACE	123427	100YRPLUS	8519.00	401.46	417.57	414.55	417.88	0.001819	7.01	3030.51	512.41	0.35
USACE	123427	200YR	8328.00	401.46	417.48	414.49	417.79	0.001815	6.97	2982.72	509.95	0.35
USACE	123427	500YR	11282.00	401.46	418.82	415.24	419.16	0.001874	7.58	3691.61	538.42	0.36
USACE	123427	SEPT2011	5239.00	401.46	415.76	413.49	416.04	0.001728	6.16	2148.15	466.29	0.33
USACE	123097	2YR	1105.00	401.43	410.97	405.76	411.12	0.000697	3.15	369.98	349.17	0.21
USACE	123097	5YR	1729.00	401.43	412.08	406.92	412.23	0.000668	3.41	1021.71	418.94	0.21
USACE	123097	10YR	2326.00	401.43	412.91	407.88	413.06	0.000693	3.71	1379.07	441.73	0.22
USACE	123097	25YR	3739.00	401.43	414.48	409.67	414.64	0.000715	4.21	2096.38	474.40	0.23
USACE	123097	50YR	4998.00	401.43	415.28	410.96	415.48	0.000852	4.82	2483.33	490.32	0.25
USACE	123097	100YR	6514.00	401.43	416.14	412.52	416.39	0.000971	5.41	2912.97	503.25	0.28
USACE	123097	100YRPLUS	8519.00	401.43	417.14	413.23	417.43	0.001098	6.07	3423.30	519.53	0.30
USACE	123097	200YR	8328.00	401.43	417.05	413.18	417.34	0.001086	6.01	3377.25	517.89	0.29
USACE	123097	500YR	11282.00	401.43	418.31	414.03	418.67	0.001271	6.91	4052.42	548.60	0.32
USACE	123097	SEPT2011	5239.00	401.43	415.42	411.93	415.63	0.000873	4.92	2554.26	492.42	0.26
USACE	122888	2YR	1105.00	401.43	410.79		410.95	0.000910	3.39	497.94	291.10	0.23
USACE	122888	5YR	1729.00	401.43	411.84		412.05	0.001035	4.00	889.10	453.02	0.26
USACE	122888	10YR	2326.00	401.43	412.69		412.89	0.000974	4.16	1281.87	468.47	0.25

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	122888	25YR	3739.00	401.43	414.29		414.47	0.000885	4.46	2047.74	489.37	0.25
USACE	122888	50YR	4998.00	401.43	415.07		415.28	0.001032	5.06	2429.52	497.43	0.27
USACE	122888	100YR	6514.00	401.43	415.91		416.16	0.001153	5.63	2852.61	505.77	0.29
USACE	122888	100YRPLUS	8519.00	401.43	416.88		417.17	0.001283	6.26	3350.25	517.00	0.31
USACE	122888	200YR	8328.00	401.43	416.80		417.08	0.001271	6.21	3305.45	515.85	0.31
USACE	122888	500YR	11282.00	401.43	418.02		418.37	0.001468	7.10	3950.54	535.79	0.34
USACE	122888	SEPT2011	5239.00	401.43	415.21		415.43	0.001054	5.16	2499.42	498.80	0.28
USACE	122648	2YR	1105.00	401.42	410.37		410.65	0.001741	4.35	424.76	421.46	0.32
USACE	122648	5YR	1729.00	401.42	411.56		411.77	0.001357	4.33	926.95	426.35	0.29
USACE	122648	10YR	2326.00	401.42	412.46		412.64	0.001159	4.34	1310.83	429.34	0.27
USACE	122648	25YR	3739.00	401.42	414.10		414.25	0.000959	4.47	2122.65	552.20	0.25
USACE	122648	50YR	4998.00	401.42	414.85		415.03	0.001085	5.00	2542.14	565.83	0.27
USACE	122648	100YR	6514.00	401.42	415.68		415.88	0.001166	5.45	3019.86	583.38	0.29
USACE	122648	100YRPLUS	8519.00	401.42	416.65		416.87	0.001239	5.94	3591.99	602.69	0.30
USACE	122648	200YR	8328.00	401.42	416.56		416.78	0.001232	5.89	3540.26	600.82	0.30
USACE	122648	500YR	11282.00	401.42	417.77		418.02	0.001348	6.57	4287.88	629.87	0.32
USACE	122648	SEPT2011	5239.00	401.42	414.99		415.17	0.001102	5.08	2620.20	568.70	0.28
USACE	122448	2YR	1105.00	401.40	410.21		410.37	0.000890	3.37	568.08	410.14	0.24
USACE	122448	5YR	1729.00	401.40	411.40		411.55	0.000804	3.59	1062.83	422.03	0.23
USACE	122448	10YR	2326.00	401.40	412.30		412.44	0.000751	3.74	1445.57	427.05	0.23
USACE	122448	25YR	3739.00	401.40	413.94		414.09	0.000713	4.11	2202.22	484.28	0.23
USACE	122448	50YR	4998.00	401.40	414.65		414.83	0.000878	4.77	2551.02	499.72	0.26
USACE	122448	100YR	6514.00	401.40	415.44		415.66	0.001025	5.40	2950.73	518.42	0.28
USACE	122448	100YRPLUS	8519.00	401.40	416.35		416.62	0.001180	6.10	3434.73	540.63	0.30
USACE	122448	200YR	8328.00	401.40	416.27		416.54	0.001164	6.03	3391.17	537.54	0.30
USACE	122448	500YR	11282.00	401.40	417.41		417.75	0.001376	6.95	4025.60	563.62	0.33
USACE	122448	SEPT2011	5239.00	401.40	414.78		414.97	0.000904	4.88	2616.06	502.07	0.26
USACE	122170	2YR	1105.00	401.36	409.77		410.04	0.001521	4.25	352.80	226.28	0.31
USACE	122170	5YR	1729.00	401.36	410.92		411.23	0.001564	4.85	683.24	327.77	0.32
USACE	122170	10YR	2326.00	401.36	411.85		412.14	0.001447	5.06	1001.17	368.58	0.31
USACE	122170	25YR	3739.00	401.36	413.56		413.82	0.001228	5.30	1683.61	435.23	0.30
USACE	122170	50YR	4998.00	401.36	414.16		414.50	0.001546	6.19	1954.37	454.88	0.34
USACE	122170	100YR	6514.00	401.36	414.87		415.27	0.001796	6.97	2281.70	471.30	0.37
USACE	122170	100YRPLUS	8519.00	401.36	415.71		416.18	0.002024	7.77	2689.17	502.11	0.40
USACE	122170	200YR	8328.00	401.36	415.64		416.10	0.002004	7.70	2651.80	498.33	0.39
USACE	122170	500YR	11282.00	401.36	416.68		417.24	0.002309	8.74	3192.53	538.18	0.43
USACE	122170	SEPT2011	5239.00	401.36	414.28		414.63	0.001594	6.33	2006.74	457.12	0.34
USACE	121767	2YR	1105.00	401.32	409.29	405.83	409.48	0.001202	3.83	414.61	465.37	0.27
USACE	121767	5YR	1729.00	401.32	410.43	407.06	410.65	0.001230	4.35	603.35	501.50	0.29
USACE	121767	10YR	2326.00	401.32	411.36	408.60	411.60	0.001224	4.70	756.62	507.49	0.29
USACE	121767	25YR	3739.00	401.32	413.44	409.86	413.51	0.000407	3.16	2700.79	518.52	0.17
USACE	121767	50YR	4998.00	401.32	414.01	410.56	414.10	0.000538	3.76	2995.56	521.75	0.20
USACE	121767	100YR	6514.00	401.32	414.67	411.29	414.79	0.000662	4.34	3344.79	526.51	0.23
USACE	121767	100YRPLUS	8519.00	401.32	415.47	411.61	415.62	0.000799	4.99	3767.30	534.39	0.25
USACE	121767	200YR	8328.00	401.32	415.40	411.61	415.55	0.000786	4.93	3729.81	533.43	0.25
USACE	121767	500YR	11282.00	401.32	416.38	412.03	416.58	0.000970	5.77	4259.40	632.14	0.28
USACE	121767	SEPT2011	5239.00	401.32	414.11	410.70	414.21	0.000560	3.86	3051.84	522.40	0.21
USACE	121681	2YR	1105.00	401.29	408.92	405.93	409.30	0.002057	4.97	232.94	278.34	0.38
USACE	121681	5YR	1729.00	401.29	409.66	407.25	410.35	0.003224	6.78	270.62	334.69	0.48
USACE	121681	10YR	2326.00	401.29	410.09	408.27	411.17	0.004588	8.46	292.96	365.95	0.58
USACE	121681	25YR	3739.00	401.29	413.35	409.97	413.45	0.000549	3.82	2170.76	442.69	0.21
USACE	121681	50YR	4998.00	401.29	413.88	411.26	414.03	0.000735	4.58	2408.15	450.11	0.25
USACE	121681	100YR	6514.00	401.29	414.51	411.27	414.69	0.000909	5.30	2696.02	459.25	0.28
USACE	121681	100YRPLUS	8519.00	401.29	415.27	411.65	415.52	0.001091	6.07	3048.25	467.06	0.31
USACE	121681	200YR	8328.00	401.29	415.20	411.59	415.45	0.001075	6.00	3017.03	466.56	0.31
USACE	121681	500YR	11282.00	401.29	416.14	412.46	416.45	0.001321	7.00	3454.34	472.79	0.35
USACE	121681	SEPT2011	5239.00	401.29	413.98	411.26	414.14	0.000767	4.71	2454.14	451.70	0.26
USACE	121646 Hernley Road		Bridge									
USACE	121613	2YR	1105.00	400.98	408.95	404.23	409.06	0.000500	2.66	416.12	219.67	0.19
USACE	121613	5YR	1729.00	400.98	409.72	405.11	409.93	0.000814	3.68	472.64	310.62	0.25
USACE	121613	10YR	2326.00	400.98	410.19	405.84	410.52	0.001173	4.62	507.46	353.95	0.30
USACE	121613	25YR	3739.00	400.98	411.10	407.31	411.38	0.001138	4.90	1164.63	378.25	0.30
USACE	121613	50YR	4998.00	400.98	411.78	408.39	412.12	0.001268	5.47	1429.54	390.41	0.33
USACE	121613	100YR	6514.00	400.98	412.53	409.50	412.91	0.001352	5.96	1726.69	403.37	0.34
USACE	121613	100YRPLUS	8519.00	400.98	413.42	411.08	413.84	0.001436	6.52	2094.17	430.59	0.36
USACE	121613	200YR	8328.00	400.98	413.34	411.04	413.76	0.001430	6.47	2060.77	428.77	0.36
USACE	121613	500YR	11282.00	400.98	414.51	411.80	414.98	0.001452	7.01	2578.70	451.04	0.36
USACE	121613	SEPT2011	5239.00	400.98	411.91	408.59	412.25	0.001283	5.55	1479.64	392.61	0.33
USACE	121479	2YR	1105.00	400.63	408.90	404.10	408.98	0.000394	2.41	664.55	374.00	0.17
USACE	121479	5YR	1729.00	400.63	409.69	405.08	409.79	0.000495	2.92	905.62	444.07	0.19
USACE	121479	10YR	2326.00	400.63	410.18	405.88	410.31	0.000606	3.38	1058.04	459.05	0.22
USACE	121479	25YR	3739.00	400.63	411.05	408.35	411.19	0.000695	3.90	1649.15	470.76	0.24
USACE	121479	50YR	4998.00	400.63	411.74	409.12	411.90	0.000763	4.31	1976.87	481.62	0.25
USACE	121479	100YR	6514.00	400.63	412.49	409.77	412.67	0.000811	4.68	2342.36	494.44	0.26
USACE	121479	100YRPLUS	8519.00	400.63	413.38	410.34	413.59	0.000849	5.07	2788.50	509.88	0.27
USACE	121479	200YR	8328.00	400.63	413.30	410.29	413.51	0.000845	5.04	2748.85	508.63	0.27
USACE	121479	500YR	11282.00	400.63	414.47	410.93	414.72	0.000876	5.50	3359.84	529.76	0.28

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	121479	SEPT2011	5239.00	400.63	411.87	409.34	412.03	0.000771	4.37	2038.67	483.84	0.25
USACE	120443	2YR	1105.00	399.42	407.91	404.41	408.22	0.001743	4.54	287.07	270.60	0.34
USACE	120443	5YR	1729.00	399.42	408.61	405.78	408.92	0.001840	5.05	635.57	548.50	0.36
USACE	120443	10YR	2326.00	399.42	409.13	406.91	409.38	0.001637	5.03	930.22	584.11	0.34
USACE	120443	25YR	3739.00	399.42	410.14	409.10	410.32	0.001267	4.86	1550.64	633.53	0.31
USACE	120443	50YR	4998.00	399.42	410.91	409.45	411.07	0.001067	4.76	2049.12	654.68	0.29
USACE	120443	100YR	6514.00	399.42	411.71	409.79	411.87	0.000942	4.75	2582.82	675.82	0.28
USACE	120443	100YRPLUS	8519.00	399.42	412.66	410.16	412.81	0.000841	4.79	3230.71	698.85	0.26
USACE	120443	200YR	8328.00	399.42	412.58	410.12	412.73	0.000846	4.77	3174.55	696.82	0.26
USACE	120443	500YR	11282.00	399.42	413.80	410.58	413.96	0.000767	4.91	4057.05	744.21	0.26
USACE	120443	SEPT2011	5239.00	399.42	411.05	409.51	411.21	0.001036	4.74	2141.72	658.41	0.29
USACE	120110	2YR	1105.00	399.00	407.62	403.53	407.78	0.000878	3.43	508.07	445.58	0.25
USACE	120110	5YR	1729.00	399.00	408.28	404.76	408.44	0.000968	3.86	839.06	521.07	0.26
USACE	120110	10YR	2326.00	399.00	408.79	405.74	408.94	0.000957	4.03	1105.95	541.19	0.27
USACE	120110	25YR	3739.00	399.00	409.82	408.31	409.96	0.000882	4.23	1658.14	575.36	0.26
USACE	120110	50YR	4998.00	399.00	410.62	408.67	410.76	0.000819	4.34	2094.23	607.48	0.26
USACE	120110	100YR	6514.00	399.00	411.43	409.04	411.58	0.000783	4.50	2547.13	629.69	0.25
USACE	120110	100YRPLUS	8519.00	399.00	412.38	409.46	412.54	0.000762	4.72	3081.32	661.85	0.25
USACE	120110	200YR	8328.00	399.00	412.30	409.42	412.46	0.000761	4.69	3035.82	658.95	0.25
USACE	120110	500YR	11282.00	399.00	413.53	409.91	413.71	0.000746	5.00	3744.70	703.53	0.26
USACE	120110	SEPT2011	5239.00	399.00	410.76	408.72	410.90	0.000806	4.35	2174.63	610.91	0.25
USACE	119836	2YR	1105.00	398.58	407.43	405.23	407.52	0.000831	2.84	667.23	439.17	0.23
USACE	119836	5YR	1729.00	398.58	408.08	406.08	408.17	0.000845	3.12	952.13	443.67	0.24
USACE	119836	10YR	2326.00	398.58	408.58	407.08	408.68	0.000863	3.35	1174.37	447.67	0.25
USACE	119836	25YR	3739.00	398.58	409.60	407.64	409.72	0.000854	3.72	1639.00	459.45	0.25
USACE	119836	50YR	4998.00	398.58	410.40	407.99	410.53	0.000831	3.95	2008.90	467.18	0.25
USACE	119836	100YR	6514.00	398.58	411.21	408.34	411.36	0.000833	4.23	2392.20	475.60	0.26
USACE	119836	100YRPLUS	8519.00	398.58	412.15	408.74	412.32	0.000860	4.61	2846.80	494.62	0.27
USACE	119836	200YR	8328.00	398.58	412.07	408.70	412.24	0.000857	4.58	2807.97	494.03	0.26
USACE	119836	500YR	11282.00	398.58	413.29	409.22	413.49	0.000859	4.97	3414.01	502.29	0.27
USACE	119836	SEPT2011	5239.00	398.58	410.55	408.05	410.68	0.000825	3.98	2077.44	468.58	0.25
USACE	119273	2YR	1105.00	397.82	406.22	403.37	406.69	0.003165	5.54	225.58	197.10	0.42
USACE	119273	5YR	1729.00	397.82	407.34		407.57	0.001724	4.64	735.56	520.77	0.32
USACE	119273	10YR	2326.00	397.82	408.03		408.17	0.001219	4.17	1094.87	526.12	0.28
USACE	119273	25YR	3739.00	397.82	409.19		409.30	0.000916	4.00	1709.12	534.48	0.24
USACE	119273	50YR	4998.00	397.82	410.03		410.15	0.000811	4.01	2163.69	539.72	0.23
USACE	119273	100YR	6514.00	397.82	410.87		410.99	0.000769	4.14	2616.11	543.98	0.23
USACE	119273	100YRPLUS	8519.00	397.82	411.81		411.95	0.000753	4.35	3132.49	549.91	0.23
USACE	119273	200YR	8328.00	397.82	411.74		411.87	0.000751	4.33	3089.54	549.22	0.23
USACE	119273	500YR	11282.00	397.82	412.96		413.12	0.000747	4.64	3771.98	562.47	0.24
USACE	119273	SEPT2011	5239.00	397.82	410.19		410.30	0.000794	4.02	2246.97	540.57	0.23
USACE	118990	2YR	1105.00	397.13	405.56	402.32	405.88	0.002310	4.70	307.34	206.98	0.36
USACE	118990	5YR	1729.00	397.13	406.96	403.80	407.13	0.001274	4.03	803.29	412.87	0.28
USACE	118990	10YR	2326.00	397.13	407.72	404.98	407.86	0.001037	3.91	1122.47	434.82	0.26
USACE	118990	25YR	3739.00	397.13	408.90	406.94	409.04	0.000953	4.15	1640.77	443.78	0.25
USACE	118990	50YR	4998.00	397.13	409.75	407.35	409.90	0.000930	4.37	2021.40	449.91	0.25
USACE	118990	100YR	6514.00	397.13	410.57	407.77	410.74	0.000954	4.69	2394.97	455.63	0.26
USACE	118990	100YRPLUS	8519.00	397.13	411.50	408.22	411.70	0.000994	5.07	2820.33	461.53	0.27
USACE	118990	200YR	8328.00	397.13	411.42	408.17	411.62	0.000987	5.03	2785.60	460.75	0.27
USACE	118990	500YR	11282.00	397.13	412.63	408.73	412.86	0.001035	5.52	3343.31	645.98	0.28
USACE	118990	SEPT2011	5239.00	397.13	409.90	407.42	410.06	0.000924	4.40	2091.51	451.02	0.25
USACE	118762	2YR	1105.00	396.90	405.19	401.22	405.45	0.001472	4.07	282.41	89.14	0.30
USACE	118762	5YR	1729.00	396.90	406.45	402.41	406.79	0.001604	4.85	556.90	391.16	0.32
USACE	118762	10YR	2326.00	396.90	407.19	403.38	407.54	0.001647	5.24	859.76	427.09	0.33
USACE	118762	25YR	3739.00	396.90	408.32	406.61	408.72	0.001836	6.06	1355.65	492.89	0.36
USACE	118762	50YR	4998.00	396.90	409.16	407.47	409.58	0.001913	6.57	1845.01	657.76	0.37
USACE	118762	100YR	6514.00	396.90	410.03	408.08	410.42	0.001844	6.82	2439.69	730.35	0.37
USACE	118762	100YRPLUS	8519.00	396.90	411.00	408.71	411.38	0.001771	7.09	3136.23	772.30	0.37
USACE	118762	200YR	8328.00	396.90	410.92	408.66	411.31	0.001765	7.05	3081.76	771.23	0.37
USACE	118762	500YR	11282.00	396.90	412.18	409.54	412.55	0.001696	7.40	3987.63	794.32	0.36
USACE	118762	SEPT2011	5239.00	396.90	409.33	407.58	409.74	0.001868	6.57	1959.55	664.80	0.37
USACE	118429	2YR	1034.00	396.49	404.87		405.03	0.000922	3.25	343.06	129.12	0.24
USACE	118429	5YR	1766.00	396.49	406.09		406.32	0.001125	4.07	773.75	438.30	0.27
USACE	118429	10YR	2353.00	396.49	406.83		407.06	0.001120	4.34	1113.32	478.88	0.27
USACE	118429	25YR	3783.00	396.49	407.88		408.16	0.001343	5.18	1629.31	491.92	0.31
USACE	118429	50YR	5066.00	396.49	408.70		409.00	0.001421	5.64	2055.44	545.37	0.32
USACE	118429	100YR	6619.00	396.49	409.53		409.85	0.001483	6.10	2524.93	578.93	0.33
USACE	118429	100YRPLUS	8656.00	396.49	410.48		410.82	0.001535	6.57	3094.03	622.58	0.34
USACE	118429	200YR	8485.00	396.49	410.41		410.75	0.001531	6.53	3048.04	619.56	0.34
USACE	118429	500YR	11517.00	396.49	411.61		412.00	0.001642	7.23	3824.15	674.40	0.36
USACE	118429	SEPT2011	5355.00	396.49	408.86		409.17	0.001433	5.73	2146.84	551.01	0.32
USACE	118119	2YR	1034.00	396.21	404.49	400.52	404.70	0.001265	3.80	429.76	371.11	0.28
USACE	118119	5YR	1766.00	396.21	405.74	401.96	405.95	0.001219	4.24	946.79	439.81	0.28
USACE	118119	10YR	2353.00	396.21	406.49	402.99	406.69	0.001165	4.43	1280.58	445.17	0.28
USACE	118119	25YR	3783.00	396.21	407.45	405.51	407.72	0.001518	5.46	1709.30	492.61	0.32
USACE	118119	50YR	5066.00	396.21	408.23	406.14	408.52	0.001634	5.99	2123.53	527.64	0.34
USACE	118119	100YR	6619.00	396.21	409.04	406.70	409.36	0.001727	6.50	2567.53	567.74	0.35

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	118119	100YRPLUS	8656.00	396.21	409.97	407.30	410.31	0.001783	6.99	3118.18	614.68	0.37
USACE	118119	200YR	8485.00	396.21	409.90	407.25	410.24	0.001780	6.95	3073.30	611.34	0.36
USACE	118119	500YR	11517.00	396.21	411.10	408.09	411.46	0.001806	7.49	3842.53	666.33	0.37
USACE	118119	SEPT2011	5355.00	396.21	408.39	406.25	408.69	0.001653	6.09	2209.02	532.76	0.34
USACE	117842	2YR	1034.00	395.90	404.13	400.18	404.34	0.001307	3.83	407.50	282.86	0.28
USACE	117842	5YR	1766.00	395.90	405.32	401.71	405.58	0.001452	4.57	800.15	373.26	0.30
USACE	117842	10YR	2353.00	395.90	406.07	402.86	406.33	0.001427	4.85	1076.05	448.80	0.31
USACE	117842	25YR	3783.00	395.90	406.88	405.25	407.23	0.001975	6.09	1479.62	494.39	0.37
USACE	117842	50YR	5066.00	395.90	407.64	405.88	408.01	0.002057	6.58	1867.68	524.49	0.38
USACE	117842	100YR	6619.00	395.90	408.45	406.63	408.83	0.002077	6.99	2305.03	555.75	0.39
USACE	117842	100YRPLUS	8656.00	395.90	409.39	407.26	409.78	0.002051	7.37	2849.51	599.67	0.39
USACE	117842	200YR	8485.00	395.90	409.32	407.21	409.71	0.002054	7.34	2805.03	595.50	0.39
USACE	117842	500YR	11517.00	395.90	410.54	407.94	410.93	0.001980	7.73	3569.32	644.47	0.39
USACE	117842	SEPT2011	5355.00	395.90	407.80	406.01	408.17	0.002060	6.66	1953.09	529.74	0.38
USACE	117604	2YR	1034.00	395.59	403.93	399.79	404.07	0.000878	3.28	578.00	310.40	0.23
USACE	117604	5YR	1766.00	395.59	405.10	401.24	405.27	0.001003	3.93	955.43	425.10	0.26
USACE	117604	10YR	2353.00	395.59	405.83	402.47	406.03	0.001062	4.32	1201.97	463.93	0.27
USACE	117604	25YR	3783.00	395.59	406.55	404.41	406.81	0.001453	5.34	1668.14	482.14	0.32
USACE	117604	50YR	5066.00	395.59	407.28	405.09	407.56	0.001584	5.88	2022.70	493.70	0.34
USACE	117604	100YR	6619.00	395.59	408.06	405.73	408.37	0.001672	6.37	2414.33	504.81	0.35
USACE	117604	100YRPLUS	8656.00	395.59	408.99	406.48	409.32	0.001739	6.88	2886.45	521.18	0.36
USACE	117604	200YR	8485.00	395.59	408.91	406.43	409.24	0.001733	6.83	2848.81	519.57	0.36
USACE	117604	500YR	11517.00	395.59	410.10	407.15	410.48	0.001835	7.52	3483.37	721.93	0.38
USACE	117604	SEPT2011	5355.00	395.59	407.44	405.21	407.72	0.001600	5.98	2100.44	495.90	0.34
USACE	117307	2YR	1034.00	395.39	403.40	401.54	403.65	0.002449	4.38	447.43	292.11	0.37
USACE	117307	5YR	1766.00	395.39	404.64	403.22	404.86	0.001944	4.61	812.30	418.89	0.34
USACE	117307	10YR	2353.00	395.39	405.38	403.66	405.61	0.001853	4.89	1035.38	476.88	0.34
USACE	117307	25YR	3783.00	395.39	405.96	404.45	406.25	0.002448	5.95	1472.83	504.53	0.40
USACE	117307	50YR	5066.00	395.39	406.70	405.00	406.99	0.002384	6.28	1850.27	544.92	0.40
USACE	117307	100YR	6619.00	395.39	407.49	405.65	407.79	0.002316	6.61	2292.19	575.53	0.40
USACE	117307	100YRPLUS	8656.00	395.39	408.44	406.20	408.74	0.002149	6.83	2863.57	622.57	0.39
USACE	117307	200YR	8485.00	395.39	408.37	406.16	408.66	0.002158	6.81	2817.68	618.41	0.39
USACE	117307	500YR	11517.00	395.39	409.59	406.84	409.89	0.002003	7.12	3603.50	673.29	0.39
USACE	117307	SEPT2011	5355.00	395.39	406.84	405.11	407.14	0.002428	6.42	1929.24	549.16	0.40
USACE	116975	2YR	1034.00	395.07	402.85	399.20	403.06	0.001322	3.81	396.43	199.44	0.28
USACE	116975	5YR	1766.00	395.07	403.93	400.57	404.24	0.001736	4.91	628.38	478.54	0.33
USACE	116975	10YR	2353.00	395.07	404.59	402.02	404.96	0.001960	5.55	777.93	528.29	0.36
USACE	116975	25YR	3783.00	395.07	405.26	403.79	405.55	0.001858	5.72	1460.19	540.20	0.35
USACE	116975	50YR	5066.00	395.07	406.07	404.55	406.33	0.001655	5.75	1903.03	548.47	0.34
USACE	116975	100YR	6619.00	395.07	406.92	405.13	407.16	0.001521	5.86	2370.47	558.12	0.33
USACE	116975	100YRPLUS	8656.00	395.07	407.90	405.58	408.15	0.001451	6.10	2944.12	599.00	0.33
USACE	116975	200YR	8485.00	395.07	407.83	405.54	408.08	0.001459	6.09	2897.72	597.54	0.33
USACE	116975	500YR	11517.00	395.07	409.08	406.11	409.34	0.001388	6.39	3661.04	635.96	0.33
USACE	116975	SEPT2011	5355.00	395.07	406.22	404.79	406.48	0.001648	5.80	1983.76	549.93	0.34
USACE	116767	2YR	1034.00	394.42	402.65	398.56	402.81	0.000945	3.34	424.61	367.31	0.24
USACE	116767	5YR	1766.00	394.42	403.61	399.94	403.90	0.001491	4.64	558.89	494.47	0.31
USACE	116767	10YR	2353.00	394.42	404.16	401.12	404.56	0.001921	5.55	641.59	521.50	0.36
USACE	116767	25YR	3783.00	394.42	405.07	402.80	405.23	0.001085	4.50	1692.67	539.49	0.27
USACE	116767	50YR	5066.00	394.42	405.89	403.81	406.05	0.001015	4.63	2138.45	548.02	0.27
USACE	116767	100YR	6619.00	394.42	406.74	404.68	406.90	0.000971	4.80	2607.96	555.93	0.27
USACE	116767	100YRPLUS	8656.00	394.42	407.73	404.81	407.90	0.000931	5.01	3163.86	564.41	0.27
USACE	116767	200YR	8485.00	394.42	407.65	404.76	407.82	0.000933	4.99	3120.03	563.77	0.27
USACE	116767	500YR	11517.00	394.42	408.90	405.31	409.10	0.000932	5.36	3831.82	584.75	0.27
USACE	116767	SEPT2011	5355.00	394.42	406.03	404.00	406.20	0.001021	4.69	2217.98	549.44	0.27
USACE	116618	2YR	1034.00	393.69	402.71	395.49	402.72	0.000040	0.81	1273.69	563.91	0.05
USACE	116618	5YR	1766.00	393.69	403.72	396.10	403.74	0.000075	1.22	1452.66	611.11	0.07
USACE	116618	10YR	2353.00	393.69	404.30	396.51	404.34	0.000106	1.52	1558.20	630.13	0.09
USACE	116618	25YR	3783.00	393.69	405.09	397.35	405.14	0.000143	1.87	2682.94	681.03	0.11
USACE	116618	50YR	5066.00	393.69	405.90	398.00	405.96	0.000173	2.16	3150.76	700.86	0.12
USACE	116618	100YR	6619.00	393.69	406.74	398.69	406.81	0.000199	2.44	3752.80	751.14	0.13
USACE	116618	100YRPLUS	8656.00	393.69	407.73	399.49	407.82	0.000224	2.74	4486.02	848.20	0.14
USACE	116618	200YR	8485.00	393.69	407.65	399.43	407.74	0.000222	2.72	4425.99	843.31	0.14
USACE	116618	500YR	11517.00	393.69	408.90	400.47	409.00	0.000245	3.05	5467.70	961.13	0.15
USACE	116618	SEPT2011	5355.00	393.69	406.04	398.12	406.10	0.000181	2.23	3234.14	704.22	0.12
USACE	116569 Aband. Railroad		Bridge									
USACE	116525	2YR	1034.00	393.79	402.62	396.57	402.67	0.000258	1.84	597.77	553.46	0.13
USACE	116525	5YR	1766.00	393.79	403.54	397.54	403.64	0.000447	2.66	738.56	610.62	0.17
USACE	116525	10YR	2353.00	393.79	404.04	398.19	404.19	0.000607	3.24	816.76	622.01	0.21
USACE	116525	25YR	3783.00	393.79	404.96	399.52	405.06	0.000472	3.08	1933.94	750.03	0.19
USACE	116525	50YR	5066.00	393.79	405.77	400.60	405.88	0.000494	3.34	2373.35	759.95	0.19
USACE	116525	100YR	6619.00	393.79	406.63	402.16	406.74	0.000467	3.45	3091.69	767.03	0.19
USACE	116525	100YRPLUS	8656.00	393.79	407.61	403.54	407.73	0.000466	3.66	3776.97	851.78	0.19
USACE	116525	200YR	8485.00	393.79	407.53	403.46	407.65	0.000467	3.64	3719.59	844.95	0.19
USACE	116525	500YR	11517.00	393.79	408.77	404.70	408.89	0.000451	3.84	4722.61	937.76	0.19
USACE	116525	SEPT2011	5355.00	393.79	405.91	400.83	406.02	0.000505	3.41	2450.53	761.14	0.19
USACE	116426	2YR	1034.00	394.62	402.44	398.90	402.59	0.001093	3.39	441.27	440.62	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	116426	5YR	1766.00	394.62	403.37	400.39	403.55	0.001235	4.00	703.43	489.93	0.28
USACE	116426	10YR	2353.00	394.62	403.88	401.96	404.08	0.001363	4.43	870.38	532.26	0.30
USACE	116426	25YR	3783.00	394.62	404.90	403.07	404.99	0.000712	3.51	1900.32	593.29	0.22
USACE	116426	50YR	5066.00	394.62	405.71	403.57	405.81	0.000662	3.61	2388.43	604.60	0.22
USACE	116426	100YR	6619.00	394.62	406.57	404.26	406.67	0.000626	3.74	2913.49	621.59	0.21
USACE	116426	100YRPLUS	8656.00	394.62	407.55	404.60	407.66	0.000605	3.92	3550.15	699.92	0.21
USACE	116426	200YR	8485.00	394.62	407.47	404.60	407.59	0.000608	3.91	3497.74	677.35	0.21
USACE	116426	500YR	11517.00	394.62	408.71	404.61	408.84	0.000568	4.07	4424.43	782.78	0.21
USACE	116426	SEPT2011	5355.00	394.62	405.85	403.68	405.95	0.000666	3.66	2474.02	605.85	0.22
USACE	116315	2YR	1034.00	395.10	402.35	400.18	402.45	0.001148	3.25	579.97	379.23	0.26
USACE	116315	5YR	1766.00	395.10	403.31	401.91	403.40	0.000888	3.22	1012.00	485.97	0.23
USACE	116315	10YR	2353.00	395.10	403.84	402.18	403.92	0.000854	3.34	1276.34	519.79	0.23
USACE	116315	25YR	3783.00	395.10	404.80	402.62	404.90	0.000857	3.67	1810.74	583.01	0.24
USACE	116315	50YR	5066.00	395.10	405.62	403.14	405.72	0.000765	3.72	2294.15	591.75	0.23
USACE	116315	100YR	6619.00	395.10	406.49	403.50	406.59	0.000717	3.85	2812.80	614.98	0.23
USACE	116315	100YRPLUS	8656.00	395.10	407.47	403.90	407.59	0.000667	3.98	3441.53	697.46	0.22
USACE	116315	200YR	8485.00	395.10	407.40	403.85	407.51	0.000670	3.97	3388.74	666.41	0.22
USACE	116315	500YR	11517.00	395.10	408.64	404.43	408.76	0.000619	4.13	4302.55	776.02	0.22
USACE	116315	SEPT2011	5355.00	395.10	405.76	403.20	405.86	0.000768	3.77	2377.53	593.13	0.23
USACE	116224	2YR	1034.00	395.23	402.31	398.80	402.36	0.000353	2.16	738.12	293.18	0.15
USACE	116224	5YR	1766.00	395.23	403.25	399.90	403.32	0.000451	2.68	1106.20	408.67	0.18
USACE	116224	10YR	2353.00	395.23	403.77	400.70	403.85	0.000524	3.03	1325.38	441.36	0.19
USACE	116224	25YR	3783.00	395.23	404.70	401.89	404.81	0.000677	3.72	1768.45	514.76	0.22
USACE	116224	50YR	5066.00	395.23	405.52	402.08	405.64	0.000682	3.97	2196.60	530.74	0.23
USACE	116224	100YR	6619.00	395.23	406.38	402.86	406.52	0.000694	4.24	2664.18	559.56	0.23
USACE	116224	100YRPLUS	8656.00	395.23	407.36	403.45	407.51	0.000685	4.48	3241.09	622.55	0.24
USACE	116224	200YR	8485.00	395.23	407.29	403.74	407.44	0.000686	4.46	3193.75	611.31	0.24
USACE	116224	500YR	11517.00	395.23	408.53	404.16	408.69	0.000666	4.72	4052.50	750.81	0.24
USACE	116224	SEPT2011	5355.00	395.23	405.65	402.20	405.78	0.000697	4.05	2270.05	533.51	0.23
USACE	116189 Hamaker Road		Bridge									
USACE	116154	2YR	1034.00	395.06	402.03	398.44	402.19	0.001052	3.23	350.88	203.68	0.25
USACE	116154	5YR	1766.00	395.06	402.92	399.57	403.14	0.001362	4.05	670.10	409.39	0.30
USACE	116154	10YR	2353.00	395.06	403.46	400.33	403.69	0.001398	4.35	896.31	430.05	0.30
USACE	116154	25YR	3783.00	395.06	404.49	402.95	404.73	0.001434	4.87	1364.52	486.98	0.32
USACE	116154	50YR	5066.00	395.06	405.34	403.48	405.57	0.001307	5.00	1789.74	509.43	0.31
USACE	116154	100YR	6619.00	395.06	406.23	403.93	406.45	0.001190	5.10	2246.77	516.70	0.30
USACE	116154	100YRPLUS	8656.00	395.06	407.20	404.53	407.44	0.001129	5.32	2757.40	529.96	0.29
USACE	116154	200YR	8485.00	395.06	407.13	404.49	407.36	0.001132	5.30	2717.11	529.21	0.29
USACE	116154	500YR	11517.00	395.06	408.35	405.14	408.62	0.001176	5.83	3433.37	690.18	0.31
USACE	116154	SEPT2011	5355.00	395.06	405.48	403.58	405.71	0.001317	5.07	1860.04	510.75	0.31
USACE	116064	2YR	1034.00	394.81	401.69	399.07	402.01	0.002409	4.58	256.68	203.52	0.37
USACE	116064	5YR	1766.00	394.81	402.66	400.44	402.97	0.002237	5.00	563.53	388.38	0.37
USACE	116064	10YR	2353.00	394.81	403.24	402.11	403.52	0.002099	5.17	845.42	544.33	0.36
USACE	116064	25YR	3783.00	394.81	404.38	403.05	404.58	0.001540	4.95	1500.23	596.11	0.32
USACE	116064	50YR	5066.00	394.81	405.26	403.61	405.42	0.001210	4.73	2028.63	602.53	0.29
USACE	116064	100YR	6619.00	394.81	406.16	404.03	406.32	0.001028	4.67	2576.66	614.72	0.27
USACE	116064	100YRPLUS	8656.00	394.81	407.15	404.43	407.31	0.000933	4.76	3199.67	645.75	0.26
USACE	116064	200YR	8485.00	394.81	407.07	404.40	407.23	0.000938	4.75	3150.11	644.68	0.26
USACE	116064	500YR	11517.00	394.81	408.31	404.89	408.48	0.000878	4.97	3957.75	660.66	0.26
USACE	116064	SEPT2011	5355.00	394.81	405.40	403.68	405.56	0.001204	4.77	2112.36	603.14	0.29
USACE	115856	2YR	1034.00	394.51	401.35		401.58	0.001613	3.97	360.82	227.07	0.31
USACE	115856	5YR	1766.00	394.51	402.26		402.54	0.001909	4.81	625.84	386.00	0.35
USACE	115856	10YR	2353.00	394.51	402.83		403.11	0.001900	5.11	860.85	426.95	0.35
USACE	115856	25YR	3783.00	394.51	403.98		404.24	0.001713	5.40	1402.90	505.21	0.34
USACE	115856	50YR	5066.00	394.51	404.91		405.14	0.001459	5.39	1894.41	544.90	0.32
USACE	115856	100YR	6619.00	394.51	405.85		406.07	0.001298	5.45	2422.38	573.98	0.31
USACE	115856	100YRPLUS	8656.00	394.51	406.84		407.07	0.001311	5.84	3030.16	675.24	0.32
USACE	115856	200YR	8485.00	394.51	406.76		406.99	0.001320	5.83	2976.93	670.22	0.32
USACE	115856	500YR	11517.00	394.51	408.03		408.26	0.001194	5.99	3870.29	722.55	0.31
USACE	115856	SEPT2011	5355.00	394.51	405.04		405.28	0.001474	5.47	1968.12	548.41	0.33
USACE	115618	2YR	1034.00	394.06	401.12	397.44	401.27	0.000918	3.19	452.23	295.21	0.24
USACE	115618	5YR	1766.00	394.06	401.94	398.65	402.15	0.001252	4.08	733.29	447.74	0.29
USACE	115618	10YR	2353.00	394.06	402.50	399.45	402.72	0.001301	4.40	1028.84	554.06	0.30
USACE	115618	25YR	3783.00	394.06	403.72	401.88	403.90	0.001060	4.43	1729.23	603.29	0.27
USACE	115618	50YR	5066.00	394.06	404.71	402.56	404.85	0.000883	4.36	2308.02	669.49	0.25
USACE	115618	100YR	6619.00	394.06	405.67	403.01	405.82	0.000798	4.43	2883.17	709.92	0.25
USACE	115618	100YRPLUS	8656.00	394.06	406.66	403.47	406.81	0.000779	4.66	3473.96	723.13	0.25
USACE	115618	200YR	8485.00	394.06	406.58	403.44	406.73	0.000781	4.65	3426.61	722.39	0.25
USACE	115618	500YR	11517.00	394.06	407.85	403.99	408.02	0.000778	4.99	4183.77	768.31	0.25
USACE	115618	SEPT2011	5355.00	394.06	404.84	402.65	404.99	0.000899	4.44	2385.99	674.78	0.26
USACE	115441	2YR	1034.00	393.91	400.80	398.44	401.03	0.002013	4.25	470.19	448.85	0.34
USACE	115441	5YR	1766.00	393.91	401.73	400.76	401.89	0.001567	4.22	1011.16	620.96	0.31
USACE	115441	10YR	2353.00	393.91	402.34	401.32	402.46	0.001249	4.03	1395.28	633.34	0.28
USACE	115441	25YR	3783.00	393.91	403.60	401.79	403.70	0.000917	3.90	2236.11	697.48	0.25
USACE	115441	50YR	5066.00	393.91	404.61	402.11	404.69	0.000746	3.82	2954.36	739.24	0.23
USACE	115441	100YR	6619.00	393.91	405.58	402.44	405.67	0.000668	3.88	3664.46	776.71	0.22
USACE	115441	100YRPLUS	8656.00	393.91	406.57	402.78	406.67	0.000656	4.11	4388.20	843.76	0.22

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	115441	200YR	8485.00	393.91	406.49	402.78	406.59	0.000657	4.09	4330.11	841.32	0.22
USACE	115441	500YR	11517.00	393.91	407.76	403.28	407.88	0.000661	4.42	5261.26	903.86	0.23
USACE	115441	SEPT2011	5355.00	393.91	404.74	402.19	404.83	0.000760	3.89	3048.17	741.11	0.23
USACE	115220	2YR	1034.00	393.70	400.67	397.23	400.75	0.000655	2.70	873.77	605.51	0.20
USACE	115220	5YR	1766.00	393.70	401.57	398.52	401.65	0.000673	3.02	1442.00	662.46	0.21
USACE	115220	10YR	2353.00	393.70	402.18	400.20	402.26	0.000650	3.16	1861.92	703.49	0.21
USACE	115220	25YR	3783.00	393.70	403.46	400.95	403.54	0.000576	3.32	2793.33	767.69	0.20
USACE	115220	50YR	5066.00	393.70	404.48	401.35	404.56	0.000519	3.41	3568.12	798.05	0.20
USACE	115220	100YR	6619.00	393.70	405.47	401.71	405.54	0.000500	3.57	4321.09	857.79	0.20
USACE	115220	100YRPLUS	8656.00	393.70	406.46	402.20	406.54	0.000522	3.88	5081.15	942.96	0.20
USACE	115220	200YR	8485.00	393.70	406.38	402.17	406.46	0.000520	3.86	5020.03	938.03	0.20
USACE	115220	500YR	11517.00	393.70	407.64	402.67	407.74	0.000555	4.28	6003.87	1063.32	0.21
USACE	115220	SEPT2011	5355.00	393.70	404.61	401.41	404.68	0.000536	3.49	3664.13	802.48	0.20
USACE	114853	2YR	1018.00	393.62	400.18	398.09	400.38	0.001803	4.08	543.58	403.19	0.33
USACE	114853	5YR	1745.00	393.62	401.09	399.84	401.29	0.001775	4.54	981.06	508.54	0.34
USACE	114853	10YR	2330.00	393.62	401.73	400.18	401.92	0.001654	4.71	1328.90	585.59	0.33
USACE	114853	25YR	3769.00	393.62	403.14	401.15	403.27	0.001132	4.45	2278.47	721.16	0.28
USACE	114853	50YR	5054.00	393.62	404.23	401.66	404.33	0.000864	4.25	3054.70	879.35	0.25
USACE	114853	100YR	6614.00	393.62	405.23	402.19	405.33	0.000776	4.32	3777.20	1009.21	0.24
USACE	114853	100YRPLUS	8650.00	393.62	406.22	402.83	406.33	0.000779	4.61	4493.31	1048.01	0.25
USACE	114853	200YR	8480.00	393.62	406.14	402.64	406.25	0.000779	4.59	4435.30	1045.91	0.25
USACE	114853	500YR	11479.00	393.62	407.39	403.15	407.52	0.000792	4.99	5360.46	1084.67	0.25
USACE	114853	SEPT2011	5254.00	393.62	404.35	401.70	404.46	0.000855	4.26	3145.47	900.81	0.25
USACE	114718	2YR	1018.00	393.47	400.01	397.52	400.17	0.001404	3.78	618.92	452.20	0.29
USACE	114718	5YR	1745.00	393.47	400.91	399.54	401.07	0.001415	4.22	1055.13	521.86	0.30
USACE	114718	10YR	2330.00	393.47	401.57	400.04	401.72	0.001275	4.28	1417.45	570.49	0.29
USACE	114718	25YR	3769.00	393.47	403.02	400.75	403.13	0.000937	4.17	2278.11	636.34	0.25
USACE	114718	50YR	5054.00	393.47	404.12	401.22	404.22	0.000779	4.13	2989.51	690.44	0.24
USACE	114718	100YR	6614.00	393.47	405.13	401.69	405.24	0.000744	4.32	3652.66	777.52	0.24
USACE	114718	100YRPLUS	8650.00	393.47	406.11	402.19	406.23	0.000772	4.67	4327.49	818.10	0.24
USACE	114718	200YR	8480.00	393.47	406.03	402.17	406.15	0.000771	4.65	4272.60	812.85	0.24
USACE	114718	500YR	11479.00	393.47	407.28	402.70	407.42	0.000810	5.11	5165.01	889.79	0.25
USACE	114718	SEPT2011	5254.00	393.47	404.25	401.31	404.35	0.000777	4.16	3071.97	714.04	0.24
USACE	114442	2YR	1018.00	393.80	399.83	397.41	399.89	0.000633	2.46	851.23	467.59	0.20
USACE	114442	5YR	1745.00	393.80	400.73	398.94	400.80	0.000637	2.77	1283.10	490.48	0.20
USACE	114442	10YR	2330.00	393.80	401.41	399.34	401.47	0.000581	2.85	1614.17	492.96	0.20
USACE	114442	25YR	3769.00	393.80	402.87	399.86	402.94	0.000491	3.00	2337.92	559.18	0.19
USACE	114442	50YR	5054.00	393.80	403.99	400.20	404.06	0.000451	3.14	2932.61	707.66	0.18
USACE	114442	100YR	6614.00	393.80	404.99	400.63	405.08	0.000458	3.39	3503.05	749.76	0.19
USACE	114442	100YRPLUS	8650.00	393.80	405.95	401.04	406.06	0.000508	3.80	4060.54	837.42	0.20
USACE	114442	200YR	8480.00	393.80	405.88	401.01	405.98	0.000505	3.77	4014.93	814.22	0.20
USACE	114442	500YR	11479.00	393.80	407.11	401.53	407.24	0.000558	4.25	4745.82	976.94	0.22
USACE	114442	SEPT2011	5254.00	393.80	404.11	400.25	404.19	0.000455	3.18	3003.25	714.59	0.19
USACE	114230	2YR	1018.00	394.61	399.63	398.44	399.71	0.001102	2.90	726.53	452.22	0.25
USACE	114230	5YR	1745.00	394.61	400.54	399.06	400.62	0.001015	3.18	1152.73	476.36	0.25
USACE	114230	10YR	2330.00	394.61	401.23	399.29	401.32	0.000893	3.25	1483.15	485.47	0.24
USACE	114230	25YR	3769.00	394.61	402.72	399.89	402.81	0.000731	3.44	2198.33	616.26	0.23
USACE	114230	50YR	5054.00	394.61	403.85	400.30	403.94	0.000654	3.58	2823.33	765.75	0.22
USACE	114230	100YR	6614.00	394.61	404.86	400.68	404.96	0.000659	3.88	3428.82	876.58	0.22
USACE	114230	100YRPLUS	8650.00	394.61	405.81	401.12	405.93	0.000707	4.29	4055.17	925.62	0.24
USACE	114230	200YR	8480.00	394.61	405.73	401.08	405.85	0.000705	4.26	4003.71	923.10	0.24
USACE	114230	500YR	11479.00	394.61	406.96	401.66	407.10	0.000745	4.73	4828.07	984.02	0.25
USACE	114230	SEPT2011	5254.00	394.61	403.98	400.34	404.07	0.000659	3.63	2893.19	772.06	0.22
USACE	114101	2YR	1018.00	395.30	399.38	398.63	399.51	0.002299	3.80	619.05	408.49	0.36
USACE	114101	5YR	1745.00	395.30	400.33	399.06	400.45	0.001830	3.98	1018.99	431.97	0.33
USACE	114101	10YR	2330.00	395.30	401.06	399.40	401.17	0.001499	3.98	1334.27	498.10	0.31
USACE	114101	25YR	3769.00	395.30	402.58	399.92	402.69	0.001155	4.15	2010.82	748.75	0.28
USACE	114101	50YR	5054.00	395.30	403.75	400.36	403.84	0.000935	4.15	2778.75	929.33	0.26
USACE	114101	100YR	6614.00	395.30	404.76	400.76	404.86	0.000873	4.35	3474.85	1013.20	0.26
USACE	114101	100YRPLUS	8650.00	395.30	405.71	401.24	405.83	0.000906	4.74	4180.88	1133.42	0.27
USACE	114101	200YR	8480.00	395.30	405.63	401.19	405.75	0.000910	4.72	4121.69	1118.88	0.27
USACE	114101	500YR	11479.00	395.30	406.86	401.80	406.99	0.000882	5.03	5074.79	1390.24	0.27
USACE	114101	SEPT2011	5254.00	395.30	403.87	400.41	403.97	0.000930	4.18	2862.64	937.22	0.26
USACE	113998	2YR	1018.00	395.47	399.28	397.26	399.35	0.000832	2.37	717.80	593.79	0.22
USACE	113998	5YR	1745.00	395.47	400.28	397.94	400.32	0.000511	2.18	1577.19	878.02	0.18
USACE	113998	10YR	2330.00	395.47	401.02	398.22	401.06	0.000390	2.10	2146.64	1001.27	0.16
USACE	113998	25YR	3769.00	395.47	402.57	399.09	402.60	0.000261	2.03	3347.26	1535.50	0.14
USACE	113998	50YR	5054.00	395.47	403.74	399.58	403.77	0.000220	2.07	4254.90	1744.12	0.13
USACE	113998	100YR	6614.00	395.47	404.75	400.11	404.79	0.000219	2.24	5051.78	2012.78	0.13
USACE	113998	100YRPLUS	8650.00	395.47	405.70	400.39	405.75	0.000240	2.50	5804.95	2135.29	0.14
USACE	113998	200YR	8480.00	395.47	405.62	400.37	405.67	0.000238	2.48	5743.32	2132.65	0.14
USACE	113998	500YR	11479.00	395.47	406.85	400.67	406.91	0.000263	2.81	6715.02	2277.13	0.15
USACE	113998	SEPT2011	5254.00	395.47	403.86	399.58	403.90	0.000221	2.10	4352.71	1775.47	0.13
USACE	113967 Shearers Bridge		Bridge									
USACE	113946	2YR	1018.00	395.30	399.04	397.40	399.11	0.001057	2.57	644.85	569.27	0.24
USACE	113946	5YR	1745.00	395.30	400.21	398.23	400.25	0.000505	2.16	1502.41	843.50	0.18

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	113946	10YR	2330.00	395.30	400.99	398.67	401.02	0.000362	2.03	2045.53	1036.27	0.15
USACE	113946	25YR	3769.00	395.30	402.55	399.20	402.58	0.000253	2.01	3181.83	1480.82	0.13
USACE	113946	50YR	5054.00	395.30	403.71	399.57	403.75	0.000213	2.04	4053.95	1820.29	0.13
USACE	113946	100YR	6614.00	395.30	404.73	399.97	404.76	0.000212	2.20	4816.79	1962.35	0.13
USACE	113946	100YRPLUS	8650.00	395.30	405.67	400.27	405.72	0.000232	2.46	5535.98	2054.84	0.14
USACE	113946	200YR	8480.00	395.30	405.59	400.24	405.64	0.000231	2.44	5477.08	2051.19	0.14
USACE	113946	500YR	11479.00	395.30	406.82	400.64	406.88	0.000255	2.77	6404.76	2237.52	0.15
USACE	113946	SEPT2011	5254.00	395.30	403.84	399.63	403.87	0.000214	2.06	4147.59	1847.90	0.13
USACE	113836	2YR	1018.00	393.97	398.70	397.53	398.90	0.002457	4.15	449.66	342.94	0.37
USACE	113836	5YR	1745.00	393.97	400.01	398.63	400.14	0.001375	3.77	913.21	368.16	0.29
USACE	113836	10YR	2330.00	393.97	400.81	398.96	400.93	0.001146	3.79	1223.73	488.31	0.27
USACE	113836	25YR	3769.00	393.97	402.38	399.57	402.50	0.000951	4.04	1892.26	675.54	0.26
USACE	113836	50YR	5054.00	393.97	403.57	400.01	403.68	0.000795	4.07	2521.47	801.97	0.24
USACE	113836	100YR	6614.00	393.97	404.59	400.54	404.70	0.000732	4.21	3132.27	1410.01	0.24
USACE	113836	100YRPLUS	8650.00	393.97	405.53	401.07	405.65	0.000750	4.53	3699.94	1843.84	0.24
USACE	113836	200YR	8480.00	393.97	405.45	401.01	405.58	0.000749	4.50	3653.34	1835.22	0.24
USACE	113836	500YR	11479.00	393.97	406.65	401.63	406.81	0.000773	4.92	4384.13	2011.99	0.25
USACE	113836	SEPT2011	5254.00	393.97	403.69	400.07	403.81	0.000793	4.10	2593.08	842.97	0.24
USACE	113593	2YR	1018.00	391.60	398.21	395.37	398.43	0.001560	3.94	376.34	217.71	0.31
USACE	113593	5YR	1745.00	391.60	399.51	396.67	399.77	0.001561	4.59	685.77	342.28	0.32
USACE	113593	10YR	2330.00	391.60	400.33	398.06	400.60	0.001499	4.88	942.40	427.30	0.32
USACE	113593	25YR	3769.00	391.60	401.93	399.24	402.21	0.001400	5.39	1462.43	547.30	0.32
USACE	113593	50YR	5054.00	391.60	403.12	399.82	403.42	0.001377	5.81	1933.44	870.97	0.32
USACE	113593	100YR	6614.00	391.60	404.20	399.82	404.46	0.001214	5.84	2778.11	1421.97	0.31
USACE	113593	100YRPLUS	8650.00	391.60	405.21	401.47	405.43	0.001036	5.72	3623.93	1661.05	0.29
USACE	113593	200YR	8480.00	391.60	405.13	401.44	405.35	0.001050	5.73	3554.82	1640.27	0.29
USACE	113593	500YR	11479.00	391.60	406.40	402.37	406.60	0.000901	5.68	4615.82	1972.49	0.27
USACE	113593	SEPT2011	5254.00	391.60	403.24	399.82	403.54	0.001390	5.88	1989.40	895.46	0.33
USACE	113373	2YR	1016.00	390.20	398.06	393.81	398.18	0.000685	2.87	462.18	196.92	0.21
USACE	113373	5YR	1732.00	390.20	399.31	395.01	399.49	0.000864	3.67	790.18	310.74	0.24
USACE	113373	10YR	2347.00	390.20	400.11	395.86	400.32	0.000930	4.09	1050.78	335.93	0.26
USACE	113373	25YR	3789.00	390.20	401.72	397.79	401.94	0.000915	4.59	1707.57	579.97	0.26
USACE	113373	50YR	5082.00	390.20	402.97	398.54	403.16	0.000770	4.57	2545.98	923.39	0.25
USACE	113373	100YR	6648.00	390.20	404.09	400.07	404.24	0.000634	4.43	3407.71	1181.09	0.23
USACE	113373	100YRPLUS	8694.00	390.20	405.09	400.98	405.24	0.000607	4.57	4182.66	1282.39	0.22
USACE	113373	200YR	8508.00	390.20	405.01	400.78	405.16	0.000607	4.55	4119.53	1279.00	0.22
USACE	113373	500YR	11481.00	390.20	406.28	402.22	406.43	0.000584	4.76	5096.86	1372.01	0.22
USACE	113373	SEPT2011	5231.00	390.20	403.10	399.28	403.28	0.000753	4.55	2644.17	950.34	0.24
USACE	113162	2YR	1016.00	389.98	397.92	393.87	398.04	0.000696	2.87	561.99	364.74	0.21
USACE	113162	5YR	1732.00	389.98	399.18	395.06	399.31	0.000732	3.35	1062.63	563.51	0.22
USACE	113162	10YR	2347.00	389.98	400.00	395.85	400.13	0.000679	3.47	1531.94	725.15	0.22
USACE	113162	25YR	3789.00	389.98	401.68	398.12	401.77	0.000464	3.26	2660.19	923.61	0.19
USACE	113162	50YR	5082.00	389.98	402.94	399.15	403.01	0.000375	3.18	3524.78	1000.94	0.17
USACE	113162	100YR	6648.00	389.98	404.04	399.88	404.12	0.000352	3.29	4291.95	1139.46	0.17
USACE	113162	100YRPLUS	8694.00	389.98	405.04	400.43	405.12	0.000379	3.60	4980.44	1311.20	0.18
USACE	113162	200YR	8508.00	389.98	404.96	400.40	405.04	0.000376	3.57	4924.35	1309.45	0.18
USACE	113162	500YR	11481.00	389.98	406.21	401.02	406.31	0.000409	3.96	5794.99	1340.56	0.19
USACE	113162	SEPT2011	5231.00	389.98	403.07	399.20	403.14	0.000369	3.18	3613.50	1010.74	0.17
USACE	112946	2YR	1016.00	390.10	397.71	394.12	397.86	0.000969	3.39	600.96	443.90	0.24
USACE	112946	5YR	1732.00	390.10	399.00	395.52	399.14	0.000898	3.72	1091.90	559.02	0.24
USACE	112946	10YR	2347.00	390.10	399.83	397.27	399.97	0.000856	3.91	1437.19	581.08	0.24
USACE	112946	25YR	3789.00	390.10	401.51	398.33	401.64	0.000754	4.16	2179.25	637.32	0.23
USACE	112946	50YR	5082.00	390.10	402.77	398.77	402.90	0.000696	4.33	2772.61	832.32	0.23
USACE	112946	100YR	6648.00	390.10	403.86	399.54	404.01	0.000759	4.81	3385.01	1004.66	0.24
USACE	112946	100YRPLUS	8694.00	390.10	404.83	400.13	405.00	0.000814	5.25	4043.26	1253.69	0.26
USACE	112946	200YR	8508.00	390.10	404.75	400.09	404.92	0.000811	5.22	3988.14	1250.41	0.25
USACE	112946	500YR	11481.00	390.10	406.01	400.82	406.19	0.000820	5.58	4848.34	1371.80	0.26
USACE	112946	SEPT2011	5231.00	390.10	402.90	398.77	403.03	0.000692	4.35	2834.50	840.54	0.23
USACE	112748	2YR	1016.00	390.62	397.53	394.53	397.66	0.001023	3.24	582.28	355.11	0.25
USACE	112748	5YR	1732.00	390.62	398.81	396.31	398.95	0.001014	3.73	926.37	413.11	0.26
USACE	112748	10YR	2347.00	390.62	399.61	397.02	399.78	0.001060	4.13	1154.29	438.33	0.27
USACE	112748	25YR	3789.00	390.62	401.27	397.83	401.46	0.001025	4.65	1717.17	588.17	0.27
USACE	112748	50YR	5082.00	390.62	402.56	398.56	402.74	0.000917	4.81	2292.24	826.56	0.26
USACE	112748	100YR	6648.00	390.62	403.65	399.22	403.84	0.000881	5.04	2868.46	970.78	0.26
USACE	112748	100YRPLUS	8694.00	390.62	404.61	399.93	404.82	0.000955	5.54	3399.06	1045.99	0.28
USACE	112748	200YR	8508.00	390.62	404.53	399.86	404.74	0.000948	5.50	3354.34	1029.11	0.28
USACE	112748	500YR	11481.00	390.62	405.77	400.98	406.00	0.000995	6.01	4109.66	1326.98	0.29
USACE	112748	SEPT2011	5231.00	390.62	402.69	398.64	402.87	0.000907	4.82	2356.42	862.48	0.26
USACE	112554	2YR	1016.00	390.81	397.22	394.31	397.42	0.001444	3.72	399.68	208.46	0.30
USACE	112554	5YR	1732.00	390.81	398.47	395.62	398.71	0.001493	4.40	666.60	330.75	0.31
USACE	112554	10YR	2347.00	390.81	399.26	396.83	399.53	0.001527	4.82	880.42	398.91	0.32
USACE	112554	25YR	3789.00	390.81	401.03	398.10	401.25	0.001162	4.89	1617.68	864.08	0.29
USACE	112554	50YR	5082.00	390.81	402.42	398.95	402.57	0.000764	4.37	2379.50	1021.25	0.24
USACE	112554	100YR	6648.00	390.81	403.54	399.77	403.68	0.000659	4.35	2998.14	1118.05	0.23
USACE	112554	100YRPLUS	8694.00	390.81	404.49	400.75	404.65	0.000686	4.69	3522.50	1215.91	0.24
USACE	112554	200YR	8508.00	390.81	404.42	400.69	404.57	0.000682	4.66	3480.03	1202.24	0.24
USACE	112554	500YR	11481.00	390.81	405.64	401.51	405.83	0.000710	5.06	4155.17	1336.05	0.24
USACE	112554	SEPT2011	5231.00	390.81	402.55	399.04	402.70	0.000740	4.34	2454.37	1023.58	0.24

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	112456	2YR	1016.00	390.84	396.96	394.23	397.23	0.001936	4.33	304.13	183.41	0.34
USACE	112456	5YR	1732.00	390.84	398.14	395.58	398.50	0.002138	5.24	500.94	334.10	0.37
USACE	112456	10YR	2347.00	390.84	398.94	396.75	399.32	0.002125	5.66	692.56	433.05	0.38
USACE	112456	25YR	3789.00	390.84	400.87	398.36	401.12	0.001330	5.26	1418.36	861.75	0.31
USACE	112456	50YR	5082.00	390.84	402.36	398.36	402.49	0.000706	4.25	2449.48	1016.48	0.23
USACE	112456	100YR	6648.00	390.84	403.49	399.87	403.61	0.000593	4.17	3103.21	1203.75	0.22
USACE	112456	100YRPLUS	8694.00	390.84	404.44	400.83	404.58	0.000611	4.46	3651.48	1282.07	0.22
USACE	112456	200YR	8508.00	390.84	404.37	400.78	404.50	0.000608	4.43	3607.14	1261.52	0.22
USACE	112456	500YR	11481.00	390.84	405.59	401.67	405.75	0.000627	4.79	4313.38	1373.53	0.23
USACE	112456	SEPT2011	5231.00	390.84	402.49	399.34	402.62	0.000681	4.21	2529.19	1020.87	0.23
USACE	112443 Weir		Inl Struct									
USACE	112428	2YR	1016.00	390.34	396.98	393.00	397.06	0.000521	2.38	459.96	172.86	0.18
USACE	112428	5YR	1732.00	390.34	398.27	393.94	398.41	0.000668	3.12	667.08	371.29	0.21
USACE	112428	10YR	2347.00	390.34	399.07	394.61	399.24	0.000749	3.56	828.99	674.42	0.23
USACE	112428	25YR	3789.00	390.34	400.90	395.82	401.08	0.000654	3.86	1546.67	886.73	0.22
USACE	112428	50YR	5082.00	390.34	402.34	396.98	402.46	0.000436	3.47	2534.46	1027.33	0.19
USACE	112428	100YR	6648.00	390.34	403.45	398.00	403.58	0.000417	3.63	3119.10	1166.56	0.19
USACE	112428	100YRPLUS	8694.00	390.34	404.40	399.29	404.54	0.000463	4.02	3613.79	1308.98	0.20
USACE	112428	200YR	8508.00	390.34	404.32	399.24	404.46	0.000459	3.99	3573.15	1298.74	0.20
USACE	112428	500YR	11481.00	390.34	405.52	400.95	405.70	0.000511	4.47	4206.63	1350.70	0.21
USACE	112428	SEPT2011	5231.00	390.34	402.48	397.10	402.60	0.000429	3.47	2605.03	1043.82	0.19
USACE	112411	2YR	1016.00	390.51	396.96	393.25	397.05	0.000592	2.40	436.89	179.08	0.19
USACE	112411	5YR	1732.00	390.51	398.26	394.10	398.40	0.000729	3.11	608.82	253.95	0.22
USACE	112411	10YR	2347.00	390.51	399.03	394.73	399.23	0.000847	3.63	717.87	669.54	0.24
USACE	112411	25YR	3789.00	390.51	400.87	396.00	401.06	0.000714	3.90	1443.97	903.74	0.23
USACE	112411	50YR	5082.00	390.51	402.33	397.04	402.45	0.000444	3.40	2512.28	1064.39	0.19
USACE	112411	100YR	6648.00	390.51	403.45	398.12	403.57	0.000420	3.55	3103.46	1231.83	0.19
USACE	112411	100YRPLUS	8694.00	390.51	404.39	399.09	404.53	0.000464	3.93	3603.11	1321.10	0.20
USACE	112411	200YR	8508.00	390.51	404.31	399.00	404.45	0.000460	3.89	3562.07	1315.51	0.20
USACE	112411	500YR	11481.00	390.51	405.51	401.01	405.69	0.000508	4.36	4202.00	1367.40	0.21
USACE	112411	SEPT2011	5231.00	390.51	402.47	397.15	402.59	0.000436	3.40	2583.71	1081.93	0.19
USACE	112338 High Street		Bridge									
USACE	112299	2YR	1016.00	391.70	396.85	393.89	396.96	0.000824	2.70	397.45	276.74	0.22
USACE	112299	5YR	1732.00	391.70	398.10	394.68	398.28	0.000996	3.49	534.42	534.33	0.26
USACE	112299	10YR	2347.00	391.70	398.82	395.27	399.07	0.001195	4.13	613.76	659.06	0.29
USACE	112299	25YR	3789.00	391.70	400.36	396.56	400.57	0.000926	4.19	1239.15	820.84	0.26
USACE	112299	50YR	5082.00	391.70	401.49	397.40	401.69	0.000826	4.32	1854.86	952.79	0.25
USACE	112299	100YR	6648.00	391.70	402.46	398.26	402.69	0.000872	4.75	2290.23	1097.21	0.26
USACE	112299	100YRPLUS	8694.00	391.70	403.54	399.25	403.78	0.000850	5.01	2792.65	1251.86	0.26
USACE	112299	200YR	8508.00	391.70	403.45	399.16	403.69	0.000851	4.99	2750.25	1231.58	0.26
USACE	112299	500YR	11481.00	391.70	404.79	400.22	405.06	0.000842	5.35	3380.28	1499.80	0.27
USACE	112299	SEPT2011	5231.00	391.70	401.61	397.49	401.81	0.000823	4.35	1904.78	990.75	0.25
USACE	112213	2YR	1016.00	391.00	396.50	394.72	396.79	0.002548	4.70	289.79	330.51	0.39
USACE	112213	5YR	1732.00	391.00	397.77	396.09	398.11	0.002359	5.34	517.02	649.98	0.39
USACE	112213	10YR	2347.00	391.00	398.61	396.66	398.92	0.002047	5.44	692.15	708.10	0.37
USACE	112213	25YR	3789.00	391.00	400.15	398.10	400.44	0.001711	5.72	1154.84	788.59	0.35
USACE	112213	50YR	5082.00	391.00	401.24	398.66	401.56	0.001637	6.08	1585.87	858.71	0.35
USACE	112213	100YR	6648.00	391.00	402.30	399.25	402.59	0.001373	5.98	2140.36	868.80	0.33
USACE	112213	100YRPLUS	8694.00	391.00	403.39	400.02	403.68	0.001261	6.13	2713.59	964.45	0.32
USACE	112213	200YR	8508.00	391.00	403.30	399.97	403.59	0.001268	6.11	2665.49	955.23	0.32
USACE	112213	500YR	11481.00	391.00	404.65	400.72	404.97	0.001196	6.40	3377.43	1211.65	0.32
USACE	112213	SEPT2011	5231.00	391.00	401.38	398.72	401.69	0.001570	6.01	1657.95	859.75	0.35
USACE	112074	2YR	1016.00	390.42	396.23	394.23	396.48	0.001918	4.29	308.00	427.54	0.34
USACE	112074	5YR	1732.00	390.42	397.53	395.28	397.81	0.001837	4.92	550.54	582.76	0.35
USACE	112074	10YR	2347.00	390.42	398.39	395.83	398.66	0.001647	5.08	740.89	695.33	0.34
USACE	112074	25YR	3789.00	390.42	399.95	397.62	400.23	0.001462	5.47	1142.21	788.38	0.33
USACE	112074	50YR	5082.00	390.42	401.07	398.25	401.36	0.001356	5.72	1615.01	819.91	0.32
USACE	112074	100YR	6648.00	390.42	402.13	398.77	402.42	0.001243	5.86	2217.40	927.62	0.31
USACE	112074	100YRPLUS	8694.00	390.42	403.20	399.73	403.51	0.001298	6.38	2853.21	1208.69	0.33
USACE	112074	200YR	8508.00	390.42	403.11	399.69	403.42	0.001312	6.38	2793.85	1179.39	0.33
USACE	112074	500YR	11481.00	390.42	404.51	400.43	404.81	0.001152	6.44	3661.45	1617.63	0.31
USACE	112074	SEPT2011	5231.00	390.42	401.21	398.32	401.50	0.001314	5.68	1694.15	822.23	0.32
USACE	111948	2YR	1016.00	389.82	396.12	393.05	396.28	0.001040	3.29	365.51	431.40	0.26
USACE	111948	5YR	1732.00	389.82	397.38	394.05	397.61	0.001221	4.12	555.45	631.98	0.29
USACE	111948	10YR	2347.00	389.82	398.24	394.83	398.48	0.001152	4.36	735.44	744.65	0.28
USACE	111948	25YR	3789.00	389.82	399.88	396.48	400.07	0.000771	4.08	1198.83	902.83	0.24
USACE	111948	50YR	5082.00	389.82	401.05	397.85	401.23	0.000512	3.61	1916.23	929.59	0.20
USACE	111948	100YR	6648.00	389.82	402.13	398.77	402.31	0.000380	3.33	2674.34	965.45	0.18
USACE	111948	100YRPLUS	8694.00	389.82	403.21	399.40	403.41	0.000318	3.23	3461.74	1176.39	0.16
USACE	111948	200YR	8508.00	389.82	403.12	399.37	403.31	0.000322	3.24	3392.86	1161.60	0.16
USACE	111948	500YR	11481.00	389.82	404.50	400.05	404.72	0.000273	3.21	4401.99	1657.57	0.15
USACE	111948	SEPT2011	5231.00	389.82	401.20	397.95	401.37	0.000482	3.53	2016.82	931.79	0.19
USACE	111765	2YR	1016.00	389.30	395.86	393.08	396.06	0.001347	3.70	330.66	343.12	0.29
USACE	111765	5YR	1732.00	389.30	397.11	394.19	397.37	0.001428	4.42	541.17	437.33	0.31
USACE	111765	10YR	2347.00	389.30	397.97	394.91	398.25	0.001393	4.75	710.14	650.32	0.31

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	111765	25YR	3789.00	389.30	399.56	396.79	399.88	0.001360	5.36	1072.94	905.80	0.32
USACE	111765	50YR	5082.00	389.30	400.78	397.60	401.08	0.001196	5.48	1694.96	937.40	0.31
USACE	111765	100YR	6648.00	389.30	401.90	398.29	402.18	0.001065	5.55	2385.86	966.62	0.29
USACE	111765	100YRPLUS	8694.00	389.30	403.01	399.26	403.30	0.001042	5.85	3081.43	1123.07	0.30
USACE	111765	200YR	8508.00	389.30	402.92	399.20	403.20	0.001047	5.84	3019.60	1071.65	0.30
USACE	111765	500YR	11481.00	389.30	404.29	400.59	404.62	0.001194	6.70	3970.00	1323.23	0.32
USACE	111765	SEPT2011	5231.00	389.30	400.93	397.67	401.23	0.001151	5.43	1790.56	939.12	0.30
USACE	111571	2YR	1016.00	388.81	395.68	392.48	395.83	0.000941	3.36	414.39	516.64	0.25
USACE	111571	5YR	1732.00	388.81	396.93	393.60	397.11	0.001011	3.97	627.53	723.64	0.26
USACE	111571	10YR	2347.00	388.81	397.78	395.12	398.00	0.001050	4.37	778.97	789.91	0.27
USACE	111571	25YR	3789.00	388.81	399.34	396.17	399.63	0.001153	5.17	1071.66	958.12	0.30
USACE	111571	50YR	5082.00	388.81	400.54	396.88	400.85	0.001151	5.59	1663.39	989.96	0.30
USACE	111571	100YR	6648.00	388.81	401.59	397.57	401.95	0.001310	6.35	2326.70	1067.94	0.33
USACE	111571	100YRPLUS	8694.00	388.81	402.73	398.36	403.07	0.001256	6.62	3095.66	1168.83	0.33
USACE	111571	200YR	8508.00	388.81	402.63	398.30	402.98	0.001254	6.58	3027.96	1153.28	0.33
USACE	111571	500YR	11481.00	388.81	404.01	399.32	404.38	0.001313	7.21	4103.96	1616.02	0.34
USACE	111571	SEPT2011	5231.00	388.81	400.68	396.94	401.00	0.001162	5.67	1746.62	1020.56	0.30
USACE	111366	2YR	1016.00	388.55	395.22	392.66	395.53	0.002189	4.62	258.49	484.29	0.36
USACE	111366	5YR	1732.00	388.55	396.27	394.40	396.75	0.002909	6.02	360.64	600.83	0.43
USACE	111366	10YR	2347.00	388.55	396.99	395.26	397.60	0.003269	6.87	441.35	683.97	0.46
USACE	111366	25YR	3789.00	388.55	398.38	396.67	399.18	0.003625	8.17	614.65	904.84	0.50
USACE	111366	50YR	5082.00	388.55	399.51	397.66	400.40	0.003601	8.87	872.90	1146.24	0.51
USACE	111366	100YR	6648.00	388.55	400.58	398.54	401.48	0.003450	9.32	1260.10	1429.36	0.51
USACE	111366	100YRPLUS	8694.00	388.55	401.66	400.03	402.61	0.003443	9.94	1653.94	1583.13	0.51
USACE	111366	200YR	8508.00	388.55	401.57	399.95	402.51	0.003445	9.89	1620.11	1581.43	0.51
USACE	111366	500YR	11481.00	388.55	402.85	401.01	403.89	0.003552	10.78	2085.50	1698.71	0.53
USACE	111366	SEPT2011	5231.00	388.55	399.70	397.74	400.56	0.003432	8.77	941.95	1193.86	0.50
USACE	111092	2YR	1016.00	388.20	394.62	392.39	394.92	0.002235	4.69	281.84	298.70	0.37
USACE	111092	5YR	1732.00	388.20	395.50	394.12	395.95	0.002973	6.02	398.52	318.27	0.43
USACE	111092	10YR	2347.00	388.20	396.17	394.56	396.70	0.003205	6.71	497.33	333.02	0.46
USACE	111092	25YR	3789.00	388.20	397.61	395.77	398.22	0.003136	7.56	731.83	360.25	0.47
USACE	111092	50YR	5082.00	388.20	398.78	396.81	399.45	0.003022	8.13	956.78	396.55	0.47
USACE	111092	100YR	6648.00	388.20	399.99	397.56	400.60	0.002550	8.10	1458.28	433.94	0.44
USACE	111092	100YRPLUS	8694.00	388.20	401.17	398.34	401.76	0.002286	8.24	1977.63	548.44	0.43
USACE	111092	200YR	8508.00	388.20	401.06	398.27	401.66	0.002306	8.23	1931.47	525.44	0.43
USACE	111092	500YR	11481.00	388.20	402.43	399.93	403.02	0.002182	8.62	2623.30	1049.27	0.42
USACE	111092	SEPT2011	5231.00	388.20	398.99	396.89	399.65	0.002916	8.11	1042.83	407.52	0.46
USACE	110853	2YR	1018.00	387.90	394.29	392.15	394.50	0.001283	3.44	281.36	136.95	0.28
USACE	110853	5YR	1729.00	387.90	395.02	393.67	395.43	0.001602	4.22	357.62	142.79	0.32
USACE	110853	10YR	2365.00	387.90	395.51	394.05	396.13	0.001857	4.81	410.42	146.85	0.35
USACE	110853	25YR	3802.00	387.90	396.43	394.94	397.54	0.002276	5.85	510.39	154.33	0.39
USACE	110853	50YR	5107.00	387.90	397.39	395.84	398.78	0.002167	6.23	625.47	189.94	0.39
USACE	110853	100YR	6679.00	387.90	398.72	397.68	400.04	0.001787	6.28	865.85	227.61	0.36
USACE	110853	100YRPLUS	8735.00	387.90	399.52	398.64	401.14	0.002077	7.15	1051.89	246.86	0.40
USACE	110853	200YR	8536.00	387.90	399.47	398.55	401.05	0.002036	7.05	1038.18	245.52	0.39
USACE	110853	500YR	11498.00	387.90	400.46	399.93	402.35	0.002396	8.15	1296.36	292.85	0.43
USACE	110853	SEPT2011	5193.00	387.90	398.13	395.90	399.15	0.001469	5.44	739.25	217.40	0.33
USACE	110630	2YR	1018.00	387.60	394.14	391.22	394.26	0.000863	3.04	402.24	231.20	0.23
USACE	110630	5YR	1729.00	387.60	394.97	392.47	395.13	0.000825	3.27	582.31	248.21	0.23
USACE	110630	10YR	2365.00	387.60	395.58	393.97	395.77	0.000797	3.42	713.71	252.85	0.23
USACE	110630	25YR	3802.00	387.60	396.79	394.56	397.06	0.000720	3.63	976.90	261.47	0.23
USACE	110630	50YR	5107.00	387.60	397.94	394.98	398.27	0.000600	3.62	1231.99	294.10	0.21
USACE	110630	100YR	6679.00	387.60	399.20	395.45	399.59	0.000527	3.70	1626.34	372.41	0.20
USACE	110630	100YRPLUS	8735.00	387.60	400.12	396.05	400.62	0.000554	4.01	1959.99	500.42	0.21
USACE	110630	200YR	8536.00	387.60	400.05	396.01	400.54	0.000548	3.97	1934.30	491.02	0.21
USACE	110630	500YR	11498.00	387.60	401.13	396.84	401.76	0.000602	4.43	2374.05	901.17	0.22
USACE	110630	SEPT2011	5193.00	387.60	398.47	395.01	398.78	0.000484	3.38	1379.44	332.26	0.19
USACE	110553	2YR	1018.00	387.34	394.14	391.04	394.18	0.000298	1.79	787.00	377.36	0.14
USACE	110553	5YR	1729.00	387.34	394.99	392.90	395.04	0.000331	2.08	1083.64	406.22	0.15
USACE	110553	10YR	2365.00	387.34	395.60	393.22	395.67	0.000351	2.29	1300.65	431.46	0.16
USACE	110553	25YR	3802.00	387.34	396.84	393.74	396.93	0.000343	2.53	1941.55	457.09	0.16
USACE	110553	50YR	5107.00	387.34	398.02	394.09	398.11	0.000294	2.57	2495.66	491.61	0.15
USACE	110553	100YR	6679.00	387.34	399.32	394.45	399.41	0.000251	2.59	3150.66	687.23	0.14
USACE	110553	100YRPLUS	8735.00	387.34	400.29	394.90	400.40	0.000275	2.88	3643.44	722.83	0.15
USACE	110553	200YR	8536.00	387.34	400.21	394.86	400.32	0.000272	2.85	3605.45	721.64	0.15
USACE	110553	500YR	11498.00	387.34	401.34	395.44	401.49	0.000311	3.24	4187.54	773.55	0.16
USACE	110553	SEPT2011	5193.00	387.34	398.57	394.11	398.64	0.000224	2.33	2766.21	508.66	0.13
USACE	110532 Oak Street		Bridge									
USACE	110509	2YR	1018.00	386.92	394.09	391.27	394.14	0.000413	2.04	647.04	408.29	0.16
USACE	110509	5YR	1729.00	386.92	394.91	393.32	394.98	0.000351	2.07	997.59	444.87	0.15
USACE	110509	10YR	2365.00	386.92	395.53	393.61	395.60	0.000318	2.10	1277.27	464.90	0.14
USACE	110509	25YR	3802.00	386.92	396.76	394.06	396.85	0.000270	2.17	1881.15	554.10	0.14
USACE	110509	50YR	5107.00	386.92	397.95	394.38	398.05	0.000203	2.07	2484.97	636.45	0.12
USACE	110509	100YR	6679.00	386.92	399.25	394.69	399.36	0.000162	2.02	3150.07	815.83	0.11
USACE	110509	100YRPLUS	8735.00	386.92	400.20	395.19	400.34	0.000175	2.23	3635.82	836.79	0.12
USACE	110509	200YR	8536.00	386.92	400.13	395.14	400.26	0.000172	2.20	3598.80	835.48	0.12
USACE	110509	500YR	11498.00	386.92	401.23	395.73	401.42	0.000195	2.49	4165.60	862.29	0.13

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	110509	SEPT2011	5193.00	386.92	398.50	394.40	398.59	0.000148	1.84	2769.33	652.78	0.10
USACE	110423	2YR	1018.00	386.80	393.68	391.61	394.00	0.002559	4.83	262.10	203.83	0.39
USACE	110423	5YR	1729.00	386.80	394.65	393.89	394.88	0.001616	4.33	546.74	422.59	0.32
USACE	110423	10YR	2365.00	386.80	395.35	394.35	395.53	0.001022	3.72	865.17	478.03	0.26
USACE	110423	25YR	3802.00	386.80	396.65	394.90	396.80	0.000580	3.16	1485.97	482.31	0.20
USACE	110423	50YR	5107.00	386.80	397.86	395.25	398.01	0.000379	2.82	2074.96	563.68	0.17
USACE	110423	100YR	6679.00	386.80	399.18	395.64	399.33	0.000280	2.65	2716.13	784.50	0.15
USACE	110423	100YRPLUS	8735.00	386.80	400.12	396.06	400.31	0.000294	2.88	3176.39	843.15	0.15
USACE	110423	200YR	8536.00	386.80	400.05	396.02	400.23	0.000291	2.85	3141.54	840.10	0.15
USACE	110423	500YR	11498.00	386.80	401.13	396.57	401.38	0.000328	3.22	3690.56	918.18	0.16
USACE	110423	SEPT2011	5193.00	386.80	398.44	395.25	398.56	0.000264	2.45	2356.97	623.31	0.14
USACE	110316	2YR	1018.00	386.61	393.28	391.35	393.68	0.003399	5.16	226.73	154.88	0.44
USACE	110316	5YR	1729.00	386.61	394.33	392.69	394.66	0.002557	5.17	466.23	356.46	0.39
USACE	110316	10YR	2365.00	386.61	395.21	394.12	395.41	0.001415	4.25	793.03	467.65	0.30
USACE	110316	25YR	3802.00	386.61	396.59	394.88	396.74	0.000671	3.34	1404.91	515.09	0.21
USACE	110316	50YR	5107.00	386.61	397.83	395.27	397.97	0.000392	2.83	1968.73	567.28	0.17
USACE	110316	100YR	6679.00	386.61	399.16	395.65	399.30	0.000272	2.59	2570.97	748.81	0.14
USACE	110316	100YRPLUS	8735.00	386.61	400.10	396.02	400.27	0.000278	2.77	2996.68	877.81	0.15
USACE	110316	200YR	8536.00	386.61	400.03	395.99	400.20	0.000275	2.74	2964.73	869.91	0.15
USACE	110316	500YR	11498.00	386.61	401.11	396.44	401.34	0.000298	3.04	3455.44	962.28	0.15
USACE	110316	SEPT2011	5193.00	386.61	398.42	395.29	398.53	0.000264	2.42	2236.75	626.94	0.14
USACE	110148	2YR	1018.00	386.46	393.18	390.19	393.31	0.000985	3.18	427.42	303.68	0.25
USACE	110148	5YR	1729.00	386.46	394.21	391.36	394.35	0.000982	3.58	696.08	474.81	0.25
USACE	110148	10YR	2365.00	386.46	395.18	392.65	395.25	0.000434	2.63	1386.56	567.25	0.17
USACE	110148	25YR	3802.00	386.46	396.58	393.88	396.64	0.000311	2.50	2157.73	755.64	0.15
USACE	110148	50YR	5107.00	386.46	397.84	394.53	397.90	0.000226	2.34	2937.68	1154.72	0.13
USACE	110148	100YR	6679.00	386.46	399.19	394.84	399.24	0.000153	2.10	3873.48	1453.22	0.11
USACE	110148	100YRPLUS	8735.00	386.46	400.14	394.95	400.21	0.000149	2.19	4544.47	1560.06	0.11
USACE	110148	200YR	8536.00	386.46	400.07	394.90	400.13	0.000148	2.17	4493.82	1557.97	0.11
USACE	110148	500YR	11498.00	386.46	401.17	395.37	401.26	0.000153	2.34	5270.67	1660.40	0.11
USACE	110148	SEPT2011	5193.00	386.46	398.44	394.55	398.48	0.000152	1.99	3347.90	1312.72	0.11
USACE	109993	2YR	1018.00	386.31	393.12	389.67	393.19	0.000547	2.43	635.37	336.69	0.19
USACE	109993	5YR	1729.00	386.31	394.15	390.76	394.22	0.000529	2.69	1064.41	535.63	0.19
USACE	109993	10YR	2365.00	386.31	395.12	392.13	395.18	0.000413	2.61	1523.85	561.93	0.17
USACE	109993	25YR	3802.00	386.31	396.52	392.93	396.59	0.000362	2.75	2197.61	837.31	0.16
USACE	109993	50YR	5107.00	386.31	397.79	393.73	397.86	0.000306	2.76	2806.52	1151.38	0.15
USACE	109993	100YR	6679.00	386.31	399.14	394.15	399.21	0.000271	2.83	3454.16	1424.16	0.15
USACE	109993	100YRPLUS	8735.00	386.31	400.09	394.63	400.17	0.000312	3.20	3908.51	1531.38	0.16
USACE	109993	200YR	8536.00	386.31	400.02	394.59	400.10	0.000307	3.16	3874.44	1518.49	0.16
USACE	109993	500YR	11498.00	386.31	401.11	395.24	401.23	0.000369	3.67	4398.62	1816.99	0.18
USACE	109993	SEPT2011	5193.00	386.31	398.40	393.74	398.45	0.000232	2.50	3098.39	1292.53	0.14
USACE	109820	2YR	1018.00	385.90	392.83	389.87	393.03	0.001426	3.77	323.05	179.60	0.29
USACE	109820	5YR	1729.00	385.90	393.87	391.15	394.07	0.001329	4.11	581.15	454.95	0.29
USACE	109820	10YR	2365.00	385.90	394.98	392.81	395.09	0.000608	3.11	1123.40	790.73	0.20
USACE	109820	25YR	3802.00	385.90	396.44	393.98	396.52	0.000363	2.71	2102.09	1022.37	0.16
USACE	109820	50YR	5107.00	385.90	397.75	394.50	397.81	0.000223	2.33	3283.57	1404.84	0.13
USACE	109820	100YR	6679.00	385.90	399.13	394.86	399.17	0.000120	1.86	4638.62	1790.14	0.10
USACE	109820	100YRPLUS	8735.00	385.90	400.08	395.30	400.14	0.000107	1.86	5586.48	2029.04	0.09
USACE	109820	200YR	8536.00	385.90	400.01	395.26	400.06	0.000107	1.85	5515.44	2015.75	0.09
USACE	109820	500YR	11498.00	385.90	401.11	395.93	401.18	0.000104	1.93	6609.81	2188.37	0.09
USACE	109820	SEPT2011	5193.00	385.90	398.38	394.52	398.42	0.000131	1.86	3897.75	1552.91	0.10
USACE	109740	2YR	1018.00	385.52	392.72	389.53	392.92	0.001287	3.58	351.60	330.59	0.28
USACE	109740	5YR	1729.00	385.52	393.81	390.83	393.94	0.000968	3.53	793.98	673.77	0.25
USACE	109740	10YR	2365.00	385.52	394.97	391.70	395.02	0.000384	2.50	1834.14	866.33	0.16
USACE	109740	25YR	3802.00	385.52	396.44	393.81	396.48	0.000212	2.10	3286.13	1197.24	0.13
USACE	109740	50YR	5107.00	385.52	397.75	394.10	397.78	0.000115	1.69	4870.11	1379.78	0.09
USACE	109740	100YR	6679.00	385.52	399.13	394.53	399.16	0.000071	1.45	6547.37	1582.28	0.08
USACE	109740	100YRPLUS	8735.00	385.52	400.08	394.87	400.12	0.000068	1.50	7714.29	1735.19	0.08
USACE	109740	200YR	8536.00	385.52	400.01	394.82	400.05	0.000068	1.49	7626.81	1704.89	0.07
USACE	109740	500YR	11498.00	385.52	401.12	395.23	401.16	0.000070	1.60	8974.46	1905.30	0.08
USACE	109740	SEPT2011	5193.00	385.52	398.38	394.21	398.40	0.000072	1.40	5634.62	1457.39	0.08
USACE	109700 Steigel Street		Bridge									
USACE	109669	2YR	1018.00	384.30	392.68	387.27	392.75	0.000425	2.30	676.79	476.31	0.16
USACE	109669	5YR	1729.00	384.30	393.79	388.39	393.84	0.000363	2.35	1373.55	709.25	0.15
USACE	109669	10YR	2365.00	384.30	394.93	389.26	394.96	0.000215	1.98	2219.55	777.17	0.12
USACE	109669	25YR	3802.00	384.30	396.42	392.73	396.45	0.000171	1.95	3593.62	1012.84	0.11
USACE	109669	50YR	5107.00	384.30	397.74	393.27	397.76	0.000126	1.81	4985.94	1170.80	0.09
USACE	109669	100YR	6679.00	384.30	399.12	393.76	399.14	0.000101	1.74	6531.08	1339.98	0.08
USACE	109669	100YRPLUS	8735.00	384.30	400.08	394.07	400.10	0.000110	1.91	7659.86	1484.13	0.09
USACE	109669	200YR	8536.00	384.30	400.01	394.12	400.03	0.000108	1.89	7573.53	1472.39	0.09
USACE	109669	500YR	11498.00	384.30	401.11	394.57	401.14	0.000124	2.13	8948.10	1766.72	0.10
USACE	109669	SEPT2011	5193.00	384.30	398.37	393.30	398.39	0.000090	1.59	5679.76	1283.71	0.08
USACE	109610	2YR	1018.00	384.51	392.34	388.88	392.64	0.001813	4.59	333.33	398.34	0.32
USACE	109610	5YR	1729.00	384.51	393.70	390.49	393.80	0.000784	3.44	991.50	467.65	0.22
USACE	109610	10YR	2365.00	384.51	394.88	392.84	394.94	0.000439	2.83	1546.58	486.62	0.17
USACE	109610	25YR	3802.00	384.51	396.37	393.40	396.43	0.000369	2.87	2292.33	599.71	0.16

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	109610	50YR	5107.00	384.51	397.69	393.77	397.74	0.000321	2.90	3093.76	939.64	0.15
USACE	109610	100YR	6679.00	384.51	399.07	394.12	399.12	0.000256	2.79	4205.29	1203.54	0.14
USACE	109610	100YRPLUS	8735.00	384.51	400.02	394.51	400.08	0.000277	3.05	5024.86	1361.01	0.14
USACE	109610	200YR	8536.00	384.51	399.95	394.47	400.01	0.000273	3.01	4962.33	1336.16	0.14
USACE	109610	500YR	11498.00	384.51	401.05	394.97	401.12	0.000308	3.37	5961.75	1824.12	0.15
USACE	109610	SEPT2011	5193.00	384.51	398.33	393.79	398.37	0.000230	2.55	3590.05	1101.67	0.13
USACE	109541	2YR	1018.00	384.80	392.24	389.78	392.51	0.001909	4.73	397.13	385.02	0.34
USACE	109541	5YR	1729.00	384.80	393.68	391.11	393.76	0.000666	3.22	1055.67	429.45	0.21
USACE	109541	10YR	2365.00	384.80	394.86	391.49	394.91	0.000409	2.78	1572.67	499.55	0.17
USACE	109541	25YR	3802.00	384.80	396.35	393.02	396.41	0.000373	2.94	2300.68	740.45	0.16
USACE	109541	50YR	5107.00	384.80	397.67	393.45	397.73	0.000308	2.90	3134.30	1160.05	0.15
USACE	109541	100YR	6679.00	384.80	399.06	393.81	399.11	0.000253	2.84	4244.98	1522.19	0.14
USACE	109541	100YRPLUS	8735.00	384.80	400.01	394.24	400.07	0.000272	3.08	5074.47	1659.37	0.15
USACE	109541	200YR	8536.00	384.80	399.94	394.18	400.00	0.000268	3.05	5012.12	1641.80	0.14
USACE	109541	500YR	11498.00	384.80	401.03	394.73	401.10	0.000318	3.49	6046.47	2062.29	0.16
USACE	109541	SEPT2011	5193.00	384.80	398.32	393.47	398.36	0.000226	2.58	3619.85	1308.47	0.13
USACE	109432	2YR	1018.00	385.80	392.33	389.27	392.37	0.000334	1.83	827.62	386.65	0.14
USACE	109432	5YR	1729.00	385.80	393.67	389.85	393.70	0.000270	1.93	1363.45	457.80	0.14
USACE	109432	10YR	2365.00	385.80	394.85	390.27	394.88	0.000207	1.90	1856.30	600.14	0.12
USACE	109432	25YR	3802.00	385.80	396.33	391.02	396.37	0.000242	2.31	2556.58	1532.15	0.14
USACE	109432	50YR	5107.00	385.80	397.65	391.56	397.70	0.000226	2.44	3411.96	2392.10	0.13
USACE	109432	100YR	6679.00	385.80	399.04	392.70	399.09	0.000194	2.46	4539.04	2651.82	0.13
USACE	109432	100YRPLUS	8735.00	385.80	399.99	393.24	400.04	0.000213	2.72	5369.15	2877.53	0.14
USACE	109432	200YR	8536.00	385.80	399.92	393.21	399.97	0.000210	2.69	5307.03	2856.64	0.13
USACE	109432	500YR	11498.00	385.80	401.01	393.76	401.08	0.000242	3.05	6287.48	3493.54	0.15
USACE	109432	SEPT2011	5193.00	385.80	398.30	391.57	398.34	0.000170	2.21	3907.23	2563.56	0.12
USACE	109333	2YR	1018.00	386.29	392.30	389.43	392.34	0.000328	1.86	827.56	330.48	0.14
USACE	109333	5YR	1729.00	386.29	393.64	389.96	393.67	0.000299	2.07	1280.18	701.75	0.14
USACE	109333	10YR	2365.00	386.29	394.82	390.34	394.86	0.000240	2.07	1693.92	1244.21	0.13
USACE	109333	25YR	3802.00	386.29	396.30	391.04	396.35	0.000286	2.55	2294.75	2411.52	0.15
USACE	109333	50YR	5107.00	386.29	397.61	391.87	397.67	0.000302	2.86	2980.99	3032.92	0.16
USACE	109333	100YR	6679.00	386.29	399.01	392.59	399.07	0.000264	2.90	3918.93	3474.55	0.15
USACE	109333	100YRPLUS	8735.00	386.29	399.95	393.07	400.02	0.000302	3.27	4611.30	3698.97	0.16
USACE	109333	200YR	8536.00	386.29	399.88	393.02	399.95	0.000297	3.23	4557.89	3684.12	0.16
USACE	109333	500YR	11498.00	386.29	400.96	393.64	401.05	0.000350	3.70	5422.17	4126.28	0.18
USACE	109333	SEPT2011	5193.00	386.29	398.27	391.89	398.32	0.000225	2.57	3411.32	3334.40	0.14
USACE	109228	2YR	1018.00	386.05	392.20	389.76	392.28	0.000708	2.82	505.62	293.62	0.21
USACE	109228	5YR	1729.00	386.05	393.56	390.49	393.63	0.000420	2.52	865.97	580.05	0.17
USACE	109228	10YR	2365.00	386.05	394.75	391.10	394.83	0.000284	2.30	1195.58	1374.55	0.14
USACE	109228	25YR	3802.00	386.05	396.21	392.43	396.31	0.000279	2.55	1701.59	2435.78	0.15
USACE	109228	50YR	5107.00	386.05	397.53	392.83	397.64	0.000239	2.58	2255.27	3579.52	0.14
USACE	109228	100YR	6679.00	386.05	398.94	393.21	399.04	0.000207	2.60	2982.10	3735.39	0.13
USACE	109228	100YRPLUS	8735.00	386.05	399.87	393.66	399.98	0.000241	2.95	3536.16	3999.91	0.14
USACE	109228	200YR	8536.00	386.05	399.80	393.63	399.91	0.000237	2.91	3492.55	3972.92	0.14
USACE	109228	500YR	11498.00	386.05	400.87	394.16	401.01	0.000287	3.38	4203.39	4520.95	0.16
USACE	109228	SEPT2011	5193.00	386.05	398.22	392.85	398.30	0.000175	2.30	2599.60	3655.26	0.12
USACE	109141	2YR	1018.00	384.99	392.07	389.60	392.20	0.001078	3.47	386.66	284.29	0.26
USACE	109141	5YR	1729.00	384.99	393.44	390.53	393.58	0.000767	3.39	618.21	999.98	0.23
USACE	109141	10YR	2365.00	384.99	394.62	391.51	394.78	0.000596	3.32	848.49	1548.76	0.21
USACE	109141	25YR	3802.00	384.99	396.08	392.52	396.27	0.000543	3.54	1265.86	2623.54	0.20
USACE	109141	50YR	5107.00	384.99	397.44	393.02	397.61	0.000425	3.42	1759.15	3438.44	0.18
USACE	109141	100YR	6679.00	384.99	398.87	393.42	399.01	0.000351	3.37	2434.77	3957.24	0.17
USACE	109141	100YRPLUS	8735.00	384.99	399.81	394.38	399.95	0.000397	3.77	3001.78	4179.10	0.18
USACE	109141	200YR	8536.00	384.99	399.74	394.30	399.88	0.000390	3.72	2957.35	4157.89	0.18
USACE	109141	500YR	11498.00	384.99	400.80	396.06	400.97	0.000461	4.26	3678.40	4431.56	0.20
USACE	109141	SEPT2011	5193.00	384.99	398.16	393.06	398.27	0.000301	3.00	2068.53	3839.39	0.16
USACE	109060	2YR	1018.00	384.50	392.06	387.45	392.12	0.000332	1.88	562.60	709.97	0.14
USACE	109060	5YR	1729.00	384.50	393.42	388.38	393.50	0.000413	2.43	757.48	1247.48	0.17
USACE	109060	10YR	2365.00	384.50	394.61	389.00	394.71	0.000409	2.70	945.69	1600.79	0.17
USACE	109060	25YR	3802.00	384.50	396.05	390.15	396.21	0.000521	3.42	1200.92	2357.01	0.20
USACE	109060	50YR	5107.00	384.50	397.42	391.04	397.55	0.000400	3.29	2137.74	3243.89	0.18
USACE	109060	100YR	6679.00	384.50	398.86	392.16	398.97	0.000283	3.01	3105.24	3805.63	0.15
USACE	109060	100YRPLUS	8735.00	384.50	399.79	393.18	399.91	0.000289	3.20	3730.35	4120.57	0.16
USACE	109060	200YR	8536.00	384.50	399.72	393.09	399.84	0.000286	3.17	3685.09	4112.45	0.16
USACE	109060	500YR	11498.00	384.50	400.78	394.29	400.93	0.000309	3.47	4396.14	4315.31	0.16
USACE	109060	SEPT2011	5193.00	384.50	398.14	391.12	398.24	0.000265	2.80	2624.23	3505.33	0.15
USACE	109032 Railroad		Bridge									
USACE	108987	2YR	1018.00	384.31	391.88	388.49	392.05	0.001150	3.45	387.82	493.01	0.26
USACE	108987	5YR	1729.00	384.31	393.23	389.75	393.42	0.001126	3.97	616.91	1407.76	0.27
USACE	108987	10YR	2365.00	384.31	394.39	391.35	394.59	0.000991	4.15	819.25	1762.19	0.26
USACE	108987	25YR	3802.00	384.31	395.53	392.51	395.85	0.001369	5.34	1023.55	1973.62	0.32
USACE	108987	50YR	5107.00	384.31	396.48	393.23	396.78	0.001349	5.67	1632.88	2819.99	0.32
USACE	108987	100YR	6679.00	384.31	397.52	393.94	397.80	0.001235	5.80	2170.95	3144.38	0.31
USACE	108987	100YRPLUS	8735.00	384.31	399.04	394.76	399.27	0.000915	5.45	3113.57	3742.76	0.27
USACE	108987	200YR	8536.00	384.31	398.85	394.69	399.09	0.000963	5.53	2984.69	3592.15	0.28
USACE	108987	500YR	11498.00	384.31	400.39	395.78	400.61	0.000830	5.56	4116.30	4485.86	0.26
USACE	108987	SEPT2011	5193.00	384.31	397.28	393.27	397.47	0.000864	4.78	2041.40	3108.86	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	108909	2YR	1018.00	384.48	391.77	388.75	391.94	0.001212	3.69	433.90	426.47	0.27
USACE	108909	5YR	1729.00	384.48	393.15	390.16	393.31	0.001014	3.90	752.90	1309.45	0.26
USACE	108909	10YR	2365.00	384.48	394.34	391.65	394.48	0.000784	3.81	1077.76	1868.36	0.23
USACE	108909	25YR	3802.00	384.48	395.52	392.55	395.67	0.000803	4.22	1562.23	2017.22	0.24
USACE	108909	50YR	5107.00	384.48	396.46	393.15	396.61	0.000749	4.34	1964.14	2104.63	0.24
USACE	108909	100YR	6679.00	384.48	397.49	393.81	397.65	0.000686	4.42	2412.00	2684.85	0.23
USACE	108909	100YRPLUS	8735.00	384.48	399.00	394.80	399.16	0.000545	4.28	3085.42	3366.94	0.21
USACE	108909	200YR	8536.00	384.48	398.81	394.75	398.97	0.000567	4.33	3000.17	3304.15	0.21
USACE	108909	500YR	11498.00	384.48	400.33	395.41	400.52	0.000538	4.55	3705.96	3928.34	0.21
USACE	108909	SEPT2011	5193.00	384.48	397.26	393.18	397.36	0.000473	3.62	2311.26	2577.98	0.19
USACE	108778	2YR	1018.00	384.69	391.41	389.26	391.72	0.002395	4.79	266.27	440.24	0.38
USACE	108778	5YR	1729.00	384.69	393.05	391.30	393.19	0.000912	3.57	625.94	748.32	0.24
USACE	108778	10YR	2365.00	384.69	394.30	392.17	394.39	0.000508	2.99	1030.24	1421.67	0.19
USACE	108778	25YR	3802.00	384.69	395.49	392.74	395.59	0.000407	2.94	1558.78	1653.39	0.17
USACE	108778	50YR	5107.00	384.69	396.43	393.16	396.54	0.000356	2.93	1980.68	1765.99	0.16
USACE	108778	100YR	6679.00	384.69	397.47	393.62	397.59	0.000317	2.95	2448.03	2024.81	0.16
USACE	108778	100YRPLUS	8735.00	384.69	398.98	394.43	399.11	0.000248	2.84	3150.79	2420.78	0.14
USACE	108778	200YR	8536.00	384.69	398.80	394.38	398.92	0.000258	2.88	3062.11	2262.63	0.14
USACE	108778	500YR	11498.00	384.69	400.32	394.88	400.47	0.000244	3.02	3803.87	3416.90	0.14
USACE	108778	SEPT2011	5193.00	384.69	397.24	393.19	397.32	0.000218	2.42	2346.30	2008.84	0.13
USACE	108657	2YR	1018.00	384.80	391.33	388.59	391.46	0.001287	3.26	441.09	411.61	0.27
USACE	108657	5YR	1729.00	384.80	393.03	389.73	393.09	0.000461	2.40	1021.82	616.88	0.17
USACE	108657	10YR	2365.00	384.80	394.29	391.19	394.33	0.000288	2.14	1584.88	898.68	0.14
USACE	108657	25YR	3802.00	384.80	395.48	392.00	395.53	0.000297	2.39	2234.30	1301.16	0.14
USACE	108657	50YR	5107.00	384.80	396.43	392.37	396.49	0.000294	2.55	2758.97	1683.72	0.14
USACE	108657	100YR	6679.00	384.80	397.47	392.75	397.53	0.000287	2.69	3340.23	1753.96	0.14
USACE	108657	100YRPLUS	8735.00	384.80	398.99	393.19	399.06	0.000247	2.73	4254.98	2163.60	0.14
USACE	108657	200YR	8536.00	384.80	398.80	393.14	398.88	0.000255	2.74	4132.52	2055.93	0.14
USACE	108657	500YR	11498.00	384.80	400.34	393.73	400.42	0.000254	2.96	5193.05	2773.19	0.14
USACE	108657	SEPT2011	5193.00	384.80	397.24	392.40	397.29	0.000195	2.19	3213.90	1726.37	0.12
USACE	108540	2YR	1292.00	384.86	391.35	388.70	391.38	0.000334	1.85	1077.51	385.85	0.14
USACE	108540	5YR	2108.00	384.86	393.03	389.40	393.05	0.000201	1.71	1795.67	471.84	0.11
USACE	108540	10YR	2889.00	384.86	394.28	389.75	394.31	0.000157	1.68	2509.74	783.46	0.10
USACE	108540	25YR	4267.00	384.86	395.48	390.34	395.51	0.000158	1.84	3341.41	931.52	0.10
USACE	108540	50YR	5771.00	384.86	396.43	390.79	396.46	0.000168	2.02	4032.82	1141.56	0.11
USACE	108540	100YR	7575.00	384.86	397.47	391.20	397.51	0.000169	2.16	4799.29	1539.34	0.11
USACE	108540	100YRPLUS	9907.00	384.86	398.99	391.67	399.04	0.000149	2.19	5925.60	1981.84	0.11
USACE	108540	200YR	9710.00	384.86	398.81	391.62	398.85	0.000154	2.21	5785.93	1913.81	0.11
USACE	108540	500YR	13115.00	384.86	400.34	392.33	400.40	0.000101	2.42	6918.84	2573.77	0.11
USACE	108540	SEPT2011	7292.00	384.86	397.23	391.14	397.27	0.000176	2.17	4623.50	1395.59	0.11
USACE	108463	2YR	1292.00	384.69	391.33	388.55	391.36	0.000292	1.76	1099.24	358.21	0.13
USACE	108463	5YR	2108.00	384.69	393.02	389.17	393.05	0.000201	1.74	1761.36	438.77	0.11
USACE	108463	10YR	2889.00	384.69	394.27	389.63	394.30	0.000156	1.70	2458.53	655.51	0.10
USACE	108463	25YR	4267.00	384.69	395.47	390.18	395.50	0.000156	1.86	3288.91	825.14	0.10
USACE	108463	50YR	5771.00	384.69	396.42	390.62	396.45	0.000165	2.03	3994.63	924.22	0.11
USACE	108463	100YR	7575.00	384.69	397.46	391.04	397.50	0.000167	2.17	4785.86	958.34	0.11
USACE	108463	100YRPLUS	9907.00	384.69	398.99	391.50	399.03	0.000146	2.20	5950.68	1630.80	0.11
USACE	108463	200YR	9710.00	384.69	398.80	391.43	398.85	0.000151	2.22	5805.29	1488.27	0.11
USACE	108463	500YR	13115.00	384.69	400.34	392.17	400.40	0.000099	2.42	6984.88	2328.85	0.11
USACE	108463	SEPT2011	7292.00	384.69	397.22	390.97	397.26	0.000173	2.19	4604.13	950.71	0.11
USACE	108384	2YR	1292.00	384.28	391.26	387.82	391.33	0.000476	2.06	635.35	270.68	0.16
USACE	108384	5YR	2108.00	384.28	392.91	388.41	393.01	0.000468	2.49	872.39	455.23	0.17
USACE	108384	10YR	2889.00	384.28	394.25	388.90	394.28	0.000206	1.87	2203.92	728.95	0.12
USACE	108384	25YR	4267.00	384.28	395.45	389.65	395.49	0.000185	1.95	3198.59	880.91	0.11
USACE	108384	50YR	5771.00	384.28	396.41	390.38	396.45	0.000176	2.03	4181.63	1094.45	0.11
USACE	108384	100YR	7575.00	384.28	397.45	391.20	397.49	0.000160	2.06	5329.22	1098.83	0.11
USACE	108384	100YRPLUS	9907.00	384.28	398.99	392.16	399.02	0.000124	1.98	7018.41	1169.18	0.10
USACE	108384	200YR	9710.00	384.28	398.80	392.08	398.83	0.000130	2.01	6808.51	1159.46	0.10
USACE	108384	500YR	13115.00	384.28	400.34	393.37	400.38	0.000050	2.10	8517.62	1614.43	0.10
USACE	108384	SEPT2011	7292.00	384.28	397.21	391.08	397.25	0.000170	2.10	5065.63	1098.13	0.11
USACE	108342 Fruitville Pike		Bridge									
USACE	108295	2YR	1292.00	384.10	391.20	387.77	391.29	0.000598	2.32	573.20	172.62	0.18
USACE	108295	5YR	2108.00	384.10	392.84	388.50	392.95	0.000588	2.78	788.42	387.41	0.19
USACE	108295	10YR	2889.00	384.10	394.13	389.06	394.23	0.000442	2.72	1271.38	629.47	0.17
USACE	108295	25YR	4267.00	384.10	395.36	389.92	395.46	0.000419	2.92	2546.25	762.58	0.17
USACE	108295	50YR	5771.00	384.10	396.31	390.72	396.42	0.000451	3.24	3297.77	814.69	0.18
USACE	108295	100YR	7575.00	384.10	397.28	391.56	397.40	0.000469	3.51	4116.69	859.19	0.19
USACE	108295	100YRPLUS	9907.00	384.10	398.85	392.54	398.96	0.000389	3.50	5513.07	991.05	0.17
USACE	108295	200YR	9710.00	384.10	398.65	392.46	398.76	0.000406	3.54	5332.42	977.39	0.18
USACE	108295	500YR	13115.00	384.10	400.23	394.21	400.35	0.000253	3.78	6860.48	1399.29	0.18
USACE	108295	SEPT2011	7292.00	384.10	397.02	391.43	397.15	0.000495	3.55	3900.75	856.37	0.19
USACE	108231	2YR	1292.00	383.89	391.13	386.84	391.24	0.000724	2.59	499.27	98.33	0.20
USACE	108231	5YR	2108.00	383.89	392.74	387.83	392.90	0.000814	3.18	662.18	224.19	0.22
USACE	108231	10YR	2889.00	383.89	393.95	388.62	394.15	0.000856	3.66	796.46	441.18	0.23
USACE	108231	25YR	4267.00	383.89	395.18	389.78	395.39	0.000805	3.93	1797.24	650.36	0.23
USACE	108231	50YR	5771.00	383.89	396.11	390.77	396.34	0.000870	4.37	2435.71	750.13	0.25

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	108231	100YR	7575.00	383.89	397.07	391.79	397.32	0.000895	4.72	3190.16	809.93	0.25
USACE	108231	100YRPLUS	9907.00	383.89	398.67	392.94	398.89	0.000718	4.64	4488.41	1054.74	0.23
USACE	108231	200YR	9710.00	383.89	398.47	392.83	398.69	0.000754	4.70	4321.60	1034.99	0.24
USACE	108231	500YR	13115.00	383.89	400.06	393.98	400.30	0.000462	4.99	5614.24	1427.92	0.24
USACE	108231	SEPT2011	7292.00	383.89	396.80	391.64	397.07	0.000952	4.78	2979.71	795.07	0.26
USACE	108094	2YR	1292.00	383.67	391.09	386.70	391.15	0.000393	2.03	636.25	112.58	0.15
USACE	108094	5YR	2108.00	383.67	392.69	387.38	392.80	0.000479	2.57	820.78	117.67	0.17
USACE	108094	10YR	2889.00	383.67	393.90	387.94	394.04	0.000545	2.99	965.39	194.34	0.19
USACE	108094	25YR	4267.00	383.67	395.08	388.83	395.28	0.000692	3.67	1507.17	657.75	0.21
USACE	108094	50YR	5771.00	383.67	396.00	389.69	396.23	0.000753	4.09	2228.36	914.09	0.23
USACE	108094	100YR	7575.00	383.67	396.98	390.61	397.20	0.000717	4.24	3151.87	1054.31	0.23
USACE	108094	100YRPLUS	9907.00	383.67	398.64	391.69	398.79	0.000486	3.84	4877.39	1155.47	0.19
USACE	108094	200YR	9710.00	383.67	398.43	391.60	398.59	0.000521	3.93	4654.01	1150.46	0.20
USACE	108094	500YR	13115.00	383.67	400.08	393.02	400.22	0.000277	3.89	6406.66	1411.68	0.18
USACE	108094	SEPT2011	7292.00	383.67	396.70	390.46	396.94	0.000785	4.36	2881.59	1027.98	0.24
USACE	107950	2YR	1292.00	382.52	391.07	385.69	391.10	0.000189	1.50	858.75	137.64	0.11
USACE	107950	5YR	2108.00	382.52	392.67	386.32	392.73	0.000246	1.95	1083.42	143.16	0.12
USACE	107950	10YR	2889.00	382.52	393.88	386.84	393.96	0.000283	2.30	1259.31	221.33	0.14
USACE	107950	25YR	4267.00	382.52	395.05	387.65	395.17	0.000385	2.92	1800.26	814.40	0.16
USACE	107950	50YR	5771.00	382.52	395.95	388.43	396.10	0.000451	3.35	2716.99	1145.29	0.18
USACE	107950	100YR	7575.00	382.52	396.94	389.26	397.08	0.000421	3.42	3855.53	1160.71	0.18
USACE	107950	100YRPLUS	9907.00	382.52	398.62	390.22	398.71	0.000278	3.04	5848.53	1275.58	0.15
USACE	107950	200YR	9710.00	382.52	398.40	390.14	398.50	0.000299	3.12	5581.97	1230.26	0.15
USACE	107950	500YR	13115.00	382.52	400.08	391.41	400.16	0.000099	3.04	7865.17	1559.12	0.14
USACE	107950	SEPT2011	7292.00	382.52	396.66	389.14	396.81	0.000465	3.54	3527.21	1155.75	0.18
USACE	107908 Main Street		Bridge									
USACE	107871	2YR	1292.00	382.39	391.04	386.58	391.08	0.000292	1.74	744.30	132.25	0.13
USACE	107871	5YR	2108.00	382.39	392.61	387.18	392.69	0.000357	2.20	956.74	137.43	0.15
USACE	107871	10YR	2889.00	382.39	393.75	387.69	393.86	0.000412	2.59	1115.89	142.12	0.16
USACE	107871	25YR	4267.00	382.39	394.79	388.46	394.97	0.000591	3.37	1371.42	518.95	0.20
USACE	107871	50YR	5771.00	382.39	395.80	389.23	396.02	0.000660	3.82	2067.46	901.96	0.21
USACE	107871	100YR	7575.00	382.39	396.83	390.04	397.04	0.000645	4.03	3041.58	996.58	0.21
USACE	107871	100YRPLUS	9907.00	382.39	398.44	390.99	398.60	0.000477	3.79	4752.54	1117.20	0.19
USACE	107871	200YR	9710.00	382.39	398.21	390.92	398.38	0.000513	3.89	4496.91	1111.77	0.19
USACE	107871	500YR	13115.00	382.39	399.97	392.20	400.11	0.000268	3.83	6544.04	1286.08	0.18
USACE	107871	SEPT2011	7292.00	382.39	396.54	389.90	396.77	0.000702	4.13	2759.75	961.22	0.22
USACE	107775	2YR	1292.00	382.88	390.92	387.38	391.03	0.000711	2.56	504.92	111.32	0.20
USACE	107775	5YR	2108.00	382.88	392.46	388.11	392.61	0.000786	3.21	663.27	204.34	0.22
USACE	107775	10YR	2889.00	382.88	393.55	388.73	393.77	0.000874	3.75	786.67	258.48	0.24
USACE	107775	25YR	4267.00	382.88	394.55	389.68	394.85	0.001124	4.61	1318.48	414.79	0.27
USACE	107775	50YR	5771.00	382.88	395.56	390.56	395.90	0.001169	5.05	1921.83	782.32	0.29
USACE	107775	100YR	7575.00	382.88	396.67	391.51	396.95	0.000975	4.96	2931.29	1054.75	0.27
USACE	107775	100YRPLUS	9907.00	382.88	398.39	392.69	398.55	0.000549	4.10	4835.27	1153.44	0.20
USACE	107775	200YR	9710.00	382.88	398.16	392.58	398.33	0.000606	4.26	4564.63	1138.01	0.21
USACE	107775	500YR	13115.00	382.88	399.95	395.63	400.08	0.000270	3.89	6691.66	1286.48	0.18
USACE	107775	SEPT2011	7292.00	382.88	396.33	391.38	396.66	0.001144	5.26	2583.57	981.50	0.29
USACE	107673	2YR	1292.00	383.60	390.89	386.40	390.96	0.000401	2.10	616.90	109.24	0.15
USACE	107673	5YR	2108.00	383.60	392.43	387.11	392.54	0.000501	2.69	791.10	195.72	0.18
USACE	107673	10YR	2889.00	383.60	393.52	387.73	393.68	0.000584	3.15	941.49	331.73	0.20
USACE	107673	25YR	4267.00	383.60	394.52	388.66	394.73	0.000755	3.82	1560.17	564.84	0.23
USACE	107673	50YR	5771.00	383.60	395.55	389.55	395.76	0.000758	4.09	2237.90	772.51	0.23
USACE	107673	100YR	7575.00	383.60	396.65	390.50	396.84	0.000680	4.15	3241.69	1015.16	0.22
USACE	107673	100YRPLUS	9907.00	383.60	398.36	391.63	398.49	0.000436	3.67	5118.01	1146.93	0.18
USACE	107673	200YR	9710.00	383.60	398.12	391.54	398.26	0.000476	3.78	4847.42	1134.66	0.19
USACE	107673	500YR	13115.00	383.60	399.94	393.34	400.05	0.000231	3.61	7081.60	1399.54	0.17
USACE	107673	SEPT2011	7292.00	383.60	396.31	390.36	396.53	0.000772	4.34	2904.65	985.89	0.23
USACE	107475	2YR	1292.00	383.60	390.38	387.68	390.76	0.002810	4.98	259.94	71.23	0.39
USACE	107475	5YR	2108.00	383.60	391.61	388.93	392.27	0.003651	6.55	327.56	500.34	0.46
USACE	107475	10YR	2889.00	383.60	392.35	389.90	393.34	0.004712	8.00	373.15	551.43	0.53
USACE	107475	25YR	4267.00	383.60	394.04	391.33	394.47	0.002234	6.35	1408.81	689.51	0.38
USACE	107475	50YR	5771.00	383.60	395.32	392.78	395.56	0.001386	5.47	2374.65	828.31	0.30
USACE	107475	100YR	7575.00	383.60	396.52	393.65	396.68	0.000882	4.71	3512.43	985.98	0.25
USACE	107475	100YRPLUS	9907.00	383.60	398.29	394.98	398.39	0.000469	3.78	5415.46	1160.25	0.18
USACE	107475	200YR	9710.00	383.60	398.04	394.95	398.15	0.000522	3.94	5136.19	1131.12	0.19
USACE	107475	500YR	13115.00	383.60	399.90	395.48	400.00	0.000225	3.54	7350.90	1260.82	0.16
USACE	107475	SEPT2011	7292.00	383.60	396.15	393.57	396.34	0.001090	5.12	3151.27	970.90	0.27
USACE	107182	2YR	1292.00	382.99	390.03	386.42	390.20	0.001150	3.28	396.91	83.36	0.26
USACE	107182	5YR	2108.00	382.99	391.23	387.47	391.51	0.001471	4.26	551.07	163.43	0.30
USACE	107182	10YR	2889.00	382.99	391.95	388.30	392.34	0.001828	5.11	692.84	239.41	0.34
USACE	107182	25YR	4267.00	382.99	393.46	389.49	393.89	0.001705	5.62	1220.22	455.75	0.34
USACE	107182	50YR	5771.00	382.99	394.71	390.70	395.12	0.001525	5.82	1833.25	566.47	0.33
USACE	107182	100YR	7575.00	382.99	395.98	392.23	396.35	0.001308	5.85	2521.57	630.92	0.31
USACE	107182	100YRPLUS	9907.00	382.99	397.92	393.87	398.19	0.000907	5.42	3587.19	658.49	0.27
USACE	107182	200YR	9710.00	382.99	397.64	393.76	397.93	0.000979	5.55	3434.57	653.64	0.27
USACE	107182	500YR	13115.00	382.99	399.62	394.98	399.89	0.000526	5.60	4562.62	737.24	0.26
USACE	107182	SEPT2011	7292.00	382.99	395.51	392.05	395.94	0.001554	6.19	2267.38	594.68	0.34

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	106849	2YR	1314.00	382.14	389.33	386.38	389.66	0.002225	4.68	302.37	119.23	0.35
USACE	106849	5YR	2046.00	382.14	390.31	387.51	390.83	0.002872	5.94	425.69	269.99	0.41
USACE	106849	10YR	2763.00	382.14	391.31	388.50	391.69	0.002137	5.64	840.21	363.16	0.36
USACE	106849	25YR	4275.00	382.14	393.10	390.97	393.35	0.001324	5.12	1561.88	472.13	0.30
USACE	106849	50YR	5777.00	382.14	394.47	391.69	394.66	0.000946	4.75	2253.28	530.21	0.26
USACE	106849	100YR	7568.00	382.14	395.82	392.25	395.97	0.000725	4.51	3020.12	606.57	0.23
USACE	106849	100YRPLUS	9897.00	382.14	397.84	393.05	397.94	0.000419	3.80	4341.15	694.25	0.18
USACE	106849	200YR	9680.00	382.14	397.55	392.99	397.67	0.000464	3.94	4143.98	685.34	0.19
USACE	106849	500YR	13053.00	382.14	399.63	393.70	399.73	0.000203	3.58	5673.11	820.56	0.16
USACE	106849	SEPT2011	7044.00	382.14	395.32	392.09	395.50	0.000838	4.71	2727.80	581.77	0.25
USACE	106584	2YR	1314.00	380.98	389.16	385.23	389.28	0.000760	3.08	718.47	320.86	0.21
USACE	106584	5YR	2046.00	380.98	390.25	386.35	390.37	0.000736	3.36	1073.53	329.49	0.22
USACE	106584	10YR	2763.00	380.98	391.21	387.54	391.33	0.000685	3.51	1391.40	334.04	0.21
USACE	106584	25YR	4275.00	380.98	392.97	389.23	393.09	0.000608	3.74	1987.51	343.92	0.21
USACE	106584	50YR	5777.00	380.98	394.32	389.82	394.46	0.000606	4.06	2492.05	399.49	0.21
USACE	106584	100YR	7568.00	380.98	395.66	390.38	395.81	0.000576	4.26	3046.86	689.04	0.21
USACE	106584	100YRPLUS	9897.00	380.98	397.70	391.01	397.84	0.000449	4.14	3909.20	788.38	0.19
USACE	106584	200YR	9680.00	380.98	397.41	390.95	397.55	0.000476	4.21	3785.12	759.22	0.19
USACE	106584	500YR	13053.00	380.98	399.51	391.73	399.67	0.000276	4.38	4688.31	967.98	0.19
USACE	106584	SEPT2011	7044.00	380.98	395.16	390.22	395.31	0.000619	4.30	2836.45	669.05	0.21
USACE	106332	2YR	1314.00	380.52	388.90	384.77	389.06	0.000956	3.44	593.89	251.37	0.24
USACE	106332	5YR	2046.00	380.52	389.95	385.93	390.14	0.001065	4.01	863.61	261.95	0.26
USACE	106332	10YR	2763.00	380.52	390.90	386.89	391.10	0.001048	4.31	1116.87	267.90	0.26
USACE	106332	25YR	4275.00	380.52	392.67	389.12	392.89	0.000979	4.72	1598.26	432.43	0.26
USACE	106332	50YR	5777.00	380.52	394.00	389.87	394.25	0.001001	5.18	1973.02	608.20	0.27
USACE	106332	100YR	7568.00	380.52	395.56	390.57	395.67	0.000432	3.70	3286.44	678.73	0.18
USACE	106332	100YRPLUS	9897.00	380.52	397.65	391.34	397.74	0.000225	2.95	4609.06	705.61	0.13
USACE	106332	200YR	9680.00	380.52	397.35	391.28	397.45	0.000250	3.06	4417.78	702.21	0.14
USACE	106332	500YR	13053.00	380.52	399.51	392.26	399.61	0.000111	2.79	5823.32	817.46	0.12
USACE	106332	SEPT2011	7044.00	380.52	394.80	390.39	395.09	0.001088	5.64	2201.46	642.32	0.28
USACE	106103	2YR	1314.00	380.69	388.74	384.52	388.86	0.000676	2.94	654.06	244.79	0.20
USACE	106103	5YR	2046.00	380.69	389.76	385.54	389.92	0.000807	3.54	905.61	250.21	0.23
USACE	106103	10YR	2763.00	380.69	390.71	386.36	390.88	0.000826	3.88	1145.30	255.13	0.24
USACE	106103	25YR	4275.00	380.69	392.47	388.43	392.68	0.000820	4.38	1614.69	324.51	0.24
USACE	106103	50YR	5777.00	380.69	393.88	389.26	394.04	0.000644	4.23	2339.38	682.16	0.22
USACE	106103	100YR	7568.00	380.69	395.47	390.00	395.58	0.000364	3.47	3359.57	832.10	0.17
USACE	106103	100YRPLUS	9897.00	380.69	397.61	390.80	397.69	0.000185	2.73	4818.66	876.74	0.12
USACE	106103	200YR	9680.00	380.69	397.31	390.73	397.39	0.000206	2.84	4607.05	866.67	0.13
USACE	106103	500YR	13053.00	380.69	399.50	391.68	399.58	0.000089	2.56	6162.13	1028.93	0.11
USACE	106103	SEPT2011	7044.00	380.69	394.74	389.79	394.88	0.000519	3.99	2883.27	811.28	0.20
USACE	105859	2YR	1314.00	382.37	388.40	385.81	388.61	0.001693	3.97	491.90	250.26	0.31
USACE	105859	5YR	2046.00	382.37	389.44	386.84	389.65	0.001547	4.29	754.85	255.90	0.30
USACE	105859	10YR	2763.00	382.37	390.43	388.26	390.63	0.001308	4.36	1012.68	261.28	0.29
USACE	105859	25YR	4275.00	382.37	392.29	389.06	392.46	0.000937	4.29	1642.98	653.48	0.25
USACE	105859	50YR	5777.00	382.37	393.79	389.66	393.89	0.000494	3.45	2564.66	834.46	0.19
USACE	105859	100YR	7568.00	382.37	395.42	390.26	395.49	0.000271	2.81	3597.36	851.08	0.14
USACE	105859	100YRPLUS	9897.00	382.37	397.58	390.94	397.65	0.000148	2.32	5011.49	929.47	0.11
USACE	105859	200YR	9680.00	382.37	397.28	390.87	397.34	0.000163	2.40	4808.62	922.34	0.11
USACE	105859	500YR	13053.00	382.37	399.49	392.63	399.56	0.000076	2.25	6294.97	1047.09	0.10
USACE	105859	SEPT2011	7044.00	382.37	394.67	390.09	394.76	0.000384	3.21	3117.38	844.68	0.17
USACE	105730	2YR	1314.00	382.70	388.31	385.03	388.42	0.000770	2.73	553.67	297.13	0.21
USACE	105730	5YR	2046.00	382.70	389.34	385.68	389.47	0.000762	3.07	941.51	546.54	0.22
USACE	105730	10YR	2763.00	382.70	390.38	386.22	390.48	0.000552	2.90	1490.20	688.16	0.19
USACE	105730	25YR	4275.00	382.70	392.28	387.24	392.34	0.000291	2.46	2826.80	1060.29	0.14
USACE	105730	50YR	5777.00	382.70	393.77	389.10	393.82	0.000230	2.42	3775.31	1225.98	0.13
USACE	105730	100YR	7568.00	382.70	395.40	389.81	395.45	0.000191	2.42	4839.36	1356.22	0.12
USACE	105730	100YRPLUS	9897.00	382.70	397.57	390.34	397.62	0.000145	2.35	6350.90	1508.04	0.11
USACE	105730	200YR	9680.00	382.70	397.26	390.29	397.31	0.000154	2.39	6136.89	1501.61	0.11
USACE	105730	500YR	13053.00	382.70	399.48	390.91	399.54	0.000057	2.50	7682.53	1660.59	0.11
USACE	105730	SEPT2011	7044.00	382.70	394.65	389.66	394.70	0.000226	2.53	4339.05	1265.74	0.13
USACE	105700 Eby Street		Bridge									
USACE	105669	2YR	1314.00	382.01	387.95	384.92	388.02	0.000651	2.49	879.23	503.58	0.19
USACE	105669	5YR	2046.00	382.01	389.22	385.67	389.28	0.000444	2.38	1477.83	570.68	0.17
USACE	105669	10YR	2763.00	382.01	390.38	386.28	390.42	0.000338	2.32	2040.56	721.09	0.15
USACE	105669	25YR	4275.00	382.01	392.23	387.82	392.27	0.000211	2.13	3421.42	856.28	0.12
USACE	105669	50YR	5777.00	382.01	393.73	388.28	393.77	0.000183	2.19	4369.76	1131.58	0.12
USACE	105669	100YR	7568.00	382.01	395.37	388.72	395.41	0.000163	2.26	5438.36	1175.00	0.11
USACE	105669	100YRPLUS	9897.00	382.01	397.55	389.22	397.59	0.000138	2.32	6995.11	1289.67	0.11
USACE	105669	200YR	9680.00	382.01	397.24	389.17	397.28	0.000146	2.35	6759.64	1274.76	0.11
USACE	105669	500YR	13053.00	382.01	399.47	389.77	399.52	0.000086	2.49	8501.30	1504.91	0.11
USACE	105669	SEPT2011	7044.00	382.01	394.61	388.60	394.65	0.000189	2.34	4936.46	1161.53	0.12
USACE	105522	2YR	1314.00	381.32	387.81	384.79	387.90	0.000892	2.87	789.91	672.14	0.22
USACE	105522	5YR	2046.00	381.32	389.14	385.79	389.20	0.000525	2.57	1385.34	699.87	0.18
USACE	105522	10YR	2763.00	381.32	390.32	387.31	390.37	0.000375	2.43	1921.08	726.61	0.16
USACE	105522	25YR	4275.00	381.32	392.18	387.93	392.23	0.000293	2.49	2781.61	781.40	0.14
USACE	105522	50YR	5777.00	381.32	393.68	388.36	393.73	0.000266	2.61	3491.58	926.61	0.14
USACE	105522	100YR	7568.00	381.32	395.31	388.79	395.37	0.000243	2.74	4282.38	1198.20	0.14

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	105522	100YRPLUS	9897.00	381.32	397.49	389.25	397.56	0.000205	2.80	5368.87	1220.57	0.13
USACE	105522	200YR	9680.00	381.32	397.18	389.21	397.25	0.000215	2.83	5213.62	1207.71	0.13
USACE	105522	500YR	13053.00	381.32	399.42	389.81	399.49	0.000134	3.07	6329.95	1354.91	0.13
USACE	105522	SEPT2011	7044.00	381.32	394.55	388.66	394.61	0.000278	2.81	3910.10	1184.90	0.14
USACE	105184	2YR	1314.00	380.70	387.61	383.74	387.68	0.000496	2.32	857.44	576.05	0.17
USACE	105184	5YR	2046.00	380.70	388.99	384.57	389.05	0.000407	2.43	1339.19	605.43	0.16
USACE	105184	10YR	2763.00	380.70	390.19	385.28	390.25	0.000350	2.50	1768.33	631.42	0.15
USACE	105184	25YR	4275.00	380.70	392.05	387.01	392.13	0.000331	2.78	2448.95	682.20	0.15
USACE	105184	50YR	5777.00	380.70	393.55	387.62	393.64	0.000331	3.05	3013.11	762.92	0.16
USACE	105184	100YR	7568.00	380.70	395.18	388.20	395.28	0.000322	3.28	3643.51	1091.79	0.16
USACE	105184	100YRPLUS	9897.00	380.70	397.37	388.80	397.48	0.000290	3.45	4506.97	1186.67	0.15
USACE	105184	200YR	9680.00	380.70	397.05	388.75	397.16	0.000303	3.48	4379.22	1182.64	0.16
USACE	105184	500YR	13053.00	380.70	399.30	389.53	399.44	0.000199	3.86	5317.31	1295.66	0.16
USACE	105184	SEPT2011	7044.00	380.70	394.40	388.03	394.51	0.000362	3.34	3341.66	980.02	0.17
USACE	104871	2YR	1314.00	380.19	387.46	384.08	387.52	0.000501	2.49	1045.07	368.20	0.17
USACE	104871	5YR	2046.00	380.19	388.87	384.90	388.93	0.000405	2.56	1595.64	484.59	0.16
USACE	104871	10YR	2763.00	380.19	390.09	385.58	390.14	0.000337	2.58	2116.23	537.95	0.15
USACE	104871	25YR	4275.00	380.19	391.96	386.72	392.02	0.000305	2.78	2961.29	596.00	0.15
USACE	104871	50YR	5777.00	380.19	393.47	387.36	393.53	0.000295	2.98	3667.66	678.57	0.15
USACE	104871	100YR	7568.00	380.19	395.11	388.00	395.18	0.000280	3.16	4467.79	1058.33	0.15
USACE	104871	100YRPLUS	9897.00	380.19	397.31	388.61	397.38	0.000244	3.25	5576.52	1327.48	0.14
USACE	104871	200YR	9680.00	380.19	396.99	388.57	397.07	0.000255	3.28	5413.72	1300.58	0.15
USACE	104871	500YR	13053.00	380.19	399.28	389.30	399.37	0.000162	3.58	6602.72	1610.73	0.15
USACE	104871	SEPT2011	7044.00	380.19	394.32	387.64	394.39	0.000319	3.25	4078.53	930.23	0.16
USACE	104590	2YR	1314.00	380.00	387.27	383.62	387.36	0.000632	2.88	916.55	407.23	0.20
USACE	104590	5YR	2046.00	380.00	388.74	384.70	388.81	0.000438	2.74	1579.71	532.67	0.17
USACE	104590	10YR	2763.00	380.00	389.99	386.31	390.05	0.000329	2.62	2181.87	599.26	0.15
USACE	104590	25YR	4275.00	380.00	391.88	387.15	391.94	0.000278	2.72	3109.21	671.48	0.14
USACE	104590	50YR	5777.00	380.00	393.39	387.54	393.45	0.000263	2.88	3862.92	886.04	0.14
USACE	104590	100YR	7568.00	380.00	395.04	388.35	395.10	0.000247	3.03	4701.90	1046.34	0.14
USACE	104590	100YRPLUS	9897.00	380.00	397.25	388.88	397.32	0.000215	3.11	5852.58	1084.43	0.13
USACE	104590	200YR	9680.00	380.00	396.93	388.83	397.00	0.000225	3.14	5683.45	1067.56	0.14
USACE	104590	500YR	13053.00	380.00	399.24	389.48	399.32	0.000143	3.42	6916.75	1670.32	0.14
USACE	104590	SEPT2011	7044.00	380.00	394.24	388.09	394.31	0.000284	3.12	4291.59	978.22	0.15
USACE	104213	2YR	1314.00	379.73	387.10	383.91	387.15	0.000462	2.29	1118.13	475.50	0.16
USACE	104213	5YR	2046.00	379.73	388.64	384.80	388.67	0.000273	2.05	1850.04	547.89	0.13
USACE	104213	10YR	2763.00	379.73	389.91	385.46	389.94	0.000210	2.00	2462.20	624.79	0.12
USACE	104213	25YR	4275.00	379.73	391.81	386.12	391.85	0.000187	2.15	3378.85	874.49	0.12
USACE	104213	50YR	5777.00	379.73	393.33	387.00	393.36	0.000184	2.32	4113.41	935.26	0.12
USACE	104213	100YR	7568.00	379.73	394.98	387.48	395.02	0.000179	2.49	4928.78	964.15	0.12
USACE	104213	100YRPLUS	9897.00	379.73	397.19	387.93	397.24	0.000160	2.60	6074.11	991.34	0.11
USACE	104213	200YR	9680.00	379.73	396.87	387.88	396.92	0.000167	2.62	5903.82	989.28	0.12
USACE	104213	500YR	13053.00	379.73	399.21	388.47	399.27	0.000107	2.88	7151.40	1237.47	0.12
USACE	104213	SEPT2011	7044.00	379.73	394.16	387.38	394.21	0.000202	2.54	4524.86	947.12	0.12
USACE	103844	2YR	1314.00	379.49	386.93	383.29	386.98	0.000450	2.35	1002.50	516.22	0.16
USACE	103844	5YR	2046.00	379.49	388.52	384.31	388.57	0.000304	2.24	1585.49	646.18	0.14
USACE	103844	10YR	2763.00	379.49	389.82	385.73	389.86	0.000252	2.26	2063.82	763.67	0.13
USACE	103844	25YR	4275.00	379.49	391.72	386.38	391.77	0.000243	2.51	2770.55	848.04	0.13
USACE	103844	50YR	5777.00	379.49	393.23	386.85	393.29	0.000248	2.77	3334.83	907.87	0.14
USACE	103844	100YR	7568.00	379.49	394.87	387.32	394.94	0.000248	3.00	3957.17	931.47	0.14
USACE	103844	100YRPLUS	9897.00	379.49	397.09	387.86	397.17	0.000236	3.23	4818.89	964.82	0.14
USACE	103844	200YR	9680.00	379.49	396.76	387.81	396.85	0.000246	3.25	4686.54	959.88	0.14
USACE	103844	500YR	13053.00	379.49	399.12	388.49	399.22	0.000163	3.62	5668.46	1176.73	0.15
USACE	103844	SEPT2011	7044.00	379.49	394.05	387.19	394.13	0.000278	3.06	3646.11	926.10	0.15
USACE	103500	2YR	1314.00	379.29	386.72	382.76	386.81	0.000556	2.64	685.21	404.36	0.18
USACE	103500	5YR	2046.00	379.29	388.33	383.67	388.43	0.000496	2.90	998.95	476.67	0.18
USACE	103500	10YR	2763.00	379.29	389.63	384.89	389.74	0.000466	3.11	1271.22	546.71	0.18
USACE	103500	25YR	4275.00	379.29	391.50	385.87	391.65	0.000507	3.66	1689.74	769.94	0.19
USACE	103500	50YR	5777.00	379.29	392.98	386.61	393.15	0.000545	4.13	2051.43	907.93	0.20
USACE	103500	100YR	7568.00	379.29	394.60	387.38	394.81	0.000556	4.52	2482.93	1026.77	0.21
USACE	103500	100YRPLUS	9897.00	379.29	396.83	388.27	397.04	0.000500	4.72	3092.29	1067.92	0.21
USACE	103500	200YR	9680.00	379.29	396.49	388.19	396.71	0.000524	4.76	3000.14	1061.64	0.21
USACE	103500	500YR	13053.00	379.29	398.86	389.28	399.13	0.000336	5.23	3650.59	1358.63	0.21
USACE	103500	SEPT2011	7044.00	379.29	393.76	387.16	393.97	0.000627	4.61	2253.93	963.93	0.22
USACE	103426	2YR	1314.00	379.20	386.64	382.69	386.76	0.000663	2.86	505.95	391.91	0.20
USACE	103426	5YR	2046.00	379.20	388.20	383.52	388.37	0.000712	3.44	661.94	472.97	0.22
USACE	103426	10YR	2763.00	379.20	389.45	384.23	389.66	0.000757	3.92	787.17	532.25	0.23
USACE	103426	25YR	4275.00	379.20	391.19	385.38	391.54	0.000961	4.96	961.59	670.87	0.27
USACE	103426	50YR	5777.00	379.20	392.53	386.43	393.01	0.001157	5.89	1095.04	868.03	0.30
USACE	103426	100YR	7568.00	379.20	393.98	387.45	394.62	0.001328	6.80	1240.42	998.84	0.33
USACE	103426	100YRPLUS	9897.00	379.20	396.01	388.62	396.81	0.001389	7.63	1443.46	1107.48	0.34
USACE	103426	200YR	9680.00	379.20	395.68	388.52	396.48	0.001434	7.65	1409.84	1098.99	0.34
USACE	103426	500YR	13053.00	379.20	397.73	390.05	398.83	0.000687	8.99	1614.74	1227.37	0.38
USACE	103426	SEPT2011	7044.00	379.20	393.14	387.17	393.78	0.001442	6.79	1156.69	921.05	0.34
USACE	103385 Railroad		Bridge									
USACE	103346	2YR	1314.00	379.14	386.49	382.81	386.68	0.001044	3.64	411.13	317.30	0.25

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	103346	5YR	2046.00	379.14	388.03	383.84	388.28	0.001060	4.23	555.93	472.96	0.26
USACE	103346	10YR	2763.00	379.14	389.24	384.70	389.54	0.001099	4.73	669.44	529.85	0.28
USACE	103346	25YR	4275.00	379.14	390.83	386.36	391.30	0.001405	5.95	818.53	653.56	0.32
USACE	103346	50YR	5777.00	379.14	391.96	387.38	392.63	0.001738	7.08	925.62	788.97	0.36
USACE	103346	100YR	7568.00	379.14	393.15	388.39	394.05	0.002072	8.23	1037.18	846.59	0.40
USACE	103346	100YRPLUS	9897.00	379.14	394.63	389.57	395.81	0.002364	9.44	1175.79	910.25	0.44
USACE	103346	200YR	9680.00	379.14	394.36	389.47	395.54	0.002423	9.45	1150.95	897.87	0.44
USACE	103346	500YR	13053.00	379.14	395.45	391.01	397.25	0.002139	11.65	1253.55	1053.30	0.52
USACE	103346	SEPT2011	7044.00	379.14	392.31	388.11	393.23	0.002312	8.32	958.44	810.76	0.42
USACE	103198	2YR	1314.00	378.79	386.41	382.71	386.51	0.000721	2.98	637.82	614.70	0.21
USACE	103198	5YR	2046.00	378.79	388.01	383.79	388.09	0.000489	2.85	1024.11	742.42	0.18
USACE	103198	10YR	2763.00	378.79	389.25	385.44	389.34	0.000414	2.89	1323.90	809.59	0.17
USACE	103198	25YR	4275.00	378.79	390.90	386.36	391.01	0.000440	3.33	1720.09	974.58	0.18
USACE	103198	50YR	5777.00	378.79	392.10	386.93	392.24	0.000490	3.77	2009.75	1042.38	0.19
USACE	103198	100YR	7568.00	378.79	393.37	387.49	393.55	0.000534	4.20	2315.53	1171.35	0.20
USACE	103198	100YRPLUS	9897.00	378.79	394.95	388.14	395.18	0.000557	4.63	2697.34	1481.51	0.21
USACE	103198	200YR	9680.00	378.79	394.68	388.08	394.91	0.000577	4.65	2632.27	1474.56	0.21
USACE	103198	500YR	13053.00	378.79	396.06	388.90	396.39	0.000456	5.49	2965.10	1524.51	0.24
USACE	103198	SEPT2011	7044.00	378.79	392.51	387.34	392.71	0.000624	4.35	2109.62	1069.36	0.22
USACE	102974	2YR	1314.00	378.01	386.30	381.96	386.37	0.000459	2.53	743.36	471.96	0.17
USACE	102974	5YR	2046.00	378.01	387.92	383.15	387.99	0.000361	2.58	1120.17	535.72	0.15
USACE	102974	10YR	2763.00	378.01	389.18	384.34	389.25	0.000333	2.71	1424.28	557.05	0.15
USACE	102974	25YR	4275.00	378.01	390.81	385.66	390.91	0.000375	3.18	1845.60	724.12	0.17
USACE	102974	50YR	5777.00	378.01	392.00	386.28	392.14	0.000433	3.65	2171.45	772.92	0.18
USACE	102974	100YR	7568.00	378.01	393.26	386.89	393.43	0.000479	4.09	2543.63	819.72	0.19
USACE	102974	100YRPLUS	9897.00	378.01	394.85	387.58	395.05	0.000506	4.52	3050.50	864.45	0.20
USACE	102974	200YR	9680.00	378.01	394.58	387.51	394.78	0.000515	4.51	2960.02	845.86	0.20
USACE	102974	500YR	13053.00	378.01	396.00	388.38	396.27	0.000399	5.26	3460.17	882.11	0.23
USACE	102974	SEPT2011	7044.00	378.01	392.39	386.73	392.57	0.000562	4.25	2282.92	785.71	0.21
USACE	102751	2YR	1314.00	377.60	386.11	382.15	386.24	0.000796	3.27	587.15	529.36	0.22
USACE	102751	5YR	2046.00	377.60	387.76	383.34	387.89	0.000620	3.33	933.31	629.18	0.20
USACE	102751	10YR	2763.00	377.60	389.02	385.03	389.15	0.000564	3.48	1202.13	687.34	0.20
USACE	102751	25YR	4275.00	377.60	390.62	386.02	390.80	0.000652	4.14	1543.55	720.96	0.22
USACE	102751	50YR	5777.00	377.60	391.77	386.78	392.00	0.000765	4.78	1787.96	756.60	0.24
USACE	102751	100YR	7568.00	377.60	392.98	387.49	393.28	0.000868	5.42	2046.55	774.44	0.26
USACE	102751	100YRPLUS	9897.00	377.60	394.51	388.27	394.88	0.000936	6.04	2373.85	859.37	0.27
USACE	102751	200YR	9680.00	377.60	394.23	388.20	394.61	0.000970	6.07	2313.96	824.72	0.28
USACE	102751	500YR	13053.00	377.60	395.59	389.19	396.13	0.000778	7.20	2605.12	977.14	0.31
USACE	102751	SEPT2011	7044.00	377.60	392.07	387.29	392.39	0.001022	5.61	1852.24	763.36	0.28
USACE	102532	2YR	1294.00	377.42	386.00	381.13	386.09	0.000501	2.73	685.28	567.87	0.18
USACE	102532	5YR	2040.00	377.42	387.66	382.32	387.76	0.000464	3.01	1044.03	678.29	0.17
USACE	102532	10YR	2738.00	377.42	388.93	383.59	389.04	0.000438	3.18	1383.53	781.19	0.17
USACE	102532	25YR	4290.00	377.42	390.51	385.24	390.66	0.000541	3.89	1808.47	959.63	0.20
USACE	102532	50YR	5792.00	377.42	391.64	386.01	391.84	0.000645	4.51	2111.59	988.96	0.22
USACE	102532	100YR	7580.00	377.42	392.83	386.81	393.09	0.000740	5.11	2433.76	1020.81	0.24
USACE	102532	100YRPLUS	9913.00	377.42	394.36	387.62	394.68	0.000804	5.70	2845.08	1061.41	0.25
USACE	102532	200YR	9685.00	377.42	394.08	387.61	394.39	0.000832	5.73	2767.78	1058.71	0.26
USACE	102532	500YR	13049.00	377.42	395.50	388.80	395.94	0.000657	6.75	3152.37	1087.00	0.29
USACE	102532	SEPT2011	8277.00	377.42	391.73	387.13	392.13	0.001275	6.36	2137.09	991.54	0.31
USACE	102289	2YR	1294.00	377.42	385.93	381.54	385.98	0.000327	2.11	851.13	538.08	0.14
USACE	102289	5YR	2040.00	377.42	387.61	383.42	387.66	0.000282	2.27	1233.77	655.81	0.14
USACE	102289	10YR	2738.00	377.42	388.88	383.89	388.94	0.000267	2.42	1577.83	857.73	0.14
USACE	102289	25YR	4290.00	377.42	390.45	384.66	390.54	0.000335	2.99	2129.06	1590.52	0.16
USACE	102289	50YR	5792.00	377.42	391.57	385.25	391.69	0.000394	3.46	2547.89	2212.42	0.17
USACE	102289	100YR	7580.00	377.42	392.76	385.87	392.92	0.000445	3.90	2994.80	2559.30	0.19
USACE	102289	100YRPLUS	9913.00	377.42	394.30	386.58	394.49	0.000473	4.32	3568.64	2787.95	0.19
USACE	102289	200YR	9685.00	377.42	394.01	386.51	394.20	0.000492	4.35	3459.41	2781.86	0.20
USACE	102289	500YR	13049.00	377.42	395.50	387.40	395.77	0.000376	5.06	4019.82	2835.30	0.22
USACE	102289	SEPT2011	8277.00	377.42	391.59	386.09	391.84	0.000798	4.92	2556.02	2227.91	0.24
USACE	102040	2YR	2118.00	377.33	385.67	381.40	385.82	0.000803	3.41	822.00	380.36	0.23
USACE	102040	5YR	3388.00	377.33	387.30	382.66	387.51	0.000850	4.03	1142.97	480.75	0.24
USACE	102040	10YR	4469.00	377.33	388.56	383.90	388.79	0.000838	4.37	1437.38	823.55	0.24
USACE	102040	25YR	6413.00	377.33	390.06	385.02	390.36	0.000947	5.10	1845.85	884.87	0.27
USACE	102040	50YR	8141.00	377.33	391.12	385.74	391.49	0.001048	5.69	2135.10	899.89	0.28
USACE	102040	100YR	10152.00	377.33	392.25	386.54	392.70	0.001132	6.26	2445.27	926.66	0.30
USACE	102040	100YRPLUS	13277.00	377.33	393.72	387.57	394.29	0.000813	7.10	2845.23	948.39	0.32
USACE	102040	200YR	12449.00	377.33	393.43	387.31	393.96	0.001207	6.84	2768.15	944.01	0.31
USACE	102040	500YR	15965.00	377.33	394.92	388.43	395.58	0.000861	7.69	3173.36	970.47	0.34
USACE	102040	SEPT2011	8277.00	377.33	391.21	385.79	391.59	0.001051	5.72	2159.71	903.02	0.28
USACE	101876	2YR	2118.00	377.20	385.55	382.92	385.68	0.000843	3.49	930.90	237.61	0.23
USACE	101876	5YR	3388.00	377.20	387.21	383.73	387.35	0.000777	3.85	1338.39	299.80	0.23
USACE	101876	10YR	4469.00	377.20	388.48	384.29	388.63	0.000708	4.02	1723.43	607.18	0.22
USACE	101876	25YR	6413.00	377.20	389.99	385.03	390.18	0.000776	4.62	2226.02	689.88	0.24
USACE	101876	50YR	8141.00	377.20	391.05	385.61	391.29	0.000855	5.15	2606.25	712.81	0.26
USACE	101876	100YR	10152.00	377.20	392.21	386.21	392.48	0.000872	5.51	3033.49	722.83	0.26
USACE	101876	100YRPLUS	13277.00	377.20	393.78	387.03	394.09	0.000571	5.99	3623.17	732.96	0.27
USACE	101876	200YR	12449.00	377.20	393.42	386.82	393.72	0.000877	5.85	3487.11	730.87	0.27
USACE	101876	500YR	15965.00	377.20	395.02	387.78	395.37	0.000576	6.34	4094.26	740.53	0.27

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	101876	SEPT2011	8277.00	377.20	391.15	385.66	391.38	0.000854	5.17	2639.80	713.92	0.26
USACE	101779	2YR	2118.00	377.12	385.49	381.07	385.60	0.000571	2.74	790.34	154.20	0.19
USACE	101779	5YR	3388.00	377.12	387.08	381.91	387.27	0.000697	3.50	994.13	255.54	0.22
USACE	101779	10YR	4469.00	377.12	388.34	382.53	388.54	0.000671	3.78	1552.50	624.82	0.22
USACE	101779	25YR	6413.00	377.12	389.85	383.51	390.09	0.000705	4.28	2276.01	765.00	0.23
USACE	101779	50YR	8141.00	377.12	390.95	384.31	391.20	0.000699	4.54	2841.35	770.55	0.23
USACE	101779	100YR	10152.00	377.12	392.14	385.14	392.40	0.000674	4.75	3455.05	778.16	0.23
USACE	101779	100YRPLUS	13277.00	377.12	393.75	386.31	394.04	0.000267	5.05	4287.98	785.49	0.23
USACE	101779	200YR	12449.00	377.12	393.36	386.01	393.64	0.000653	4.96	4086.26	783.97	0.23
USACE	101779	500YR	15965.00	377.12	395.00	387.97	395.30	0.000261	5.27	4932.36	790.41	0.23
USACE	101779	SEPT2011	8277.00	377.12	391.04	384.35	391.29	0.000694	4.55	2890.27	771.19	0.23
USACE	101750 Rettew Lane		Bridge									
USACE	101715	2YR	2118.00	376.91	385.32	380.88	385.44	0.000603	2.77	775.64	260.50	0.19
USACE	101715	5YR	3388.00	376.91	386.87	381.77	387.06	0.000739	3.55	976.90	361.22	0.22
USACE	101715	10YR	4469.00	376.91	387.92	382.42	388.17	0.000833	4.09	1212.50	510.18	0.24
USACE	101715	25YR	6413.00	376.91	389.53	383.42	389.85	0.000901	4.75	1814.80	771.75	0.26
USACE	101715	50YR	8141.00	376.91	390.78	384.20	391.12	0.000863	5.01	2381.18	814.62	0.26
USACE	101715	100YR	10152.00	376.91	391.97	385.07	392.33	0.000856	5.31	2914.37	818.60	0.26
USACE	101715	100YRPLUS	13277.00	376.91	393.57	386.27	393.97	0.000850	5.72	3635.65	824.44	0.26
USACE	101715	200YR	12449.00	376.91	393.18	385.96	393.57	0.000847	5.60	3461.37	823.00	0.26
USACE	101715	500YR	15965.00	376.91	394.75	387.20	395.18	0.000860	6.05	4165.95	828.94	0.27
USACE	101715	SEPT2011	8277.00	376.91	390.88	384.27	391.22	0.000861	5.02	2422.20	814.93	0.26
USACE	101601	2YR	2118.00	376.71	384.77	381.81	385.22	0.002366	5.63	458.11	331.68	0.38
USACE	101601	5YR	3388.00	376.71	386.01	383.37	386.75	0.003188	7.31	602.05	529.48	0.46
USACE	101601	10YR	4469.00	376.71	386.85	384.31	387.79	0.003704	8.42	736.63	574.29	0.50
USACE	101601	25YR	6413.00	376.71	388.06	385.84	389.36	0.004497	10.11	954.64	706.84	0.56
USACE	101601	50YR	8141.00	376.71	388.92	387.15	390.54	0.005168	11.44	1127.50	761.72	0.61
USACE	101601	100YR	10152.00	376.71	389.83	388.65	391.68	0.005547	12.50	1316.17	784.81	0.64
USACE	101601	100YRPLUS	13277.00	376.71	391.06	389.85	393.23	0.005985	13.87	1613.06	829.57	0.68
USACE	101601	200YR	12449.00	376.71	390.74	389.59	392.85	0.005920	13.57	1534.85	828.50	0.67
USACE	101601	500YR	15965.00	376.71	392.03	390.98	394.39	0.006157	14.76	1851.76	832.88	0.69
USACE	101601	SEPT2011	8277.00	376.71	389.01	387.23	390.64	0.005142	11.48	1145.96	763.31	0.61
USACE	101294	2YR	2118.00	376.48	383.92	381.71	384.37	0.003266	5.82	593.38	233.12	0.43
USACE	101294	5YR	3388.00	376.48	385.11	383.65	385.67	0.003519	6.85	875.95	245.19	0.46
USACE	101294	10YR	4469.00	376.48	385.91	384.29	386.56	0.003776	7.63	1077.59	261.15	0.48
USACE	101294	25YR	6413.00	376.48	387.12	385.16	387.91	0.004052	8.71	1407.16	299.02	0.51
USACE	101294	50YR	8141.00	376.48	388.03	385.96	388.92	0.004153	9.41	1663.65	322.99	0.53
USACE	101294	100YR	10152.00	376.48	388.95	386.83	389.94	0.004314	10.18	1921.35	357.85	0.55
USACE	101294	100YRPLUS	13277.00	376.48	390.18	387.81	391.35	0.004578	11.27	2268.53	386.85	0.57
USACE	101294	200YR	12449.00	376.48	389.87	387.58	390.99	0.004513	10.99	2180.76	382.77	0.57
USACE	101294	500YR	15965.00	376.48	391.12	388.52	392.44	0.004779	12.11	2538.73	406.41	0.59
USACE	101294	SEPT2011	8277.00	376.48	388.15	386.01	389.02	0.004066	9.39	1696.59	328.97	0.52
USACE	100844	2YR	2118.00	376.01	383.87		383.93	0.000304	2.13	1326.46	331.02	0.14
USACE	100844	5YR	3388.00	376.01	385.01		385.11	0.000424	2.78	1718.64	356.66	0.17
USACE	100844	10YR	4469.00	376.01	385.78		385.92	0.000509	3.23	2001.37	374.46	0.19
USACE	100844	25YR	6413.00	376.01	386.95		387.14	0.000643	3.94	2469.18	437.26	0.22
USACE	100844	50YR	8141.00	376.01	387.84		388.07	0.000718	4.40	2880.18	469.98	0.23
USACE	100844	100YR	10152.00	376.01	388.76		389.03	0.000781	4.84	3319.74	487.11	0.25
USACE	100844	100YRPLUS	13277.00	376.01	390.01		390.34	0.000859	5.42	3944.09	512.43	0.26
USACE	100844	200YR	12449.00	376.01	389.70		390.01	0.000840	5.27	3782.87	504.81	0.26
USACE	100844	500YR	15965.00	376.01	390.99		391.36	0.000912	5.85	4454.33	539.92	0.27
USACE	100844	SEPT2011	8277.00	376.01	387.97		388.19	0.000706	4.39	2938.41	471.67	0.23
USACE	100498	2YR	2118.00	375.51	383.46		383.71	0.001798	4.89	826.38	319.93	0.33
USACE	100498	5YR	3388.00	375.51	384.57		384.83	0.001823	5.45	1187.72	332.46	0.34
USACE	100498	10YR	4469.00	375.51	385.31		385.60	0.001879	5.88	1438.23	340.24	0.35
USACE	100498	25YR	6413.00	375.51	386.44		386.77	0.001957	6.52	1826.21	349.68	0.37
USACE	100498	50YR	8141.00	375.51	387.31		387.68	0.002007	6.99	2133.43	357.18	0.38
USACE	100498	100YR	10152.00	375.51	388.20		388.61	0.002064	7.48	2454.22	364.04	0.39
USACE	100498	100YRPLUS	13277.00	375.51	389.40		389.89	0.002158	8.17	2898.36	374.23	0.41
USACE	100498	200YR	12449.00	375.51	389.10		389.56	0.002136	8.00	2784.61	371.56	0.40
USACE	100498	500YR	15965.00	375.51	390.34		390.88	0.002225	8.70	3252.36	383.29	0.42
USACE	100498	SEPT2011	8277.00	375.51	387.45		387.81	0.001938	6.93	2183.24	358.27	0.37
USACE	100106	2YR	2118.00	375.18	382.99		383.16	0.001052	3.78	928.16	365.33	0.26
USACE	100106	5YR	3388.00	375.18	384.05		384.25	0.001168	4.39	1329.08	390.10	0.28
USACE	100106	10YR	4469.00	375.18	384.77		384.99	0.001248	4.81	1613.53	405.11	0.29
USACE	100106	25YR	6413.00	375.18	385.87		386.13	0.001335	5.39	2069.80	426.27	0.31
USACE	100106	50YR	8141.00	375.18	386.73		387.02	0.001363	5.76	2444.03	438.80	0.31
USACE	100106	100YR	10152.00	375.18	387.61		387.93	0.001394	6.15	2836.75	449.61	0.32
USACE	100106	100YRPLUS	13277.00	375.18	388.81		389.17	0.001439	6.68	3383.57	462.82	0.33
USACE	100106	200YR	12449.00	375.18	388.51		388.86	0.001432	6.55	3242.73	460.27	0.33
USACE	100106	500YR	15965.00	375.18	389.74		390.14	0.001471	7.08	3819.80	474.82	0.34
USACE	100106	SEPT2011	8277.00	375.18	386.90		387.18	0.001296	5.68	2517.83	440.82	0.31
USACE	99577	2YR	1889.00	374.77	382.49	378.89	382.63	0.000920	3.41	1153.33	560.51	0.24
USACE	99577	5YR	3187.00	374.77	383.47	380.48	383.64	0.001136	4.16	1705.90	573.74	0.27
USACE	99577	10YR	4247.00	374.77	384.15	382.05	384.34	0.001215	4.56	2098.39	579.60	0.28
USACE	99577	25YR	6126.00	374.77	385.21	382.75	385.43	0.001285	5.09	2723.59	594.85	0.30

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	99577	50YR	7807.00	374.77	386.07	383.20	386.30	0.001314	5.47	3239.00	614.48	0.30
USACE	99577	100YR	9736.00	374.77	386.95	383.67	387.20	0.001338	5.83	3789.40	640.21	0.31
USACE	99577	100YRPLUS	12733.00	374.77	388.14	384.25	388.42	0.001356	6.29	4571.35	669.48	0.32
USACE	99577	200YR	11936.00	374.77	387.84	384.12	388.11	0.001351	6.17	4368.19	660.52	0.32
USACE	99577	500YR	15319.00	374.77	389.07	384.72	389.37	0.001377	6.66	5210.46	708.42	0.33
USACE	99577	SEPT2011	8159.00	374.77	386.25	383.32	386.48	0.001312	5.52	3348.37	618.58	0.30
USACE	99253	2YR	1889.00	374.59	381.60		382.01	0.005286	6.18	712.37	522.24	0.53
USACE	99253	5YR	3187.00	374.59	382.74		383.03	0.003527	5.94	1364.91	613.85	0.45
USACE	99253	10YR	4247.00	374.59	383.51		383.76	0.002890	5.88	1844.56	645.97	0.42
USACE	99253	25YR	6126.00	374.59	384.66		384.89	0.002303	5.90	2626.93	701.13	0.39
USACE	99253	50YR	7807.00	374.59	385.57		385.78	0.001996	5.94	3274.99	729.21	0.37
USACE	99253	100YR	9736.00	374.59	386.48		386.69	0.001794	6.05	3953.06	755.44	0.35
USACE	99253	100YRPLUS	12733.00	374.59	387.71		387.92	0.001627	6.27	4903.33	791.17	0.35
USACE	99253	200YR	11936.00	374.59	387.40		387.61	0.001666	6.21	4656.19	782.45	0.35
USACE	99253	500YR	15319.00	374.59	388.66		388.88	0.001533	6.45	5668.66	819.99	0.34
USACE	99253	SEPT2011	8159.00	374.59	385.76		385.96	0.001932	5.94	3413.21	733.52	0.36
USACE	98977	2YR	1889.00	374.50	381.23		381.38	0.001065	3.60	912.65	456.50	0.26
USACE	98977	5YR	3187.00	374.50	382.40		382.54	0.000954	3.85	1470.84	495.03	0.26
USACE	98977	10YR	4247.00	374.50	383.18		383.32	0.000901	4.02	1866.80	523.80	0.25
USACE	98977	25YR	6126.00	374.50	384.37		384.51	0.000833	4.25	2511.11	564.00	0.25
USACE	98977	50YR	7807.00	374.50	385.29		385.44	0.000787	4.41	3041.48	584.71	0.25
USACE	98977	100YR	9736.00	374.50	386.21		386.38	0.000760	4.60	3588.74	602.81	0.25
USACE	98977	100YRPLUS	12733.00	374.50	387.45		387.63	0.000752	4.91	4352.71	638.98	0.25
USACE	98977	200YR	11936.00	374.50	387.13		387.31	0.000755	4.84	4152.35	630.14	0.25
USACE	98977	500YR	15319.00	374.50	388.40		388.60	0.000749	5.16	4977.90	674.38	0.25
USACE	98977	SEPT2011	8159.00	374.50	385.48		385.64	0.000773	4.42	3155.28	586.97	0.25
USACE	98724	2YR	1889.00	374.32	380.80		381.01	0.002017	4.62	748.10	470.30	0.35
USACE	98724	5YR	3187.00	374.32	382.15		382.28	0.001152	4.05	1416.72	511.76	0.28
USACE	98724	10YR	4247.00	374.32	382.97		383.09	0.000980	4.04	1841.45	530.50	0.26
USACE	98724	25YR	6126.00	374.32	384.18		384.30	0.000851	4.15	2506.87	570.27	0.25
USACE	98724	50YR	7807.00	374.32	385.11		385.24	0.000783	4.26	3055.63	599.24	0.24
USACE	98724	100YR	9736.00	374.32	386.05		386.19	0.000742	4.41	3626.32	623.68	0.24
USACE	98724	100YRPLUS	12733.00	374.32	387.29		387.44	0.000713	4.65	4414.65	650.06	0.24
USACE	98724	200YR	11936.00	374.32	386.97		387.12	0.000720	4.59	4209.63	642.87	0.24
USACE	98724	500YR	15319.00	374.32	388.24		388.41	0.000701	4.86	5046.32	674.88	0.24
USACE	98724	SEPT2011	8159.00	374.32	385.31		385.44	0.000765	4.27	3174.93	603.54	0.24
USACE	98485	2YR	1889.00	374.22	380.61		380.72	0.000693	2.82	965.17	487.15	0.21
USACE	98485	5YR	3187.00	374.22	381.99		382.09	0.000566	2.96	1689.97	561.95	0.20
USACE	98485	10YR	4247.00	374.22	382.82		382.91	0.000535	3.11	2164.89	587.61	0.20
USACE	98485	25YR	6126.00	374.22	384.04		384.14	0.000505	3.33	2899.20	614.70	0.20
USACE	98485	50YR	7807.00	374.22	384.98		385.09	0.000490	3.51	3491.09	636.40	0.20
USACE	98485	100YR	9736.00	374.22	385.92		386.04	0.000483	3.70	4096.15	660.30	0.20
USACE	98485	100YRPLUS	12733.00	374.22	387.16		387.30	0.000490	4.01	4976.62	738.51	0.20
USACE	98485	200YR	11936.00	374.22	386.84		386.98	0.000492	3.94	4743.45	726.54	0.20
USACE	98485	500YR	15319.00	374.22	388.12		388.27	0.000488	4.21	5701.33	775.01	0.21
USACE	98485	SEPT2011	8159.00	374.22	385.18		385.30	0.000483	3.53	3619.18	639.41	0.20
USACE	98368	2YR	1889.00	374.24	380.49	377.81	380.62	0.001026	3.17	806.20	385.08	0.25
USACE	98368	5YR	3187.00	374.24	381.87	378.98	382.00	0.000855	3.41	1327.46	449.34	0.24
USACE	98368	10YR	4247.00	374.24	382.70	379.64	382.83	0.000806	3.59	1789.53	470.81	0.24
USACE	98368	25YR	6126.00	374.24	383.92	380.64	384.06	0.000775	3.91	2440.05	576.86	0.24
USACE	98368	50YR	7807.00	374.24	384.86	381.12	385.02	0.000731	4.08	2995.89	595.05	0.24
USACE	98368	100YR	9736.00	374.24	385.80	381.58	385.97	0.000709	4.28	3560.01	624.92	0.24
USACE	98368	100YRPLUS	12733.00	374.24	387.04	382.20	387.22	0.000691	4.56	4368.75	672.04	0.24
USACE	98368	200YR	11936.00	374.24	386.72	382.05	386.90	0.000697	4.50	4156.48	663.43	0.24
USACE	98368	500YR	15319.00	374.24	387.99	382.62	388.19	0.000676	4.76	5021.87	695.06	0.24
USACE	98368	SEPT2011	8159.00	374.24	385.07	381.21	385.22	0.000717	4.10	3116.53	597.33	0.23
USACE	98286	2YR	1889.00	374.09	380.37	377.98	380.52	0.001154	3.71	780.27	330.27	0.27
USACE	98286	5YR	3187.00	374.09	381.78	379.46	381.92	0.000936	3.88	1300.39	393.82	0.26
USACE	98286	10YR	4247.00	374.09	382.61	380.06	382.76	0.000909	4.11	1631.26	410.92	0.26
USACE	98286	25YR	6126.00	374.09	383.82	380.72	383.99	0.000879	4.44	2148.72	444.13	0.26
USACE	98286	50YR	7807.00	374.09	384.76	381.17	384.95	0.000856	4.68	2580.50	485.62	0.26
USACE	98286	100YR	9736.00	374.09	385.69	381.63	385.89	0.000849	4.95	3039.71	526.12	0.26
USACE	98286	100YRPLUS	12733.00	374.09	386.92	382.31	387.15	0.000854	5.32	3696.58	606.68	0.27
USACE	98286	200YR	11936.00	374.09	386.60	382.10	386.83	0.000854	5.23	3522.48	568.52	0.27
USACE	98286	500YR	15319.00	374.09	387.86	382.76	388.12	0.000848	5.57	4231.13	652.36	0.27
USACE	98286	SEPT2011	8159.00	374.09	384.96	381.27	385.15	0.000843	4.71	2677.13	490.80	0.26
USACE	98254 Sun Hill Road		Bridge									
USACE	98225	2YR	1889.00	373.60	380.09	377.71	380.37	0.001914	4.69	634.49	334.53	0.35
USACE	98225	5YR	3187.00	373.60	381.38	379.82	381.64	0.001646	5.00	1102.11	382.03	0.34
USACE	98225	10YR	4247.00	373.60	382.21	380.40	382.47	0.001499	5.16	1423.43	390.56	0.33
USACE	98225	25YR	6126.00	373.60	383.46	381.15	383.73	0.001384	5.48	1928.64	417.33	0.32
USACE	98225	50YR	7807.00	373.60	384.41	381.62	384.69	0.001317	5.72	2330.96	430.89	0.32
USACE	98225	100YR	9736.00	373.60	385.34	382.06	385.64	0.001295	6.02	2737.18	469.79	0.32
USACE	98225	100YRPLUS	12733.00	373.60	386.55	382.69	386.89	0.001311	6.50	3286.73	544.72	0.33
USACE	98225	200YR	11936.00	373.60	386.24	382.51	386.57	0.001307	6.38	3144.93	535.53	0.33
USACE	98225	500YR	15319.00	373.60	387.46	383.21	387.84	0.001356	6.95	3721.43	614.18	0.34
USACE	98225	SEPT2011	8159.00	373.60	384.62	381.82	384.90	0.001291	5.74	2420.57	433.63	0.32

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	98106	2YR	1889.00	373.30	379.92	377.69	380.12	0.001620	4.34	820.88	423.43	0.32
USACE	98106	5YR	3187.00	373.30	381.25	379.68	381.42	0.001260	4.41	1441.55	513.28	0.29
USACE	98106	10YR	4247.00	373.30	382.11	380.02	382.26	0.001063	4.38	1890.85	529.91	0.28
USACE	98106	25YR	6126.00	373.30	383.38	380.64	383.53	0.000913	4.49	2581.67	556.31	0.26
USACE	98106	50YR	7807.00	373.30	384.34	381.04	384.50	0.000838	4.60	3120.55	561.96	0.26
USACE	98106	100YR	9736.00	373.30	385.28	381.04	385.45	0.000806	4.78	3647.36	563.39	0.25
USACE	98106	100YRPLUS	12733.00	373.30	386.50	382.09	386.69	0.000804	5.12	4333.79	565.19	0.26
USACE	98106	200YR	11936.00	373.30	386.19	381.96	386.37	0.000803	5.04	4159.44	564.78	0.26
USACE	98106	500YR	15319.00	373.30	387.42	382.46	387.63	0.000813	5.41	4855.17	566.42	0.26
USACE	98106	SEPT2011	8159.00	373.30	384.56	381.04	384.71	0.000816	4.60	3238.77	562.28	0.25
USACE	97841	2YR	1889.00	372.72	379.44		379.68	0.001683	4.42	815.22	368.81	0.33
USACE	97841	5YR	3187.00	372.72	380.76		381.03	0.001665	5.06	1313.07	392.20	0.34
USACE	97841	10YR	4247.00	372.72	381.60		381.89	0.001692	5.50	1648.87	406.06	0.35
USACE	97841	25YR	6126.00	372.72	382.82		383.18	0.001795	6.24	2163.19	450.84	0.37
USACE	97841	50YR	7807.00	372.72	383.78		384.16	0.001786	6.66	2617.01	489.63	0.37
USACE	97841	100YR	9736.00	372.72	384.70		385.11	0.001812	7.11	3075.66	507.55	0.38
USACE	97841	100YRPLUS	12733.00	372.72	385.87		386.34	0.001897	7.79	3684.53	528.43	0.39
USACE	97841	200YR	11936.00	372.72	385.57		386.03	0.001879	7.62	3527.25	522.99	0.39
USACE	97841	500YR	15319.00	372.72	386.76		387.28	0.001958	8.30	4162.62	543.62	0.41
USACE	97841	SEPT2011	8159.00	372.72	384.00		384.38	0.001757	6.70	2723.86	494.44	0.37
USACE	97601	2YR	1889.00	371.91	378.79		379.17	0.002666	5.15	520.61	237.46	0.41
USACE	97601	5YR	3187.00	371.91	379.90		380.46	0.003257	6.51	813.47	288.50	0.46
USACE	97601	10YR	4247.00	371.91	380.64		381.30	0.003482	7.26	1034.07	305.13	0.49
USACE	97601	25YR	6126.00	371.91	381.75		382.54	0.003720	8.29	1381.52	325.53	0.52
USACE	97601	50YR	7807.00	371.91	382.54		383.48	0.004050	9.22	1663.77	382.24	0.55
USACE	97601	100YR	9736.00	371.91	383.33		384.40	0.004305	10.07	1990.99	433.08	0.57
USACE	97601	100YRPLUS	12733.00	371.91	384.46		385.62	0.004305	10.84	2489.39	454.18	0.59
USACE	97601	200YR	11936.00	371.91	384.16		385.31	0.004320	10.66	2358.03	448.10	0.58
USACE	97601	500YR	15319.00	371.91	385.31		386.54	0.004314	11.42	2883.31	471.64	0.59
USACE	97601	SEPT2011	8159.00	371.91	382.70		383.69	0.004196	9.49	1723.52	406.75	0.56
USACE	97348	2YR	1889.00	371.39	378.59		378.75	0.000853	3.36	916.53	391.67	0.24
USACE	97348	5YR	3187.00	371.39	379.68		379.91	0.001122	4.29	1358.01	417.85	0.28
USACE	97348	10YR	4247.00	371.39	380.41		380.68	0.001262	4.86	1679.21	461.84	0.30
USACE	97348	25YR	6126.00	371.39	381.49		381.85	0.001475	5.71	2189.58	482.24	0.33
USACE	97348	50YR	7807.00	371.39	382.31		382.72	0.001593	6.29	2591.47	497.12	0.35
USACE	97348	100YR	9736.00	371.39	383.10		383.57	0.001734	6.90	2990.32	511.98	0.37
USACE	97348	100YRPLUS	12733.00	371.39	384.16		384.74	0.001967	7.83	3550.34	551.84	0.40
USACE	97348	200YR	11936.00	371.39	383.89		384.43	0.001901	7.58	3403.87	537.08	0.39
USACE	97348	500YR	15319.00	371.39	384.99		385.63	0.002059	8.39	4017.95	564.26	0.42
USACE	97348	SEPT2011	8159.00	371.39	382.49		382.90	0.001603	6.38	2679.20	500.68	0.35
USACE	97056	2YR	1889.00	370.73	378.30		378.46	0.001170	3.73	1098.78	544.13	0.27
USACE	97056	5YR	3187.00	370.73	379.36		379.55	0.001298	4.39	1683.75	553.26	0.29
USACE	97056	10YR	4247.00	370.73	380.09		380.29	0.001344	4.78	2086.08	557.12	0.30
USACE	97056	25YR	6126.00	370.73	381.16		381.40	0.001419	5.36	2697.60	590.44	0.32
USACE	97056	50YR	7807.00	370.73	381.96		382.23	0.001527	5.89	3177.53	605.33	0.34
USACE	97056	100YR	9736.00	370.73	382.74		383.05	0.001601	6.36	3652.96	609.53	0.35
USACE	97056	100YRPLUS	12733.00	370.73	383.80		384.15	0.001717	7.02	4298.63	617.45	0.37
USACE	97056	200YR	11936.00	370.73	383.53		383.86	0.001690	6.86	4132.29	614.94	0.36
USACE	97056	500YR	15319.00	370.73	384.62		385.02	0.001800	7.54	4813.85	646.31	0.38
USACE	97056	SEPT2011	8159.00	370.73	382.14		382.41	0.001517	5.95	3287.00	606.48	0.34
USACE	96746	2YR	1889.00	370.23	377.85		378.03	0.001648	4.21	1166.37	673.17	0.32
USACE	96746	5YR	3187.00	370.23	378.97		379.12	0.001423	4.44	1921.86	683.07	0.31
USACE	96746	10YR	4247.00	370.23	379.71		379.86	0.001337	4.62	2436.02	702.50	0.30
USACE	96746	25YR	6126.00	370.23	380.79		380.96	0.001304	5.01	3208.29	717.57	0.31
USACE	96746	50YR	7807.00	370.23	381.60		381.77	0.001302	5.32	3785.04	721.89	0.31
USACE	96746	100YR	9736.00	370.23	382.37		382.56	0.001337	5.69	4346.58	725.57	0.32
USACE	96746	100YRPLUS	12733.00	370.23	383.41		383.63	0.001402	6.23	5104.11	730.47	0.33
USACE	96746	200YR	11936.00	370.23	383.14		383.36	0.001388	6.10	4908.75	729.19	0.33
USACE	96746	500YR	15319.00	370.23	384.23		384.47	0.001459	6.67	5704.56	743.19	0.34
USACE	96746	SEPT2011	8159.00	370.23	381.78		381.96	0.001281	5.35	3920.20	722.84	0.31
USACE	96403	2YR	1889.00	369.42	377.45	374.58	377.58	0.001026	3.62	1346.13	647.26	0.26
USACE	96403	5YR	3187.00	369.42	378.58	376.66	378.71	0.001006	4.01	2102.17	680.11	0.26
USACE	96403	10YR	4247.00	369.42	379.34	377.17	379.46	0.000982	4.23	2620.00	687.17	0.26
USACE	96403	25YR	6126.00	369.42	380.42	377.72	380.56	0.000995	4.63	3370.30	695.61	0.27
USACE	96403	50YR	7807.00	369.42	381.21	378.16	381.37	0.001032	4.98	3923.18	711.31	0.28
USACE	96403	100YR	9736.00	369.42	381.97	378.55	382.14	0.001095	5.39	4455.48	721.53	0.29
USACE	96403	100YRPLUS	12733.00	369.42	382.98	379.06	383.18	0.001194	5.97	5172.94	745.46	0.31
USACE	96403	200YR	11936.00	369.42	382.72	378.93	382.91	0.001171	5.83	4986.71	735.47	0.30
USACE	96403	500YR	15319.00	369.42	383.77	379.45	384.00	0.001276	6.45	5752.69	786.12	0.32
USACE	96403	SEPT2011	8159.00	369.42	381.41	378.23	381.56	0.001018	5.01	4058.32	713.91	0.28
USACE	96112	2YR	1889.00	368.90	377.15	374.95	377.27	0.001071	3.39	1170.68	545.55	0.26
USACE	96112	5YR	3187.00	368.90	378.30	376.46	378.41	0.000984	3.70	1807.25	649.28	0.26
USACE	96112	10YR	4247.00	368.90	379.06	376.85	379.18	0.000929	3.87	2247.63	715.29	0.25
USACE	96112	25YR	6126.00	368.90	380.14	377.35	380.28	0.000924	4.23	2871.09	763.77	0.26
USACE	96112	50YR	7807.00	368.90	380.92	377.73	381.08	0.000958	4.57	3320.94	786.04	0.27
USACE	96112	100YR	9736.00	368.90	381.65	378.16	381.83	0.001023	4.97	3745.61	804.62	0.28
USACE	96112	100YRPLUS	12733.00	368.90	382.61	378.66	382.84	0.001125	5.55	4310.98	820.20	0.30

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	96112	200YR	11936.00	368.90	382.36	378.54	382.58	0.001103	5.41	4164.15	816.09	0.29
USACE	96112	500YR	15319.00	368.90	383.37	379.05	383.64	0.001194	5.98	4756.49	832.61	0.31
USACE	96112	SEPT2011	8159.00	368.90	381.11	377.79	381.27	0.000942	4.60	3434.80	791.74	0.27
USACE	95680	2YR	1909.00	368.40	376.73	373.29	376.85	0.000868	3.41	947.71	478.41	0.24
USACE	95680	5YR	3131.00	368.40	377.93	375.83	378.05	0.000729	3.51	1501.49	534.33	0.22
USACE	95680	10YR	4175.00	368.40	378.71	376.43	378.83	0.000727	3.74	1879.34	636.19	0.23
USACE	95680	25YR	6018.00	368.40	379.80	376.96	379.93	0.000715	4.02	2428.82	724.18	0.23
USACE	95680	50YR	7667.00	368.40	380.56	377.33	380.71	0.000741	4.31	2819.67	790.82	0.24
USACE	95680	100YR	9560.00	368.40	381.26	377.72	381.44	0.000797	4.67	3182.92	869.92	0.25
USACE	95680	100YRPLUS	12503.00	368.40	382.19	378.23	382.41	0.000882	5.19	3665.45	922.19	0.27
USACE	95680	200YR	11724.00	368.40	381.95	378.12	382.16	0.000865	5.07	3538.86	913.38	0.26
USACE	95680	500YR	15054.00	368.40	382.92	378.46	383.18	0.000940	5.58	4049.41	946.27	0.28
USACE	95680	SEPT2011	8138.00	368.40	380.75	377.41	380.91	0.000751	4.40	2919.07	800.66	0.24
USACE	95546	2YR	1909.00	368.00	376.68	372.76	376.74	0.000397	2.55	1248.07	418.80	0.17
USACE	95546	5YR	3131.00	368.00	377.88	374.15	377.95	0.000421	2.91	1735.43	442.79	0.18
USACE	95546	10YR	4175.00	368.00	378.65	375.25	378.73	0.000456	3.20	2051.81	465.50	0.19
USACE	95546	25YR	6018.00	368.00	379.72	376.07	379.84	0.000523	3.69	2498.95	588.37	0.20
USACE	95546	50YR	7667.00	368.00	380.47	376.47	380.61	0.000583	4.08	2942.21	679.12	0.22
USACE	95546	100YR	9560.00	368.00	381.15	376.87	381.33	0.000749	4.81	3279.68	765.95	0.25
USACE	95546	100YRPLUS	12503.00	368.00	382.04	377.42	382.28	0.000920	5.60	3787.94	858.48	0.28
USACE	95546	200YR	11724.00	368.00	381.81	377.28	382.04	0.000867	5.37	3651.15	825.84	0.27
USACE	95546	500YR	15054.00	368.00	382.76	377.85	383.04	0.001005	6.07	4234.57	922.93	0.29
USACE	95546	SEPT2011	8138.00	368.00	380.66	376.57	380.80	0.000607	4.21	3034.31	691.28	0.22
USACE	95505 Mill Road		Bridge									
USACE	95463	2YR	1909.00	367.64	376.43	372.45	376.60	0.000916	3.60	1048.98	548.48	0.25
USACE	95463	5YR	3131.00	367.64	377.37	373.91	377.59	0.001171	4.45	1568.46	604.72	0.29
USACE	95463	10YR	4175.00	367.64	377.98	374.83	378.24	0.001339	5.01	1912.56	620.32	0.31
USACE	95463	25YR	6018.00	367.64	378.91	376.77	379.20	0.001476	5.65	2536.66	645.08	0.33
USACE	95463	50YR	7667.00	367.64	379.66	377.33	379.98	0.001570	6.15	2985.15	702.04	0.35
USACE	95463	100YR	9560.00	367.64	380.42	377.83	380.78	0.001656	6.64	3447.69	744.24	0.36
USACE	95463	100YRPLUS	12503.00	367.64	381.50	378.42	381.91	0.001761	7.30	4111.34	779.87	0.38
USACE	95463	200YR	11724.00	367.64	381.22	378.27	381.62	0.001742	7.14	3938.18	776.76	0.37
USACE	95463	500YR	15054.00	367.64	382.34	378.91	382.79	0.001831	7.80	4647.70	822.92	0.39
USACE	95463	SEPT2011	8138.00	367.64	379.87	377.47	380.20	0.001584	6.26	3111.25	711.41	0.35
USACE	95362	2YR	1909.00	367.63	376.28	373.03	376.48	0.001283	4.07	959.73	520.28	0.29
USACE	95362	5YR	3131.00	367.63	377.23	374.76	377.46	0.001479	4.80	1460.51	597.15	0.32
USACE	95362	10YR	4175.00	367.63	377.84	376.11	378.09	0.001578	5.23	1812.59	619.54	0.33
USACE	95362	25YR	6018.00	367.63	378.77	376.89	379.04	0.001662	5.79	2356.60	707.71	0.35
USACE	95362	50YR	7667.00	367.63	379.52	377.38	379.80	0.001657	6.11	2808.69	748.94	0.35
USACE	95362	100YR	9560.00	367.63	380.29	377.85	380.59	0.001651	6.43	3276.96	795.25	0.35
USACE	95362	100YRPLUS	12503.00	367.63	381.38	378.44	381.69	0.001628	6.83	3944.88	831.18	0.36
USACE	95362	200YR	11724.00	367.63	381.10	378.28	381.41	0.001637	6.73	3772.59	821.06	0.36
USACE	95362	500YR	15054.00	367.63	382.23	378.87	382.57	0.001612	7.13	4472.21	856.81	0.36
USACE	95362	SEPT2011	8138.00	367.63	379.73	377.52	380.02	0.001645	6.18	2936.67	771.54	0.35
USACE	94906	2YR	1909.00	367.56	375.33	373.61	375.63	0.002877	5.40	811.70	455.61	0.42
USACE	94906	5YR	3131.00	367.56	376.24	375.23	376.54	0.002844	5.97	1276.72	556.77	0.43
USACE	94906	10YR	4175.00	367.56	376.89	375.78	377.17	0.002629	6.15	1646.23	577.48	0.42
USACE	94906	25YR	6018.00	367.56	377.88	376.36	378.15	0.002339	6.35	2221.78	588.43	0.40
USACE	94906	50YR	7667.00	367.56	378.66	376.73	378.94	0.002203	6.57	2691.82	667.99	0.40
USACE	94906	100YR	9560.00	367.56	379.47	377.15	379.74	0.002062	6.75	3185.81	761.41	0.39
USACE	94906	100YRPLUS	12503.00	367.56	380.60	377.65	380.88	0.001917	7.02	3885.27	801.29	0.38
USACE	94906	200YR	11724.00	367.56	380.31	377.51	380.59	0.001953	6.95	3704.15	794.93	0.38
USACE	94906	500YR	15054.00	367.56	381.47	378.03	381.77	0.001845	7.26	4435.26	820.50	0.38
USACE	94906	SEPT2011	8138.00	367.56	378.90	376.87	379.16	0.002135	6.58	2832.33	702.61	0.39
USACE	94555	2YR	1909.00	367.47	374.96	371.52	375.08	0.000852	3.20	1100.86	521.74	0.23
USACE	94555	5YR	3131.00	367.47	375.74	372.60	375.91	0.001124	4.00	1527.53	576.68	0.28
USACE	94555	10YR	4175.00	367.47	376.37	373.44	376.55	0.001183	4.36	1896.24	664.18	0.29
USACE	94555	25YR	6018.00	367.47	377.36	375.06	377.56	0.001196	4.78	2486.14	702.02	0.29
USACE	94555	50YR	7667.00	367.47	378.15	375.44	378.37	0.001179	5.05	2968.16	736.25	0.30
USACE	94555	100YR	9560.00	367.47	378.97	376.03	379.20	0.001174	5.34	3464.00	762.01	0.30
USACE	94555	100YRPLUS	12503.00	367.47	380.10	376.57	380.36	0.001163	5.72	4164.90	835.04	0.31
USACE	94555	200YR	11724.00	367.47	379.81	376.43	380.06	0.001169	5.63	3983.38	807.75	0.30
USACE	94555	500YR	15054.00	367.47	380.98	376.98	381.26	0.001163	6.02	4707.78	873.16	0.31
USACE	94555	SEPT2011	8138.00	367.47	378.39	375.68	378.61	0.001157	5.09	3114.77	741.96	0.30
USACE	94089	2YR	1896.00	367.41	374.51	373.33	374.62	0.001118	3.53	1228.54	641.17	0.26
USACE	94089	5YR	3103.00	367.41	375.20	373.97	375.33	0.001333	4.16	1670.52	649.21	0.29
USACE	94089	10YR	4140.00	367.41	375.83	374.30	375.96	0.001275	4.34	2087.47	662.94	0.29
USACE	94089	25YR	5968.00	367.41	376.86	374.73	376.99	0.001155	4.53	2770.80	699.32	0.28
USACE	94089	50YR	7604.00	367.41	377.68	375.04	377.82	0.001083	4.69	3333.83	758.30	0.28
USACE	94089	100YR	9486.00	367.41	378.51	375.36	378.66	0.001038	4.88	3910.70	821.26	0.28
USACE	94089	100YRPLUS	12406.00	367.41	379.67	375.79	379.83	0.000989	5.14	4726.17	912.28	0.28
USACE	94089	200YR	11642.00	367.41	379.37	375.69	379.53	0.001006	5.08	4513.05	891.70	0.28
USACE	94089	500YR	14975.00	367.41	380.56	376.14	380.73	0.000974	5.37	5355.65	982.01	0.28
USACE	94089	SEPT2011	8130.00	367.41	377.93	375.14	378.07	0.001063	4.73	3507.05	776.80	0.28
USACE	93814	2YR	1896.00	367.37	374.30	373.26	374.35	0.000731	2.81	1537.50	903.23	0.21
USACE	93814	5YR	3103.00	367.37	374.97	373.70	375.03	0.000762	3.10	2147.16	918.62	0.22

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	93814	10YR	4140.00	367.37	375.64	373.92	375.69	0.000641	3.05	2769.01	937.26	0.21
USACE	93814	25YR	5968.00	367.37	376.70	374.24	376.75	0.000520	3.03	3789.34	973.56	0.19
USACE	93814	50YR	7604.00	367.37	377.55	374.46	377.60	0.000462	3.06	4619.93	1009.78	0.18
USACE	93814	100YR	9486.00	367.37	378.40	374.70	378.45	0.000426	3.13	5475.10	1114.49	0.18
USACE	93814	100YRPLUS	12406.00	367.37	379.57	374.99	379.64	0.000387	3.22	6688.20	1205.85	0.17
USACE	93814	200YR	11642.00	367.37	379.27	374.93	379.33	0.000398	3.20	6371.12	1182.55	0.18
USACE	93814	500YR	14975.00	367.37	380.47	375.26	380.54	0.000371	3.33	7620.28	1227.50	0.17
USACE	93814	SEPT2011	8130.00	367.37	377.80	374.54	377.86	0.000447	3.07	4877.38	1018.28	0.18
USACE	93633	2YR	1896.00	367.32	374.19	371.31	374.25	0.000549	2.56	1460.49	783.60	0.19
USACE	93633	5YR	3103.00	367.32	374.82	373.24	374.90	0.000726	3.16	1907.82	806.83	0.22
USACE	93633	10YR	4140.00	367.32	375.53	373.55	375.59	0.000573	3.01	2678.47	844.13	0.20
USACE	93633	25YR	5968.00	367.32	376.60	373.99	376.67	0.000505	3.11	3611.98	882.20	0.19
USACE	93633	50YR	7604.00	367.32	377.46	374.29	377.52	0.000472	3.21	4383.25	939.79	0.19
USACE	93633	100YR	9486.00	367.32	378.31	374.58	378.38	0.000450	3.33	5186.49	993.47	0.19
USACE	93633	100YRPLUS	12406.00	367.32	379.49	374.89	379.57	0.000422	3.48	6335.65	1116.00	0.19
USACE	93633	200YR	11642.00	367.32	379.18	374.89	379.26	0.000430	3.45	6033.27	1101.57	0.19
USACE	93633	500YR	14975.00	367.32	380.39	375.15	380.47	0.000417	3.64	7235.07	1162.63	0.19
USACE	93633	SEPT2011	8130.00	367.32	377.71	374.38	377.78	0.000465	3.25	4623.69	956.48	0.19
USACE	93607 Private Drive		Bridge									
USACE	93584	2YR	1896.00	367.04	373.54	372.55	373.64	0.001097	3.45	1157.78	708.07	0.26
USACE	93584	5YR	3103.00	367.04	374.62	373.09	374.70	0.000807	3.35	1887.60	772.98	0.23
USACE	93584	10YR	4140.00	367.04	375.40	373.37	375.47	0.000622	3.17	2636.64	819.13	0.21
USACE	93584	25YR	5968.00	367.04	376.55	373.76	376.61	0.000523	3.21	3604.58	875.57	0.20
USACE	93584	50YR	7604.00	367.04	377.41	374.05	377.48	0.000484	3.30	4364.17	921.09	0.19
USACE	93584	100YR	9486.00	367.04	378.27	374.35	378.34	0.000466	3.44	5147.69	1048.83	0.19
USACE	93584	100YRPLUS	12406.00	367.04	379.46	374.69	379.53	0.000442	3.61	6275.66	1107.79	0.19
USACE	93584	200YR	11642.00	367.04	379.15	374.64	379.22	0.000449	3.57	5977.99	1093.83	0.19
USACE	93584	500YR	14975.00	367.04	380.36	375.05	380.44	0.000437	3.77	7162.88	1161.63	0.19
USACE	93584	SEPT2011	8130.00	367.04	377.67	374.13	377.74	0.000476	3.33	4599.07	953.15	0.19
USACE	93477	2YR	1896.00	366.78	373.45	370.85	373.53	0.000800	3.02	1264.65	701.03	0.23
USACE	93477	5YR	3103.00	366.78	374.55	372.78	374.62	0.000612	2.98	2047.96	744.05	0.20
USACE	93477	10YR	4140.00	366.78	375.34	373.09	375.40	0.000539	3.01	2634.03	775.78	0.19
USACE	93477	25YR	5968.00	366.78	376.49	373.52	376.56	0.000484	3.14	3527.71	943.29	0.19
USACE	93477	50YR	7604.00	366.78	377.35	373.83	377.42	0.000460	3.26	4224.75	1009.12	0.19
USACE	93477	100YR	9486.00	366.78	378.21	374.12	378.29	0.000457	3.45	4935.05	1073.75	0.19
USACE	93477	100YRPLUS	12406.00	366.78	379.40	374.43	379.48	0.000438	3.63	5950.21	1110.74	0.19
USACE	93477	200YR	11642.00	366.78	379.09	374.42	379.17	0.000444	3.59	5684.60	1101.34	0.19
USACE	93477	500YR	14975.00	366.78	380.30	374.85	380.39	0.000442	3.83	6730.52	1159.13	0.19
USACE	93477	SEPT2011	8130.00	366.78	377.61	373.91	377.69	0.000453	3.30	4439.20	1024.24	0.19
USACE	93087	2YR	1896.00	366.20	373.14	371.77	373.21	0.000822	3.00	1243.36	891.97	0.23
USACE	93087	5YR	3103.00	366.20	374.30	372.26	374.37	0.000669	3.08	1869.79	913.89	0.21
USACE	93087	10YR	4140.00	366.20	375.11	372.55	375.18	0.000628	3.21	2308.30	928.94	0.21
USACE	93087	25YR	5968.00	366.20	376.26	372.97	376.34	0.000611	3.49	2945.94	949.41	0.21
USACE	93087	50YR	7604.00	366.20	377.12	373.29	377.21	0.000622	3.75	3421.92	993.00	0.22
USACE	93087	100YR	9486.00	366.20	377.96	373.60	378.07	0.000650	4.06	3897.04	1023.58	0.22
USACE	93087	100YRPLUS	12406.00	366.20	379.13	374.05	379.27	0.000703	4.54	4579.04	1072.99	0.24
USACE	93087	200YR	11642.00	366.20	378.82	373.93	378.95	0.000693	4.43	4396.80	1058.48	0.23
USACE	93087	500YR	14975.00	366.20	380.00	374.40	380.16	0.000758	4.95	5116.84	1128.05	0.25
USACE	93087	SEPT2011	8130.00	366.20	377.38	373.38	377.48	0.000625	3.83	3567.65	1004.55	0.22
USACE	92578	2YR	1896.00	365.64	372.68	370.15	372.79	0.000842	3.30	1082.54	746.22	0.23
USACE	92578	5YR	3103.00	365.64	373.91	371.71	374.01	0.000753	3.52	1687.50	827.12	0.23
USACE	92578	10YR	4140.00	365.64	374.73	372.13	374.84	0.000707	3.66	2128.58	856.25	0.22
USACE	92578	25YR	5968.00	365.64	375.90	372.65	376.01	0.000698	3.97	2772.74	950.46	0.23
USACE	92578	50YR	7604.00	365.64	376.75	373.07	376.87	0.000718	4.27	3264.29	1034.48	0.23
USACE	92578	100YR	9486.00	365.64	377.57	373.41	377.71	0.000754	4.60	3767.05	1103.46	0.24
USACE	92578	100YRPLUS	12406.00	365.64	378.72	374.10	378.89	0.000784	5.01	4512.24	1174.87	0.25
USACE	92578	200YR	11642.00	365.64	378.42	373.98	378.58	0.000781	4.92	4311.14	1156.72	0.25
USACE	92578	500YR	14975.00	365.64	379.58	374.52	379.76	0.000811	5.33	5101.55	1214.65	0.26
USACE	92578	SEPT2011	8130.00	365.64	377.00	373.15	377.13	0.000725	4.36	3418.11	1054.32	0.24
USACE	92060	2YR	1919.00	365.00	372.14	369.25	372.29	0.001063	3.52	972.50	519.28	0.26
USACE	92060	5YR	3121.00	365.00	373.32	370.26	373.52	0.001168	4.19	1416.73	547.67	0.28
USACE	92060	10YR	4164.00	365.00	374.11	371.42	374.34	0.001262	4.69	1722.46	639.43	0.30
USACE	92060	25YR	6027.00	365.00	375.17	372.21	375.48	0.001478	5.54	2141.84	758.22	0.33
USACE	92060	50YR	7682.00	365.00	375.92	372.77	376.30	0.001696	6.27	2441.36	829.17	0.36
USACE	92060	100YR	9586.00	365.00	376.62	373.36	377.09	0.001934	7.03	2733.45	893.88	0.39
USACE	92060	100YRPLUS	12537.00	365.00	377.56	374.13	378.18	0.002348	8.22	3147.40	1013.67	0.44
USACE	92060	200YR	11768.00	365.00	377.33	373.94	377.90	0.002199	7.84	3040.75	992.76	0.42
USACE	92060	500YR	15154.00	365.00	378.30	374.73	379.02	0.002559	8.96	3509.16	1053.56	0.46
USACE	92060	SEPT2011	8227.00	365.00	376.14	372.95	376.55	0.001756	6.48	2534.78	852.66	0.37
USACE	91603	2YR	1919.00	364.19	371.45	369.15	371.68	0.001743	4.29	884.04	461.51	0.33
USACE	91603	5YR	3121.00	364.19	372.71	370.89	372.92	0.001481	4.56	1495.00	506.83	0.32
USACE	91603	10YR	4164.00	364.19	373.51	371.45	373.74	0.001437	4.86	1908.11	522.01	0.32
USACE	91603	25YR	6027.00	364.19	374.55	372.15	374.80	0.001501	5.43	2598.59	870.73	0.33
USACE	91603	50YR	7682.00	364.19	375.31	372.66	375.55	0.001460	5.67	3310.01	995.71	0.33
USACE	91603	100YR	9586.00	364.19	376.04	373.14	376.29	0.001403	5.85	4061.08	1231.60	0.33
USACE	91603	100YRPLUS	12537.00	364.19	377.06	373.82	377.29	0.001305	6.03	5230.11	1580.88	0.32
USACE	91603	200YR	11768.00	364.19	376.79	373.63	377.03	0.001357	6.05	4909.03	1565.42	0.33

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	91603	500YR	15154.00	364.19	377.89	374.43	378.11	0.001181	6.03	6240.05	1628.17	0.31
USACE	91603	SEPT2011	8227.00	364.19	375.55	372.81	375.79	0.001420	5.69	3554.08	1050.09	0.33
USACE	91129	2YR	1919.00	363.41	370.72	368.03	370.93	0.001435	4.09	824.78	410.01	0.30
USACE	91129	5YR	3121.00	363.41	372.12	369.81	372.30	0.001148	4.24	1530.31	594.80	0.28
USACE	91129	10YR	4164.00	363.41	373.01	370.54	373.16	0.000958	4.20	2139.10	751.76	0.26
USACE	91129	25YR	6027.00	363.41	374.07	371.15	374.22	0.000927	4.48	3002.54	902.20	0.26
USACE	91129	50YR	7682.00	363.41	374.83	372.05	374.99	0.000917	4.71	3717.12	963.62	0.27
USACE	91129	100YR	9586.00	363.41	375.56	372.52	375.73	0.000930	4.98	4435.83	997.94	0.27
USACE	91129	100YRPLUS	12537.00	363.41	376.59	373.08	376.76	0.000930	5.30	5484.53	1044.79	0.28
USACE	91129	200YR	11768.00	363.41	376.31	372.94	376.48	0.000939	5.24	5200.04	1032.17	0.28
USACE	91129	500YR	15154.00	363.41	377.43	373.49	377.61	0.000910	5.49	6381.74	1072.87	0.28
USACE	91129	SEPT2011	8227.00	363.41	375.08	372.21	375.24	0.000905	4.76	3959.41	978.24	0.27
USACE	90827	2YR	1919.00	362.91	370.02	367.65	370.35	0.002604	5.12	648.67	252.00	0.40
USACE	90827	5YR	3121.00	362.91	371.47	369.06	371.81	0.002254	5.62	1063.29	336.61	0.39
USACE	90827	10YR	4164.00	362.91	372.37	369.13	372.73	0.002147	5.97	1406.20	687.33	0.38
USACE	90827	25YR	6027.00	362.91	373.52	371.11	373.82	0.001816	6.04	2411.50	946.00	0.36
USACE	90827	50YR	7682.00	362.91	374.36	371.87	374.62	0.001564	5.96	3271.12	1130.44	0.34
USACE	90827	100YR	9586.00	362.91	375.16	372.88	375.38	0.001346	5.84	4174.53	1175.89	0.32
USACE	90827	100YRPLUS	12537.00	362.91	376.26	373.62	376.45	0.001131	5.73	5446.73	1229.97	0.30
USACE	90827	200YR	11768.00	362.91	375.96	373.41	376.16	0.001194	5.78	5099.56	1211.83	0.31
USACE	90827	500YR	15154.00	362.91	377.14	373.97	377.32	0.001005	5.68	6529.89	1281.41	0.29
USACE	90827	SEPT2011	8227.00	362.91	374.65	372.07	374.89	0.001445	5.85	3591.37	1156.54	0.33
USACE	90515	2YR	1919.00	362.39	369.86	366.13	369.94	0.000556	2.82	1340.02	848.90	0.19
USACE	90515	5YR	3121.00	362.39	371.34	367.99	371.44	0.000520	3.12	2003.44	1043.77	0.19
USACE	90515	10YR	4164.00	362.39	372.24	368.65	372.35	0.000550	3.45	2432.99	1409.56	0.20
USACE	90515	25YR	6027.00	362.39	373.35	369.34	373.47	0.000580	3.83	3493.20	1619.81	0.21
USACE	90515	50YR	7682.00	362.39	374.17	369.84	374.29	0.000589	4.07	4330.03	1846.77	0.22
USACE	90515	100YR	9586.00	362.39	374.97	370.33	375.09	0.000582	4.24	5213.10	1964.89	0.22
USACE	90515	100YRPLUS	12537.00	362.39	376.07	371.00	376.19	0.000554	4.39	6465.17	2053.25	0.22
USACE	90515	200YR	11768.00	362.39	375.77	370.84	375.89	0.000568	4.38	6122.76	2020.23	0.22
USACE	90515	500YR	15154.00	362.39	376.96	371.54	377.08	0.000528	4.48	7495.33	2102.89	0.21
USACE	90515	SEPT2011	8227.00	362.39	374.46	369.98	374.58	0.000569	4.07	4647.25	1876.02	0.22
USACE	90349	2YR	1919.00	362.21	369.79	366.26	369.85	0.000446	2.44	1342.37	731.47	0.17
USACE	90349	5YR	3121.00	362.21	371.27	367.75	371.35	0.000431	2.76	1976.36	842.05	0.18
USACE	90349	10YR	4164.00	362.21	372.17	368.26	372.25	0.000456	3.06	2385.15	1077.94	0.18
USACE	90349	25YR	6027.00	362.21	373.27	368.86	373.37	0.000488	3.43	3394.49	1240.05	0.19
USACE	90349	50YR	7682.00	362.21	374.09	369.32	374.19	0.000508	3.70	4198.03	1482.85	0.20
USACE	90349	100YR	9586.00	362.21	374.88	369.77	374.99	0.000508	3.88	5051.02	1529.00	0.20
USACE	90349	100YRPLUS	12537.00	362.21	375.98	370.47	376.10	0.000496	4.08	6265.47	1618.84	0.20
USACE	90349	200YR	11768.00	362.21	375.68	370.05	375.80	0.000506	4.05	5932.73	1605.49	0.21
USACE	90349	500YR	15154.00	362.21	376.88	370.99	377.00	0.000481	4.21	7263.02	1683.86	0.20
USACE	90349	SEPT2011	8227.00	362.21	374.38	369.45	374.48	0.000493	3.71	4510.29	1496.37	0.20
USACE	90233	2YR	1919.00	361.88	369.65	365.64	369.77	0.000633	3.17	999.96	478.58	0.21
USACE	90233	5YR	3121.00	361.88	371.12	366.94	371.26	0.000674	3.71	1444.03	537.25	0.22
USACE	90233	10YR	4164.00	361.88	371.98	367.82	372.16	0.000751	4.18	1728.91	829.51	0.24
USACE	90233	25YR	6027.00	361.88	373.06	369.11	373.26	0.000853	4.79	2628.71	1043.25	0.26
USACE	90233	50YR	7682.00	361.88	373.88	369.71	374.08	0.000859	5.05	3377.44	1318.51	0.27
USACE	90233	100YR	9586.00	361.88	374.71	370.50	374.90	0.000778	5.04	4241.50	1389.16	0.26
USACE	90233	100YRPLUS	12537.00	361.88	375.85	371.27	376.02	0.000685	5.02	5451.72	1425.61	0.24
USACE	90233	200YR	11768.00	361.88	375.54	371.10	375.71	0.000716	5.06	5121.00	1422.31	0.25
USACE	90233	500YR	15154.00	361.88	376.77	372.58	376.92	0.000628	5.03	6431.21	1462.06	0.24
USACE	90233	SEPT2011	8227.00	361.88	374.19	369.91	374.38	0.000803	4.98	3700.00	1340.19	0.26
USACE	90194 Auction Road		Bridge									
USACE	90159	2YR	1919.00	361.54	369.56	365.81	369.65	0.000505	2.87	976.00	346.99	0.19
USACE	90159	5YR	3121.00	361.54	370.95	367.00	371.06	0.000534	3.32	1398.59	535.93	0.20
USACE	90159	10YR	4164.00	361.54	371.88	367.88	372.02	0.000576	3.69	1737.49	679.40	0.21
USACE	90159	25YR	6027.00	361.54	373.00	368.74	373.13	0.000570	3.95	2580.09	808.04	0.21
USACE	90159	50YR	7682.00	361.54	373.85	369.36	373.99	0.000580	4.20	3172.95	959.40	0.22
USACE	90159	100YR	9586.00	361.54	374.68	369.91	374.83	0.000572	4.37	3848.21	1091.51	0.22
USACE	90159	100YRPLUS	12537.00	361.54	375.79	370.83	375.95	0.000562	4.59	4802.01	1120.12	0.22
USACE	90159	200YR	11768.00	361.54	375.49	370.65	375.65	0.000572	4.56	4541.58	1113.48	0.22
USACE	90159	500YR	15154.00	361.54	376.69	371.27	376.86	0.000552	4.75	5575.22	1139.99	0.22
USACE	90159	SEPT2011	8227.00	361.54	374.16	369.61	374.30	0.000557	4.19	3419.16	1019.59	0.22
USACE	90026	2YR	1919.00	361.34	369.22	365.79	369.49	0.001303	4.39	561.10	174.29	0.30
USACE	90026	5YR	3121.00	361.34	370.51	367.23	370.87	0.001557	5.39	811.59	342.12	0.34
USACE	90026	10YR	4164.00	361.34	371.39	368.38	371.81	0.001646	5.95	1028.62	420.38	0.35
USACE	90026	25YR	6027.00	361.34	372.61	369.81	372.96	0.001420	6.02	1794.57	568.14	0.33
USACE	90026	50YR	7682.00	361.34	373.51	370.40	373.84	0.001297	6.09	2355.41	728.79	0.32
USACE	90026	100YR	9586.00	361.34	374.38	371.59	374.69	0.001178	6.11	2921.80	745.97	0.31
USACE	90026	100YRPLUS	12537.00	361.34	375.52	372.59	375.82	0.001095	6.26	3677.08	805.41	0.31
USACE	90026	200YR	11768.00	361.34	375.21	372.42	375.51	0.001129	6.25	3467.32	774.74	0.31
USACE	90026	500YR	15154.00	361.34	376.43	373.26	376.73	0.001041	6.38	4295.99	827.18	0.30
USACE	90026	SEPT2011	8227.00	361.34	373.86	371.15	374.16	0.001188	5.95	2582.06	735.65	0.31
USACE	89777	2YR	1919.00	361.10	368.97	365.24	369.18	0.001095	3.94	632.56	218.22	0.27
USACE	89777	5YR	3121.00	361.10	370.24	366.54	370.51	0.001210	4.66	919.46	356.25	0.29
USACE	89777	10YR	4164.00	361.10	371.06	368.26	371.42	0.001452	5.46	1124.08	469.62	0.33

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	89777	25YR	6027.00	361.10	372.35	369.36	372.63	0.001153	5.33	1969.62	565.80	0.30
USACE	89777	50YR	7682.00	361.10	373.27	370.00	373.54	0.001078	5.47	2503.19	690.94	0.29
USACE	89777	100YR	9586.00	361.10	374.15	370.62	374.41	0.001029	5.62	3056.72	753.08	0.29
USACE	89777	100YRPLUS	12537.00	361.10	375.29	370.91	375.56	0.000997	5.89	3833.39	805.04	0.29
USACE	89777	200YR	11768.00	361.10	374.97	370.91	375.25	0.001020	5.86	3611.96	786.59	0.29
USACE	89777	500YR	15154.00	361.10	376.20	372.38	376.49	0.000972	6.09	4493.16	842.31	0.29
USACE	89777	SEPT2011	8227.00	361.10	373.63	370.20	373.89	0.001003	5.39	2726.96	720.18	0.28
USACE	89482	2YR	1919.00	360.82	368.68	365.30	368.85	0.001016	3.75	795.02	368.77	0.26
USACE	89482	5YR	3121.00	360.82	369.99	366.69	370.16	0.000934	4.07	1358.20	529.34	0.26
USACE	89482	10YR	4164.00	360.82	370.89	368.42	371.04	0.000813	4.08	1906.54	658.79	0.24
USACE	89482	25YR	6027.00	360.82	372.22	368.96	372.34	0.000618	3.91	2826.74	731.47	0.22
USACE	89482	50YR	7682.00	360.82	373.15	369.64	373.26	0.000553	3.93	3516.79	853.33	0.21
USACE	89482	100YR	9586.00	360.82	374.03	369.70	374.15	0.000528	4.04	4200.85	896.64	0.21
USACE	89482	100YRPLUS	12537.00	360.82	375.18	371.02	375.31	0.000524	4.28	5140.26	967.01	0.21
USACE	89482	200YR	11768.00	360.82	374.86	370.90	374.99	0.000533	4.25	4871.52	942.97	0.21
USACE	89482	500YR	15154.00	360.82	376.10	371.41	376.24	0.000517	4.45	5944.29	1076.94	0.21
USACE	89482	SEPT2011	8227.00	360.82	373.52	369.73	373.63	0.000510	3.86	3803.14	870.43	0.20
USACE	89183	2YR	1919.00	360.58	368.49	364.26	368.61	0.000596	3.00	947.13	488.41	0.20
USACE	89183	5YR	3121.00	360.58	369.80	365.43	369.92	0.000578	3.32	1475.73	590.73	0.20
USACE	89183	10YR	4164.00	360.58	370.70	366.31	370.82	0.000565	3.52	1903.14	708.80	0.21
USACE	89183	25YR	6027.00	360.58	372.02	368.35	372.16	0.000545	3.78	2617.42	897.91	0.21
USACE	89183	50YR	7682.00	360.58	372.95	368.88	373.09	0.000549	4.02	3173.21	988.13	0.21
USACE	89183	100YR	9586.00	360.58	373.82	369.39	373.98	0.000565	4.28	3731.53	1035.67	0.22
USACE	89183	100YRPLUS	12537.00	360.58	374.95	370.08	375.13	0.000597	4.67	4493.66	1100.47	0.23
USACE	89183	200YR	11768.00	360.58	374.63	369.88	374.81	0.000599	4.61	4272.77	1080.16	0.23
USACE	89183	500YR	15154.00	360.58	375.86	370.60	376.06	0.000611	4.94	5143.18	1145.45	0.23
USACE	89183	SEPT2011	8227.00	360.58	373.33	369.03	373.47	0.000522	4.01	3415.21	1008.73	0.21
USACE	88806	2YR	1919.00	360.31	367.97	365.67	368.24	0.001699	4.68	611.70	519.89	0.33
USACE	88806	5YR	3121.00	360.31	369.20	366.88	369.54	0.001866	5.54	891.89	564.28	0.36
USACE	88806	10YR	4164.00	360.31	370.04	367.76	370.43	0.001977	6.12	1101.41	588.36	0.37
USACE	88806	25YR	6027.00	360.31	371.29	368.68	371.76	0.002127	6.97	1458.85	656.65	0.40
USACE	88806	50YR	7682.00	360.31	372.15	369.41	372.68	0.002229	7.56	1797.06	715.82	0.41
USACE	88806	100YR	9586.00	360.31	372.96	370.02	373.55	0.002385	8.22	2134.45	866.70	0.43
USACE	88806	100YRPLUS	12537.00	360.31	373.93	370.92	374.66	0.002757	9.34	2578.99	1256.21	0.47
USACE	88806	200YR	11768.00	360.31	373.64	370.68	374.34	0.002699	9.09	2438.94	1043.30	0.47
USACE	88806	500YR	15154.00	360.31	374.81	371.87	375.58	0.002787	9.84	3041.75	1757.39	0.48
USACE	88806	SEPT2011	8227.00	360.31	372.57	369.61	373.08	0.002118	7.56	1967.43	778.76	0.41
USACE	88468	2YR	1919.00	360.02	367.26	365.29	367.59	0.002135	5.21	585.04	652.34	0.37
USACE	88468	5YR	3121.00	360.02	368.29	366.52	368.78	0.002760	6.58	802.18	715.06	0.44
USACE	88468	10YR	4164.00	360.02	369.02	367.28	369.60	0.003065	7.40	980.69	757.55	0.47
USACE	88468	25YR	6027.00	360.02	370.15	368.40	370.86	0.003352	8.47	1294.73	844.36	0.50
USACE	88468	50YR	7682.00	360.02	370.84	369.03	371.69	0.003846	9.54	1594.13	957.63	0.54
USACE	88468	100YR	9586.00	360.02	371.77	369.78	372.57	0.003542	9.73	2132.89	1264.69	0.53
USACE	88468	100YRPLUS	12537.00	360.02	373.14	370.82	373.74	0.002560	8.98	2946.01	1392.52	0.46
USACE	88468	200YR	11768.00	360.02	372.76	370.56	373.41	0.002813	9.21	2721.40	1310.51	0.48
USACE	88468	500YR	15154.00	360.02	374.16	372.15	374.69	0.002186	8.76	3546.91	1612.06	0.43
USACE	88468	SEPT2011	8227.00	360.02	371.13	369.36	372.08	0.004133	10.08	1755.54	1179.98	0.56
USACE	88149	2YR	1919.00	359.80	366.91	363.72	367.08	0.001068	3.74	848.21	502.33	0.27
USACE	88149	5YR	3121.00	359.80	367.90	365.14	368.13	0.001265	4.50	1254.69	598.15	0.30
USACE	88149	10YR	4164.00	359.80	368.65	366.37	368.90	0.001304	4.89	1589.27	648.73	0.31
USACE	88149	25YR	6027.00	359.80	369.84	367.11	370.11	0.001295	5.35	2284.10	811.20	0.31
USACE	88149	50YR	7682.00	359.80	370.65	367.90	370.90	0.001203	5.46	2918.42	898.35	0.31
USACE	88149	100YR	9586.00	359.80	371.64	368.37	371.86	0.001011	5.33	3705.50	1010.35	0.29
USACE	88149	100YRPLUS	12537.00	359.80	372.99	369.10	373.19	0.000843	5.27	4782.98	1106.01	0.27
USACE	88149	200YR	11768.00	359.80	372.61	368.91	372.81	0.000898	5.32	4478.93	1083.05	0.27
USACE	88149	500YR	15154.00	359.80	374.01	370.04	374.20	0.000775	5.33	5593.36	1216.94	0.26
USACE	88149	SEPT2011	8227.00	359.80	371.05	368.03	371.27	0.001066	5.28	3234.82	932.56	0.29
USACE	87905	2YR	1919.00	359.59	366.50	364.55	366.74	0.001825	4.80	830.21	529.74	0.35
USACE	87905	5YR	3121.00	359.59	367.50	366.17	367.75	0.001849	5.36	1224.51	562.86	0.36
USACE	87905	10YR	4164.00	359.59	368.26	366.64	368.52	0.001791	5.65	1530.37	590.39	0.36
USACE	87905	25YR	6027.00	359.59	369.45	367.25	369.73	0.001769	6.17	2132.72	646.22	0.36
USACE	87905	50YR	7682.00	359.59	370.27	367.70	370.55	0.001656	6.33	2671.44	666.67	0.36
USACE	87905	100YR	9586.00	359.59	371.31	368.14	371.56	0.001381	6.18	3377.05	680.77	0.33
USACE	87905	100YRPLUS	12537.00	359.59	372.71	369.14	372.94	0.001167	6.17	4378.06	752.30	0.31
USACE	87905	200YR	11768.00	359.59	372.31	368.57	372.55	0.001237	6.21	4086.59	727.10	0.32
USACE	87905	500YR	15154.00	359.59	373.75	369.66	373.98	0.001058	6.20	5146.99	990.69	0.30
USACE	87905	SEPT2011	8227.00	359.59	370.71	367.84	370.96	0.001442	6.08	2969.42	675.48	0.34
USACE	87737	2YR	1919.00	359.51	366.35		366.48	0.001018	3.58	1022.91	420.59	0.26
USACE	87737	5YR	3121.00	359.51	367.34		367.49	0.001108	4.13	1469.07	472.93	0.28
USACE	87737	10YR	4164.00	359.51	368.11		368.26	0.001077	4.37	1840.97	494.20	0.28
USACE	87737	25YR	6027.00	359.51	369.31		369.48	0.001007	4.66	2457.44	519.16	0.28
USACE	87737	50YR	7682.00	359.51	370.12		370.30	0.001029	4.99	2880.63	528.80	0.28
USACE	87737	100YR	9586.00	359.51	371.16		371.35	0.000962	5.16	3440.37	551.58	0.28
USACE	87737	100YRPLUS	12537.00	359.51	372.56		372.76	0.000916	5.47	4247.62	597.33	0.28
USACE	87737	200YR	11768.00	359.51	372.15		372.36	0.000952	5.45	4009.59	588.66	0.28
USACE	87737	500YR	15154.00	359.51	373.59		373.81	0.000894	5.70	4873.68	616.53	0.28
USACE	87737	SEPT2011	8227.00	359.51	370.58		370.75	0.000932	4.90	3121.73	534.78	0.27

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	87491	2YR	1889.00	359.30	365.91		366.14	0.001852	4.30	644.19	303.88	0.34
USACE	87491	5YR	3068.00	359.30	366.85		367.12	0.001956	4.96	938.12	324.26	0.36
USACE	87491	10YR	4103.00	359.30	367.62		367.91	0.001861	5.25	1196.17	344.16	0.36
USACE	87491	25YR	5955.00	359.30	368.83		369.14	0.001736	5.66	1634.15	378.27	0.35
USACE	87491	50YR	7606.00	359.30	369.61		369.96	0.001766	6.08	1936.47	395.42	0.36
USACE	87491	100YR	9515.00	359.30	370.69		371.04	0.001575	6.21	2372.72	420.45	0.35
USACE	87491	100YRPLUS	12444.00	359.30	372.10		372.47	0.001426	6.46	2990.13	455.11	0.34
USACE	87491	200YR	11713.00	359.30	371.68		372.05	0.001513	6.49	2800.82	445.35	0.35
USACE	87491	500YR	15191.00	359.30	373.12		373.52	0.001410	6.81	3471.05	486.63	0.34
USACE	87491	SEPT2011	8254.00	359.30	370.11		370.44	0.001582	5.97	2133.64	403.45	0.35
USACE	87247	2YR	1889.00	359.01	365.47		365.66	0.001975	4.45	813.40	443.89	0.35
USACE	87247	5YR	3068.00	359.01	366.48		366.65	0.001647	4.58	1277.49	474.19	0.33
USACE	87247	10YR	4103.00	359.01	367.31		367.48	0.001409	4.61	1692.06	523.17	0.31
USACE	87247	25YR	5955.00	359.01	368.60		368.75	0.001148	4.66	2417.99	605.95	0.29
USACE	87247	50YR	7606.00	359.01	369.40		369.57	0.001120	4.90	2916.56	646.34	0.29
USACE	87247	100YR	9515.00	359.01	370.53		370.69	0.000935	4.84	3678.39	702.35	0.27
USACE	87247	100YRPLUS	12444.00	359.01	372.00		372.15	0.000788	4.87	4766.99	782.76	0.25
USACE	87247	200YR	11713.00	359.01	371.55		371.71	0.000862	4.96	4428.93	757.18	0.26
USACE	87247	500YR	15191.00	359.01	373.05		373.21	0.000740	5.00	5612.00	818.87	0.25
USACE	87247	SEPT2011	8254.00	359.01	369.93		370.09	0.000966	4.73	3267.24	670.19	0.27
USACE	86951	2YR	1889.00	358.70	365.10		365.20	0.001134	3.27	1112.79	661.79	0.26
USACE	86951	5YR	3068.00	358.70	366.22		366.30	0.000781	3.13	1903.59	745.58	0.23
USACE	86951	10YR	4103.00	358.70	367.12		367.19	0.000606	3.03	2601.06	809.12	0.20
USACE	86951	25YR	5955.00	358.70	368.46		368.52	0.000485	3.05	3757.61	916.81	0.19
USACE	86951	50YR	7606.00	358.70	369.27		369.33	0.000469	3.20	4520.91	959.01	0.19
USACE	86951	100YR	9515.00	358.70	370.43		370.49	0.000374	3.10	5675.95	1022.46	0.17
USACE	86951	100YRPLUS	12444.00	358.70	371.92		371.98	0.000312	3.10	7267.61	1461.64	0.16
USACE	86951	200YR	11713.00	358.70	371.47		371.53	0.000339	3.15	6775.77	1284.71	0.17
USACE	86951	500YR	15191.00	358.70	372.98		373.05	0.000299	3.22	8441.75	1774.87	0.16
USACE	86951	SEPT2011	8254.00	358.70	369.83		369.89	0.000395	3.06	5064.12	994.28	0.18
USACE	86588	2YR	1889.00	358.51	364.70	363.46	364.79	0.001118	3.31	1319.01	738.66	0.26
USACE	86588	5YR	3068.00	358.51	365.97	364.05	366.03	0.000674	3.00	2334.11	836.09	0.21
USACE	86588	10YR	4103.00	358.51	366.93	364.40	366.98	0.000514	2.88	3156.32	880.87	0.19
USACE	86588	25YR	5955.00	358.51	368.30	364.86	368.35	0.000415	2.91	4419.67	951.33	0.18
USACE	86588	50YR	7606.00	358.51	369.11	365.16	369.17	0.000426	3.13	5209.21	999.79	0.18
USACE	86588	100YR	9515.00	358.51	370.30	365.46	370.36	0.000369	3.16	6437.79	1074.59	0.17
USACE	86588	100YRPLUS	12444.00	358.51	371.81	365.87	371.87	0.000322	3.23	8120.74	1201.94	0.16
USACE	86588	200YR	11713.00	358.51	371.35	365.76	371.41	0.000349	3.27	7597.35	1172.13	0.17
USACE	86588	500YR	15191.00	358.51	372.87	366.16	372.93	0.000316	3.38	9357.18	1281.09	0.16
USACE	86588	SEPT2011	8254.00	358.51	369.69	365.26	369.74	0.000367	3.03	5797.28	1023.91	0.17
USACE	86253	2YR	1889.00	358.23	364.35	362.32	364.45	0.000921	3.20	1281.99	597.75	0.24
USACE	86253	5YR	3068.00	358.23	365.73	363.51	365.81	0.000662	3.15	2140.90	659.38	0.21
USACE	86253	10YR	4103.00	358.23	366.72	363.87	366.80	0.000565	3.19	2829.66	717.24	0.20
USACE	86253	25YR	5955.00	358.23	368.12	364.38	368.20	0.000497	3.34	3878.56	772.17	0.19
USACE	86253	50YR	7606.00	358.23	368.92	364.74	369.01	0.000525	3.63	4505.00	793.27	0.20
USACE	86253	100YR	9515.00	358.23	370.13	365.10	370.21	0.000465	3.69	5487.57	831.86	0.19
USACE	86253	100YRPLUS	12444.00	358.23	371.65	365.65	371.74	0.000440	3.91	6799.45	1083.90	0.19
USACE	86253	200YR	11713.00	358.23	371.18	365.53	371.27	0.000462	3.91	6381.49	992.84	0.20
USACE	86253	500YR	15191.00	358.23	372.71	366.12	372.80	0.000444	4.14	7771.50	1155.21	0.20
USACE	86253	SEPT2011	8254.00	358.23	369.53	364.88	369.60	0.000460	3.54	4989.07	812.10	0.19
USACE	86092	2YR	1889.00	358.01	364.20	362.07	364.30	0.000991	3.14	1091.61	562.69	0.25
USACE	86092	5YR	3068.00	358.01	365.64	363.49	365.70	0.000559	2.80	1925.70	593.88	0.19
USACE	86092	10YR	4103.00	358.01	366.65	363.85	366.71	0.000448	2.76	2536.59	614.99	0.18
USACE	86092	25YR	5955.00	358.01	368.06	364.30	368.12	0.000384	2.87	3430.51	640.53	0.17
USACE	86092	50YR	7606.00	358.01	368.86	364.63	368.93	0.000407	3.12	3941.10	650.42	0.18
USACE	86092	100YR	9515.00	358.01	370.07	364.97	370.15	0.000357	3.17	4799.20	757.96	0.17
USACE	86092	100YRPLUS	12444.00	358.01	371.59	365.42	371.68	0.000324	3.29	6041.25	998.74	0.16
USACE	86092	200YR	11713.00	358.01	371.12	365.31	371.20	0.000346	3.31	5633.88	869.72	0.17
USACE	86092	500YR	15191.00	358.01	372.65	365.79	372.74	0.000325	3.48	6988.69	1166.40	0.17
USACE	86092	SEPT2011	8254.00	358.01	369.47	364.75	369.54	0.000355	3.04	4355.09	698.09	0.17
USACE	86030	2YR	1889.00	357.96	364.15	362.77	364.24	0.000967	3.24	1133.18	593.70	0.25
USACE	86030	5YR	3068.00	357.96	365.61	363.44	365.67	0.000517	2.79	2034.05	636.26	0.19
USACE	86030	10YR	4103.00	357.96	366.63	363.77	366.69	0.000415	2.74	2697.15	680.46	0.17
USACE	86030	25YR	5955.00	357.96	368.05	364.27	368.10	0.000344	2.79	3666.30	691.87	0.16
USACE	86030	50YR	7606.00	357.96	368.84	364.54	368.90	0.000366	3.04	4220.67	704.02	0.17
USACE	86030	100YR	9515.00	357.96	370.06	364.90	370.13	0.000338	3.16	5153.98	879.73	0.17
USACE	86030	100YRPLUS	12444.00	357.96	371.58	365.29	371.65	0.000320	3.35	6787.93	1175.64	0.17
USACE	86030	200YR	11713.00	357.96	371.11	365.19	371.18	0.000352	3.42	6235.77	1149.35	0.17
USACE	86030	500YR	15191.00	357.96	372.65	365.67	372.72	0.000307	3.46	8089.60	1270.60	0.16
USACE	86030	SEPT2011	8254.00	357.96	369.45	364.67	369.51	0.000327	2.99	4663.52	765.45	0.16
USACE	86023 Weir		Inl Struct									
USACE	86016	2YR	1889.00	355.96	364.12	360.51	364.23	0.000646	3.20	1178.92	574.47	0.21
USACE	86016	5YR	3068.00	355.96	365.58	363.14	365.65	0.000439	2.99	2071.65	650.17	0.18
USACE	86016	10YR	4103.00	355.96	366.60	363.61	366.66	0.000366	2.94	2753.52	684.62	0.17
USACE	86016	25YR	5955.00	355.96	368.02	364.20	368.08	0.000316	3.00	3735.00	702.28	0.16
USACE	86016	50YR	7606.00	355.96	368.82	364.55	368.88	0.000341	3.26	4299.54	716.80	0.17
USACE	86016	100YR	9515.00	355.96	370.03	364.91	370.11	0.000343	3.49	5288.53	977.19	0.17

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	86016	100YRPLUS	12444.00	355.96	371.55	365.49	371.62	0.000298	3.50	6957.40	1183.60	0.16
USACE	86016	200YR	11713.00	355.96	371.08	365.37	371.15	0.000320	3.55	6404.56	1135.05	0.17
USACE	86016	500YR	15191.00	355.96	372.62	365.82	372.69	0.000287	3.60	8272.69	1275.40	0.16
USACE	86016	SEPT2011	8254.00	355.96	369.43	364.70	369.49	0.000308	3.20	4752.31	774.92	0.16
USACE	86011 Footbridge		Bridge									
USACE	85998	2YR	1889.00	355.96	364.12		364.20	0.000560	2.89	1241.29	593.88	0.20
USACE	85998	5YR	3068.00	355.96	365.56		365.62	0.000389	2.73	2158.12	662.56	0.17
USACE	85998	10YR	4103.00	355.96	366.58		366.64	0.000329	2.72	2851.66	697.47	0.16
USACE	85998	25YR	5955.00	355.96	368.00		368.06	0.000290	2.81	3865.44	745.95	0.15
USACE	85998	50YR	7606.00	355.96	368.80		368.86	0.000318	3.08	4486.45	824.84	0.16
USACE	85998	100YR	9515.00	355.96	370.02		370.08	0.000295	3.17	5692.28	1073.38	0.16
USACE	85998	100YRPLUS	12444.00	355.96	371.54		371.60	0.000256	3.19	7436.71	1226.20	0.15
USACE	85998	200YR	11713.00	355.96	371.07		371.13	0.000275	3.23	6869.99	1158.44	0.15
USACE	85998	500YR	15191.00	355.96	372.60		372.67	0.000249	3.30	8771.71	1292.46	0.15
USACE	85998	SEPT2011	8254.00	355.96	369.41		369.47	0.000296	3.08	5057.22	1014.85	0.16
USACE	85953	2YR	1889.00	356.09	364.09	361.02	364.17	0.000658	2.95	1196.75	608.31	0.21
USACE	85953	5YR	3068.00	356.09	365.54	363.10	365.60	0.000409	2.68	2122.98	686.92	0.17
USACE	85953	10YR	4103.00	356.09	366.57	363.48	366.62	0.000370	2.77	2883.75	896.63	0.17
USACE	85953	25YR	5955.00	356.09	368.00	363.99	368.04	0.000262	2.57	4408.52	1012.61	0.14
USACE	85953	50YR	7606.00	356.09	368.79	364.34	368.84	0.000273	2.77	5257.39	1099.49	0.15
USACE	85953	100YR	9515.00	356.09	370.02	364.72	370.06	0.000228	2.71	6652.82	1392.26	0.14
USACE	85953	100YRPLUS	12444.00	356.09	371.54	365.15	371.58	0.000203	2.77	8563.97	1727.72	0.13
USACE	85953	200YR	11713.00	356.09	371.06	365.02	371.11	0.000217	2.79	7937.40	1585.31	0.14
USACE	85953	500YR	15191.00	356.09	372.60	365.46	372.65	0.000197	2.86	10014.22	2079.17	0.13
USACE	85953	SEPT2011	8254.00	356.09	369.41	364.47	369.45	0.000233	2.65	5942.34	1253.89	0.14
USACE	85887	2YR	1889.00	356.23	364.05	360.92	364.12	0.000565	2.74	1103.97	609.11	0.19
USACE	85887	5YR	3068.00	356.23	365.49	362.59	365.56	0.000468	2.87	1665.81	1441.13	0.18
USACE	85887	10YR	4103.00	356.23	366.51	363.00	366.59	0.000475	3.14	2217.67	1855.92	0.19
USACE	85887	25YR	5955.00	356.23	367.97	363.62	368.02	0.000295	2.74	4057.63	2152.26	0.15
USACE	85887	50YR	7606.00	356.23	368.77	364.03	368.82	0.000295	2.88	4870.90	2204.68	0.15
USACE	85887	100YR	9515.00	356.23	369.99	364.46	370.04	0.000240	2.79	6151.90	2315.46	0.14
USACE	85887	100YRPLUS	12444.00	356.23	371.52	365.01	371.57	0.000203	2.78	7832.36	2465.40	0.13
USACE	85887	200YR	11713.00	356.23	371.04	364.88	371.09	0.000221	2.83	7294.97	2425.75	0.14
USACE	85887	500YR	15191.00	356.23	372.58	365.49	372.63	0.000199	2.89	9043.22	2557.10	0.13
USACE	85887	SEPT2011	8254.00	356.23	369.38	364.18	369.43	0.000248	2.74	5508.38	2263.02	0.14
USACE	85828	2YR	1889.00	356.28	363.93	360.72	364.07	0.000834	3.12	715.81	628.18	0.23
USACE	85828	5YR	3068.00	356.28	365.44	361.75	365.51	0.000498	2.83	1576.92	1313.73	0.19
USACE	85828	10YR	4103.00	356.28	366.47	362.40	366.55	0.000435	2.89	2130.95	1785.66	0.18
USACE	85828	25YR	5955.00	356.28	367.95	363.35	368.00	0.000263	2.51	3922.02	2056.70	0.14
USACE	85828	50YR	7606.00	356.28	368.74	364.02	368.81	0.000277	2.72	4588.41	2100.88	0.15
USACE	85828	100YR	9515.00	356.28	369.97	364.68	370.04	0.000238	2.71	5651.83	2176.87	0.14
USACE	85828	100YRPLUS	12444.00	356.28	371.49	365.38	371.57	0.000211	2.77	7057.76	2264.27	0.13
USACE	85828	200YR	11713.00	356.28	371.01	365.38	371.09	0.000227	2.80	6606.77	2258.54	0.14
USACE	85828	500YR	15191.00	356.28	372.55	365.82	372.62	0.000212	2.92	8073.83	2308.59	0.14
USACE	85828	SEPT2011	8254.00	356.28	369.36	364.26	369.42	0.000239	2.62	5118.54	2128.38	0.14
USACE	85783 Colebrook Road		Mult Open									
USACE	85737	2YR	1889.00	355.80	363.60	360.24	363.74	0.000813	3.15	704.47	600.10	0.23
USACE	85737	5YR	3068.00	355.80	365.06	361.22	365.25	0.000874	3.79	972.15	993.40	0.25
USACE	85737	10YR	4103.00	355.80	366.13	361.88	366.27	0.000675	3.65	1904.02	1536.91	0.22
USACE	85737	25YR	5955.00	355.80	367.64	362.95	367.69	0.000266	2.56	4141.57	1839.37	0.14
USACE	85737	50YR	7606.00	355.80	368.75	363.74	368.79	0.000218	2.49	5239.41	1921.43	0.13
USACE	85737	100YR	9515.00	355.80	369.84	364.45	369.89	0.000192	2.49	6341.59	2055.42	0.13
USACE	85737	100YRPLUS	12444.00	355.80	371.31	366.18	371.36	0.000172	2.54	7855.97	2112.75	0.12
USACE	85737	200YR	11713.00	355.80	370.98	366.07	371.03	0.000175	2.52	7505.67	2097.08	0.12
USACE	85737	500YR	15191.00	355.80	372.56	366.56	372.61	0.000162	2.62	9199.82	2246.24	0.12
USACE	85737	SEPT2011	8254.00	355.80	369.15	363.99	369.20	0.000205	2.47	5643.93	2005.62	0.13
USACE	85606	2YR	1889.00	355.41	363.53	359.91	363.63	0.000633	2.95	961.89	627.51	0.20
USACE	85606	5YR	3068.00	355.41	365.01	361.90	365.12	0.000557	3.18	1427.90	1046.19	0.20
USACE	85606	10YR	4103.00	355.41	366.10	362.52	366.17	0.000380	2.86	2402.88	1564.92	0.17
USACE	85606	25YR	5955.00	355.41	367.61	363.20	367.65	0.000223	2.43	4178.49	1692.66	0.13
USACE	85606	50YR	7606.00	355.41	368.72	363.68	368.77	0.000200	2.46	5194.04	1793.96	0.13
USACE	85606	100YR	9515.00	355.41	369.82	364.16	369.87	0.000187	2.53	6304.07	1958.20	0.12
USACE	85606	100YRPLUS	12444.00	355.41	371.29	364.81	371.34	0.000173	2.61	7827.41	2224.59	0.12
USACE	85606	200YR	11713.00	355.41	370.96	364.65	371.00	0.000175	2.58	7480.16	2188.94	0.12
USACE	85606	500YR	15191.00	355.41	372.54	365.39	372.59	0.000164	2.69	9113.46	2382.38	0.12
USACE	85606	SEPT2011	8254.00	355.41	369.13	363.85	369.17	0.000195	2.48	5589.95	1877.01	0.13
USACE	85279	2YR	1889.00	354.99	363.38	360.89	363.43	0.000494	2.53	1362.74	879.89	0.18
USACE	85279	5YR	3068.00	354.99	364.92	361.92	364.96	0.000313	2.33	2235.51	1080.33	0.15
USACE	85279	10YR	4103.00	354.99	366.01	362.28	366.05	0.000295	2.46	2928.46	1171.64	0.14
USACE	85279	25YR	5955.00	354.99	367.54	362.86	367.58	0.000227	2.40	4267.71	1333.32	0.13
USACE	85279	50YR	7606.00	354.99	368.66	363.24	368.70	0.000202	2.42	5255.45	1433.93	0.12
USACE	85279	100YR	9515.00	354.99	369.76	363.56	369.80	0.000189	2.49	6226.16	1544.28	0.12
USACE	85279	100YRPLUS	12444.00	354.99	371.23	363.98	371.28	0.000180	2.61	7524.65	1735.06	0.12
USACE	85279	200YR	11713.00	354.99	370.90	363.89	370.95	0.000181	2.58	7229.15	1710.18	0.12
USACE	85279	500YR	15191.00	354.99	372.48	364.34	372.53	0.000175	2.72	8619.81	1857.19	0.12
USACE	85279	SEPT2011	8254.00	354.99	369.07	363.35	369.11	0.000195	2.43	5614.41	1473.75	0.12

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	84892	2YR	1889.00	354.61	363.16	359.00	363.24	0.000479	2.84	1159.91	518.36	0.18
USACE	84892	5YR	3068.00	354.61	364.73	361.29	364.82	0.000440	3.10	1727.51	566.47	0.18
USACE	84892	10YR	4103.00	354.61	365.81	361.83	365.91	0.000441	3.34	2150.16	619.91	0.19
USACE	84892	25YR	5955.00	354.61	367.34	362.61	367.45	0.000455	3.73	2778.80	671.44	0.19
USACE	84892	50YR	7606.00	354.61	368.43	363.10	368.57	0.000512	4.20	3256.13	739.10	0.21
USACE	84892	100YR	9515.00	354.61	369.52	363.59	369.68	0.000533	4.52	3797.85	775.65	0.21
USACE	84892	100YRPLUS	12444.00	354.61	370.98	364.23	371.16	0.000551	4.92	4569.31	817.89	0.22
USACE	84892	200YR	11713.00	354.61	370.65	364.05	370.82	0.000545	4.82	4390.01	808.37	0.22
USACE	84892	500YR	15191.00	354.61	372.19	364.79	372.40	0.000593	5.36	5272.27	911.66	0.23
USACE	84892	SEPT2011	8254.00	354.61	368.84	363.28	368.98	0.000519	4.31	3451.93	755.65	0.21
USACE	84497	2YR	1889.00	354.40	362.83		362.98	0.000885	3.50	937.25	294.14	0.24
USACE	84497	5YR	3068.00	354.40	364.38		364.56	0.000909	4.09	1444.93	363.97	0.25
USACE	84497	10YR	4103.00	354.40	365.44		365.65	0.000950	4.54	1852.92	406.27	0.27
USACE	84497	25YR	5955.00	354.40	366.92		367.18	0.001015	5.19	2480.75	444.04	0.28
USACE	84497	50YR	7606.00	354.40	367.99		368.28	0.001050	5.63	2970.69	471.91	0.29
USACE	84497	100YR	9515.00	354.40	369.05		369.37	0.001082	6.06	3485.57	495.30	0.30
USACE	84497	100YRPLUS	12444.00	354.40	370.47		370.84	0.001130	6.64	4217.90	534.65	0.31
USACE	84497	200YR	11713.00	354.40	370.15		370.50	0.001114	6.50	4047.95	526.82	0.31
USACE	84497	500YR	15191.00	354.40	371.67		372.06	0.001153	7.09	4875.84	566.13	0.32
USACE	84497	SEPT2011	8254.00	354.40	368.39		368.68	0.001052	5.76	3160.53	480.79	0.29
USACE	84028	2YR	1889.00	353.99	362.30		362.52	0.001078	4.00	713.43	224.02	0.27
USACE	84028	5YR	3068.00	353.99	363.79		364.07	0.001185	4.79	1113.21	298.42	0.29
USACE	84028	10YR	4103.00	353.99	364.82		365.14	0.001227	5.27	1438.14	331.31	0.30
USACE	84028	25YR	5955.00	353.99	366.25		366.63	0.001320	6.01	1948.95	375.97	0.32
USACE	84028	50YR	7606.00	353.99	367.30		367.71	0.001351	6.46	2353.29	396.11	0.33
USACE	84028	100YR	9515.00	353.99	368.34		368.79	0.001393	6.94	2775.39	418.82	0.34
USACE	84028	100YRPLUS	12444.00	353.99	369.73		370.23	0.001434	7.55	3380.94	451.51	0.35
USACE	84028	200YR	11713.00	353.99	369.42		369.91	0.001412	7.38	3243.67	442.92	0.35
USACE	84028	500YR	15191.00	353.99	370.92		371.45	0.001439	7.97	3932.65	478.40	0.36
USACE	84028	SEPT2011	8254.00	353.99	367.70		368.12	0.001348	6.60	2512.54	403.69	0.33
USACE	83678	2YR	1889.00	353.79	362.01		362.16	0.000880	3.61	1033.62	353.02	0.24
USACE	83678	5YR	3068.00	353.79	363.51		363.68	0.000887	4.14	1607.38	404.97	0.25
USACE	83678	10YR	4103.00	353.79	364.55		364.74	0.000889	4.48	2048.44	446.49	0.26
USACE	83678	25YR	5955.00	353.79	365.98		366.20	0.000932	5.04	2718.89	496.27	0.27
USACE	83678	50YR	7606.00	353.79	367.02		367.26	0.000962	5.45	3257.97	525.24	0.28
USACE	83678	100YR	9515.00	353.79	368.06		368.33	0.000984	5.83	3812.70	540.87	0.29
USACE	83678	100YRPLUS	12444.00	353.79	369.46		369.75	0.001014	6.34	4586.07	567.53	0.30
USACE	83678	200YR	11713.00	353.79	369.15		369.44	0.000998	6.20	4413.73	561.06	0.29
USACE	83678	500YR	15191.00	353.79	370.65		370.97	0.001023	6.72	5276.64	591.86	0.30
USACE	83678	SEPT2011	8254.00	353.79	367.43		367.67	0.000956	5.56	3471.02	531.88	0.28
USACE	83090	2YR	1889.00	353.60	361.51	358.26	361.65	0.000874	3.43	924.06	250.54	0.24
USACE	83090	5YR	3068.00	353.60	362.95	359.12	363.15	0.000967	4.14	1296.67	262.55	0.26
USACE	83090	10YR	4103.00	353.60	363.87	360.19	364.14	0.001177	4.92	1559.73	316.75	0.30
USACE	83090	25YR	5955.00	353.60	365.15	361.08	365.53	0.001410	5.91	1991.71	360.33	0.33
USACE	83090	50YR	7606.00	353.60	366.12	361.78	366.56	0.001531	6.55	2347.72	376.91	0.35
USACE	83090	100YR	9515.00	353.60	367.06	362.48	367.58	0.001668	7.22	2711.96	393.10	0.37
USACE	83090	100YRPLUS	12444.00	353.60	368.26	363.81	368.93	0.001957	8.35	3214.08	446.51	0.41
USACE	83090	200YR	11713.00	353.60	368.03	363.17	368.64	0.001840	8.00	3111.97	438.70	0.39
USACE	83090	500YR	15191.00	353.60	369.40	363.11	370.13	0.002004	8.93	3731.79	521.01	0.42
USACE	83090	SEPT2011	8254.00	353.60	366.51	362.03	366.96	0.001545	6.73	2494.84	385.65	0.35
USACE	82723	2YR	1889.00	353.29	361.09	357.75	361.29	0.001094	3.99	808.03	239.47	0.27
USACE	82723	5YR	3068.00	353.29	362.43	359.14	362.72	0.001347	5.00	1214.33	371.63	0.31
USACE	82723	10YR	4103.00	353.29	363.35	359.93	363.67	0.001392	5.47	1582.43	504.08	0.32
USACE	82723	25YR	5955.00	353.29	364.63	361.08	365.00	0.001472	6.15	2151.00	646.93	0.34
USACE	82723	50YR	7606.00	353.29	365.58	362.47	365.99	0.001547	6.68	2610.22	752.22	0.35
USACE	82723	100YR	9515.00	353.29	366.52	362.81	366.96	0.001600	7.17	3097.69	818.34	0.36
USACE	82723	100YRPLUS	12444.00	353.29	367.71	364.00	368.22	0.001711	7.90	3748.06	892.74	0.38
USACE	82723	200YR	11713.00	353.29	367.49	363.86	367.97	0.001643	7.65	3626.58	879.85	0.37
USACE	82723	500YR	15191.00	353.29	368.88	364.80	369.40	0.001665	8.24	4424.13	947.17	0.38
USACE	82723	SEPT2011	8254.00	353.29	365.98	362.69	366.39	0.001516	6.77	2816.67	778.19	0.35
USACE	82179	2YR	1889.00	352.89	360.51		360.68	0.001175	3.85	851.57	291.43	0.28
USACE	82179	5YR	3068.00	352.89	361.82		362.03	0.001206	4.45	1267.18	346.14	0.29
USACE	82179	10YR	4103.00	352.89	362.73		362.96	0.001222	4.84	1616.42	413.99	0.30
USACE	82179	25YR	5955.00	352.89	364.01		364.26	0.001243	5.38	2194.47	496.61	0.31
USACE	82179	50YR	7606.00	352.89	364.95		365.22	0.001248	5.74	2695.42	563.92	0.31
USACE	82179	100YR	9515.00	352.89	365.90		366.18	0.001238	6.06	3268.86	647.05	0.32
USACE	82179	100YRPLUS	12444.00	352.89	367.09		367.40	0.001240	6.48	4104.92	745.56	0.32
USACE	82179	200YR	11713.00	352.89	366.90		367.19	0.001197	6.30	3959.06	729.12	0.32
USACE	82179	500YR	15191.00	352.89	368.36		368.64	0.001069	6.41	5097.46	816.25	0.30
USACE	82179	SEPT2011	8254.00	352.89	365.38		365.65	0.001195	5.77	2945.44	605.72	0.31
USACE	81743	2YR	1921.00	352.47	360.04	357.37	360.18	0.001056	3.33	770.47	250.90	0.26
USACE	81743	5YR	3050.00	352.47	361.35	358.46	361.52	0.001066	3.88	1158.68	334.78	0.27
USACE	81743	10YR	4053.00	352.47	362.25	359.01	362.45	0.001075	4.25	1495.78	407.83	0.28
USACE	81743	25YR	5867.00	352.47	363.53	359.81	363.75	0.001044	4.67	2062.34	473.06	0.28
USACE	81743	50YR	7517.00	352.47	364.47	360.38	364.71	0.001057	5.03	2531.89	532.05	0.29
USACE	81743	100YR	9480.00	352.47	365.40	360.39	365.67	0.001076	5.39	3055.74	591.45	0.29
USACE	81743	100YRPLUS	12398.00	352.47	366.59	362.10	366.89	0.001094	5.84	3810.76	674.38	0.30

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	81743	200YR	11879.00	352.47	366.40	362.42	366.69	0.001094	5.78	3680.10	663.28	0.30
USACE	81743	500YR	15963.00	352.47	367.85	363.07	368.17	0.001074	6.19	4709.84	996.31	0.30
USACE	81743	SEPT2011	8387.00	352.47	364.90	360.39	365.15	0.001064	5.19	2764.96	555.91	0.29
USACE	81362	2YR	1921.00	352.17	359.51	357.72	359.71	0.001504	4.33	662.61	227.28	0.31
USACE	81362	5YR	3050.00	352.17	360.88	358.49	361.08	0.001309	4.63	1018.47	292.58	0.30
USACE	81362	10YR	4053.00	352.17	361.80	359.08	362.02	0.001257	4.92	1349.87	414.70	0.30
USACE	81362	25YR	5867.00	352.17	363.12	359.55	363.35	0.001151	5.20	1972.45	579.91	0.30
USACE	81362	50YR	7517.00	352.17	364.09	360.51	364.31	0.001059	5.32	2595.33	685.58	0.29
USACE	81362	100YR	9480.00	352.17	365.06	361.10	365.28	0.000964	5.38	3289.85	737.84	0.28
USACE	81362	100YRPLUS	12398.00	352.17	366.29	361.39	366.50	0.000878	5.50	4224.29	787.58	0.27
USACE	81362	200YR	11879.00	352.17	366.09	361.39	366.30	0.000890	5.47	4067.09	780.64	0.27
USACE	81362	500YR	15963.00	352.17	367.58	362.61	367.79	0.000813	5.64	5270.74	832.88	0.27
USACE	81362	SEPT2011	8387.00	352.17	364.54	360.76	364.76	0.001015	5.35	2907.20	711.01	0.29
USACE	80918	2YR	1921.00	351.60	358.73		359.01	0.001548	4.52	582.79	154.33	0.32
USACE	80918	5YR	3050.00	351.60	359.86		360.32	0.002061	5.83	800.38	221.19	0.38
USACE	80918	10YR	4053.00	351.60	360.67		361.23	0.002292	6.60	993.97	255.50	0.41
USACE	80918	25YR	5867.00	351.60	361.89		362.56	0.002500	7.56	1359.61	349.40	0.44
USACE	80918	50YR	7517.00	351.60	362.84		363.56	0.002525	8.11	1735.56	441.01	0.45
USACE	80918	100YR	9480.00	351.60	363.87		364.58	0.002396	8.41	2212.10	486.57	0.44
USACE	80918	100YRPLUS	12398.00	351.60	365.16		365.86	0.002247	8.75	2879.69	540.30	0.43
USACE	80918	200YR	11879.00	351.60	364.94		365.65	0.002274	8.71	2765.17	535.53	0.44
USACE	80918	500YR	15963.00	351.60	366.51		367.20	0.002110	9.08	3637.05	585.62	0.43
USACE	80918	SEPT2011	8387.00	351.60	363.31		364.03	0.002472	8.26	1947.41	460.17	0.44
USACE	80537	2YR	1921.00	350.80	358.40		358.53	0.000867	3.44	854.14	284.99	0.24
USACE	80537	5YR	3050.00	350.80	359.56		359.72	0.000939	3.99	1198.97	311.92	0.26
USACE	80537	10YR	4053.00	350.80	360.38		360.57	0.000989	4.39	1461.99	328.08	0.27
USACE	80537	25YR	5867.00	350.80	361.60		361.83	0.001066	4.99	1881.73	358.17	0.28
USACE	80537	50YR	7517.00	350.80	362.54		362.81	0.001122	5.45	2231.01	387.34	0.30
USACE	80537	100YR	9480.00	350.80	363.52		363.84	0.001198	5.97	2637.06	439.12	0.31
USACE	80537	100YRPLUS	12398.00	350.80	364.76		365.13	0.001281	6.61	3223.38	509.20	0.33
USACE	80537	200YR	11879.00	350.80	364.55		364.92	0.001272	6.52	3120.06	497.92	0.32
USACE	80537	500YR	15963.00	350.80	366.09		366.50	0.001285	7.07	3935.96	556.80	0.33
USACE	80537	SEPT2011	8387.00	350.80	362.99		363.28	0.001153	5.68	2409.83	409.02	0.30
USACE	80097	2YR	1921.00	350.20	357.84	354.12	358.08	0.001197	4.07	588.81	250.38	0.28
USACE	80097	5YR	3050.00	350.20	358.86	355.31	359.19	0.001496	5.01	898.04	325.74	0.32
USACE	80097	10YR	4053.00	350.20	359.64	356.20	360.01	0.001569	5.48	1167.69	358.47	0.34
USACE	80097	25YR	5867.00	350.20	360.85	358.09	361.25	0.001595	6.05	1632.03	411.23	0.35
USACE	80097	50YR	7517.00	350.20	361.80	359.17	362.21	0.001568	6.39	2041.81	452.05	0.35
USACE	80097	100YR	9480.00	350.20	362.81	359.92	363.23	0.001524	6.70	2522.93	498.47	0.35
USACE	80097	100YRPLUS	12398.00	350.20	364.07	360.63	364.51	0.001482	7.09	3187.32	552.02	0.35
USACE	80097	200YR	11879.00	350.20	363.86	360.60	364.30	0.001489	7.02	3071.90	543.20	0.35
USACE	80097	500YR	15963.00	350.20	365.43	361.44	365.89	0.001440	7.47	3981.65	618.80	0.35
USACE	80097	SEPT2011	8387.00	350.20	362.26	359.52	362.68	0.001556	6.55	2254.19	474.64	0.35
USACE	79584	2YR	1921.00	349.39	357.27	353.52	357.48	0.001090	3.87	696.82	464.49	0.27
USACE	79584	5YR	3050.00	349.39	358.33	354.68	358.52	0.001008	4.13	1385.44	492.26	0.27
USACE	79584	10YR	4053.00	349.39	359.14	355.88	359.33	0.000982	4.36	1786.43	504.78	0.27
USACE	79584	25YR	5867.00	349.39	360.37	357.28	360.57	0.000943	4.69	2421.87	523.77	0.27
USACE	79584	50YR	7517.00	349.39	361.34	358.20	361.55	0.000927	4.95	2936.39	544.13	0.27
USACE	79584	100YR	9480.00	349.39	362.36	358.70	362.58	0.000910	5.22	3503.18	564.70	0.27
USACE	79584	100YRPLUS	12398.00	349.39	363.63	359.33	363.87	0.000915	5.62	4232.89	586.88	0.28
USACE	79584	200YR	11879.00	349.39	363.41	359.22	363.66	0.000915	5.55	4109.34	583.91	0.28
USACE	79584	500YR	15963.00	349.39	364.98	359.97	365.25	0.000934	6.07	5046.23	619.44	0.28
USACE	79584	SEPT2011	8387.00	349.39	361.80	358.44	362.02	0.000919	5.08	3191.32	552.77	0.27
USACE	79236	2YR	1921.00	349.20	356.97	353.43	357.12	0.000910	3.50	863.44	557.00	0.24
USACE	79236	5YR	3050.00	349.20	358.15	355.43	358.24	0.000577	3.12	1836.65	579.71	0.20
USACE	79236	10YR	4053.00	349.20	358.97	356.29	359.06	0.000543	3.24	2316.93	595.71	0.20
USACE	79236	25YR	5867.00	349.20	360.22	357.14	360.31	0.000516	3.47	3079.84	626.44	0.20
USACE	79236	50YR	7517.00	349.20	361.19	357.69	361.29	0.000502	3.65	3700.02	649.20	0.20
USACE	79236	100YR	9480.00	349.20	362.22	357.75	362.33	0.000496	3.85	4383.14	678.28	0.20
USACE	79236	100YRPLUS	12398.00	349.20	363.49	358.24	363.61	0.000510	4.19	5272.91	722.30	0.21
USACE	79236	200YR	11879.00	349.20	363.28	358.15	363.39	0.000508	4.13	5120.78	715.46	0.20
USACE	79236	500YR	15963.00	349.20	364.85	358.75	364.98	0.000514	4.49	6277.94	755.13	0.21
USACE	79236	SEPT2011	8387.00	349.20	361.66	357.69	361.76	0.000499	3.74	4006.18	660.70	0.20
USACE	78850	2YR	1921.00	349.07	356.57		356.73	0.001144	3.57	794.05	339.94	0.27
USACE	78850	5YR	3050.00	349.07	357.77		357.94	0.001075	3.95	1325.09	552.58	0.27
USACE	78850	10YR	4053.00	349.07	358.62		358.78	0.000970	4.07	1831.74	641.78	0.26
USACE	78850	25YR	5867.00	349.07	359.93		360.07	0.000794	4.09	2756.10	745.48	0.24
USACE	78850	50YR	7517.00	349.07	360.94		361.07	0.000671	4.04	3531.46	776.60	0.23
USACE	78850	100YR	9480.00	349.07	362.01		362.13	0.000582	4.04	4366.27	793.50	0.22
USACE	78850	100YRPLUS	12398.00	349.07	363.29		363.42	0.000536	4.17	5395.39	812.62	0.21
USACE	78850	200YR	11879.00	349.07	363.08		363.20	0.000540	4.14	5223.11	806.58	0.21
USACE	78850	500YR	15963.00	349.07	364.66		364.80	0.000509	4.36	6528.27	838.41	0.21
USACE	78850	SEPT2011	8387.00	349.07	361.43		361.55	0.000628	4.04	3909.09	786.15	0.22
USACE	78613	2YR	1921.00	348.69	356.54	352.63	356.58	0.000277	2.03	1413.50	588.48	0.14
USACE	78613	5YR	3050.00	348.69	357.73	353.38	357.78	0.000310	2.40	2033.78	833.17	0.15
USACE	78613	10YR	4053.00	348.69	358.57	353.92	358.63	0.000320	2.61	2774.45	1037.57	0.16
USACE	78613	25YR	5867.00	348.69	359.89	354.71	359.94	0.000273	2.65	3996.74	1091.27	0.15

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	78613	50YR	7517.00	348.69	360.91	355.35	360.96	0.000246	2.68	4976.19	1108.82	0.14
USACE	78613	100YR	9480.00	348.69	361.97	356.01	362.03	0.000228	2.74	6010.37	1124.24	0.14
USACE	78613	100YRPLUS	12398.00	348.69	363.26	356.60	363.32	0.000221	2.89	7279.75	1144.08	0.14
USACE	78613	200YR	11879.00	348.69	363.05	356.53	363.11	0.000222	2.86	7067.95	1141.24	0.14
USACE	78613	500YR	15963.00	348.69	364.63	357.39	364.70	0.000220	3.08	8658.22	1177.63	0.14
USACE	78613	SEPT2011	8387.00	348.69	361.39	355.69	361.45	0.000237	2.70	5445.03	1114.66	0.14
USACE	78291	2YR	1921.00	348.30	356.27	353.70	356.42	0.001051	3.69	904.28	503.38	0.26
USACE	78291	5YR	3050.00	348.30	357.55	354.47	357.64	0.000710	3.44	1927.55	882.68	0.22
USACE	78291	10YR	4053.00	348.30	358.45	355.59	358.51	0.000495	3.09	2730.33	907.23	0.19
USACE	78291	25YR	5867.00	348.30	359.80	356.30	359.85	0.000353	2.88	3986.67	953.29	0.16
USACE	78291	50YR	7517.00	348.30	360.83	357.31	360.88	0.000297	2.83	4991.37	985.29	0.15
USACE	78291	100YR	9480.00	348.30	361.90	357.61	361.95	0.000262	2.83	6059.93	1005.47	0.14
USACE	78291	100YRPLUS	12398.00	348.30	363.20	357.97	363.25	0.000245	2.93	7373.89	1028.98	0.14
USACE	78291	200YR	11879.00	348.30	362.98	357.91	363.04	0.000247	2.91	7154.17	1024.27	0.14
USACE	78291	500YR	15963.00	348.30	364.57	358.31	364.63	0.000237	3.08	8843.50	1090.62	0.14
USACE	78291	SEPT2011	8387.00	348.30	361.32	357.46	361.37	0.000279	2.82	5475.40	993.88	0.15
USACE	78047	2YR	1921.00	348.00	356.15	352.02	356.24	0.000507	2.70	1194.82	647.68	0.19
USACE	78047	5YR	3050.00	348.00	357.46	353.20	357.52	0.000374	2.62	2282.80	857.71	0.16
USACE	78047	10YR	4053.00	348.00	358.38	354.39	358.43	0.000299	2.52	3072.52	865.76	0.15
USACE	78047	25YR	5867.00	348.00	359.74	355.73	359.78	0.000250	2.53	4273.64	906.49	0.14
USACE	78047	50YR	7517.00	348.00	360.78	356.28	360.83	0.000228	2.58	5228.48	929.25	0.14
USACE	78047	100YR	9480.00	348.00	361.86	357.02	361.91	0.000214	2.66	6242.68	956.33	0.13
USACE	78047	100YRPLUS	12398.00	348.00	363.15	357.44	363.20	0.000214	2.85	7530.03	1038.08	0.14
USACE	78047	200YR	11879.00	348.00	362.93	357.36	362.99	0.000215	2.82	7309.21	1025.91	0.14
USACE	78047	500YR	15963.00	348.00	364.52	357.86	364.59	0.000214	3.03	9018.46	1125.94	0.14
USACE	78047	SEPT2011	8387.00	348.00	361.27	356.54	361.32	0.000221	2.62	5687.05	940.08	0.13
USACE	77271	2YR	1921.00	347.28	355.48		355.67	0.001124	3.93	832.55	282.62	0.27
USACE	77271	5YR	3050.00	347.28	356.82		357.04	0.001133	4.48	1236.31	317.40	0.28
USACE	77271	10YR	4053.00	347.28	357.76		358.00	0.001163	4.89	1545.91	346.10	0.29
USACE	77271	25YR	5867.00	347.28	359.11		359.39	0.001232	5.53	2056.97	408.52	0.31
USACE	77271	50YR	7517.00	347.28	360.15		360.45	0.001243	5.93	2502.89	449.86	0.31
USACE	77271	100YR	9480.00	347.28	361.20		361.54	0.001299	6.44	3006.94	541.49	0.32
USACE	77271	100YRPLUS	12398.00	347.28	362.46		362.84	0.001318	6.92	3756.48	628.78	0.33
USACE	77271	200YR	11879.00	347.28	362.25		362.62	0.001321	6.86	3623.79	617.59	0.33
USACE	77271	500YR	15963.00	347.28	363.85		364.23	0.001255	7.21	4672.72	694.65	0.33
USACE	77271	SEPT2011	8387.00	347.28	360.63		360.95	0.001257	6.13	2726.03	473.59	0.32
USACE	76963	2YR	1921.00	347.05	355.09		355.30	0.001281	4.13	673.19	225.33	0.29
USACE	76963	5YR	3050.00	347.05	356.43		356.68	0.001278	4.68	995.91	254.57	0.30
USACE	76963	10YR	4053.00	347.05	357.35		357.63	0.001314	5.12	1240.77	276.07	0.31
USACE	76963	25YR	5867.00	347.05	358.66		359.00	0.001412	5.83	1622.19	309.34	0.33
USACE	76963	50YR	7517.00	347.05	359.64		360.04	0.001534	6.46	1945.47	353.60	0.34
USACE	76963	100YR	9480.00	347.05	360.64		361.10	0.001646	7.10	2326.81	407.89	0.36
USACE	76963	100YRPLUS	12398.00	347.05	361.84		362.37	0.001777	7.86	2854.52	470.94	0.38
USACE	76963	200YR	11879.00	347.05	361.64		362.16	0.001761	7.74	2760.22	460.54	0.38
USACE	76963	500YR	15963.00	347.05	363.14		363.75	0.001914	8.69	3552.82	587.78	0.40
USACE	76963	SEPT2011	8387.00	347.05	360.09		360.53	0.001595	6.77	2112.15	378.21	0.35
USACE	76630	2YR	1921.00	346.82	354.82	350.84	354.97	0.000766	3.39	864.21	323.05	0.23
USACE	76630	5YR	3050.00	346.82	356.19	352.00	356.35	0.000729	3.74	1332.71	354.43	0.23
USACE	76630	10YR	4053.00	346.82	357.12	353.60	357.29	0.000735	4.03	1672.28	374.40	0.24
USACE	76630	25YR	5867.00	346.82	358.43	354.54	358.63	0.000781	4.55	2182.32	404.60	0.25
USACE	76630	50YR	7517.00	346.82	359.41	355.38	359.64	0.000842	5.01	2595.56	484.79	0.26
USACE	76630	100YR	9480.00	346.82	360.39	356.00	360.67	0.000930	5.56	3067.80	679.56	0.28
USACE	76630	100YRPLUS	12398.00	346.82	361.62	356.69	361.91	0.000932	5.93	3746.85	765.91	0.28
USACE	76630	200YR	11879.00	346.82	361.41	356.58	361.70	0.000932	5.87	3628.14	754.07	0.28
USACE	76630	500YR	15963.00	346.82	362.95	357.51	363.27	0.000924	6.28	4545.80	834.23	0.29
USACE	76630	SEPT2011	8387.00	346.82	359.86	355.68	360.11	0.000873	5.24	2801.52	567.34	0.27
USACE	76111	2YR	1921.00	346.12	353.98	350.75	354.35	0.001847	5.01	514.89	220.55	0.35
USACE	76111	5YR	3050.00	346.12	355.20	352.16	355.70	0.002156	6.08	796.18	239.68	0.39
USACE	76111	10YR	4053.00	346.12	356.04	353.34	356.62	0.002316	6.76	1043.44	320.52	0.41
USACE	76111	25YR	5867.00	346.12	357.26	355.06	357.92	0.002454	7.61	1461.46	364.88	0.43
USACE	76111	50YR	7517.00	346.12	358.19	356.09	358.89	0.002489	8.14	1839.80	435.34	0.44
USACE	76111	100YR	9480.00	346.12	359.16	356.90	359.88	0.002452	8.57	2292.46	691.79	0.44
USACE	76111	100YRPLUS	12398.00	346.12	360.45	357.97	361.15	0.002286	8.88	3031.70	968.47	0.44
USACE	76111	200YR	11879.00	346.12	360.22	357.85	360.93	0.002346	8.88	2888.48	941.83	0.44
USACE	76111	500YR	15963.00	346.12	361.91	358.98	362.55	0.002020	8.96	3963.96	1102.60	0.42
USACE	76111	SEPT2011	8387.00	346.12	358.64	356.48	359.35	0.002466	8.33	2041.38	458.44	0.44
USACE	75873	2YR	1921.00	345.70	353.68	349.94	353.96	0.001319	4.32	595.27	252.59	0.30
USACE	75873	5YR	3050.00	345.70	354.87	351.16	355.24	0.001562	5.25	940.23	315.57	0.33
USACE	75873	10YR	4053.00	345.70	355.70	352.18	356.12	0.001666	5.80	1216.03	344.02	0.35
USACE	75873	25YR	5867.00	345.70	356.91	354.17	357.39	0.001786	6.55	1690.05	439.80	0.37
USACE	75873	50YR	7517.00	345.70	357.86	355.22	358.35	0.001776	6.94	2129.22	485.16	0.37
USACE	75873	100YR	9480.00	345.70	358.85	355.99	359.35	0.001734	7.27	2626.29	523.51	0.37
USACE	75873	100YRPLUS	12398.00	345.70	360.14	357.06	360.65	0.001664	7.64	3347.64	586.25	0.37
USACE	75873	200YR	11879.00	345.70	359.91	356.84	360.42	0.001693	7.61	3210.24	575.47	0.37
USACE	75873	500YR	15963.00	345.70	361.61	357.97	362.11	0.001533	7.87	4258.80	668.89	0.36
USACE	75873	SEPT2011	8387.00	345.70	358.32	355.60	358.82	0.001753	7.09	2355.30	501.32	0.37
USACE	75509	2YR	1921.00	345.20	353.33	350.12	353.50	0.001054	3.77	861.42	378.31	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	75509	5YR	3050.00	345.20	354.59	352.23	354.75	0.000913	3.96	1378.55	409.19	0.25
USACE	75509	10YR	4053.00	345.20	355.46	352.82	355.61	0.000879	4.17	1739.27	425.25	0.25
USACE	75509	25YR	5867.00	345.20	356.68	353.56	356.85	0.000891	4.59	2274.26	451.60	0.26
USACE	75509	50YR	7517.00	345.20	357.62	354.10	357.82	0.000899	4.91	2710.58	470.01	0.27
USACE	75509	100YR	9480.00	345.20	358.60	354.60	358.81	0.000922	5.27	3180.22	493.98	0.27
USACE	75509	100YRPLUS	12398.00	345.20	359.89	355.23	360.13	0.000928	5.67	3835.19	519.61	0.28
USACE	75509	200YR	11879.00	345.20	359.65	355.12	359.89	0.000939	5.63	3711.95	515.82	0.28
USACE	75509	500YR	15963.00	345.20	361.36	355.89	361.62	0.000883	5.95	4623.74	558.98	0.28
USACE	75509	SEPT2011	8387.00	345.20	358.08	354.33	358.28	0.000907	5.07	2926.10	480.79	0.27
USACE	75192	2YR	1921.00	344.70	353.06	349.43	353.20	0.000785	3.43	984.06	398.58	0.23
USACE	75192	5YR	3050.00	344.70	354.34	351.31	354.47	0.000758	3.78	1590.06	499.33	0.23
USACE	75192	10YR	4053.00	344.70	355.21	352.24	355.35	0.000740	4.00	2037.15	520.69	0.24
USACE	75192	25YR	5867.00	344.70	356.43	352.98	356.58	0.000758	4.40	2712.70	576.92	0.24
USACE	75192	50YR	7517.00	344.70	357.38	353.60	357.54	0.000766	4.70	3273.28	603.95	0.25
USACE	75192	100YR	9480.00	344.70	358.36	354.11	358.54	0.000764	4.96	3887.62	655.68	0.25
USACE	75192	100YRPLUS	12398.00	344.70	359.66	354.96	359.85	0.000743	5.24	4784.04	716.28	0.25
USACE	75192	200YR	11879.00	344.70	359.42	354.76	359.60	0.000755	5.21	4611.07	707.07	0.25
USACE	75192	500YR	15963.00	344.70	361.15	355.56	361.35	0.000693	5.43	5899.16	774.27	0.25
USACE	75192	SEPT2011	8387.00	344.70	357.83	353.79	358.00	0.000766	4.82	3551.03	616.58	0.25
USACE	74888	2YR	1921.00	344.49	352.48	349.13	352.83	0.001731	4.81	499.76	228.21	0.34
USACE	74888	5YR	3050.00	344.49	353.65	350.56	354.09	0.001967	5.74	864.93	348.85	0.37
USACE	74888	10YR	4053.00	344.49	354.53	351.59	354.97	0.001909	6.09	1189.57	388.03	0.37
USACE	74888	25YR	5867.00	344.49	355.74	353.69	356.21	0.001877	6.61	1686.19	428.06	0.38
USACE	74888	50YR	7517.00	344.49	356.72	354.46	357.18	0.001786	6.88	2113.85	448.82	0.37
USACE	74888	100YR	9480.00	344.49	357.71	355.13	358.18	0.001721	7.17	2566.46	463.40	0.37
USACE	74888	100YRPLUS	12398.00	344.49	359.00	355.85	359.50	0.001699	7.65	3185.70	500.09	0.38
USACE	74888	200YR	11879.00	344.49	358.75	355.80	359.25	0.001720	7.60	3063.23	491.41	0.38
USACE	74888	500YR	15963.00	344.49	360.52	356.74	361.02	0.001567	7.92	3979.21	537.01	0.37
USACE	74888	SEPT2011	8387.00	344.49	357.18	354.79	357.64	0.001743	7.00	2324.72	455.39	0.37
USACE	74615	2YR	1921.00	344.40	352.02		352.34	0.001820	4.85	613.16	269.77	0.34
USACE	74615	5YR	3050.00	344.40	353.18		353.54	0.001911	5.57	943.27	301.13	0.36
USACE	74615	10YR	4053.00	344.40	354.06		354.45	0.001911	6.00	1228.74	348.12	0.37
USACE	74615	25YR	5867.00	344.40	355.27		355.69	0.001921	6.59	1670.55	379.62	0.38
USACE	74615	50YR	7517.00	344.40	356.24		356.68	0.001909	7.01	2056.16	420.17	0.38
USACE	74615	100YR	9480.00	344.40	357.22		357.69	0.001926	7.47	2492.64	470.84	0.39
USACE	74615	100YRPLUS	12398.00	344.40	358.53		359.03	0.001865	7.90	3148.87	532.98	0.39
USACE	74615	200YR	11879.00	344.40	358.27		358.77	0.001900	7.87	3013.37	517.27	0.39
USACE	74615	500YR	15963.00	344.40	360.11		360.59	0.001664	8.06	4040.56	597.12	0.38
USACE	74615	SEPT2011	8387.00	344.40	356.70		357.16	0.001915	7.22	2255.83	443.88	0.38
USACE	74414	2YR	1921.00	344.12	351.69		351.97	0.001798	4.62	612.64	262.93	0.34
USACE	74414	5YR	3050.00	344.12	352.86		353.16	0.001744	5.14	941.66	295.81	0.34
USACE	74414	10YR	4053.00	344.12	353.77		354.08	0.001631	5.40	1232.71	333.76	0.34
USACE	74414	25YR	5867.00	344.12	354.98		355.32	0.001617	5.91	1648.84	353.94	0.35
USACE	74414	50YR	7517.00	344.12	355.95		356.32	0.001622	6.33	2017.51	406.92	0.35
USACE	74414	100YR	9480.00	344.12	356.93		357.33	0.001617	6.73	2435.28	449.88	0.36
USACE	74414	100YRPLUS	12398.00	344.12	358.24		358.67	0.001585	7.18	3059.39	516.14	0.36
USACE	74414	200YR	11879.00	344.12	357.98		358.41	0.001609	7.13	2927.56	493.92	0.36
USACE	74414	500YR	15963.00	344.12	359.86		360.28	0.001402	7.33	4124.30	761.29	0.35
USACE	74414	SEPT2011	8387.00	344.12	356.42		356.80	0.001604	6.49	2211.46	424.32	0.35
USACE	74090	2YR	1921.00	343.80	350.58	348.45	351.12	0.003859	6.01	365.87	173.21	0.48
USACE	74090	5YR	3050.00	343.80	351.72	350.31	352.34	0.003696	6.77	596.52	226.87	0.49
USACE	74090	10YR	4053.00	343.80	352.89	351.35	353.39	0.002666	6.48	895.90	291.06	0.43
USACE	74090	25YR	5867.00	343.80	354.19	352.32	354.68	0.002349	6.80	1336.83	377.83	0.41
USACE	74090	50YR	7517.00	343.80	355.29	352.93	355.74	0.001952	6.73	1779.32	430.33	0.38
USACE	74090	100YR	9480.00	343.80	356.36	353.69	356.79	0.001720	6.78	2262.70	475.64	0.37
USACE	74090	100YRPLUS	12398.00	343.80	357.78	354.54	358.17	0.001453	6.77	2976.35	557.13	0.34
USACE	74090	200YR	11879.00	343.80	357.48	354.43	357.90	0.001545	6.87	2822.78	538.38	0.35
USACE	74090	500YR	15963.00	343.80	359.43	355.39	359.83	0.001331	7.06	4043.41	1004.27	0.34
USACE	74090	SEPT2011	8387.00	343.80	355.81	353.39	356.24	0.001801	6.70	2010.07	449.61	0.37
USACE	73799	2YR	1921.00	343.29	350.38	346.86	350.53	0.000879	3.25	697.34	248.01	0.24
USACE	73799	5YR	3050.00	343.29	351.51	347.80	351.71	0.001004	3.91	987.76	268.17	0.26
USACE	73799	10YR	4053.00	343.29	352.68	348.73	352.89	0.000878	4.07	1322.17	300.23	0.25
USACE	73799	25YR	5867.00	343.29	353.93	349.93	354.19	0.000982	4.74	1746.96	383.81	0.27
USACE	73799	50YR	7517.00	343.29	355.04	350.85	355.31	0.000924	4.96	2208.50	454.46	0.27
USACE	73799	100YR	9480.00	343.29	356.08	351.47	356.39	0.000956	5.37	2749.66	549.86	0.28
USACE	73799	100YRPLUS	12398.00	343.29	357.53	352.46	357.82	0.000860	5.52	3610.24	629.99	0.27
USACE	73799	200YR	11879.00	343.29	357.22	352.26	357.53	0.000904	5.57	3417.92	619.20	0.28
USACE	73799	500YR	15963.00	343.29	359.27	353.40	359.52	0.000670	5.30	4887.35	1034.00	0.24
USACE	73799	SEPT2011	8387.00	343.29	355.53	351.18	355.83	0.000979	5.26	2451.04	521.80	0.28
USACE	73520	2YR	1921.00	343.05	349.92	347.68	350.17	0.001904	4.59	682.27	415.10	0.35
USACE	73520	5YR	3050.00	343.05	351.25	349.77	351.40	0.001116	4.06	1299.53	506.88	0.28
USACE	73520	10YR	4053.00	343.05	352.56	350.16	352.65	0.000615	3.39	2000.06	708.86	0.21
USACE	73520	25YR	5867.00	343.05	353.84	350.76	353.94	0.000566	3.59	2731.11	1029.97	0.21
USACE	73520	50YR	7517.00	343.05	354.97	351.15	355.07	0.000493	3.61	3444.41	1372.86	0.20
USACE	73520	100YR	9480.00	343.05	356.04	351.56	356.14	0.000482	3.81	4174.56	1769.94	0.20
USACE	73520	100YRPLUS	12398.00	343.05	357.49	352.03	357.60	0.000436	3.92	5289.87	2019.15	0.19
USACE	73520	200YR	11879.00	343.05	357.18	351.94	357.29	0.000458	3.96	5044.80	1998.75	0.20
USACE	73520	500YR	15963.00	343.05	359.24	352.54	359.34	0.000350	3.82	6856.28	2609.65	0.18

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	73520	SEPT2011	8387.00	343.05	355.48	351.30	355.58	0.000496	3.74	3776.71	1465.57	0.20
USACE	73284	2YR	1988.00	342.81	349.66	348.34	349.80	0.001330	3.87	916.42	472.88	0.29
USACE	73284	5YR	3171.00	342.81	351.12	349.19	351.20	0.000714	3.32	1628.91	509.51	0.22
USACE	73284	10YR	4248.00	342.81	352.47	349.55	352.54	0.000461	3.00	2351.74	561.70	0.18
USACE	73284	25YR	6142.00	342.81	353.75	350.00	353.83	0.000461	3.30	3111.95	680.69	0.19
USACE	73284	50YR	7864.00	342.81	354.90	350.31	354.98	0.000413	3.37	3937.17	734.47	0.18
USACE	73284	100YR	9906.00	342.81	355.97	350.73	356.05	0.000380	3.44	4740.10	768.22	0.18
USACE	73284	100YRPLUS	12955.00	342.81	357.42	351.22	357.51	0.000396	3.79	5999.23	949.49	0.18
USACE	73284	200YR	12339.00	342.81	357.11	351.12	357.20	0.000405	3.78	5708.50	919.41	0.18
USACE	73284	500YR	16528.00	342.81	359.19	351.71	359.27	0.000301	3.59	7894.99	1353.97	0.16
USACE	73284	SEPT2011	8777.00	342.81	355.40	350.49	355.49	0.000393	3.39	4312.06	747.79	0.18
USACE	73063	2YR	1988.00	342.71	349.56	346.68	349.62	0.000512	2.41	1276.78	476.12	0.18
USACE	73063	5YR	3171.00	342.71	351.04	348.14	351.09	0.000364	2.38	2003.47	511.40	0.16
USACE	73063	10YR	4248.00	342.71	352.42	348.48	352.47	0.000265	2.28	2735.85	545.29	0.14
USACE	73063	25YR	6142.00	342.71	353.69	348.96	353.75	0.000278	2.57	3446.18	590.66	0.15
USACE	73063	50YR	7864.00	342.71	354.84	349.37	354.91	0.000263	2.70	4165.03	684.36	0.14
USACE	73063	100YR	9906.00	342.71	355.91	349.74	355.99	0.000264	2.88	4875.73	726.03	0.15
USACE	73063	100YRPLUS	12955.00	342.71	357.36	350.24	357.45	0.000260	3.09	5900.89	847.52	0.15
USACE	73063	200YR	12339.00	342.71	357.05	350.14	357.14	0.000264	3.06	5666.00	812.06	0.15
USACE	73063	500YR	16528.00	342.71	359.13	350.77	359.22	0.000234	3.18	7428.68	1192.29	0.14
USACE	73063	SEPT2011	8777.00	342.71	355.35	349.55	355.42	0.000262	2.77	4499.02	704.39	0.15
USACE	72796	2YR	1988.00	342.62	349.41	347.24	349.48	0.000661	2.77	1152.83	440.12	0.21
USACE	72796	5YR	3171.00	342.62	350.94	348.25	351.00	0.000436	2.64	1854.99	473.68	0.17
USACE	72796	10YR	4248.00	342.62	352.35	348.60	352.40	0.000310	2.51	2548.95	503.50	0.15
USACE	72796	25YR	6142.00	342.62	353.62	349.08	353.69	0.000322	2.81	3196.45	517.31	0.16
USACE	72796	50YR	7864.00	342.62	354.77	349.44	354.85	0.000306	2.95	3827.91	567.24	0.16
USACE	72796	100YR	9906.00	342.62	355.84	349.80	355.92	0.000312	3.17	4448.95	592.74	0.16
USACE	72796	100YRPLUS	12955.00	342.62	357.28	350.34	357.39	0.000313	3.42	5360.02	698.93	0.16
USACE	72796	200YR	12339.00	342.62	356.97	350.24	357.07	0.000316	3.39	5148.95	656.33	0.16
USACE	72796	500YR	16528.00	342.62	359.06	350.88	359.16	0.000285	3.54	6821.80	1041.12	0.16
USACE	72796	SEPT2011	8777.00	342.62	355.28	349.59	355.36	0.000307	3.05	4118.00	584.26	0.16
USACE	72549	2YR	1988.00	342.41	349.00		349.23	0.001566	4.30	638.94	224.65	0.32
USACE	72549	5YR	3171.00	342.41	350.61		350.82	0.001193	4.43	1029.66	265.85	0.29
USACE	72549	10YR	4248.00	342.41	352.07		352.27	0.000914	4.38	1473.82	354.81	0.26
USACE	72549	25YR	6142.00	342.41	353.32		353.55	0.000944	4.87	1943.55	396.12	0.27
USACE	72549	50YR	7864.00	342.41	354.49		354.71	0.000847	4.97	2451.10	464.73	0.26
USACE	72549	100YR	9906.00	342.41	355.55		355.79	0.000822	5.20	2972.92	512.63	0.26
USACE	72549	100YRPLUS	12955.00	342.41	357.01		357.26	0.000763	5.41	3770.30	614.28	0.26
USACE	72549	200YR	12339.00	342.41	356.69		356.94	0.000787	5.40	3578.81	588.07	0.26
USACE	72549	500YR	16528.00	342.41	358.83		359.05	0.000625	5.32	5085.30	908.40	0.24
USACE	72549	SEPT2011	8777.00	342.41	354.99		355.22	0.000831	5.07	2691.88	488.12	0.26
USACE	72423	2YR	1988.00	342.31	348.83	345.58	349.05	0.001157	3.84	546.41	168.74	0.28
USACE	72423	5YR	3171.00	342.31	350.28	346.54	350.62	0.001360	4.82	697.98	186.96	0.31
USACE	72423	10YR	4248.00	342.31	351.91	347.27	352.14	0.000864	4.38	1311.29	300.39	0.26
USACE	72423	25YR	6142.00	342.31	353.10	348.41	353.41	0.000999	5.12	1732.65	364.47	0.28
USACE	72423	50YR	7864.00	342.31	354.27	349.35	354.58	0.000949	5.37	2186.09	413.83	0.28
USACE	72423	100YR	9906.00	342.31	355.31	350.30	355.66	0.000967	5.74	2655.72	500.62	0.29
USACE	72423	100YRPLUS	12955.00	342.31	356.78	350.94	357.13	0.000905	5.98	3500.65	649.46	0.28
USACE	72423	200YR	12339.00	342.31	356.45	350.71	356.81	0.000944	6.02	3296.41	603.63	0.29
USACE	72423	500YR	16528.00	342.31	358.66	351.40	358.95	0.000707	5.76	4877.84	915.78	0.26
USACE	72423	SEPT2011	8777.00	342.31	354.77	349.79	355.09	0.000954	5.54	2399.08	444.48	0.28
USACE	72393 Erisman Road		Bridge									
USACE	72364	2YR	1988.00	342.23	348.39	346.19	348.88	0.003045	5.66	363.32	166.51	0.44
USACE	72364	5YR	3171.00	342.23	349.60	347.33	350.37	0.003646	7.13	472.48	207.00	0.50
USACE	72364	10YR	4248.00	342.23	350.68	348.37	351.24	0.002575	6.64	868.19	240.27	0.43
USACE	72364	25YR	6142.00	342.23	352.21	349.73	352.74	0.002139	6.85	1284.18	311.45	0.40
USACE	72364	50YR	7864.00	342.23	353.45	350.75	353.96	0.001791	6.83	1692.45	348.32	0.38
USACE	72364	100YR	9906.00	342.23	354.75	351.49	355.23	0.001573	6.93	2200.81	462.01	0.36
USACE	72364	100YRPLUS	12955.00	342.23	356.57	352.50	356.98	0.001191	6.64	3195.23	588.22	0.32
USACE	72364	200YR	12339.00	342.23	356.21	352.34	356.64	0.001265	6.73	2985.93	577.73	0.33
USACE	72364	500YR	16528.00	342.23	358.53	353.27	358.86	0.000883	6.27	4511.28	839.50	0.28
USACE	72364	SEPT2011	8777.00	342.23	354.04	351.09	354.54	0.001685	6.88	1906.70	386.11	0.37
USACE	72242	2YR	1988.00	341.89	348.24	345.34	348.50	0.001574	4.24	561.71	198.26	0.32
USACE	72242	5YR	3171.00	341.89	349.55	346.42	349.86	0.001553	4.85	837.27	220.55	0.33
USACE	72242	10YR	4248.00	341.89	350.55	347.79	350.89	0.001508	5.23	1064.78	236.08	0.33
USACE	72242	25YR	6142.00	341.89	352.07	348.85	352.45	0.001427	5.72	1463.48	282.48	0.33
USACE	72242	50YR	7864.00	341.89	353.32	349.56	353.71	0.001297	5.93	1832.46	302.05	0.32
USACE	72242	100YR	9906.00	341.89	354.61	350.26	355.02	0.001200	6.16	2231.34	473.00	0.31
USACE	72242	100YRPLUS	12955.00	341.89	356.39	351.28	356.83	0.001099	6.47	2807.86	668.89	0.31
USACE	72242	200YR	12339.00	341.89	356.06	351.02	356.49	0.001113	6.41	2696.92	525.37	0.31
USACE	72242	500YR	16528.00	341.89	358.46	352.21	358.74	0.000713	5.72	4863.74	846.24	0.25
USACE	72242	SEPT2011	8777.00	341.89	353.91	349.88	354.31	0.001252	6.04	2013.19	386.07	0.32
USACE	72007	2YR	1988.00	341.29	347.79	345.31	348.08	0.001972	4.58	553.56	216.10	0.35
USACE	72007	5YR	3171.00	341.29	349.16	346.86	349.47	0.001732	5.01	866.53	246.94	0.34
USACE	72007	10YR	4248.00	341.29	350.19	347.74	350.52	0.001599	5.30	1147.92	403.06	0.34
USACE	72007	25YR	6142.00	341.29	351.78	348.60	352.11	0.001337	5.50	1688.59	571.38	0.32

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	72007	50YR	7864.00	341.29	353.09	349.44	353.40	0.001135	5.53	2159.80	657.82	0.30
USACE	72007	100YR	9906.00	341.29	354.42	349.98	354.73	0.001015	5.67	2654.14	740.57	0.29
USACE	72007	100YRPLUS	12955.00	341.29	356.24	351.10	356.56	0.000895	5.85	3353.28	823.98	0.28
USACE	72007	200YR	12339.00	341.29	355.90	350.93	356.22	0.000909	5.80	3220.83	810.58	0.28
USACE	72007	500YR	16528.00	341.29	358.44	351.89	358.57	0.000398	4.31	7099.56	932.43	0.19
USACE	72007	SEPT2011	8777.00	341.29	353.70	349.69	354.01	0.001075	5.59	2384.63	698.31	0.30
USACE	71785	2YR	1988.00	340.12	347.40		347.67	0.001703	4.58	602.98	245.19	0.33
USACE	71785	5YR	3171.00	340.12	348.84		349.11	0.001432	4.86	1008.44	320.74	0.32
USACE	71785	10YR	4248.00	340.12	349.95		350.19	0.001191	4.86	1442.36	445.24	0.29
USACE	71785	25YR	6142.00	340.12	351.64		351.83	0.000851	4.64	2245.86	501.39	0.26
USACE	71785	50YR	7864.00	340.12	352.99		353.17	0.000687	4.53	2946.41	535.12	0.24
USACE	71785	100YR	9906.00	340.12	354.35		354.52	0.000591	4.53	3695.78	562.42	0.22
USACE	71785	100YRPLUS	12955.00	340.12	356.20		356.36	0.000501	4.56	4769.45	602.79	0.21
USACE	71785	200YR	12339.00	340.12	355.86		356.02	0.000512	4.53	4564.55	593.44	0.21
USACE	71785	500YR	16528.00	340.12	358.32		358.48	0.000426	4.59	6117.67	673.80	0.20
USACE	71785	SEPT2011	8777.00	340.12	353.62		353.79	0.000640	4.53	3286.08	550.40	0.23
USACE	71548	2YR	1988.00	339.28	347.09	343.61	347.32	0.001230	4.09	674.19	266.78	0.29
USACE	71548	5YR	3171.00	339.28	348.57	344.86	348.81	0.001103	4.45	1117.17	330.21	0.28
USACE	71548	10YR	4248.00	339.28	349.71	346.32	349.94	0.000978	4.59	1511.91	363.95	0.27
USACE	71548	25YR	6142.00	339.28	351.42	347.58	351.64	0.000817	4.71	2167.05	398.37	0.25
USACE	71548	50YR	7864.00	339.28	352.78	348.29	353.00	0.000729	4.82	2727.26	423.21	0.25
USACE	71548	100YR	9906.00	339.28	354.15	349.02	354.37	0.000679	5.00	3319.28	445.79	0.24
USACE	71548	100YRPLUS	12955.00	339.28	355.99	349.85	356.23	0.000633	5.26	4179.78	529.38	0.24
USACE	71548	200YR	12339.00	339.28	355.65	349.65	355.88	0.000631	5.18	4015.89	504.61	0.24
USACE	71548	500YR	16528.00	339.28	358.13	350.62	358.36	0.000552	5.37	5399.02	581.78	0.23
USACE	71548	SEPT2011	8777.00	339.28	353.41	348.78	353.63	0.000704	4.90	2995.59	432.92	0.24
USACE	71231	2YR	1988.00	338.18	346.82		346.97	0.000879	3.42	831.36	319.00	0.24
USACE	71231	5YR	3171.00	338.18	348.35		348.50	0.000733	3.61	1346.90	344.97	0.23
USACE	71231	10YR	4248.00	338.18	349.51		349.66	0.000656	3.74	1752.18	354.36	0.22
USACE	71231	25YR	6142.00	338.18	351.25		351.40	0.000584	3.97	2428.65	441.84	0.21
USACE	71231	50YR	7864.00	338.18	352.63		352.79	0.000532	4.11	3072.80	482.86	0.21
USACE	71231	100YR	9906.00	338.18	354.00		354.17	0.000502	4.29	3768.97	525.20	0.21
USACE	71231	100YRPLUS	12955.00	338.18	355.86		356.04	0.000473	4.54	4785.69	570.46	0.20
USACE	71231	200YR	12339.00	338.18	355.52		355.70	0.000475	4.48	4592.62	562.49	0.20
USACE	71231	500YR	16528.00	338.18	358.01		358.19	0.000427	4.70	6075.11	631.45	0.20
USACE	71231	SEPT2011	8777.00	338.18	353.26		353.42	0.000519	4.20	3385.34	506.79	0.21
USACE	70874	2YR	1988.00	337.91	346.36		346.60	0.001210	4.20	790.16	298.85	0.28
USACE	70874	5YR	3171.00	337.91	347.90		348.17	0.001163	4.72	1269.51	321.77	0.29
USACE	70874	10YR	4248.00	337.91	349.07		349.35	0.001133	5.08	1652.39	338.49	0.29
USACE	70874	25YR	6142.00	337.91	350.79		351.11	0.001111	5.63	2266.22	373.22	0.30
USACE	70874	50YR	7864.00	337.91	352.17		352.51	0.001071	5.97	2795.47	392.16	0.30
USACE	70874	100YR	9906.00	337.91	353.53		353.90	0.001070	6.39	3340.21	409.41	0.30
USACE	70874	100YRPLUS	12955.00	337.91	355.36		355.78	0.001064	6.92	4111.84	442.52	0.31
USACE	70874	200YR	12339.00	337.91	355.04		355.43	0.001052	6.79	3969.38	428.43	0.30
USACE	70874	500YR	16528.00	337.91	357.49		357.94	0.001035	7.43	5133.60	516.43	0.31
USACE	70874	SEPT2011	8777.00	337.91	352.80		353.15	0.001072	6.17	3042.55	400.57	0.30
USACE	70645	2YR	1988.00	337.58	345.85		346.23	0.002119	5.20	611.16	296.89	0.37
USACE	70645	5YR	3171.00	337.58	347.51		347.86	0.001670	5.42	1140.63	331.20	0.34
USACE	70645	10YR	4248.00	337.58	348.73		349.07	0.001473	5.60	1554.12	346.56	0.33
USACE	70645	25YR	6142.00	337.58	350.51		350.85	0.001305	5.95	2184.24	362.68	0.32
USACE	70645	50YR	7864.00	337.58	351.90		352.26	0.001251	6.32	2749.08	437.79	0.32
USACE	70645	100YR	9906.00	337.58	353.30		353.66	0.001155	6.53	3412.04	505.74	0.31
USACE	70645	100YRPLUS	12955.00	337.58	355.19		355.54	0.001023	6.70	4423.96	564.28	0.30
USACE	70645	200YR	12339.00	337.58	354.85		355.20	0.001039	6.66	4234.21	555.88	0.30
USACE	70645	500YR	16528.00	337.58	357.39		357.71	0.000844	6.65	5720.80	610.50	0.28
USACE	70645	SEPT2011	8777.00	337.58	352.54		352.91	0.001207	6.42	3041.95	469.99	0.32
USACE	70292	2YR	1988.00	337.10	345.32		345.61	0.001434	4.54	631.79	215.45	0.31
USACE	70292	5YR	3171.00	337.10	347.01		347.35	0.001365	5.16	1005.15	224.77	0.32
USACE	70292	10YR	4248.00	337.10	348.20		348.59	0.001377	5.67	1275.86	229.84	0.32
USACE	70292	25YR	6142.00	337.10	349.90		350.38	0.001457	6.50	1678.21	247.63	0.34
USACE	70292	50YR	7864.00	337.10	351.20		351.79	0.001564	7.25	2122.28	422.86	0.36
USACE	70292	100YR	9906.00	337.10	352.68		353.23	0.001402	7.39	2793.56	484.77	0.35
USACE	70292	100YRPLUS	12955.00	337.10	354.67		355.17	0.001175	7.40	3834.50	552.39	0.33
USACE	70292	200YR	12339.00	337.10	354.32		354.83	0.001204	7.38	3640.42	543.14	0.33
USACE	70292	500YR	16528.00	337.10	357.00		357.42	0.000915	7.15	5194.31	614.58	0.29
USACE	70292	SEPT2011	8777.00	337.10	351.88		352.45	0.001493	7.34	2418.70	454.24	0.36
USACE	70002	2YR	1988.00	336.51	345.06		345.26	0.000871	3.67	657.38	162.44	0.24
USACE	70002	5YR	3171.00	336.51	346.70		346.99	0.000991	4.51	951.18	188.82	0.27
USACE	70002	10YR	4248.00	336.51	347.86		348.22	0.001092	5.14	1187.68	217.25	0.29
USACE	70002	25YR	6142.00	336.51	349.51		349.99	0.001216	6.03	1576.43	254.10	0.31
USACE	70002	50YR	7864.00	336.51	350.81		351.36	0.001280	6.64	1918.35	279.37	0.33
USACE	70002	100YR	9906.00	336.51	352.19		352.83	0.001320	7.22	2320.93	305.10	0.34
USACE	70002	100YRPLUS	12955.00	336.51	354.08		354.79	0.001316	7.84	2964.54	365.96	0.35
USACE	70002	200YR	12339.00	336.51	353.74		354.44	0.001318	7.73	2841.45	357.48	0.34
USACE	70002	500YR	16528.00	336.51	356.42		357.09	0.001135	7.97	3877.32	417.24	0.33
USACE	70002	SEPT2011	8777.00	336.51	351.45		352.04	0.001296	6.90	2101.86	289.17	0.33
USACE	69765	2YR	1988.00	336.10	344.53		344.94	0.001987	5.28	447.41	150.77	0.36

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	69765	5YR	3171.00	336.10	346.19		346.66	0.001882	5.97	729.52	185.30	0.37
USACE	69765	10YR	4248.00	336.10	347.37		347.88	0.001819	6.41	960.96	206.57	0.37
USACE	69765	25YR	6142.00	336.10	349.09		349.64	0.001719	6.96	1341.21	234.05	0.37
USACE	69765	50YR	7864.00	336.10	350.43		351.02	0.001652	7.36	1672.43	260.27	0.37
USACE	69765	100YR	9906.00	336.10	351.87		352.48	0.001566	7.71	2084.93	306.13	0.36
USACE	69765	100YRPLUS	12955.00	336.10	353.83		354.43	0.001401	7.95	2727.28	348.23	0.35
USACE	69765	200YR	12339.00	336.10	353.49		354.08	0.001415	7.88	2608.15	340.63	0.35
USACE	69765	500YR	16528.00	336.10	356.24		356.79	0.001141	7.88	3624.98	397.97	0.32
USACE	69765	SEPT2011	8777.00	336.10	351.10		351.70	0.001620	7.54	1855.93	286.74	0.37
USACE	69476	2YR	1988.00	335.33	344.23		344.48	0.001081	3.97	516.00	114.95	0.27
USACE	69476	5YR	3171.00	335.33	345.82		346.19	0.001259	4.93	734.72	157.26	0.30
USACE	69476	10YR	4248.00	335.33	346.96		347.41	0.001366	5.59	925.95	183.34	0.32
USACE	69476	25YR	6142.00	335.33	348.63		349.19	0.001448	6.42	1265.28	222.74	0.34
USACE	69476	50YR	7864.00	335.33	349.95		350.56	0.001451	6.92	1575.24	247.31	0.35
USACE	69476	100YR	9906.00	335.33	351.36		352.04	0.001440	7.41	1972.25	306.68	0.35
USACE	69476	100YRPLUS	12955.00	335.33	353.37		354.04	0.001289	7.67	2633.93	351.37	0.34
USACE	69476	200YR	12339.00	335.33	353.02		353.68	0.001304	7.60	2511.65	344.00	0.34
USACE	69476	500YR	16528.00	335.33	355.87		356.47	0.001031	7.56	3576.70	406.79	0.31
USACE	69476	SEPT2011	8777.00	335.33	350.61		351.25	0.001439	7.13	1748.96	282.27	0.35
USACE	69178	2YR	1988.00	335.02	343.80		344.10	0.001443	4.79	562.23	168.15	0.31
USACE	69178	5YR	3171.00	335.02	345.44		345.78	0.001405	5.42	864.43	196.92	0.32
USACE	69178	10YR	4248.00	335.02	346.59		346.97	0.001415	5.90	1100.45	214.27	0.33
USACE	69178	25YR	6142.00	335.02	348.27		348.72	0.001435	6.60	1483.74	242.12	0.34
USACE	69178	50YR	7864.00	335.02	349.59		350.09	0.001473	7.17	1827.02	281.85	0.35
USACE	69178	100YR	9906.00	335.02	351.01		351.56	0.001475	7.70	2276.41	341.92	0.36
USACE	69178	100YRPLUS	12955.00	335.02	353.10		353.61	0.001247	7.74	3046.08	394.98	0.34
USACE	69178	200YR	12339.00	335.02	352.74		353.25	0.001268	7.69	2905.48	385.88	0.34
USACE	69178	500YR	16528.00	335.02	355.68		356.12	0.000973	7.53	4234.95	507.58	0.30
USACE	69178	SEPT2011	8777.00	335.02	350.24		350.78	0.001519	7.53	2021.61	315.88	0.36
USACE	68863	2YR	1988.00	334.28	343.50		343.71	0.000940	3.85	652.04	265.28	0.25
USACE	68863	5YR	3171.00	334.28	345.23		345.42	0.000760	4.00	1142.06	297.25	0.24
USACE	68863	10YR	4248.00	334.28	346.42		346.61	0.000688	4.14	1505.74	311.16	0.23
USACE	68863	25YR	6142.00	334.28	348.17		348.36	0.000615	4.35	2158.08	459.48	0.22
USACE	68863	50YR	7864.00	334.28	349.55		349.74	0.000532	4.35	2868.78	565.69	0.21
USACE	68863	100YR	9906.00	334.28	351.05		351.21	0.000451	4.30	3776.36	651.16	0.20
USACE	68863	100YRPLUS	12955.00	334.28	353.17		353.31	0.000351	4.15	5336.59	806.46	0.18
USACE	68863	200YR	12339.00	334.28	352.81		352.95	0.000363	4.15	5045.06	785.87	0.18
USACE	68863	500YR	16528.00	334.28	355.77		355.88	0.000249	3.84	7736.19	1028.10	0.15
USACE	68863	SEPT2011	8777.00	334.28	350.25		350.42	0.000491	4.32	3273.44	605.02	0.20
USACE	68451	2YR	1978.00	333.89	343.03		343.27	0.001197	4.14	722.37	265.75	0.28
USACE	68451	5YR	3156.00	333.89	344.81		345.05	0.001028	4.49	1237.73	313.07	0.27
USACE	68451	10YR	4227.00	333.89	346.02		346.27	0.000971	4.76	1646.56	367.68	0.27
USACE	68451	25YR	6121.00	333.89	347.80		348.05	0.000880	5.07	2356.12	437.51	0.26
USACE	68451	50YR	7848.00	333.89	349.21		349.46	0.000804	5.24	3049.66	541.53	0.26
USACE	68451	100YR	9915.00	333.89	350.75		350.98	0.000693	5.24	3929.42	595.40	0.24
USACE	68451	100YRPLUS	12967.00	333.89	352.93		353.13	0.000552	5.13	5298.49	666.05	0.22
USACE	68451	200YR	12402.00	333.89	352.55		352.76	0.000569	5.14	5052.68	650.57	0.22
USACE	68451	500YR	16596.00	333.89	355.57		355.75	0.000421	4.95	7260.83	831.63	0.20
USACE	68451	SEPT2011	8762.00	333.89	349.92		350.16	0.000749	5.24	3447.29	572.30	0.25
USACE	68109	2YR	1978.00	333.18	342.77		342.95	0.000708	3.38	588.34	85.69	0.22
USACE	68109	5YR	3156.00	333.18	344.45		344.73	0.000862	4.28	835.12	217.30	0.25
USACE	68109	10YR	4227.00	333.18	345.61		345.94	0.000928	4.81	1115.40	271.89	0.27
USACE	68109	25YR	6121.00	333.18	347.38		347.75	0.000905	5.29	1704.15	372.80	0.27
USACE	68109	50YR	7848.00	333.18	348.84		349.18	0.000812	5.41	2277.97	413.99	0.26
USACE	68109	100YR	9915.00	333.18	350.41		350.74	0.000712	5.45	2957.90	446.71	0.25
USACE	68109	100YRPLUS	12967.00	333.18	352.65		352.93	0.000581	5.41	4005.60	491.36	0.23
USACE	68109	200YR	12402.00	333.18	352.27		352.56	0.000598	5.40	3820.93	483.81	0.23
USACE	68109	500YR	16596.00	333.18	355.35		355.60	0.000447	5.23	5434.80	591.57	0.21
USACE	68109	SEPT2011	8762.00	333.18	349.57		349.91	0.000759	5.42	2588.78	429.78	0.25
USACE	67830	2YR	1978.00	333.02	342.40	338.09	342.68	0.001267	4.28	493.98	100.61	0.29
USACE	67830	5YR	3156.00	333.02	344.08	339.59	344.43	0.001302	5.03	839.65	254.51	0.31
USACE	67830	10YR	4227.00	333.02	345.29	340.64	345.65	0.001211	5.31	1161.61	278.95	0.30
USACE	67830	25YR	6121.00	333.02	347.12	342.28	347.47	0.001057	5.57	1701.00	309.47	0.29
USACE	67830	50YR	7848.00	333.02	348.59	344.21	348.94	0.000949	5.72	2172.43	331.44	0.28
USACE	67830	100YR	9915.00	333.02	350.17	345.06	350.52	0.000862	5.88	2717.26	358.67	0.27
USACE	67830	100YRPLUS	12967.00	333.02	352.41	346.09	352.75	0.000737	5.99	3569.19	445.69	0.26
USACE	67830	200YR	12402.00	333.02	352.03	345.93	352.37	0.000754	5.96	3418.27	432.94	0.26
USACE	67830	500YR	16596.00	333.02	355.12	347.10	355.45	0.000618	6.06	4712.47	579.78	0.24
USACE	67830	SEPT2011	8762.00	333.02	349.33	344.64	349.67	0.000901	5.78	2421.76	343.88	0.28
USACE	67426	2YR	1978.00	332.41	342.01	336.97	342.23	0.000915	3.76	552.99	136.35	0.25
USACE	67426	5YR	3156.00	332.41	343.66	338.31	343.96	0.000995	4.50	847.65	199.90	0.27
USACE	67426	10YR	4227.00	332.41	344.86	339.34	345.19	0.001008	4.94	1098.72	219.31	0.28
USACE	67426	25YR	6121.00	332.41	346.69	340.92	347.06	0.000976	5.44	1523.52	244.86	0.28
USACE	67426	50YR	7848.00	332.41	348.17	342.83	348.56	0.000923	5.72	1896.74	259.50	0.28
USACE	67426	100YR	9915.00	332.41	349.75	343.97	350.16	0.000877	6.02	2322.00	277.86	0.28
USACE	67426	100YRPLUS	12967.00	332.41	351.98	345.19	352.43	0.000823	6.40	2993.88	332.92	0.27
USACE	67426	200YR	12402.00	332.41	351.60	344.96	352.04	0.000833	6.34	2868.79	323.36	0.27
USACE	67426	500YR	16596.00	332.41	354.77	346.36	355.18	0.000661	6.34	4054.15	660.57	0.25

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	67426	SEPT2011	8762.00	332.41	348.91	343.39	349.31	0.000896	5.85	2092.34	268.13	0.28
USACE	67122	2YR	1978.00	332.20	341.78	336.39	341.96	0.000762	3.49	658.04	223.00	0.23
USACE	67122	5YR	3156.00	332.20	343.46	337.74	343.67	0.000759	3.99	1096.74	299.50	0.23
USACE	67122	10YR	4227.00	332.20	344.68	338.70	344.90	0.000714	4.21	1499.29	350.53	0.23
USACE	67122	25YR	6121.00	332.20	346.57	340.20	346.78	0.000611	4.36	2227.79	412.14	0.22
USACE	67122	50YR	7848.00	332.20	348.10	342.46	348.29	0.000530	4.39	2887.73	447.13	0.21
USACE	67122	100YR	9915.00	332.20	349.72	343.39	349.91	0.000456	4.39	3622.29	455.06	0.20
USACE	67122	100YRPLUS	12967.00	332.20	352.01	344.52	352.18	0.000382	4.41	4678.27	482.82	0.19
USACE	67122	200YR	12402.00	332.20	351.62	344.32	351.79	0.000391	4.40	4495.65	472.35	0.19
USACE	67122	500YR	16596.00	332.20	354.81	345.53	354.97	0.000313	4.41	6052.83	700.10	0.17
USACE	67122	SEPT2011	8762.00	332.20	348.86	342.94	349.05	0.000489	4.38	3231.25	451.60	0.20
USACE	66848	2YR	1999.00	332.07	341.63	336.60	341.76	0.000629	3.13	914.11	337.97	0.21
USACE	66848	5YR	3192.00	332.07	343.35	337.95	343.48	0.000510	3.26	1528.36	369.18	0.19
USACE	66848	10YR	4277.00	332.07	344.60	338.97	344.72	0.000464	3.39	2001.26	389.59	0.19
USACE	66848	25YR	6197.00	332.07	346.50	341.32	346.62	0.000416	3.60	2768.37	428.31	0.18
USACE	66848	50YR	7946.00	332.07	348.02	342.02	348.15	0.000383	3.75	3460.31	470.59	0.18
USACE	66848	100YR	10036.00	332.07	349.65	342.69	349.78	0.000352	3.87	4250.51	499.86	0.18
USACE	66848	100YRPLUS	13125.00	332.07	351.94	343.42	352.08	0.000313	4.01	5454.80	670.56	0.17
USACE	66848	200YR	12540.00	332.07	351.55	343.32	351.69	0.000317	3.98	5240.69	652.73	0.17
USACE	66848	500YR	16760.00	332.07	354.76	344.20	354.89	0.000252	3.98	7104.31	947.64	0.16
USACE	66848	SEPT2011	8812.00	332.07	348.79	342.33	348.92	0.000359	3.76	3826.99	483.76	0.18
USACE	66565	2YR	1999.00	332.07	341.39		341.56	0.000815	3.78	893.27	327.38	0.24
USACE	66565	5YR	3192.00	332.07	343.18		343.32	0.000624	3.80	1533.13	392.74	0.22
USACE	66565	10YR	4277.00	332.07	344.46		344.59	0.000543	3.85	2059.76	431.22	0.21
USACE	66565	25YR	6197.00	332.07	346.39		346.51	0.000454	3.93	2934.05	477.98	0.19
USACE	66565	50YR	7946.00	332.07	347.93		348.05	0.000401	3.98	3697.13	511.41	0.19
USACE	66565	100YR	10036.00	332.07	349.57		349.69	0.000360	4.06	4565.32	546.21	0.18
USACE	66565	100YRPLUS	13125.00	332.07	351.88		351.99	0.000311	4.12	5879.22	597.52	0.17
USACE	66565	200YR	12540.00	332.07	351.49		351.60	0.000316	4.10	5648.62	587.94	0.17
USACE	66565	500YR	16760.00	332.07	354.71		354.82	0.000257	4.13	7690.37	698.45	0.16
USACE	66565	SEPT2011	8812.00	332.07	348.71		348.82	0.000372	3.97	4100.86	528.15	0.18
USACE	66256	2YR	1999.00	331.98	341.09		341.30	0.000893	3.72	609.55	153.64	0.25
USACE	66256	5YR	3192.00	331.98	342.81		343.08	0.000953	4.44	901.18	186.37	0.26
USACE	66256	10YR	4277.00	331.98	344.03		344.36	0.000991	4.94	1141.42	207.42	0.28
USACE	66256	25YR	6197.00	331.98	345.89		346.29	0.001024	5.63	1569.26	259.26	0.29
USACE	66256	50YR	7946.00	331.98	347.40		347.84	0.001006	6.04	2002.58	318.41	0.29
USACE	66256	100YR	10036.00	331.98	349.05		349.50	0.000932	6.28	2585.57	380.90	0.29
USACE	66256	100YRPLUS	13125.00	331.98	351.42		351.83	0.000766	6.28	3579.08	453.11	0.27
USACE	66256	200YR	12540.00	331.98	351.03		351.44	0.000787	6.27	3400.80	442.12	0.27
USACE	66256	500YR	16760.00	331.98	354.36		354.69	0.000563	5.98	5022.44	535.09	0.23
USACE	66256	SEPT2011	8812.00	331.98	348.19		348.63	0.000959	6.13	2266.49	353.95	0.29
USACE	65875	2YR	1999.00	331.82	340.86		341.00	0.000627	3.21	819.73	223.66	0.21
USACE	65875	5YR	3192.00	331.82	342.59		342.76	0.000641	3.74	1260.60	305.52	0.22
USACE	65875	10YR	4277.00	331.82	343.85		344.03	0.000610	3.98	1676.06	347.24	0.22
USACE	65875	25YR	6197.00	331.82	345.77		345.96	0.000542	4.20	2386.24	387.40	0.21
USACE	65875	50YR	7946.00	331.82	347.33		347.51	0.000487	4.31	3010.78	409.62	0.20
USACE	65875	100YR	10036.00	331.82	349.01		349.19	0.000440	4.43	3714.42	428.65	0.20
USACE	65875	100YRPLUS	13125.00	331.82	351.39		351.57	0.000379	4.52	4767.31	456.28	0.19
USACE	65875	200YR	12540.00	331.82	350.99		351.17	0.000385	4.49	4586.82	451.61	0.19
USACE	65875	500YR	16760.00	331.82	354.32		354.50	0.000306	4.50	6156.19	492.26	0.17
USACE	65875	SEPT2011	8812.00	331.82	348.13		348.31	0.000452	4.32	3343.76	419.08	0.20
USACE	65468	2YR	1999.00	331.63	340.57	335.99	340.73	0.000688	3.41	710.61	157.79	0.22
USACE	65468	5YR	3192.00	331.63	342.28	337.20	342.48	0.000721	4.00	989.39	168.89	0.23
USACE	65468	10YR	4277.00	331.63	343.50	338.53	343.75	0.000762	4.47	1201.94	180.26	0.24
USACE	65468	25YR	6197.00	331.63	345.37	339.88	345.68	0.000788	5.08	1554.01	195.43	0.26
USACE	65468	50YR	7946.00	331.63	346.90	340.79	347.25	0.000786	5.48	1861.31	206.98	0.26
USACE	65468	100YR	10036.00	331.63	348.54	341.63	348.94	0.000778	5.88	2211.23	218.36	0.26
USACE	65468	100YRPLUS	13125.00	331.63	350.90	342.69	351.34	0.000731	6.27	2743.53	232.75	0.26
USACE	65468	200YR	12540.00	331.63	350.51	342.49	350.94	0.000732	6.18	2653.26	230.41	0.26
USACE	65468	500YR	16760.00	331.63	353.84	343.88	354.30	0.000632	6.45	3455.97	251.91	0.25
USACE	65468	SEPT2011	8812.00	331.63	347.70	341.14	348.06	0.000761	5.60	2029.17	212.59	0.26
USACE	65279	2YR	1999.00	331.51	340.50	335.54	340.61	0.000473	2.87	938.63	246.24	0.18
USACE	65279	5YR	3192.00	331.51	342.23	336.69	342.35	0.000456	3.22	1381.34	266.13	0.19
USACE	65279	10YR	4277.00	331.51	343.46	337.59	343.60	0.000458	3.51	1719.37	280.12	0.19
USACE	65279	25YR	6197.00	331.51	345.36	339.58	345.52	0.000449	3.88	2267.62	298.00	0.19
USACE	65279	50YR	7946.00	331.51	346.91	340.31	347.09	0.000438	4.14	2741.84	314.95	0.19
USACE	65279	100YR	10036.00	331.51	348.58	341.01	348.77	0.000425	4.39	3280.88	333.32	0.20
USACE	65279	100YRPLUS	13125.00	331.51	350.96	341.91	351.17	0.000394	4.65	4102.10	363.03	0.19
USACE	65279	200YR	12540.00	331.51	350.57	341.75	350.77	0.000393	4.58	3960.91	354.74	0.19
USACE	65279	500YR	16760.00	331.51	353.93	342.81	354.14	0.000328	4.70	5347.00	542.16	0.18
USACE	65279	SEPT2011	8812.00	331.51	347.72	340.61	347.90	0.000419	4.20	3000.10	322.83	0.19
USACE	64890	2YR	1999.00	331.31	340.27		340.40	0.000619	3.24	863.44	255.87	0.21
USACE	64890	5YR	3192.00	331.31	342.04		342.16	0.000518	3.42	1364.05	301.27	0.20
USACE	64890	10YR	4277.00	331.31	343.29		343.42	0.000483	3.59	1752.11	319.50	0.20
USACE	64890	25YR	6197.00	331.31	345.21		345.35	0.000436	3.81	2387.65	341.09	0.19
USACE	64890	50YR	7946.00	331.31	346.77		346.92	0.000405	3.98	2937.21	363.30	0.19
USACE	64890	100YR	10036.00	331.31	348.45		348.61	0.000381	4.16	3574.94	397.79	0.19

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	64890	100YRPLUS	13125.00	331.31	350.86		351.02	0.000334	4.29	4591.20	443.29	0.18
USACE	64890	200YR	12540.00	331.31	350.46		350.62	0.000338	4.25	4417.01	434.87	0.18
USACE	64890	500YR	16760.00	331.31	353.86		354.01	0.000266	4.23	5994.95	490.31	0.16
USACE	64890	SEPT2011	8812.00	331.31	347.59		347.74	0.000381	4.01	3241.59	378.33	0.18
USACE	64523	2YR	1999.00	331.00	340.10		340.19	0.000450	2.80	973.94	260.04	0.18
USACE	64523	5YR	3192.00	331.00	341.88		341.99	0.000412	3.08	1462.12	287.73	0.18
USACE	64523	10YR	4277.00	331.00	343.14		343.25	0.000406	3.32	1833.35	305.02	0.18
USACE	64523	25YR	6197.00	331.00	345.06		345.19	0.000390	3.63	2442.19	327.92	0.18
USACE	64523	50YR	7946.00	331.00	346.63		346.77	0.000372	3.84	2968.20	343.45	0.18
USACE	64523	100YR	10036.00	331.00	348.31		348.47	0.000358	4.06	3563.42	364.34	0.18
USACE	64523	100YRPLUS	13125.00	331.00	350.73		350.89	0.000327	4.26	4480.91	397.59	0.18
USACE	64523	200YR	12540.00	331.00	350.33		350.49	0.000329	4.21	4324.65	391.63	0.18
USACE	64523	500YR	16760.00	331.00	353.74		353.91	0.000275	4.32	5755.31	447.90	0.16
USACE	64523	SEPT2011	8812.00	331.00	347.46		347.60	0.000354	3.89	3256.03	353.09	0.18
USACE	64167	2YR	1942.00	330.70	339.84	335.19	340.00	0.000652	3.38	794.83	209.52	0.22
USACE	64167	5YR	3083.00	330.70	341.63	336.44	341.80	0.000629	3.82	1203.04	245.93	0.22
USACE	64167	10YR	4121.00	330.70	342.87	337.62	343.07	0.000624	4.13	1519.79	260.85	0.22
USACE	64167	25YR	5993.00	330.70	344.79	339.17	345.01	0.000613	4.57	2041.24	286.01	0.23
USACE	64167	50YR	7714.00	330.70	346.36	340.09	346.60	0.000589	4.84	2503.34	343.51	0.23
USACE	64167	100YR	9812.00	330.70	348.05	341.02	348.30	0.000559	5.09	3199.94	451.88	0.23
USACE	64167	100YRPLUS	12832.00	330.70	350.51	342.07	350.75	0.000458	5.07	4400.69	514.22	0.21
USACE	64167	200YR	12370.00	330.70	350.11	341.93	350.35	0.000479	5.11	4192.19	505.25	0.21
USACE	64167	500YR	16550.00	330.70	353.59	343.16	353.79	0.000344	4.88	6103.84	600.40	0.19
USACE	64167	SEPT2011	8723.00	330.70	347.18	340.49	347.43	0.000582	5.00	2760.73	400.56	0.23
USACE	63799	2YR	1942.00	330.51	339.63	334.68	339.77	0.000567	3.15	849.60	227.31	0.20
USACE	63799	5YR	3083.00	330.51	341.42	335.86	341.58	0.000564	3.61	1297.28	272.30	0.21
USACE	63799	10YR	4121.00	330.51	342.66	336.83	342.84	0.000571	3.94	1650.22	294.65	0.21
USACE	63799	25YR	5993.00	330.51	344.58	338.60	344.79	0.000561	4.37	2242.35	321.91	0.22
USACE	63799	50YR	7714.00	330.51	346.15	339.53	346.38	0.000564	4.73	2773.74	364.84	0.22
USACE	63799	100YR	9812.00	330.51	347.84	340.50	348.10	0.000550	5.04	3430.16	407.26	0.22
USACE	63799	100YRPLUS	12832.00	330.51	350.33	341.65	350.58	0.000474	5.16	4499.21	472.21	0.21
USACE	63799	200YR	12370.00	330.51	349.92	341.49	350.17	0.000490	5.16	4313.72	445.49	0.21
USACE	63799	500YR	16550.00	330.51	353.42	342.77	353.66	0.000390	5.19	6041.25	829.15	0.20
USACE	63799	SEPT2011	8723.00	330.51	346.97	339.99	347.22	0.000563	4.91	3082.97	387.57	0.22
USACE	63503	2YR	1942.00	330.39	339.54	334.37	339.62	0.000364	2.52	1382.94	395.98	0.16
USACE	63503	5YR	3083.00	330.39	341.34	335.61	341.43	0.000335	2.78	2152.91	453.44	0.16
USACE	63503	10YR	4121.00	330.39	342.60	336.59	342.69	0.000331	3.01	2743.31	488.04	0.16
USACE	63503	25YR	5993.00	330.39	344.54	338.09	344.63	0.000321	3.31	3736.01	539.83	0.16
USACE	63503	50YR	7714.00	330.39	346.12	338.89	346.22	0.000307	3.51	4626.53	584.06	0.16
USACE	63503	100YR	9812.00	330.39	347.83	339.62	347.94	0.000290	3.67	5647.76	612.00	0.16
USACE	63503	100YRPLUS	12832.00	330.39	350.32	340.47	350.43	0.000258	3.82	7244.14	676.97	0.16
USACE	63503	200YR	12370.00	330.39	349.91	340.37	350.02	0.000265	3.81	6967.20	662.38	0.16
USACE	63503	500YR	16550.00	330.39	353.43	341.39	353.53	0.000213	3.85	9520.95	1188.12	0.15
USACE	63503	SEPT2011	8723.00	330.39	346.95	339.28	347.06	0.000299	3.59	5117.22	596.05	0.16
USACE	63318	2YR	1994.00	330.30	339.36	335.89	339.51	0.000918	3.65	1158.90	435.45	0.25
USACE	63318	5YR	3168.00	330.30	341.21	337.75	341.34	0.000678	3.69	1962.78	502.97	0.22
USACE	63318	10YR	4243.00	330.30	342.48	338.59	342.61	0.000605	3.82	2552.81	538.70	0.21
USACE	63318	25YR	6179.00	330.30	344.43	339.38	344.56	0.000534	4.05	3503.28	596.61	0.21
USACE	63318	50YR	7953.00	330.30	346.03	339.95	346.15	0.000489	4.22	4323.48	635.40	0.20
USACE	63318	100YR	10098.00	330.30	347.74	340.57	347.87	0.000459	4.43	5257.61	770.96	0.20
USACE	63318	100YRPLUS	13206.00	330.30	350.25	341.47	350.38	0.000380	4.46	6768.73	941.03	0.19
USACE	63318	200YR	12690.00	330.30	349.83	341.27	349.96	0.000393	4.47	6509.79	920.64	0.19
USACE	63318	500YR	16982.00	330.30	353.37	342.24	353.49	0.000292	4.36	8806.82	1386.13	0.17
USACE	63318	SEPT2011	8968.00	330.30	346.86	340.26	346.99	0.000472	4.31	4770.65	683.22	0.20
USACE	63117	2YR	1994.00	330.20	339.12	335.28	339.32	0.000971	3.95	831.61	245.05	0.26
USACE	63117	5YR	3168.00	330.20	340.98	336.94	341.19	0.000849	4.30	1362.89	304.41	0.25
USACE	63117	10YR	4243.00	330.20	342.24	337.91	342.46	0.000820	4.61	1759.24	322.71	0.25
USACE	63117	25YR	6179.00	330.20	344.19	339.04	344.43	0.000775	5.03	2410.77	349.78	0.25
USACE	63117	50YR	7953.00	330.20	345.77	340.04	346.03	0.000748	5.36	3005.45	405.97	0.25
USACE	63117	100YR	10098.00	330.20	347.49	340.86	347.76	0.000693	5.58	3739.46	441.96	0.25
USACE	63117	100YRPLUS	13206.00	330.20	350.02	341.85	350.28	0.000598	5.73	4953.40	521.27	0.24
USACE	63117	200YR	12690.00	330.20	349.59	341.71	349.86	0.000618	5.74	4735.65	510.82	0.24
USACE	63117	500YR	16982.00	330.20	353.19	342.88	353.41	0.000452	5.55	6754.38	905.21	0.21
USACE	63117	SEPT2011	8968.00	330.20	346.60	340.43	346.87	0.000724	5.49	3353.67	427.53	0.25
USACE	62978	2YR	1994.00	330.11	338.80	335.37	339.14	0.001593	4.83	543.24	152.67	0.33
USACE	62978	5YR	3168.00	330.11	340.58	336.82	341.01	0.001590	5.64	825.58	165.71	0.34
USACE	62978	10YR	4243.00	330.11	341.74	337.81	342.28	0.001718	6.39	1026.73	178.41	0.36
USACE	62978	25YR	6179.00	330.11	343.53	339.43	344.23	0.001869	7.46	1361.29	202.85	0.39
USACE	62978	50YR	7953.00	330.11	345.02	340.40	345.82	0.001899	8.16	1685.05	228.61	0.40
USACE	62978	100YR	10098.00	330.11	346.65	341.62	347.54	0.001894	8.81	2081.85	257.81	0.41
USACE	62978	100YRPLUS	13206.00	330.11	349.18	342.90	350.09	0.001645	9.14	2760.10	318.64	0.39
USACE	62978	200YR	12690.00	330.11	348.76	342.65	349.66	0.001687	9.10	2642.55	292.82	0.39
USACE	62978	500YR	16982.00	330.11	352.38	344.63	353.25	0.001328	9.21	3702.96	463.66	0.36
USACE	62978	SEPT2011	8968.00	330.11	345.80	340.91	346.66	0.001913	8.51	1870.05	245.74	0.41
USACE	62907	2YR	1994.00	330.07	338.75	334.62	339.01	0.001105	4.25	598.54	149.70	0.28
USACE	62907	5YR	3168.00	330.07	340.52	335.88	340.88	0.001198	5.12	873.27	162.36	0.30
USACE	62907	10YR	4243.00	330.07	341.66	337.05	342.14	0.001393	5.97	1075.63	205.94	0.33

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	62907	25YR	6179.00	330.07	343.45	338.63	344.07	0.001506	6.92	1482.73	240.51	0.35
USACE	62907	50YR	7953.00	330.07	344.96	339.74	345.64	0.001510	7.49	1859.45	259.61	0.36
USACE	62907	100YR	10098.00	330.07	346.60	340.77	347.35	0.001487	8.03	2298.36	274.27	0.36
USACE	62907	100YRPLUS	13206.00	330.07	349.15	342.68	349.91	0.001311	8.36	3023.46	316.44	0.35
USACE	62907	200YR	12690.00	330.07	348.72	342.50	349.48	0.001343	8.33	2897.58	291.26	0.35
USACE	62907	500YR	16982.00	330.07	352.39	344.08	353.08	0.001031	8.30	4200.14	401.83	0.32
USACE	62907	SEPT2011	8968.00	330.07	345.75	340.24	346.47	0.001504	7.77	2067.71	266.83	0.36
USACE	62886 Footbridge		Bridge									
USACE	62857	2YR	1994.00	330.02	338.62		338.91	0.001362	4.46	556.26	146.49	0.30
USACE	62857	5YR	3168.00	330.02	340.21		340.60	0.001473	5.34	798.27	157.35	0.33
USACE	62857	10YR	4243.00	330.02	341.40		341.88	0.001581	6.05	1001.95	195.01	0.35
USACE	62857	25YR	6179.00	330.02	343.24		343.83	0.001625	6.90	1422.20	254.50	0.36
USACE	62857	50YR	7953.00	330.02	344.69		345.33	0.001589	7.40	1807.89	272.96	0.37
USACE	62857	100YR	10098.00	330.02	346.30		346.99	0.001528	7.86	2261.90	291.69	0.37
USACE	62857	100YRPLUS	13206.00	330.02	348.82		349.52	0.001335	8.18	3064.12	353.98	0.35
USACE	62857	200YR	12690.00	330.02	348.39		349.09	0.001384	8.18	2912.23	345.40	0.36
USACE	62857	500YR	16982.00	330.02	352.01		352.69	0.001108	8.36	4339.05	475.66	0.33
USACE	62857	SEPT2011	8968.00	330.02	345.46		346.13	0.001563	7.63	2022.11	281.18	0.37
USACE	62746	2YR	1994.00	330.05	338.55		338.74	0.000836	3.63	660.01	166.03	0.24
USACE	62746	5YR	3168.00	330.05	340.14		340.42	0.000973	4.48	955.41	206.69	0.27
USACE	62746	10YR	4243.00	330.05	341.33		341.67	0.001041	5.05	1222.90	250.89	0.28
USACE	62746	25YR	6179.00	330.05	343.18		343.59	0.001057	5.72	1740.73	300.30	0.29
USACE	62746	50YR	7953.00	330.05	344.64		345.10	0.001059	6.19	2205.38	341.57	0.30
USACE	62746	100YR	10098.00	330.05	346.26		346.75	0.001023	6.57	2796.07	384.00	0.30
USACE	62746	100YRPLUS	13206.00	330.05	348.82		349.28	0.000845	6.65	3828.78	424.32	0.28
USACE	62746	200YR	12690.00	330.05	348.38		348.85	0.000879	6.66	3644.24	419.14	0.29
USACE	62746	500YR	16982.00	330.05	352.03		352.48	0.000699	6.77	5405.72	586.26	0.26
USACE	62746	SEPT2011	8968.00	330.05	345.42		345.90	0.001048	6.40	2479.62	363.30	0.30
USACE	62517	2YR	1994.00	329.81	338.40	333.67	338.56	0.000700	3.33	718.57	177.86	0.22
USACE	62517	5YR	3168.00	329.81	339.96	334.83	340.20	0.000818	4.11	1017.89	202.00	0.25
USACE	62517	10YR	4243.00	329.81	341.14	335.74	341.44	0.000878	4.64	1259.88	244.07	0.26
USACE	62517	25YR	6179.00	329.81	342.96	337.18	343.36	0.000967	5.45	1780.28	316.91	0.28
USACE	62517	50YR	7953.00	329.81	344.43	338.19	344.86	0.000954	5.86	2257.23	332.58	0.29
USACE	62517	100YR	10098.00	329.81	346.06	339.43	346.52	0.000929	6.25	2822.24	357.15	0.29
USACE	62517	100YRPLUS	13206.00	329.81	348.64	340.78	349.09	0.000786	6.41	3791.88	439.65	0.27
USACE	62517	200YR	12690.00	329.81	348.20	340.59	348.66	0.000816	6.42	3621.70	424.85	0.28
USACE	62517	500YR	16982.00	329.81	351.91	342.00	352.32	0.000606	6.31	5075.27	569.05	0.25
USACE	62517	SEPT2011	8968.00	329.81	345.21	338.93	345.66	0.000948	6.07	2522.88	346.53	0.29
USACE	62348	2YR	1994.00	329.70	338.33	333.28	338.45	0.000505	2.79	931.30	254.00	0.19
USACE	62348	5YR	3168.00	329.70	339.90	334.37	340.06	0.000577	3.42	1282.05	275.13	0.21
USACE	62348	10YR	4243.00	329.70	341.09	335.22	341.29	0.000619	3.87	1564.50	289.81	0.22
USACE	62348	25YR	6179.00	329.70	342.93	336.88	343.18	0.000659	4.48	2022.91	304.10	0.23
USACE	62348	50YR	7953.00	329.70	344.39	337.76	344.69	0.000680	4.93	2396.91	314.25	0.24
USACE	62348	100YR	10098.00	329.70	346.01	338.63	346.35	0.000692	5.37	2820.75	356.35	0.25
USACE	62348	100YRPLUS	13206.00	329.70	348.57	339.66	348.96	0.000649	5.79	3561.58	484.25	0.25
USACE	62348	200YR	12690.00	329.70	348.13	339.43	348.51	0.000664	5.76	3421.34	468.45	0.25
USACE	62348	500YR	16982.00	329.70	351.84	340.91	352.21	0.000523	5.84	4680.97	623.92	0.23
USACE	62348	SEPT2011	8968.00	329.70	345.17	338.19	345.49	0.000688	5.15	2598.87	328.54	0.24
USACE	62214	2YR	1994.00	329.59	338.28	333.17	338.38	0.000440	2.70	1037.70	289.82	0.18
USACE	62214	5YR	3168.00	329.59	339.84	334.23	339.99	0.000509	3.30	1424.98	296.27	0.20
USACE	62214	10YR	4243.00	329.59	341.03	335.09	341.20	0.000554	3.75	1720.77	301.04	0.21
USACE	62214	25YR	6179.00	329.59	342.86	336.57	343.09	0.000609	4.39	2183.07	318.42	0.23
USACE	62214	50YR	7953.00	329.59	344.31	337.32	344.59	0.000646	4.89	2553.66	342.42	0.24
USACE	62214	100YR	10098.00	329.59	345.92	338.42	346.26	0.000674	5.39	2969.66	351.11	0.25
USACE	62214	100YRPLUS	13206.00	329.59	348.48	339.46	348.87	0.000642	5.85	3662.67	438.61	0.25
USACE	62214	200YR	12690.00	329.59	348.04	339.29	348.43	0.000655	5.80	3538.66	428.16	0.25
USACE	62214	500YR	16982.00	329.59	351.73	340.56	352.14	0.000552	6.07	4576.62	556.97	0.24
USACE	62214	SEPT2011	8968.00	329.59	345.08	337.99	345.39	0.000662	5.14	2752.33	347.21	0.24
USACE	62110	2YR	1994.00	329.50	337.97	334.07	338.25	0.001219	4.40	548.20	206.66	0.29
USACE	62110	5YR	3168.00	329.50	339.34	335.35	339.80	0.001606	5.68	703.36	268.00	0.34
USACE	62110	10YR	4243.00	329.50	340.34	336.41	340.97	0.001910	6.68	819.71	293.56	0.38
USACE	62110	25YR	6179.00	329.50	341.86	337.90	342.78	0.002336	8.15	998.84	304.02	0.43
USACE	62110	50YR	7953.00	329.50	343.03	339.00	344.21	0.002669	9.32	1136.37	318.30	0.47
USACE	62110	100YR	10098.00	329.50	344.31	340.16	345.79	0.002983	10.53	1287.16	330.52	0.51
USACE	62110	100YRPLUS	13206.00	329.50	346.62	341.72	348.35	0.002863	11.47	1560.35	344.19	0.51
USACE	62110	200YR	12690.00	329.50	346.21	341.50	347.91	0.002910	11.36	1511.70	340.11	0.51
USACE	62110	500YR	16982.00	329.50	349.73	343.35	351.60	0.002477	12.03	1927.37	382.89	0.49
USACE	62110	SEPT2011	8968.00	329.50	343.64	339.55	344.97	0.002836	9.92	1208.34	326.42	0.49
USACE	62032 U.S. Route 283		Culvert									
USACE	61952	2YR	1994.00	329.00	337.99	333.24	338.19	0.000808	3.73	634.02	250.22	0.24
USACE	61952	5YR	3168.00	329.00	339.34	334.49	339.68	0.001107	4.87	815.95	319.40	0.29
USACE	61952	10YR	4243.00	329.00	340.32	335.44	340.79	0.001341	5.75	948.98	344.67	0.32
USACE	61952	25YR	6179.00	329.00	341.78	337.00	342.48	0.001700	7.09	1146.32	368.96	0.37
USACE	61952	50YR	7953.00	329.00	342.87	338.24	343.78	0.002005	8.19	1293.06	383.21	0.41
USACE	61952	100YR	10098.00	329.00	344.02	339.39	345.20	0.002333	9.36	1448.18	398.04	0.45
USACE	61952	100YRPLUS	13206.00	329.00	346.08	340.78	347.50	0.002374	10.38	1727.01	428.66	0.46

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	61952	200YR	12690.00	329.00	345.72	340.58	347.11	0.002390	10.25	1677.54	424.94	0.46
USACE	61952	500YR	16982.00	329.00	348.47	342.32	350.13	0.002345	11.34	2048.82	449.78	0.47
USACE	61952	SEPT2011	8968.00	329.00	343.42	338.78	344.46	0.002170	8.77	1367.84	389.39	0.43
USACE	61734	2YR	1994.00	328.97	337.88	333.07	338.01	0.000563	3.02	1006.66	281.29	0.20
USACE	61734	5YR	3168.00	328.97	339.23	334.25	339.41	0.000698	3.77	1409.55	325.38	0.23
USACE	61734	10YR	4243.00	328.97	340.22	335.20	340.45	0.000780	4.29	1746.55	351.47	0.25
USACE	61734	25YR	6179.00	328.97	341.73	336.90	342.02	0.000881	5.03	2307.53	391.90	0.27
USACE	61734	50YR	7953.00	328.97	342.87	337.74	343.21	0.000946	5.56	2772.65	413.74	0.28
USACE	61734	100YR	10098.00	328.97	344.10	338.57	344.48	0.000985	6.05	3287.78	420.82	0.29
USACE	61734	100YRPLUS	13206.00	328.97	346.30	339.70	346.69	0.000871	6.30	4232.60	442.61	0.28
USACE	61734	200YR	12690.00	328.97	345.92	339.53	346.31	0.000889	6.26	4063.74	433.37	0.28
USACE	61734	500YR	16982.00	328.97	348.84	340.86	349.23	0.000751	6.47	5409.90	541.79	0.27
USACE	61734	SEPT2011	8968.00	328.97	343.46	338.15	343.82	0.000969	5.81	3018.85	417.35	0.29
USACE	61505	2YR	1994.00	328.88	337.70	333.46	337.86	0.000766	3.38	963.45	309.67	0.23
USACE	61505	5YR	3168.00	328.88	339.03	334.74	339.23	0.000863	4.04	1383.78	320.16	0.25
USACE	61505	10YR	4243.00	328.88	340.02	336.11	340.25	0.000931	4.53	1701.40	324.88	0.27
USACE	61505	25YR	6179.00	328.88	341.49	337.33	341.79	0.001047	5.31	2188.09	343.83	0.29
USACE	61505	50YR	7953.00	328.88	342.60	338.11	342.97	0.001135	5.91	2578.18	356.13	0.31
USACE	61505	100YR	10098.00	328.88	343.80	338.87	344.23	0.001211	6.52	3011.56	367.17	0.32
USACE	61505	100YRPLUS	13206.00	328.88	346.03	339.77	346.47	0.001061	6.79	3855.22	427.89	0.31
USACE	61505	200YR	12690.00	328.88	345.63	339.64	346.08	0.001100	6.79	3701.89	425.82	0.31
USACE	61505	500YR	16982.00	328.88	348.61	340.72	349.04	0.000885	6.88	5020.48	453.82	0.29
USACE	61505	SEPT2011	8968.00	328.88	343.18	338.49	343.57	0.001176	6.21	2784.48	360.98	0.31
USACE	61225	2YR	1994.00	328.75	337.50	332.88	337.65	0.000697	3.21	811.07	270.57	0.22
USACE	61225	5YR	3168.00	328.75	338.77	334.09	338.99	0.000873	4.03	1088.76	288.58	0.25
USACE	61225	10YR	4243.00	328.75	339.70	335.13	339.98	0.001001	4.64	1296.13	296.47	0.27
USACE	61225	25YR	6179.00	328.75	341.09	336.70	341.48	0.001189	5.57	1610.24	306.36	0.31
USACE	61225	50YR	7953.00	328.75	342.12	337.50	342.61	0.001349	6.32	1848.95	315.31	0.33
USACE	61225	100YR	10098.00	328.75	343.23	338.46	343.84	0.001512	7.13	2109.48	344.82	0.36
USACE	61225	100YRPLUS	13206.00	328.75	345.52	339.50	346.13	0.001273	7.32	2743.83	437.93	0.34
USACE	61225	200YR	12690.00	328.75	345.10	339.33	345.72	0.001337	7.36	2621.38	427.41	0.34
USACE	61225	500YR	16982.00	328.75	348.21	340.61	348.77	0.000988	7.21	3559.41	617.31	0.30
USACE	61225	SEPT2011	8968.00	328.75	342.65	338.04	343.20	0.001434	6.72	1972.76	327.88	0.34
USACE	60983	2YR	1994.00	328.74	337.31		337.47	0.000788	3.43	764.17	199.99	0.23
USACE	60983	5YR	3168.00	328.74	338.51		338.76	0.001015	4.34	1010.23	208.83	0.27
USACE	60983	10YR	4243.00	328.74	339.39		339.72	0.001179	5.01	1198.12	215.29	0.30
USACE	60983	25YR	6179.00	328.74	340.73		341.17	0.001393	5.98	1492.17	231.31	0.33
USACE	60983	50YR	7953.00	328.74	341.73		342.26	0.001545	6.71	1747.48	278.50	0.35
USACE	60983	100YR	10098.00	328.74	342.87		343.47	0.001584	7.24	2072.38	290.88	0.36
USACE	60983	100YRPLUS	13206.00	328.74	345.31		345.82	0.001143	6.94	2818.57	321.89	0.32
USACE	60983	200YR	12690.00	328.74	344.86		345.39	0.001223	7.03	2676.77	316.80	0.33
USACE	60983	500YR	16982.00	328.74	348.08		348.52	0.000828	6.62	3755.00	354.96	0.28
USACE	60983	SEPT2011	8968.00	328.74	342.27		342.84	0.001581	7.00	1899.35	284.59	0.36
USACE	60698	2YR	1994.00	328.71	337.05	333.12	337.22	0.000967	3.60	746.16	205.88	0.25
USACE	60698	5YR	3168.00	328.71	338.18	334.38	338.45	0.001222	4.52	982.79	211.49	0.29
USACE	60698	10YR	4243.00	328.71	339.01	335.76	339.36	0.001412	5.21	1161.05	217.22	0.32
USACE	60698	25YR	6179.00	328.71	340.27	336.85	340.74	0.001673	6.24	1454.94	241.60	0.36
USACE	60698	50YR	7953.00	328.71	341.21	337.61	341.79	0.001864	7.02	1684.47	245.14	0.38
USACE	60698	100YR	10098.00	328.71	342.26	338.39	342.96	0.002037	7.82	1945.62	253.15	0.41
USACE	60698	100YRPLUS	13206.00	328.71	344.89	339.48	345.47	0.001372	7.36	2706.30	313.19	0.35
USACE	60698	200YR	12690.00	328.71	344.41	339.05	345.01	0.001491	7.50	2556.93	302.23	0.36
USACE	60698	500YR	16982.00	328.71	347.80	340.65	348.27	0.000933	6.88	3668.53	361.30	0.29
USACE	60698	SEPT2011	8968.00	328.71	341.71	338.00	342.34	0.001962	7.43	1806.57	248.49	0.40
USACE	60427	2YR	1994.00	328.54	336.80	332.33	336.98	0.000836	3.48	715.05	173.22	0.24
USACE	60427	5YR	3168.00	328.54	337.80	333.49	338.11	0.001252	4.67	892.27	184.94	0.30
USACE	60427	10YR	4243.00	328.54	338.49	334.51	338.94	0.001619	5.63	1027.39	198.78	0.34
USACE	60427	25YR	6179.00	328.54	339.52	336.01	340.20	0.002200	7.09	1237.77	212.28	0.41
USACE	60427	50YR	7953.00	328.54	340.21	337.02	341.15	0.002770	8.34	1390.21	225.70	0.46
USACE	60427	100YR	10098.00	328.54	341.03	337.82	342.22	0.003271	9.55	1591.27	276.56	0.51
USACE	60427	100YRPLUS	13206.00	328.54	344.28	339.36	345.04	0.001661	8.09	2580.02	329.53	0.38
USACE	60427	200YR	12690.00	328.54	343.73	339.13	344.54	0.001851	8.32	2404.73	311.08	0.40
USACE	60427	500YR	16982.00	328.54	347.43	340.95	348.00	0.001034	7.30	3780.33	430.08	0.31
USACE	60427	SEPT2011	8968.00	328.54	340.58	337.50	341.65	0.003060	8.98	1475.63	247.52	0.49
USACE	60316	2YR	1994.00	328.51	336.72	332.26	336.89	0.000703	3.46	742.58	166.30	0.22
USACE	60316	5YR	3168.00	328.51	337.66	333.33	337.97	0.001121	4.73	906.34	181.68	0.29
USACE	60316	10YR	4243.00	328.51	338.31	334.21	338.76	0.001520	5.79	1028.17	199.26	0.34
USACE	60316	25YR	6179.00	328.51	339.24	335.75	339.95	0.002139	7.33	1224.03	211.85	0.41
USACE	60316	50YR	7953.00	328.51	339.86	336.70	340.83	0.002750	8.66	1360.78	234.03	0.47
USACE	60316	100YR	10098.00	328.51	340.66	337.67	341.86	0.003214	9.83	1576.22	288.96	0.51
USACE	60316	100YRPLUS	13206.00	328.51	344.15	339.35	344.83	0.001443	7.87	2676.43	358.35	0.36
USACE	60316	200YR	12690.00	328.51	343.57	339.18	344.31	0.001630	8.15	2474.92	337.84	0.38
USACE	60316	500YR	16982.00	328.51	347.37	341.14	347.85	0.000865	6.95	4053.03	485.93	0.29
USACE	60316	SEPT2011	8968.00	328.51	340.18	337.22	341.29	0.003084	9.35	1439.86	268.82	0.50
USACE	60291 Weir		Inl Struct									
USACE	60263	2YR	1994.00	322.01	330.58		330.63	0.000196	1.87	1092.64	159.50	0.12
USACE	60263	5YR	3168.00	322.01	332.51		332.59	0.000230	2.36	1411.14	170.94	0.13

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	60263	10YR	4243.00	322.01	334.03		334.14	0.000248	2.70	1678.44	179.13	0.14
USACE	60263	25YR	6179.00	322.01	336.43		336.58	0.000267	3.19	2123.38	194.10	0.15
USACE	60263	50YR	7953.00	322.01	338.42		338.61	0.000275	3.54	2532.90	221.46	0.16
USACE	60263	100YR	10098.00	322.01	340.80		341.01	0.000262	3.80	3168.14	343.31	0.16
USACE	60263	100YRPLUS	13206.00	322.01	344.42		344.61	0.000197	3.73	4605.67	441.69	0.14
USACE	60263	200YR	12690.00	322.01	343.88		344.07	0.000205	3.74	4369.24	428.89	0.14
USACE	60263	500YR	16982.00	322.01	347.53		347.71	0.000170	3.79	6136.57	533.06	0.13
USACE	60263	SEPT2011	8968.00	322.01	339.54		339.74	0.000273	3.70	2791.26	241.98	0.16
USACE	60215	2YR	1994.00	322.11	330.44	327.94	330.59	0.001198	3.13	665.11	175.54	0.27
USACE	60215	5YR	3168.00	322.11	332.39	328.62	332.55	0.000815	3.31	1018.46	186.48	0.23
USACE	60215	10YR	4243.00	322.11	333.93	329.18	334.10	0.000672	3.48	1312.22	194.82	0.22
USACE	60215	25YR	6179.00	322.11	336.34	330.03	336.55	0.000547	3.76	1798.01	207.23	0.21
USACE	60215	50YR	7953.00	322.11	338.36	330.72	338.58	0.000477	3.96	2227.06	219.10	0.20
USACE	60215	100YR	10098.00	322.11	340.76	331.46	340.99	0.000396	4.07	2872.85	354.27	0.19
USACE	60215	100YRPLUS	13206.00	322.11	344.42	332.42	344.59	0.000240	3.67	4347.69	447.14	0.15
USACE	60215	200YR	12690.00	322.11	343.88	332.27	344.05	0.000257	3.73	4108.82	429.31	0.16
USACE	60215	500YR	16982.00	322.11	347.54	333.48	347.69	0.000181	3.54	5880.42	581.18	0.13
USACE	60215	SEPT2011	8968.00	322.11	339.48	331.08	339.71	0.000446	4.06	2478.46	235.63	0.20
USACE	60136	2YR	1994.00	322.30	330.43	326.76	330.52	0.000484	2.76	924.28	200.11	0.18
USACE	60136	5YR	3168.00	322.30	332.38	327.51	332.49	0.000431	3.07	1330.91	219.14	0.18
USACE	60136	10YR	4243.00	322.30	333.93	328.11	334.05	0.000397	3.27	1686.07	237.07	0.18
USACE	60136	25YR	6179.00	322.30	336.36	328.98	336.49	0.000350	3.53	2266.39	241.05	0.17
USACE	60136	50YR	7953.00	322.30	338.38	329.67	338.53	0.000321	3.72	2757.38	244.68	0.17
USACE	60136	100YR	10098.00	322.30	340.79	330.45	340.94	0.000297	3.95	3467.90	380.49	0.17
USACE	60136	100YRPLUS	13206.00	322.30	344.44	331.38	344.56	0.000197	3.66	5003.00	458.43	0.14
USACE	60136	200YR	12690.00	322.30	343.89	331.24	344.02	0.000208	3.69	4765.85	444.58	0.14
USACE	60136	500YR	16982.00	322.30	347.54	332.41	347.67	0.000162	3.63	6389.56	532.32	0.13
USACE	60136	SEPT2011	8968.00	322.30	339.51	330.07	339.66	0.000307	3.82	3038.18	273.18	0.17
USACE	60102	2YR	1994.00	322.34	330.26	326.22	330.46	0.000931	3.61	562.91	188.72	0.25
USACE	60102	5YR	3168.00	322.34	332.12	327.28	332.42	0.000981	4.39	744.84	197.44	0.27
USACE	60102	10YR	4243.00	322.34	333.59	328.10	333.96	0.001001	4.94	892.82	203.49	0.28
USACE	60102	25YR	6179.00	322.34	335.88	329.36	336.37	0.001018	5.74	1137.51	214.59	0.29
USACE	60102	50YR	7953.00	322.34	337.80	330.37	338.38	0.001001	6.28	1346.80	218.25	0.30
USACE	60102	100YR	10098.00	322.34	340.12	331.48	340.78	0.000937	6.73	1648.26	323.23	0.29
USACE	60102	100YRPLUS	13206.00	322.34	344.39	332.93	344.55	0.000225	3.85	4600.67	532.34	0.15
USACE	60102	200YR	12690.00	322.34	343.85	332.69	344.01	0.000238	3.89	4371.50	501.50	0.15
USACE	60102	500YR	16982.00	322.34	347.51	334.49	347.66	0.000181	3.80	5946.81	587.15	0.14
USACE	60102	SEPT2011	8968.00	322.34	338.87	330.90	339.50	0.000982	6.54	1463.73	220.58	0.30
USACE	60065 Chiques Road		Bridge									
USACE	60017	2YR	1994.00	321.99	330.03	326.39	330.32	0.001437	4.30	470.49	119.88	0.30
USACE	60017	5YR	3168.00	321.99	331.73	327.55	332.16	0.001588	5.30	613.42	145.14	0.33
USACE	60017	10YR	4243.00	321.99	333.02	328.45	333.58	0.001689	6.05	723.30	154.67	0.35
USACE	60017	25YR	6179.00	321.99	334.92	329.88	335.71	0.001872	7.21	885.00	183.02	0.38
USACE	60017	50YR	7953.00	321.99	336.39	330.99	337.39	0.002020	8.14	1009.91	205.65	0.40
USACE	60017	100YR	10098.00	321.99	338.02	332.20	339.26	0.002146	9.09	1147.76	226.54	0.42
USACE	60017	100YRPLUS	13206.00	321.99	340.67	333.74	341.26	0.001060	7.16	2552.16	409.46	0.31
USACE	60017	200YR	12690.00	321.99	339.90	333.49	341.36	0.002176	9.95	1385.51	352.51	0.44
USACE	60017	500YR	16982.00	321.99	343.41	335.43	343.94	0.000860	7.13	3659.56	465.01	0.28
USACE	60017	SEPT2011	8968.00	321.99	337.16	331.58	338.28	0.002093	8.62	1075.43	210.49	0.42
USACE	59943	2YR	1994.00	321.79	329.71	326.56	330.14	0.002228	5.39	415.33	132.74	0.37
USACE	59943	5YR	3168.00	321.79	331.55	327.84	332.02	0.001904	5.86	663.10	136.61	0.36
USACE	59943	10YR	4243.00	321.79	332.92	329.15	333.42	0.001745	6.20	853.03	140.46	0.35
USACE	59943	25YR	6179.00	321.79	334.90	331.03	335.47	0.001661	6.84	1136.96	161.39	0.35
USACE	59943	50YR	7953.00	321.79	336.43	331.92	337.08	0.001626	7.34	1378.12	196.31	0.35
USACE	59943	100YR	10098.00	321.79	338.14	332.86	338.85	0.001551	7.77	1655.71	252.55	0.35
USACE	59943	100YRPLUS	13206.00	321.79	340.60	334.05	341.16	0.001167	7.45	2647.91	408.24	0.31
USACE	59943	200YR	12690.00	321.79	340.11	333.86	340.88	0.001456	8.17	1974.61	389.39	0.35
USACE	59943	500YR	16982.00	321.79	343.39	335.31	343.83	0.000852	7.02	3912.43	492.77	0.27
USACE	59943	SEPT2011	8968.00	321.79	337.24	332.39	337.92	0.001596	7.56	1509.98	230.24	0.35
USACE	59728	2YR	1994.00	321.39	329.61	325.19	329.80	0.000821	3.56	648.51	166.19	0.24
USACE	59728	5YR	3168.00	321.39	331.44	326.28	331.69	0.000838	4.20	952.95	307.48	0.25
USACE	59728	10YR	4243.00	321.39	332.82	327.15	333.10	0.000825	4.59	1225.64	366.46	0.25
USACE	59728	25YR	6179.00	321.39	334.82	328.81	335.15	0.000819	5.15	1647.04	408.46	0.26
USACE	59728	50YR	7953.00	321.39	336.38	329.93	336.75	0.000818	5.57	1994.27	441.76	0.26
USACE	59728	100YR	10098.00	321.39	338.10	330.99	338.53	0.000815	6.02	2409.73	491.52	0.27
USACE	59728	100YRPLUS	13206.00	321.39	340.75	332.47	340.91	0.000350	4.38	5279.05	638.74	0.18
USACE	59728	200YR	12690.00	321.39	340.11	332.27	340.56	0.000766	6.33	3029.95	589.85	0.27
USACE	59728	500YR	16982.00	321.39	343.52	333.76	343.64	0.000241	3.99	7212.27	752.58	0.15
USACE	59728	SEPT2011	8968.00	321.39	337.20	330.40	337.60	0.000815	5.78	2186.49	463.56	0.27
USACE	59510	2YR	1994.00	321.01	328.95		329.47	0.002571	5.82	358.48	78.39	0.41
USACE	59510	5YR	3168.00	321.01	330.69		331.35	0.002527	6.78	559.46	139.39	0.42
USACE	59510	10YR	4243.00	321.01	332.10		332.79	0.002241	7.11	782.12	178.53	0.41
USACE	59510	25YR	6179.00	321.01	334.26		334.88	0.001760	7.23	1250.44	245.04	0.37
USACE	59510	50YR	7953.00	321.01	335.98		336.52	0.001378	7.01	1683.85	258.37	0.34
USACE	59510	100YR	10098.00	321.01	337.83		338.32	0.001133	6.93	2175.45	274.83	0.31
USACE	59510	100YRPLUS	13206.00	321.01	340.27		340.76	0.001005	7.21	2987.73	409.38	0.30
USACE	59510	200YR	12690.00	321.01	339.84		340.37	0.001083	7.36	2817.62	391.65	0.31

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	59510	500YR	16982.00	321.01	343.22		343.55	0.000582	6.08	4330.48	495.71	0.24
USACE	59510	SEPT2011	8968.00	321.01	336.86		337.38	0.001251	6.97	1915.09	265.62	0.33
USACE	59174	2YR	1994.00	320.51	328.72	324.48	328.91	0.000843	3.67	621.34	164.80	0.24
USACE	59174	5YR	3168.00	320.51	330.65	325.80	330.83	0.000638	3.74	1079.50	192.58	0.22
USACE	59174	10YR	4243.00	320.51	332.07	326.68	332.28	0.000658	4.18	1385.99	245.77	0.23
USACE	59174	25YR	6179.00	320.51	334.19	328.11	334.43	0.000630	4.63	1965.37	322.91	0.23
USACE	59174	50YR	7953.00	320.51	335.89	329.02	336.15	0.000594	4.89	2559.71	359.54	0.23
USACE	59174	100YR	10098.00	320.51	337.76	329.61	338.00	0.000524	4.98	3263.48	394.61	0.22
USACE	59174	100YRPLUS	13206.00	320.51	340.23	330.62	340.47	0.000452	5.09	4298.59	446.03	0.21
USACE	59174	200YR	12690.00	320.51	339.81	330.50	340.06	0.000465	5.08	4115.37	437.15	0.21
USACE	59174	500YR	16982.00	320.51	343.15	331.43	343.37	0.000358	4.99	5761.30	553.86	0.19
USACE	59174	SEPT2011	8968.00	320.51	336.78	329.54	337.03	0.000561	4.95	2886.86	377.50	0.22
USACE	58785	2YR	1994.00	319.91	328.19	324.38	328.48	0.001450	4.35	460.68	78.93	0.31
USACE	58785	5YR	3168.00	319.91	330.02	325.63	330.44	0.001506	5.26	650.86	134.58	0.33
USACE	58785	10YR	4243.00	319.91	331.36	326.59	331.87	0.001518	5.86	847.00	156.27	0.34
USACE	58785	25YR	6179.00	319.91	333.43	328.01	334.04	0.001471	6.59	1198.84	185.00	0.34
USACE	58785	50YR	7953.00	319.91	335.09	329.32	335.76	0.001403	7.05	1530.38	217.05	0.34
USACE	58785	100YR	10098.00	319.91	336.94	330.83	337.65	0.001307	7.43	1980.48	277.96	0.34
USACE	58785	100YRPLUS	13206.00	319.91	339.49	332.45	340.17	0.001092	7.54	2832.87	405.52	0.32
USACE	58785	200YR	12690.00	319.91	339.05	332.25	339.74	0.001143	7.58	2663.98	382.69	0.32
USACE	58785	500YR	16982.00	319.91	342.61	334.05	343.14	0.000781	7.11	4194.74	531.59	0.28
USACE	58785	SEPT2011	8968.00	319.91	335.97	330.07	336.66	0.001362	7.25	1729.53	238.36	0.34
USACE	58487	2YR	1994.00	319.38	327.82		328.08	0.001193	4.13	567.18	170.10	0.28
USACE	58487	5YR	3168.00	319.38	329.74		330.03	0.001054	4.60	923.96	200.63	0.28
USACE	58487	10YR	4243.00	319.38	331.14		331.46	0.000983	4.92	1219.53	219.54	0.28
USACE	58487	25YR	6179.00	319.38	333.29		333.63	0.000887	5.32	1715.63	240.81	0.27
USACE	58487	50YR	7953.00	319.38	334.99		335.36	0.000846	5.67	2144.70	268.24	0.27
USACE	58487	100YR	10098.00	319.38	336.83		337.26	0.000858	6.21	2715.45	365.70	0.28
USACE	58487	100YRPLUS	13206.00	319.38	339.43		339.83	0.000710	6.27	3885.87	510.47	0.26
USACE	58487	200YR	12690.00	319.38	338.98		339.39	0.000753	6.34	3656.36	496.55	0.27
USACE	58487	500YR	16982.00	319.38	342.59		342.89	0.000498	5.84	5705.97	638.98	0.22
USACE	58487	SEPT2011	8968.00	319.38	335.86		336.26	0.000853	5.94	2391.20	301.52	0.27
USACE	58180	2YR	1994.00	318.60	327.62	322.63	327.79	0.000669	3.35	713.94	205.87	0.22
USACE	58180	5YR	3168.00	318.60	329.55	323.77	329.76	0.000654	3.87	1153.44	246.50	0.22
USACE	58180	10YR	4243.00	318.60	330.97	324.69	331.20	0.000638	4.19	1517.64	268.32	0.22
USACE	58180	25YR	6179.00	318.60	333.13	326.10	333.39	0.000608	4.62	2146.28	311.78	0.23
USACE	58180	50YR	7953.00	318.60	334.85	327.70	335.12	0.000586	4.93	2714.00	363.86	0.23
USACE	58180	100YR	10098.00	318.60	336.72	328.91	337.02	0.000564	5.24	3463.99	468.61	0.23
USACE	58180	100YRPLUS	13206.00	318.60	339.35	330.14	339.63	0.000472	5.29	4926.23	658.97	0.21
USACE	58180	200YR	12690.00	318.60	338.89	329.98	339.18	0.000501	5.36	4635.96	644.39	0.22
USACE	58180	500YR	16982.00	318.60	342.55	331.27	342.75	0.000324	4.86	7091.70	752.82	0.18
USACE	58180	SEPT2011	8968.00	318.60	335.74	328.33	336.02	0.000580	5.10	3046.69	413.23	0.23
USACE	57843	2YR	1994.00	317.79	327.37		327.55	0.000707	3.43	616.30	128.50	0.22
USACE	57843	5YR	3168.00	317.79	329.25		329.51	0.000781	4.18	893.53	165.18	0.24
USACE	57843	10YR	4243.00	317.79	330.63		330.95	0.000818	4.69	1135.26	184.89	0.25
USACE	57843	25YR	6179.00	317.79	332.75		333.14	0.000839	5.35	1566.31	221.29	0.26
USACE	57843	50YR	7953.00	317.79	334.44		334.88	0.000838	5.81	1973.38	262.09	0.27
USACE	57843	100YR	10098.00	317.79	336.31		336.78	0.000808	6.17	2513.76	316.73	0.27
USACE	57843	100YRPLUS	13206.00	317.79	338.95		339.42	0.000713	6.41	3471.29	422.38	0.26
USACE	57843	200YR	12690.00	317.79	338.49		338.96	0.000732	6.39	3283.39	395.87	0.26
USACE	57843	500YR	16982.00	317.79	342.22		342.60	0.000520	6.08	5008.12	505.02	0.23
USACE	57843	SEPT2011	8968.00	317.79	335.32		335.78	0.000832	6.01	2214.61	285.86	0.27
USACE	57569	2YR	1994.00	317.11	327.05		327.31	0.001036	4.18	571.08	141.98	0.27
USACE	57569	5YR	3168.00	317.11	328.88		329.25	0.001138	5.06	849.34	160.91	0.29
USACE	57569	10YR	4243.00	317.11	330.22		330.67	0.001210	5.70	1072.92	173.12	0.31
USACE	57569	25YR	6179.00	317.11	332.27		332.84	0.001282	6.59	1446.79	190.68	0.32
USACE	57569	50YR	7953.00	317.11	333.91		334.57	0.001316	7.23	1773.25	207.45	0.34
USACE	57569	100YR	10098.00	317.11	335.75		336.48	0.001294	7.76	2183.21	238.58	0.34
USACE	57569	100YRPLUS	13206.00	317.11	338.39		339.14	0.001163	8.14	2894.09	305.53	0.33
USACE	57569	200YR	12690.00	317.11	337.92		338.68	0.001199	8.12	2753.15	290.98	0.33
USACE	57569	500YR	16982.00	317.11	341.72		342.38	0.000913	8.03	4057.03	391.70	0.30
USACE	57569	SEPT2011	8968.00	317.11	334.77		335.47	0.001323	7.53	1957.06	223.50	0.34
USACE	57310	2YR	1994.00	316.64	326.89		327.06	0.000740	3.27	650.15	133.40	0.22
USACE	57310	5YR	3168.00	316.64	328.73		328.96	0.000793	3.97	922.89	168.31	0.24
USACE	57310	10YR	4243.00	316.64	330.07		330.36	0.000833	4.49	1160.27	183.83	0.25
USACE	57310	25YR	6179.00	316.64	332.13		332.51	0.000871	5.21	1556.59	200.64	0.27
USACE	57310	50YR	7953.00	316.64	333.78		334.24	0.000884	5.72	1901.94	217.07	0.27
USACE	57310	100YR	10098.00	316.64	335.63		336.14	0.000873	6.19	2328.06	246.63	0.28
USACE	57310	100YRPLUS	13206.00	316.64	338.28		338.84	0.000798	6.58	3032.17	285.54	0.27
USACE	57310	200YR	12690.00	316.64	337.81		338.36	0.000819	6.55	2898.64	277.96	0.28
USACE	57310	500YR	16982.00	316.64	341.60		342.15	0.000664	6.71	4085.12	349.56	0.26
USACE	57310	SEPT2011	8968.00	316.64	334.64		335.13	0.000888	5.98	2093.42	229.53	0.28
USACE	57194	2YR	1994.00	316.42	326.83	320.62	326.98	0.000541	3.11	683.76	111.42	0.19
USACE	57194	5YR	3168.00	316.42	328.64	321.88	328.88	0.000665	3.95	890.81	116.71	0.22
USACE	57194	10YR	4243.00	316.42	329.94	322.91	330.26	0.000767	4.62	1044.30	120.52	0.24
USACE	57194	25YR	6179.00	316.42	331.92	324.51	332.39	0.000909	5.61	1280.55	130.84	0.27
USACE	57194	50YR	7953.00	316.42	333.49	325.79	334.08	0.001006	6.37	1469.00	147.41	0.29

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	57194	100YR	10098.00	316.42	335.22	326.98	335.96	0.001092	7.15	1676.53	184.97	0.31
USACE	57194	100YRPLUS	13206.00	316.42	337.70	328.49	338.62	0.001135	8.01	1974.25	236.38	0.33
USACE	57194	200YR	12690.00	316.42	337.26	328.26	338.15	0.001140	7.90	1920.63	227.88	0.33
USACE	57194	500YR	16982.00	316.42	341.13	330.13	341.97	0.000903	7.99	3126.48	350.64	0.30
USACE	57194	SEPT2011	8968.00	316.42	334.30	326.38	334.96	0.001057	6.77	1565.82	156.97	0.30
USACE	57147 Old Harrisburg P		Bridge									
USACE	57093	2YR	1994.00	316.26	326.66	322.32	326.88	0.001013	3.78	542.91	98.21	0.26
USACE	57093	5YR	3168.00	316.26	328.44	323.60	328.76	0.001099	4.61	735.59	140.05	0.28
USACE	57093	10YR	4243.00	316.26	329.73	324.45	330.13	0.001163	5.21	884.04	150.86	0.29
USACE	57093	25YR	6179.00	316.26	331.71	325.82	332.24	0.001237	6.07	1111.76	169.21	0.31
USACE	57093	50YR	7953.00	316.26	333.28	327.04	333.93	0.001284	6.73	1292.63	195.62	0.32
USACE	57093	100YR	10098.00	316.26	335.00	328.35	335.78	0.001321	7.40	1490.57	223.72	0.34
USACE	57093	100YRPLUS	13206.00	316.26	337.31	329.75	338.26	0.001338	8.19	1756.58	243.70	0.35
USACE	57093	200YR	12690.00	316.26	336.94	329.52	337.86	0.001337	8.07	1713.94	240.85	0.34
USACE	57093	500YR	16982.00	316.26	340.03	331.21	340.72	0.000928	7.51	2939.42	270.22	0.30
USACE	57093	SEPT2011	8968.00	316.26	334.09	327.55	334.80	0.001314	7.08	1385.36	209.49	0.33
USACE	56936	2YR	1994.00	316.77	326.55		326.73	0.000657	3.48	673.88	214.29	0.22
USACE	56936	5YR	3168.00	316.77	328.33		328.58	0.000762	4.28	948.93	252.54	0.24
USACE	56936	10YR	4243.00	316.77	329.65		329.92	0.000745	4.61	1287.44	260.15	0.24
USACE	56936	25YR	6179.00	316.77	331.69		331.97	0.000682	4.94	1830.58	270.97	0.24
USACE	56936	50YR	7953.00	316.77	333.32		333.61	0.000636	5.16	2278.70	279.62	0.24
USACE	56936	100YR	10098.00	316.77	335.10		335.41	0.000597	5.39	2787.43	292.54	0.23
USACE	56936	100YRPLUS	13206.00	316.77	337.50		337.82	0.000532	5.57	3518.61	321.16	0.23
USACE	56936	200YR	12690.00	316.77	337.12		337.43	0.000542	5.55	3396.92	311.95	0.23
USACE	56936	500YR	16982.00	316.77	340.12		340.43	0.000463	5.66	4480.12	411.99	0.22
USACE	56936	SEPT2011	8968.00	316.77	334.15		334.46	0.000621	5.28	2514.55	284.56	0.24
USACE	56727	2YR	1994.00	317.32	326.35		326.57	0.000873	3.76	594.56	180.59	0.24
USACE	56727	5YR	3168.00	317.32	328.13		328.40	0.000911	4.44	911.56	241.64	0.26
USACE	56727	10YR	4243.00	317.32	329.44		329.75	0.000898	4.82	1198.03	274.79	0.26
USACE	56727	25YR	6179.00	317.32	331.50		331.82	0.000803	5.14	1792.42	297.86	0.26
USACE	56727	50YR	7953.00	317.32	333.17		333.47	0.000708	5.25	2297.75	310.06	0.25
USACE	56727	100YR	10098.00	317.32	334.98		335.28	0.000632	5.37	2871.69	324.21	0.24
USACE	56727	100YRPLUS	13206.00	317.32	337.40		337.70	0.000543	5.48	3679.21	340.73	0.23
USACE	56727	200YR	12690.00	317.32	337.01		337.31	0.000557	5.47	3547.16	338.37	0.23
USACE	56727	500YR	16982.00	317.32	340.05		340.33	0.000451	5.46	4813.50	514.31	0.21
USACE	56727	SEPT2011	8968.00	317.32	334.01		334.32	0.000674	5.33	2563.72	316.33	0.24
USACE	56527	2YR	2015.00	317.63	326.12	322.16	326.36	0.001179	4.04	559.82	158.48	0.28
USACE	56527	5YR	3194.00	317.63	327.93	323.36	328.21	0.001051	4.50	883.58	194.97	0.28
USACE	56527	10YR	4278.00	317.63	329.26	324.31	329.55	0.000978	4.79	1154.74	213.87	0.27
USACE	56527	25YR	6238.00	317.63	331.33	326.26	331.65	0.000862	5.12	1623.35	237.27	0.26
USACE	56527	50YR	8029.00	317.63	332.98	327.27	333.31	0.000805	5.41	2031.62	263.96	0.26
USACE	56527	100YR	10193.00	317.63	334.76	328.25	335.13	0.000789	5.82	2566.40	341.15	0.26
USACE	56527	100YRPLUS	13330.00	317.63	337.24	329.39	337.58	0.000625	5.73	3492.18	387.26	0.24
USACE	56527	200YR	12801.00	317.63	336.84	329.18	337.19	0.000652	5.77	3337.69	384.19	0.25
USACE	56527	500YR	17106.00	317.63	339.93	330.52	340.23	0.000483	5.54	4554.34	423.86	0.22
USACE	56527	SEPT2011	9029.00	317.63	333.81	327.77	334.17	0.000794	5.59	2264.30	295.24	0.26
USACE	56437	2YR	2015.00	317.84	325.69	323.83	326.13	0.003399	5.50	412.89	131.89	0.44
USACE	56437	5YR	3194.00	317.84	327.58	325.04	328.02	0.002321	5.68	683.17	156.54	0.39
USACE	56437	10YR	4278.00	317.84	328.91	325.87	329.38	0.002009	5.96	898.73	176.70	0.37
USACE	56437	25YR	6238.00	317.84	330.99	326.98	331.49	0.001660	6.31	1247.00	191.74	0.35
USACE	56437	50YR	8029.00	317.84	332.61	327.85	333.15	0.001513	6.65	1519.30	205.14	0.34
USACE	56437	100YR	10193.00	317.84	334.36	328.90	334.97	0.001408	7.04	1814.03	220.05	0.34
USACE	56437	100YRPLUS	13330.00	317.84	336.71	330.03	337.40	0.001294	7.52	2209.19	246.44	0.33
USACE	56437	200YR	12801.00	317.84	336.34	329.85	337.01	0.001308	7.44	2146.13	240.44	0.33
USACE	56437	500YR	17106.00	317.84	339.24	331.16	340.02	0.001216	8.04	2634.15	296.10	0.33
USACE	56437	SEPT2011	9029.00	317.84	333.43	328.45	334.00	0.001462	6.84	1657.69	211.66	0.34
USACE	56354 Railroad		Bridge									
USACE	56291	2YR	2015.00	317.40	325.33	322.22	325.75	0.002043	5.22	432.45	119.76	0.37
USACE	56291	5YR	3194.00	317.40	327.14	323.52	327.68	0.002005	6.12	695.03	181.81	0.38
USACE	56291	10YR	4278.00	317.40	328.46	324.59	329.07	0.001947	6.67	915.36	191.57	0.38
USACE	56291	25YR	6238.00	317.40	330.43	325.98	331.16	0.001919	7.52	1243.76	202.11	0.39
USACE	56291	50YR	8029.00	317.40	331.95	327.69	332.79	0.001922	8.19	1498.99	207.71	0.40
USACE	56291	100YR	10193.00	317.40	333.60	328.76	334.57	0.001928	8.88	1774.77	218.71	0.41
USACE	56291	100YRPLUS	13330.00	317.40	335.79	330.08	336.91	0.001917	9.72	2139.57	235.27	0.42
USACE	56291	200YR	12801.00	317.40	335.44	329.87	336.53	0.001917	9.59	2081.14	233.25	0.42
USACE	56291	500YR	17106.00	317.40	338.12	331.49	339.42	0.001919	10.61	2528.92	258.74	0.43
USACE	56291	SEPT2011	9029.00	317.40	332.74	328.21	333.63	0.001926	8.52	1629.67	213.57	0.41
USACE	56104	2YR	2015.00	316.41	325.10		325.39	0.001294	4.36	481.01	131.60	0.29
USACE	56104	5YR	3194.00	316.41	326.90		327.31	0.001364	5.23	764.51	170.29	0.31
USACE	56104	10YR	4278.00	316.41	328.22		328.70	0.001406	5.83	997.86	184.41	0.33
USACE	56104	25YR	6238.00	316.41	330.18		330.79	0.001457	6.70	1379.62	202.84	0.34
USACE	56104	50YR	8029.00	316.41	331.71		332.41	0.001492	7.34	1701.74	219.77	0.35
USACE	56104	100YR	10193.00	316.41	333.38		334.17	0.001495	7.95	2078.65	232.69	0.36
USACE	56104	100YRPLUS	13330.00	316.41	335.59		336.49	0.001474	8.64	2619.03	253.95	0.37
USACE	56104	200YR	12801.00	316.41	335.23		336.12	0.001480	8.54	2528.91	251.45	0.37
USACE	56104	500YR	17106.00	316.41	337.95		338.97	0.001464	9.38	3256.67	285.79	0.37

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	56104	SEPT2011	9029.00	316.41	332.50		333.25	0.001496	7.64	1877.51	225.68	0.36
USACE	55845	2YR	2015.00	315.70	324.76		325.06	0.001246	4.46	551.04	176.09	0.29
USACE	55845	5YR	3194.00	315.70	326.59		326.96	0.001258	5.21	891.17	196.53	0.31
USACE	55845	10YR	4278.00	315.70	327.91		328.35	0.001279	5.75	1159.82	209.11	0.32
USACE	55845	25YR	6238.00	315.70	329.87		330.42	0.001337	6.60	1585.00	233.39	0.33
USACE	55845	50YR	8029.00	315.70	331.41		332.03	0.001359	7.20	1962.28	254.72	0.34
USACE	55845	100YR	10193.00	315.70	333.07		333.78	0.001387	7.84	2416.94	303.68	0.35
USACE	55845	100YRPLUS	13330.00	315.70	335.35		336.10	0.001299	8.31	3183.88	364.12	0.35
USACE	55845	200YR	12801.00	315.70	334.98		335.73	0.001313	8.25	3052.12	355.67	0.35
USACE	55845	500YR	17106.00	315.70	337.82		338.57	0.001180	8.64	4146.72	414.38	0.34
USACE	55845	SEPT2011	9029.00	315.70	332.20		332.86	0.001373	7.51	2168.78	269.40	0.35
USACE	55590	2YR	2015.00	314.52	324.39		324.73	0.001374	4.69	483.75	103.66	0.30
USACE	55590	5YR	3194.00	314.52	326.09		326.60	0.001620	5.85	671.17	119.14	0.34
USACE	55590	10YR	4278.00	314.52	327.29		327.95	0.001822	6.75	819.26	127.02	0.37
USACE	55590	25YR	6238.00	314.52	329.04		329.96	0.002156	8.15	1054.28	144.40	0.41
USACE	55590	50YR	8029.00	314.52	330.37		331.54	0.002410	9.24	1263.40	166.50	0.45
USACE	55590	100YR	10193.00	314.52	331.89		333.27	0.002531	10.18	1527.71	180.24	0.47
USACE	55590	100YRPLUS	13330.00	314.52	333.99		335.58	0.002563	11.18	1921.99	198.66	0.48
USACE	55590	200YR	12801.00	314.52	333.65		335.21	0.002561	11.03	1855.58	195.52	0.48
USACE	55590	500YR	17106.00	314.52	336.22		338.05	0.002584	12.19	2393.94	224.92	0.49
USACE	55590	SEPT2011	9029.00	314.52	331.09		332.36	0.002480	9.71	1384.91	173.03	0.46
USACE	55423	2YR	2015.00	314.18	324.30		324.52	0.000804	3.79	572.22	108.05	0.24
USACE	55423	5YR	3194.00	314.18	325.99		326.34	0.001011	4.83	774.15	127.05	0.27
USACE	55423	10YR	4278.00	314.18	327.18		327.65	0.001179	5.64	930.39	134.69	0.30
USACE	55423	25YR	6238.00	314.18	328.92		329.60	0.001438	6.88	1172.11	143.16	0.34
USACE	55423	50YR	8029.00	314.18	330.25		331.12	0.001631	7.84	1367.60	149.53	0.37
USACE	55423	100YR	10193.00	314.18	331.76		332.82	0.001788	8.79	1597.85	157.06	0.40
USACE	55423	100YRPLUS	13330.00	314.18	333.82		335.13	0.001904	9.87	1931.99	166.91	0.42
USACE	55423	200YR	12801.00	314.18	333.49		334.76	0.001888	9.70	1876.94	165.31	0.41
USACE	55423	500YR	17106.00	314.18	336.01		337.60	0.002022	11.00	2311.73	182.19	0.44
USACE	55423	SEPT2011	9029.00	314.18	330.96		331.92	0.001712	8.30	1474.49	153.00	0.38
USACE	55196	2YR	2015.00	314.08	324.13		324.33	0.000776	3.61	588.86	110.16	0.23
USACE	55196	5YR	3194.00	314.08	325.79		326.10	0.000959	4.58	795.33	134.48	0.27
USACE	55196	10YR	4278.00	314.08	326.96		327.38	0.001106	5.33	958.98	145.20	0.29
USACE	55196	25YR	6238.00	314.08	328.66		329.26	0.001326	6.46	1248.07	188.91	0.33
USACE	55196	50YR	8029.00	314.08	330.01		330.73	0.001429	7.20	1514.96	204.83	0.35
USACE	55196	100YR	10193.00	314.08	331.57		332.38	0.001459	7.82	1844.44	218.36	0.36
USACE	55196	100YRPLUS	13330.00	314.08	333.74		334.64	0.001417	8.43	2337.24	237.33	0.36
USACE	55196	200YR	12801.00	314.08	333.39		334.27	0.001424	8.34	2254.96	234.06	0.36
USACE	55196	500YR	17106.00	314.08	336.04		337.05	0.001399	9.11	2916.83	273.20	0.36
USACE	55196	SEPT2011	9029.00	314.08	330.74		331.51	0.001452	7.51	1666.28	211.50	0.35
USACE	54958	2YR	2015.00	313.52	324.02		324.15	0.000584	2.96	680.70	99.65	0.20
USACE	54958	5YR	3194.00	313.52	325.67		325.88	0.000688	3.70	962.62	211.43	0.22
USACE	54958	10YR	4278.00	313.52	326.86		327.11	0.000737	4.17	1229.53	238.07	0.24
USACE	54958	25YR	6238.00	313.52	328.62		328.94	0.000782	4.80	1674.30	264.58	0.25
USACE	54958	50YR	8029.00	313.52	330.02		330.37	0.000793	5.21	2054.73	280.55	0.26
USACE	54958	100YR	10193.00	313.52	331.62		332.01	0.000772	5.56	2518.52	298.08	0.26
USACE	54958	100YRPLUS	13330.00	313.52	333.84		334.26	0.000715	5.88	3207.15	320.48	0.25
USACE	54958	200YR	12801.00	313.52	333.49		333.90	0.000724	5.84	3092.96	317.32	0.25
USACE	54958	500YR	17106.00	313.52	336.21		336.66	0.000675	6.24	4009.64	360.22	0.25
USACE	54958	SEPT2011	9029.00	313.52	330.77		331.14	0.000786	5.39	2268.29	288.70	0.26
USACE	54720	2YR	2015.00	313.22	323.77	317.92	323.99	0.000790	3.73	547.35	136.81	0.23
USACE	54720	5YR	3194.00	313.22	325.37	319.28	325.68	0.000944	4.61	882.90	242.36	0.26
USACE	54720	10YR	4278.00	313.22	326.56	320.36	326.91	0.000975	5.06	1192.09	276.56	0.27
USACE	54720	25YR	6238.00	313.22	328.36	322.10	328.73	0.000953	5.54	1722.87	311.44	0.27
USACE	54720	50YR	8029.00	313.22	329.80	323.39	330.18	0.000904	5.80	2184.73	330.43	0.27
USACE	54720	100YR	10193.00	313.22	331.45	325.92	331.82	0.000823	5.96	2746.13	348.75	0.26
USACE	54720	100YRPLUS	13330.00	313.22	333.72	327.22	334.08	0.000714	6.07	3565.39	372.36	0.25
USACE	54720	200YR	12801.00	313.22	333.36	326.98	333.72	0.000729	6.05	3430.47	368.52	0.25
USACE	54720	500YR	17106.00	313.22	336.12	328.40	336.48	0.000641	6.25	4494.75	401.79	0.24
USACE	54720	SEPT2011	9029.00	313.22	330.58	325.13	330.95	0.000867	5.88	2444.94	340.13	0.27
USACE	54365	2YR	2015.00	312.70	323.51		323.70	0.000769	3.57	602.66	165.00	0.23
USACE	54365	5YR	3194.00	312.70	325.07		325.34	0.000906	4.39	901.61	215.04	0.26
USACE	54365	10YR	4278.00	312.70	326.24		326.56	0.000954	4.89	1167.36	239.60	0.27
USACE	54365	25YR	6238.00	312.70	328.02		328.39	0.000972	5.49	1621.41	268.61	0.28
USACE	54365	50YR	8029.00	312.70	329.44		329.85	0.000949	5.84	2015.10	282.91	0.28
USACE	54365	100YR	10193.00	312.70	331.10		331.52	0.000891	6.11	2496.48	299.08	0.28
USACE	54365	100YRPLUS	13330.00	312.70	333.38		333.81	0.000795	6.34	3204.21	320.44	0.27
USACE	54365	200YR	12801.00	312.70	333.02		333.44	0.000809	6.31	3087.44	317.00	0.27
USACE	54365	500YR	17106.00	312.70	335.79		336.24	0.000730	6.62	4003.02	344.10	0.26
USACE	54365	SEPT2011	9029.00	312.70	330.22		330.64	0.000924	5.98	2237.54	291.02	0.28
USACE	54021	2YR	2015.00	312.06	323.36		323.49	0.000439	2.87	744.11	162.69	0.18
USACE	54021	5YR	3194.00	312.06	324.87		325.07	0.000593	3.74	1026.40	204.08	0.21
USACE	54021	10YR	4278.00	312.06	325.99		326.27	0.000697	4.36	1280.74	239.91	0.23
USACE	54021	25YR	6238.00	312.06	327.72		328.09	0.000812	5.19	1717.04	262.35	0.26
USACE	54021	50YR	8029.00	312.06	329.09		329.54	0.000873	5.76	2088.29	274.33	0.27
USACE	54021	100YR	10193.00	312.06	330.71		331.21	0.000892	6.26	2539.81	286.75	0.28

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	54021	100YRPLUS	13330.00	312.06	332.96		333.52	0.000868	6.76	3205.90	302.79	0.28
USACE	54021	200YR	12801.00	312.06	332.60		333.15	0.000873	6.69	3096.58	300.60	0.28
USACE	54021	500YR	17106.00	312.06	335.34		335.95	0.000846	7.25	3941.45	314.20	0.28
USACE	54021	SEPT2011	9029.00	312.06	329.85		330.32	0.000886	6.01	2297.20	279.98	0.28
USACE	53776	2YR	2015.00	311.72	323.22	316.43	323.36	0.000546	3.08	673.36	151.50	0.19
USACE	53776	5YR	3194.00	311.72	324.68	317.74	324.91	0.000715	3.94	936.72	200.06	0.23
USACE	53776	10YR	4278.00	311.72	325.79	318.79	326.08	0.000802	4.51	1164.67	208.48	0.25
USACE	53776	25YR	6238.00	311.72	327.50	320.44	327.88	0.000896	5.27	1528.80	218.14	0.27
USACE	53776	50YR	8029.00	311.72	328.87	321.84	329.31	0.000940	5.80	1832.41	224.60	0.28
USACE	53776	100YR	10193.00	311.72	330.48	323.79	330.98	0.000939	6.25	2199.93	231.35	0.28
USACE	53776	100YRPLUS	13330.00	311.72	332.75	325.45	333.30	0.000896	6.70	2734.55	305.68	0.28
USACE	53776	200YR	12801.00	311.72	332.38	325.26	332.93	0.000902	6.62	2647.28	262.72	0.28
USACE	53776	500YR	17106.00	311.72	335.10	326.75	335.74	0.000897	7.29	3323.40	513.72	0.29
USACE	53776	SEPT2011	9029.00	311.72	329.63	322.52	330.10	0.000944	6.02	2002.94	227.88	0.28
USACE	53408	2YR	2024.00	311.04	323.07		323.18	0.000431	2.68	807.04	213.27	0.17
USACE	53408	5YR	3206.00	311.04	324.50		324.67	0.000530	3.34	1136.60	242.29	0.20
USACE	53408	10YR	4291.00	311.04	325.61		325.81	0.000574	3.76	1413.58	256.89	0.21
USACE	53408	25YR	6265.00	311.04	327.32		327.57	0.000613	4.31	1865.84	270.14	0.22
USACE	53408	50YR	8072.00	311.04	328.70		328.98	0.000631	4.71	2248.01	293.13	0.23
USACE	53408	100YR	10258.00	311.04	330.34		330.65	0.000607	5.00	2761.55	328.18	0.23
USACE	53408	100YRPLUS	13415.00	311.04	332.65		332.98	0.000547	5.23	3549.97	353.08	0.22
USACE	53408	200YR	12887.00	311.04	332.28		332.60	0.000555	5.19	3419.94	348.66	0.22
USACE	53408	500YR	17211.00	311.04	335.06		335.41	0.000510	5.52	4438.31	386.34	0.22
USACE	53408	SEPT2011	9088.00	311.04	329.47		329.76	0.000625	4.87	2480.58	313.85	0.23
USACE	53197	2YR	2024.00	310.68	322.93		323.07	0.000536	3.08	710.24	153.72	0.19
USACE	53197	5YR	3206.00	310.68	324.29		324.53	0.000729	4.00	931.85	171.36	0.23
USACE	53197	10YR	4291.00	310.68	325.34		325.65	0.000854	4.64	1122.03	190.94	0.25
USACE	53197	25YR	6265.00	310.68	326.98		327.39	0.000990	5.51	1486.55	246.66	0.28
USACE	53197	50YR	8072.00	310.68	328.32		328.80	0.001033	6.04	1841.92	278.62	0.29
USACE	53197	100YR	10258.00	310.68	329.96		330.47	0.000993	6.40	2322.35	312.03	0.29
USACE	53197	100YRPLUS	13415.00	310.68	332.31		332.81	0.000871	6.60	3151.85	386.58	0.28
USACE	53197	200YR	12887.00	310.68	331.93		332.44	0.000895	6.59	3005.69	379.20	0.28
USACE	53197	500YR	17211.00	310.68	334.79		335.26	0.000753	6.71	4167.75	435.68	0.27
USACE	53197	SEPT2011	9088.00	310.68	329.09		329.58	0.001020	6.23	2058.73	290.43	0.29
USACE	53049	2YR	2024.00	310.57	322.91		323.00	0.000267	2.43	842.03	111.87	0.14
USACE	53049	5YR	3206.00	310.57	324.26		324.43	0.000413	3.30	1048.39	163.95	0.18
USACE	53049	10YR	4291.00	310.57	325.30		325.53	0.000518	3.93	1221.96	170.34	0.20
USACE	53049	25YR	6265.00	310.57	326.91		327.25	0.000664	4.84	1505.27	181.57	0.23
USACE	53049	50YR	8072.00	310.57	328.23		328.65	0.000753	5.49	1751.44	191.01	0.25
USACE	53049	100YR	10258.00	310.57	329.84		330.33	0.000788	6.01	2074.40	208.67	0.26
USACE	53049	100YRPLUS	13415.00	310.57	332.15		332.69	0.000763	6.46	2581.82	232.87	0.26
USACE	53049	200YR	12887.00	310.57	331.78		332.31	0.000768	6.39	2496.38	228.46	0.26
USACE	53049	500YR	17211.00	310.57	334.54		335.14	0.000744	6.90	3179.07	267.53	0.26
USACE	53049	SEPT2011	9088.00	310.57	328.98		329.44	0.000780	5.77	1896.87	201.04	0.26
USACE	52798	2YR	2024.00	310.67	322.75		322.90	0.000534	3.11	664.20	129.57	0.19
USACE	52798	5YR	3206.00	310.67	324.02		324.28	0.000783	4.15	839.35	144.87	0.24
USACE	52798	10YR	4291.00	310.67	324.99		325.34	0.000956	4.90	983.79	153.15	0.27
USACE	52798	25YR	6265.00	310.67	326.50		327.01	0.001182	5.97	1225.08	165.38	0.31
USACE	52798	50YR	8072.00	310.67	327.77		328.39	0.001299	6.70	1439.38	173.97	0.33
USACE	52798	100YR	10258.00	310.67	329.35		330.06	0.001314	7.27	1722.35	183.76	0.33
USACE	52798	100YRPLUS	13415.00	310.67	331.64		332.43	0.001238	7.77	2160.70	199.02	0.33
USACE	52798	200YR	12887.00	310.67	331.27		332.05	0.001250	7.70	2087.82	196.46	0.33
USACE	52798	500YR	17211.00	310.67	334.00		334.89	0.001203	8.36	2652.56	218.14	0.34
USACE	52798	SEPT2011	9088.00	310.67	328.50		329.17	0.001319	6.99	1568.11	178.54	0.33
USACE	52504	2YR	2024.00	311.39	322.66		322.76	0.000361	2.55	805.04	124.42	0.16
USACE	52504	5YR	3206.00	311.39	323.88		324.07	0.000551	3.47	970.89	149.20	0.20
USACE	52504	10YR	4291.00	311.39	324.82		325.08	0.000695	4.16	1120.40	167.60	0.23
USACE	52504	25YR	6265.00	311.39	326.29		326.68	0.000886	5.14	1379.77	181.64	0.27
USACE	52504	50YR	8072.00	311.39	327.53		328.02	0.000990	5.82	1608.81	187.16	0.29
USACE	52504	100YR	10258.00	311.39	329.11		329.68	0.001014	6.37	1910.81	194.88	0.30
USACE	52504	100YRPLUS	13415.00	311.39	331.42		332.07	0.000968	6.87	2375.78	208.83	0.30
USACE	52504	200YR	12887.00	311.39	331.05		331.69	0.000976	6.80	2298.80	206.24	0.30
USACE	52504	500YR	17211.00	311.39	333.77		334.53	0.000974	7.53	2902.16	242.80	0.30
USACE	52504	SEPT2011	9088.00	311.39	328.26		328.79	0.001011	6.10	1746.24	190.65	0.29
USACE	52278	2YR	2024.00	311.68	322.60		322.68	0.000294	2.31	893.79	140.19	0.15
USACE	52278	5YR	3206.00	311.68	323.79		323.94	0.000453	3.15	1075.89	164.62	0.18
USACE	52278	10YR	4291.00	311.68	324.70		324.92	0.000576	3.79	1232.85	177.48	0.21
USACE	52278	25YR	6265.00	311.68	326.15		326.48	0.000748	4.72	1499.12	190.14	0.25
USACE	52278	50YR	8072.00	311.68	327.37		327.79	0.000845	5.37	1735.62	195.86	0.27
USACE	52278	100YR	10258.00	311.68	328.95		329.45	0.000876	5.91	2051.62	206.00	0.28
USACE	52278	100YRPLUS	13415.00	311.68	331.27		331.84	0.000843	6.41	2549.46	222.37	0.28
USACE	52278	200YR	12887.00	311.68	330.90		331.46	0.000849	6.34	2466.98	219.81	0.28
USACE	52278	500YR	17211.00	311.68	333.64		334.30	0.000829	6.95	3096.08	238.73	0.28
USACE	52278	SEPT2011	9088.00	311.68	328.10		328.56	0.000868	5.65	1878.81	199.65	0.27
USACE	52053	2YR	2024.00	311.90	322.51		322.61	0.000381	2.50	817.09	124.94	0.16
USACE	52053	5YR	3206.00	311.90	323.65		323.83	0.000582	3.40	978.36	165.98	0.21
USACE	52053	10YR	4291.00	311.90	324.52		324.77	0.000730	4.07	1132.04	179.39	0.24

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	52053	25YR	6265.00	311.90	325.91		326.29	0.000925	5.03	1387.41	188.56	0.27
USACE	52053	50YR	8072.00	311.90	327.11		327.58	0.001026	5.68	1618.19	197.22	0.29
USACE	52053	100YR	10258.00	311.90	328.69		329.23	0.001028	6.18	1937.44	207.13	0.30
USACE	52053	100YRPLUS	13415.00	311.90	331.03		331.64	0.000950	6.62	2441.21	222.14	0.29
USACE	52053	200YR	12887.00	311.90	330.66		331.25	0.000962	6.55	2357.94	219.81	0.29
USACE	52053	500YR	17211.00	311.90	333.40		334.10	0.000931	7.19	2991.81	249.50	0.30
USACE	52053	SEPT2011	9088.00	311.90	327.83		328.34	0.001038	5.95	1762.14	201.74	0.30
USACE	51846	2YR	2024.00	311.96	322.45		322.53	0.000328	2.29	882.80	125.47	0.15
USACE	51846	5YR	3206.00	311.96	323.55		323.70	0.000510	3.14	1032.61	147.82	0.19
USACE	51846	10YR	4291.00	311.96	324.40		324.62	0.000652	3.79	1168.23	170.23	0.22
USACE	51846	25YR	6265.00	311.96	325.75		326.09	0.000850	4.75	1417.63	197.26	0.26
USACE	51846	50YR	8072.00	311.96	326.93		327.36	0.000951	5.40	1667.90	223.35	0.28
USACE	51846	100YR	10258.00	311.96	328.52		329.01	0.000934	5.83	2036.89	239.08	0.28
USACE	51846	100YRPLUS	13415.00	311.96	330.91		331.43	0.000830	6.13	2635.88	262.47	0.27
USACE	51846	200YR	12887.00	311.96	330.52		331.04	0.000846	6.09	2536.03	258.86	0.28
USACE	51846	500YR	17211.00	311.96	333.32		333.89	0.000761	6.46	3290.08	277.05	0.27
USACE	51846	SEPT2011	9088.00	311.96	327.65		328.12	0.000956	5.63	1832.74	231.27	0.28
USACE	51718	2YR	2024.00	312.09	322.39		322.48	0.000390	2.43	835.56	131.78	0.16
USACE	51718	5YR	3206.00	312.09	323.46		323.63	0.000595	3.31	998.32	161.56	0.21
USACE	51718	10YR	4291.00	312.09	324.29		324.53	0.000757	3.99	1134.11	168.74	0.24
USACE	51718	25YR	6265.00	312.09	325.59		325.97	0.000986	4.99	1377.24	201.94	0.28
USACE	51718	50YR	8072.00	312.09	326.75		327.23	0.001093	5.65	1618.67	214.13	0.30
USACE	51718	100YR	10258.00	312.09	328.34		328.88	0.001070	6.11	1976.69	234.60	0.30
USACE	51718	100YRPLUS	13415.00	312.09	330.74		331.32	0.000935	6.41	2566.00	254.36	0.29
USACE	51718	200YR	12887.00	312.09	330.36		330.93	0.000955	6.36	2468.71	251.32	0.29
USACE	51718	500YR	17211.00	312.09	333.16		333.78	0.000852	6.75	3224.15	286.12	0.28
USACE	51718	SEPT2011	9088.00	312.09	327.47		327.99	0.001099	5.91	1776.71	225.65	0.30
USACE	51607	2YR	2024.00	312.11	322.37	315.55	322.43	0.000239	2.02	1002.27	136.53	0.13
USACE	51607	5YR	3206.00	312.11	323.44	316.49	323.56	0.000386	2.80	1160.97	158.65	0.17
USACE	51607	10YR	4291.00	312.11	324.25	317.23	324.43	0.000507	3.41	1292.68	163.71	0.20
USACE	51607	25YR	6265.00	312.11	325.55	318.39	325.84	0.000692	4.34	1509.51	173.72	0.23
USACE	51607	50YR	8072.00	312.11	326.70	319.30	327.08	0.000805	5.01	1723.56	192.67	0.26
USACE	51607	100YR	10258.00	312.11	328.28	320.27	328.74	0.000828	5.53	2042.60	207.53	0.27
USACE	51607	100YRPLUS	13415.00	312.11	330.67	321.55	331.20	0.000770	5.95	2585.37	248.78	0.26
USACE	51607	200YR	12887.00	312.11	330.29	321.36	330.80	0.000780	5.89	2490.77	242.97	0.26
USACE	51607	500YR	17211.00	312.11	333.09	322.94	333.67	0.000735	6.39	3222.85	276.81	0.26
USACE	51607	SEPT2011	9088.00	312.11	327.41	319.77	327.84	0.000828	5.29	1865.27	202.30	0.26
USACE	51577 Weir		Inl Struct									
USACE	51547	2YR	2024.00	311.03	319.79		319.89	0.000404	2.49	837.32	133.09	0.17
USACE	51547	5YR	3206.00	311.03	321.48		321.63	0.000483	3.15	1067.68	139.91	0.19
USACE	51547	10YR	4291.00	311.03	322.96		323.15	0.000502	3.57	1279.18	145.24	0.20
USACE	51547	25YR	6265.00	311.03	324.66		324.96	0.000626	4.42	1532.14	151.69	0.23
USACE	51547	50YR	8072.00	311.03	326.18		326.55	0.000686	5.02	1766.17	158.06	0.24
USACE	51547	100YR	10258.00	311.03	327.93		328.40	0.000728	5.61	2060.17	182.57	0.25
USACE	51547	100YRPLUS	13415.00	311.03	330.37		330.92	0.000719	6.16	2534.17	204.58	0.26
USACE	51547	200YR	12887.00	311.03	329.98		330.52	0.000721	6.08	2455.15	202.18	0.26
USACE	51547	500YR	17211.00	311.03	332.77		333.43	0.000733	6.78	3041.75	221.16	0.27
USACE	51547	SEPT2011	9088.00	311.03	327.01		327.43	0.000706	5.30	1899.55	164.61	0.25
USACE	51476	2YR	2024.00	310.85	319.73		319.85	0.000615	2.74	753.72	140.16	0.20
USACE	51476	5YR	3206.00	310.85	321.41		321.58	0.000657	3.35	999.78	154.52	0.21
USACE	51476	10YR	4291.00	310.85	322.90		323.11	0.000629	3.70	1240.55	165.35	0.22
USACE	51476	25YR	6265.00	310.85	324.61		324.91	0.000730	4.47	1526.88	169.73	0.24
USACE	51476	50YR	8072.00	310.85	326.13		326.50	0.000763	4.99	1787.22	173.11	0.25
USACE	51476	100YR	10258.00	310.85	327.89		328.33	0.000770	5.48	2095.70	178.61	0.26
USACE	51476	100YRPLUS	13415.00	310.85	330.33		330.86	0.000752	6.02	2551.78	197.36	0.26
USACE	51476	200YR	12887.00	310.85	329.94		330.45	0.000755	5.94	2476.08	193.04	0.26
USACE	51476	500YR	17211.00	310.85	332.73		333.36	0.000759	6.63	3056.94	217.25	0.27
USACE	51476	SEPT2011	9088.00	310.85	326.96		327.37	0.000768	5.23	1932.11	174.94	0.25
USACE	51405	2YR	2024.00	310.55	319.74	314.47	319.80	0.000269	2.06	1013.16	189.39	0.14
USACE	51405	5YR	3206.00	310.55	321.43	315.18	321.53	0.000316	2.58	1371.45	227.08	0.15
USACE	51405	10YR	4291.00	310.55	322.93	315.76	323.05	0.000317	2.87	1748.26	294.56	0.16
USACE	51405	25YR	6265.00	310.55	324.67	316.68	324.84	0.000370	3.44	2206.80	316.07	0.18
USACE	51405	50YR	8072.00	310.55	326.21	317.41	326.41	0.000384	3.80	2623.67	327.84	0.18
USACE	51405	100YR	10258.00	310.55	328.00	318.26	328.23	0.000384	4.13	3118.47	334.34	0.19
USACE	51405	100YRPLUS	13415.00	310.55	330.47	319.39	330.74	0.000368	4.47	3815.56	346.26	0.19
USACE	51405	200YR	12887.00	310.55	330.08	319.19	330.34	0.000370	4.41	3703.55	341.81	0.19
USACE	51405	500YR	17211.00	310.55	332.92	320.77	333.23	0.000370	4.88	4519.55	374.80	0.19
USACE	51405	SEPT2011	9088.00	310.55	327.06	317.81	327.27	0.000385	3.96	2856.26	331.30	0.18
USACE	51346	2YR	2024.00	310.39	319.72	313.69	319.79	0.000251	2.03	998.94	201.05	0.13
USACE	51346	5YR	3206.00	310.39	321.41	314.62	321.51	0.000299	2.55	1292.07	290.74	0.15
USACE	51346	10YR	4291.00	310.39	322.93	315.29	323.02	0.000255	2.62	1818.64	317.56	0.14
USACE	51346	25YR	6265.00	310.39	324.67	316.38	324.80	0.000280	3.04	2282.37	368.57	0.15
USACE	51346	50YR	8072.00	310.39	326.21	317.21	326.37	0.000278	3.28	2714.48	398.71	0.16
USACE	51346	100YR	10258.00	310.39	328.01	318.07	328.19	0.000265	3.47	3235.84	448.17	0.16
USACE	51346	100YRPLUS	13415.00	310.39	330.48	319.17	330.70	0.000241	3.66	3978.87	519.03	0.15
USACE	51346	200YR	12887.00	310.39	330.09	319.00	330.30	0.000244	3.63	3859.13	507.09	0.15
USACE	51346	500YR	17211.00	310.39	332.93	320.94	333.19	0.000233	3.91	4732.41	590.14	0.15

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	51346	SEPT2011	9088.00	310.39	327.06	317.63	327.23	0.000272	3.38	2958.82	408.49	0.16
USACE	51305 Eby Chiques Rd		Bridge									
USACE	51257	2YR	2024.00	309.75	319.44	313.53	319.54	0.000341	2.48	816.78	181.40	0.16
USACE	51257	5YR	3206.00	309.75	321.14	314.55	321.28	0.000409	3.11	1090.77	245.67	0.18
USACE	51257	10YR	4291.00	309.75	322.42	315.37	322.55	0.000347	3.11	1664.80	266.97	0.17
USACE	51257	25YR	6265.00	309.75	324.14	316.49	324.31	0.000378	3.59	2137.92	298.28	0.18
USACE	51257	50YR	8072.00	309.75	325.87	317.39	326.05	0.000346	3.74	2646.14	325.44	0.18
USACE	51257	100YR	10258.00	309.75	327.81	318.36	328.00	0.000314	3.88	3253.95	360.55	0.17
USACE	51257	100YRPLUS	13415.00	309.75	330.35	320.32	330.55	0.000277	4.02	4098.55	476.52	0.16
USACE	51257	200YR	12887.00	309.75	329.95	319.47	330.15	0.000282	3.99	3961.08	459.71	0.16
USACE	51257	500YR	17211.00	309.75	332.81	321.74	333.05	0.000266	4.27	4976.36	552.59	0.16
USACE	51257	SEPT2011	9088.00	309.75	326.80	317.86	326.98	0.000329	3.81	2932.49	340.90	0.17
USACE	51124	2YR	2024.00	309.28	319.34		319.47	0.000476	3.05	749.50	157.86	0.19
USACE	51124	5YR	3206.00	309.28	321.05		321.22	0.000492	3.51	1027.57	169.05	0.20
USACE	51124	10YR	4291.00	309.28	322.27		322.48	0.000515	3.88	1245.86	189.06	0.20
USACE	51124	25YR	6265.00	309.28	323.95		324.22	0.000571	4.48	1578.53	204.85	0.22
USACE	51124	50YR	8072.00	309.28	325.66		325.96	0.000534	4.71	1939.65	216.88	0.22
USACE	51124	100YR	10258.00	309.28	327.58		327.91	0.000502	4.96	2373.34	238.18	0.21
USACE	51124	100YRPLUS	13415.00	309.28	330.10		330.46	0.000467	5.25	3068.72	303.95	0.21
USACE	51124	200YR	12887.00	309.28	329.70		330.05	0.000477	5.23	2946.46	298.58	0.21
USACE	51124	500YR	17211.00	309.28	332.59		332.96	0.000441	5.54	3904.74	371.97	0.21
USACE	51124	SEPT2011	9088.00	309.28	326.58		326.89	0.000514	4.81	2143.46	224.57	0.22
USACE	50893	2YR	2024.00	309.00	319.19		319.35	0.000562	3.32	681.75	158.11	0.20
USACE	50893	5YR	3206.00	309.00	320.88		321.09	0.000590	3.84	965.22	175.15	0.21
USACE	50893	10YR	4291.00	309.00	322.09		322.34	0.000608	4.20	1183.45	186.04	0.22
USACE	50893	25YR	6265.00	309.00	323.72		324.07	0.000670	4.82	1497.91	199.16	0.24
USACE	50893	50YR	8072.00	309.00	325.43		325.82	0.000613	5.00	1849.34	212.74	0.23
USACE	50893	100YR	10258.00	309.00	327.35		327.77	0.000553	5.16	2273.78	229.77	0.22
USACE	50893	100YRPLUS	13415.00	309.00	329.89		330.34	0.000486	5.31	2885.38	250.07	0.21
USACE	50893	200YR	12887.00	309.00	329.48		329.93	0.000495	5.29	2784.81	247.29	0.21
USACE	50893	500YR	17211.00	309.00	332.35		332.84	0.000463	5.62	3533.92	280.09	0.21
USACE	50893	SEPT2011	9088.00	309.00	326.35		326.76	0.000582	5.07	2049.14	220.36	0.23
USACE	50717	2YR	2024.00	308.53	319.10		319.25	0.000512	3.30	728.11	151.00	0.19
USACE	50717	5YR	3206.00	308.53	320.76		320.98	0.000619	4.06	995.80	170.73	0.22
USACE	50717	10YR	4291.00	308.53	321.95		322.23	0.000686	4.59	1212.48	202.55	0.24
USACE	50717	25YR	6265.00	308.53	323.60		323.94	0.000765	5.29	1553.92	211.83	0.25
USACE	50717	50YR	8072.00	308.53	325.34		325.69	0.000686	5.44	1931.23	221.24	0.25
USACE	50717	100YR	10258.00	308.53	327.30		327.65	0.000606	5.54	2377.36	238.09	0.24
USACE	50717	100YRPLUS	13415.00	308.53	329.86		330.23	0.000528	5.68	3041.44	273.12	0.23
USACE	50717	200YR	12887.00	308.53	329.45		329.82	0.000540	5.66	2930.56	269.58	0.23
USACE	50717	500YR	17211.00	308.53	332.34		332.73	0.000487	5.90	3755.55	304.38	0.22
USACE	50717	SEPT2011	9088.00	308.53	326.28		326.63	0.000643	5.48	2141.88	227.38	0.24
USACE	50470	2YR	2024.00	308.20	319.00		319.13	0.000424	2.92	766.13	149.71	0.18
USACE	50470	5YR	3206.00	308.20	320.65		320.83	0.000497	3.55	1023.66	160.17	0.20
USACE	50470	10YR	4291.00	308.20	321.84		322.06	0.000544	4.00	1216.27	164.66	0.21
USACE	50470	25YR	6265.00	308.20	323.45		323.76	0.000646	4.76	1488.08	181.94	0.23
USACE	50470	50YR	8072.00	308.20	325.18		325.53	0.000615	5.05	1819.37	197.62	0.23
USACE	50470	100YR	10258.00	308.20	327.12		327.50	0.000591	5.38	2241.96	229.26	0.23
USACE	50470	100YRPLUS	13415.00	308.20	329.69		330.09	0.000545	5.68	2909.90	298.18	0.23
USACE	50470	200YR	12887.00	308.20	329.27		329.68	0.000558	5.66	2787.28	291.54	0.23
USACE	50470	500YR	17211.00	308.20	332.19		332.60	0.000497	5.89	3705.00	342.23	0.22
USACE	50470	SEPT2011	9088.00	308.20	326.10		326.47	0.000618	5.27	2012.47	221.23	0.23
USACE	50252	2YR	2024.00	307.89	318.92	312.76	319.04	0.000361	2.79	772.94	146.22	0.16
USACE	50252	5YR	3206.00	307.89	320.56	314.13	320.73	0.000419	3.35	1017.84	153.36	0.18
USACE	50252	10YR	4291.00	307.89	321.73	315.81	321.95	0.000468	3.79	1200.11	157.88	0.19
USACE	50252	25YR	6265.00	307.89	323.31	317.17	323.63	0.000573	4.56	1453.36	163.83	0.22
USACE	50252	50YR	8072.00	307.89	325.02	318.20	325.40	0.000565	4.90	1741.24	171.38	0.22
USACE	50252	100YR	10258.00	307.89	326.93	319.13	327.37	0.000564	5.30	2080.93	193.63	0.23
USACE	50252	100YRPLUS	13415.00	307.89	329.44	320.27	329.96	0.000559	5.77	2642.47	270.86	0.23
USACE	50252	200YR	12887.00	307.89	329.04	320.08	329.55	0.000561	5.71	2537.28	252.98	0.23
USACE	50252	500YR	17211.00	307.89	331.95	321.51	332.48	0.000518	6.02	3420.34	460.44	0.23
USACE	50252	SEPT2011	9088.00	307.89	325.94	318.66	326.34	0.000557	5.06	1901.09	176.44	0.22
USACE	50097	2YR	2024.00	307.58	318.90	312.23	318.99	0.000260	2.50	887.10	148.17	0.14
USACE	50097	5YR	3206.00	307.58	320.52	313.52	320.66	0.000325	3.10	1152.29	182.45	0.16
USACE	50097	10YR	4291.00	307.58	321.69	315.05	321.87	0.000374	3.54	1376.21	201.81	0.18
USACE	50097	25YR	6265.00	307.58	323.27	316.46	323.53	0.000465	4.27	1729.94	239.21	0.20
USACE	50097	50YR	8072.00	307.58	325.01	317.29	325.29	0.000453	4.55	2177.68	277.92	0.20
USACE	50097	100YR	10258.00	307.58	326.96	318.20	327.25	0.000426	4.77	2758.78	320.08	0.20
USACE	50097	100YRPLUS	13415.00	307.58	329.53	319.41	329.82	0.000377	4.91	3626.36	388.97	0.19
USACE	50097	200YR	12887.00	307.58	329.11	319.20	329.41	0.000385	4.89	3484.86	376.29	0.19
USACE	50097	500YR	17211.00	307.58	332.04	320.88	332.35	0.000355	5.14	4514.61	467.81	0.19
USACE	50097	SEPT2011	9088.00	307.58	325.95	317.74	326.23	0.000440	4.66	2446.06	297.69	0.20
USACE	49935	2YR	2024.00	307.41	318.80	312.08	318.93	0.000402	2.98	789.67	183.40	0.17
USACE	49935	5YR	3206.00	307.41	320.40	313.36	320.59	0.000510	3.72	1029.88	206.57	0.20
USACE	49935	10YR	4291.00	307.41	321.54	314.35	321.79	0.000588	4.27	1211.06	215.13	0.22
USACE	49935	25YR	6265.00	307.41	323.17	316.18	323.44	0.000600	4.69	1759.09	227.79	0.22

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	49935	50YR	8072.00	307.41	324.92	317.43	325.21	0.000563	4.92	2169.45	240.29	0.22
USACE	49935	100YR	10258.00	307.41	326.86	318.48	327.17	0.000525	5.14	2649.39	255.42	0.22
USACE	49935	100YRPLUS	13415.00	307.41	329.39	320.47	329.75	0.000505	5.52	3332.38	305.71	0.22
USACE	49935	200YR	12887.00	307.41	328.99	320.28	329.34	0.000493	5.38	3215.16	277.61	0.21
USACE	49935	500YR	17211.00	307.41	331.89	321.72	332.27	0.000489	5.87	4168.85	361.83	0.22
USACE	49935	SEPT2011	9088.00	307.41	325.85	318.07	326.16	0.000542	5.02	2396.79	246.74	0.22
USACE	49776	2YR	2024.00	307.09	318.69	312.06	318.86	0.000503	3.41	758.06	139.31	0.19
USACE	49776	5YR	3206.00	307.09	320.21	313.44	320.49	0.000722	4.49	969.56	169.71	0.24
USACE	49776	10YR	4291.00	307.09	321.28	314.51	321.67	0.000899	5.33	1129.48	197.02	0.27
USACE	49776	25YR	6265.00	307.09	322.76	316.34	323.30	0.001139	6.46	1505.69	226.95	0.31
USACE	49776	50YR	8072.00	307.09	324.56	317.94	325.08	0.001025	6.65	1921.09	235.36	0.30
USACE	49776	100YR	10258.00	307.09	326.56	319.25	327.06	0.000898	6.75	2401.58	244.60	0.28
USACE	49776	100YRPLUS	13415.00	307.09	329.14	321.07	329.64	0.000796	6.96	3060.76	295.27	0.27
USACE	49776	200YR	12887.00	307.09	328.74	320.77	329.24	0.000795	6.86	2949.84	262.48	0.27
USACE	49776	500YR	17211.00	307.09	331.68	323.39	332.18	0.000719	7.16	3881.98	339.73	0.26
USACE	49776	SEPT2011	9088.00	307.09	325.52	318.57	326.03	0.000958	6.69	2150.88	239.86	0.29
USACE	49674	2YR	2024.00	306.80	318.64	313.77	318.78	0.000837	2.98	680.46	128.53	0.23
USACE	49674	5YR	3206.00	306.80	320.16	315.01	320.37	0.000930	3.66	877.40	141.42	0.25
USACE	49674	10YR	4291.00	306.80	321.24	316.05	321.52	0.001017	4.22	1019.49	159.72	0.27
USACE	49674	25YR	6265.00	306.80	322.71	317.43	323.12	0.001198	5.14	1298.08	194.83	0.30
USACE	49674	50YR	8072.00	306.80	324.51	318.28	324.94	0.001037	5.38	1684.10	240.70	0.28
USACE	49674	100YR	10258.00	306.80	326.52	319.18	326.94	0.000856	5.46	2159.75	251.24	0.27
USACE	49674	100YRPLUS	13415.00	306.80	329.12	320.33	329.54	0.000697	5.56	2942.89	323.12	0.25
USACE	49674	200YR	12887.00	306.80	328.71	320.16	329.14	0.000727	5.58	2747.21	317.83	0.25
USACE	49674	500YR	17211.00	306.80	331.67	321.60	332.09	0.000601	5.70	3810.34	364.13	0.24
USACE	49674	SEPT2011	9088.00	306.80	325.48	318.71	325.91	0.000940	5.41	1911.89	246.04	0.27
USACE	49631 Newcomer Road		Bridge									
USACE	49562	2YR	2024.00	305.87	317.08	310.37	317.20	0.000360	2.75	759.23	123.88	0.16
USACE	49562	5YR	3206.00	305.87	318.92	311.66	319.12	0.000471	3.57	939.64	155.23	0.19
USACE	49562	10YR	4291.00	305.87	320.24	312.68	320.51	0.000566	4.23	1068.52	187.15	0.22
USACE	49562	25YR	6265.00	305.87	322.19	313.94	322.58	0.000681	5.13	1487.80	270.06	0.24
USACE	49562	50YR	8072.00	305.87	323.77	314.98	324.23	0.000730	5.71	1839.71	297.12	0.26
USACE	49562	100YR	10258.00	305.87	325.39	316.12	325.93	0.000776	6.29	2228.54	316.54	0.27
USACE	49562	100YRPLUS	13415.00	305.87	327.33	317.70	327.98	0.000835	7.02	2729.14	338.78	0.28
USACE	49562	200YR	12887.00	305.87	327.02	317.46	327.65	0.000828	6.91	2645.70	335.31	0.28
USACE	49562	500YR	17211.00	305.87	329.73	319.33	330.18	0.000586	6.36	4194.58	366.06	0.24
USACE	49562	SEPT2011	9088.00	305.87	324.57	315.53	325.07	0.000749	5.98	2029.74	307.39	0.26
USACE	49415	2YR	2024.00	305.82	316.85		317.08	0.000933	4.31	702.29	158.67	0.26
USACE	49415	5YR	3206.00	305.82	318.73		319.00	0.000926	4.89	1017.17	175.49	0.26
USACE	49415	10YR	4291.00	305.82	320.09		320.40	0.000942	5.34	1262.47	186.32	0.27
USACE	49415	25YR	6265.00	305.82	322.08		322.46	0.000981	6.03	1644.39	197.04	0.28
USACE	49415	50YR	8072.00	305.82	323.66		324.09	0.001002	6.55	1963.33	206.54	0.29
USACE	49415	100YR	10258.00	305.82	325.28		325.78	0.001045	7.14	2305.84	217.85	0.30
USACE	49415	100YRPLUS	13415.00	305.82	327.21		327.82	0.001139	8.00	2749.90	242.81	0.32
USACE	49415	200YR	12887.00	305.82	326.90		327.49	0.001129	7.88	2674.57	239.03	0.32
USACE	49415	500YR	17211.00	305.82	329.28		329.99	0.001179	8.72	3276.40	266.35	0.33
USACE	49415	SEPT2011	9088.00	305.82	324.47		324.93	0.001014	6.81	2131.70	211.68	0.30
USACE	49185	2YR	2024.00	305.76	316.71		316.90	0.000628	3.62	665.08	135.72	0.21
USACE	49185	5YR	3206.00	305.76	318.57		318.82	0.000695	4.32	932.86	151.18	0.23
USACE	49185	10YR	4291.00	305.76	319.91		320.21	0.000744	4.83	1142.09	160.52	0.24
USACE	49185	25YR	6265.00	305.76	321.87		322.26	0.000813	5.59	1466.85	169.62	0.26
USACE	49185	50YR	8072.00	305.76	323.41		323.88	0.000889	6.26	1735.86	187.85	0.28
USACE	49185	100YR	10258.00	305.76	325.01		325.55	0.000927	6.82	2045.61	197.68	0.29
USACE	49185	100YRPLUS	13415.00	305.76	326.92		327.58	0.001014	7.65	2437.67	215.92	0.31
USACE	49185	200YR	12887.00	305.76	326.61		327.25	0.001000	7.51	2372.20	212.04	0.31
USACE	49185	500YR	17211.00	305.76	328.95		329.73	0.001079	8.44	2898.33	236.73	0.32
USACE	49185	SEPT2011	9088.00	305.76	324.21		324.71	0.000903	6.52	1888.23	193.07	0.28
USACE	48907	2YR	2024.00	305.74	316.51		316.71	0.000700	3.70	637.04	153.29	0.22
USACE	48907	5YR	3206.00	305.74	318.36		318.62	0.000742	4.34	963.00	191.13	0.24
USACE	48907	10YR	4291.00	305.74	319.71		320.00	0.000749	4.73	1229.29	202.39	0.24
USACE	48907	25YR	6265.00	305.74	321.69		322.02	0.000771	5.33	1645.01	218.27	0.25
USACE	48907	50YR	8072.00	305.74	323.24		323.62	0.000777	5.74	1993.33	229.51	0.26
USACE	48907	100YR	10258.00	305.74	324.86		325.28	0.000793	6.20	2373.45	241.64	0.27
USACE	48907	100YRPLUS	13415.00	305.74	326.78		327.28	0.000832	6.82	2851.71	255.76	0.28
USACE	48907	200YR	12887.00	305.74	326.47		326.96	0.000828	6.73	2772.72	253.76	0.28
USACE	48907	500YR	17211.00	305.74	328.83		329.41	0.000855	7.41	3389.58	268.29	0.29
USACE	48907	SEPT2011	9088.00	305.74	324.05		324.45	0.000778	5.94	2180.74	235.34	0.26
USACE	48580	2YR	2024.00	305.72	316.39		316.52	0.000411	2.90	788.68	142.31	0.17
USACE	48580	5YR	3206.00	305.72	318.21		318.40	0.000501	3.63	1060.12	155.92	0.20
USACE	48580	10YR	4291.00	305.72	319.53		319.77	0.000568	4.18	1272.46	166.08	0.21
USACE	48580	25YR	6265.00	305.72	321.45		321.79	0.000669	5.02	1606.24	180.97	0.24
USACE	48580	50YR	8072.00	305.72	322.95		323.37	0.000734	5.63	1886.61	191.97	0.25
USACE	48580	100YR	10258.00	305.72	324.50		325.01	0.000811	6.31	2194.58	209.27	0.27
USACE	48580	100YRPLUS	13415.00	305.72	326.33		326.98	0.000915	7.18	2595.81	228.64	0.29
USACE	48580	200YR	12887.00	305.72	326.03		326.66	0.000901	7.05	2528.51	225.51	0.29
USACE	48580	500YR	17211.00	305.72	328.29		329.09	0.001003	8.03	3066.87	250.95	0.31
USACE	48580	SEPT2011	9088.00	305.72	323.73		324.19	0.000763	5.93	2038.29	198.46	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	48287	2YR	2024.00	305.71	316.20		316.37	0.000594	3.35	710.37	173.68	0.21
USACE	48287	5YR	3206.00	305.71	317.97		318.22	0.000701	4.14	1051.71	206.22	0.23
USACE	48287	10YR	4291.00	305.71	319.27		319.57	0.000773	4.72	1332.57	228.67	0.25
USACE	48287	25YR	6265.00	305.71	321.15		321.56	0.000884	5.59	1791.96	264.50	0.27
USACE	48287	50YR	8072.00	305.71	322.65		323.12	0.000932	6.16	2208.76	289.71	0.28
USACE	48287	100YR	10258.00	305.71	324.20		324.75	0.000980	6.75	2684.25	318.53	0.29
USACE	48287	100YRPLUS	13415.00	305.71	326.06		326.69	0.001025	7.42	3316.44	365.72	0.31
USACE	48287	200YR	12887.00	305.71	325.76		326.38	0.001023	7.33	3207.33	357.48	0.31
USACE	48287	500YR	17211.00	305.71	328.07		328.76	0.001030	7.98	4103.77	421.44	0.31
USACE	48287	SEPT2011	9088.00	305.71	323.43		323.94	0.000949	6.43	2442.00	304.76	0.29
USACE	47961	2YR	2024.00	305.68	316.02		316.18	0.000555	3.24	689.84	141.08	0.20
USACE	47961	5YR	3206.00	305.68	317.76		318.00	0.000663	4.02	957.07	164.56	0.22
USACE	47961	10YR	4291.00	305.68	319.03		319.33	0.000737	4.59	1179.08	185.65	0.24
USACE	47961	25YR	6265.00	305.68	320.89		321.28	0.000840	5.42	1554.38	218.84	0.26
USACE	47961	50YR	8072.00	305.68	322.38		322.83	0.000880	5.96	1898.74	243.32	0.27
USACE	47961	100YR	10258.00	305.68	323.93		324.44	0.000914	6.49	2293.58	266.52	0.28
USACE	47961	100YRPLUS	13415.00	305.68	325.77		326.37	0.000969	7.18	2809.60	295.26	0.30
USACE	47961	200YR	12887.00	305.68	325.47		326.06	0.000962	7.07	2722.54	289.86	0.30
USACE	47961	500YR	17211.00	305.68	327.72		328.43	0.001035	7.94	3428.90	348.05	0.31
USACE	47961	SEPT2011	9088.00	305.68	323.16		323.64	0.000888	6.19	2093.41	254.39	0.28
USACE	47590	2YR	2024.00	305.67	315.78	310.36	315.96	0.000641	3.43	698.24	173.59	0.21
USACE	47590	5YR	3206.00	305.67	317.51	311.63	317.74	0.000710	4.11	1115.77	349.49	0.23
USACE	47590	10YR	4291.00	305.67	318.79	312.61	319.05	0.000724	4.51	1647.97	590.29	0.24
USACE	47590	25YR	6265.00	305.67	320.75	314.25	320.97	0.000591	4.54	2741.37	780.45	0.22
USACE	47590	50YR	8072.00	305.67	322.32	315.85	322.51	0.000499	4.50	3672.52	799.08	0.21
USACE	47590	100YR	10258.00	305.67	323.93	317.20	324.12	0.000444	4.56	4651.68	817.68	0.20
USACE	47590	100YRPLUS	13415.00	305.67	325.83	319.39	326.02	0.000419	4.77	5832.29	847.68	0.20
USACE	47590	200YR	12887.00	305.67	325.52	319.05	325.71	0.000422	4.73	5638.49	839.94	0.20
USACE	47590	500YR	17211.00	305.67	327.86	320.13	328.05	0.000397	4.98	7134.87	872.43	0.20
USACE	47590	SEPT2011	9088.00	305.67	323.13	316.45	323.32	0.000463	4.50	4164.62	810.11	0.20
USACE	47229	2YR	2024.00	305.62	315.56		315.73	0.000613	3.46	870.21	282.87	0.21
USACE	47229	5YR	3206.00	305.62	317.29		317.50	0.000653	4.05	1374.60	300.44	0.22
USACE	47229	10YR	4291.00	305.62	318.55		318.79	0.000679	4.47	1766.06	331.05	0.23
USACE	47229	25YR	6265.00	305.62	320.46		320.74	0.000703	5.04	2541.34	458.42	0.24
USACE	47229	50YR	8072.00	305.62	322.00		322.30	0.000699	5.41	3304.27	540.18	0.25
USACE	47229	100YR	10258.00	305.62	323.58		323.91	0.000715	5.85	4222.43	601.01	0.25
USACE	47229	100YRPLUS	13415.00	305.62	325.50		325.83	0.000670	6.10	5403.94	626.28	0.25
USACE	47229	200YR	12887.00	305.62	325.19		325.52	0.000677	6.06	5210.05	622.59	0.25
USACE	47229	500YR	17211.00	305.62	327.55		327.87	0.000635	6.37	6703.70	647.63	0.25
USACE	47229	SEPT2011	9088.00	305.62	322.76		323.10	0.000746	5.78	3735.80	592.84	0.26
USACE	46926	2YR	2024.00	305.61	315.34		315.53	0.000727	3.57	683.10	148.60	0.23
USACE	46926	5YR	3206.00	305.61	316.98		317.26	0.000886	4.48	941.43	167.78	0.26
USACE	46926	10YR	4291.00	305.61	318.17		318.54	0.001002	5.15	1162.77	214.05	0.28
USACE	46926	25YR	6265.00	305.61	319.96		320.46	0.001147	6.12	1606.51	286.95	0.31
USACE	46926	50YR	8072.00	305.61	321.35		321.99	0.001297	6.99	2060.28	391.83	0.33
USACE	46926	100YR	10258.00	305.61	322.97		323.61	0.001217	7.29	2707.12	410.09	0.33
USACE	46926	100YRPLUS	13415.00	305.61	324.86		325.54	0.001193	7.80	3510.10	441.75	0.33
USACE	46926	200YR	12887.00	305.61	324.56		325.23	0.001197	7.72	3376.52	434.86	0.33
USACE	46926	500YR	17211.00	305.61	326.87		327.59	0.001171	8.31	4446.46	496.89	0.33
USACE	46926	SEPT2011	9088.00	305.61	322.16		322.80	0.001241	7.10	2380.89	399.27	0.33
USACE	46472	2YR	2024.00	305.55	315.02		315.20	0.000714	3.42	672.84	152.73	0.22
USACE	46472	5YR	3206.00	305.55	316.61		316.86	0.000831	4.20	928.64	168.18	0.25
USACE	46472	10YR	4291.00	305.55	317.78		318.09	0.000916	4.79	1130.39	179.99	0.27
USACE	46472	25YR	6265.00	305.55	319.53		319.95	0.001024	5.63	1458.15	194.40	0.29
USACE	46472	50YR	8072.00	305.55	320.91		321.42	0.001096	6.27	1734.82	209.16	0.30
USACE	46472	100YR	10258.00	305.55	322.36		323.04	0.001300	7.32	2126.27	345.59	0.34
USACE	46472	100YRPLUS	13415.00	305.55	324.33		325.01	0.001183	7.59	2861.41	393.09	0.33
USACE	46472	200YR	12887.00	305.55	324.02		324.69	0.001199	7.55	2738.53	384.08	0.33
USACE	46472	500YR	17211.00	305.55	326.40		327.07	0.001088	7.87	3723.27	450.73	0.32
USACE	46472	SEPT2011	9088.00	305.55	321.66		322.24	0.001166	6.71	1903.92	265.88	0.32
USACE	46157	2YR	2024.00	305.57	314.90	309.46	315.01	0.000431	2.77	857.86	206.90	0.18
USACE	46157	5YR	3206.00	305.57	316.49	310.53	316.64	0.000481	3.32	1214.64	236.68	0.19
USACE	46157	10YR	4291.00	305.57	317.66	311.36	317.84	0.000509	3.69	1504.98	257.31	0.20
USACE	46157	25YR	6265.00	305.57	319.44	312.62	319.66	0.000533	4.20	1980.17	280.03	0.21
USACE	46157	50YR	8072.00	305.57	320.86	314.14	321.10	0.000545	4.56	2393.67	306.53	0.22
USACE	46157	100YR	10258.00	305.57	322.39	315.31	322.66	0.000545	4.90	2891.00	340.89	0.22
USACE	46157	100YRPLUS	13415.00	305.57	324.35	316.42	324.65	0.000545	5.30	3604.91	475.38	0.23
USACE	46157	200YR	12887.00	305.57	324.03	316.29	324.33	0.000552	5.27	3482.07	466.55	0.23
USACE	46157	500YR	17211.00	305.57	326.42	317.64	326.74	0.000510	5.54	4439.85	578.83	0.22
USACE	46157	SEPT2011	9088.00	305.57	321.65	314.58	321.90	0.000539	4.71	2642.67	324.24	0.22
USACE	45895	2YR	2024.00	305.53	314.79		314.90	0.000421	2.76	865.32	181.97	0.17
USACE	45895	5YR	3206.00	305.53	316.36		316.51	0.000490	3.37	1160.08	193.65	0.19
USACE	45895	10YR	4291.00	305.53	317.51		317.70	0.000541	3.82	1388.09	202.66	0.21
USACE	45895	25YR	6265.00	305.53	319.25		319.50	0.000616	4.52	1756.64	222.30	0.23
USACE	45895	50YR	8072.00	305.53	320.63		320.94	0.000652	4.99	2073.37	234.68	0.24
USACE	45895	100YR	10258.00	305.53	322.13		322.49	0.000695	5.53	2442.96	259.15	0.25
USACE	45895	100YRPLUS	13415.00	305.53	324.04		324.47	0.000726	6.11	2964.23	288.06	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	45895	200YR	12887.00	305.53	323.74		324.16	0.000719	6.01	2876.95	281.32	0.26
USACE	45895	500YR	17211.00	305.53	326.06		326.56	0.000752	6.70	3588.28	328.94	0.27
USACE	45895	SEPT2011	9088.00	305.53	321.41		321.74	0.000664	5.23	2260.19	247.15	0.24
USACE	45420	2YR	2024.00	305.50	314.60		314.70	0.000401	2.62	940.80	225.53	0.17
USACE	45420	5YR	3206.00	305.50	316.16		316.28	0.000434	3.09	1341.85	284.42	0.18
USACE	45420	10YR	4291.00	305.50	317.31		317.45	0.000444	3.39	1683.30	306.16	0.19
USACE	45420	25YR	6265.00	305.50	319.06		319.23	0.000448	3.78	2236.06	324.09	0.19
USACE	45420	50YR	8072.00	305.50	320.47		320.65	0.000444	4.05	2698.99	336.08	0.20
USACE	45420	100YR	10258.00	305.50	321.99		322.19	0.000438	4.33	3218.53	348.10	0.20
USACE	45420	100YRPLUS	13415.00	305.50	323.92		324.16	0.000431	4.66	3907.30	361.87	0.20
USACE	45420	200YR	12887.00	305.50	323.61		323.84	0.000433	4.61	3794.84	359.93	0.20
USACE	45420	500YR	17211.00	305.50	325.97		326.23	0.000428	5.01	4660.38	376.62	0.20
USACE	45420	SEPT2011	9088.00	305.50	321.26		321.45	0.000433	4.16	2966.47	342.54	0.19
USACE	45128	2YR	2024.00	305.46	314.50		314.58	0.000373	2.50	1015.85	258.08	0.16
USACE	45128	5YR	3206.00	305.46	316.05		316.16	0.000389	2.90	1430.34	272.93	0.17
USACE	45128	10YR	4291.00	305.46	317.20		317.33	0.000406	3.21	1751.31	286.84	0.18
USACE	45128	25YR	6265.00	305.46	318.95		319.10	0.000423	3.64	2264.01	300.61	0.19
USACE	45128	50YR	8072.00	305.46	320.35		320.52	0.000429	3.95	2692.46	311.13	0.19
USACE	45128	100YR	10258.00	305.46	321.86		322.06	0.000433	4.27	3173.86	324.30	0.20
USACE	45128	100YRPLUS	13415.00	305.46	323.79		324.03	0.000438	4.66	3821.40	345.88	0.20
USACE	45128	200YR	12887.00	305.46	323.48		323.71	0.000438	4.60	3714.45	342.68	0.20
USACE	45128	500YR	17211.00	305.46	325.83		326.10	0.000443	5.06	4551.97	374.26	0.21
USACE	45128	SEPT2011	9088.00	305.46	321.13		321.32	0.000423	4.08	2940.49	318.37	0.19
USACE	44755	2YR	2024.00	305.45	314.35	309.45	314.44	0.000400	2.61	1049.37	266.71	0.17
USACE	44755	5YR	3206.00	305.45	315.91	310.59	316.01	0.000404	2.98	1474.53	280.07	0.17
USACE	44755	10YR	4291.00	305.45	317.05	311.91	317.17	0.000418	3.28	1803.07	295.62	0.18
USACE	44755	25YR	6265.00	305.45	318.79	313.29	318.94	0.000437	3.73	2337.15	319.53	0.19
USACE	44755	50YR	8072.00	305.45	320.19	313.93	320.36	0.000442	4.03	2798.36	339.09	0.19
USACE	44755	100YR	10258.00	305.45	321.71	314.58	321.90	0.000437	4.31	3326.23	356.51	0.20
USACE	44755	100YRPLUS	13415.00	305.45	323.64	315.39	323.86	0.000432	4.65	4040.62	379.52	0.20
USACE	44755	200YR	12887.00	305.45	323.33	315.27	323.54	0.000434	4.60	3922.81	376.48	0.20
USACE	44755	500YR	17211.00	305.45	325.68	316.21	325.93	0.000425	4.98	4832.97	605.22	0.20
USACE	44755	SEPT2011	9088.00	305.45	320.98	314.24	321.16	0.000431	4.14	3071.07	348.14	0.19
USACE	44437	2YR	2024.00	305.41	314.26	308.81	314.33	0.000273	2.17	1166.75	461.97	0.14
USACE	44437	5YR	3206.00	305.41	315.81	309.78	315.89	0.000293	2.55	1603.44	476.69	0.15
USACE	44437	10YR	4291.00	305.41	316.95	310.48	317.05	0.000310	2.84	1929.58	484.39	0.16
USACE	44437	25YR	6265.00	305.41	318.68	311.90	318.81	0.000334	3.27	2434.23	500.13	0.17
USACE	44437	50YR	8072.00	305.41	320.08	312.75	320.23	0.000347	3.58	2846.39	516.11	0.17
USACE	44437	100YR	10258.00	305.41	321.59	313.46	321.77	0.000358	3.91	3299.53	539.18	0.18
USACE	44437	100YRPLUS	13415.00	305.41	323.51	314.76	323.73	0.000372	4.33	3886.78	552.48	0.19
USACE	44437	200YR	12887.00	305.41	323.20	314.63	323.42	0.000370	4.26	3791.60	551.13	0.19
USACE	44437	500YR	17211.00	305.41	325.53	315.62	325.80	0.000388	4.76	4516.76	558.77	0.19
USACE	44437	SEPT2011	9088.00	305.41	320.87	313.07	321.03	0.000345	3.72	3083.21	527.61	0.17
USACE	43974	2YR	2024.00	305.38	314.15		314.20	0.000265	2.15	1500.34	383.50	0.14
USACE	43974	5YR	3206.00	305.38	315.69		315.76	0.000276	2.49	2122.53	430.31	0.15
USACE	43974	10YR	4291.00	305.38	316.82		316.90	0.000305	2.83	2642.32	485.78	0.16
USACE	43974	25YR	6265.00	305.38	318.56		318.65	0.000305	3.14	3531.88	531.79	0.16
USACE	43974	50YR	8072.00	305.38	319.97		320.07	0.000297	3.34	4301.13	561.82	0.16
USACE	43974	100YR	10258.00	305.38	321.49		321.60	0.000287	3.52	5178.40	589.84	0.16
USACE	43974	100YRPLUS	13415.00	305.38	323.44		323.56	0.000280	3.77	6365.38	630.55	0.16
USACE	43974	200YR	12887.00	305.38	323.12		323.24	0.000281	3.74	6169.10	624.40	0.16
USACE	43974	500YR	17211.00	305.38	325.48		325.62	0.000269	3.99	7687.19	658.67	0.16
USACE	43974	SEPT2011	9088.00	305.38	320.77		320.87	0.000285	3.39	4757.11	575.76	0.16
USACE	43716	2YR	2024.00	305.41	313.98		314.09	0.000682	3.28	1243.25	333.86	0.22
USACE	43716	5YR	3206.00	305.41	315.51		315.65	0.000696	3.77	1773.69	354.19	0.23
USACE	43716	10YR	4291.00	305.41	316.63		316.79	0.000722	4.16	2174.75	364.46	0.23
USACE	43716	25YR	6265.00	305.41	318.34		318.53	0.000758	4.74	2810.95	380.21	0.25
USACE	43716	50YR	8072.00	305.41	319.72		319.94	0.000774	5.17	3347.73	394.44	0.25
USACE	43716	100YR	10258.00	305.41	321.23		321.48	0.000790	5.62	3955.34	413.36	0.26
USACE	43716	100YRPLUS	13415.00	305.41	323.14		323.43	0.000817	6.21	4774.45	443.92	0.27
USACE	43716	200YR	12887.00	305.41	322.83		323.12	0.000816	6.13	4638.12	440.05	0.27
USACE	43716	500YR	17211.00	305.41	325.15		325.49	0.000827	6.75	5692.04	466.90	0.28
USACE	43716	SEPT2011	9088.00	305.41	320.52		320.75	0.000766	5.35	3665.79	405.44	0.25
USACE	43383	2YR	2024.00	305.31	313.76		313.89	0.000569	3.08	941.19	199.53	0.20
USACE	43383	5YR	3206.00	305.31	315.22		315.42	0.000712	3.89	1247.44	219.71	0.23
USACE	43383	10YR	4291.00	305.31	316.27		316.53	0.000824	4.51	1484.68	231.57	0.25
USACE	43383	25YR	6265.00	305.31	317.88		318.24	0.000978	5.44	1870.99	250.15	0.28
USACE	43383	50YR	8072.00	305.31	319.18		319.63	0.001081	6.14	2212.06	273.49	0.30
USACE	43383	100YR	10258.00	305.31	320.61		321.15	0.001151	6.80	2617.45	292.34	0.32
USACE	43383	100YRPLUS	13415.00	305.31	322.43		323.08	0.001229	7.62	3172.83	319.55	0.34
USACE	43383	200YR	12887.00	305.31	322.13		322.77	0.001221	7.50	3079.09	315.39	0.33
USACE	43383	500YR	17211.00	305.31	324.37		325.13	0.001264	8.34	3811.47	335.55	0.35
USACE	43383	SEPT2011	9088.00	305.31	319.95		320.44	0.001090	6.41	2427.77	284.33	0.31
USACE	43036	2YR	2024.00	305.26	313.47		313.65	0.000815	3.57	760.54	171.02	0.24
USACE	43036	5YR	3206.00	305.26	314.84		315.12	0.001026	4.51	999.85	178.39	0.28
USACE	43036	10YR	4291.00	305.26	315.81		316.18	0.001207	5.26	1175.17	183.08	0.30
USACE	43036	25YR	6265.00	305.26	317.29		317.82	0.001470	6.41	1451.31	190.85	0.34

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	43036	50YR	8072.00	305.26	318.49		319.16	0.001642	7.27	1685.26	199.02	0.37
USACE	43036	100YR	10258.00	305.26	319.81		320.63	0.001794	8.15	1954.63	208.67	0.39
USACE	43036	100YRPLUS	13415.00	305.26	321.48		322.52	0.001972	9.24	2313.59	222.35	0.42
USACE	43036	200YR	12887.00	305.26	321.21		322.21	0.001946	9.07	2254.00	219.17	0.42
USACE	43036	500YR	17211.00	305.26	323.13		324.50	0.002281	10.66	2710.11	264.67	0.46
USACE	43036	SEPT2011	9088.00	305.26	319.23		319.96	0.001664	7.62	1834.88	204.65	0.38
USACE	42748	2YR	2024.00	305.23	313.28		313.43	0.000664	3.23	860.95	255.56	0.22
USACE	42748	5YR	3206.00	305.23	314.62		314.84	0.000806	4.00	1215.22	270.80	0.24
USACE	42748	10YR	4291.00	305.23	315.57		315.85	0.000922	4.60	1477.40	280.56	0.27
USACE	42748	25YR	6265.00	305.23	317.04		317.41	0.001070	5.46	1900.29	294.50	0.29
USACE	42748	50YR	8072.00	305.23	318.26		318.70	0.001142	6.06	2265.09	305.14	0.31
USACE	42748	100YR	10258.00	305.23	319.61		320.12	0.001194	6.66	2686.87	318.69	0.32
USACE	42748	100YRPLUS	13415.00	305.23	321.34		321.94	0.001250	7.38	3252.42	336.85	0.34
USACE	42748	200YR	12887.00	305.23	321.06		321.65	0.001245	7.28	3158.03	334.11	0.33
USACE	42748	500YR	17211.00	305.23	323.09		323.81	0.001319	8.17	3859.97	354.86	0.35
USACE	42748	SEPT2011	9088.00	305.23	319.03		319.49	0.001124	6.27	2502.35	312.73	0.31
USACE	42441	2YR	2024.00	305.14	313.09		313.22	0.000664	3.15	835.27	217.59	0.21
USACE	42441	5YR	3206.00	305.14	314.40		314.59	0.000785	3.85	1143.32	249.95	0.24
USACE	42441	10YR	4291.00	305.14	315.33		315.56	0.000869	4.36	1382.05	263.48	0.26
USACE	42441	25YR	6265.00	305.14	316.79		317.08	0.000954	5.05	1779.81	280.29	0.28
USACE	42441	50YR	8072.00	305.14	318.01		318.35	0.000974	5.50	2130.16	292.52	0.28
USACE	42441	100YR	10258.00	305.14	319.38		319.75	0.000974	5.92	2539.57	306.34	0.29
USACE	42441	100YRPLUS	13415.00	305.14	321.13		321.56	0.000972	6.43	3089.91	323.85	0.29
USACE	42441	200YR	12887.00	305.14	320.84		321.26	0.000974	6.35	2997.82	320.58	0.29
USACE	42441	500YR	17211.00	305.14	322.90		323.40	0.000991	7.00	3682.89	343.35	0.30
USACE	42441	SEPT2011	9088.00	305.14	318.80		319.14	0.000930	5.61	2363.58	300.32	0.28
USACE	42009	2YR	2024.00	305.11	312.84		312.94	0.000610	2.95	1038.53	306.69	0.20
USACE	42009	5YR	3206.00	305.11	314.14		314.26	0.000644	3.43	1461.42	338.86	0.22
USACE	42009	10YR	4291.00	305.11	315.06		315.21	0.000677	3.79	1781.01	352.88	0.23
USACE	42009	25YR	6265.00	305.11	316.52		316.69	0.000699	4.26	2306.90	368.40	0.24
USACE	42009	50YR	8072.00	305.11	317.76		317.95	0.000685	4.55	2770.45	378.57	0.24
USACE	42009	100YR	10258.00	305.11	319.15		319.36	0.000663	4.84	3305.73	397.01	0.24
USACE	42009	100YRPLUS	13415.00	305.11	320.91		321.16	0.000660	5.26	4033.88	422.44	0.24
USACE	42009	200YR	12887.00	305.11	320.62		320.86	0.000666	5.21	3911.23	419.85	0.24
USACE	42009	500YR	17211.00	305.11	322.72		322.99	0.000648	5.63	4806.52	434.92	0.25
USACE	42009	SEPT2011	9088.00	305.11	318.57		318.77	0.000638	4.60	3080.77	385.43	0.23
USACE	41706	2YR	2024.00	305.10	312.64	308.47	312.76	0.000588	2.96	878.18	231.64	0.20
USACE	41706	5YR	3206.00	305.10	313.88	309.43	314.05	0.000715	3.66	1184.67	261.19	0.23
USACE	41706	10YR	4291.00	305.10	314.76	310.44	314.98	0.000817	4.19	1421.98	279.71	0.25
USACE	41706	25YR	6265.00	305.10	316.16	311.68	316.44	0.000926	4.93	1842.89	323.36	0.27
USACE	41706	50YR	8072.00	305.10	317.35	312.50	317.69	0.000997	5.50	2262.78	410.44	0.29
USACE	41706	100YR	10258.00	305.10	318.77	313.30	319.12	0.000919	5.71	2779.32	439.68	0.28
USACE	41706	100YRPLUS	13415.00	305.10	320.55	314.31	320.92	0.000857	6.01	3441.11	478.29	0.28
USACE	41706	200YR	12887.00	305.10	320.25	314.16	320.62	0.000869	5.97	3331.12	471.04	0.28
USACE	41706	500YR	17211.00	305.10	322.34	315.33	322.76	0.000835	6.41	4119.18	515.84	0.28
USACE	41706	SEPT2011	9088.00	305.10	318.20	312.88	318.53	0.000893	5.46	2572.89	426.38	0.27
USACE	41427	2YR	2024.00	305.09	312.29		312.52	0.001220	3.83	530.27	222.19	0.28
USACE	41427	5YR	3206.00	305.09	313.44		313.76	0.001441	4.70	816.33	287.28	0.31
USACE	41427	10YR	4291.00	305.09	314.32		314.66	0.001449	5.09	1087.00	325.75	0.32
USACE	41427	25YR	6265.00	305.09	315.79		316.13	0.001275	5.36	1592.82	359.06	0.31
USACE	41427	50YR	8072.00	305.09	317.06		317.40	0.001098	5.42	2067.02	386.27	0.29
USACE	41427	100YR	10258.00	305.09	318.53		318.85	0.000923	5.42	2659.41	417.66	0.28
USACE	41427	100YRPLUS	13415.00	305.09	320.36		320.67	0.000785	5.50	3451.03	447.50	0.26
USACE	41427	200YR	12887.00	305.09	320.06		320.37	0.000807	5.49	3316.79	442.29	0.26
USACE	41427	500YR	17211.00	305.09	322.19		322.51	0.000711	5.68	4299.91	479.61	0.25
USACE	41427	SEPT2011	9088.00	305.09	317.97		318.27	0.000924	5.25	2425.50	408.39	0.27
USACE	41116	2YR	2024.00	305.08	311.96	308.93	312.15	0.001134	3.75	896.16	305.05	0.27
USACE	41116	5YR	3206.00	305.08	313.07	310.11	313.32	0.001326	4.56	1241.95	317.00	0.30
USACE	41116	10YR	4291.00	305.08	313.91	310.50	314.21	0.001451	5.14	1508.24	322.07	0.32
USACE	41116	25YR	6265.00	305.08	315.34	312.04	315.71	0.001504	5.86	1975.52	330.00	0.34
USACE	41116	50YR	8072.00	305.08	316.58	312.74	316.99	0.001489	6.34	2393.84	345.37	0.35
USACE	41116	100YR	10258.00	305.08	318.02	313.44	318.48	0.001441	6.80	2907.95	370.00	0.35
USACE	41116	100YRPLUS	13415.00	305.08	319.80	314.32	320.32	0.001431	7.43	3609.86	674.42	0.35
USACE	41116	200YR	12887.00	305.08	319.50	314.19	320.02	0.001442	7.35	3488.74	644.27	0.35
USACE	41116	500YR	17211.00	305.08	321.58	315.25	322.18	0.001421	8.04	4367.57	868.90	0.36
USACE	41116	SEPT2011	9088.00	305.08	317.50	313.08	317.91	0.001347	6.38	2719.40	360.70	0.33
USACE	40773	2YR	2066.00	305.02	311.46	309.19	311.69	0.001707	4.34	861.81	331.95	0.33
USACE	40773	5YR	3280.00	305.02	312.51	310.58	312.81	0.001890	5.15	1226.41	353.71	0.36
USACE	40773	10YR	4395.00	305.02	313.32	311.17	313.66	0.002000	5.73	1517.08	368.77	0.38
USACE	40773	25YR	6457.00	305.02	314.79	312.00	315.17	0.001896	6.31	2076.64	389.24	0.38
USACE	40773	50YR	8347.00	305.02	316.09	312.63	316.49	0.001710	6.58	2591.44	397.92	0.37
USACE	40773	100YR	10629.00	305.02	317.59	313.32	318.00	0.001533	6.84	3196.53	411.19	0.36
USACE	40773	100YRPLUS	13901.00	305.02	319.41	314.22	319.86	0.001435	7.30	3967.14	494.05	0.35
USACE	40773	200YR	13356.00	305.02	319.10	314.03	319.55	0.001458	7.25	3834.37	459.94	0.35
USACE	40773	500YR	17814.00	305.02	321.22	315.11	321.72	0.001387	7.82	4766.64	811.08	0.35
USACE	40773	SEPT2011	9542.00	305.02	317.08	313.05	317.46	0.001492	6.55	2988.56	405.68	0.35
USACE	40434	2YR	2066.00	304.91	310.87		311.10	0.001795	4.25	799.59	314.97	0.34

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	40434	5YR	3280.00	304.91	311.81		312.13	0.002134	5.20	1105.77	332.96	0.38
USACE	40434	10YR	4395.00	304.91	312.55		312.94	0.002311	5.85	1356.12	343.93	0.40
USACE	40434	25YR	6457.00	304.91	314.09		314.51	0.002049	6.33	1895.45	354.38	0.39
USACE	40434	50YR	8347.00	304.91	315.47		315.91	0.001795	6.57	2390.38	362.66	0.37
USACE	40434	100YR	10629.00	304.91	317.03		317.48	0.001585	6.83	2964.24	374.28	0.36
USACE	40434	100YRPLUS	13901.00	304.91	318.87		319.37	0.001492	7.33	3667.05	396.20	0.36
USACE	40434	200YR	13356.00	304.91	318.56		319.05	0.001512	7.26	3544.93	391.12	0.36
USACE	40434	500YR	17814.00	304.91	320.66		321.24	0.001473	7.94	4402.51	419.97	0.36
USACE	40434	SEPT2011	9542.00	304.91	316.55		316.96	0.001525	6.50	2784.18	370.25	0.35
USACE	40184	2YR	2066.00	304.85	310.24		310.55	0.002736	4.78	650.32	275.35	0.40
USACE	40184	5YR	3280.00	304.85	310.99		311.45	0.003537	6.04	857.85	280.55	0.47
USACE	40184	10YR	4395.00	304.85	311.62		312.19	0.003904	6.86	1035.81	284.30	0.51
USACE	40184	25YR	6457.00	304.85	313.36		313.91	0.002848	7.00	1538.13	293.31	0.45
USACE	40184	50YR	8347.00	304.85	314.85		315.39	0.002315	7.12	1982.08	304.18	0.42
USACE	40184	100YR	10629.00	304.85	316.48		317.04	0.001958	7.33	2496.93	327.86	0.40
USACE	40184	100YRPLUS	13901.00	304.85	318.36		318.96	0.001741	7.71	3134.78	344.91	0.39
USACE	40184	200YR	13356.00	304.85	318.04		318.64	0.001785	7.67	3023.73	342.98	0.39
USACE	40184	500YR	17814.00	304.85	320.17		320.84	0.001672	8.27	3768.89	356.40	0.39
USACE	40184	SEPT2011	9542.00	304.85	316.03		316.54	0.001866	6.95	2351.23	319.46	0.39
USACE	40002	2YR	2066.00	304.83	309.83		310.08	0.002221	4.27	674.74	290.37	0.36
USACE	40002	5YR	3280.00	304.83	310.38		310.81	0.003360	5.70	841.35	307.99	0.46
USACE	40002	10YR	4395.00	304.83	310.95		311.48	0.003734	6.47	1017.79	311.89	0.49
USACE	40002	25YR	6457.00	304.83	313.01		313.43	0.002068	5.98	1674.31	323.85	0.39
USACE	40002	50YR	8347.00	304.83	314.61		315.00	0.001574	5.94	2195.66	328.88	0.35
USACE	40002	100YR	10629.00	304.83	316.31		316.70	0.001298	6.04	2756.62	333.55	0.33
USACE	40002	100YRPLUS	13901.00	304.83	318.22		318.65	0.001183	6.44	3422.62	366.38	0.32
USACE	40002	200YR	13356.00	304.83	317.89		318.32	0.001208	6.39	3303.31	361.82	0.32
USACE	40002	500YR	17814.00	304.83	320.04		320.54	0.001156	6.96	4126.83	400.78	0.32
USACE	40002	SEPT2011	9542.00	304.83	315.86		316.22	0.001234	5.73	2608.43	332.03	0.31
USACE	39898	2YR	2066.00	304.81	309.58	308.55	309.77	0.003779	3.67	644.26	395.69	0.43
USACE	39898	5YR	3280.00	304.81	310.07	309.18	310.36	0.004545	4.59	842.15	413.05	0.49
USACE	39898	10YR	4395.00	304.81	310.70	309.56	311.00	0.003716	4.76	1108.37	427.01	0.45
USACE	39898	25YR	6457.00	304.81	312.99	310.10	313.16	0.001139	3.71	2138.95	464.67	0.27
USACE	39898	50YR	8347.00	304.81	314.63	310.54	314.79	0.000736	3.53	2906.31	471.64	0.23
USACE	39898	100YR	10629.00	304.81	316.35	310.99	316.51	0.000549	3.51	3724.02	478.66	0.21
USACE	39898	100YRPLUS	13901.00	304.81	318.28	311.51	318.46	0.000466	3.68	4657.67	485.61	0.20
USACE	39898	200YR	13356.00	304.81	317.95	311.47	318.12	0.000480	3.66	4497.33	484.67	0.20
USACE	39898	500YR	17814.00	304.81	320.13	312.23	320.33	0.000437	3.95	5599.96	539.62	0.19
USACE	39898	SEPT2011	9542.00	304.81	315.89	310.75	316.04	0.000535	3.35	3506.72	476.90	0.20
USACE	39875 Weir		Inl Struct									
USACE	39852	2YR	2066.00	295.40	306.86		306.88	0.000079	1.21	1804.67	297.96	0.08
USACE	39852	5YR	3280.00	295.40	309.01		309.04	0.000085	1.47	2482.20	333.81	0.08
USACE	39852	10YR	4395.00	295.40	310.73		310.77	0.000085	1.63	3175.31	449.24	0.08
USACE	39852	25YR	6457.00	295.40	313.04		313.09	0.000089	1.88	4258.44	484.34	0.09
USACE	39852	50YR	8347.00	295.40	314.67		314.72	0.000095	2.09	5063.53	504.57	0.09
USACE	39852	100YR	10629.00	295.40	316.37		316.44	0.000101	2.30	5937.42	514.83	0.10
USACE	39852	100YRPLUS	13901.00	295.40	318.32		318.40	0.000112	2.60	6941.69	519.62	0.10
USACE	39852	200YR	13356.00	295.40	317.98		318.07	0.000111	2.56	6769.47	518.93	0.10
USACE	39852	500YR	17814.00	295.40	320.15		320.26	0.000126	2.93	7925.37	565.98	0.11
USACE	39852	SEPT2011	9542.00	295.40	315.93		315.99	0.000091	2.15	5706.73	513.42	0.09
USACE	39767	2YR	2066.00	295.66	306.77		306.85	0.000287	2.46	1088.70	251.67	0.15
USACE	39767	5YR	3280.00	295.66	308.92		309.01	0.000268	2.75	1684.86	308.24	0.15
USACE	39767	10YR	4395.00	295.66	310.65		310.74	0.000240	2.87	2312.63	403.53	0.14
USACE	39767	25YR	6457.00	295.66	312.97		313.07	0.000215	3.04	3316.55	454.74	0.14
USACE	39767	50YR	8347.00	295.66	314.60		314.70	0.000211	3.22	4077.86	481.38	0.14
USACE	39767	100YR	10629.00	295.66	316.31		316.42	0.000207	3.40	4915.99	496.43	0.14
USACE	39767	100YRPLUS	13901.00	295.66	318.25		318.38	0.000212	3.69	5886.75	502.46	0.14
USACE	39767	200YR	13356.00	295.66	317.92		318.04	0.000213	3.65	5720.06	501.77	0.14
USACE	39767	500YR	17814.00	295.66	320.08		320.23	0.000228	4.05	6829.65	545.86	0.15
USACE	39767	SEPT2011	9542.00	295.66	315.87		315.96	0.000189	3.20	4696.65	493.26	0.13
USACE	39663	2YR	2066.00	296.91	306.59	302.15	306.79	0.000884	3.90	740.56	242.56	0.25
USACE	39663	5YR	3280.00	296.91	308.82	303.58	308.97	0.000561	3.68	1350.96	293.88	0.21
USACE	39663	10YR	4395.00	296.91	310.59	305.53	310.71	0.000408	3.50	1936.12	353.45	0.18
USACE	39663	25YR	6457.00	296.91	312.92	306.80	313.04	0.000327	3.54	2813.06	482.25	0.17
USACE	39663	50YR	8347.00	296.91	314.55	307.69	314.68	0.000305	3.68	3505.35	520.09	0.16
USACE	39663	100YR	10629.00	296.91	316.27	308.37	316.40	0.000285	3.82	4286.20	542.42	0.16
USACE	39663	100YRPLUS	13901.00	296.91	318.21	309.35	318.35	0.000281	4.06	5204.21	554.03	0.16
USACE	39663	200YR	13356.00	296.91	317.88	309.22	318.02	0.000284	4.04	5045.92	554.03	0.16
USACE	39663	500YR	17814.00	296.91	320.04	310.19	320.21	0.000290	4.39	6087.74	589.88	0.17
USACE	39663	SEPT2011	9542.00	296.91	315.83	308.07	315.94	0.000263	3.60	4082.30	539.39	0.15
USACE	39581	2YR	2066.00	297.59	306.43	302.42	306.71	0.001111	4.33	549.15	160.28	0.28
USACE	39581	5YR	3280.00	297.59	308.53	303.78	308.86	0.001048	4.96	783.97	304.27	0.28
USACE	39581	10YR	4395.00	297.59	310.48	305.01	310.65	0.000554	4.08	1642.28	419.68	0.21
USACE	39581	25YR	6457.00	297.59	312.85	306.41	313.00	0.000414	4.00	2557.03	547.87	0.19
USACE	39581	50YR	8347.00	297.59	314.50	307.45	314.65	0.000367	4.06	3265.56	645.94	0.18
USACE	39581	100YR	10629.00	297.59	316.22	308.60	316.37	0.000336	4.17	4074.02	704.91	0.18
USACE	39581	100YRPLUS	13901.00	297.59	318.17	309.85	318.33	0.000318	4.35	5057.68	726.95	0.18

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	39581	200YR	13356.00	297.59	317.84	309.74	318.00	0.000323	4.34	4886.57	724.11	0.18
USACE	39581	500YR	17814.00	297.59	320.01	311.01	320.19	0.000319	4.63	6007.57	764.36	0.18
USACE	39581	SEPT2011	9542.00	297.59	315.78	308.08	315.92	0.000312	3.94	3859.80	689.17	0.17
USACE	39551 Garfield Road		Mult Open									
USACE	39510	2YR	2128.00	296.44	306.44	300.72	306.59	0.000500	3.18	736.70	369.80	0.19
USACE	39510	5YR	3377.00	296.44	308.38	301.95	308.60	0.000579	3.93	960.26	451.41	0.21
USACE	39510	10YR	4532.00	296.44	309.88	302.86	310.04	0.000418	3.65	1759.22	554.39	0.19
USACE	39510	25YR	6682.00	296.44	312.49	304.57	312.62	0.000315	3.61	2718.51	641.68	0.17
USACE	39510	50YR	8671.00	296.44	314.33	305.75	314.47	0.000279	3.68	3471.76	691.94	0.16
USACE	39510	100YR	11043.00	296.44	316.10	306.90	316.24	0.000266	3.85	4233.66	723.28	0.16
USACE	39510	100YRPLUS	14442.00	296.44	318.04	308.41	318.20	0.000273	4.17	5160.22	781.56	0.16
USACE	39510	200YR	13854.00	296.44	317.74	308.17	317.90	0.000272	4.11	5009.32	773.82	0.16
USACE	39510	500YR	18475.00	296.44	319.88	309.91	320.06	0.000290	4.55	6143.73	854.87	0.17
USACE	39510	SEPT2011	10388.00	296.44	315.66	306.59	315.80	0.000267	3.79	4042.72	715.64	0.16
USACE	39376	2YR	2128.00	296.45	306.39	300.84	306.51	0.000491	2.92	821.43	202.15	0.19
USACE	39376	5YR	3377.00	296.45	308.35	301.97	308.50	0.000479	3.36	1250.19	236.63	0.19
USACE	39376	10YR	4532.00	296.45	309.82	302.85	309.98	0.000453	3.59	1686.02	321.63	0.19
USACE	39376	25YR	6682.00	296.45	312.43	304.19	312.58	0.000352	3.64	2601.96	395.49	0.17
USACE	39376	50YR	8671.00	296.45	314.28	305.24	314.43	0.000307	3.69	3355.55	502.05	0.16
USACE	39376	100YR	11043.00	296.45	316.05	306.94	316.20	0.000285	3.82	4127.72	635.82	0.16
USACE	39376	100YRPLUS	14442.00	296.45	318.00	308.24	318.17	0.000282	4.08	5060.99	747.02	0.16
USACE	39376	200YR	13854.00	296.45	317.69	308.05	317.86	0.000281	4.03	4908.21	736.48	0.16
USACE	39376	500YR	18475.00	296.45	319.83	309.68	320.02	0.000291	4.40	6060.68	842.42	0.17
USACE	39376	SEPT2011	10388.00	296.45	315.62	306.63	315.77	0.000287	3.77	3933.70	576.73	0.16
USACE	39236	2YR	2128.00	296.43	306.29		306.44	0.000645	3.42	768.53	201.95	0.21
USACE	39236	5YR	3377.00	296.43	308.26		308.43	0.000582	3.76	1205.40	236.11	0.21
USACE	39236	10YR	4532.00	296.43	309.74		309.91	0.000537	3.96	1629.90	307.42	0.21
USACE	39236	25YR	6682.00	296.43	312.37		312.53	0.000408	3.96	2514.75	381.71	0.19
USACE	39236	50YR	8671.00	296.43	314.24		314.38	0.000348	3.97	3267.72	417.08	0.17
USACE	39236	100YR	11043.00	296.43	316.01		316.16	0.000316	4.05	4032.90	447.77	0.17
USACE	39236	100YRPLUS	14442.00	296.43	317.96		318.13	0.000307	4.28	4950.39	491.18	0.17
USACE	39236	200YR	13854.00	296.43	317.66		317.82	0.000307	4.24	4801.56	486.68	0.17
USACE	39236	500YR	18475.00	296.43	319.79		319.98	0.000313	4.59	5893.07	559.41	0.17
USACE	39236	SEPT2011	10388.00	296.43	315.58		315.73	0.000320	4.01	3840.84	438.71	0.17
USACE	39085	2YR	2128.00	296.40	306.20		306.34	0.000637	3.37	805.98	204.78	0.21
USACE	39085	5YR	3377.00	296.40	308.19		308.34	0.000559	3.67	1230.09	222.47	0.21
USACE	39085	10YR	4532.00	296.40	309.68		309.84	0.000520	3.89	1601.03	268.26	0.20
USACE	39085	25YR	6682.00	296.40	312.32		312.47	0.000410	3.97	2395.68	351.65	0.19
USACE	39085	50YR	8671.00	296.40	314.18		314.34	0.000355	4.01	3096.53	386.60	0.18
USACE	39085	100YR	11043.00	296.40	315.96		316.12	0.000324	4.12	3814.12	425.03	0.17
USACE	39085	100YRPLUS	14442.00	296.40	317.91		318.09	0.000316	4.35	4667.57	453.28	0.17
USACE	39085	200YR	13854.00	296.40	317.61		317.78	0.000316	4.31	4530.89	447.10	0.17
USACE	39085	500YR	18475.00	296.40	319.74		319.94	0.000323	4.67	5533.43	499.84	0.18
USACE	39085	SEPT2011	10388.00	296.40	315.53		315.68	0.000328	4.07	3631.64	415.32	0.17
USACE	38892	2YR	2128.00	296.37	306.00	301.10	306.20	0.000860	3.99	673.64	126.61	0.25
USACE	38892	5YR	3377.00	296.37	307.93	302.60	308.19	0.000900	4.70	929.57	139.99	0.26
USACE	38892	10YR	4532.00	296.37	309.36	303.71	309.68	0.000942	5.25	1145.24	159.98	0.27
USACE	38892	25YR	6682.00	296.37	311.98	305.21	312.33	0.000825	5.64	1625.07	241.94	0.26
USACE	38892	50YR	8671.00	296.37	313.86	306.26	314.21	0.000739	5.80	2133.65	282.95	0.26
USACE	38892	100YR	11043.00	296.37	315.64	307.47	316.00	0.000671	5.93	2648.31	294.39	0.25
USACE	38892	100YRPLUS	14442.00	296.37	317.57	309.07	317.95	0.000653	6.27	3233.23	317.83	0.25
USACE	38892	200YR	13854.00	296.37	317.27	308.84	317.65	0.000653	6.20	3138.99	312.07	0.25
USACE	38892	500YR	18475.00	296.37	319.36	310.42	319.80	0.000667	6.71	3835.68	356.57	0.26
USACE	38892	SEPT2011	10388.00	296.37	315.21	307.17	315.56	0.000680	5.87	2521.84	291.54	0.25
USACE	38829 Old Mill Buildin		Mult Open									
USACE	38787	2YR	2128.00	296.30	305.68		305.96	0.001340	4.71	533.19	106.53	0.30
USACE	38787	5YR	3377.00	296.30	307.48		307.86	0.001433	5.59	734.42	118.23	0.32
USACE	38787	10YR	4532.00	296.30	308.84		309.29	0.001452	6.14	901.88	127.91	0.33
USACE	38787	25YR	6682.00	296.30	311.48		311.95	0.001175	6.37	1308.31	187.11	0.30
USACE	38787	50YR	8671.00	296.30	313.43		313.91	0.001029	6.51	1679.64	193.34	0.29
USACE	38787	100YR	11043.00	296.30	315.20		315.73	0.000990	6.87	2027.96	200.07	0.29
USACE	38787	100YRPLUS	14442.00	296.30	317.07		317.71	0.001055	7.58	2416.07	218.98	0.30
USACE	38787	200YR	13854.00	296.30	316.78		317.40	0.001040	7.45	2353.72	215.17	0.30
USACE	38787	500YR	18475.00	296.30	318.77		319.55	0.001170	8.45	2806.75	242.33	0.33
USACE	38787	SEPT2011	10388.00	296.30	314.79		315.30	0.000983	6.73	1945.70	197.60	0.29
USACE	38702	2YR	2128.00	296.20	305.65		305.83	0.000670	3.37	642.26	95.32	0.22
USACE	38702	5YR	3377.00	296.20	307.44		307.73	0.000822	4.30	829.35	121.63	0.25
USACE	38702	10YR	4532.00	296.20	308.78		309.16	0.000926	4.99	1006.25	142.22	0.27
USACE	38702	25YR	6682.00	296.20	311.41		311.85	0.000837	5.49	1466.41	191.17	0.26
USACE	38702	50YR	8671.00	296.20	313.36		313.83	0.000759	5.72	1846.48	198.88	0.26
USACE	38702	100YR	11043.00	296.20	315.13		315.66	0.000745	6.10	2208.89	214.06	0.26
USACE	38702	100YRPLUS	14442.00	296.20	316.98		317.63	0.000793	6.74	2619.10	230.82	0.27
USACE	38702	200YR	13854.00	296.20	316.69		317.32	0.000783	6.63	2553.95	228.08	0.27
USACE	38702	500YR	18475.00	296.20	318.65		319.45	0.000877	7.50	3018.34	247.49	0.29
USACE	38702	SEPT2011	10388.00	296.20	314.72		315.23	0.000737	5.97	2122.15	208.99	0.26

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	38643	2YR	2128.00	296.00	305.32	301.06	305.71	0.001381	5.09	463.85	76.67	0.31
USACE	38643	5YR	3377.00	296.00	306.92	302.49	307.55	0.001813	6.57	591.39	85.02	0.37
USACE	38643	10YR	4532.00	296.00	308.07	303.69	308.94	0.002161	7.73	688.11	91.39	0.41
USACE	38643	25YR	6682.00	296.00	310.52	305.60	311.57	0.002132	8.79	952.86	149.54	0.42
USACE	38643	50YR	8671.00	296.00	312.59	307.10	313.60	0.001755	8.78	1328.14	187.04	0.39
USACE	38643	100YR	11043.00	296.00	314.48	308.58	315.46	0.001525	8.85	1690.15	199.86	0.38
USACE	38643	100YRPLUS	14442.00	296.00	316.32	311.50	317.43	0.001515	9.43	2084.10	227.97	0.38
USACE	38643	200YR	13854.00	296.00	316.04	311.46	317.12	0.001510	9.32	2020.68	224.54	0.38
USACE	38643	500YR	18475.00	296.00	317.94	313.33	319.24	0.001604	10.24	2466.79	244.05	0.40
USACE	38643	SEPT2011	10388.00	296.00	314.06	308.22	315.03	0.001538	8.74	1608.23	194.99	0.38
USACE	38616 Garfield Road		Bridge									
USACE	38582	2YR	2128.00	295.63	305.34	300.18	305.54	0.000701	3.72	632.33	99.49	0.23
USACE	38582	5YR	3377.00	295.63	306.99	301.51	307.31	0.000918	4.80	807.13	124.02	0.27
USACE	38582	10YR	4532.00	295.63	308.18	302.55	308.61	0.001055	5.55	949.54	138.74	0.29
USACE	38582	25YR	6682.00	295.63	310.02	304.13	310.59	0.001212	6.58	1216.24	186.59	0.32
USACE	38582	50YR	8671.00	295.63	311.47	305.34	312.11	0.001234	7.12	1553.27	202.16	0.33
USACE	38582	100YR	11043.00	295.63	312.98	306.49	313.68	0.001218	7.56	1870.87	219.91	0.33
USACE	38582	100YRPLUS	14442.00	295.63	314.94	308.53	315.70	0.001163	7.97	2328.51	253.01	0.33
USACE	38582	200YR	13854.00	295.63	314.62	308.30	315.37	0.001167	7.89	2250.47	245.68	0.33
USACE	38582	500YR	18475.00	295.63	316.89	310.66	317.74	0.001143	8.47	2876.62	304.89	0.33
USACE	38582	SEPT2011	10388.00	295.63	312.61	306.17	313.29	0.001213	7.42	1789.99	215.06	0.33
USACE	38490	2YR	2128.00	295.45	305.19		305.45	0.001015	4.17	555.80	106.89	0.26
USACE	38490	5YR	3377.00	295.45	306.81		307.20	0.001214	5.18	748.45	130.24	0.30
USACE	38490	10YR	4532.00	295.45	308.00		308.48	0.001346	5.91	912.65	144.26	0.32
USACE	38490	25YR	6682.00	295.45	309.83		310.46	0.001480	6.90	1222.39	194.96	0.35
USACE	38490	50YR	8671.00	295.45	311.31		311.98	0.001429	7.31	1542.42	235.55	0.35
USACE	38490	100YR	11043.00	295.45	312.88		313.55	0.001315	7.53	1936.73	266.06	0.34
USACE	38490	100YRPLUS	14442.00	295.45	314.87		315.55	0.001163	7.68	2498.14	295.50	0.32
USACE	38490	200YR	13854.00	295.45	314.55		315.23	0.001184	7.66	2403.99	291.25	0.33
USACE	38490	500YR	18475.00	295.45	316.86		317.57	0.001065	7.91	3110.17	320.72	0.32
USACE	38490	SEPT2011	10388.00	295.45	312.50		313.17	0.001332	7.46	1836.87	260.30	0.34
USACE	38303	2YR	2128.00	295.15	304.85		305.21	0.001486	4.95	498.23	134.80	0.32
USACE	38303	5YR	3377.00	295.15	306.48		306.94	0.001586	5.82	730.46	150.05	0.34
USACE	38303	10YR	4532.00	295.15	307.67		308.21	0.001657	6.45	918.63	165.26	0.35
USACE	38303	25YR	6682.00	295.15	309.52		310.17	0.001721	7.33	1243.30	188.53	0.37
USACE	38303	50YR	8671.00	295.15	310.96		311.69	0.001752	7.96	1531.17	211.44	0.38
USACE	38303	100YR	11043.00	295.15	312.47		313.27	0.001730	8.49	1869.68	233.73	0.38
USACE	38303	100YRPLUS	14442.00	295.15	314.44		315.29	0.001646	8.98	2361.19	255.82	0.38
USACE	38303	200YR	13854.00	295.15	314.11		314.96	0.001671	8.93	2278.59	255.07	0.38
USACE	38303	500YR	18475.00	295.15	316.41		317.32	0.001563	9.41	2878.50	271.08	0.38
USACE	38303	SEPT2011	10388.00	295.15	312.11		312.89	0.001719	8.32	1785.55	229.71	0.38
USACE	38057	2YR	2128.00	295.00	304.44		304.82	0.001688	5.15	509.31	147.28	0.34
USACE	38057	5YR	3377.00	295.00	306.05		306.54	0.001758	6.03	767.12	170.98	0.36
USACE	38057	10YR	4532.00	295.00	307.25		307.80	0.001774	6.60	980.06	183.79	0.37
USACE	38057	25YR	6682.00	295.00	309.12		309.75	0.001757	7.36	1335.88	197.44	0.38
USACE	38057	50YR	8671.00	295.00	310.56		311.27	0.001758	7.95	1627.00	207.08	0.39
USACE	38057	100YR	11043.00	295.00	312.06		312.86	0.001771	8.57	1945.88	218.12	0.39
USACE	38057	100YRPLUS	14442.00	295.00	313.93		314.87	0.001849	9.49	2374.52	244.24	0.41
USACE	38057	200YR	13854.00	295.00	313.63		314.55	0.001831	9.33	2302.13	238.81	0.41
USACE	38057	500YR	18475.00	295.00	315.90		316.92	0.001780	10.03	2862.20	254.82	0.41
USACE	38057	SEPT2011	10388.00	295.00	311.71		312.48	0.001737	8.36	1870.34	214.83	0.39
USACE	37798	2YR	2128.00	294.69	304.38		304.53	0.000523	3.10	692.60	94.01	0.19
USACE	37798	5YR	3377.00	294.69	305.93		306.19	0.000725	4.10	864.80	137.69	0.23
USACE	37798	10YR	4532.00	294.69	307.08		307.43	0.000863	4.82	1042.28	166.49	0.26
USACE	37798	25YR	6682.00	294.69	308.87		309.37	0.001030	5.83	1372.25	205.80	0.29
USACE	37798	50YR	8671.00	294.69	310.28		310.87	0.001110	6.49	1682.07	231.67	0.31
USACE	37798	100YR	11043.00	294.69	311.78		312.45	0.001164	7.11	2046.51	260.33	0.32
USACE	37798	100YRPLUS	14442.00	294.69	313.68		314.44	0.001178	7.73	2580.47	294.43	0.33
USACE	37798	200YR	13854.00	294.69	313.37		314.12	0.001180	7.64	2489.79	291.19	0.33
USACE	37798	500YR	18475.00	294.69	315.67		316.49	0.001167	8.26	3195.85	325.98	0.33
USACE	37798	SEPT2011	10388.00	294.69	311.43		312.08	0.001134	6.92	1958.48	252.37	0.31
USACE	37552	2YR	2128.00	294.49	304.14		304.36	0.000840	3.82	601.31	123.58	0.24
USACE	37552	5YR	3377.00	294.49	305.63		305.97	0.001065	4.83	799.98	142.39	0.28
USACE	37552	10YR	4532.00	294.49	306.74		307.17	0.001210	5.56	966.47	157.34	0.31
USACE	37552	25YR	6682.00	294.49	308.48		309.07	0.001379	6.59	1260.37	181.37	0.33
USACE	37552	50YR	8671.00	294.49	309.86		310.55	0.001469	7.31	1525.63	203.24	0.35
USACE	37552	100YR	11043.00	294.49	311.34		312.12	0.001506	7.93	1840.98	223.66	0.36
USACE	37552	100YRPLUS	14442.00	294.49	313.22		314.10	0.001516	8.61	2287.26	251.48	0.37
USACE	37552	200YR	13854.00	294.49	312.91		313.78	0.001514	8.51	2211.77	246.92	0.37
USACE	37552	500YR	18475.00	294.49	315.19		316.15	0.001491	9.20	2812.54	280.27	0.37
USACE	37552	SEPT2011	10388.00	294.49	311.00		311.75	0.001471	7.72	1767.55	218.95	0.36
USACE	37293	2YR	2128.00	294.23	303.89	299.15	304.13	0.000965	3.98	639.56	215.32	0.26
USACE	37293	5YR	3377.00	294.23	305.40	300.49	305.68	0.001002	4.59	990.41	250.13	0.27
USACE	37293	10YR	4532.00	294.23	306.56	301.55	306.85	0.000973	4.90	1286.93	263.95	0.27
USACE	37293	25YR	6682.00	294.23	308.39	304.19	308.70	0.000905	5.28	1781.80	277.36	0.27
USACE	37293	50YR	8671.00	294.23	309.81	305.14	310.15	0.000888	5.64	2192.84	298.87	0.27
USACE	37293	100YR	11043.00	294.23	311.35	306.05	311.71	0.000840	5.90	2659.00	308.93	0.27

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	37293	100YRPLUS	14442.00	294.23	313.28	307.02	313.67	0.000803	6.25	3269.62	323.75	0.27
USACE	37293	200YR	13854.00	294.23	312.97	306.87	313.36	0.000807	6.19	3169.59	321.25	0.27
USACE	37293	500YR	18475.00	294.23	315.29	307.97	315.72	0.000776	6.62	3934.26	337.98	0.27
USACE	37293	SEPT2011	10388.00	294.23	311.00	305.84	311.35	0.000834	5.78	2553.24	306.70	0.27
USACE	37050	2YR	2128.00	294.11	303.73	298.84	303.90	0.000771	3.48	835.77	336.85	0.23
USACE	37050	5YR	3377.00	294.11	305.30	300.26	305.45	0.000637	3.61	1411.91	391.82	0.22
USACE	37050	10YR	4532.00	294.11	306.49	301.35	306.63	0.000562	3.69	1897.62	442.92	0.21
USACE	37050	25YR	6682.00	294.11	308.36	303.92	308.49	0.000451	3.71	2771.22	503.83	0.19
USACE	37050	50YR	8671.00	294.11	309.82	304.60	309.95	0.000400	3.78	3466.99	535.86	0.18
USACE	37050	100YR	11043.00	294.11	311.38	305.22	311.51	0.000364	3.88	4223.52	568.71	0.18
USACE	37050	100YRPLUS	14442.00	294.11	313.33	305.97	313.48	0.000336	4.05	5201.51	664.04	0.17
USACE	37050	200YR	13854.00	294.11	313.02	305.83	313.16	0.000339	4.02	5042.43	651.60	0.17
USACE	37050	500YR	18475.00	294.11	315.36	306.85	315.53	0.000320	4.26	6255.36	760.75	0.17
USACE	37050	SEPT2011	10388.00	294.11	311.03	305.05	311.16	0.000363	3.82	4052.46	558.12	0.18
USACE	36854	2YR	2128.00	294.07	303.60		303.75	0.000735	3.41	937.17	414.77	0.22
USACE	36854	5YR	3377.00	294.07	305.22		305.33	0.000521	3.28	1643.00	451.60	0.19
USACE	36854	10YR	4532.00	294.07	306.43		306.53	0.000434	3.26	2198.10	474.59	0.18
USACE	36854	25YR	6682.00	294.07	308.32		308.41	0.000353	3.30	3133.64	518.09	0.17
USACE	36854	50YR	8671.00	294.07	309.78		309.88	0.000316	3.37	3910.81	541.81	0.16
USACE	36854	100YR	11043.00	294.07	311.34		311.45	0.000286	3.45	4768.59	558.74	0.16
USACE	36854	100YRPLUS	14442.00	294.07	313.30		313.42	0.000263	3.59	5893.84	587.16	0.15
USACE	36854	200YR	13854.00	294.07	312.99		313.10	0.000265	3.57	5709.75	583.04	0.15
USACE	36854	500YR	18475.00	294.07	315.34		315.46	0.000248	3.77	7111.28	607.36	0.15
USACE	36854	SEPT2011	10388.00	294.07	310.99		311.09	0.000286	3.40	4574.67	553.62	0.16
USACE	36517	2YR	2128.00	293.90	303.35		303.50	0.000746	3.47	874.73	297.66	0.22
USACE	36517	5YR	3377.00	293.90	305.00		305.15	0.000618	3.61	1400.41	337.88	0.21
USACE	36517	10YR	4532.00	293.90	306.22		306.36	0.000556	3.72	1837.60	375.44	0.20
USACE	36517	25YR	6682.00	293.90	308.13		308.28	0.000479	3.87	2579.16	399.44	0.19
USACE	36517	50YR	8671.00	293.90	309.61		309.76	0.000444	4.01	3177.45	413.90	0.19
USACE	36517	100YR	11043.00	293.90	311.17		311.33	0.000415	4.17	3834.98	426.06	0.19
USACE	36517	100YRPLUS	14442.00	293.90	313.13		313.31	0.000394	4.40	4684.90	443.14	0.19
USACE	36517	200YR	13854.00	293.90	312.82		312.99	0.000395	4.36	4546.57	439.66	0.19
USACE	36517	500YR	18475.00	293.90	315.16		315.36	0.000383	4.67	5607.65	465.71	0.19
USACE	36517	SEPT2011	10388.00	293.90	310.82		310.98	0.000412	4.09	3687.98	423.68	0.19
USACE	36288	2YR	2128.00	293.69	303.08		303.30	0.000976	4.03	622.66	137.39	0.26
USACE	36288	5YR	3377.00	293.69	304.62		304.94	0.001133	4.93	852.33	160.90	0.29
USACE	36288	10YR	4532.00	293.69	305.76		306.16	0.001253	5.60	1049.91	186.32	0.31
USACE	36288	25YR	6682.00	293.69	307.56		308.07	0.001387	6.57	1458.11	262.07	0.33
USACE	36288	50YR	8671.00	293.69	309.04		309.56	0.001284	6.83	1870.08	289.89	0.33
USACE	36288	100YR	11043.00	293.69	310.63		311.14	0.001182	7.06	2353.00	320.70	0.32
USACE	36288	100YRPLUS	14442.00	293.69	312.59		313.13	0.001115	7.44	3040.96	379.98	0.32
USACE	36288	200YR	13854.00	293.69	312.27		312.81	0.001132	7.41	2921.03	372.53	0.32
USACE	36288	500YR	18475.00	293.69	314.66		315.19	0.001007	7.64	3881.20	432.91	0.31
USACE	36288	SEPT2011	10388.00	293.69	310.29		310.80	0.001172	6.93	2246.34	313.91	0.32
USACE	36016	2YR	2128.00	293.60	302.85	298.36	303.04	0.000890	3.70	724.91	209.09	0.25
USACE	36016	5YR	3377.00	293.60	304.42	299.71	304.64	0.000882	4.21	1093.82	321.81	0.25
USACE	36016	10YR	4532.00	293.60	305.60	301.29	305.83	0.000831	4.45	1399.45	388.13	0.25
USACE	36016	25YR	6682.00	293.60	307.46	302.83	307.71	0.000772	4.81	1891.12	443.51	0.25
USACE	36016	50YR	8671.00	293.60	308.95	303.63	309.23	0.000738	5.10	2293.54	480.67	0.25
USACE	36016	100YR	11043.00	293.60	310.52	304.68	310.83	0.000733	5.48	2745.62	533.32	0.25
USACE	36016	100YRPLUS	14442.00	293.60	312.48	305.57	312.83	0.000710	5.86	3359.45	579.91	0.25
USACE	36016	200YR	13854.00	293.60	312.16	305.43	312.51	0.000716	5.81	3257.32	576.74	0.25
USACE	36016	500YR	18475.00	293.60	314.52	306.46	314.93	0.000697	6.27	4049.70	632.80	0.26
USACE	36016	SEPT2011	10388.00	293.60	310.18	304.49	310.49	0.000719	5.34	2646.86	525.19	0.25
USACE	35704	2YR	2128.00	293.41	302.70		302.81	0.000493	2.81	858.86	226.85	0.19
USACE	35704	5YR	3377.00	293.41	304.26		304.41	0.000532	3.33	1318.12	351.97	0.20
USACE	35704	10YR	4532.00	293.41	305.45		305.61	0.000508	3.54	1759.39	383.99	0.20
USACE	35704	25YR	6682.00	293.41	307.34		307.50	0.000452	3.76	2515.78	412.11	0.19
USACE	35704	50YR	8671.00	293.41	308.86		309.02	0.000416	3.91	3152.66	429.05	0.19
USACE	35704	100YR	11043.00	293.41	310.45		310.63	0.000387	4.07	3851.19	445.73	0.19
USACE	35704	100YRPLUS	14442.00	293.41	312.44		312.63	0.000368	4.31	4760.30	471.78	0.18
USACE	35704	200YR	13854.00	293.41	312.12		312.30	0.000370	4.27	4610.01	467.12	0.18
USACE	35704	500YR	18475.00	293.41	314.51		314.72	0.000354	4.57	5770.42	502.10	0.19
USACE	35704	SEPT2011	10388.00	293.41	310.12		310.29	0.000382	3.98	3702.54	442.12	0.18
USACE	35577	2YR	2128.00	293.32	302.56		302.73	0.000751	3.45	741.09	241.72	0.23
USACE	35577	5YR	3377.00	293.32	304.13		304.33	0.000729	3.88	1184.83	300.06	0.23
USACE	35577	10YR	4532.00	293.32	305.34		305.54	0.000678	4.08	1553.27	311.80	0.23
USACE	35577	25YR	6682.00	293.32	307.23		307.44	0.000612	4.35	2156.43	324.45	0.22
USACE	35577	50YR	8671.00	293.32	308.74		308.96	0.000574	4.56	2652.64	333.49	0.22
USACE	35577	100YR	11043.00	293.32	310.33		310.57	0.000551	4.81	3192.27	346.28	0.22
USACE	35577	100YRPLUS	14442.00	293.32	312.30		312.57	0.000538	5.17	3891.99	364.44	0.22
USACE	35577	200YR	13854.00	293.32	311.98		312.25	0.000539	5.10	3776.74	361.45	0.22
USACE	35577	500YR	18475.00	293.32	314.35		314.66	0.000531	5.54	4660.64	384.90	0.22
USACE	35577	SEPT2011	10388.00	293.32	310.00		310.23	0.000540	4.70	3078.70	343.62	0.22
USACE	35205	2YR	2128.00	293.22	302.25	297.64	302.44	0.000849	3.66	736.94	224.70	0.24
USACE	35205	5YR	3377.00	293.22	303.84	298.96	304.05	0.000811	4.09	1103.16	234.90	0.24
USACE	35205	10YR	4532.00	293.22	305.04	300.03	305.27	0.000787	4.38	1388.62	239.77	0.24

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	35205	25YR	6682.00	293.22	306.92	302.30	307.19	0.000773	4.87	1848.25	252.24	0.25
USACE	35205	50YR	8671.00	293.22	308.42	303.11	308.72	0.000756	5.21	2232.48	259.21	0.25
USACE	35205	100YR	11043.00	293.22	310.00	303.86	310.33	0.000744	5.57	2645.39	265.00	0.25
USACE	35205	100YRPLUS	14442.00	293.22	311.94	304.80	312.33	0.000743	6.04	3166.92	270.68	0.26
USACE	35205	200YR	13854.00	293.22	311.63	304.64	312.01	0.000741	5.96	3082.39	269.77	0.26
USACE	35205	500YR	18475.00	293.22	313.96	305.72	314.42	0.000749	6.53	3719.91	312.71	0.26
USACE	35205	SEPT2011	10388.00	293.22	309.68	303.66	310.00	0.000724	5.42	2561.60	263.91	0.25
USACE	34951	2YR	2128.00	293.13	302.14	297.23	302.25	0.000518	2.87	1048.77	333.01	0.19
USACE	34951	5YR	3377.00	293.13	303.75	298.46	303.86	0.000472	3.13	1650.79	405.68	0.19
USACE	34951	10YR	4532.00	293.13	304.97	299.44	305.09	0.000440	3.30	2175.54	454.40	0.18
USACE	34951	25YR	6682.00	293.13	306.89	301.53	307.01	0.000387	3.48	3101.68	509.63	0.18
USACE	34951	50YR	8671.00	293.13	308.42	302.19	308.54	0.000349	3.59	3907.02	539.97	0.17
USACE	34951	100YR	11043.00	293.13	310.03	302.95	310.15	0.000320	3.70	4796.69	567.14	0.17
USACE	34951	100YRPLUS	14442.00	293.13	312.01	303.79	312.14	0.000297	3.87	5952.92	594.90	0.17
USACE	34951	200YR	13854.00	293.13	311.70	303.61	311.82	0.000300	3.84	5763.50	591.36	0.17
USACE	34951	500YR	18475.00	293.13	314.08	304.61	314.22	0.000282	4.07	7208.69	623.77	0.16
USACE	34951	SEPT2011	10388.00	293.13	309.70	302.78	309.82	0.000316	3.63	4613.82	562.18	0.17
USACE	34683	2YR	2128.00	293.04	301.89	297.56	302.06	0.000877	3.68	942.18	297.12	0.24
USACE	34683	5YR	3377.00	293.04	303.49	299.04	303.69	0.000850	4.15	1451.73	334.67	0.25
USACE	34683	10YR	4532.00	293.04	304.71	300.23	304.93	0.000822	4.45	1871.04	352.78	0.25
USACE	34683	25YR	6682.00	293.04	306.62	301.78	306.86	0.000782	4.88	2568.18	377.30	0.25
USACE	34683	50YR	8671.00	293.04	308.15	302.65	308.40	0.000752	5.19	3158.25	395.89	0.25
USACE	34683	100YR	11043.00	293.04	309.75	303.46	310.02	0.000728	5.50	3803.57	411.69	0.25
USACE	34683	100YRPLUS	14442.00	293.04	311.72	304.43	312.01	0.000714	5.92	4635.20	432.53	0.25
USACE	34683	200YR	13854.00	293.04	311.40	304.27	311.69	0.000715	5.85	4499.03	429.26	0.25
USACE	34683	500YR	18475.00	293.04	313.76	305.41	314.09	0.000705	6.34	5541.12	453.42	0.26
USACE	34683	SEPT2011	10388.00	293.04	309.44	303.24	309.69	0.000709	5.35	3675.13	408.58	0.25
USACE	34521	2YR	2128.00	292.82	301.84	296.39	301.95	0.000442	2.70	918.04	215.00	0.18
USACE	34521	5YR	3377.00	292.82	303.43	297.44	303.58	0.000504	3.29	1280.26	240.79	0.19
USACE	34521	10YR	4532.00	292.82	304.63	298.26	304.81	0.000537	3.70	1579.87	255.51	0.20
USACE	34521	25YR	6682.00	292.82	306.52	299.62	306.75	0.000571	4.27	2081.74	274.23	0.22
USACE	34521	50YR	8671.00	292.82	308.03	301.02	308.29	0.000588	4.69	2503.14	286.83	0.22
USACE	34521	100YR	11043.00	292.82	309.60	302.14	309.91	0.000606	5.12	2965.22	301.78	0.23
USACE	34521	100YRPLUS	14442.00	292.82	311.53	303.31	311.90	0.000631	5.67	3566.82	319.79	0.24
USACE	34521	200YR	13854.00	292.82	311.22	303.13	311.58	0.000626	5.58	3468.02	316.91	0.24
USACE	34521	500YR	18475.00	292.82	313.54	304.49	313.97	0.000653	6.21	4225.48	337.05	0.25
USACE	34521	SEPT2011	10388.00	292.82	309.29	301.85	309.59	0.000582	4.96	2874.29	298.77	0.23
USACE	34203	2YR	2125.00	292.59	301.62	296.78	301.78	0.000642	3.26	793.49	181.60	0.21
USACE	34203	5YR	3375.00	292.59	303.16	297.98	303.38	0.000746	3.99	1084.58	196.11	0.24
USACE	34203	10YR	4530.00	292.59	304.33	298.91	304.60	0.000809	4.51	1320.12	206.05	0.25
USACE	34203	25YR	6690.00	292.59	306.17	300.68	306.52	0.000888	5.29	1711.34	219.85	0.27
USACE	34203	50YR	8689.00	292.59	307.64	301.69	308.05	0.000933	5.86	2040.41	229.24	0.28
USACE	34203	100YR	11078.00	292.59	309.17	302.66	309.65	0.000972	6.43	2397.20	237.05	0.29
USACE	34203	100YRPLUS	14488.00	292.59	311.04	303.85	311.63	0.001037	7.18	2852.31	250.28	0.31
USACE	34203	200YR	13906.00	292.59	310.74	303.66	311.31	0.001025	7.06	2777.83	247.76	0.31
USACE	34203	500YR	18544.00	292.59	312.97	305.07	313.68	0.001101	7.96	3351.42	265.07	0.32
USACE	34203	SEPT2011	10576.00	292.59	308.87	302.46	309.34	0.000963	6.31	2326.20	235.49	0.29
USACE	33830	2YR	2125.00	292.41	301.27		301.47	0.001054	3.89	704.28	172.14	0.26
USACE	33830	5YR	3375.00	292.41	302.78		303.04	0.001126	4.60	969.52	180.60	0.28
USACE	33830	10YR	4530.00	292.41	303.93		304.24	0.001180	5.14	1181.77	189.95	0.30
USACE	33830	25YR	6690.00	292.41	305.71		306.13	0.001283	6.02	1538.84	213.29	0.32
USACE	33830	50YR	8689.00	292.41	307.11		307.63	0.001392	6.78	1862.65	250.32	0.34
USACE	33830	100YR	11078.00	292.41	308.64		309.23	0.001405	7.36	2273.21	283.52	0.35
USACE	33830	100YRPLUS	14488.00	292.41	310.51		311.19	0.001437	8.08	2845.79	332.71	0.36
USACE	33830	200YR	13906.00	292.41	310.20		310.87	0.001437	7.98	2745.98	324.96	0.36
USACE	33830	500YR	18544.00	292.41	312.54		313.25	0.001343	8.47	3557.02	363.11	0.35
USACE	33830	SEPT2011	10576.00	292.41	308.33		308.91	0.001415	7.27	2186.57	279.72	0.35
USACE	33479	2YR	2125.00	292.53	300.77		301.05	0.001342	4.36	559.74	145.51	0.30
USACE	33479	5YR	3375.00	292.53	302.17		302.57	0.001566	5.36	781.39	170.99	0.33
USACE	33479	10YR	4530.00	292.53	303.26		303.75	0.001657	6.00	980.38	191.51	0.35
USACE	33479	25YR	6690.00	292.53	305.02		305.61	0.001696	6.83	1341.60	219.67	0.37
USACE	33479	50YR	8689.00	292.53	306.45		307.10	0.001660	7.34	1671.02	239.17	0.37
USACE	33479	100YR	11078.00	292.53	308.01		308.70	0.001585	7.77	2059.29	258.94	0.37
USACE	33479	100YRPLUS	14488.00	292.53	309.93		310.68	0.001509	8.26	2575.84	278.62	0.37
USACE	33479	200YR	13906.00	292.53	309.62		310.36	0.001522	8.19	2489.81	275.98	0.37
USACE	33479	500YR	18544.00	292.53	311.98		312.77	0.001418	8.69	3161.94	293.06	0.36
USACE	33479	SEPT2011	10576.00	292.53	307.70		308.38	0.001599	7.68	1979.29	255.04	0.37
USACE	33198	2YR	2125.00	293.56	299.83		300.42	0.003953	6.16	364.90	111.77	0.49
USACE	33198	5YR	3375.00	293.56	300.88		301.79	0.004918	7.82	488.13	121.76	0.57
USACE	33198	10YR	4530.00	293.56	301.72		302.90	0.005381	8.95	593.32	126.40	0.61
USACE	33198	25YR	6690.00	293.56	303.12		304.69	0.005789	10.53	774.59	132.40	0.65
USACE	33198	50YR	8689.00	293.56	304.28		306.16	0.005931	11.64	931.31	138.09	0.67
USACE	33198	100YR	11078.00	293.56	305.56		307.76	0.005963	12.73	1115.16	149.13	0.69
USACE	33198	100YRPLUS	14488.00	293.56	307.11		309.72	0.006050	14.04	1351.64	155.60	0.71
USACE	33198	200YR	13906.00	293.56	306.86		309.40	0.006031	13.83	1313.29	154.75	0.71
USACE	33198	500YR	18544.00	293.56	308.76		311.80	0.006097	15.35	1613.11	161.93	0.73
USACE	33198	SEPT2011	10576.00	293.56	305.30		307.44	0.005973	12.53	1076.46	147.34	0.69

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	32982	2YR	2125.00	293.94	299.21		299.59	0.003179	4.99	457.12	153.77	0.43
USACE	32982	5YR	3375.00	293.94	300.20		300.77	0.003723	6.23	613.68	165.31	0.49
USACE	32982	10YR	4530.00	293.94	301.11		301.80	0.003676	6.90	776.06	186.26	0.50
USACE	32982	25YR	6690.00	293.94	302.72		303.54	0.003309	7.67	1093.82	206.13	0.49
USACE	32982	50YR	8689.00	293.94	304.08		304.98	0.003007	8.15	1380.60	215.08	0.48
USACE	32982	100YR	11078.00	293.94	305.55		306.55	0.002801	8.70	1702.46	228.68	0.47
USACE	32982	100YRPLUS	14488.00	293.94	307.34		308.45	0.002606	9.32	2154.24	270.77	0.47
USACE	32982	200YR	13906.00	293.94	307.05		308.14	0.002641	9.24	2076.13	266.57	0.47
USACE	32982	500YR	18544.00	293.94	309.28		310.47	0.002369	9.81	2701.35	290.28	0.46
USACE	32982	SEPT2011	10576.00	293.94	305.27		306.24	0.002799	8.54	1639.58	222.25	0.47
USACE	32874	2YR	2125.00	293.96	298.62		299.13	0.005665	5.76	399.69	187.20	0.56
USACE	32874	5YR	3375.00	293.96	299.64		300.29	0.005299	6.66	604.60	209.21	0.56
USACE	32874	10YR	4530.00	293.96	300.73		301.37	0.004092	6.79	839.38	221.57	0.51
USACE	32874	25YR	6690.00	293.96	302.49		303.16	0.003061	7.09	1241.56	235.22	0.47
USACE	32874	50YR	8689.00	293.96	303.92		304.63	0.002635	7.42	1591.27	256.17	0.45
USACE	32874	100YR	11078.00	293.96	305.46		306.21	0.002286	7.71	2011.37	292.49	0.43
USACE	32874	100YRPLUS	14488.00	293.96	307.32		308.11	0.002003	8.08	2572.49	308.58	0.41
USACE	32874	200YR	13906.00	293.96	307.02		307.80	0.002039	8.02	2480.71	305.75	0.41
USACE	32874	500YR	18544.00	293.96	309.31		310.15	0.001788	8.45	3203.09	325.61	0.40
USACE	32874	SEPT2011	10576.00	293.96	305.16		305.90	0.002349	7.66	1923.37	287.75	0.43
USACE	32814	2YR	2125.00	294.00	298.44	297.13	298.77	0.003792	4.60	505.91	220.00	0.45
USACE	32814	5YR	3375.00	294.00	299.52	297.89	299.93	0.003394	5.29	750.79	234.73	0.45
USACE	32814	10YR	4530.00	294.00	300.65	298.48	301.08	0.002614	5.43	1024.99	247.42	0.41
USACE	32814	25YR	6690.00	294.00	302.46	299.37	302.92	0.002010	5.77	1488.40	266.86	0.38
USACE	32814	50YR	8689.00	294.00	303.90	300.09	304.40	0.001740	6.07	1891.83	289.22	0.36
USACE	32814	100YR	11078.00	294.00	305.46	300.82	306.00	0.001539	6.37	2356.95	306.89	0.35
USACE	32814	100YRPLUS	14488.00	294.00	307.32	301.80	307.93	0.001421	6.84	2952.18	333.71	0.35
USACE	32814	200YR	13906.00	294.00	307.02	301.64	307.62	0.001436	6.77	2853.20	329.06	0.35
USACE	32814	500YR	18544.00	294.00	309.31	302.85	309.98	0.001320	7.30	3648.65	367.20	0.34
USACE	32814	SEPT2011	10576.00	294.00	305.16	300.68	305.69	0.001567	6.30	2264.46	303.70	0.35
USACE	32803 Weir		Inl Struct									
USACE	32782	2YR	2125.00	292.00	298.08	294.80	298.24	0.000942	3.37	810.86	202.84	0.25
USACE	32782	5YR	3375.00	292.00	299.56	295.59	299.79	0.001013	4.08	1124.84	222.70	0.27
USACE	32782	10YR	4530.00	292.00	300.67	296.28	300.96	0.001070	4.62	1380.55	237.34	0.28
USACE	32782	25YR	6690.00	292.00	302.42	297.52	302.80	0.001137	5.41	1812.99	256.32	0.30
USACE	32782	50YR	8689.00	292.00	303.84	298.39	304.29	0.001164	5.98	2188.84	277.67	0.31
USACE	32782	100YR	11078.00	292.00	305.35	299.19	305.87	0.001169	6.50	2626.49	301.09	0.32
USACE	32782	100YRPLUS	14488.00	292.00	307.19	300.38	307.80	0.001189	7.17	3203.49	326.27	0.33
USACE	32782	200YR	13906.00	292.00	306.89	300.23	307.49	0.001186	7.06	3107.59	322.37	0.33
USACE	32782	500YR	18544.00	292.00	309.14	301.68	309.84	0.001190	7.79	3866.37	356.39	0.34
USACE	32782	SEPT2011	10576.00	292.00	305.05	299.08	305.55	0.001166	6.40	2537.53	296.82	0.32
USACE	32720	2YR	2125.00	291.92	297.94		298.16	0.001242	3.80	685.21	198.13	0.28
USACE	32720	5YR	3375.00	291.92	299.41		299.70	0.001292	4.53	981.87	205.82	0.30
USACE	32720	10YR	4530.00	291.92	300.51		300.87	0.001344	5.09	1211.43	211.83	0.32
USACE	32720	25YR	6690.00	291.92	302.21		302.69	0.001457	6.02	1587.82	236.70	0.34
USACE	32720	50YR	8689.00	291.92	303.61		304.18	0.001466	6.60	1936.58	260.57	0.35
USACE	32720	100YR	11078.00	291.92	305.11		305.75	0.001460	7.16	2342.98	282.71	0.35
USACE	32720	100YRPLUS	14488.00	291.92	306.93		307.68	0.001464	7.85	2886.28	308.97	0.36
USACE	32720	200YR	13906.00	291.92	306.64		307.37	0.001465	7.74	2795.63	306.41	0.36
USACE	32720	500YR	18544.00	291.92	308.88		309.72	0.001445	8.48	3505.26	327.65	0.37
USACE	32720	SEPT2011	10576.00	291.92	304.81		305.44	0.001459	7.05	2260.23	278.87	0.35
USACE	32599	2YR	2125.00	291.88	297.61		297.95	0.002216	4.83	531.89	130.93	0.38
USACE	32599	5YR	3375.00	291.88	298.98		299.48	0.002413	5.90	715.80	137.39	0.41
USACE	32599	10YR	4530.00	291.88	299.97		300.62	0.002655	6.80	855.49	152.59	0.44
USACE	32599	25YR	6690.00	291.88	301.51		302.42	0.002961	8.13	1116.91	182.82	0.48
USACE	32599	50YR	8689.00	291.88	302.84		303.89	0.002960	8.90	1370.53	200.46	0.49
USACE	32599	100YR	11078.00	291.88	304.27		305.47	0.002909	9.62	1673.42	222.43	0.49
USACE	32599	100YRPLUS	14488.00	291.88	306.03		307.39	0.002859	10.46	2082.39	241.87	0.50
USACE	32599	200YR	13906.00	291.88	305.75		307.08	0.002871	10.34	2013.54	239.60	0.50
USACE	32599	500YR	18544.00	291.88	307.95		309.44	0.002731	11.17	2558.78	254.28	0.50
USACE	32599	SEPT2011	10576.00	291.88	303.99		305.16	0.002917	9.48	1610.97	218.63	0.49
USACE	32466	2YR	2125.00	291.83	297.14		297.59	0.003255	5.35	400.77	97.77	0.44
USACE	32466	5YR	3375.00	291.83	298.42		299.08	0.003528	6.56	558.08	144.71	0.48
USACE	32466	10YR	4530.00	291.83	299.36		300.19	0.003692	7.42	701.32	157.39	0.50
USACE	32466	25YR	6690.00	291.83	300.88		301.96	0.003810	8.63	956.47	180.00	0.53
USACE	32466	50YR	8689.00	291.83	302.25		303.45	0.003580	9.26	1216.39	198.62	0.52
USACE	32466	100YR	11078.00	291.83	303.75		305.05	0.003290	9.78	1526.61	211.89	0.52
USACE	32466	100YRPLUS	14488.00	291.83	305.54		306.98	0.003134	10.53	1919.63	228.00	0.52
USACE	32466	200YR	13906.00	291.83	305.25		306.67	0.003161	10.42	1853.70	225.94	0.52
USACE	32466	500YR	18544.00	291.83	307.48		309.05	0.002941	11.19	2374.93	241.72	0.51
USACE	32466	SEPT2011	10576.00	291.83	303.46		304.73	0.003328	9.66	1465.21	209.27	0.52
USACE	32338	2YR	2125.00	291.81	296.31		296.99	0.006534	6.64	320.19	86.01	0.61
USACE	32338	5YR	3375.00	291.81	297.50		298.45	0.006364	7.86	460.00	144.09	0.63
USACE	32338	10YR	4530.00	291.81	298.52		299.59	0.005734	8.46	615.96	162.40	0.61
USACE	32338	25YR	6690.00	291.81	300.28		301.42	0.004576	9.00	932.27	191.53	0.57
USACE	32338	50YR	8689.00	291.81	301.84		302.96	0.003705	9.16	1242.66	207.05	0.53
USACE	32338	100YR	11078.00	291.81	303.46		304.59	0.003130	9.37	1586.41	216.13	0.50

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	32338	100YRPLUS	14488.00	291.81	305.31		306.54	0.002863	9.96	1997.71	229.21	0.49
USACE	32338	200YR	13906.00	291.81	305.01		306.22	0.002897	9.86	1929.88	226.89	0.49
USACE	32338	500YR	18544.00	291.81	307.29		308.63	0.002650	10.55	2466.85	245.57	0.49
USACE	32338	SEPT2011	10576.00	291.81	303.15		304.27	0.003204	9.30	1519.79	214.31	0.50
USACE	32266	2YR	2125.00	291.81	296.01	294.63	296.51	0.004518	5.75	396.36	130.03	0.51
USACE	32266	5YR	3375.00	291.81	297.27	295.55	297.95	0.004261	6.73	582.78	183.00	0.52
USACE	32266	10YR	4530.00	291.81	298.36	296.33	299.10	0.003738	7.16	795.35	206.28	0.51
USACE	32266	25YR	6690.00	291.81	300.21	297.70	300.98	0.002943	7.56	1207.35	233.97	0.47
USACE	32266	50YR	8689.00	291.81	301.81	298.68	302.59	0.002452	7.77	1597.92	260.07	0.44
USACE	32266	100YR	11078.00	291.81	303.46	299.64	304.25	0.002112	8.01	2047.55	282.11	0.42
USACE	32266	100YRPLUS	14488.00	291.81	305.35	300.79	306.20	0.001930	8.49	2599.77	301.72	0.41
USACE	32266	200YR	13906.00	291.81	305.04	300.58	305.89	0.001955	8.41	2508.52	298.96	0.41
USACE	32266	500YR	18544.00	291.81	307.37	301.97	308.28	0.001774	8.94	3226.73	319.29	0.40
USACE	32266	SEPT2011	10576.00	291.81	303.15	299.43	303.93	0.002159	7.95	1959.07	278.61	0.42
USACE	32240 Weir		Inl Struct									
USACE	32219	2YR	2125.00	288.86	295.91		296.12	0.000932	3.66	641.98	148.01	0.25
USACE	32219	5YR	3375.00	288.86	297.45		297.73	0.001033	4.43	918.07	213.30	0.28
USACE	32219	10YR	4530.00	288.86	298.58		298.91	0.001072	4.93	1172.52	236.92	0.29
USACE	32219	25YR	6690.00	288.86	300.42		300.82	0.001075	5.58	1634.62	267.30	0.30
USACE	32219	50YR	8689.00	288.86	302.00		302.44	0.001023	5.96	2084.26	299.84	0.30
USACE	32219	100YR	11078.00	288.86	303.65		304.09	0.000939	6.19	2597.96	320.09	0.29
USACE	32219	100YRPLUS	14488.00	288.86	305.54		306.02	0.000905	6.60	3216.07	335.20	0.29
USACE	32219	200YR	13906.00	288.86	305.23		305.71	0.000909	6.54	3114.92	332.56	0.29
USACE	32219	500YR	18544.00	288.86	307.57		308.09	0.000868	7.00	3915.64	352.64	0.29
USACE	32219	SEPT2011	10576.00	288.86	303.33		303.77	0.000949	6.13	2497.98	317.78	0.29
USACE	32117	2YR	2125.00	288.71	295.71		295.98	0.001472	4.22	568.50	186.96	0.31
USACE	32117	5YR	3375.00	288.71	297.30		297.61	0.001326	4.71	895.39	227.00	0.31
USACE	32117	10YR	4530.00	288.71	298.47		298.80	0.001238	5.03	1174.37	254.44	0.30
USACE	32117	25YR	6690.00	288.71	300.34		300.69	0.001105	5.42	1681.89	286.41	0.30
USACE	32117	50YR	8689.00	288.71	301.93		302.31	0.001036	5.76	2185.56	351.21	0.29
USACE	32117	100YR	11078.00	288.71	303.59		303.97	0.000892	5.83	2788.83	371.55	0.28
USACE	32117	100YRPLUS	14488.00	288.71	305.50		305.89	0.000817	6.09	3512.83	387.84	0.27
USACE	32117	200YR	13906.00	288.71	305.19		305.58	0.000826	6.05	3394.75	385.37	0.27
USACE	32117	500YR	18544.00	288.71	307.55		307.95	0.000752	6.34	4323.08	404.42	0.27
USACE	32117	SEPT2011	10576.00	288.71	303.28		303.65	0.000911	5.80	2671.65	368.21	0.28
USACE	31971	2YR	2125.00	288.19	295.54		295.77	0.001263	4.11	674.05	250.26	0.29
USACE	31971	5YR	3375.00	288.19	297.22		297.42	0.000964	4.20	1135.47	292.05	0.26
USACE	31971	10YR	4530.00	288.19	298.42		298.62	0.000842	4.31	1504.45	324.91	0.25
USACE	31971	25YR	6690.00	288.19	300.33		300.53	0.000700	4.46	2181.96	381.38	0.24
USACE	31971	50YR	8689.00	288.19	301.95		302.15	0.000615	4.58	2850.43	448.81	0.23
USACE	31971	100YR	11078.00	288.19	303.63		303.82	0.000515	4.55	3623.52	471.10	0.21
USACE	31971	100YRPLUS	14488.00	288.19	305.55		305.75	0.000463	4.69	4554.38	496.18	0.20
USACE	31971	200YR	13906.00	288.19	305.24		305.44	0.000470	4.66	4402.14	492.96	0.21
USACE	31971	500YR	18544.00	288.19	307.61		307.82	0.000422	4.84	5611.40	529.26	0.20
USACE	31971	SEPT2011	10576.00	288.19	303.31		303.50	0.000528	4.54	3473.78	466.65	0.21
USACE	31830	2YR	2125.00	287.71	295.25		295.56	0.001998	4.95	584.06	206.40	0.36
USACE	31830	5YR	3375.00	287.71	296.99		297.27	0.001474	5.05	1019.25	305.04	0.32
USACE	31830	10YR	4530.00	287.71	298.27		298.50	0.001100	4.84	1417.70	317.95	0.29
USACE	31830	25YR	6690.00	287.71	300.23		300.44	0.000828	4.79	2077.65	356.75	0.26
USACE	31830	50YR	8689.00	287.71	301.86		302.07	0.000699	4.83	2708.67	425.64	0.24
USACE	31830	100YR	11078.00	287.71	303.56		303.76	0.000582	4.79	3464.90	459.91	0.22
USACE	31830	100YRPLUS	14488.00	287.71	305.48		305.69	0.000517	4.92	4369.04	479.82	0.22
USACE	31830	200YR	13906.00	287.71	305.17		305.38	0.000525	4.89	4221.84	474.78	0.22
USACE	31830	500YR	18544.00	287.71	307.55		307.77	0.000468	5.07	5376.24	497.13	0.21
USACE	31830	SEPT2011	10576.00	287.71	303.23		303.44	0.000598	4.78	3317.81	455.90	0.23
USACE	31654	2YR	2125.00	287.31	294.95		295.26	0.001632	4.64	560.45	165.95	0.33
USACE	31654	5YR	3375.00	287.31	296.70		297.04	0.001404	5.08	871.73	193.35	0.32
USACE	31654	10YR	4530.00	287.31	297.92		298.30	0.001396	5.58	1175.68	283.41	0.33
USACE	31654	25YR	6690.00	287.31	299.92		300.28	0.001147	5.77	1784.87	343.34	0.31
USACE	31654	50YR	8689.00	287.31	301.61		301.95	0.000927	5.70	2429.96	408.06	0.28
USACE	31654	100YR	11078.00	287.31	303.34		303.65	0.000774	5.67	3180.25	465.63	0.26
USACE	31654	100YRPLUS	14488.00	287.31	305.30		305.60	0.000671	5.74	4114.80	488.79	0.25
USACE	31654	200YR	13906.00	287.31	304.99		305.29	0.000685	5.73	3962.18	485.21	0.25
USACE	31654	500YR	18544.00	287.31	307.40		307.69	0.000586	5.81	5153.83	502.45	0.24
USACE	31654	SEPT2011	10576.00	287.31	303.01		303.33	0.000797	5.67	3028.32	460.65	0.27
USACE	31558	2YR	2125.00	287.03	294.87	290.90	295.10	0.001002	3.90	581.11	101.93	0.26
USACE	31558	5YR	3375.00	287.03	296.55	291.98	296.90	0.001169	4.88	758.46	158.89	0.30
USACE	31558	10YR	4530.00	287.03	297.66	292.84	298.13	0.001349	5.69	913.29	223.35	0.32
USACE	31558	25YR	6690.00	287.03	299.51	294.23	300.09	0.001403	6.53	1492.02	302.77	0.34
USACE	31558	50YR	8689.00	287.03	301.19	295.36	301.76	0.001250	6.75	2066.86	360.93	0.33
USACE	31558	100YR	11078.00	287.03	302.98	296.62	303.49	0.001041	6.71	2772.79	417.89	0.31
USACE	31558	100YRPLUS	14488.00	287.03	304.99	298.51	305.47	0.000895	6.77	3635.99	439.15	0.29
USACE	31558	200YR	13906.00	287.03	304.67	298.23	305.15	0.000914	6.75	3495.56	436.02	0.29
USACE	31558	500YR	18544.00	287.03	307.12	300.81	307.57	0.000776	6.82	4590.39	456.35	0.28
USACE	31558	SEPT2011	10576.00	287.03	302.64	296.35	303.16	0.001075	6.71	2631.68	413.42	0.31
USACE	31530 Siegrist Road		Bridge									

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	31498	2YR	2125.00	286.91	294.75	290.83	294.99	0.001035	3.96	577.41	161.26	0.27
USACE	31498	5YR	3375.00	286.91	296.42	291.89	296.77	0.001175	4.89	814.53	278.38	0.30
USACE	31498	10YR	4530.00	286.91	297.59	292.76	298.00	0.001223	5.43	1057.26	335.74	0.31
USACE	31498	25YR	6690.00	286.91	299.57	294.28	299.87	0.000857	5.15	2104.08	371.04	0.27
USACE	31498	50YR	8689.00	286.91	301.09	295.38	301.39	0.000764	5.28	2688.36	394.67	0.26
USACE	31498	100YR	11078.00	286.91	302.68	297.22	302.99	0.000696	5.44	3334.65	415.84	0.25
USACE	31498	100YRPLUS	14488.00	286.91	304.72	298.75	305.04	0.000623	5.61	4197.06	428.40	0.24
USACE	31498	200YR	13906.00	286.91	304.39	298.60	304.71	0.000633	5.58	4055.09	426.50	0.24
USACE	31498	500YR	18544.00	286.91	306.90	299.36	307.23	0.000569	5.82	5141.63	440.97	0.24
USACE	31498	SEPT2011	10576.00	286.91	302.38	297.21	302.69	0.000705	5.40	3209.83	413.37	0.25
USACE	31419	2YR	2125.00	286.79	294.21		294.77	0.002995	6.00	368.12	95.38	0.44
USACE	31419	5YR	3375.00	286.79	295.79		296.52	0.003032	7.08	560.63	138.80	0.46
USACE	31419	10YR	4530.00	286.79	297.04		297.78	0.002665	7.37	791.38	202.03	0.44
USACE	31419	25YR	6690.00	286.79	299.08		299.69	0.001873	7.12	1240.92	234.91	0.38
USACE	31419	50YR	8689.00	286.79	300.66		301.24	0.001520	7.03	1627.36	249.90	0.35
USACE	31419	100YR	11078.00	286.79	302.27		302.85	0.001314	7.10	2035.13	258.80	0.34
USACE	31419	100YRPLUS	14488.00	286.79	304.29		304.90	0.001152	7.27	2571.69	272.38	0.32
USACE	31419	200YR	13906.00	286.79	303.96		304.57	0.001173	7.24	2482.65	270.16	0.32
USACE	31419	500YR	18544.00	286.79	306.43		307.09	0.001036	7.51	3172.77	286.65	0.31
USACE	31419	SEPT2011	10576.00	286.79	301.97		302.55	0.001336	7.05	1958.56	257.01	0.34
USACE	31226	2YR	2125.00	286.63	293.50		294.11	0.003842	6.31	354.84	118.10	0.48
USACE	31226	5YR	3375.00	286.63	295.30		295.92	0.002916	6.69	609.01	152.83	0.44
USACE	31226	10YR	4530.00	286.63	296.64		297.27	0.002448	6.89	820.01	160.54	0.42
USACE	31226	25YR	6690.00	286.63	298.66		299.33	0.002094	7.35	1154.90	171.59	0.40
USACE	31226	50YR	8689.00	286.63	300.19		300.92	0.001939	7.75	1424.99	180.38	0.39
USACE	31226	100YR	11078.00	286.63	301.76		302.55	0.001837	8.19	1714.85	190.53	0.39
USACE	31226	100YRPLUS	14488.00	286.63	303.76		304.63	0.001691	8.61	2124.98	216.78	0.39
USACE	31226	200YR	13906.00	286.63	303.43		304.29	0.001723	8.57	2053.46	215.22	0.39
USACE	31226	500YR	18544.00	286.63	305.92		306.85	0.001499	8.84	2603.65	226.24	0.37
USACE	31226	SEPT2011	10576.00	286.63	301.47		302.25	0.001839	8.07	1660.70	188.56	0.39
USACE	31043	2YR	2125.00	285.09	293.04		293.51	0.002464	5.52	419.40	138.12	0.40
USACE	31043	5YR	3375.00	285.09	295.00		295.46	0.001844	5.77	735.15	174.82	0.36
USACE	31043	10YR	4530.00	285.09	296.42		296.87	0.001573	5.94	990.65	186.69	0.34
USACE	31043	25YR	6690.00	285.09	298.49		298.97	0.001387	6.38	1392.71	201.48	0.33
USACE	31043	50YR	8689.00	285.09	300.05		300.58	0.001320	6.78	1715.00	210.80	0.33
USACE	31043	100YR	11078.00	285.09	301.63		302.22	0.001294	7.25	2054.84	219.52	0.34
USACE	31043	100YRPLUS	14488.00	285.09	303.63		304.32	0.001301	7.92	2516.31	246.07	0.34
USACE	31043	200YR	13906.00	285.09	303.30		303.97	0.001310	7.84	2436.07	238.85	0.34
USACE	31043	500YR	18544.00	285.09	305.84		306.55	0.001160	8.13	3108.11	275.11	0.33
USACE	31043	SEPT2011	10576.00	285.09	301.34		301.92	0.001283	7.12	1992.31	217.33	0.33
USACE	30883	2YR	2125.00	284.04	292.54		293.08	0.002867	5.90	383.81	135.43	0.42
USACE	30883	5YR	3375.00	284.04	294.65		295.15	0.002015	6.04	683.11	145.55	0.37
USACE	30883	10YR	4530.00	284.04	296.07		296.59	0.001785	6.34	895.52	152.37	0.36
USACE	30883	25YR	6690.00	284.04	298.10		298.72	0.001698	7.03	1212.59	159.39	0.36
USACE	30883	50YR	8689.00	284.04	299.62		300.33	0.001698	7.63	1476.59	207.66	0.37
USACE	30883	100YR	11078.00	284.04	301.22		301.98	0.001623	8.05	1811.52	211.92	0.37
USACE	30883	100YRPLUS	14488.00	284.04	303.26		304.09	0.001512	8.47	2248.55	216.95	0.37
USACE	30883	200YR	13906.00	284.04	302.92		303.74	0.001530	8.41	2176.27	216.10	0.37
USACE	30883	500YR	18544.00	284.04	305.42		306.33	0.001425	8.92	2723.91	222.63	0.36
USACE	30883	SEPT2011	10576.00	284.04	300.93		301.68	0.001622	7.94	1750.90	211.23	0.37
USACE	30573	2YR	2125.00	282.19	292.18		292.47	0.001160	4.31	495.07	70.42	0.28
USACE	30573	5YR	3375.00	282.19	294.24		294.64	0.001217	5.19	799.34	199.18	0.30
USACE	30573	10YR	4530.00	282.19	295.65		296.13	0.001244	5.76	1099.37	233.37	0.31
USACE	30573	25YR	6690.00	282.19	297.74		298.26	0.001180	6.30	1607.52	249.94	0.31
USACE	30573	50YR	8689.00	282.19	299.29		299.87	0.001136	6.67	2001.12	256.09	0.31
USACE	30573	100YR	11078.00	282.19	300.89		301.54	0.001108	7.06	2414.09	261.99	0.31
USACE	30573	100YRPLUS	14488.00	282.19	302.91		303.68	0.001074	7.52	2951.34	269.21	0.31
USACE	30573	200YR	13906.00	282.19	302.58		303.33	0.001080	7.45	2862.52	268.08	0.31
USACE	30573	500YR	18544.00	282.19	305.05		305.96	0.001049	8.00	3536.11	279.12	0.31
USACE	30573	SEPT2011	10576.00	282.19	300.61		301.24	0.001100	6.95	2340.63	260.94	0.31
USACE	30447	2YR	2125.00	281.72	291.70		292.23	0.002496	5.87	362.46	53.54	0.40
USACE	30447	5YR	3375.00	281.72	293.65		294.40	0.002593	7.04	599.00	196.39	0.42
USACE	30447	10YR	4530.00	281.72	295.08		295.89	0.002432	7.54	912.27	233.09	0.42
USACE	30447	25YR	6690.00	281.72	297.28		298.05	0.002050	7.89	1478.36	277.95	0.40
USACE	30447	50YR	8689.00	281.72	298.98		299.69	0.001731	7.90	1958.75	289.81	0.37
USACE	30447	100YR	11078.00	281.72	300.68		301.38	0.001525	8.00	2468.08	305.20	0.35
USACE	30447	100YRPLUS	14488.00	281.72	302.79		303.52	0.001356	8.20	3127.95	318.39	0.34
USACE	30447	200YR	13906.00	281.72	302.45		303.18	0.001379	8.17	3019.45	316.25	0.34
USACE	30447	500YR	18544.00	281.72	305.00		305.78	0.001243	8.49	3848.79	335.47	0.33
USACE	30447	SEPT2011	10576.00	281.72	300.38		301.08	0.001536	7.93	2378.21	303.42	0.36
USACE	30237	2YR	2125.00	281.28	291.51	286.72	291.81	0.001247	4.39	485.75	82.18	0.29
USACE	30237	5YR	3375.00	281.28	293.49	288.18	293.92	0.001328	5.34	749.70	177.38	0.31
USACE	30237	10YR	4530.00	281.28	294.92	289.32	295.43	0.001356	5.94	1037.66	252.99	0.32
USACE	30237	25YR	6690.00	281.28	297.08	291.07	297.66	0.001312	6.61	1699.04	317.21	0.33
USACE	30237	50YR	8689.00	281.28	298.75	292.81	299.36	0.001251	7.00	2245.34	358.28	0.32
USACE	30237	100YR	11078.00	281.28	300.45	294.62	301.09	0.001212	7.42	2821.81	403.58	0.33
USACE	30237	100YRPLUS	14488.00	281.28	302.58	296.45	303.25	0.001169	7.92	3570.51	447.06	0.33

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	30237	200YR	13906.00	281.28	302.23	296.54	302.90	0.001176	7.84	3447.72	444.10	0.33
USACE	30237	500YR	18544.00	281.28	304.80	297.97	305.52	0.001136	8.43	4375.85	463.68	0.33
USACE	30237	SEPT2011	10576.00	281.28	300.16	294.22	300.78	0.001201	7.30	2721.21	392.96	0.32
USACE	30092	2YR	2125.00	281.20	291.38	285.99	291.63	0.001003	3.95	538.63	79.03	0.26
USACE	30092	5YR	3375.00	281.20	293.39	287.42	293.73	0.001040	4.74	869.84	221.65	0.27
USACE	30092	10YR	4530.00	281.20	294.85	288.52	295.22	0.001001	5.12	1216.33	269.40	0.28
USACE	30092	25YR	6690.00	281.20	297.04	290.33	297.45	0.000958	5.67	1785.95	368.27	0.28
USACE	30092	50YR	8689.00	281.20	298.70	291.74	299.16	0.000943	6.10	2273.47	406.90	0.28
USACE	30092	100YR	11078.00	281.20	300.39	294.02	300.89	0.000940	6.55	2816.15	440.06	0.29
USACE	30092	100YRPLUS	14488.00	281.20	302.51	295.45	303.07	0.000923	7.05	3554.89	469.37	0.29
USACE	30092	200YR	13906.00	281.20	302.17	295.23	302.71	0.000927	6.97	3432.45	465.92	0.29
USACE	30092	500YR	18544.00	281.20	304.74	296.58	305.34	0.000904	7.53	4363.31	523.28	0.29
USACE	30092	SEPT2011	10576.00	281.20	300.10	293.72	300.59	0.000930	6.44	2719.53	435.86	0.28
USACE	29941	2YR	2125.00	281.01	291.18	286.02	291.46	0.001114	4.25	501.40	95.02	0.27
USACE	29941	5YR	3375.00	281.01	293.15	287.48	293.55	0.001207	5.16	809.73	197.69	0.30
USACE	29941	10YR	4530.00	281.01	294.57	288.68	295.05	0.001238	5.74	1110.90	224.73	0.31
USACE	29941	25YR	6690.00	281.01	296.70	290.47	297.27	0.001273	6.56	1636.49	278.37	0.32
USACE	29941	50YR	8689.00	281.01	298.33	291.84	298.98	0.001301	7.17	2101.72	332.10	0.33
USACE	29941	100YR	11078.00	281.01	300.02	294.04	300.71	0.001274	7.63	2738.76	367.42	0.33
USACE	29941	100YRPLUS	14488.00	281.01	302.16	295.72	302.89	0.001232	8.14	3549.65	397.83	0.33
USACE	29941	200YR	13906.00	281.01	301.81	295.47	302.54	0.001241	8.07	3413.04	390.23	0.33
USACE	29941	500YR	18544.00	281.01	304.42	297.13	305.18	0.001170	8.57	4460.58	434.39	0.33
USACE	29941	SEPT2011	10576.00	281.01	299.74	293.77	300.41	0.001262	7.51	2633.64	364.30	0.33
USACE	29605	2YR	2125.00	281.09	291.00		291.16	0.000592	3.18	673.87	109.13	0.20
USACE	29605	5YR	3375.00	281.09	292.97		293.21	0.000666	3.93	972.66	165.93	0.22
USACE	29605	10YR	4530.00	281.09	294.38		294.68	0.000726	4.50	1215.78	181.37	0.24
USACE	29605	25YR	6690.00	281.09	296.48		296.89	0.000823	5.38	1616.28	200.59	0.26
USACE	29605	50YR	8689.00	281.09	298.07		298.58	0.000895	6.06	1944.41	211.98	0.28
USACE	29605	100YR	11078.00	281.09	299.71		300.33	0.000967	6.75	2300.30	221.83	0.29
USACE	29605	100YRPLUS	14488.00	281.09	301.75		302.52	0.001046	7.60	2764.09	231.56	0.31
USACE	29605	200YR	13906.00	281.09	301.42		302.17	0.001034	7.46	2688.63	229.97	0.31
USACE	29605	500YR	18544.00	281.09	303.86		304.78	0.001125	8.47	3262.68	242.43	0.33
USACE	29605	SEPT2011	10576.00	281.09	299.44		300.03	0.000941	6.59	2240.29	220.36	0.29
USACE	29205	2YR	2125.00	280.92	290.67		290.88	0.000830	3.67	581.11	88.76	0.24
USACE	29205	5YR	3375.00	280.92	292.58		292.89	0.000928	4.53	809.15	130.26	0.26
USACE	29205	10YR	4530.00	280.92	293.94		294.34	0.000999	5.14	992.92	138.27	0.28
USACE	29205	25YR	6690.00	280.92	295.96		296.50	0.001124	6.12	1282.46	148.80	0.30
USACE	29205	50YR	8689.00	280.92	297.48		298.15	0.001230	6.90	1515.28	158.32	0.32
USACE	29205	100YR	11078.00	280.92	299.04		299.86	0.001342	7.72	1770.90	169.80	0.34
USACE	29205	100YRPLUS	14488.00	280.92	300.98		302.00	0.001466	8.72	2117.20	186.54	0.36
USACE	29205	200YR	13906.00	280.92	300.67		301.66	0.001450	8.57	2058.99	184.33	0.36
USACE	29205	500YR	18544.00	280.92	303.01		304.23	0.001556	9.66	2510.73	200.99	0.38
USACE	29205	SEPT2011	10576.00	280.92	298.79		299.57	0.001299	7.52	1729.52	167.98	0.34
USACE	28854	2YR	2125.00	280.88	290.21		290.51	0.001281	4.37	495.67	93.97	0.29
USACE	28854	5YR	3375.00	280.88	292.05		292.48	0.001392	5.33	718.25	145.98	0.32
USACE	28854	10YR	4530.00	280.88	293.39		293.91	0.001443	5.97	927.50	165.14	0.33
USACE	28854	25YR	6690.00	280.88	295.38		296.03	0.001515	6.89	1277.38	186.48	0.35
USACE	28854	50YR	8689.00	280.88	296.90		297.66	0.001555	7.56	1572.92	200.77	0.36
USACE	28854	100YR	11078.00	280.88	298.48		299.34	0.001581	8.20	1901.82	213.57	0.37
USACE	28854	100YRPLUS	14488.00	280.88	300.47		301.45	0.001593	8.94	2340.64	227.20	0.38
USACE	28854	200YR	13906.00	280.88	300.16		301.11	0.001590	8.82	2268.66	225.26	0.38
USACE	28854	500YR	18544.00	280.88	302.54		303.64	0.001602	9.67	2821.95	239.36	0.39
USACE	28854	SEPT2011	10576.00	280.88	298.25		299.07	0.001540	8.01	1851.67	211.78	0.37
USACE	28452	2YR	2132.00	280.67	289.80		290.04	0.000989	3.96	555.64	93.67	0.26
USACE	28452	5YR	3382.00	280.67	291.57		291.95	0.001170	4.99	747.87	137.13	0.29
USACE	28452	10YR	4540.00	280.67	292.86		293.35	0.001295	5.74	967.52	179.68	0.32
USACE	28452	25YR	6704.00	280.67	294.77		295.43	0.001457	6.82	1324.40	194.66	0.34
USACE	28452	50YR	8710.00	280.67	296.21		297.02	0.001584	7.66	1611.98	204.65	0.37
USACE	28452	100YR	11107.00	280.67	297.68		298.67	0.001723	8.55	1921.00	218.16	0.39
USACE	28452	100YRPLUS	14526.00	280.67	299.50		300.73	0.001896	9.68	2339.64	244.13	0.41
USACE	28452	200YR	13945.00	280.67	299.21		300.40	0.001867	9.49	2269.91	239.19	0.41
USACE	28452	500YR	18595.00	280.67	301.40		302.88	0.002042	10.78	2834.72	274.59	0.44
USACE	28452	SEPT2011	10671.00	280.67	297.47		298.41	0.001674	8.35	1875.90	213.81	0.38
USACE	28138	2YR	2132.00	280.13	289.52		289.75	0.000873	3.86	554.06	74.74	0.24
USACE	28138	5YR	3382.00	280.13	291.22		291.60	0.001102	4.95	775.37	165.76	0.28
USACE	28138	10YR	4540.00	280.13	292.46		292.95	0.001248	5.72	990.09	181.13	0.31
USACE	28138	25YR	6704.00	280.13	294.30		294.97	0.001464	6.88	1340.34	201.24	0.34
USACE	28138	50YR	8710.00	280.13	295.67		296.51	0.001639	7.80	1629.85	220.71	0.37
USACE	28138	100YR	11107.00	280.13	297.11		298.12	0.001784	8.69	1959.18	235.11	0.39
USACE	28138	100YRPLUS	14526.00	280.13	298.92		300.13	0.001929	9.73	2399.54	250.37	0.41
USACE	28138	200YR	13945.00	280.13	298.63		299.81	0.001909	9.57	2327.62	249.03	0.41
USACE	28138	500YR	18595.00	280.13	300.81		302.22	0.002034	10.71	2881.52	257.98	0.43
USACE	28138	SEPT2011	10671.00	280.13	296.91		297.88	0.001740	8.50	1911.88	233.78	0.38
USACE	27842	2YR	2132.00	279.79	289.21		289.46	0.001040	4.01	532.49	78.85	0.26
USACE	27842	5YR	3382.00	279.79	290.84		291.24	0.001295	5.13	712.12	126.67	0.30
USACE	27842	10YR	4540.00	279.79	292.00		292.54	0.001484	5.97	878.84	156.73	0.33
USACE	27842	25YR	6704.00	279.79	293.73		294.49	0.001754	7.22	1188.42	196.31	0.37

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	27842	50YR	8710.00	279.79	295.04		295.97	0.001934	8.13	1450.98	204.23	0.40
USACE	27842	100YR	11107.00	279.79	296.42		297.53	0.002095	9.05	1736.34	211.49	0.42
USACE	27842	100YRPLUS	14526.00	279.79	298.14		299.49	0.002266	10.15	2108.89	221.22	0.45
USACE	27842	200YR	13945.00	279.79	297.87		299.18	0.002238	9.97	2048.99	219.77	0.44
USACE	27842	500YR	18595.00	279.79	299.94		301.54	0.002415	11.24	2514.75	230.23	0.47
USACE	27842	SEPT2011	10671.00	279.79	296.24		297.31	0.002033	8.84	1699.16	210.51	0.41
USACE	27549	2YR	2132.00	279.13	288.78	284.21	289.10	0.001415	4.58	468.28	90.91	0.31
USACE	27549	5YR	3382.00	279.13	290.27	285.72	290.79	0.001772	5.83	670.54	163.93	0.35
USACE	27549	10YR	4540.00	279.13	291.39	286.89	292.03	0.001960	6.66	863.65	182.16	0.38
USACE	27549	25YR	6704.00	279.13	293.07	288.61	293.91	0.002190	7.84	1185.13	199.27	0.41
USACE	27549	50YR	8710.00	279.13	294.34	290.59	295.35	0.002347	8.72	1445.40	208.33	0.43
USACE	27549	100YR	11107.00	279.13	295.73	291.98	296.88	0.002424	9.51	1741.27	217.28	0.45
USACE	27549	100YRPLUS	14526.00	279.13	297.47	293.46	298.79	0.002499	10.44	2131.67	232.82	0.47
USACE	27549	200YR	13945.00	279.13	297.20	293.24	298.49	0.002483	10.28	2068.86	230.31	0.46
USACE	27549	500YR	18595.00	279.13	299.30	294.97	300.79	0.002547	11.34	2569.64	246.46	0.48
USACE	27549	SEPT2011	10671.00	279.13	295.58	291.77	296.67	0.002350	9.29	1707.26	216.31	0.44
USACE	27201	2YR	2132.00	278.61	288.53		288.72	0.000723	3.49	621.24	99.00	0.22
USACE	27201	5YR	3382.00	278.61	289.96		290.28	0.000996	4.59	782.19	129.03	0.27
USACE	27201	10YR	4540.00	278.61	291.02		291.45	0.001184	5.39	925.04	139.01	0.30
USACE	27201	25YR	6704.00	278.61	292.61		293.24	0.001460	6.60	1153.32	147.06	0.34
USACE	27201	50YR	8710.00	278.61	293.80		294.61	0.001680	7.55	1332.36	153.02	0.37
USACE	27201	100YR	11107.00	278.61	295.11		296.11	0.001871	8.50	1536.57	160.81	0.40
USACE	27201	100YRPLUS	14526.00	278.61	296.73		298.00	0.002087	9.65	1806.97	171.96	0.43
USACE	27201	200YR	13945.00	278.61	296.48		297.70	0.002047	9.46	1764.21	169.97	0.42
USACE	27201	500YR	18595.00	278.61	298.40		299.96	0.002304	10.84	2105.49	185.64	0.46
USACE	27201	SEPT2011	10671.00	278.61	294.98		295.93	0.001788	8.26	1516.58	160.06	0.39
USACE	26867	2YR	2132.00	277.58	288.32		288.49	0.000630	3.32	643.25	92.94	0.21
USACE	26867	5YR	3382.00	277.58	289.66		289.95	0.000932	4.37	848.76	188.29	0.26
USACE	26867	10YR	4540.00	277.58	290.68		291.06	0.001076	5.05	1055.55	213.26	0.28
USACE	26867	25YR	6704.00	277.58	292.27		292.75	0.001225	5.94	1413.39	237.64	0.31
USACE	26867	50YR	8710.00	277.58	293.48		294.05	0.001316	6.58	1715.38	257.84	0.32
USACE	26867	100YR	11107.00	277.58	294.85		295.47	0.001332	7.08	2080.34	274.65	0.33
USACE	26867	100YRPLUS	14526.00	277.58	296.59		297.28	0.001325	7.63	2574.89	294.52	0.34
USACE	26867	200YR	13945.00	277.58	296.32		297.00	0.001321	7.53	2496.21	291.17	0.34
USACE	26867	500YR	18595.00	277.58	298.40		299.16	0.001312	8.15	3126.30	315.10	0.34
USACE	26867	SEPT2011	10671.00	277.58	294.73		295.33	0.001280	6.90	2047.23	273.45	0.32
USACE	26526	2YR	2132.00	277.26	288.13	281.58	288.28	0.000551	3.15	719.18	330.51	0.20
USACE	26526	5YR	3382.00	277.26	289.49	282.90	289.66	0.000594	3.63	1331.09	427.47	0.21
USACE	26526	10YR	4540.00	277.26	290.57	283.95	290.74	0.000561	3.79	1797.93	438.46	0.21
USACE	26526	25YR	6704.00	277.26	292.23	285.65	292.40	0.000515	4.01	2539.17	452.73	0.20
USACE	26526	50YR	8710.00	277.26	293.49	287.10	293.67	0.000496	4.20	3117.35	460.92	0.20
USACE	26526	100YR	11107.00	277.26	294.91	289.67	295.09	0.000468	4.36	3774.75	469.52	0.20
USACE	26526	100YRPLUS	14526.00	277.26	296.69	290.44	296.89	0.000442	4.57	4621.81	478.21	0.20
USACE	26526	200YR	13945.00	277.26	296.42	290.33	296.61	0.000444	4.53	4490.06	477.20	0.20
USACE	26526	500YR	18595.00	277.26	298.54	291.21	298.76	0.000427	4.82	5510.47	485.62	0.20
USACE	26526	SEPT2011	10671.00	277.26	294.78	289.55	294.96	0.000452	4.26	3715.40	468.77	0.20
USACE	26232	2YR	2132.00	277.07	287.75	283.13	288.04	0.001233	4.45	599.84	369.09	0.29
USACE	26232	5YR	3382.00	277.07	289.26	284.82	289.46	0.000868	4.23	1325.12	429.80	0.25
USACE	26232	10YR	4540.00	277.07	290.39	286.01	290.56	0.000726	4.18	1826.92	464.16	0.23
USACE	26232	25YR	6704.00	277.07	292.08	288.63	292.24	0.000600	4.22	2676.18	546.51	0.22
USACE	26232	50YR	8710.00	277.07	293.37	289.19	293.52	0.000536	4.28	3401.77	582.12	0.21
USACE	26232	100YR	11107.00	277.07	294.80	289.75	294.95	0.000473	4.31	4263.88	622.60	0.20
USACE	26232	100YRPLUS	14526.00	277.07	296.60	290.43	296.76	0.000423	4.40	5414.32	715.86	0.19
USACE	26232	200YR	13945.00	277.07	296.32	290.33	296.48	0.000427	4.38	5231.90	703.29	0.19
USACE	26232	500YR	18595.00	277.07	298.46	291.15	298.63	0.000384	4.51	6659.55	759.86	0.19
USACE	26232	SEPT2011	10671.00	277.07	294.67	289.65	294.82	0.000459	4.22	4188.04	613.38	0.20
USACE	25611	2YR	2132.00	276.81	287.19	281.79	287.40	0.000813	3.80	698.79	316.40	0.24
USACE	25611	5YR	3382.00	276.81	288.75	283.18	288.96	0.000750	4.11	1228.52	374.57	0.23
USACE	25611	10YR	4540.00	276.81	289.95	284.28	290.13	0.000642	4.11	1761.97	524.72	0.22
USACE	25611	25YR	6704.00	276.81	291.73	285.99	291.89	0.000526	4.12	2644.48	558.79	0.21
USACE	25611	50YR	8710.00	276.81	293.04	288.43	293.20	0.000485	4.23	3302.17	601.42	0.20
USACE	25611	100YR	11107.00	276.81	294.50	289.24	294.67	0.000443	4.32	4039.01	649.90	0.19
USACE	25611	100YRPLUS	14526.00	276.81	296.33	290.07	296.50	0.000411	4.49	4972.45	725.73	0.19
USACE	25611	200YR	13945.00	276.81	296.05	289.96	296.22	0.000413	4.45	4828.65	709.68	0.19
USACE	25611	500YR	18595.00	276.81	298.20	290.80	298.39	0.000393	4.70	5946.82	767.57	0.19
USACE	25611	SEPT2011	10671.00	276.81	294.39	289.13	294.55	0.000426	4.22	3982.04	647.61	0.19
USACE	25270	2YR	2123.00	276.63	287.05	281.09	287.17	0.000459	2.93	947.88	328.10	0.18
USACE	25270	5YR	3366.00	276.63	288.61	282.37	288.74	0.000449	3.25	1477.45	349.13	0.18
USACE	25270	10YR	4517.00	276.63	289.81	283.36	289.94	0.000431	3.45	1904.59	363.39	0.18
USACE	25270	25YR	6673.00	276.63	291.58	284.99	291.73	0.000429	3.80	2565.20	387.37	0.19
USACE	25270	50YR	8677.00	276.63	292.88	287.30	293.05	0.000441	4.12	3080.45	403.69	0.19
USACE	25270	100YR	11075.00	276.63	294.31	288.06	294.51	0.000458	4.48	3675.49	443.05	0.20
USACE	25270	100YRPLUS	14484.00	276.63	296.13	288.90	296.35	0.000458	4.82	4530.15	492.10	0.21
USACE	25270	200YR	13912.00	276.63	295.85	288.77	296.07	0.000459	4.78	4393.72	486.58	0.20
USACE	25270	500YR	18549.00	276.63	298.00	289.72	298.24	0.000456	5.16	5493.26	558.88	0.21
USACE	25270	SEPT2011	10678.00	276.63	294.22	287.95	294.40	0.000424	4.29	3633.70	429.40	0.19
USACE	25066	2YR	2123.00	276.49	286.91		287.06	0.000657	3.32	861.23	287.61	0.21

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	25066	5YR	3366.00	276.49	288.48		288.63	0.000606	3.61	1330.53	316.31	0.21
USACE	25066	10YR	4517.00	276.49	289.68		289.84	0.000565	3.78	1738.33	359.83	0.21
USACE	25066	25YR	6673.00	276.49	291.46		291.63	0.000530	4.06	2417.24	398.61	0.20
USACE	25066	50YR	8677.00	276.49	292.77		292.95	0.000525	4.32	2950.66	424.21	0.21
USACE	25066	100YR	11075.00	276.49	294.21		294.41	0.000507	4.55	3585.67	451.43	0.21
USACE	25066	100YRPLUS	14484.00	276.49	296.04		296.25	0.000493	4.84	4439.09	482.62	0.21
USACE	25066	200YR	13912.00	276.49	295.76		295.97	0.000493	4.78	4305.37	477.82	0.21
USACE	25066	500YR	18549.00	276.49	297.91		298.14	0.000490	5.17	5370.23	515.91	0.21
USACE	25066	SEPT2011	10678.00	276.49	294.12		294.31	0.000487	4.43	3544.27	449.89	0.20
USACE	24861	2YR	2123.00	276.40	286.83		286.93	0.000464	2.91	1046.74	312.91	0.18
USACE	24861	5YR	3366.00	276.40	288.40		288.51	0.000437	3.18	1560.14	334.64	0.18
USACE	24861	10YR	4517.00	276.40	289.61		289.73	0.000420	3.36	1973.44	348.64	0.18
USACE	24861	25YR	6673.00	276.40	291.39		291.53	0.000421	3.72	2614.29	369.18	0.18
USACE	24861	50YR	8677.00	276.40	292.69		292.84	0.000431	4.02	3097.32	374.60	0.19
USACE	24861	100YR	11075.00	276.40	294.13		294.31	0.000446	4.36	3649.22	396.31	0.19
USACE	24861	100YRPLUS	14484.00	276.40	295.95		296.16	0.000451	4.72	4438.94	451.39	0.20
USACE	24861	200YR	13912.00	276.40	295.67		295.87	0.000450	4.66	4313.95	448.45	0.20
USACE	24861	500YR	18549.00	276.40	297.81		298.05	0.000449	5.04	5293.68	463.43	0.20
USACE	24861	SEPT2011	10678.00	276.40	294.04		294.21	0.000426	4.24	3614.54	394.85	0.19
USACE	24474	2YR	2123.00	276.02	286.49	281.03	286.70	0.000752	3.83	645.81	238.11	0.23
USACE	24474	5YR	3366.00	276.02	288.10	282.50	288.30	0.000671	4.06	1195.34	265.00	0.22
USACE	24474	10YR	4517.00	276.02	289.32	283.71	289.52	0.000652	4.31	1531.52	298.48	0.23
USACE	24474	25YR	6673.00	276.02	291.08	285.92	291.31	0.000666	4.80	2117.39	360.49	0.23
USACE	24474	50YR	8677.00	276.02	292.38	287.04	292.63	0.000659	5.08	2614.59	393.28	0.24
USACE	24474	100YR	11075.00	276.02	293.84	288.13	294.10	0.000627	5.29	3202.71	413.23	0.23
USACE	24474	100YRPLUS	14484.00	276.02	295.68	289.06	295.95	0.000596	5.54	3985.05	440.50	0.23
USACE	24474	200YR	13912.00	276.02	295.40	288.90	295.67	0.000598	5.49	3863.06	435.53	0.23
USACE	24474	500YR	18549.00	276.02	297.55	290.00	297.85	0.000582	5.85	4848.95	481.05	0.23
USACE	24474	SEPT2011	10678.00	276.02	293.77	288.00	294.01	0.000599	5.15	3171.99	412.36	0.23
USACE	24399	2YR	2123.00	275.80	286.39	280.79	286.63	0.000788	4.00	587.49	231.32	0.24
USACE	24399	5YR	3366.00	275.80	288.02	282.27	288.23	0.000725	4.29	1166.39	290.98	0.23
USACE	24399	10YR	4517.00	275.80	289.23	283.58	289.46	0.000710	4.57	1523.56	327.44	0.24
USACE	24399	25YR	6673.00	275.80	290.99	285.34	291.26	0.000749	5.15	2232.94	440.90	0.25
USACE	24399	50YR	8677.00	275.80	292.32	286.74	292.58	0.000713	5.35	2856.56	491.67	0.25
USACE	24399	100YR	11075.00	275.80	293.80	288.35	294.06	0.000640	5.41	3617.99	531.87	0.24
USACE	24399	100YRPLUS	14484.00	275.80	295.66	289.32	295.90	0.000561	5.44	4638.99	565.54	0.23
USACE	24399	200YR	13912.00	275.80	295.38	289.15	295.62	0.000570	5.43	4480.70	561.26	0.23
USACE	24399	500YR	18549.00	275.80	297.54	289.76	297.78	0.000505	5.51	5735.11	590.53	0.22
USACE	24399	SEPT2011	10678.00	275.80	293.73	288.02	293.98	0.000613	5.27	3579.11	530.49	0.23
USACE	24369 Bridge Valley Rd		Bridge									
USACE	24340	2YR	2123.00	275.66	286.35	280.09	286.52	0.000535	3.34	690.50	225.44	0.20
USACE	24340	5YR	3366.00	275.66	287.87	281.43	288.08	0.000600	3.93	1304.20	334.69	0.22
USACE	24340	10YR	4517.00	275.66	288.95	282.49	289.21	0.000704	4.55	1633.78	402.98	0.24
USACE	24340	25YR	6673.00	275.66	290.70	284.12	290.99	0.000745	5.14	2525.92	508.37	0.25
USACE	24340	50YR	8677.00	275.66	292.13	285.51	292.43	0.000723	5.43	3305.48	570.87	0.25
USACE	24340	100YR	11075.00	275.66	293.66	286.95	293.96	0.000678	5.62	4213.54	614.40	0.25
USACE	24340	100YRPLUS	14484.00	275.66	295.51	288.63	295.81	0.000644	5.88	5403.91	679.34	0.24
USACE	24340	200YR	13912.00	275.66	295.23	288.14	295.53	0.000649	5.84	5215.35	666.98	0.24
USACE	24340	500YR	18549.00	275.66	297.38	290.27	297.69	0.000626	6.19	6792.57	775.81	0.24
USACE	24340	SEPT2011	10678.00	275.66	293.59	286.74	293.87	0.000645	5.46	4172.95	613.17	0.24
USACE	24209	2YR	2123.00	275.51	286.28	281.12	286.43	0.000779	3.19	786.62	268.24	0.22
USACE	24209	5YR	3366.00	275.51	287.80	282.90	287.97	0.000742	3.60	1280.56	348.03	0.23
USACE	24209	10YR	4517.00	275.51	288.90	284.07	289.08	0.000723	3.88	1671.21	368.73	0.23
USACE	24209	25YR	6673.00	275.51	290.64	285.76	290.86	0.000707	4.33	2430.83	513.79	0.23
USACE	24209	50YR	8677.00	275.51	292.07	286.68	292.30	0.000683	4.62	3217.36	603.80	0.23
USACE	24209	100YR	11075.00	275.51	293.62	287.56	293.83	0.000590	4.66	4212.52	674.30	0.22
USACE	24209	100YRPLUS	14484.00	275.51	295.48	288.57	295.68	0.000511	4.72	5529.54	744.61	0.21
USACE	24209	200YR	13912.00	275.51	295.20	288.46	295.40	0.000522	4.71	5319.89	736.70	0.21
USACE	24209	500YR	18549.00	275.51	297.36	289.33	297.56	0.000460	4.84	6988.04	818.93	0.20
USACE	24209	SEPT2011	10678.00	275.51	293.55	287.32	293.76	0.000564	4.54	4169.08	672.40	0.22
USACE	24017	2YR	2123.00	275.44	286.13	280.78	286.29	0.000675	3.35	779.42	359.50	0.22
USACE	24017	5YR	3366.00	275.44	287.64	282.27	287.83	0.000712	3.88	1174.80	448.29	0.23
USACE	24017	10YR	4517.00	275.44	288.86	283.25	288.96	0.000402	3.18	2279.59	534.39	0.18
USACE	24017	25YR	6673.00	275.44	290.62	285.51	290.73	0.000380	3.44	3279.92	596.45	0.18
USACE	24017	50YR	8677.00	275.44	292.07	286.67	292.18	0.000342	3.52	4177.06	642.77	0.17
USACE	24017	100YR	11075.00	275.44	293.61	287.52	293.72	0.000312	3.61	5199.95	683.53	0.16
USACE	24017	100YRPLUS	14484.00	275.44	295.47	288.27	295.59	0.000293	3.78	6518.42	738.14	0.16
USACE	24017	200YR	13912.00	275.44	295.19	288.27	295.30	0.000294	3.74	6311.92	728.05	0.16
USACE	24017	500YR	18549.00	275.44	297.35	288.53	297.48	0.000285	4.00	7960.91	800.12	0.16
USACE	24017	SEPT2011	10678.00	275.44	293.55	287.40	293.65	0.000297	3.51	5156.30	681.94	0.16
USACE	23791	2YR	2123.00	275.33	286.00	279.97	286.15	0.000548	3.25	864.63	254.54	0.20
USACE	23791	5YR	3366.00	275.33	287.49	281.40	287.68	0.000641	3.91	1277.88	331.27	0.22
USACE	23791	10YR	4517.00	275.33	288.61	282.52	288.83	0.000691	4.36	1791.64	556.91	0.23
USACE	23791	25YR	6673.00	275.33	290.46	285.38	290.63	0.000523	4.20	2904.29	645.15	0.21
USACE	23791	50YR	8677.00	275.33	291.95	286.35	292.09	0.000431	4.10	3914.31	719.93	0.19
USACE	23791	100YR	11075.00	275.33	293.53	287.21	293.65	0.000344	3.93	5071.32	759.28	0.17
USACE	23791	100YRPLUS	14484.00	275.33	295.41	287.43	295.52	0.000287	3.86	6484.08	825.52	0.16

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	23791	200YR	13912.00	275.33	295.13	287.43	295.24	0.000292	3.85	6269.89	817.94	0.16
USACE	23791	500YR	18549.00	275.33	297.30	289.81	297.41	0.000257	3.90	7915.63	868.86	0.15
USACE	23791	SEPT2011	10678.00	275.33	293.47	287.05	293.58	0.000328	3.82	5026.50	757.16	0.17
USACE	23561	2YR	2123.00	275.23	285.94	279.39	286.03	0.000358	2.66	1104.95	376.48	0.16
USACE	23561	5YR	3366.00	275.23	287.44	280.69	287.55	0.000377	3.04	1758.84	647.18	0.17
USACE	23561	10YR	4517.00	275.23	288.59	281.68	288.69	0.000330	3.06	2572.62	675.95	0.16
USACE	23561	25YR	6673.00	275.23	290.44	283.28	290.52	0.000255	2.98	3850.88	705.54	0.15
USACE	23561	50YR	8677.00	275.23	291.93	285.81	292.00	0.000218	2.96	4916.09	723.70	0.14
USACE	23561	100YR	11075.00	275.23	293.51	286.65	293.58	0.000191	2.97	6063.94	733.26	0.13
USACE	23561	100YRPLUS	14484.00	275.23	295.39	287.76	295.46	0.000176	3.06	7452.37	743.42	0.13
USACE	23561	200YR	13912.00	275.23	295.10	287.66	295.18	0.000177	3.04	7241.80	741.75	0.13
USACE	23561	500YR	18549.00	275.23	297.27	288.61	297.36	0.000170	3.21	8865.99	756.13	0.13
USACE	23561	SEPT2011	10678.00	275.23	293.45	286.46	293.51	0.000182	2.88	6020.61	732.94	0.13
USACE	23311	2YR	2123.00	275.12	285.83	279.98	285.93	0.000470	2.91	1171.30	528.70	0.18
USACE	23311	5YR	3366.00	275.12	287.37	281.45	287.45	0.000352	2.83	2152.10	675.69	0.16
USACE	23311	10YR	4517.00	275.12	288.54	282.59	288.60	0.000273	2.69	2949.61	683.57	0.14
USACE	23311	25YR	6673.00	275.12	290.40	285.58	290.46	0.000210	2.61	4232.19	696.56	0.13
USACE	23311	50YR	8677.00	275.12	291.89	286.13	291.95	0.000183	2.63	5282.49	711.87	0.12
USACE	23311	100YR	11075.00	275.12	293.47	286.80	293.53	0.000164	2.68	6415.00	723.07	0.12
USACE	23311	100YRPLUS	14484.00	275.12	295.36	287.46	295.42	0.000154	2.79	7786.62	734.03	0.12
USACE	23311	200YR	13912.00	275.12	295.07	287.39	295.13	0.000155	2.77	7578.68	732.35	0.12
USACE	23311	500YR	18549.00	275.12	297.24	287.97	297.31	0.000151	2.96	9184.63	749.01	0.12
USACE	23311	SEPT2011	10678.00	275.12	293.42	286.72	293.47	0.000156	2.60	6373.51	722.69	0.12
USACE	23046	2YR	2123.00	275.12	285.70	280.31	285.80	0.000489	2.95	1147.68	527.95	0.18
USACE	23046	5YR	3366.00	275.12	287.28	281.70	287.35	0.000345	2.79	2144.05	649.53	0.16
USACE	23046	10YR	4517.00	275.12	288.47	282.78	288.53	0.000269	2.67	2925.76	659.76	0.14
USACE	23046	25YR	6673.00	275.12	290.35	285.12	290.40	0.000209	2.62	4171.41	670.12	0.13
USACE	23046	50YR	8677.00	275.12	291.85	286.09	291.90	0.000184	2.64	5185.08	682.99	0.12
USACE	23046	100YR	11075.00	275.12	293.43	286.60	293.49	0.000167	2.70	6278.76	698.76	0.12
USACE	23046	100YRPLUS	14484.00	275.12	295.31	287.31	295.38	0.000159	2.84	7610.37	715.45	0.12
USACE	23046	200YR	13912.00	275.12	295.03	287.22	295.09	0.000159	2.81	7407.78	713.15	0.12
USACE	23046	500YR	18549.00	275.12	297.20	287.82	297.27	0.000158	3.03	8974.59	729.15	0.12
USACE	23046	SEPT2011	10678.00	275.12	293.37	286.51	293.43	0.000158	2.63	6240.36	698.29	0.12
USACE	22799	2YR	2123.00	275.11	285.52	280.71	285.66	0.000696	3.42	1003.91	435.31	0.22
USACE	22799	5YR	3366.00	275.11	287.15	282.24	287.25	0.000486	3.25	1793.95	526.25	0.19
USACE	22799	10YR	4517.00	275.11	288.37	284.67	288.45	0.000387	3.14	2449.56	555.70	0.17
USACE	22799	25YR	6673.00	275.11	290.26	285.69	290.34	0.000302	3.10	3554.52	605.24	0.16
USACE	22799	50YR	8677.00	275.11	291.78	286.15	291.85	0.000253	3.06	4557.50	691.80	0.14
USACE	22799	100YR	11075.00	275.11	293.37	286.80	293.44	0.000219	3.07	5686.55	751.91	0.14
USACE	22799	100YRPLUS	14484.00	275.11	295.26	287.47	295.33	0.000199	3.15	7065.27	792.40	0.13
USACE	22799	200YR	13912.00	275.11	294.97	287.38	295.05	0.000200	3.13	6856.44	788.02	0.13
USACE	22799	500YR	18549.00	275.11	297.15	288.03	297.23	0.000190	3.30	8482.58	834.99	0.13
USACE	22799	SEPT2011	10678.00	275.11	293.31	286.73	293.38	0.000208	2.98	5649.30	749.90	0.13
USACE	22503	2YR	2123.00	275.09	285.36		285.47	0.000543	3.02	1066.85	414.22	0.19
USACE	22503	5YR	3366.00	275.09	287.03		287.12	0.000401	2.96	1786.70	439.29	0.17
USACE	22503	10YR	4517.00	275.09	288.26		288.35	0.000350	3.00	2331.00	446.51	0.16
USACE	22503	25YR	6673.00	275.09	290.16		290.25	0.000309	3.15	3187.47	454.66	0.16
USACE	22503	50YR	8677.00	275.09	291.67		291.77	0.000290	3.30	3876.91	459.06	0.16
USACE	22503	100YR	11075.00	275.09	293.26		293.36	0.000279	3.48	4607.89	462.49	0.16
USACE	22503	100YRPLUS	14484.00	275.09	295.13		295.26	0.000279	3.75	5511.36	534.53	0.16
USACE	22503	200YR	13912.00	275.09	294.85		294.98	0.000278	3.71	5361.87	519.35	0.16
USACE	22503	500YR	18549.00	275.09	297.01		297.16	0.000281	4.03	6590.70	630.99	0.16
USACE	22503	SEPT2011	10678.00	275.09	293.21		293.31	0.000263	3.37	4587.07	462.40	0.15
USACE	22151	2YR	2123.00	275.09	284.91		285.18	0.001219	4.12	514.96	77.85	0.28
USACE	22151	5YR	3366.00	275.09	286.39		286.83	0.001692	5.31	633.84	83.36	0.34
USACE	22151	10YR	4517.00	275.09	287.44		288.05	0.001995	6.26	724.56	90.51	0.38
USACE	22151	25YR	6673.00	275.09	288.98		289.92	0.002498	7.81	885.43	130.85	0.43
USACE	22151	50YR	8677.00	275.09	290.19		291.41	0.002823	8.96	1116.16	223.81	0.47
USACE	22151	100YR	11075.00	275.09	291.54		292.99	0.002964	9.89	1457.28	266.84	0.49
USACE	22151	100YRPLUS	14484.00	275.09	293.36		294.89	0.002797	10.51	2042.73	412.36	0.49
USACE	22151	200YR	13912.00	275.09	293.07		294.60	0.002842	10.45	1931.69	363.07	0.49
USACE	22151	500YR	18549.00	275.09	295.60		296.83	0.002127	10.08	3084.98	506.26	0.43
USACE	22151	SEPT2011	10678.00	275.09	291.66		292.97	0.002654	9.42	1488.88	268.33	0.46
USACE	21843	2YR	2123.00	275.06	284.83	278.94	284.93	0.000401	2.62	969.96	234.01	0.17
USACE	21843	5YR	3366.00	275.06	286.34	280.08	286.49	0.000481	3.24	1334.14	311.51	0.19
USACE	21843	10YR	4517.00	275.06	287.46	280.98	287.64	0.000515	3.63	1739.56	353.13	0.20
USACE	21843	25YR	6673.00	275.06	289.17	282.51	289.39	0.000554	4.18	2341.55	458.82	0.21
USACE	21843	50YR	8677.00	275.06	290.55	283.70	290.79	0.000562	4.53	2892.42	518.35	0.22
USACE	21843	100YR	11075.00	275.06	292.05	285.00	292.30	0.000551	4.81	3531.85	549.19	0.22
USACE	21843	100YRPLUS	14484.00	275.06	293.92	286.12	294.19	0.000539	5.15	4363.51	629.05	0.22
USACE	21843	200YR	13912.00	275.06	293.63	285.84	293.90	0.000539	5.09	4233.75	620.06	0.22
USACE	21843	500YR	18549.00	275.06	295.96	287.58	296.27	0.000522	5.48	5346.00	709.38	0.22
USACE	21843	SEPT2011	10678.00	275.06	292.12	284.86	292.35	0.000501	4.60	3561.05	551.61	0.21
USACE	21510	2YR	2015.00	275.04	284.65		284.77	0.000546	3.02	999.63	339.24	0.19
USACE	21510	5YR	3176.00	275.04	286.18		286.32	0.000531	3.37	1556.79	395.25	0.20
USACE	21510	10YR	4253.00	275.04	287.31		287.45	0.000524	3.61	2032.28	448.53	0.20
USACE	21510	25YR	6298.00	275.04	289.04		289.19	0.000515	3.98	2909.63	564.27	0.20

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	21510	50YR	8226.00	275.04	290.44		290.59	0.000470	4.09	3723.92	595.12	0.20
USACE	21510	100YR	10547.00	275.04	291.97		292.11	0.000426	4.19	4649.31	617.65	0.19
USACE	21510	100YRPLUS	13793.00	275.04	293.86		294.00	0.000385	4.31	5840.03	640.50	0.19
USACE	21510	200YR	13272.00	275.04	293.57		293.71	0.000390	4.29	5655.39	637.41	0.19
USACE	21510	500YR	17674.00	275.04	295.93		296.08	0.000347	4.42	7190.50	659.82	0.18
USACE	21510	SEPT2011	10642.00	275.04	292.03		292.17	0.000424	4.19	4686.09	618.39	0.19
USACE	20967	2YR	2015.00	274.99	284.47		284.53	0.000341	2.46	1359.71	367.95	0.15
USACE	20967	5YR	3176.00	274.99	285.99		286.07	0.000371	2.89	1956.12	462.55	0.17
USACE	20967	10YR	4253.00	274.99	287.12		287.21	0.000369	3.11	2539.92	545.39	0.17
USACE	20967	25YR	6298.00	274.99	288.87		288.96	0.000331	3.26	3521.61	572.42	0.16
USACE	20967	50YR	8226.00	274.99	290.29		290.37	0.000309	3.39	4342.63	587.41	0.16
USACE	20967	100YR	10547.00	274.99	291.82		291.91	0.000290	3.53	5254.14	600.94	0.16
USACE	20967	100YRPLUS	13793.00	274.99	293.72		293.82	0.000274	3.70	6409.37	614.94	0.16
USACE	20967	200YR	13272.00	274.99	293.43		293.53	0.000276	3.67	6231.31	612.61	0.16
USACE	20967	500YR	17674.00	274.99	295.80		295.91	0.000258	3.88	7707.15	630.70	0.16
USACE	20967	SEPT2011	10642.00	274.99	291.88		291.97	0.000289	3.53	5290.15	601.32	0.16
USACE	20444	2YR	2015.00	274.96	284.32	279.53	284.37	0.000275	2.15	1627.27	445.21	0.14
USACE	20444	5YR	3176.00	274.96	285.85	281.42	285.90	0.000262	2.37	2331.65	474.87	0.14
USACE	20444	10YR	4253.00	274.96	286.99	282.04	287.04	0.000258	2.55	2879.74	488.40	0.14
USACE	20444	25YR	6298.00	274.96	288.74	282.78	288.80	0.000263	2.86	3766.30	528.01	0.15
USACE	20444	50YR	8226.00	274.96	290.15	283.41	290.23	0.000265	3.09	4529.27	550.43	0.15
USACE	20444	100YR	10547.00	274.96	291.68	283.95	291.77	0.000264	3.33	5390.57	572.07	0.15
USACE	20444	100YRPLUS	13793.00	274.96	293.59	284.62	293.68	0.000264	3.60	6505.44	600.85	0.16
USACE	20444	200YR	13272.00	274.96	293.30	284.53	293.39	0.000264	3.56	6331.79	596.39	0.15
USACE	20444	500YR	17674.00	274.96	295.67	285.34	295.78	0.000268	3.93	7801.00	780.22	0.16
USACE	20444	SEPT2011	10642.00	274.96	291.74	283.95	291.83	0.000264	3.33	5424.91	572.88	0.15
USACE	19986	2YR	2015.00	274.92	284.16		284.23	0.000323	2.39	1250.15	326.77	0.15
USACE	19986	5YR	3176.00	274.92	285.68		285.76	0.000340	2.76	1771.56	360.49	0.16
USACE	19986	10YR	4253.00	274.92	286.80		286.90	0.000352	3.03	2189.82	380.65	0.17
USACE	19986	25YR	6298.00	274.92	288.54		288.65	0.000376	3.48	2872.37	408.81	0.18
USACE	19986	50YR	8226.00	274.92	289.94		290.07	0.000389	3.80	3462.97	432.48	0.18
USACE	19986	100YR	10547.00	274.92	291.47		291.62	0.000388	4.08	4138.91	450.80	0.19
USACE	19986	100YRPLUS	13793.00	274.92	293.36		293.53	0.000387	4.41	5015.40	475.30	0.19
USACE	19986	200YR	13272.00	274.92	293.07		293.24	0.000387	4.36	4878.61	471.68	0.19
USACE	19986	500YR	17674.00	274.92	295.44		295.63	0.000378	4.71	6030.23	502.02	0.19
USACE	19986	SEPT2011	10642.00	274.92	291.53		291.68	0.000388	4.09	4165.89	451.51	0.19
USACE	19596	2YR	2015.00	274.90	284.02		284.10	0.000325	2.42	1139.91	298.19	0.15
USACE	19596	5YR	3176.00	274.90	285.52		285.62	0.000362	2.87	1616.66	333.03	0.17
USACE	19596	10YR	4253.00	274.90	286.63		286.75	0.000382	3.19	1997.25	348.32	0.17
USACE	19596	25YR	6298.00	274.90	288.35		288.49	0.000416	3.68	2610.60	367.93	0.19
USACE	19596	50YR	8226.00	274.90	289.74		289.91	0.000434	4.04	3132.75	383.33	0.19
USACE	19596	100YR	10547.00	274.90	291.25		291.45	0.000444	4.39	3727.36	400.01	0.20
USACE	19596	100YRPLUS	13793.00	274.90	293.14		293.36	0.000452	4.79	4503.28	423.81	0.21
USACE	19596	200YR	13272.00	274.90	292.85		293.07	0.000451	4.73	4382.04	420.22	0.20
USACE	19596	500YR	17674.00	274.90	295.21		295.46	0.000449	5.16	5406.99	449.43	0.21
USACE	19596	SEPT2011	10642.00	274.90	291.31		291.51	0.000444	4.40	3751.18	400.71	0.20
USACE	19201	2YR	2015.00	274.87	283.75	279.66	283.90	0.000776	3.46	829.84	226.24	0.23
USACE	19201	5YR	3176.00	274.87	285.21	281.22	285.40	0.000830	4.06	1184.24	258.45	0.25
USACE	19201	10YR	4253.00	274.87	286.30	282.18	286.52	0.000865	4.49	1476.84	279.67	0.26
USACE	19201	25YR	6298.00	274.87	287.97	283.35	288.25	0.000908	5.13	1966.57	304.05	0.27
USACE	19201	50YR	8226.00	274.87	289.34	284.16	289.65	0.000928	5.60	2395.29	324.66	0.28
USACE	19201	100YR	10547.00	274.87	290.83	285.03	291.19	0.000932	6.05	2899.03	350.31	0.28
USACE	19201	100YRPLUS	13793.00	274.87	292.69	286.06	293.10	0.000933	6.58	3585.73	389.01	0.29
USACE	19201	200YR	13272.00	274.87	292.41	285.89	292.80	0.000934	6.50	3475.88	382.62	0.29
USACE	19201	500YR	17674.00	274.87	294.75	287.22	295.19	0.000923	7.10	4447.30	498.93	0.30
USACE	19201	SEPT2011	10642.00	274.87	290.89	285.07	291.25	0.000933	6.07	2919.56	351.70	0.29
USACE	18906	2YR	2015.00	274.86	283.52		283.67	0.000783	3.49	850.08	254.16	0.23
USACE	18906	5YR	3176.00	274.86	284.98		285.16	0.000788	3.97	1247.35	290.80	0.24
USACE	18906	10YR	4253.00	274.86	286.08		286.27	0.000792	4.32	1578.34	316.86	0.25
USACE	18906	25YR	6298.00	274.86	287.76		287.98	0.000792	4.81	2138.91	346.46	0.25
USACE	18906	50YR	8226.00	274.86	289.14		289.38	0.000772	5.13	2629.59	363.47	0.25
USACE	18906	100YR	10547.00	274.86	290.65		290.92	0.000746	5.43	3192.92	382.27	0.25
USACE	18906	100YRPLUS	13793.00	274.86	292.54		292.83	0.000717	5.79	3934.08	405.16	0.25
USACE	18906	200YR	13272.00	274.86	292.25		292.53	0.000721	5.73	3818.19	401.70	0.25
USACE	18906	500YR	17674.00	274.86	294.61		294.93	0.000679	6.11	4803.31	431.46	0.25
USACE	18906	SEPT2011	10642.00	274.86	290.71		290.98	0.000746	5.45	3215.51	383.34	0.25
USACE	18586	2YR	2015.00	274.84	283.17		283.38	0.001014	3.84	711.32	181.07	0.26
USACE	18586	5YR	3176.00	274.84	284.55		284.84	0.001183	4.71	967.03	191.69	0.29
USACE	18586	10YR	4253.00	274.84	285.56		285.93	0.001326	5.39	1168.24	208.55	0.32
USACE	18586	25YR	6298.00	274.84	287.11		287.61	0.001521	6.42	1509.46	228.67	0.35
USACE	18586	50YR	8226.00	274.84	288.40		289.00	0.001613	7.14	1813.45	242.82	0.37
USACE	18586	100YR	10547.00	274.84	289.84		290.53	0.001653	7.80	2175.56	259.94	0.38
USACE	18586	100YRPLUS	13793.00	274.84	291.64		292.43	0.001675	8.54	2663.71	283.74	0.39
USACE	18586	200YR	13272.00	274.84	291.36		292.14	0.001672	8.43	2586.29	279.62	0.39
USACE	18586	500YR	17674.00	274.84	293.65		294.54	0.001644	9.20	3269.76	319.24	0.39
USACE	18586	SEPT2011	10642.00	274.84	289.90		290.59	0.001653	7.82	2190.29	260.58	0.38
USACE	18311	2YR	2015.00	274.79	282.77		283.05	0.001345	4.38	566.95	153.03	0.30

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	18311	5YR	3176.00	274.79	283.98		284.43	0.001757	5.61	772.74	186.92	0.35
USACE	18311	10YR	4253.00	274.79	284.87		285.46	0.002045	6.51	944.58	198.78	0.39
USACE	18311	25YR	6298.00	274.79	286.20		287.04	0.002545	7.98	1226.30	225.31	0.44
USACE	18311	50YR	8226.00	274.79	287.37		288.39	0.002753	8.93	1498.38	239.27	0.47
USACE	18311	100YR	10547.00	274.79	288.73		289.90	0.002828	9.77	1835.65	257.55	0.49
USACE	18311	100YRPLUS	13793.00	274.79	290.47		291.80	0.002825	10.65	2305.17	279.45	0.50
USACE	18311	200YR	13272.00	274.79	290.20		291.50	0.002835	10.54	2229.74	276.79	0.50
USACE	18311	500YR	17674.00	274.79	292.42		293.91	0.002777	11.51	2898.39	322.98	0.50
USACE	18311	SEPT2011	10642.00	274.79	288.78		289.96	0.002831	9.81	1849.22	258.59	0.49
USACE	18085	2YR	2015.00	274.77	282.68		282.81	0.000606	3.00	789.48	213.56	0.20
USACE	18085	5YR	3176.00	274.77	283.89		284.10	0.000799	3.84	1074.00	251.44	0.24
USACE	18085	10YR	4253.00	274.77	284.78		285.06	0.000945	4.49	1308.26	268.05	0.27
USACE	18085	25YR	6298.00	274.77	286.13		286.54	0.001166	5.49	1673.42	272.84	0.30
USACE	18085	50YR	8226.00	274.77	287.32		287.82	0.001273	6.18	2001.53	276.48	0.32
USACE	18085	100YR	10547.00	274.77	288.71		289.30	0.001321	6.80	2389.41	281.38	0.34
USACE	18085	100YRPLUS	13793.00	274.77	290.48		291.18	0.001356	7.51	2892.86	288.05	0.35
USACE	18085	200YR	13272.00	274.77	290.21		290.89	0.001353	7.41	2814.05	287.07	0.35
USACE	18085	500YR	17674.00	274.77	292.48		293.28	0.001349	8.17	3475.51	295.85	0.35
USACE	18085	SEPT2011	10642.00	274.77	288.77		289.36	0.001323	6.82	2404.70	281.60	0.34
USACE	17947	2YR	2015.00	274.59	282.61	278.25	282.71	0.000539	2.56	788.48	231.34	0.19
USACE	17947	5YR	3176.00	274.59	283.80	279.15	283.98	0.000716	3.34	951.34	241.80	0.22
USACE	17947	10YR	4253.00	274.59	284.67	279.83	284.92	0.000866	3.97	1070.65	257.90	0.25
USACE	17947	25YR	6298.00	274.59	285.97	280.89	286.37	0.001137	5.04	1248.74	285.48	0.29
USACE	17947	50YR	8226.00	274.59	287.10	281.67	287.63	0.001317	5.86	1402.64	294.13	0.32
USACE	17947	100YR	10547.00	274.59	288.38	282.55	289.07	0.001461	6.68	1578.36	303.34	0.35
USACE	17947	100YRPLUS	13793.00	274.59	289.99	283.66	290.90	0.001617	7.67	1798.46	332.24	0.37
USACE	17947	200YR	13272.00	274.59	289.74	283.50	290.62	0.001595	7.52	1764.52	324.89	0.37
USACE	17947	500YR	17674.00	274.59	291.79	284.89	292.95	0.001729	8.64	2045.48	353.54	0.39
USACE	17947	SEPT2011	10642.00	274.59	288.43	282.58	289.13	0.001466	6.71	1585.18	303.74	0.35
USACE	17869 Kinderhook Road		Bridge									
USACE	17808	2YR	2015.00	274.50	281.96	277.34	282.04	0.000402	2.32	892.58	198.21	0.16
USACE	17808	5YR	3176.00	274.50	283.25	278.13	283.39	0.000523	3.00	1093.20	210.08	0.19
USACE	17808	10YR	4253.00	274.50	284.21	278.76	284.40	0.000622	3.55	1241.50	220.76	0.22
USACE	17808	25YR	6298.00	274.50	285.64	279.77	285.94	0.000801	4.47	1463.10	247.46	0.25
USACE	17808	50YR	8226.00	274.50	286.73	280.60	287.15	0.000956	5.24	1632.37	258.73	0.28
USACE	17808	100YR	10547.00	274.50	287.87	281.45	288.43	0.001126	6.07	1808.06	266.44	0.31
USACE	17808	100YRPLUS	13793.00	274.50	289.23	282.53	290.00	0.001339	7.12	2020.03	279.43	0.34
USACE	17808	200YR	13272.00	274.50	289.03	282.36	289.76	0.001307	6.96	1987.97	277.61	0.34
USACE	17808	500YR	17674.00	274.50	290.73	283.71	291.74	0.001541	8.19	2251.31	288.34	0.37
USACE	17808	SEPT2011	10642.00	274.50	287.91	281.49	288.48	0.001132	6.10	1814.77	266.74	0.31
USACE	17690	2YR	2015.00	274.38	281.81		281.96	0.000797	3.08	697.77	157.22	0.23
USACE	17690	5YR	3176.00	274.38	283.05		283.28	0.000993	3.92	908.26	204.17	0.26
USACE	17690	10YR	4253.00	274.38	283.97		284.27	0.001120	4.53	1111.85	230.85	0.29
USACE	17690	25YR	6298.00	274.38	285.36		285.79	0.001309	5.46	1447.42	248.83	0.32
USACE	17690	50YR	8226.00	274.38	286.45		286.98	0.001447	6.18	1724.32	261.66	0.34
USACE	17690	100YR	10547.00	274.38	287.60		288.25	0.001562	6.90	2031.76	269.95	0.36
USACE	17690	100YRPLUS	13793.00	274.38	289.04		289.82	0.001675	7.73	2425.78	279.61	0.38
USACE	17690	200YR	13272.00	274.38	288.82		289.58	0.001660	7.60	2364.44	278.13	0.38
USACE	17690	500YR	17674.00	274.38	290.57		291.50	0.001764	8.55	2862.90	289.99	0.40
USACE	17690	SEPT2011	10642.00	274.38	287.65		288.29	0.001566	6.92	2043.79	270.24	0.36
USACE	17549	2YR	2015.00	274.35	281.51		281.79	0.001591	4.30	510.24	125.98	0.32
USACE	17549	5YR	3176.00	274.35	282.62		283.06	0.002052	5.51	662.52	148.66	0.37
USACE	17549	10YR	4253.00	274.35	283.41		284.02	0.002444	6.48	796.89	185.90	0.42
USACE	17549	25YR	6298.00	274.35	284.66		285.49	0.002842	7.74	1042.17	196.94	0.46
USACE	17549	50YR	8226.00	274.35	285.63		286.64	0.003131	8.72	1233.50	197.80	0.49
USACE	17549	100YR	10547.00	274.35	286.66		287.88	0.003406	9.72	1436.46	198.75	0.52
USACE	17549	100YRPLUS	13793.00	274.35	287.91		289.42	0.003718	10.93	1686.60	200.01	0.56
USACE	17549	200YR	13272.00	274.35	287.72		289.18	0.003674	10.75	1648.25	199.81	0.55
USACE	17549	500YR	17674.00	274.35	289.24		291.06	0.004016	12.18	1954.56	209.36	0.59
USACE	17549	SEPT2011	10642.00	274.35	286.70		287.93	0.003416	9.76	1444.26	198.79	0.52
USACE	17375	2YR	2015.00	274.18	281.02		281.43	0.002626	5.13	425.10	131.06	0.40
USACE	17375	5YR	3176.00	274.18	281.93		282.59	0.003513	6.63	584.24	199.78	0.48
USACE	17375	10YR	4253.00	274.18	282.64		283.47	0.003969	7.60	726.44	201.42	0.52
USACE	17375	25YR	6298.00	274.18	283.74		284.85	0.004591	9.06	949.51	203.53	0.57
USACE	17375	50YR	8226.00	274.18	284.55		285.93	0.005196	10.29	1113.59	205.02	0.62
USACE	17375	100YR	10547.00	274.18	285.38		287.09	0.005817	11.59	1285.44	206.43	0.67
USACE	17375	100YRPLUS	13793.00	274.18	286.37		288.53	0.006615	13.21	1490.59	208.05	0.72
USACE	17375	200YR	13272.00	274.18	286.22		288.31	0.006495	12.96	1459.51	207.81	0.71
USACE	17375	500YR	17674.00	274.18	287.36		290.08	0.007514	14.96	1705.62	223.31	0.78
USACE	17375	SEPT2011	10642.00	274.18	285.41		287.14	0.005842	11.64	1291.91	206.48	0.67
USACE	17264	2YR	2015.00	274.04	280.95	277.28	281.16	0.001024	3.73	630.70	160.48	0.26
USACE	17264	5YR	3176.00	274.04	281.84	278.27	282.19	0.001515	4.95	776.64	167.73	0.33
USACE	17264	10YR	4253.00	274.04	282.52	279.09	283.01	0.001914	5.91	893.81	180.23	0.37
USACE	17264	25YR	6298.00	274.04	283.57	280.72	284.30	0.002528	7.38	1090.76	192.88	0.44
USACE	17264	50YR	8226.00	274.04	284.29	281.71	285.31	0.003216	8.77	1242.68	229.07	0.50
USACE	17264	100YR	10547.00	274.04	285.11	282.82	286.38	0.003704	9.94	1432.43	236.88	0.54
USACE	17264	100YRPLUS	13793.00	274.04	286.09	284.31	287.68	0.004262	11.32	1671.14	246.71	0.59

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	17264	200YR	13272.00	274.04	285.94	283.75	287.48	0.004188	11.12	1633.72	245.60	0.58
USACE	17264	500YR	17674.00	274.04	287.14	285.45	289.05	0.004681	12.58	1939.84	271.43	0.63
USACE	17264	SEPT2011	10642.00	274.04	285.14	282.86	286.42	0.003723	9.98	1439.75	237.30	0.54
USACE	17247 Weir		Inl Struct									
USACE	17228	2YR	2015.00	270.54	276.70		276.87	0.000954	3.32	612.38	116.34	0.25
USACE	17228	5YR	3176.00	270.54	277.64		277.94	0.001399	4.46	723.51	120.41	0.31
USACE	17228	10YR	4253.00	270.54	278.34		278.78	0.001774	5.37	808.65	123.57	0.35
USACE	17228	25YR	6298.00	270.54	279.54		280.24	0.002288	6.77	980.14	155.26	0.41
USACE	17228	50YR	8226.00	270.54	280.79		281.65	0.002364	7.55	1187.14	178.48	0.43
USACE	17228	100YR	10547.00	270.54	282.19		283.19	0.002365	8.26	1454.43	209.85	0.44
USACE	17228	100YRPLUS	13793.00	270.54	283.99		285.11	0.002235	8.88	1891.35	264.47	0.44
USACE	17228	200YR	13272.00	270.54	283.70		284.82	0.002290	8.85	1812.39	263.09	0.44
USACE	17228	500YR	17674.00	270.54	286.05		287.15	0.001910	9.07	2457.00	293.27	0.41
USACE	17228	SEPT2011	10642.00	270.54	282.24		283.25	0.002363	8.28	1466.04	211.36	0.44
USACE	17150	2YR	2015.00	270.41	275.92	274.80	276.57	0.005138	6.81	341.39	168.42	0.56
USACE	17150	5YR	3176.00	270.41	276.95	275.93	277.64	0.004714	7.46	579.23	206.62	0.55
USACE	17150	10YR	4253.00	270.41	277.81	276.88	278.50	0.004187	7.72	757.61	209.70	0.53
USACE	17150	25YR	6298.00	270.41	279.32	277.73	280.02	0.003374	7.97	1079.18	214.38	0.50
USACE	17150	50YR	8226.00	270.41	280.66	278.37	281.36	0.002851	8.12	1368.96	218.09	0.47
USACE	17150	100YR	10547.00	270.41	282.13	279.08	282.86	0.002470	8.33	1692.07	220.86	0.45
USACE	17150	100YRPLUS	13793.00	270.41	284.00	279.96	284.76	0.002119	8.58	2138.84	249.98	0.42
USACE	17150	200YR	13272.00	270.41	283.70	279.81	284.46	0.002180	8.56	2063.61	248.39	0.43
USACE	17150	500YR	17674.00	270.41	286.05	280.90	286.84	0.001816	8.77	2664.11	262.42	0.40
USACE	17150	SEPT2011	10642.00	270.41	282.19	279.11	282.92	0.002458	8.34	1704.76	220.97	0.45
USACE	17032	2YR	2015.00	270.11	275.94	273.42	276.14	0.001459	3.72	619.14	233.68	0.30
USACE	17032	5YR	3176.00	270.11	277.00	274.36	277.22	0.001414	4.18	965.45	263.41	0.31
USACE	17032	10YR	4253.00	270.11	277.85	274.98	278.10	0.001394	4.55	1192.23	269.85	0.31
USACE	17032	25YR	6298.00	270.11	279.38	276.05	279.67	0.001224	4.89	1612.84	279.11	0.30
USACE	17032	50YR	8226.00	270.11	280.73	276.71	281.06	0.001075	5.07	1998.61	294.15	0.29
USACE	17032	100YR	10547.00	270.11	282.23	277.51	282.58	0.000953	5.26	2440.30	297.67	0.28
USACE	17032	100YRPLUS	13793.00	270.11	284.10	278.29	284.51	0.000849	5.52	3008.90	309.91	0.27
USACE	17032	200YR	13272.00	270.11	283.80	278.17	284.20	0.000867	5.49	2915.31	308.55	0.27
USACE	17032	500YR	17674.00	270.11	286.16	279.07	286.61	0.000765	5.78	3655.37	317.64	0.26
USACE	17032	SEPT2011	10642.00	270.11	282.28	277.53	282.64	0.000949	5.27	2457.65	297.81	0.28
USACE	16817	2YR	2015.00	269.31	275.49		275.76	0.002133	4.79	644.86	258.93	0.37
USACE	16817	5YR	3176.00	269.31	276.55		276.85	0.002078	5.34	933.73	304.42	0.37
USACE	16817	10YR	4253.00	269.31	277.48		277.76	0.001795	5.43	1220.84	317.53	0.35
USACE	16817	25YR	6298.00	269.31	279.12		279.39	0.001337	5.36	1759.56	337.66	0.32
USACE	16817	50YR	8226.00	269.31	280.54		280.81	0.001078	5.31	2253.81	353.78	0.29
USACE	16817	100YR	10547.00	269.31	282.08		282.36	0.000896	5.31	2802.10	358.65	0.27
USACE	16817	100YRPLUS	13793.00	269.31	283.99		284.31	0.000760	5.40	3494.53	363.53	0.26
USACE	16817	200YR	13272.00	269.31	283.69		283.99	0.000781	5.39	3382.73	362.77	0.26
USACE	16817	500YR	17674.00	269.31	286.08		286.42	0.000665	5.54	4261.18	372.72	0.24
USACE	16817	SEPT2011	10642.00	269.31	282.14		282.42	0.000891	5.31	2823.54	358.80	0.27
USACE	16490	2YR	2015.00	268.38	274.36	273.63	274.85	0.004007	6.28	498.48	256.00	0.50
USACE	16490	5YR	3176.00	268.38	275.77	274.53	276.14	0.002598	5.97	881.54	291.19	0.42
USACE	16490	10YR	4253.00	268.38	276.88	275.03	277.19	0.001953	5.77	1215.00	305.61	0.37
USACE	16490	25YR	6298.00	268.38	278.69	275.65	278.97	0.001432	5.70	1780.13	320.76	0.33
USACE	16490	50YR	8226.00	268.38	280.18	276.45	280.47	0.001203	5.77	2270.95	335.98	0.31
USACE	16490	100YR	10547.00	268.38	281.78	277.03	282.07	0.001052	5.92	2817.76	350.00	0.30
USACE	16490	100YRPLUS	13793.00	268.38	283.74	277.76	284.05	0.000932	6.15	3519.22	364.08	0.29
USACE	16490	200YR	13272.00	268.38	283.43	277.64	283.73	0.000952	6.12	3404.78	362.08	0.29
USACE	16490	500YR	17674.00	268.38	285.86	278.52	286.19	0.000840	6.40	4305.14	377.82	0.28
USACE	16490	SEPT2011	10642.00	268.38	281.84	277.05	282.13	0.001047	5.92	2839.33	350.42	0.30
USACE	16253	2YR	2015.00	267.49	273.89		274.16	0.001853	4.54	594.08	222.97	0.34
USACE	16253	5YR	3176.00	267.49	275.38		275.66	0.001506	4.81	948.27	250.50	0.32
USACE	16253	10YR	4253.00	267.49	276.53		276.81	0.001313	4.98	1249.18	268.58	0.31
USACE	16253	25YR	6298.00	267.49	278.39		278.68	0.001102	5.24	1765.08	284.63	0.29
USACE	16253	50YR	8226.00	267.49	279.90		280.21	0.001001	5.48	2201.74	293.09	0.29
USACE	16253	100YR	10547.00	267.49	281.49		281.83	0.000951	5.83	2695.35	343.04	0.28
USACE	16253	100YRPLUS	13793.00	267.49	283.48		283.84	0.000868	6.12	3407.76	373.84	0.28
USACE	16253	200YR	13272.00	267.49	283.16		283.51	0.000884	6.09	3289.19	368.62	0.28
USACE	16253	500YR	17674.00	267.49	285.62		286.00	0.000787	6.37	4233.21	394.16	0.27
USACE	16253	SEPT2011	10642.00	267.49	281.56		281.89	0.000948	5.84	2716.71	344.39	0.28
USACE	15944	2YR	2015.00	266.51	273.35		273.62	0.001683	4.45	565.69	180.41	0.33
USACE	15944	5YR	3176.00	266.51	274.95		275.22	0.001346	4.70	879.60	209.72	0.31
USACE	15944	10YR	4253.00	266.51	276.15		276.44	0.001198	4.91	1137.16	218.62	0.30
USACE	15944	25YR	6298.00	266.51	278.03		278.35	0.001079	5.33	1559.59	230.36	0.29
USACE	15944	50YR	8226.00	266.51	279.54		279.90	0.001028	5.69	1914.58	241.87	0.29
USACE	15944	100YR	10547.00	266.51	281.13		281.53	0.000997	6.10	2319.55	265.96	0.29
USACE	15944	100YRPLUS	13793.00	266.51	283.11		283.56	0.000949	6.52	2866.40	286.05	0.29
USACE	15944	200YR	13272.00	266.51	282.79		283.23	0.000961	6.47	2775.40	283.24	0.29
USACE	15944	500YR	17674.00	266.51	285.25		285.74	0.000894	6.90	3498.31	303.02	0.29
USACE	15944	SEPT2011	10642.00	266.51	281.19		281.60	0.000995	6.11	2336.01	266.91	0.29
USACE	15640	2YR	2015.00	265.80	272.94		273.17	0.001275	4.06	577.15	207.75	0.29
USACE	15640	5YR	3176.00	265.80	274.69		274.89	0.000806	3.82	966.86	232.33	0.24

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	15640	10YR	4253.00	265.80	275.95		276.15	0.000641	3.77	1263.46	238.94	0.22
USACE	15640	25YR	6298.00	265.80	277.87		278.11	0.000520	3.85	1728.85	246.65	0.20
USACE	15640	50YR	8226.00	265.80	279.39		279.68	0.000466	3.98	2109.70	251.70	0.20
USACE	15640	100YR	10547.00	265.80	280.99		281.32	0.000435	4.16	2514.79	256.31	0.20
USACE	15640	100YRPLUS	13793.00	265.80	282.96		283.36	0.000411	4.41	3026.61	263.01	0.19
USACE	15640	200YR	13272.00	265.80	282.64		283.03	0.000416	4.38	2942.84	261.92	0.19
USACE	15640	500YR	17674.00	265.80	285.09		285.56	0.000391	4.68	3593.43	269.85	0.19
USACE	15640	SEPT2011	10642.00	265.80	281.05		281.39	0.000434	4.17	2530.66	256.52	0.19
USACE	15396	2YR	2015.00	265.03	272.42		272.78	0.001893	5.06	487.76	155.11	0.35
USACE	15396	5YR	3176.00	265.03	274.25		274.61	0.001476	5.29	782.62	167.51	0.33
USACE	15396	10YR	4253.00	265.03	275.52		275.91	0.001381	5.64	1002.92	177.96	0.32
USACE	15396	25YR	6298.00	265.03	277.43		277.89	0.001353	6.31	1351.49	188.31	0.33
USACE	15396	50YR	8226.00	265.03	278.93		279.47	0.001361	6.88	1641.02	196.91	0.34
USACE	15396	100YR	10547.00	265.03	280.49		281.12	0.001383	7.49	1965.60	223.77	0.35
USACE	15396	100YRPLUS	13793.00	265.03	282.44		283.16	0.001386	8.16	2431.99	250.52	0.36
USACE	15396	200YR	13272.00	265.03	282.12		282.83	0.001395	8.07	2352.40	247.43	0.36
USACE	15396	500YR	17674.00	265.03	284.39		285.34	0.001664	9.63	2950.82	307.87	0.40
USACE	15396	SEPT2011	10642.00	265.03	280.55		281.18	0.001384	7.51	1979.30	225.97	0.35
USACE	15150	2YR	2015.00	264.59	271.82		272.26	0.002324	5.33	390.17	81.94	0.39
USACE	15150	5YR	3176.00	264.59	273.52		274.13	0.002339	6.34	572.38	144.15	0.41
USACE	15150	10YR	4253.00	264.59	274.75		275.44	0.002295	6.94	763.57	166.43	0.41
USACE	15150	25YR	6298.00	264.59	276.64		277.43	0.002193	7.72	1094.15	182.56	0.42
USACE	15150	50YR	8226.00	264.59	278.13		279.01	0.002154	8.35	1376.75	200.25	0.42
USACE	15150	100YR	10547.00	264.59	279.69		280.66	0.002097	8.93	1705.63	217.76	0.42
USACE	15150	100YRPLUS	13793.00	264.59	281.68		282.72	0.001985	9.50	2153.05	233.90	0.42
USACE	15150	200YR	13272.00	264.59	281.35		282.38	0.002016	9.44	2076.31	231.09	0.42
USACE	15150	500YR	17674.00	264.59	283.76		284.88	0.001894	10.09	2659.45	251.65	0.42
USACE	15150	SEPT2011	10642.00	264.59	279.76		280.73	0.002094	8.95	1719.10	218.38	0.42
USACE	14898	2YR	2015.00	264.03	271.29		271.67	0.002159	4.95	411.59	81.44	0.37
USACE	14898	5YR	3176.00	264.03	273.01		273.55	0.002130	5.89	575.60	126.66	0.39
USACE	14898	10YR	4253.00	264.03	274.23		274.87	0.002145	6.56	745.21	152.95	0.40
USACE	14898	25YR	6298.00	264.03	276.12		276.90	0.002105	7.43	1070.87	187.27	0.41
USACE	14898	50YR	8226.00	264.03	277.64		278.49	0.002023	7.98	1370.02	205.75	0.41
USACE	14898	100YR	10547.00	264.03	279.23		280.16	0.001940	8.50	1711.64	222.22	0.41
USACE	14898	100YRPLUS	13793.00	264.03	281.25		282.24	0.001814	9.02	2177.51	239.10	0.40
USACE	14898	200YR	13272.00	264.03	280.91		281.90	0.001847	8.97	2096.85	236.05	0.41
USACE	14898	500YR	17674.00	264.03	283.37		284.43	0.001710	9.54	2701.91	255.40	0.40
USACE	14898	SEPT2011	10642.00	264.03	279.30		280.22	0.001936	8.52	1725.71	222.77	0.41
USACE	14652	2YR	2015.00	263.61	270.85		271.18	0.001751	4.61	444.60	94.15	0.34
USACE	14652	5YR	3176.00	263.61	272.59		273.05	0.001760	5.50	646.68	150.54	0.35
USACE	14652	10YR	4253.00	263.61	273.82		274.37	0.001776	6.10	844.81	171.46	0.36
USACE	14652	25YR	6298.00	263.61	275.73		276.39	0.001762	6.92	1186.44	185.86	0.37
USACE	14652	50YR	8226.00	263.61	277.25		278.00	0.001745	7.52	1476.41	195.89	0.38
USACE	14652	100YR	10547.00	263.61	278.84		279.68	0.001732	8.13	1795.89	204.91	0.38
USACE	14652	100YRPLUS	13793.00	263.61	280.85		281.80	0.001701	8.82	2218.23	216.53	0.39
USACE	14652	200YR	13272.00	263.61	280.51		281.45	0.001720	8.74	2144.82	214.34	0.39
USACE	14652	500YR	17674.00	263.61	282.93		284.01	0.001697	9.56	2684.99	232.08	0.40
USACE	14652	SEPT2011	10642.00	263.61	278.90		279.75	0.001731	8.15	1808.85	205.21	0.39
USACE	14359	2YR	2015.00	262.81	270.23		270.61	0.002167	4.93	409.48	75.32	0.37
USACE	14359	5YR	3176.00	262.81	272.00		272.49	0.002025	5.72	625.19	160.77	0.37
USACE	14359	10YR	4253.00	262.81	273.28		273.83	0.001896	6.16	845.35	181.13	0.37
USACE	14359	25YR	6298.00	262.81	275.25		275.86	0.001741	6.78	1220.01	198.59	0.37
USACE	14359	50YR	8226.00	262.81	276.81		277.48	0.001648	7.23	1538.73	208.79	0.37
USACE	14359	100YR	10547.00	262.81	278.44		279.17	0.001587	7.71	1885.59	218.50	0.37
USACE	14359	100YRPLUS	13793.00	262.81	280.49		281.29	0.001510	8.26	2346.31	230.59	0.37
USACE	14359	200YR	13272.00	262.81	280.14		280.93	0.001537	8.21	2265.51	228.57	0.37
USACE	14359	500YR	17674.00	262.81	282.61		283.50	0.001463	8.84	2846.15	241.50	0.37
USACE	14359	SEPT2011	10642.00	262.81	278.50		279.23	0.001584	7.73	1899.71	218.92	0.37
USACE	14120	2YR	2015.00	262.11	269.64	266.58	270.06	0.002362	5.24	384.96	92.54	0.38
USACE	14120	5YR	3176.00	262.11	271.46	267.84	271.99	0.002145	5.99	606.95	137.71	0.38
USACE	14120	10YR	4253.00	262.11	272.75	268.83	273.35	0.002045	6.49	791.67	146.42	0.38
USACE	14120	25YR	6298.00	262.11	274.67	270.88	275.40	0.002020	7.36	1082.33	156.59	0.39
USACE	14120	50YR	8226.00	262.11	276.18	272.14	277.02	0.002036	8.06	1324.84	165.81	0.40
USACE	14120	100YR	10547.00	262.11	277.74	273.28	278.71	0.002059	8.77	1589.46	173.17	0.42
USACE	14120	100YRPLUS	13793.00	262.11	279.70	274.55	280.83	0.002067	9.60	1940.65	183.96	0.43
USACE	14120	200YR	13272.00	262.11	279.35	274.39	280.47	0.002093	9.52	1876.79	182.12	0.43
USACE	14120	500YR	17674.00	262.11	281.72	275.99	283.03	0.002102	10.49	2322.17	194.79	0.44
USACE	14120	SEPT2011	10642.00	262.11	277.80	273.31	278.78	0.002058	8.80	1600.36	173.45	0.42
USACE	13977	2YR	2015.00	261.58	269.40	265.97	269.74	0.001843	4.69	430.71	95.98	0.34
USACE	13977	5YR	3176.00	261.58	271.26	267.22	271.69	0.001671	5.37	669.29	146.67	0.34
USACE	13977	10YR	4253.00	261.58	272.56	268.21	273.06	0.001616	5.87	869.85	159.03	0.35
USACE	13977	25YR	6298.00	261.58	274.49	269.70	275.11	0.001624	6.70	1190.35	172.61	0.36
USACE	13977	50YR	8226.00	261.58	276.00	271.34	276.72	0.001641	7.35	1458.15	181.75	0.37
USACE	13977	100YR	10547.00	261.58	277.57	272.54	278.40	0.001668	8.02	1749.79	190.20	0.38
USACE	13977	100YRPLUS	13793.00	261.58	279.56	273.88	280.51	0.001671	8.77	2137.52	199.94	0.39
USACE	13977	200YR	13272.00	261.58	279.20	273.68	280.15	0.001693	8.70	2066.97	198.33	0.39
USACE	13977	500YR	17674.00	261.58	281.59	275.28	282.70	0.001705	9.60	2554.38	211.05	0.40
USACE	13977	SEPT2011	10642.00	261.58	277.64	272.57	278.46	0.001667	8.04	1761.85	190.53	0.38

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	13759	2YR	2015.00	261.13	269.01		269.34	0.001805	4.61	437.64	78.09	0.34
USACE	13759	5YR	3176.00	261.13	270.88		271.32	0.001707	5.39	666.80	197.15	0.34
USACE	13759	10YR	4253.00	261.13	272.21		272.71	0.001615	5.84	948.33	221.80	0.34
USACE	13759	25YR	6298.00	261.13	274.17		274.75	0.001549	6.53	1401.43	239.80	0.35
USACE	13759	50YR	8226.00	261.13	275.71		276.35	0.001513	7.05	1779.96	251.72	0.35
USACE	13759	100YR	10547.00	261.13	277.31		278.02	0.001494	7.59	2190.31	262.24	0.36
USACE	13759	100YRPLUS	13793.00	261.13	279.34		280.12	0.001448	8.18	2734.11	273.19	0.36
USACE	13759	200YR	13272.00	261.13	278.97		279.75	0.001476	8.13	2634.53	271.36	0.36
USACE	13759	500YR	17674.00	261.13	281.40		282.29	0.001451	8.87	3316.34	291.36	0.37
USACE	13759	SEPT2011	10642.00	261.13	277.37		278.08	0.001492	7.61	2207.33	262.64	0.36
USACE	13605	2YR	2015.00	260.58	268.71	265.04	269.05	0.001865	4.70	428.31	73.54	0.34
USACE	13605	5YR	3176.00	260.58	270.58	266.34	271.05	0.001800	5.54	646.95	208.19	0.35
USACE	13605	10YR	4253.00	260.58	271.92	267.36	272.45	0.001705	6.00	947.35	231.79	0.35
USACE	13605	25YR	6298.00	260.58	273.90	269.01	274.51	0.001630	6.70	1423.97	249.92	0.36
USACE	13605	50YR	8226.00	260.58	275.44	270.84	276.11	0.001604	7.26	1818.22	262.95	0.36
USACE	13605	100YR	10547.00	260.58	277.03	272.21	277.78	0.001593	7.83	2245.73	273.82	0.37
USACE	13605	100YRPLUS	13793.00	260.58	279.06	273.56	279.89	0.001552	8.45	2813.43	285.27	0.37
USACE	13605	200YR	13272.00	260.58	278.69	273.38	279.52	0.001583	8.41	2708.06	283.31	0.37
USACE	13605	500YR	17674.00	260.58	281.12	274.84	282.06	0.001551	9.16	3414.43	298.18	0.38
USACE	13605	SEPT2011	10642.00	260.58	277.09	272.27	277.85	0.001591	7.85	2263.56	274.22	0.37
USACE	13330	2YR	2015.00	260.09	268.15	264.64	268.52	0.002001	4.88	413.61	74.33	0.36
USACE	13330	5YR	3176.00	260.09	270.07	265.99	270.55	0.001825	5.64	661.88	160.14	0.36
USACE	13330	10YR	4253.00	260.09	271.41	267.03	271.97	0.001773	6.18	925.99	218.28	0.36
USACE	13330	25YR	6298.00	260.09	273.40	268.60	274.05	0.001714	6.93	1383.34	238.81	0.37
USACE	13330	50YR	8226.00	260.09	274.94	270.19	275.67	0.001694	7.52	1758.41	248.92	0.37
USACE	13330	100YR	10547.00	260.09	276.52	271.80	277.33	0.001703	8.15	2160.56	260.22	0.38
USACE	13330	100YRPLUS	13793.00	260.09	278.54	273.19	279.46	0.001678	8.84	2698.80	273.17	0.39
USACE	13330	200YR	13272.00	260.09	278.16	272.99	279.07	0.001712	8.79	2595.95	270.40	0.39
USACE	13330	500YR	17674.00	260.09	280.58	274.52	281.62	0.001688	9.60	3270.58	284.87	0.40
USACE	13330	SEPT2011	10642.00	260.09	276.58	271.84	277.40	0.001701	8.17	2177.57	260.63	0.38
USACE	13125	2YR	2015.00	259.33	267.85		268.15	0.001447	4.43	477.24	106.45	0.31
USACE	13125	5YR	3176.00	259.33	269.80		270.20	0.001400	5.16	755.55	168.41	0.31
USACE	13125	10YR	4253.00	259.33	271.16		271.63	0.001401	5.71	989.16	176.06	0.32
USACE	13125	25YR	6298.00	259.33	273.10		273.72	0.001518	6.71	1346.72	195.04	0.35
USACE	13125	50YR	8226.00	259.33	274.56		275.33	0.001649	7.56	1654.56	224.42	0.37
USACE	13125	100YR	10547.00	259.33	276.08		276.98	0.001741	8.36	2009.25	241.10	0.38
USACE	13125	100YRPLUS	13793.00	259.33	278.07		279.10	0.001770	9.17	2507.26	259.55	0.40
USACE	13125	200YR	13272.00	259.33	277.68		278.71	0.001807	9.12	2407.19	256.86	0.40
USACE	13125	500YR	17674.00	259.33	280.08		281.26	0.001811	10.01	3044.23	273.58	0.41
USACE	13125	SEPT2011	10642.00	259.33	276.15		277.05	0.001741	8.38	2024.62	241.83	0.39
USACE	12862	2YR	2015.00	258.73	267.49		267.78	0.001372	4.29	475.05	87.29	0.30
USACE	12862	5YR	3176.00	258.73	269.43		269.84	0.001370	5.12	674.36	119.00	0.31
USACE	12862	10YR	4253.00	258.73	270.73		271.25	0.001467	5.84	838.52	133.60	0.33
USACE	12862	25YR	6298.00	258.73	272.55		273.28	0.001715	7.08	1092.83	147.84	0.37
USACE	12862	50YR	8226.00	258.73	273.90		274.84	0.001936	8.11	1298.94	157.21	0.40
USACE	12862	100YR	10547.00	258.73	275.25		276.45	0.002184	9.21	1516.75	164.49	0.43
USACE	12862	100YRPLUS	13793.00	258.73	277.02		278.52	0.002400	10.44	1815.42	173.55	0.46
USACE	12862	200YR	13272.00	258.73	276.64		278.13	0.002429	10.34	1750.86	171.47	0.46
USACE	12862	500YR	17674.00	258.73	278.74		280.63	0.002673	11.80	2122.78	182.33	0.50
USACE	12862	SEPT2011	10642.00	258.73	275.31		276.52	0.002190	9.24	1526.32	164.79	0.43
USACE	12628	2YR	2015.00	258.00	267.35		267.52	0.000714	3.35	606.10	95.65	0.22
USACE	12628	5YR	3176.00	258.00	269.31		269.56	0.000760	4.06	905.14	190.15	0.24
USACE	12628	10YR	4253.00	258.00	270.62		270.94	0.000819	4.61	1180.22	223.35	0.25
USACE	12628	25YR	6298.00	258.00	272.47		272.90	0.000938	5.50	1618.10	246.26	0.28
USACE	12628	50YR	8226.00	258.00	273.87		274.39	0.001034	6.20	1969.24	256.38	0.30
USACE	12628	100YR	10547.00	258.00	275.29		275.92	0.001138	6.94	2338.18	264.83	0.31
USACE	12628	100YRPLUS	13793.00	258.00	277.15		277.91	0.001211	7.74	2842.32	274.78	0.33
USACE	12628	200YR	13272.00	258.00	276.76		277.51	0.001233	7.69	2734.65	272.76	0.33
USACE	12628	500YR	17674.00	258.00	279.00		279.91	0.001310	8.62	3359.25	284.99	0.35
USACE	12628	SEPT2011	10642.00	258.00	275.35		275.98	0.001140	6.97	2354.39	265.18	0.32
USACE	12411	2YR	2015.00	257.70	266.89		267.27	0.001813	4.92	415.14	77.10	0.34
USACE	12411	5YR	3176.00	257.70	268.81		269.30	0.001725	5.72	620.30	129.25	0.35
USACE	12411	10YR	4253.00	257.70	270.09		270.66	0.001730	6.30	800.88	149.51	0.36
USACE	12411	25YR	6298.00	257.70	271.84		272.59	0.001896	7.38	1087.50	200.39	0.39
USACE	12411	50YR	8226.00	257.70	273.14		274.05	0.002043	8.23	1374.02	236.38	0.41
USACE	12411	100YR	10547.00	257.70	274.52		275.55	0.002107	8.96	1707.57	245.80	0.42
USACE	12411	100YRPLUS	13793.00	257.70	276.41		277.54	0.002044	9.60	2179.48	253.72	0.42
USACE	12411	200YR	13272.00	257.70	275.98		277.13	0.002140	9.64	2070.36	252.09	0.43
USACE	12411	500YR	17674.00	257.70	278.24		279.52	0.002072	10.39	2651.23	260.62	0.43
USACE	12411	SEPT2011	10642.00	257.70	274.58		275.61	0.002102	8.97	1722.95	246.17	0.42
USACE	12113	2YR	2024.00	257.10	266.03		266.58	0.002850	5.94	341.38	56.67	0.42
USACE	12113	5YR	3184.00	257.10	267.80		268.59	0.003139	7.17	464.51	92.79	0.45
USACE	12113	10YR	4259.00	257.10	268.98		269.93	0.003234	8.00	612.23	150.83	0.47
USACE	12113	25YR	6315.00	257.10	270.83		271.85	0.003003	8.74	920.06	178.09	0.47
USACE	12113	50YR	8257.00	257.10	272.26		273.32	0.002799	9.17	1185.66	191.62	0.46
USACE	12113	100YR	10588.00	257.10	273.75		274.85	0.002613	9.57	1478.53	201.53	0.46
USACE	12113	100YRPLUS	13847.00	257.10	275.78		276.89	0.002300	9.85	1903.59	217.29	0.44

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	12113	200YR	13326.00	257.10	275.29		276.44	0.002478	10.01	1797.70	213.27	0.45
USACE	12113	500YR	17752.00	257.10	277.67		278.86	0.002218	10.43	2327.77	233.22	0.44
USACE	12113	SEPT2011	10702.00	257.10	273.81		274.91	0.002612	9.60	1490.95	201.93	0.46
USACE	11757	2YR	2024.00	256.60	265.81		266.01	0.000753	3.52	579.34	85.31	0.23
USACE	11757	5YR	3184.00	256.60	267.60		267.90	0.000891	4.42	780.48	137.05	0.26
USACE	11757	10YR	4259.00	256.60	268.77		269.17	0.001032	5.15	954.51	159.61	0.28
USACE	11757	25YR	6315.00	256.60	270.49		271.06	0.001247	6.27	1255.26	182.15	0.32
USACE	11757	50YR	8257.00	256.60	271.83		272.53	0.001385	7.09	1505.88	191.60	0.34
USACE	11757	100YR	10588.00	256.60	273.24		274.08	0.001496	7.87	1786.15	208.96	0.36
USACE	11757	100YRPLUS	13847.00	256.60	275.24		276.18	0.001487	8.54	2226.09	229.23	0.37
USACE	11757	200YR	13326.00	256.60	274.72		275.69	0.001577	8.61	2107.82	224.44	0.38
USACE	11757	500YR	17752.00	256.60	277.07		278.17	0.001564	9.38	2662.54	249.04	0.38
USACE	11757	SEPT2011	10702.00	256.60	273.30		274.14	0.001504	7.91	1798.20	210.11	0.36
USACE	11441	2YR	2024.00	256.26	265.30	261.06	265.65	0.001604	4.74	426.83	133.30	0.32
USACE	11441	5YR	3184.00	256.26	267.12	262.45	267.53	0.001513	5.35	766.00	216.93	0.32
USACE	11441	10YR	4259.00	256.26	268.38	263.53	268.79	0.001386	5.61	1062.44	260.30	0.32
USACE	11441	25YR	6315.00	256.26	270.20	265.31	270.62	0.001282	6.05	1568.54	312.56	0.31
USACE	11441	50YR	8257.00	256.26	271.64	267.62	272.05	0.001172	6.25	2040.45	335.62	0.30
USACE	11441	100YR	10588.00	256.26	273.15	268.66	273.56	0.001067	6.41	2549.94	337.85	0.30
USACE	11441	100YRPLUS	13847.00	256.26	275.27	269.67	275.67	0.000902	6.46	3270.66	340.47	0.28
USACE	11441	200YR	13326.00	256.26	274.72	269.48	275.15	0.000990	6.61	3084.24	340.00	0.29
USACE	11441	500YR	17752.00	256.26	277.19	270.85	277.62	0.000866	6.80	3929.74	348.82	0.28
USACE	11441	SEPT2011	10702.00	256.26	273.21	268.71	273.63	0.001066	6.43	2570.62	337.93	0.30
USACE	11153	2YR	2024.00	256.20	265.00	260.58	265.24	0.001124	3.91	520.04	194.71	0.27
USACE	11153	5YR	3184.00	256.20	266.92	261.79	267.15	0.000877	4.11	1078.01	311.68	0.25
USACE	11153	10YR	4259.00	256.20	268.22	262.74	268.45	0.000785	4.28	1536.06	387.16	0.24
USACE	11153	25YR	6315.00	256.20	270.09	264.28	270.30	0.000667	4.44	2316.91	432.91	0.23
USACE	11153	50YR	8257.00	256.20	271.55	266.36	271.76	0.000606	4.59	2955.09	442.86	0.22
USACE	11153	100YR	10588.00	256.20	273.07	267.33	273.29	0.000564	4.77	3639.85	454.03	0.22
USACE	11153	100YRPLUS	13847.00	256.20	275.22	268.50	275.43	0.000490	4.87	4632.28	468.78	0.21
USACE	11153	200YR	13326.00	256.20	274.66	268.32	274.89	0.000535	4.97	4371.97	466.16	0.22
USACE	11153	500YR	17752.00	256.20	277.15	269.47	277.39	0.000480	5.18	5545.39	477.80	0.21
USACE	11153	SEPT2011	10702.00	256.20	273.13	267.34	273.35	0.000565	4.78	3667.78	454.42	0.22
USACE	10819	2YR	2024.00	256.01	264.54	260.32	264.82	0.001350	4.26	475.06	121.82	0.30
USACE	10819	5YR	3184.00	256.01	266.58	261.56	266.84	0.000992	4.39	1074.71	469.74	0.27
USACE	10819	10YR	4259.00	256.01	267.99	262.53	268.18	0.000725	4.16	1854.28	575.74	0.23
USACE	10819	25YR	6315.00	256.01	269.94	264.19	270.09	0.000505	3.91	3070.64	653.11	0.20
USACE	10819	50YR	8257.00	256.01	271.44	266.40	271.56	0.000419	3.86	4066.93	676.42	0.19
USACE	10819	100YR	10588.00	256.01	272.99	267.38	273.11	0.000367	3.88	5128.38	694.17	0.18
USACE	10819	100YRPLUS	13847.00	256.01	275.16	268.43	275.28	0.000300	3.84	6659.00	713.60	0.16
USACE	10819	200YR	13326.00	256.01	274.60	268.14	274.72	0.000332	3.95	6256.01	708.25	0.17
USACE	10819	500YR	17752.00	256.01	277.11	269.09	277.23	0.000283	4.02	8064.04	731.26	0.16
USACE	10819	SEPT2011	10702.00	256.01	273.05	267.41	273.17	0.000366	3.89	5171.51	694.72	0.18
USACE	10433	2YR	2024.00	255.37	264.05	259.75	264.32	0.001225	4.14	491.28	81.79	0.28
USACE	10433	5YR	3184.00	255.37	266.01	260.96	266.39	0.001263	5.00	666.02	96.36	0.30
USACE	10433	10YR	4259.00	255.37	267.28	261.92	267.78	0.001381	5.73	869.82	238.05	0.32
USACE	10433	25YR	6315.00	255.37	269.10	263.53	269.73	0.001493	6.67	1469.52	360.72	0.34
USACE	10433	50YR	8257.00	255.37	270.57	264.80	271.24	0.001452	7.12	2014.31	372.00	0.35
USACE	10433	100YR	10588.00	255.37	272.11	266.20	272.80	0.001405	7.54	2591.72	378.77	0.35
USACE	10433	100YRPLUS	13847.00	255.37	274.34	269.12	275.01	0.001233	7.77	3446.84	388.75	0.33
USACE	10433	200YR	13326.00	255.37	273.70	268.88	274.43	0.001368	7.97	3199.76	386.00	0.35
USACE	10433	500YR	17752.00	255.37	276.23	270.50	276.97	0.001243	8.37	4189.31	397.89	0.34
USACE	10433	SEPT2011	10702.00	255.37	272.17	266.33	272.87	0.001409	7.57	2613.89	379.05	0.35
USACE	10108	2YR	2024.00	254.47	263.37	259.56	263.80	0.002046	5.24	386.61	67.69	0.36
USACE	10108	5YR	3184.00	254.47	265.39	261.02	265.89	0.001874	5.84	704.81	227.07	0.36
USACE	10108	10YR	4259.00	254.47	266.84	262.12	267.29	0.001554	5.91	1055.43	256.95	0.33
USACE	10108	25YR	6315.00	254.47	268.75	263.93	269.21	0.001398	6.31	1566.19	275.59	0.32
USACE	10108	50YR	8257.00	254.47	270.26	266.30	270.74	0.001313	6.63	1992.73	288.49	0.32
USACE	10108	100YR	10588.00	254.47	271.82	267.26	272.32	0.001258	6.99	2450.29	299.68	0.32
USACE	10108	100YRPLUS	13847.00	254.47	274.09	268.32	274.59	0.001097	7.17	3150.22	316.76	0.31
USACE	10108	200YR	13326.00	254.47	273.42	268.17	273.95	0.001226	7.39	2939.52	312.08	0.32
USACE	10108	500YR	17752.00	254.47	275.98	269.32	276.54	0.001108	7.73	3760.27	329.64	0.31
USACE	10108	SEPT2011	10702.00	254.47	271.88	267.30	272.38	0.001261	7.02	2467.59	300.13	0.32
USACE	9852	2YR	2024.00	254.13	263.18	258.48	263.40	0.000926	3.69	551.36	118.67	0.25
USACE	9852	5YR	3184.00	254.13	265.25	259.65	265.51	0.000853	4.20	917.08	243.73	0.25
USACE	9852	10YR	4259.00	254.13	266.69	260.56	266.97	0.000810	4.52	1227.20	279.24	0.25
USACE	9852	25YR	6315.00	254.13	268.59	262.09	268.91	0.000816	5.08	1880.69	324.49	0.26
USACE	9852	50YR	8257.00	254.13	270.10	263.32	270.45	0.000810	5.47	2386.68	343.70	0.26
USACE	9852	100YR	10588.00	254.13	271.65	265.34	272.04	0.000810	5.88	2936.85	362.09	0.27
USACE	9852	100YRPLUS	13847.00	254.13	273.95	266.60	274.34	0.000726	6.11	3790.58	383.19	0.26
USACE	9852	200YR	13326.00	254.13	273.26	266.41	273.68	0.000807	6.28	3528.75	376.60	0.27
USACE	9852	500YR	17752.00	254.13	275.84	268.03	276.28	0.000748	6.65	4531.40	399.75	0.27
USACE	9852	SEPT2011	10702.00	254.13	271.71	265.38	272.10	0.000813	5.91	2957.54	362.62	0.27
USACE	9583	2YR	2024.00	253.58	262.80	258.40	263.10	0.001252	4.39	467.28	128.31	0.29
USACE	9583	5YR	3184.00	253.58	264.77	259.68	265.21	0.001340	5.34	654.14	213.23	0.31
USACE	9583	10YR	4259.00	253.58	266.12	260.69	266.66	0.001431	6.05	855.89	378.77	0.33
USACE	9583	25YR	6315.00	253.58	268.33	262.33	268.67	0.000932	5.54	2249.22	412.66	0.27

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9583	50YR	8257.00	253.58	269.87	263.78	270.22	0.000881	5.81	2899.44	430.55	0.27
USACE	9583	100YR	10588.00	253.58	271.45	265.97	271.81	0.000848	6.12	3591.00	444.26	0.27
USACE	9583	100YRPLUS	13847.00	253.58	273.78	267.30	274.13	0.000737	6.25	4654.11	468.66	0.26
USACE	9583	200YR	13326.00	253.58	273.07	267.26	273.45	0.000830	6.46	4321.82	460.98	0.27
USACE	9583	500YR	17752.00	253.58	275.68	268.38	276.06	0.000752	6.75	5561.21	489.23	0.27
USACE	9583	SEPT2011	10702.00	253.58	271.51	266.05	271.87	0.000850	6.14	3616.23	444.73	0.27
USACE	9325	2YR	2024.00	253.21	262.51	257.82	262.78	0.001134	4.16	486.38	68.53	0.27
USACE	9325	5YR	3184.00	253.21	264.47	259.09	264.87	0.001228	5.08	699.94	165.46	0.30
USACE	9325	10YR	4259.00	253.21	265.81	260.09	266.29	0.001286	5.70	1009.95	285.21	0.31
USACE	9325	25YR	6315.00	253.21	267.82	261.75	268.37	0.001289	6.41	1642.95	332.35	0.32
USACE	9325	50YR	8257.00	253.21	269.33	263.10	269.92	0.001294	6.93	2157.16	352.99	0.33
USACE	9325	100YR	10588.00	253.21	270.88	265.47	271.51	0.001289	7.41	2709.37	359.99	0.33
USACE	9325	100YRPLUS	13847.00	253.21	273.24	267.34	273.87	0.001132	7.63	3574.34	369.59	0.32
USACE	9325	200YR	13326.00	253.21	272.46	267.12	273.15	0.001290	7.91	3286.84	366.94	0.34
USACE	9325	500YR	17752.00	253.21	275.08	268.65	275.79	0.001187	8.34	4258.44	375.38	0.33
USACE	9325	SEPT2011	10702.00	253.21	270.93	265.57	271.57	0.001296	7.45	2728.23	360.25	0.33
USACE	9045	2YR	2024.00	252.87	262.20	257.60	262.47	0.001121	4.17	487.33	102.68	0.27
USACE	9045	5YR	3184.00	252.87	264.15	258.88	264.52	0.001161	4.98	777.15	168.33	0.29
USACE	9045	10YR	4259.00	252.87	265.48	259.86	265.93	0.001225	5.60	1012.31	186.95	0.30
USACE	9045	25YR	6315.00	252.87	267.40	261.49	268.00	0.001365	6.61	1404.40	215.20	0.33
USACE	9045	50YR	8257.00	252.87	268.79	262.78	269.52	0.001505	7.46	1710.24	224.35	0.35
USACE	9045	100YR	10588.00	252.87	270.20	264.78	271.08	0.001656	8.34	2031.71	232.18	0.38
USACE	9045	100YRPLUS	13847.00	252.87	272.48	266.43	273.46	0.001593	8.98	2576.46	244.55	0.38
USACE	9045	200YR	13326.00	252.87	271.63	266.16	272.69	0.001812	9.27	2370.01	240.37	0.40
USACE	9045	500YR	17752.00	252.87	274.08	267.95	275.32	0.001849	10.26	2979.88	259.51	0.41
USACE	9045	SEPT2011	10702.00	252.87	270.24	264.84	271.14	0.001673	8.40	2041.56	232.42	0.38
USACE	8765	2YR	2024.00	252.62	261.79	257.49	262.11	0.001443	4.51	448.79	135.20	0.31
USACE	8765	5YR	3184.00	252.62	263.78	258.81	264.17	0.001365	5.15	828.75	222.07	0.31
USACE	8765	10YR	4259.00	252.62	265.14	259.85	265.57	0.001321	5.58	1153.34	250.62	0.31
USACE	8765	25YR	6315.00	252.62	267.09	261.56	267.60	0.001337	6.32	1669.06	329.69	0.32
USACE	8765	50YR	8257.00	252.62	268.50	263.32	269.08	0.001390	6.94	2054.67	381.00	0.33
USACE	8765	100YR	10588.00	252.62	269.93	264.93	270.59	0.001462	7.62	2448.24	416.22	0.35
USACE	8765	100YRPLUS	13847.00	252.62	272.29	266.20	272.98	0.001322	7.99	3105.67	455.72	0.34
USACE	8765	200YR	13326.00	252.62	271.38	265.98	272.15	0.001545	8.33	2851.74	444.87	0.36
USACE	8765	500YR	17752.00	252.62	273.91	267.62	274.76	0.001485	9.00	3561.40	475.76	0.37
USACE	8765	SEPT2011	10702.00	252.62	269.97	264.98	270.64	0.001476	7.67	2459.48	416.72	0.35
USACE	8265	2YR	2024.00	252.02	261.18	256.69	261.43	0.001202	4.05	500.34	79.32	0.28
USACE	8265	5YR	3184.00	252.02	263.24	257.96	263.55	0.001060	4.58	842.65	224.51	0.28
USACE	8265	10YR	4259.00	252.02	264.66	258.96	264.98	0.000963	4.83	1182.22	254.91	0.27
USACE	8265	25YR	6315.00	252.02	266.67	260.61	267.01	0.000894	5.26	1746.81	307.19	0.27
USACE	8265	50YR	8257.00	252.02	268.10	262.64	268.47	0.000878	5.62	2203.36	328.90	0.27
USACE	8265	100YR	10588.00	252.02	269.56	263.96	269.96	0.000878	6.02	2689.04	339.23	0.28
USACE	8265	100YRPLUS	13847.00	252.02	272.02	265.36	272.41	0.000727	6.07	3543.67	353.03	0.26
USACE	8265	200YR	13326.00	252.02	271.03	264.96	271.47	0.000887	6.45	3196.49	347.52	0.28
USACE	8265	500YR	17752.00	252.02	273.66	266.53	274.11	0.000790	6.72	4125.68	360.40	0.27
USACE	8265	SEPT2011	10702.00	252.02	269.59	263.99	270.00	0.000886	6.06	2701.84	339.44	0.28
USACE	7888	2YR	2024.00	251.61	260.71	256.18	260.98	0.001209	4.13	489.69	72.94	0.28
USACE	7888	5YR	3184.00	251.61	262.82	257.44	263.14	0.001100	4.68	814.05	201.09	0.28
USACE	7888	10YR	4259.00	251.61	264.27	258.40	264.61	0.001013	4.97	1130.20	235.37	0.27
USACE	7888	25YR	6315.00	251.61	266.29	260.05	266.66	0.000962	5.46	1626.53	253.69	0.28
USACE	7888	50YR	8257.00	251.61	267.69	262.18	268.12	0.000992	5.97	1992.31	265.29	0.29
USACE	7888	100YR	10588.00	251.61	269.11	263.59	269.60	0.001030	6.50	2375.53	273.74	0.30
USACE	7888	100YRPLUS	13847.00	251.61	271.63	264.95	272.10	0.000872	6.63	3078.60	286.39	0.28
USACE	7888	200YR	13326.00	251.61	270.55	264.77	271.10	0.001072	7.04	2774.57	280.40	0.31
USACE	7888	500YR	17752.00	251.61	273.19	266.09	273.77	0.000983	7.45	3531.49	295.23	0.30
USACE	7888	SEPT2011	10702.00	251.61	269.15	263.64	269.64	0.001042	6.54	2384.27	273.87	0.30
USACE	7474	2YR	2024.00	251.04	260.24		260.50	0.001076	4.17	547.88	131.91	0.27
USACE	7474	5YR	3184.00	251.04	262.42		262.72	0.000932	4.62	871.63	163.93	0.26
USACE	7474	10YR	4259.00	251.04	263.88		264.22	0.000917	5.04	1121.27	181.28	0.27
USACE	7474	25YR	6315.00	251.04	265.81		266.25	0.001035	5.97	1506.35	225.28	0.29
USACE	7474	50YR	8257.00	251.04	267.16		267.69	0.001125	6.65	1831.67	248.64	0.31
USACE	7474	100YR	10588.00	251.04	268.53		269.14	0.001198	7.30	2182.74	261.83	0.33
USACE	7474	100YRPLUS	13847.00	251.04	271.14		271.73	0.000996	7.38	2900.31	287.04	0.30
USACE	7474	200YR	13326.00	251.04	269.93		270.63	0.001272	7.96	2558.35	275.67	0.34
USACE	7474	500YR	17752.00	251.04	272.63		273.34	0.001140	8.31	3337.09	301.16	0.33
USACE	7474	SEPT2011	10702.00	251.04	268.56		269.17	0.001216	7.36	2188.72	262.04	0.33
USACE	7132	2YR	2024.00	250.39	259.65	255.60	260.03	0.001745	4.96	408.32	60.20	0.33
USACE	7132	5YR	3184.00	250.39	261.71	256.95	262.26	0.001827	5.96	545.80	96.23	0.35
USACE	7132	10YR	4259.00	250.39	263.04	258.05	263.74	0.001965	6.79	709.62	153.60	0.38
USACE	7132	25YR	6315.00	250.39	264.74	259.85	265.69	0.002293	8.14	1014.55	208.47	0.42
USACE	7132	50YR	8257.00	250.39	265.91	261.31	267.07	0.002566	9.17	1275.58	234.00	0.45
USACE	7132	100YR	10588.00	250.39	267.14	263.89	268.47	0.002763	10.11	1579.81	258.98	0.47
USACE	7132	100YRPLUS	13847.00	250.39	270.26	265.87	271.24	0.001773	9.25	2453.66	296.54	0.39
USACE	7132	200YR	13326.00	250.39	268.48	265.57	269.93	0.002821	10.85	1941.46	278.98	0.49
USACE	7132	500YR	17752.00	250.39	271.63	267.40	272.79	0.002000	10.33	2867.01	309.36	0.42
USACE	7132	SEPT2011	10702.00	250.39	267.13	263.97	268.49	0.002840	10.24	1575.14	258.75	0.48
USACE	6904	2YR	2024.00	249.59	259.54		259.72	0.000737	3.43	590.40	82.67	0.22

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6904	5YR	3184.00	249.59	261.67		261.92	0.000746	4.07	883.00	200.67	0.23
USACE	6904	10YR	4259.00	249.59	263.07		263.35	0.000742	4.45	1190.87	232.31	0.24
USACE	6904	25YR	6315.00	249.59	264.86		265.22	0.000829	5.21	1642.19	274.10	0.26
USACE	6904	50YR	8257.00	249.59	266.08		266.52	0.000930	5.87	1996.93	307.78	0.28
USACE	6904	100YR	10588.00	249.59	267.37		267.87	0.000993	6.44	2406.75	325.58	0.29
USACE	6904	100YRPLUS	13847.00	249.59	270.42		270.83	0.000699	6.11	3467.73	366.71	0.25
USACE	6904	200YR	13326.00	249.59	268.74		269.30	0.001039	6.98	2865.85	346.76	0.30
USACE	6904	500YR	17752.00	249.59	271.82		272.32	0.000799	6.86	3988.30	377.73	0.27
USACE	6904	SEPT2011	10702.00	249.59	267.36		267.87	0.001018	6.52	2403.27	325.40	0.30
USACE	6668	2YR	3820.00	248.82	258.86	254.85	259.38	0.001971	5.78	691.38	141.55	0.37
USACE	6668	5YR	6110.00	248.82	260.81	256.61	261.54	0.002140	7.02	982.98	215.98	0.40
USACE	6668	10YR	7920.00	248.82	262.18	257.75	262.98	0.002059	7.53	1341.23	268.52	0.40
USACE	6668	25YR	10600.00	248.82	264.07	259.52	264.87	0.001801	7.84	1934.46	365.31	0.39
USACE	6668	50YR	12700.00	248.82	265.49	260.51	266.20	0.001505	7.69	2482.71	417.74	0.36
USACE	6668	100YR	15100.00	248.82	266.97	262.04	267.59	0.001238	7.45	3121.23	440.04	0.33
USACE	6668	100YRPLUS	19748.00	248.82	270.20	263.52	270.65	0.000768	6.65	4567.24	454.67	0.27
USACE	6668	200YR	17700.00	248.82	268.50	262.74	269.04	0.001021	7.20	3800.02	446.82	0.31
USACE	6668	500YR	21700.00	248.82	271.73	264.47	272.12	0.000619	6.29	5268.57	464.46	0.25
USACE	6668	SEPT2011	15100.00	248.82	266.97	262.04	267.59	0.001238	7.45	3121.23	440.04	0.33
USACE	6542	2YR	3820.00	248.49	258.95	253.03	259.15	0.000641	3.66	1109.97	255.64	0.22
USACE	6542	5YR	6110.00	248.49	260.97	254.37	261.26	0.000725	4.48	1641.48	348.55	0.24
USACE	6542	10YR	7920.00	248.49	262.36	255.28	262.69	0.000739	4.90	2011.73	356.68	0.25
USACE	6542	25YR	10600.00	248.49	264.22	256.50	264.60	0.000735	5.37	2508.14	379.28	0.25
USACE	6542	50YR	12700.00	248.49	265.56	257.33	265.98	0.000724	5.67	2867.20	531.21	0.25
USACE	6542	100YR	15100.00	248.49	266.96	258.34	267.42	0.000718	5.98	3240.79	585.25	0.26
USACE	6542	100YRPLUS	19748.00	248.49	270.21	260.61	270.53	0.000450	5.33	5008.47	621.48	0.21
USACE	6542	200YR	17700.00	248.49	268.43	259.97	268.92	0.000705	6.27	3631.41	602.54	0.26
USACE	6542	500YR	21700.00	248.49	271.73	261.13	272.03	0.000385	5.18	5625.92	634.57	0.20
USACE	6542	SEPT2011	15100.00	248.49	266.96	258.34	267.42	0.000718	5.98	3240.79	585.25	0.26
USACE	6424	2YR	3820.00	248.09	258.79	253.14	259.05	0.000774	4.18	971.72	235.18	0.24
USACE	6424	5YR	6110.00	248.09	260.67	254.57	261.12	0.001032	5.46	1202.85	302.81	0.29
USACE	6424	10YR	7920.00	248.09	261.92	255.57	262.51	0.001194	6.31	1356.22	324.55	0.32
USACE	6424	25YR	10600.00	248.09	263.56	256.90	264.36	0.001381	7.37	1558.34	346.39	0.35
USACE	6424	50YR	12700.00	248.09	264.73	257.79	265.70	0.001496	8.10	1702.87	358.18	0.37
USACE	6424	100YR	15100.00	248.09	265.93	258.81	267.09	0.001623	8.87	1850.45	370.85	0.39
USACE	6424	100YRPLUS	19748.00	248.09	269.99	260.47	270.44	0.000613	6.32	4444.85	478.51	0.25
USACE	6424	200YR	17700.00	248.09	267.19	259.74	268.54	0.001725	9.61	2004.69	425.97	0.40
USACE	6424	500YR	21700.00	248.09	271.53	261.12	271.94	0.000523	6.13	5004.48	626.30	0.23
USACE	6424	SEPT2011	15100.00	248.09	265.93	258.81	267.09	0.001623	8.87	1850.45	370.85	0.39
USACE	6380 Marietta Avenue		Bridge									
USACE	6339	2YR	3820.00	247.96	258.39	252.94	258.66	0.000807	4.22	979.61	133.72	0.25
USACE	6339	5YR	6110.00	247.96	260.19	254.34	260.65	0.001100	5.56	1212.85	346.47	0.30
USACE	6339	10YR	7920.00	247.96	261.37	255.30	261.99	0.001290	6.46	1366.23	451.37	0.33
USACE	6339	25YR	10600.00	247.96	262.92	256.57	263.78	0.001514	7.58	1568.90	490.74	0.36
USACE	6339	50YR	12700.00	247.96	264.06	257.49	265.09	0.001643	8.34	1717.09	503.24	0.38
USACE	6339	100YR	15100.00	247.96	265.33	258.41	266.54	0.001748	9.09	1881.11	563.31	0.40
USACE	6339	100YRPLUS	19748.00	247.96	268.40	260.15	269.08	0.000993	7.70	4945.03	653.28	0.31
USACE	6339	200YR	17700.00	247.96	266.71	259.45	268.11	0.001803	9.75	2061.15	604.01	0.41
USACE	6339	500YR	21700.00	247.96	269.71	260.80	270.34	0.000872	7.55	5644.37	657.50	0.29
USACE	6339	SEPT2011	15100.00	247.96	265.33	258.41	266.54	0.001748	9.09	1881.11	563.31	0.40
USACE	6216	2YR	3820.00	247.61	258.11	253.69	258.49	0.001517	4.99	825.37	374.59	0.33
USACE	6216	5YR	6110.00	247.61	260.04	255.31	260.49	0.001440	5.68	1398.41	492.26	0.33
USACE	6216	10YR	7920.00	247.61	261.27	256.36	261.75	0.001372	6.03	1780.35	571.90	0.33
USACE	6216	25YR	10600.00	247.61	262.93	258.65	263.43	0.001267	6.39	2293.34	615.23	0.32
USACE	6216	50YR	12700.00	247.61	264.15	259.46	264.67	0.001190	6.60	2670.93	704.91	0.32
USACE	6216	100YR	15100.00	247.61	265.50	260.20	266.03	0.001105	6.79	3089.49	769.88	0.31
USACE	6216	100YRPLUS	19748.00	247.61	268.54	261.37	268.77	0.000489	5.12	6903.51	826.81	0.21
USACE	6216	200YR	17700.00	247.61	266.97	260.90	267.52	0.001008	6.91	3547.48	802.50	0.30
USACE	6216	500YR	21700.00	247.61	269.85	261.79	270.06	0.000418	4.96	7871.62	836.71	0.20
USACE	6216	SEPT2011	15100.00	247.61	265.50	260.20	266.03	0.001105	6.79	3089.49	769.88	0.31
USACE	5905	2YR	3820.00	247.13	257.81	252.34	258.09	0.000968	4.38	1175.06	456.51	0.26
USACE	5905	5YR	6110.00	247.13	259.86	253.89	260.11	0.000784	4.53	2246.24	598.54	0.24
USACE	5905	10YR	7920.00	247.13	261.16	254.99	261.38	0.000694	4.60	2964.75	707.76	0.23
USACE	5905	25YR	10600.00	247.13	262.88	257.89	263.09	0.000593	4.65	3941.17	777.29	0.22
USACE	5905	50YR	12700.00	247.13	264.13	258.74	264.33	0.000534	4.68	4660.93	780.86	0.21
USACE	5905	100YR	15100.00	247.13	265.52	259.38	265.71	0.000479	4.70	5459.57	784.33	0.20
USACE	5905	100YRPLUS	19748.00	247.13	268.50	260.23	268.63	0.000282	4.03	8840.39	795.74	0.16
USACE	5905	200YR	17700.00	247.13	267.03	259.88	267.22	0.000426	4.70	6335.21	789.68	0.20
USACE	5905	500YR	21700.00	247.13	269.82	260.60	269.94	0.000243	3.91	9893.50	801.06	0.15
USACE	5905	SEPT2011	15100.00	247.13	265.52	259.38	265.71	0.000479	4.70	5459.57	784.33	0.20
USACE	5439	2YR	3820.00	246.18	257.30		257.60	0.001104	4.62	1117.33	415.84	0.28
USACE	5439	5YR	6110.00	246.18	259.50		259.74	0.000784	4.55	2159.29	512.97	0.25
USACE	5439	10YR	7920.00	246.18	260.85		261.06	0.000662	4.53	2872.09	546.53	0.23
USACE	5439	25YR	10600.00	246.18	262.62		262.82	0.000546	4.51	3870.62	577.46	0.21
USACE	5439	50YR	12700.00	246.18	263.91		264.09	0.000479	4.48	4623.25	590.10	0.20
USACE	5439	100YR	15100.00	246.18	265.32		265.50	0.000419	4.45	5466.01	601.16	0.19
USACE	5439	100YRPLUS	19748.00	246.18	268.33		268.49	0.000306	4.26	7311.11	624.44	0.17

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5439	200YR	17700.00	246.18	266.86		267.03	0.000364	4.41	6398.05	613.32	0.18
USACE	5439	500YR	21700.00	246.18	269.67		269.82	0.000268	4.17	8151.63	634.08	0.16
USACE	5439	SEPT2011	15100.00	246.18	265.32		265.50	0.000419	4.45	5466.01	601.16	0.19
USACE	5162	2YR	3820.00	245.72	256.56		257.14	0.002434	6.26	747.85	326.37	0.41
USACE	5162	5YR	6110.00	245.72	259.04		259.44	0.001416	5.76	1642.43	390.04	0.32
USACE	5162	10YR	7920.00	245.72	260.46		260.82	0.001155	5.70	2217.51	414.08	0.30
USACE	5162	25YR	10600.00	245.72	262.29		262.61	0.000940	5.68	2988.72	430.08	0.28
USACE	5162	50YR	12700.00	245.72	263.60		263.91	0.000836	5.71	3559.95	441.68	0.27
USACE	5162	100YR	15100.00	245.72	265.03		265.34	0.000742	5.73	4200.13	451.62	0.25
USACE	5162	100YRPLUS	19748.00	245.72	268.09		268.37	0.000553	5.57	5615.05	474.40	0.23
USACE	5162	200YR	17700.00	245.72	266.59		266.89	0.000653	5.73	4911.06	462.88	0.24
USACE	5162	500YR	21700.00	245.72	269.44		269.71	0.000487	5.48	6264.98	485.08	0.21
USACE	5162	SEPT2011	15100.00	245.72	265.03		265.34	0.000742	5.73	4200.13	451.62	0.25
USACE	4908	2YR	3820.00	245.03	256.30	250.75	256.65	0.001200	4.84	891.53	281.84	0.29
USACE	4908	5YR	6110.00	245.03	258.80	252.54	259.13	0.000942	5.06	1739.44	377.75	0.27
USACE	4908	10YR	7920.00	245.03	260.23	253.67	260.56	0.000848	5.21	2278.54	412.09	0.26
USACE	4908	25YR	10600.00	245.03	262.07	255.17	262.40	0.000763	5.42	2976.85	472.92	0.25
USACE	4908	50YR	12700.00	245.03	263.38	257.53	263.71	0.000715	5.56	3480.76	510.03	0.25
USACE	4908	100YR	15100.00	245.03	264.82	258.24	265.16	0.000665	5.69	4037.09	540.21	0.24
USACE	4908	100YRPLUS	19748.00	245.03	267.90	259.52	268.23	0.000531	5.68	5244.29	578.89	0.22
USACE	4908	200YR	17700.00	245.03	266.38	259.08	266.72	0.000609	5.77	4646.66	563.20	0.24
USACE	4908	500YR	21700.00	245.03	269.27	259.92	269.58	0.000479	5.63	5783.92	590.40	0.21
USACE	4908	SEPT2011	15100.00	245.03	264.82	258.24	265.16	0.000665	5.69	4037.09	540.21	0.24
USACE	4663	2YR	3820.00	244.55	256.32	249.38	256.43	0.000364	2.74	1471.85	265.47	0.16
USACE	4663	5YR	6110.00	244.55	258.79	250.64	258.94	0.000358	3.20	2221.92	343.96	0.17
USACE	4663	10YR	7920.00	244.55	260.20	251.48	260.38	0.000371	3.53	2692.58	382.81	0.18
USACE	4663	25YR	10600.00	244.55	262.02	252.53	262.23	0.000385	3.93	3306.10	412.38	0.18
USACE	4663	50YR	12700.00	244.55	263.32	253.27	263.56	0.000390	4.20	3751.08	436.75	0.19
USACE	4663	100YR	15100.00	244.55	264.75	254.07	265.01	0.000389	4.44	4244.18	478.45	0.19
USACE	4663	100YRPLUS	19748.00	244.55	267.83	255.67	268.11	0.000346	4.68	5321.84	603.20	0.18
USACE	4663	200YR	17700.00	244.55	266.31	254.88	266.59	0.000378	4.65	4786.66	530.11	0.19
USACE	4663	500YR	21700.00	244.55	269.19	256.45	269.48	0.000323	4.73	5806.24	720.64	0.18
USACE	4663	SEPT2011	15100.00	244.55	264.75	254.07	265.01	0.000389	4.44	4244.18	478.45	0.19
USACE	4400	2YR	3820.00	243.70	256.05		256.29	0.000707	4.01	1081.78	200.63	0.23
USACE	4400	5YR	6110.00	243.70	258.50		258.80	0.000705	4.67	1766.42	336.77	0.24
USACE	4400	10YR	7920.00	243.70	259.90		260.23	0.000709	5.05	2257.02	358.99	0.24
USACE	4400	25YR	10600.00	243.70	261.71		262.08	0.000706	5.48	2935.52	390.32	0.25
USACE	4400	50YR	12700.00	243.70	263.02		263.41	0.000690	5.73	3459.92	408.48	0.25
USACE	4400	100YR	15100.00	243.70	264.47		264.87	0.000659	5.92	4057.81	417.88	0.25
USACE	4400	100YRPLUS	19748.00	243.70	267.61		267.99	0.000539	5.97	5401.78	439.50	0.23
USACE	4400	200YR	17700.00	243.70	266.05		266.45	0.000613	6.05	4726.64	427.92	0.24
USACE	4400	500YR	21700.00	243.70	269.00		269.37	0.000488	5.93	6019.74	447.97	0.22
USACE	4400	SEPT2011	15100.00	243.70	264.47		264.87	0.000659	5.92	4057.81	417.88	0.25
USACE	4185	2YR	3820.00	243.40	255.26		255.98	0.002467	6.99	695.51	182.79	0.42
USACE	4185	5YR	6110.00	243.40	257.63		258.49	0.002317	7.97	1175.09	218.39	0.42
USACE	4185	10YR	7920.00	243.40	258.92		259.92	0.002422	8.78	1462.43	227.46	0.44
USACE	4185	25YR	10600.00	243.40	260.58		261.75	0.002526	9.76	1851.19	240.10	0.46
USACE	4185	50YR	12700.00	243.40	261.80		263.07	0.002536	10.34	2149.84	248.23	0.47
USACE	4185	100YR	15100.00	243.40	263.18		264.53	0.002483	10.84	2497.91	257.18	0.47
USACE	4185	100YRPLUS	19748.00	243.40	266.39		267.70	0.002029	11.03	3365.50	280.87	0.44
USACE	4185	200YR	17700.00	243.40	264.72		266.13	0.002360	11.22	2906.17	271.00	0.47
USACE	4185	500YR	21700.00	243.40	267.84		269.10	0.001819	10.95	3779.38	288.86	0.42
USACE	4185	SEPT2011	15100.00	243.40	263.18		264.53	0.002483	10.84	2497.91	257.18	0.47
USACE	3914	2YR	3820.00	242.95	255.11	249.66	255.44	0.001072	4.59	859.77	159.00	0.28
USACE	3914	5YR	6110.00	242.95	257.55	251.28	257.96	0.001017	5.30	1524.35	342.31	0.28
USACE	3914	10YR	7920.00	242.95	258.90	252.37	259.34	0.001011	5.71	1996.47	364.01	0.29
USACE	3914	25YR	10600.00	242.95	260.67	253.80	261.14	0.000973	6.12	2692.70	425.19	0.29
USACE	3914	50YR	12700.00	242.95	261.96	254.84	262.44	0.000927	6.34	3282.34	473.84	0.29
USACE	3914	100YR	15100.00	242.95	263.44	256.07	263.90	0.000836	6.40	3995.85	492.77	0.28
USACE	3914	100YRPLUS	19748.00	242.95	266.77	258.49	267.15	0.000597	6.10	5701.89	534.73	0.24
USACE	3914	200YR	17700.00	242.95	265.08	257.89	265.51	0.000729	6.36	4816.82	510.53	0.26
USACE	3914	500YR	21700.00	242.95	268.24	258.96	268.59	0.000516	5.95	6504.49	553.76	0.23
USACE	3914	SEPT2011	15100.00	242.95	263.44	256.07	263.90	0.000836	6.40	3995.85	492.77	0.28
USACE	3619	2YR	3820.00	242.72	254.52	249.46	255.03	0.001696	5.70	671.33	87.04	0.34
USACE	3619	5YR	6110.00	242.72	256.97	251.41	257.57	0.001607	6.46	1390.35	427.95	0.35
USACE	3619	10YR	7920.00	242.72	258.44	252.66	258.99	0.001397	6.56	2061.04	473.79	0.33
USACE	3619	25YR	10600.00	242.72	260.34	254.28	260.83	0.001164	6.60	3022.18	531.20	0.31
USACE	3619	50YR	12700.00	242.72	261.71	257.00	262.16	0.001013	6.55	3763.63	552.29	0.29
USACE	3619	100YR	15100.00	242.72	263.24	257.95	263.64	0.000872	6.47	4631.35	579.98	0.28
USACE	3619	100YRPLUS	19748.00	242.72	266.66	259.08	266.96	0.000576	5.94	6688.36	624.27	0.23
USACE	3619	200YR	17700.00	242.72	264.92	258.58	265.28	0.000730	6.30	5623.50	601.34	0.26
USACE	3619	500YR	21700.00	242.72	268.15	259.65	268.42	0.000485	5.71	7634.70	638.28	0.22
USACE	3619	SEPT2011	15100.00	242.72	263.24	257.95	263.64	0.000872	6.47	4631.35	579.98	0.28
USACE	3357	2YR	3820.00	242.35	254.25	248.65	254.61	0.001215	4.80	801.54	187.91	0.29
USACE	3357	5YR	6110.00	242.35	256.78	250.51	257.18	0.001043	5.31	1656.65	401.81	0.29
USACE	3357	10YR	7920.00	242.35	258.25	251.70	258.65	0.000966	5.57	2285.32	451.68	0.28
USACE	3357	25YR	10600.00	242.35	260.16	253.21	260.55	0.000855	5.77	3187.09	488.18	0.27

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3357	50YR	12700.00	242.35	261.53	254.17	261.91	0.000782	5.87	3873.02	510.62	0.26
USACE	3357	100YR	15100.00	242.35	263.06	256.29	263.43	0.000701	5.92	4676.19	533.71	0.25
USACE	3357	100YRPLUS	19748.00	242.35	266.52	257.87	266.82	0.000499	5.65	6586.69	572.52	0.22
USACE	3357	200YR	17700.00	242.35	264.76	257.17	265.11	0.000609	5.88	5597.54	550.60	0.24
USACE	3357	500YR	21700.00	242.35	268.03	258.34	268.31	0.000431	5.51	7459.29	584.64	0.21
USACE	3357	SEPT2011	15100.00	242.35	263.06	256.29	263.43	0.000701	5.92	4676.19	533.71	0.25
USACE	3150	2YR	3820.00	242.09	253.58	249.90	254.23	0.002619	6.47	591.19	116.40	0.42
USACE	3150	5YR	6110.00	242.09	256.22	251.70	256.87	0.001929	6.82	1280.91	310.97	0.38
USACE	3150	10YR	7920.00	242.09	257.74	252.92	258.37	0.001691	7.01	1791.34	353.81	0.37
USACE	3150	25YR	10600.00	242.09	259.71	254.47	260.31	0.001419	7.14	2515.03	377.25	0.34
USACE	3150	50YR	12700.00	242.09	261.11	256.37	261.69	0.001278	7.24	3055.25	393.85	0.33
USACE	3150	100YR	15100.00	242.09	262.68	257.22	263.24	0.001134	7.29	3684.49	411.24	0.32
USACE	3150	100YRPLUS	19748.00	242.09	266.22	258.54	266.68	0.000797	6.97	5214.65	452.46	0.27
USACE	3150	200YR	17700.00	242.09	264.41	258.01	264.94	0.000986	7.27	4413.25	432.35	0.30
USACE	3150	500YR	21700.00	242.09	267.75	258.98	268.19	0.000693	6.82	5920.95	471.03	0.26
USACE	3150	SEPT2011	15100.00	242.09	262.68	257.22	263.24	0.001134	7.29	3684.49	411.24	0.32
USACE	2938	2YR	3820.00	241.72	253.35	247.91	253.77	0.001369	5.16	739.76	130.10	0.31
USACE	2938	5YR	6110.00	241.72	255.98	249.72	256.49	0.001294	5.93	1360.85	254.58	0.31
USACE	2938	10YR	7920.00	241.72	257.46	250.91	258.04	0.001307	6.47	1749.49	272.13	0.32
USACE	2938	25YR	10600.00	241.72	259.34	252.43	260.01	0.001308	7.11	2280.50	289.02	0.33
USACE	2938	50YR	12700.00	241.72	260.69	253.54	261.41	0.001294	7.50	2674.38	297.41	0.33
USACE	2938	100YR	15100.00	241.72	262.20	255.52	262.97	0.001251	7.84	3134.77	309.03	0.33
USACE	2938	100YRPLUS	19748.00	241.72	265.75	257.20	266.47	0.000986	7.88	4265.66	329.00	0.30
USACE	2938	200YR	17700.00	241.72	263.91	256.48	264.69	0.001161	8.04	3670.39	318.34	0.32
USACE	2938	500YR	21700.00	241.72	267.30	257.80	267.99	0.000887	7.84	4780.82	337.21	0.29
USACE	2938	SEPT2011	15100.00	241.72	262.20	255.52	262.97	0.001251	7.84	3134.77	309.03	0.33
USACE	2681	2YR	3820.00	241.34	253.07	247.57	253.42	0.001175	4.76	803.17	175.69	0.29
USACE	2681	5YR	6110.00	241.34	255.72	249.30	256.17	0.001112	5.47	1423.17	251.58	0.29
USACE	2681	10YR	7920.00	241.34	257.20	250.42	257.71	0.001137	6.02	1809.03	276.54	0.30
USACE	2681	25YR	10600.00	241.34	259.08	251.84	259.68	0.001156	6.66	2359.66	306.87	0.31
USACE	2681	50YR	12700.00	241.34	260.42	252.84	261.08	0.001152	7.06	2786.20	328.06	0.31
USACE	2681	100YR	15100.00	241.34	261.95	253.85	262.65	0.001110	7.38	3304.43	349.82	0.31
USACE	2681	100YRPLUS	19748.00	241.34	265.57	256.34	266.21	0.000856	7.36	4677.85	399.37	0.28
USACE	2681	200YR	17700.00	241.34	263.68	255.65	264.39	0.001035	7.59	3935.97	382.80	0.31
USACE	2681	500YR	21700.00	241.34	267.15	256.79	267.76	0.000753	7.25	5317.81	409.51	0.27
USACE	2681	SEPT2011	15100.00	241.34	261.95	253.85	262.65	0.001110	7.38	3304.43	349.82	0.31
USACE	2230	2YR	3820.00	240.65	252.21		252.74	0.001889	5.82	656.05	80.89	0.36
USACE	2230	5YR	6110.00	240.65	254.94		255.55	0.001656	6.43	1150.58	247.35	0.35
USACE	2230	10YR	7920.00	240.65	256.51		257.12	0.001498	6.71	1564.05	284.74	0.34
USACE	2230	25YR	10600.00	240.65	258.53		259.13	0.001295	6.92	2174.51	328.03	0.33
USACE	2230	50YR	12700.00	240.65	259.94		260.54	0.001192	7.08	2669.77	379.59	0.32
USACE	2230	100YR	15100.00	240.65	261.59		262.13	0.000998	6.93	3325.34	410.57	0.30
USACE	2230	100YRPLUS	19748.00	240.65	265.46		265.82	0.000578	6.04	5058.02	474.23	0.23
USACE	2230	200YR	17700.00	240.65	263.45		263.91	0.000803	6.65	4117.55	449.74	0.27
USACE	2230	500YR	21700.00	240.65	267.10		267.41	0.000467	5.71	5846.56	488.41	0.21
USACE	2230	SEPT2011	15100.00	240.65	261.59		262.13	0.000998	6.93	3325.34	410.57	0.30
USACE	1853	2YR	3820.00	240.02	250.67		251.64	0.004591	7.90	483.83	74.63	0.55
USACE	1853	5YR	6110.00	240.02	253.56		254.62	0.003558	8.35	827.19	197.72	0.50
USACE	1853	10YR	7920.00	240.02	255.50		256.38	0.002508	7.99	1360.63	320.84	0.43
USACE	1853	25YR	10600.00	240.02	257.93		258.59	0.001615	7.37	2226.88	382.80	0.36
USACE	1853	50YR	12700.00	240.02	259.49		260.06	0.001320	7.18	2849.87	426.22	0.33
USACE	1853	100YR	15100.00	240.02	261.26		261.74	0.001021	6.82	3646.68	462.93	0.30
USACE	1853	100YRPLUS	19748.00	240.02	265.29		265.60	0.000535	5.73	5612.13	496.66	0.22
USACE	1853	200YR	17700.00	240.02	263.20		263.60	0.000768	6.38	4587.19	488.00	0.26
USACE	1853	500YR	21700.00	240.02	266.97		267.23	0.000430	5.41	6452.97	506.60	0.20
USACE	1853	SEPT2011	15100.00	240.02	261.26		261.74	0.001021	6.82	3646.68	462.93	0.30
USACE	1604	2YR	3820.00	238.80	250.35	245.10	250.85	0.001660	5.67	674.11	77.34	0.34
USACE	1604	5YR	6110.00	238.80	253.23	246.99	253.91	0.001709	6.65	1013.48	296.33	0.35
USACE	1604	10YR	7920.00	238.80	255.28	248.26	255.85	0.001278	6.45	1781.00	370.29	0.32
USACE	1604	25YR	10600.00	238.80	257.77	249.96	258.23	0.000936	6.21	2757.46	420.82	0.28
USACE	1604	50YR	12700.00	238.80	259.35	251.17	259.77	0.000802	6.13	3443.37	444.28	0.26
USACE	1604	100YR	15100.00	238.80	261.13	253.36	261.51	0.000677	6.02	4250.90	473.64	0.24
USACE	1604	100YRPLUS	19748.00	238.80	265.21	255.80	265.47	0.000412	5.35	6234.42	500.94	0.20
USACE	1604	200YR	17700.00	238.80	263.10	255.18	263.42	0.000545	5.77	5194.54	484.16	0.22
USACE	1604	500YR	21700.00	238.80	266.89	256.33	267.13	0.000344	5.13	7083.80	506.21	0.18
USACE	1604	SEPT2011	15100.00	238.80	261.13	253.36	261.51	0.000677	6.02	4250.90	473.64	0.24
USACE	1368	2YR	3820.00	238.26	249.94	244.83	250.45	0.001775	5.73	666.67	80.00	0.35
USACE	1368	5YR	6110.00	238.26	252.79	246.74	253.49	0.001869	6.71	913.19	244.17	0.37
USACE	1368	10YR	7920.00	238.26	254.91	248.02	255.53	0.001425	6.58	1634.31	422.09	0.33
USACE	1368	25YR	10600.00	238.26	257.44	249.75	257.99	0.001085	6.51	2435.34	478.79	0.30
USACE	1368	50YR	12700.00	238.26	259.01	250.96	259.55	0.000984	6.63	2954.09	516.41	0.29
USACE	1368	100YR	15100.00	238.26	260.79	252.16	261.31	0.000871	6.69	3563.49	540.08	0.28
USACE	1368	100YRPLUS	19748.00	238.26	264.90	255.34	265.34	0.000602	6.37	4997.46	635.14	0.24
USACE	1368	200YR	17700.00	238.26	262.75	254.70	263.25	0.000755	6.67	4246.45	572.37	0.26
USACE	1368	500YR	21700.00	238.26	266.60	255.88	267.01	0.000528	6.27	5591.78	637.60	0.23
USACE	1368	SEPT2011	15100.00	238.26	260.79	252.16	261.31	0.000871	6.69	3563.49	540.08	0.28
USACE	1212	2YR	3820.00	237.76	248.16	246.28	249.83	0.007650	10.36	368.59	50.67	0.68

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1212	5YR	6110.00	237.76	250.16	248.61	252.74	0.009652	12.88	474.28	190.43	0.77
USACE	1212	10YR	7920.00	237.76	251.90	250.20	254.83	0.009605	13.75	588.76	276.56	0.78
USACE	1212	25YR	10600.00	237.76	254.42	252.65	257.38	0.008172	14.00	890.77	493.89	0.74
USACE	1212	50YR	12700.00	237.76	256.21	254.54	259.00	0.006712	13.86	1180.57	541.64	0.68
USACE	1212	100YR	15100.00	237.76	258.39	255.78	260.84	0.005041	13.34	1597.85	585.76	0.61
USACE	1212	100YRPLUS	19748.00	237.76	263.45	258.02	265.05	0.002496	11.40	2729.90	810.41	0.45
USACE	1212	200YR	17700.00	237.76	260.82	257.25	262.87	0.003663	12.57	2133.63	778.97	0.53
USACE	1212	500YR	21700.00	237.76	265.32	258.75	266.76	0.002068	11.01	3151.64	818.42	0.41
USACE	1212	SEPT2011	15100.00	237.76	258.39	255.78	260.84	0.005041	13.34	1597.85	585.76	0.61
USACE	1076	2YR	4140.00	237.49	248.54	243.13	248.84	0.001070	4.40	940.30	118.47	0.28
USACE	1076	5YR	6540.00	237.49	250.87	244.62	251.32	0.001239	5.32	1228.43	129.27	0.30
USACE	1076	10YR	8420.00	237.49	252.76	245.63	253.26	0.001262	5.67	1485.56	144.35	0.31
USACE	1076	25YR	11300.00	237.49	255.30	246.99	255.87	0.001103	6.07	1875.50	167.48	0.30
USACE	1076	50YR	13400.00	237.49	257.01	247.89	257.63	0.001012	6.33	2144.01	268.50	0.29
USACE	1076	100YR	15900.00	237.49	259.04	248.89	259.70	0.000914	6.57	2461.90	677.39	0.29
USACE	1076	100YRPLUS	20794.00	237.49	263.75	250.63	264.43	0.000667	6.65	3203.06	1260.34	0.26
USACE	1076	200YR	18200.00	237.49	261.31	249.73	261.98	0.000774	6.59	2818.94	1075.60	0.27
USACE	1076	500YR	22600.00	237.49	265.56	251.27	266.24	0.000598	6.64	3487.16	1272.20	0.24
USACE	1076	SEPT2011	15900.00	237.49	259.04	248.89	259.70	0.000914	6.57	2461.90	677.39	0.29
USACE	959 Chiques Hill Rd		Bridge									
USACE	858	2YR	4140.00	237.20	247.13	243.37	247.78	0.002589	6.45	642.13	87.30	0.42
USACE	858	5YR	6540.00	237.20	249.11	245.11	250.09	0.003208	7.95	822.82	95.46	0.48
USACE	858	10YR	8420.00	237.20	250.97	246.30	252.05	0.003060	8.35	1009.17	107.13	0.47
USACE	858	25YR	11300.00	237.20	253.43	247.89	254.64	0.002600	8.86	1321.36	281.63	0.45
USACE	858	50YR	13400.00	237.20	255.11	248.97	256.38	0.002308	9.12	1584.86	493.04	0.44
USACE	858	100YR	15900.00	237.20	257.17	250.14	258.47	0.001970	9.26	1909.69	954.55	0.41
USACE	858	100YRPLUS	20794.00	237.20	260.50	252.18	261.92	0.001701	9.78	2432.19	1199.73	0.40
USACE	858	200YR	18200.00	237.20	258.79	251.16	260.15	0.001820	9.50	2164.26	979.35	0.40
USACE	858	500YR	22600.00	237.20	261.75	252.85	263.20	0.001602	9.90	2628.92	1361.03	0.39
USACE	858	SEPT2011	15900.00	237.20	257.17	250.14	258.47	0.001970	9.26	1909.69	954.55	0.41
USACE	754	2YR	4140.00	237.01	246.33	243.52	247.33	0.004297	8.02	516.08	72.47	0.53
USACE	754	5YR	6540.00	237.01	247.62	245.44	249.39	0.006564	10.69	612.02	76.31	0.67
USACE	754	10YR	8420.00	237.01	249.44	246.73	251.37	0.005961	11.14	755.88	81.73	0.65
USACE	754	25YR	11300.00	237.01	252.17	248.49	254.08	0.004703	11.17	1139.28	240.00	0.59
USACE	754	50YR	13400.00	237.01	254.30	249.64	255.97	0.003396	10.67	1572.40	376.13	0.52
USACE	754	100YR	15900.00	237.01	256.74	251.52	258.19	0.002465	10.17	2189.30	1027.88	0.45
USACE	754	100YRPLUS	20794.00	237.01	260.41	253.69	261.66	0.001739	9.83	3253.66	1468.91	0.39
USACE	754	200YR	18200.00	237.01	258.61	252.68	259.93	0.002009	9.90	2733.13	1160.50	0.42
USACE	754	500YR	22600.00	237.01	261.71	254.29	262.91	0.001561	9.73	3633.45	1531.27	0.38
USACE	754	SEPT2011	15900.00	237.01	256.74	251.52	258.19	0.002465	10.17	2189.30	1027.88	0.45
USACE	675	2YR	4140.00	236.89	246.10	243.14	246.98	0.003738	7.51	551.35	88.69	0.50
USACE	675	5YR	6540.00	236.89	247.24	244.94	248.85	0.005966	10.20	640.92	96.17	0.64
USACE	675	10YR	8420.00	236.89	249.14	246.15	250.87	0.005206	10.54	801.35	219.18	0.61
USACE	675	25YR	11300.00	236.89	251.96	247.80	253.69	0.003816	10.66	1202.37	681.38	0.54
USACE	675	50YR	13400.00	236.89	254.15	248.94	255.69	0.002822	10.25	1702.12	970.77	0.48
USACE	675	100YR	15900.00	236.89	256.69	250.23	257.97	0.002007	9.64	2458.98	1411.41	0.41
USACE	675	100YRPLUS	20794.00	236.89	260.42	253.03	261.48	0.001407	9.23	3835.30	1998.19	0.36
USACE	675	200YR	18200.00	236.89	258.58	251.58	259.74	0.001652	9.39	3147.11	1750.86	0.38
USACE	675	500YR	22600.00	236.89	261.75	253.81	262.74	0.001249	9.06	4335.12	2021.96	0.34
USACE	675	SEPT2011	15900.00	236.89	256.69	250.23	257.97	0.002007	9.64	2458.99	1411.41	0.41
USACE	607	2YR	4140.00	236.71	246.14	242.49	246.57	0.001977	5.24	789.54	139.31	0.36
USACE	607	5YR	6540.00	236.71	247.40	243.89	248.14	0.002875	6.90	948.08	150.90	0.45
USACE	607	10YR	8420.00	236.71	249.43	244.83	250.14	0.002163	6.80	1357.66	507.83	0.40
USACE	607	25YR	11300.00	236.71	252.35	246.13	253.00	0.001408	6.61	2008.58	932.17	0.34
USACE	607	50YR	13400.00	236.71	254.50	246.96	255.12	0.001083	6.48	2489.39	1304.64	0.31
USACE	607	100YR	15900.00	236.71	256.98	248.08	257.50	0.000799	6.21	3995.43	1713.71	0.27
USACE	607	100YRPLUS	20794.00	236.71	260.68	249.80	261.09	0.000547	5.88	6098.11	2332.22	0.23
USACE	607	200YR	18200.00	236.71	258.86	249.00	259.32	0.000641	5.98	5066.38	2160.86	0.25
USACE	607	500YR	22600.00	236.71	261.99	250.29	262.39	0.000487	5.79	6846.63	2341.71	0.22
USACE	607	SEPT2011	15900.00	236.71	256.98	248.08	257.50	0.000799	6.21	3995.45	1713.71	0.27
USACE	555 River Trail		Mult Open									
USACE	517	2YR	4140.00	236.48	246.09	240.71	246.30	0.000685	3.71	1236.80	215.74	0.22
USACE	517	5YR	6540.00	236.48	247.33	241.92	247.71	0.001061	5.06	1463.39	299.35	0.29
USACE	517	10YR	8420.00	236.48	249.32	242.78	249.74	0.000919	5.33	1845.66	376.32	0.27
USACE	517	25YR	11300.00	236.48	252.09	243.95	252.56	0.000784	5.67	2407.78	422.71	0.26
USACE	517	50YR	13400.00	236.48	253.96	244.69	254.45	0.000714	5.87	2796.29	459.65	0.26
USACE	517	100YR	15900.00	236.48	256.07	245.50	256.60	0.000662	6.13	3794.71	1095.56	0.25
USACE	517	100YRPLUS	20794.00	236.48	260.18	246.96	260.63	0.000471	5.91	5763.68	2345.83	0.22
USACE	517	200YR	18200.00	236.48	258.04	246.20	258.53	0.000558	6.02	4736.42	1915.12	0.23
USACE	517	500YR	22600.00	236.48	261.63	247.46	262.06	0.000424	5.85	6457.37	2377.90	0.21
USACE	517	SEPT2011	15900.00	236.48	256.07	245.50	256.60	0.000662	6.13	3794.71	1095.56	0.25
USACE	443	2YR	4140.00	236.00	245.88	240.92	246.20	0.001141	4.51	918.34	118.55	0.28
USACE	443	5YR	6540.00	236.00	246.93	242.38	247.54	0.001877	6.29	1043.87	136.73	0.37
USACE	443	10YR	8420.00	236.00	248.89	243.35	249.57	0.001598	6.63	1288.15	266.20	0.35
USACE	443	25YR	11300.00	236.00	251.62	244.61	252.39	0.001353	7.08	1663.08	346.69	0.34
USACE	443	50YR	13400.00	236.00	253.46	245.43	254.29	0.001228	7.34	2018.01	588.19	0.33

HEC-RAS Plan: Existing River: ChiquesCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	443	100YR	15900.00	236.00	255.62	246.34	256.45	0.001062	7.45	2607.25	1040.76	0.31
USACE	443	100YRPLUS	20794.00	236.00	259.70	248.01	260.49	0.000806	7.46	3752.01	2303.02	0.28
USACE	443	200YR	18200.00	236.00	257.57	247.15	258.38	0.000926	7.46	3153.19	1461.10	0.30
USACE	443	500YR	22600.00	236.00	261.14	248.58	261.92	0.000740	7.46	4156.99	2449.14	0.27
USACE	443	SEPT2011	15900.00	236.00	255.62	246.34	256.45	0.001062	7.45	2607.25	1040.76	0.31
USACE	332	2YR	4140.00	235.11	245.83	239.70	246.08	0.000767	3.99	1038.41	151.76	0.24
USACE	332	5YR	6540.00	235.11	246.83	241.11	247.33	0.001380	5.65	1157.32	226.87	0.32
USACE	332	10YR	8420.00	235.11	248.81	242.07	249.38	0.001235	6.03	1404.19	514.62	0.31
USACE	332	25YR	11300.00	235.11	251.57	243.38	252.22	0.001075	6.49	1880.22	715.78	0.30
USACE	332	50YR	13400.00	235.11	253.44	244.24	254.12	0.000968	6.68	2346.37	934.29	0.29
USACE	332	100YR	15900.00	235.11	255.62	245.21	256.30	0.000845	6.79	2936.35	1186.58	0.28
USACE	332	100YRPLUS	20794.00	235.11	259.71	246.96	260.37	0.000661	6.86	4154.07	2475.09	0.25
USACE	332	200YR	18200.00	235.11	257.57	246.06	258.24	0.000751	6.84	3512.14	1448.35	0.27
USACE	332	500YR	22600.00	235.11	261.16	247.53	261.80	0.000610	6.87	4588.05	2684.24	0.25
USACE	332	SEPT2011	15900.00	235.11	255.62	245.21	256.30	0.000845	6.79	2936.35	1186.58	0.28
USACE	241	2YR	4140.00	234.19	245.81	238.68	246.00	0.000533	3.54	1171.35	206.21	0.20
USACE	241	5YR	6540.00	234.19	246.80	240.08	247.19	0.000980	5.07	1292.22	234.43	0.27
USACE	241	10YR	8420.00	234.19	248.79	241.04	249.25	0.000914	5.49	1547.17	627.90	0.27
USACE	241	25YR	11300.00	234.19	251.55	242.33	252.10	0.000834	5.99	2034.54	1093.83	0.27
USACE	241	50YR	13400.00	234.19	253.42	243.18	254.01	0.000779	6.25	2416.00	1194.88	0.27
USACE	241	100YR	15900.00	234.19	255.59	244.14	256.22	0.000715	6.47	2863.88	1370.73	0.26
USACE	241	100YRPLUS	20794.00	234.19	259.63	245.83	260.31	0.000615	6.81	3754.53	2423.08	0.25
USACE	241	200YR	18200.00	234.19	257.52	244.97	258.17	0.000663	6.64	3267.92	1514.72	0.25
USACE	241	500YR	22600.00	234.19	261.06	246.42	261.75	0.000582	6.90	4112.28	2927.85	0.24
USACE	241	SEPT2011	15900.00	234.19	255.59	244.14	256.22	0.000715	6.47	2863.88	1370.73	0.26
USACE	164	2YR	4140.00	233.20	245.81	238.10	245.94	0.000322	2.82	1482.06	432.05	0.16
USACE	164	5YR	6540.00	233.20	246.81	239.35	247.06	0.000581	4.04	1641.92	510.18	0.22
USACE	164	10YR	8420.00	233.20	248.82	240.20	249.11	0.000545	4.38	1965.62	723.72	0.22
USACE	164	25YR	11300.00	233.20	251.60	241.37	251.96	0.000508	4.82	2416.27	1087.55	0.21
USACE	164	50YR	13400.00	233.20	253.47	242.14	253.87	0.000488	5.09	2719.61	1215.61	0.21
USACE	164	100YR	15900.00	233.20	255.64	242.97	256.08	0.000465	5.37	3070.32	1337.95	0.21
USACE	164	100YRPLUS	20794.00	233.20	259.67	244.42	260.19	0.000425	5.81	3724.10	2056.97	0.21
USACE	164	200YR	18200.00	233.20	257.57	243.68	258.04	0.000445	5.59	3382.95	1420.37	0.21
USACE	164	500YR	22600.00	233.20	261.09	244.91	261.64	0.000412	5.95	3954.89	2854.45	0.21
USACE	164	SEPT2011	15900.00	233.20	255.64	242.97	256.08	0.000465	5.37	3070.32	1337.95	0.21
USACE	128 Railroad		Bridge									
USACE	60	2YR	4140.00	232.82	243.90	236.33	243.98	0.000200	2.14	1936.64	240.00	0.12
USACE	60	5YR	6540.00	232.82	246.82	237.31	246.93	0.000200	2.57	2558.34	810.25	0.13
USACE	60	10YR	8420.00	232.82	248.81	237.99	248.93	0.000200	2.85	2981.11	1314.21	0.13
USACE	60	25YR	11300.00	232.82	251.54	238.93	251.70	0.000200	3.20	3562.33	1456.43	0.14
USACE	60	50YR	13400.00	232.82	253.35	239.52	253.53	0.000200	3.43	3947.60	1684.90	0.14
USACE	60	100YR	15900.00	232.82	255.37	240.20	255.58	0.000200	3.67	4378.80	2075.66	0.14
USACE	60	100YRPLUS	20794.00	232.82	258.98	241.39	259.24	0.000200	4.08	5148.22	2564.24	0.15
USACE	60	200YR	18200.00	232.82	257.12	240.78	257.35	0.000200	3.87	4751.25	2282.91	0.14
USACE	60	500YR	22600.00	232.82	260.21	241.80	260.49	0.000200	4.22	5410.79	2937.03	0.15
USACE	60	SEPT2011	15900.00	232.82	255.37	240.20	255.58	0.000200	3.67	4378.80	2075.66	0.14

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	15386	2YR	162.00	449.58	451.77	451.77	452.16	0.013795	5.82	46.85	59.06	0.81
USACE	15386	5YR	262.00	449.58	452.13	452.13	452.57	0.013414	6.57	74.44	99.89	0.83
USACE	15386	10YR	341.00	449.58	452.39	452.39	452.81	0.011771	6.70	105.65	134.47	0.79
USACE	15386	25YR	471.00	449.58	452.65	452.61	453.08	0.011819	7.22	141.57	146.13	0.81
USACE	15386	50YR	571.00	449.58	452.82	452.78	453.26	0.011789	7.54	167.49	155.52	0.82
USACE	15386	100YR	677.00	449.58	453.10		453.46	0.009223	7.14	212.32	164.97	0.74
USACE	15386	100YRPLUS	885.00	449.58	453.41		453.80	0.009051	7.57	269.27	191.07	0.74
USACE	15386	200YR	784.00	449.58	453.27		453.64	0.009083	7.36	242.72	180.02	0.74
USACE	15386	500YR	931.00	449.58	453.50		453.87	0.008591	7.51	285.54	193.15	0.73
USACE	15386	SEPT2011	278.00	449.58	452.16	452.16	452.62	0.013882	6.75	77.66	102.40	0.85
USACE	15162	2YR	162.00	446.74	449.28		449.54	0.008903	4.32	48.13	48.57	0.55
USACE	15162	5YR	262.00	446.74	449.80	449.31	450.10	0.008274	4.88	80.75	72.76	0.55
USACE	15162	10YR	341.00	446.74	450.09		450.42	0.008311	5.26	103.13	82.98	0.56
USACE	15162	25YR	471.00	446.74	450.45		450.83	0.008596	5.81	135.03	93.09	0.58
USACE	15162	50YR	571.00	446.74	450.77		451.13	0.007748	5.89	166.54	102.59	0.56
USACE	15162	100YR	677.00	446.74	450.82		451.30	0.010129	6.80	171.45	103.22	0.64
USACE	15162	100YRPLUS	885.00	446.74	451.26		451.74	0.009329	7.06	217.93	108.70	0.63
USACE	15162	200YR	784.00	446.74	451.04		451.53	0.009786	6.97	195.03	106.15	0.64
USACE	15162	500YR	931.00	446.74	451.29		451.80	0.009868	7.30	221.68	109.11	0.65
USACE	15162	SEPT2011	278.00	446.74	449.85	449.42	450.17	0.008366	4.98	84.93	74.28	0.55
USACE	14887	2YR	162.00	443.48	445.82	445.49	446.27	0.016382	5.44	31.20	26.14	0.72
USACE	14887	5YR	262.00	443.48	446.30	446.30	446.91	0.016926	6.50	53.80	61.92	0.76
USACE	14887	10YR	341.00	443.48	446.58	446.58	447.24	0.016705	6.98	71.80	67.25	0.77
USACE	14887	25YR	471.00	443.48	447.00	447.00	447.69	0.015550	7.46	103.24	84.65	0.77
USACE	14887	50YR	571.00	443.48	447.14	447.14	447.97	0.018159	8.32	115.48	90.31	0.83
USACE	14887	100YR	677.00	443.48	447.61	447.61	448.22	0.012370	7.54	170.36	128.28	0.70
USACE	14887	100YRPLUS	885.00	443.48	447.84	447.84	448.56	0.014428	8.50	201.10	140.46	0.77
USACE	14887	200YR	784.00	443.48	447.75	447.75	448.40	0.013233	8.00	187.98	133.03	0.73
USACE	14887	500YR	931.00	443.48	447.96	447.96	448.64	0.013470	8.38	218.00	148.73	0.75
USACE	14887	SEPT2011	278.00	443.48	446.37	446.37	446.98	0.016664	6.58	58.01	63.06	0.76
USACE	14652	2YR	162.00	441.78	443.94		444.08	0.005559	3.39	92.08	151.70	0.43
USACE	14652	5YR	262.00	441.78	444.27		444.43	0.005869	3.87	142.45	155.61	0.46
USACE	14652	10YR	341.00	441.78	444.48		444.65	0.006039	4.17	176.05	160.30	0.47
USACE	14652	25YR	471.00	441.78	444.79		444.97	0.006176	4.57	225.67	166.28	0.48
USACE	14652	50YR	571.00	441.78	445.00		445.19	0.006163	4.79	261.04	168.78	0.49
USACE	14652	100YR	677.00	441.78	445.18		445.39	0.006388	5.07	291.74	170.47	0.50
USACE	14652	100YRPLUS	885.00	441.78	445.56		445.78	0.006203	5.39	356.50	173.36	0.51
USACE	14652	200YR	784.00	441.78	445.39		445.60	0.006157	5.20	328.24	172.16	0.50
USACE	14652	500YR	931.00	441.78	445.66		445.87	0.005987	5.40	373.90	174.10	0.50
USACE	14652	SEPT2011	278.00	441.78	444.35		444.50	0.005362	3.80	155.82	157.07	0.44
USACE	14426	2YR	291.00	439.79	441.68		441.85	0.014806	4.89	117.16	167.51	0.68
USACE	14426	5YR	481.00	439.79	442.01		442.21	0.014008	5.40	175.88	185.63	0.69
USACE	14426	10YR	639.00	439.79	442.25	441.92	442.46	0.013219	5.67	220.71	190.75	0.68
USACE	14426	25YR	901.00	439.79	442.59	442.17	442.82	0.012465	6.07	285.81	193.87	0.68
USACE	14426	50YR	1106.00	439.79	442.83		443.08	0.011931	6.32	333.40	196.47	0.67
USACE	14426	100YR	1325.00	439.79	443.11		443.36	0.010907	6.44	388.15	200.04	0.65
USACE	14426	100YRPLUS	1733.00	439.79	443.49		443.78	0.010850	6.96	466.69	207.96	0.66
USACE	14426	200YR	1550.00	439.79	443.33		443.60	0.010841	6.73	432.57	204.16	0.66
USACE	14426	500YR	1862.00	439.79	443.61		443.91	0.010779	7.10	491.06	210.03	0.67
USACE	14426	SEPT2011	569.00	439.79	442.15		442.35	0.013453	5.55	201.92	189.46	0.68
USACE	14195	2YR	291.00	435.64	439.18		439.40	0.008128	5.28	123.88	127.10	0.54
USACE	14195	5YR	481.00	435.64	439.65		439.86	0.007858	5.72	187.55	141.91	0.54
USACE	14195	10YR	639.00	435.64	439.94		440.17	0.007905	6.06	229.62	146.59	0.55
USACE	14195	25YR	901.00	435.64	440.36		440.60	0.007825	6.47	291.84	151.06	0.56
USACE	14195	50YR	1106.00	435.64	440.64		440.91	0.007819	6.76	336.04	160.63	0.56
USACE	14195	100YR	1325.00	435.64	440.97		441.25	0.008020	7.17	390.83	176.94	0.58
USACE	14195	100YRPLUS	1733.00	435.64	441.44		441.74	0.007634	7.45	477.19	184.07	0.57
USACE	14195	200YR	1550.00	435.64	441.24		441.53	0.007799	7.33	439.43	181.37	0.57
USACE	14195	500YR	1862.00	435.64	441.58		441.89	0.007542	7.54	502.94	185.99	0.57
USACE	14195	SEPT2011	569.00	435.64	439.81		440.03	0.007954	5.94	211.00	144.75	0.55
USACE	13915	2YR	291.00	433.71	436.41		436.65	0.012031	5.45	102.90	94.18	0.64
USACE	13915	5YR	481.00	433.71	436.88		437.16	0.011877	6.16	151.23	107.91	0.66
USACE	13915	10YR	639.00	433.71	437.22		437.51	0.011314	6.50	188.37	114.14	0.66
USACE	13915	25YR	901.00	433.71	437.68		438.01	0.010870	7.00	242.98	121.83	0.66
USACE	13915	50YR	1106.00	433.71	437.99		438.34	0.010677	7.33	280.87	125.33	0.66
USACE	13915	100YR	1325.00	433.71	438.28		438.67	0.010496	7.64	318.63	128.06	0.66
USACE	13915	100YRPLUS	1733.00	433.71	438.77		439.21	0.010577	8.26	382.73	135.04	0.68
USACE	13915	200YR	1550.00	433.71	438.57		438.98	0.010497	7.99	355.19	132.12	0.67
USACE	13915	500YR	1862.00	433.71	438.91		439.37	0.010614	8.44	401.59	136.85	0.68
USACE	13915	SEPT2011	569.00	433.71	437.08		437.37	0.011441	6.34	172.82	111.66	0.65
USACE	13675	2YR	291.00	430.76	434.11		434.39	0.007675	5.58	110.87	89.52	0.57
USACE	13675	5YR	481.00	430.76	434.74		435.02	0.007045	6.07	175.35	110.82	0.56
USACE	13675	10YR	639.00	430.76	435.13		435.42	0.007013	6.48	220.44	122.27	0.57
USACE	13675	25YR	901.00	430.76	435.66		435.97	0.006868	6.96	289.89	136.55	0.57
USACE	13675	50YR	1106.00	430.76	436.01		436.33	0.006788	7.26	337.87	142.45	0.58
USACE	13675	100YR	1325.00	430.76	436.34		436.68	0.006695	7.54	386.87	148.24	0.58
USACE	13675	100YRPLUS	1733.00	430.76	436.88		437.25	0.006482	7.92	469.22	155.63	0.58
USACE	13675	200YR	1550.00	430.76	436.65		437.01	0.006596	7.77	433.54	153.04	0.58
USACE	13675	500YR	1862.00	430.76	437.05		437.41	0.006378	8.00	494.53	156.63	0.58
USACE	13675	SEPT2011	569.00	430.76	434.96		435.26	0.007072	6.33	200.70	118.04	0.57

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	13453	2YR	291.00	428.57	431.75		432.15	0.013644	6.69	94.56	74.29	0.71
USACE	13453	5YR	481.00	428.57	432.31		432.80	0.014947	7.92	141.24	94.35	0.76
USACE	13453	10YR	639.00	428.57	432.68		433.21	0.014933	8.49	177.67	100.77	0.78
USACE	13453	25YR	901.00	428.57	433.22		433.79	0.014794	9.26	234.27	111.40	0.79
USACE	13453	50YR	1106.00	428.57	433.59		434.19	0.014456	9.68	277.75	118.90	0.79
USACE	13453	100YR	1325.00	428.57	433.95		434.57	0.014247	10.10	320.56	124.54	0.80
USACE	13453	100YRPLUS	1733.00	428.57	434.53		435.19	0.013808	10.71	395.98	132.31	0.80
USACE	13453	200YR	1550.00	428.57	434.28		434.92	0.014010	10.45	362.52	128.86	0.80
USACE	13453	500YR	1862.00	428.57	434.71		435.38	0.013748	10.91	419.43	135.85	0.80
USACE	13453	SEPT2011	569.00	428.57	432.52		433.03	0.014854	8.23	162.15	97.71	0.77
USACE	13204	2YR	291.00	426.68	429.76		429.91	0.006029	4.44	155.20	117.39	0.47
USACE	13204	5YR	481.00	426.68	430.39		430.55	0.005627	4.93	232.37	130.00	0.48
USACE	13204	10YR	639.00	426.68	430.79		430.97	0.005558	5.29	286.35	136.72	0.48
USACE	13204	25YR	901.00	426.68	431.36		431.56	0.005533	5.80	367.34	147.22	0.49
USACE	13204	50YR	1106.00	426.68	431.72		431.94	0.005690	6.20	421.34	152.72	0.51
USACE	13204	100YR	1325.00	426.68	432.06		432.30	0.005832	6.57	472.82	155.65	0.52
USACE	13204	100YRPLUS	1733.00	426.68	432.60		432.88	0.006145	7.23	558.36	160.43	0.54
USACE	13204	200YR	1550.00	426.68	432.36		432.63	0.005996	6.94	521.15	158.09	0.53
USACE	13204	500YR	1862.00	426.68	432.75		433.05	0.006248	7.42	583.64	162.09	0.55
USACE	13204	SEPT2011	569.00	426.68	430.62		430.79	0.005586	5.14	263.09	133.83	0.48
USACE	12888	2YR	291.00	424.12	427.37		427.61	0.008899	5.01	105.95	85.67	0.52
USACE	12888	5YR	481.00	424.12	427.83		428.14	0.010785	6.06	147.36	96.89	0.58
USACE	12888	10YR	639.00	424.12	428.13		428.49	0.011716	6.68	177.03	101.49	0.61
USACE	12888	25YR	901.00	424.12	428.56		428.99	0.012839	7.51	226.65	119.02	0.65
USACE	12888	50YR	1106.00	424.12	428.83		429.30	0.013237	7.95	259.36	121.66	0.67
USACE	12888	100YR	1325.00	424.12	429.10		429.60	0.013358	8.31	292.60	123.23	0.68
USACE	12888	100YRPLUS	1733.00	424.12	429.60		430.14	0.012857	8.72	355.08	126.06	0.68
USACE	12888	200YR	1550.00	424.12	429.38		429.90	0.013131	8.56	327.18	124.81	0.68
USACE	12888	500YR	1862.00	424.12	429.76		430.31	0.012596	8.80	375.14	127.07	0.67
USACE	12888	SEPT2011	569.00	424.12	428.00		428.34	0.011308	6.41	164.16	98.83	0.60
USACE	12518	2YR	291.00	420.71	423.66	423.38	423.92	0.011160	5.46	123.96	123.89	0.62
USACE	12518	5YR	481.00	420.71	424.24	423.82	424.47	0.008975	5.66	195.67	183.12	0.58
USACE	12518	10YR	639.00	420.71	424.64	424.06	424.87	0.008061	5.84	248.17	204.74	0.56
USACE	12518	25YR	901.00	420.71	425.25	424.37	425.48	0.007017	6.09	327.98	235.70	0.54
USACE	12518	50YR	1106.00	420.71	425.70	424.58	425.93	0.006345	6.22	388.13	238.34	0.52
USACE	12518	100YR	1325.00	420.71	426.16	424.77	426.39	0.005773	6.34	450.24	240.87	0.51
USACE	12518	100YRPLUS	1733.00	420.71	426.91	425.11	427.17	0.005213	6.63	553.21	244.88	0.49
USACE	12518	200YR	1550.00	420.71	426.59	424.97	426.83	0.005403	6.49	509.01	243.17	0.50
USACE	12518	500YR	1862.00	420.71	427.14	425.21	427.39	0.005091	6.72	583.70	246.04	0.49
USACE	12518	SEPT2011	569.00	420.71	424.47	423.95	424.70	0.008435	5.77	225.37	194.58	0.57
USACE	12257	2YR	291.00	416.88	419.96		420.51	0.015042	6.66	68.28	45.27	0.73
USACE	12257	5YR	481.00	416.88	420.59		421.32	0.016309	8.02	97.37	47.50	0.79
USACE	12257	10YR	639.00	416.88	421.07		421.90	0.016077	8.74	120.74	49.22	0.80
USACE	12257	25YR	901.00	416.88	421.77		422.76	0.015730	9.72	156.72	52.83	0.82
USACE	12257	50YR	1106.00	416.88	422.24		423.35	0.015876	10.44	181.64	55.24	0.84
USACE	12257	100YR	1325.00	416.88	422.67	422.16	423.92	0.016204	11.17	206.63	63.28	0.86
USACE	12257	100YRPLUS	1733.00	416.88	423.37	423.01	424.81	0.016587	12.27	255.61	74.78	0.88
USACE	12257	200YR	1550.00	416.88	423.07	422.47	424.43	0.016448	11.81	234.01	71.72	0.87
USACE	12257	500YR	1862.00	416.88	423.56	423.23	425.06	0.016697	12.57	270.42	77.44	0.89
USACE	12257	SEPT2011	569.00	416.88	420.86		421.65	0.016252	8.45	110.44	48.47	0.80
USACE	12086	2YR	291.00	415.30	418.38		418.67	0.007462	4.72	89.57	57.65	0.52
USACE	12086	5YR	481.00	415.30	419.28		419.60	0.005991	5.17	143.37	62.47	0.49
USACE	12086	10YR	639.00	415.30	419.96		420.30	0.005244	5.45	187.57	68.68	0.47
USACE	12086	25YR	901.00	415.30	420.70		421.11	0.005416	6.18	240.16	74.08	0.49
USACE	12086	50YR	1106.00	415.30	420.95		421.49	0.006642	7.08	259.40	76.79	0.55
USACE	12086	100YR	1325.00	415.30	421.29		421.94	0.007354	7.78	286.31	81.93	0.59
USACE	12086	100YRPLUS	1733.00	415.30	421.99		422.74	0.007611	8.57	349.88	98.49	0.61
USACE	12086	200YR	1550.00	415.30	421.68		422.39	0.007560	8.26	320.36	92.51	0.60
USACE	12086	500YR	1862.00	415.30	422.25		423.01	0.007347	8.66	376.72	104.57	0.60
USACE	12086	SEPT2011	569.00	415.30	419.67		420.00	0.005548	5.34	167.87	65.87	0.48
USACE	11861	2YR	291.00	412.97	416.11		416.64	0.010954	5.83	51.88	22.51	0.63
USACE	11861	5YR	481.00	412.97	417.06		417.81	0.010581	7.01	74.75	25.61	0.65
USACE	11861	10YR	639.00	412.97	417.74	416.79	418.64	0.010232	7.74	92.95	27.59	0.66
USACE	11861	25YR	901.00	412.97	418.87	417.63	419.66	0.007416	7.69	179.48	112.55	0.58
USACE	11861	50YR	1106.00	412.97	419.59		420.16	0.005270	7.04	270.53	132.78	0.50
USACE	11861	100YR	1325.00	412.97	420.25		420.68	0.003967	6.53	360.39	140.70	0.44
USACE	11861	100YRPLUS	1733.00	412.97	421.36		421.67	0.002628	5.88	521.84	148.77	0.37
USACE	11861	200YR	1550.00	412.97	420.94		421.28	0.002941	6.00	459.75	145.85	0.39
USACE	11861	500YR	1862.00	412.97	421.74		422.02	0.002291	5.67	578.59	151.12	0.35
USACE	11861	SEPT2011	569.00	412.97	417.45		418.28	0.010372	7.43	84.99	26.74	0.65
USACE	11743	2YR	291.00	411.81	415.01	414.17	415.47	0.008629	5.55	58.32	24.91	0.57
USACE	11743	5YR	481.00	411.81	416.05	414.97	416.69	0.008071	6.58	86.11	28.42	0.58
USACE	11743	10YR	639.00	411.81	416.82	415.54	417.56	0.007586	7.18	108.85	30.89	0.58
USACE	11743	25YR	901.00	411.81	417.91	416.39	418.80	0.007095	7.98	155.11	85.46	0.58
USACE	11743	50YR	1106.00	411.81	418.80	416.97	419.53	0.005297	7.58	237.59	166.17	0.52
USACE	11743	100YR	1325.00	411.81	419.63	418.54	420.20	0.004006	7.13	314.26	190.07	0.46
USACE	11743	100YRPLUS	1733.00	411.81	420.84	419.15	421.32	0.003059	6.88	427.03	202.99	0.41
USACE	11743	200YR	1550.00	411.81	420.42	418.90	420.90	0.003189	6.79	387.58	200.07	0.42
USACE	11743	500YR	1862.00	411.81	421.25	419.31	421.71	0.002771	6.75	465.57	205.71	0.39

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	11743	SEPT2011	569.00	411.81	416.49	415.30	417.19	0.007744	6.92	99.04	29.85	0.58
USACE	11690	2YR	291.00	410.30	414.73	413.32	415.07	0.004895	4.84	75.22	30.28	0.44
USACE	11690	5YR	481.00	410.30	415.78	414.27	416.26	0.005283	5.93	109.42	34.93	0.48
USACE	11690	10YR	639.00	410.30	416.57	414.86	417.14	0.005228	6.52	138.47	38.82	0.49
USACE	11690	25YR	901.00	410.30	417.70	415.70	418.37	0.005087	7.27	185.69	48.41	0.49
USACE	11690	50YR	1106.00	410.30	418.55	416.28	419.25	0.004733	7.59	238.93	134.77	0.49
USACE	11690	100YR	1325.00	410.30	419.24	416.82	419.94	0.004438	7.80	290.08	189.09	0.48
USACE	11690	100YRPLUS	1733.00	410.30	420.40	417.91	421.08	0.003943	8.02	375.89	219.23	0.46
USACE	11690	200YR	1550.00	410.30	420.01	417.56	420.66	0.003875	7.73	347.61	212.58	0.45
USACE	11690	500YR	1862.00	410.30	420.82	418.10	421.48	0.003654	7.95	407.62	227.49	0.45
USACE	11690	SEPT2011	569.00	410.30	416.24	414.60	416.77	0.005226	6.26	125.92	37.06	0.48
USACE	11660 Fairview Road		Bridge									
USACE	11630	2YR	291.00	409.85	413.87	413.65	414.62	0.015300	7.36	51.85	29.71	0.74
USACE	11630	5YR	481.00	409.85	414.47	414.47	415.64	0.020000	9.48	70.61	32.94	0.87
USACE	11630	10YR	639.00	409.85	414.94	414.94	416.39	0.021708	10.70	86.99	37.55	0.93
USACE	11630	25YR	901.00	409.85	415.97	415.97	417.31	0.016335	10.77	133.02	100.71	0.84
USACE	11630	50YR	1106.00	409.85	416.24	416.24	417.90	0.019383	12.14	145.90	122.89	0.92
USACE	11630	100YR	1325.00	409.85	417.07	417.07	418.42	0.014284	11.45	192.78	175.57	0.81
USACE	11630	100YRPLUS	1733.00	409.85	417.62	417.62	419.21	0.015496	12.62	225.42	206.58	0.85
USACE	11630	200YR	1550.00	409.85	417.37	417.37	418.87	0.015131	12.17	210.69	192.11	0.84
USACE	11630	500YR	1862.00	409.85	417.78	417.78	419.45	0.015778	12.94	235.07	210.51	0.86
USACE	11630	SEPT2011	569.00	409.85	414.73	414.73	416.07	0.021218	10.22	79.36	35.13	0.91
USACE	11582	2YR	291.00	409.84	413.73	412.43	414.02	0.004561	4.52	88.65	113.78	0.43
USACE	11582	5YR	481.00	409.84	414.17	413.89	414.56	0.006052	5.63	131.15	152.83	0.50
USACE	11582	10YR	639.00	409.84	414.47	414.19	414.91	0.006607	6.19	161.65	163.05	0.53
USACE	11582	25YR	901.00	409.84	414.90	414.57	415.42	0.007235	6.91	203.96	174.81	0.57
USACE	11582	50YR	1106.00	409.84	415.17	414.81	415.76	0.007802	7.46	230.43	180.61	0.59
USACE	11582	100YR	1325.00	409.84	415.43	415.05	416.09	0.008287	7.96	256.24	188.94	0.62
USACE	11582	100YRPLUS	1733.00	409.84	415.85	415.43	416.66	0.009085	8.78	298.32	216.87	0.66
USACE	11582	200YR	1550.00	409.84	415.68	415.26	416.42	0.008707	8.41	280.63	209.39	0.64
USACE	11582	500YR	1862.00	409.84	415.99	415.54	416.83	0.009195	8.98	311.76	219.91	0.66
USACE	11582	SEPT2011	569.00	409.84	414.36	414.07	414.77	0.006269	5.92	149.94	159.39	0.52
USACE	11472	2YR	291.00	409.15	412.81	412.47	413.29	0.009995	5.94	73.73	107.50	0.60
USACE	11472	5YR	481.00	409.15	413.58	413.27	413.87	0.006054	5.38	172.41	162.15	0.49
USACE	11472	10YR	639.00	409.15	413.96	413.57	414.22	0.005254	5.35	231.71	177.01	0.46
USACE	11472	25YR	901.00	409.15	414.45	414.02	414.70	0.004895	5.55	309.11	187.17	0.45
USACE	11472	50YR	1106.00	409.15	414.71	414.08	414.98	0.005133	5.90	352.19	191.39	0.47
USACE	11472	100YR	1325.00	409.15	414.99	414.26	415.28	0.005153	6.14	399.47	196.31	0.47
USACE	11472	100YRPLUS	1733.00	409.15	415.47	414.55	415.79	0.005101	6.48	482.79	205.19	0.48
USACE	11472	200YR	1550.00	409.15	415.27	414.43	415.57	0.005082	6.31	447.64	201.44	0.48
USACE	11472	500YR	1862.00	409.15	415.65	414.64	415.96	0.004910	6.48	513.77	208.43	0.47
USACE	11472	SEPT2011	569.00	409.15	413.91	413.47	414.13	0.004599	4.96	222.74	175.26	0.43
USACE	11297	2YR	355.00	408.36	411.39		411.77	0.007510	5.22	95.04	83.14	0.56
USACE	11297	5YR	595.00	408.36	411.75	411.75	412.36	0.011431	6.99	132.08	111.89	0.70
USACE	11297	10YR	808.00	408.36	412.06	412.06	412.75	0.012416	7.76	167.36	118.09	0.74
USACE	11297	25YR	1162.00	408.36	412.53	412.53	413.28	0.012362	8.44	228.66	134.00	0.76
USACE	11297	50YR	1442.00	408.36	412.93		413.62	0.010721	8.39	283.23	139.91	0.71
USACE	11297	100YR	1743.00	408.36	413.29		413.97	0.009864	8.49	334.34	145.91	0.69
USACE	11297	100YRPLUS	2279.00	408.36	413.84		414.54	0.009084	8.78	416.50	153.57	0.68
USACE	11297	200YR	2053.00	408.36	413.62		414.31	0.009356	8.66	382.80	150.84	0.68
USACE	11297	500YR	2486.00	408.36	414.03		414.74	0.008892	8.90	446.22	156.53	0.68
USACE	11297	SEPT2011	792.00	408.36	412.03	412.03	412.73	0.012473	7.73	164.16	117.45	0.74
USACE	11129	2YR	355.00	406.65	409.73	409.70	410.20	0.011912	6.09	80.06	79.25	0.66
USACE	11129	5YR	595.00	406.65	410.70		410.96	0.005401	5.04	170.46	113.25	0.47
USACE	11129	10YR	808.00	406.65	411.27		411.49	0.003997	4.79	242.92	134.06	0.41
USACE	11129	25YR	1162.00	406.65	411.93		412.15	0.003352	4.83	334.40	147.14	0.39
USACE	11129	50YR	1442.00	406.65	412.34		412.58	0.003286	5.05	397.67	161.57	0.39
USACE	11129	100YR	1743.00	406.65	412.75		413.00	0.003033	5.10	466.54	169.49	0.38
USACE	11129	100YRPLUS	2279.00	406.65	413.33		413.62	0.002944	5.36	568.06	180.40	0.38
USACE	11129	200YR	2053.00	406.65	413.10		413.37	0.002980	5.26	526.16	176.13	0.38
USACE	11129	500YR	2486.00	406.65	413.54		413.83	0.002920	5.45	605.02	184.02	0.38
USACE	11129	SEPT2011	792.00	406.65	411.24		411.46	0.004051	4.79	238.38	133.48	0.41
USACE	11008	2YR	355.00	405.00	408.92	408.47	409.23	0.005259	5.81	123.32	119.66	0.56
USACE	11008	5YR	595.00	405.00	410.62	409.20	410.69	0.000844	3.07	348.04	152.55	0.24
USACE	11008	10YR	808.00	405.00	411.18	409.43	411.26	0.000854	3.31	430.50	174.91	0.25
USACE	11008	25YR	1162.00	405.00	411.82	409.75	411.92	0.000926	3.71	532.89	194.60	0.26
USACE	11008	50YR	1442.00	405.00	412.23	409.97	412.34	0.000981	3.98	597.21	204.11	0.27
USACE	11008	100YR	1743.00	405.00	412.64	410.18	412.77	0.001016	4.21	662.79	212.12	0.28
USACE	11008	100YRPLUS	2279.00	405.00	413.20	410.55	413.37	0.001139	4.69	752.79	222.82	0.30
USACE	11008	200YR	2053.00	405.00	412.97	410.41	413.13	0.001090	4.50	716.33	218.62	0.29
USACE	11008	500YR	2486.00	405.00	413.39	410.69	413.59	0.001184	4.87	784.16	225.70	0.31
USACE	11008	SEPT2011	792.00	405.00	411.15	409.46	411.22	0.000846	3.28	425.57	173.65	0.25
USACE	10951	2YR	355.00	403.79	408.76	407.70	409.03	0.002061	4.79	106.90	113.36	0.42
USACE	10951	5YR	595.00	403.79	410.58	408.51	410.65	0.000537	3.12	393.57	176.36	0.23
USACE	10951	10YR	808.00	403.79	411.14	408.99	411.22	0.000545	3.33	481.45	193.14	0.23
USACE	10951	25YR	1162.00	403.79	411.77	409.69	411.88	0.000631	3.82	581.55	213.21	0.25
USACE	10951	50YR	1442.00	403.79	412.17	409.91	412.30	0.000709	4.19	643.53	219.81	0.27
USACE	10951	100YR	1743.00	403.79	412.57	410.18	412.72	0.000769	4.52	706.99	226.67	0.28

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	10951	100YRPLUS	2279.00	403.79	413.12	410.65	413.31	0.000912	5.15	793.19	236.52	0.31
USACE	10951	200YR	2053.00	403.79	412.90	410.52	413.07	0.000854	4.90	758.28	232.61	0.30
USACE	10951	500YR	2486.00	403.79	413.31	410.78	413.52	0.000963	5.37	823.19	239.88	0.32
USACE	10951	SEPT2011	792.00	403.79	411.10	408.94	411.18	0.000540	3.31	476.42	192.25	0.23
USACE	10930 Private Drive		Bridge									
USACE	10908	2YR	355.00	403.77	407.81	407.81	408.96	0.010869	9.01	45.40	21.18	0.90
USACE	10908	5YR	595.00	403.77	409.35	409.35	410.10	0.005068	8.07	118.04	77.40	0.66
USACE	10908	10YR	808.00	403.77	409.78	409.78	410.58	0.005320	8.77	153.58	88.52	0.69
USACE	10908	25YR	1162.00	403.77	410.32	410.32	411.19	0.005558	9.59	205.29	102.57	0.71
USACE	10908	50YR	1442.00	403.77	410.68	410.68	411.62	0.005791	10.20	245.24	125.50	0.74
USACE	10908	100YR	1743.00	403.77	411.14	411.14	411.97	0.004965	9.93	311.51	166.58	0.69
USACE	10908	100YRPLUS	2279.00	403.77	411.50	411.50	412.44	0.005425	10.77	367.94	184.09	0.73
USACE	10908	200YR	2053.00	403.77	411.36	411.36	412.25	0.005225	10.42	345.78	176.11	0.71
USACE	10908	500YR	2486.00	403.77	411.63	411.63	412.61	0.005584	11.06	387.34	187.02	0.74
USACE	10908	SEPT2011	792.00	403.77	409.76	409.76	410.55	0.005263	8.69	151.60	88.05	0.68
USACE	10854	2YR	355.00	403.76	407.69	407.69	408.11	0.005114	6.12	99.66	117.12	0.62
USACE	10854	5YR	595.00	403.76	408.09	408.09	408.57	0.005921	7.15	149.95	151.33	0.68
USACE	10854	10YR	808.00	403.76	408.39	408.38	408.87	0.005929	7.57	195.69	165.97	0.69
USACE	10854	25YR	1162.00	403.76	408.85	408.67	409.30	0.005102	7.60	268.97	170.12	0.66
USACE	10854	50YR	1442.00	403.76	409.16	408.87	409.61	0.004833	7.76	317.58	172.93	0.65
USACE	10854	100YR	1743.00	403.76	409.45	409.05	409.93	0.004703	7.98	363.69	175.69	0.65
USACE	10854	100YRPLUS	2279.00	403.76	409.92	409.35	410.44	0.004514	8.33	439.02	181.65	0.64
USACE	10854	200YR	2053.00	403.76	409.73	409.23	410.23	0.004581	8.19	408.37	179.17	0.64
USACE	10854	500YR	2486.00	403.76	410.09	409.46	410.63	0.004479	8.47	465.45	183.57	0.64
USACE	10854	SEPT2011	792.00	403.76	408.37	408.37	408.85	0.005875	7.51	193.38	165.83	0.69
USACE	10694	2YR	355.00	403.53	406.41	406.41	406.86	0.008116	6.31	117.16	141.60	0.75
USACE	10694	5YR	595.00	403.53	406.85	406.85	407.36	0.008454	7.29	185.09	159.38	0.79
USACE	10694	10YR	808.00	403.53	407.11	407.11	407.69	0.009217	8.11	227.53	165.30	0.84
USACE	10694	25YR	1162.00	403.53	407.45	407.45	408.15	0.010280	9.23	285.28	169.66	0.91
USACE	10694	50YR	1442.00	403.53	407.69	407.69	408.46	0.010933	9.97	324.95	175.78	0.94
USACE	10694	100YR	1743.00	403.53	407.94	407.94	408.78	0.011155	10.55	368.90	189.82	0.97
USACE	10694	100YRPLUS	2279.00	403.53	408.27	408.27	409.27	0.012214	11.70	428.34	196.21	1.03
USACE	10694	200YR	2053.00	403.53	408.14	408.14	409.07	0.011789	11.24	404.28	193.69	1.00
USACE	10694	500YR	2486.00	403.53	408.40	408.40	409.45	0.012485	12.07	450.45	202.17	1.04
USACE	10694	SEPT2011	792.00	403.53	407.09	407.09	407.67	0.009158	8.05	224.62	164.91	0.84
USACE	10512	2YR	355.00	402.65	405.31	404.95	405.44	0.003956	3.97	191.96	255.55	0.47
USACE	10512	5YR	595.00	402.65	405.72	405.27	405.85	0.004142	4.54	290.74	312.50	0.49
USACE	10512	10YR	808.00	402.65	406.00	405.49	406.15	0.004262	4.93	362.69	328.44	0.51
USACE	10512	25YR	1162.00	402.65	406.40	405.73	406.58	0.004364	5.43	463.89	345.63	0.52
USACE	10512	50YR	1442.00	402.65	406.68	405.92	406.87	0.004448	5.78	533.24	350.73	0.54
USACE	10512	100YR	1743.00	402.65	406.94	406.08	407.15	0.004546	6.12	600.28	354.80	0.55
USACE	10512	100YRPLUS	2279.00	402.65	407.36	406.33	407.61	0.004693	6.67	707.42	359.48	0.57
USACE	10512	200YR	2053.00	402.65	407.19	406.23	407.43	0.004617	6.44	664.65	357.59	0.56
USACE	10512	500YR	2486.00	402.65	407.51	406.42	407.78	0.004756	6.86	744.97	361.22	0.57
USACE	10512	SEPT2011	792.00	402.65	405.99	405.47	406.14	0.004224	4.89	358.66	327.69	0.50
USACE	10344	2YR	355.00	402.02	404.54	404.18	404.64	0.005630	3.72	201.87	225.65	0.46
USACE	10344	5YR	595.00	402.02	404.93	404.45	405.04	0.005639	4.18	293.96	248.83	0.47
USACE	10344	10YR	808.00	402.02	405.20	404.63	405.32	0.005752	4.53	360.31	261.39	0.48
USACE	10344	25YR	1162.00	402.02	405.55	404.83	405.70	0.006155	5.08	449.40	276.68	0.51
USACE	10344	50YR	1442.00	402.02	405.80	405.02	405.97	0.006447	5.47	512.05	288.48	0.53
USACE	10344	100YR	1743.00	402.02	406.03	405.17	406.23	0.006694	5.83	573.99	297.85	0.54
USACE	10344	100YRPLUS	2279.00	402.02	406.42	405.41	406.65	0.007042	6.40	679.82	320.23	0.57
USACE	10344	200YR	2053.00	402.02	406.26	405.31	406.48	0.006945	6.19	636.25	314.94	0.56
USACE	10344	500YR	2486.00	402.02	406.56	405.49	406.80	0.007095	6.58	719.29	324.98	0.57
USACE	10344	SEPT2011	792.00	402.02	405.18	404.61	405.30	0.005729	4.50	355.93	259.67	0.48
USACE	10159	2YR	355.00	400.97	403.26	403.06	403.38	0.008185	4.25	185.94	281.53	0.54
USACE	10159	5YR	595.00	400.97	403.60	403.28	403.74	0.008818	4.92	271.97	323.08	0.58
USACE	10159	10YR	808.00	400.97	403.77	403.45	403.94	0.010041	5.52	319.40	325.28	0.63
USACE	10159	25YR	1162.00	400.97	404.08	403.71	404.27	0.009935	5.95	406.70	331.03	0.64
USACE	10159	50YR	1442.00	400.97	404.32	403.84	404.52	0.009566	6.17	474.36	337.37	0.63
USACE	10159	100YR	1743.00	400.97	404.54	403.97	404.76	0.009449	6.44	538.35	342.03	0.64
USACE	10159	100YRPLUS	2279.00	400.97	404.88	404.18	405.14	0.009502	6.91	639.59	350.60	0.65
USACE	10159	200YR	2053.00	400.97	404.74	404.09	404.98	0.009421	6.70	598.75	346.20	0.64
USACE	10159	500YR	2486.00	400.97	405.00	404.26	405.27	0.009625	7.12	676.40	357.44	0.66
USACE	10159	SEPT2011	792.00	400.97	403.76	403.44	403.93	0.010040	5.49	315.22	325.09	0.63
USACE	9979	2YR	355.00	399.55	401.94	401.85	402.14	0.006024	5.03	145.09	238.03	0.64
USACE	9979	5YR	595.00	399.55	402.24	402.12	402.45	0.006050	5.55	221.22	270.12	0.65
USACE	9979	10YR	808.00	399.55	402.48	402.29	402.68	0.005291	5.56	286.45	294.50	0.62
USACE	9979	25YR	1162.00	399.55	402.75	402.48	402.98	0.005562	6.10	358.40	304.34	0.65
USACE	9979	50YR	1442.00	399.55	402.90	402.61	403.17	0.006158	6.65	398.91	308.02	0.69
USACE	9979	100YR	1743.00	399.55	403.05	402.73	403.37	0.006543	7.10	441.90	311.12	0.72
USACE	9979	100YRPLUS	2279.00	399.55	403.32	402.94	403.70	0.006916	7.72	514.94	320.28	0.75
USACE	9979	200YR	2053.00	399.55	403.21	402.87	403.56	0.006834	7.49	483.77	314.92	0.74
USACE	9979	500YR	2486.00	399.55	403.42	403.01	403.82	0.006957	7.90	543.01	334.20	0.75
USACE	9979	SEPT2011	792.00	399.55	402.47	402.28	402.66	0.005283	5.53	282.75	293.27	0.62
USACE	9834	2YR	355.00	398.60	400.87	400.87	401.08	0.008989	5.51	144.41	250.39	0.72
USACE	9834	5YR	595.00	398.60	401.10	401.10	401.35	0.009843	6.25	207.23	271.44	0.76
USACE	9834	10YR	808.00	398.60	401.20	401.20	401.53	0.013122	7.43	232.48	285.22	0.89

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9834	25YR	1162.00	398.60	401.44	401.40	401.79	0.012910	7.90	300.37	298.04	0.90
USACE	9834	50YR	1442.00	398.60	401.66	401.53	402.00	0.011015	7.74	363.24	308.95	0.84
USACE	9834	100YR	1743.00	398.60	401.87	401.64	402.21	0.009965	7.75	422.80	327.10	0.81
USACE	9834	100YRPLUS	2279.00	398.60	402.20	401.85	402.57	0.008938	7.90	517.39	350.35	0.78
USACE	9834	200YR	2053.00	398.60	402.06	401.76	402.42	0.009284	7.82	479.05	343.40	0.79
USACE	9834	500YR	2486.00	398.60	402.31	401.92	402.69	0.008704	7.98	550.66	353.77	0.78
USACE	9834	SEPT2011	792.00	398.60	401.19	401.19	401.52	0.012879	7.35	230.68	284.12	0.88
USACE	9633	2YR	355.00	397.37	399.80	399.38	399.86	0.002118	2.89	248.65	372.26	0.36
USACE	9633	5YR	595.00	397.37	400.13	399.64	400.20	0.002283	3.31	353.67	397.89	0.38
USACE	9633	10YR	808.00	397.37	400.36	399.78	400.44	0.002336	3.56	428.62	402.99	0.39
USACE	9633	25YR	1162.00	397.37	400.69	400.00	400.79	0.002367	3.89	538.30	413.94	0.40
USACE	9633	50YR	1442.00	397.37	400.89	400.12	401.00	0.002535	4.20	603.97	421.00	0.42
USACE	9633	100YR	1743.00	397.37	401.09	400.23	401.22	0.002662	4.49	670.20	429.62	0.43
USACE	9633	100YRPLUS	2279.00	397.37	401.40	400.42	401.56	0.002928	4.98	771.13	443.74	0.46
USACE	9633	200YR	2053.00	397.37	401.28	400.35	401.42	0.002803	4.77	731.37	438.57	0.45
USACE	9633	500YR	2486.00	397.37	401.50	400.49	401.68	0.003010	5.15	807.89	447.75	0.47
USACE	9633	SEPT2011	792.00	397.37	400.35	399.77	400.43	0.002295	3.52	425.57	402.77	0.38
USACE	9488	2YR	355.00	396.59	399.42	399.05	399.51	0.003117	3.77	231.55	343.02	0.44
USACE	9488	5YR	595.00	396.59	399.81	399.42	399.88	0.002290	3.59	368.55	352.28	0.38
USACE	9488	10YR	808.00	396.59	400.04	399.54	400.11	0.002317	3.81	449.16	358.83	0.39
USACE	9488	25YR	1162.00	396.59	400.38	399.70	400.46	0.002302	4.08	572.81	376.41	0.40
USACE	9488	50YR	1442.00	396.59	400.55	399.81	400.65	0.002538	4.44	638.91	388.44	0.42
USACE	9488	100YR	1743.00	396.59	400.74	399.93	400.85	0.002650	4.70	712.72	411.22	0.43
USACE	9488	100YRPLUS	2279.00	396.59	401.01	400.10	401.15	0.002838	5.11	828.97	452.40	0.45
USACE	9488	200YR	2053.00	396.59	400.91	400.03	401.04	0.002748	4.93	783.61	440.38	0.45
USACE	9488	500YR	2486.00	396.59	401.12	400.16	401.27	0.002840	5.20	875.47	466.96	0.46
USACE	9488	SEPT2011	792.00	396.59	400.04	399.54	400.11	0.002221	3.73	449.51	358.87	0.38
USACE	9335	2YR	355.00	394.60	398.35	398.35	398.77	0.007338	5.97	100.07	120.48	0.66
USACE	9335	5YR	595.00	394.60	398.78	398.78	399.25	0.007934	6.89	162.76	216.30	0.71
USACE	9335	10YR	808.00	394.60	399.12	399.12	399.51	0.006872	6.89	248.25	281.06	0.67
USACE	9335	25YR	1162.00	394.60	399.36	399.36	399.82	0.008203	7.89	319.08	310.61	0.74
USACE	9335	50YR	1442.00	394.60	399.62	399.62	400.01	0.007113	7.70	411.46	387.58	0.70
USACE	9335	100YR	1743.00	394.60	399.74	399.74	400.17	0.007740	8.21	460.70	396.75	0.73
USACE	9335	100YRPLUS	2279.00	394.60	399.94	399.94	400.42	0.008523	8.90	539.67	417.34	0.77
USACE	9335	200YR	2053.00	394.60	399.85	399.85	400.32	0.008399	8.71	503.62	403.91	0.77
USACE	9335	500YR	2486.00	394.60	399.98	399.98	400.51	0.009305	9.36	556.47	422.41	0.81
USACE	9335	SEPT2011	792.00	394.60	399.04	399.04	399.49	0.007846	7.24	226.53	269.62	0.71
USACE	9260	2YR	355.00	393.29	397.33	397.33	397.70	0.005581	5.71	120.68	174.56	0.59
USACE	9260	5YR	595.00	393.29	397.69	397.69	398.08	0.006374	6.59	190.16	206.02	0.64
USACE	9260	10YR	808.00	393.29	397.91	397.91	398.34	0.007176	7.29	236.58	222.10	0.68
USACE	9260	25YR	1162.00	393.29	398.12	398.12	398.68	0.009433	8.70	285.59	236.48	0.79
USACE	9260	50YR	1442.00	393.29	398.35	398.35	398.91	0.009278	8.98	342.91	256.86	0.79
USACE	9260	100YR	1743.00	393.29	398.52	398.52	399.13	0.010137	9.64	385.96	274.86	0.83
USACE	9260	100YRPLUS	2279.00	393.29	398.85	398.85	399.48	0.010122	10.14	480.62	321.70	0.84
USACE	9260	200YR	2053.00	393.29	398.75	398.75	399.35	0.009626	9.75	453.24	311.00	0.82
USACE	9260	500YR	2486.00	393.29	398.92	398.92	399.60	0.010673	10.53	502.66	330.17	0.87
USACE	9260	SEPT2011	792.00	393.29	397.89	397.89	398.32	0.007103	7.24	233.64	221.37	0.68
USACE	9216 Mount Joy Road		Culvert									
USACE	9173	2YR	355.00	393.50	396.11		396.30	0.008537	5.08	154.92	287.69	0.68
USACE	9173	5YR	595.00	393.50	396.40		396.57	0.007690	5.33	242.36	329.58	0.66
USACE	9173	10YR	808.00	393.50	396.60		396.78	0.007261	5.53	313.98	367.48	0.65
USACE	9173	25YR	1162.00	393.50	396.88		397.06	0.006683	5.74	420.67	403.40	0.64
USACE	9173	50YR	1442.00	393.50	397.08		397.26	0.006093	5.76	500.98	410.87	0.62
USACE	9173	100YR	1743.00	393.50	397.27		397.45	0.005699	5.83	578.83	414.31	0.60
USACE	9173	100YRPLUS	2279.00	393.50	397.57		397.77	0.005262	5.99	706.69	429.23	0.59
USACE	9173	200YR	2053.00	393.50	397.45		397.64	0.005391	5.91	654.78	418.84	0.59
USACE	9173	500YR	2486.00	393.50	397.68		397.88	0.005142	6.05	753.52	434.02	0.59
USACE	9173	SEPT2011	792.00	393.50	396.59		396.77	0.007312	5.53	308.87	366.05	0.65
USACE	9106	2YR	355.00	393.50	395.87		395.91	0.003473	2.84	237.84	326.11	0.39
USACE	9106	5YR	595.00	393.50	396.14		396.20	0.003675	3.23	331.30	369.20	0.41
USACE	9106	10YR	808.00	393.50	396.35		396.41	0.003691	3.46	410.48	383.85	0.42
USACE	9106	25YR	1162.00	393.50	396.63		396.71	0.003666	3.75	521.55	400.21	0.42
USACE	9106	50YR	1442.00	393.50	396.84		396.93	0.003609	3.93	605.92	415.11	0.43
USACE	9106	100YR	1743.00	393.50	397.03		397.14	0.003543	4.08	688.67	426.47	0.43
USACE	9106	100YRPLUS	2279.00	393.50	397.35		397.47	0.003461	4.33	826.44	445.30	0.43
USACE	9106	200YR	2053.00	393.50	397.23		397.34	0.003472	4.22	771.29	439.22	0.43
USACE	9106	500YR	2486.00	393.50	397.46		397.59	0.003444	4.42	876.76	453.25	0.43
USACE	9106	SEPT2011	792.00	393.50	396.33		396.40	0.003706	3.46	404.67	383.20	0.42
USACE	8935	2YR	355.00	393.39	395.03		395.10	0.007298	3.25	174.03	266.08	0.53
USACE	8935	5YR	595.00	393.39	395.32		395.41	0.006457	3.55	254.87	291.68	0.52
USACE	8935	10YR	808.00	393.39	395.54		395.64	0.006059	3.77	319.50	306.93	0.52
USACE	8935	25YR	1162.00	393.39	395.85		395.97	0.005700	4.10	416.27	326.50	0.52
USACE	8935	50YR	1442.00	393.39	396.07		396.21	0.005479	4.31	490.67	349.09	0.51
USACE	8935	100YR	1743.00	393.39	396.28		396.43	0.005276	4.50	567.11	364.92	0.51
USACE	8935	100YRPLUS	2279.00	393.39	396.61		396.79	0.005059	4.81	691.66	381.30	0.51
USACE	8935	200YR	2053.00	393.39	396.48		396.65	0.005140	4.69	640.86	378.42	0.51
USACE	8935	500YR	2486.00	393.39	396.73		396.92	0.004982	4.91	737.29	386.02	0.51
USACE	8935	SEPT2011	792.00	393.39	395.52		395.63	0.006064	3.75	315.18	306.28	0.52

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8714	2YR	355.00	391.57	393.34		393.44	0.007622	3.15	136.20	142.27	0.56
USACE	8714	5YR	595.00	391.57	393.75		393.89	0.007282	3.78	201.72	174.92	0.57
USACE	8714	10YR	808.00	391.57	394.04		394.20	0.006858	4.18	255.28	193.21	0.57
USACE	8714	25YR	1162.00	391.57	394.42		394.62	0.006547	4.70	339.48	242.07	0.58
USACE	8714	50YR	1442.00	391.57	394.68		394.89	0.006381	5.02	404.78	264.40	0.59
USACE	8714	100YR	1743.00	391.57	394.91		395.15	0.006318	5.33	468.41	285.34	0.59
USACE	8714	100YRPLUS	2279.00	391.57	395.29		395.55	0.006077	5.74	581.56	309.96	0.59
USACE	8714	200YR	2053.00	391.57	395.14		395.39	0.006183	5.59	534.61	302.14	0.59
USACE	8714	500YR	2486.00	391.57	395.43		395.70	0.006001	5.88	624.44	321.20	0.60
USACE	8714	SEPT2011	792.00	391.57	394.02		394.18	0.006938	4.16	250.79	191.98	0.58
USACE	8459	2YR	355.00	389.18	391.42		391.61	0.006569	4.48	119.86	117.73	0.58
USACE	8459	5YR	595.00	389.18	391.93		392.15	0.006178	5.10	196.10	181.65	0.58
USACE	8459	10YR	808.00	389.18	392.22		392.47	0.006485	5.64	251.98	207.61	0.61
USACE	8459	25YR	1162.00	389.18	392.62		392.90	0.006704	6.29	342.00	245.80	0.63
USACE	8459	50YR	1442.00	389.18	392.87		393.17	0.006884	6.71	404.43	260.94	0.65
USACE	8459	100YR	1743.00	389.18	393.11		393.44	0.006936	7.07	470.83	277.79	0.66
USACE	8459	100YRPLUS	2279.00	389.18	393.48		393.85	0.007200	7.68	576.94	305.46	0.68
USACE	8459	200YR	2053.00	389.18	393.33		393.68	0.007091	7.43	532.39	291.96	0.67
USACE	8459	500YR	2486.00	389.18	393.60		393.99	0.007328	7.91	614.83	315.22	0.69
USACE	8459	SEPT2011	792.00	389.18	392.20		392.44	0.006453	5.59	246.61	195.78	0.61
USACE	8311	2YR	355.00	388.08	390.28		390.40	0.009184	3.58	127.51	110.97	0.52
USACE	8311	5YR	595.00	388.08	390.72		390.89	0.011021	4.67	190.99	204.38	0.59
USACE	8311	10YR	808.00	388.08	390.97		391.17	0.011108	5.10	245.29	218.12	0.61
USACE	8311	25YR	1162.00	388.08	391.31		391.54	0.011721	5.76	324.01	247.15	0.64
USACE	8311	50YR	1442.00	388.08	391.52		391.78	0.012005	6.16	377.77	269.05	0.66
USACE	8311	100YR	1743.00	388.08	391.75		392.03	0.012235	6.56	441.46	292.79	0.67
USACE	8311	100YRPLUS	2279.00	388.08	392.08		392.40	0.012456	7.10	542.79	327.08	0.69
USACE	8311	200YR	2053.00	388.08	391.94		392.24	0.012414	6.88	498.31	308.71	0.68
USACE	8311	500YR	2486.00	388.08	392.18		392.51	0.012459	7.25	577.30	330.65	0.69
USACE	8311	SEPT2011	792.00	388.08	390.95		391.14	0.011272	5.10	240.05	217.13	0.61
USACE	8130	2YR	355.00	387.05	389.10		389.17	0.005055	3.02	175.94	269.95	0.42
USACE	8130	5YR	595.00	387.05	389.44		389.52	0.005283	3.50	275.53	311.34	0.44
USACE	8130	10YR	808.00	387.05	389.65		389.75	0.005469	3.82	346.12	334.34	0.46
USACE	8130	25YR	1162.00	387.05	389.96		390.08	0.005580	4.21	453.10	362.98	0.47
USACE	8130	50YR	1442.00	387.05	390.16		390.29	0.005685	4.47	524.45	369.51	0.48
USACE	8130	100YR	1743.00	387.05	390.35		390.50	0.005825	4.74	599.01	388.45	0.49
USACE	8130	100YRPLUS	2279.00	387.05	390.66		390.83	0.005944	5.12	719.16	404.75	0.51
USACE	8130	200YR	2053.00	387.05	390.53		390.70	0.005869	4.96	669.58	395.31	0.50
USACE	8130	500YR	2486.00	387.05	390.76		390.94	0.006001	5.26	760.90	408.18	0.51
USACE	8130	SEPT2011	792.00	387.05	389.64		389.74	0.005400	3.78	342.49	333.40	0.45
USACE	7944	2YR	355.00	385.86	388.29		388.36	0.003792	3.14	231.40	346.23	0.38
USACE	7944	5YR	595.00	385.86	388.56		388.64	0.004268	3.60	330.43	399.69	0.41
USACE	7944	10YR	808.00	385.86	388.73		388.82	0.004621	3.92	401.00	407.43	0.43
USACE	7944	25YR	1162.00	385.86	388.98		389.09	0.004984	4.33	504.38	420.89	0.45
USACE	7944	50YR	1442.00	385.86	389.15		389.27	0.005198	4.60	575.64	426.93	0.47
USACE	7944	100YR	1743.00	385.86	389.32		389.45	0.005382	4.85	646.62	433.99	0.48
USACE	7944	100YRPLUS	2279.00	385.86	389.59		389.75	0.005602	5.23	766.08	449.95	0.50
USACE	7944	200YR	2053.00	385.86	389.48		389.63	0.005493	5.07	717.82	442.95	0.49
USACE	7944	500YR	2486.00	385.86	389.68		389.85	0.005673	5.36	809.08	454.99	0.50
USACE	7944	SEPT2011	792.00	385.86	388.72		388.81	0.004595	3.90	396.18	407.06	0.43
USACE	7713	2YR	355.00	384.84	387.01	386.94	387.14	0.007848	4.11	186.42	430.24	0.52
USACE	7713	5YR	595.00	384.84	387.25	387.12	387.37	0.007236	4.26	296.38	459.99	0.51
USACE	7713	10YR	808.00	384.84	387.43		387.54	0.006850	4.36	379.72	481.84	0.50
USACE	7713	25YR	1162.00	384.84	387.68		387.79	0.006380	4.50	503.55	505.49	0.49
USACE	7713	50YR	1442.00	384.84	387.84		387.97	0.006183	4.62	589.10	514.50	0.49
USACE	7713	100YR	1743.00	384.84	388.01		388.14	0.005957	4.71	677.50	524.14	0.48
USACE	7713	100YRPLUS	2279.00	384.84	388.28		388.42	0.005844	4.94	818.56	545.69	0.48
USACE	7713	200YR	2053.00	384.84	388.17		388.31	0.005908	4.86	761.12	540.59	0.48
USACE	7713	500YR	2486.00	384.84	388.37		388.52	0.005833	5.03	867.78	550.50	0.49
USACE	7713	SEPT2011	792.00	384.84	387.41		387.53	0.006880	4.36	373.70	480.71	0.50
USACE	7471	2YR	355.00	382.70	385.97		386.07	0.002781	3.98	266.28	489.35	0.42
USACE	7471	5YR	595.00	382.70	386.25		386.34	0.002738	4.20	414.30	540.67	0.42
USACE	7471	10YR	808.00	382.70	386.44		386.53	0.002783	4.41	520.65	572.31	0.43
USACE	7471	25YR	1162.00	382.70	386.69		386.78	0.002935	4.75	664.90	600.85	0.44
USACE	7471	50YR	1442.00	382.70	386.88		386.97	0.002895	4.88	783.62	635.44	0.44
USACE	7471	100YR	1743.00	382.70	387.03		387.14	0.003053	5.15	883.67	664.53	0.46
USACE	7471	100YRPLUS	2279.00	382.70	387.28		387.39	0.003204	5.49	1049.62	687.40	0.47
USACE	7471	200YR	2053.00	382.70	387.19		387.29	0.003106	5.33	986.35	678.20	0.47
USACE	7471	500YR	2486.00	382.70	387.35		387.47	0.003336	5.67	1100.33	695.09	0.49
USACE	7471	SEPT2011	792.00	382.70	386.43		386.52	0.002778	4.39	512.97	569.03	0.43
USACE	7264	2YR	355.00	382.20	384.88	384.88	385.15	0.007812	5.92	144.96	282.76	0.69
USACE	7264	5YR	595.00	382.20	385.16	385.16	385.41	0.008008	6.48	256.97	487.79	0.71
USACE	7264	10YR	808.00	382.20	385.29	385.29	385.56	0.008994	7.10	324.15	531.16	0.76
USACE	7264	25YR	1162.00	382.20	385.48	385.48	385.76	0.009613	7.67	436.14	637.74	0.79
USACE	7264	50YR	1442.00	382.20	385.56	385.56	385.88	0.011578	8.56	483.65	666.26	0.87
USACE	7264	100YR	1743.00	382.20	385.67	385.67	386.00	0.011781	8.86	563.44	690.42	0.89
USACE	7264	100YRPLUS	2279.00	382.20	385.83	385.80	386.18	0.012736	9.52	670.52	703.14	0.93
USACE	7264	200YR	2053.00	382.20	385.75	385.75	386.11	0.012896	9.43	617.83	698.85	0.93
USACE	7264	500YR	2486.00	382.20	385.89	385.88	386.25	0.012686	9.62	715.16	706.57	0.93
USACE	7264	SEPT2011	792.00	382.20	385.28	385.28	385.55	0.008956	7.06	318.64	526.90	0.76

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	7035	2YR	355.00	379.66	382.76		382.87	0.006186	4.17	216.10	445.30	0.55
USACE	7035	5YR	595.00	379.66	382.99		383.11	0.006673	4.69	336.47	593.13	0.58
USACE	7035	10YR	808.00	379.66	383.13		383.25	0.007198	5.08	419.17	653.20	0.61
USACE	7035	25YR	1162.00	379.66	383.31		383.44	0.007568	5.50	544.47	700.68	0.63
USACE	7035	50YR	1442.00	379.66	383.45		383.59	0.007496	5.69	647.15	769.62	0.63
USACE	7035	100YR	1743.00	379.66	383.57		383.71	0.007478	5.86	743.09	792.38	0.64
USACE	7035	100YRPLUS	2279.00	379.66	383.78		383.93	0.007445	6.15	907.04	831.83	0.64
USACE	7035	200YR	2053.00	379.66	383.69		383.84	0.007413	6.02	839.91	814.31	0.64
USACE	7035	500YR	2486.00	379.66	383.85		384.00	0.007396	6.24	969.98	845.75	0.65
USACE	7035	SEPT2011	792.00	379.66	383.11		383.24	0.007326	5.10	409.68	650.73	0.61
USACE	6818	2YR	355.00	378.29	381.40	381.29	381.57	0.005736	4.68	227.92	550.24	0.55
USACE	6818	5YR	595.00	378.29	381.63	381.56	381.78	0.005649	4.96	375.33	723.50	0.56
USACE	6818	10YR	808.00	378.29	381.80	381.65	381.92	0.005307	5.02	501.54	777.09	0.54
USACE	6818	25YR	1162.00	378.29	382.00		382.11	0.005072	5.16	659.99	802.13	0.54
USACE	6818	50YR	1442.00	378.29	382.14		382.25	0.005057	5.31	771.97	826.10	0.54
USACE	6818	100YR	1743.00	378.29	382.26		382.38	0.005134	5.50	877.37	846.99	0.55
USACE	6818	100YRPLUS	2279.00	378.29	382.46		382.58	0.005211	5.77	1044.56	866.20	0.56
USACE	6818	200YR	2053.00	378.29	382.38		382.50	0.005193	5.67	976.63	860.19	0.56
USACE	6818	500YR	2486.00	378.29	382.53		382.65	0.005260	5.88	1105.55	875.30	0.56
USACE	6818	SEPT2011	792.00	378.29	381.79		381.92	0.005144	4.94	499.91	776.83	0.54
USACE	6597	2YR	355.00	376.96	380.25	380.22	380.42	0.004879	4.56	236.06	579.43	0.52
USACE	6597	5YR	595.00	376.96	380.50		380.63	0.004722	4.79	399.94	733.94	0.52
USACE	6597	10YR	808.00	376.96	380.63		380.77	0.005183	5.18	498.63	773.71	0.55
USACE	6597	25YR	1162.00	376.96	380.80		380.94	0.005589	5.59	631.49	790.17	0.57
USACE	6597	50YR	1442.00	376.96	380.92		381.06	0.005658	5.79	732.28	804.68	0.58
USACE	6597	100YR	1743.00	376.96	381.05		381.19	0.005658	5.95	835.45	818.77	0.58
USACE	6597	100YRPLUS	2279.00	376.96	381.27		381.41	0.005435	6.08	1013.06	839.36	0.58
USACE	6597	200YR	2053.00	376.96	381.17		381.32	0.005609	6.07	936.44	832.28	0.58
USACE	6597	500YR	2486.00	376.96	381.34		381.48	0.005427	6.16	1072.95	844.06	0.58
USACE	6597	SEPT2011	792.00	376.96	380.61		380.76	0.005389	5.26	483.85	770.61	0.56
USACE	6469	2YR	355.00	376.06	379.52	379.52	379.68	0.006773	4.27	224.07	642.02	0.48
USACE	6469	5YR	595.00	376.06	379.68	379.68	379.84	0.008245	4.91	331.74	704.91	0.54
USACE	6469	10YR	808.00	376.06	379.83		379.96	0.007575	4.88	437.85	729.88	0.52
USACE	6469	25YR	1162.00	376.06	380.07		380.18	0.006228	4.68	621.78	815.22	0.48
USACE	6469	50YR	1442.00	376.06	380.24		380.34	0.005496	4.57	765.60	858.91	0.45
USACE	6469	100YR	1743.00	376.06	380.41		380.50	0.004917	4.47	914.87	889.12	0.43
USACE	6469	100YRPLUS	2279.00	376.06	380.68		380.76	0.004305	4.41	1158.80	931.06	0.41
USACE	6469	200YR	2053.00	376.06	380.57		380.66	0.004459	4.40	1060.58	910.44	0.41
USACE	6469	500YR	2486.00	376.06	380.79		380.87	0.003985	4.33	1261.19	941.92	0.40
USACE	6469	SEPT2011	792.00	376.06	379.84		379.96	0.006915	4.68	446.50	732.12	0.50
USACE	6285	2YR	388.00	375.07	378.33	378.22	378.47	0.004111	4.29	229.54	430.86	0.48
USACE	6285	5YR	660.00	375.07	378.67	378.42	378.80	0.003921	4.56	362.87	538.11	0.48
USACE	6285	10YR	904.00	375.07	378.90	378.58	379.02	0.003850	4.76	479.65	651.94	0.48
USACE	6285	25YR	1312.00	375.07	379.21	378.80	379.32	0.003716	4.98	654.33	737.79	0.48
USACE	6285	50YR	1639.00	375.07	379.41	378.89	379.53	0.003661	5.15	777.37	775.67	0.48
USACE	6285	100YR	1992.00	375.07	379.61	379.04	379.73	0.003640	5.32	899.13	803.23	0.48
USACE	6285	100YRPLUS	2605.00	375.07	379.91	379.21	380.04	0.003594	5.56	1092.13	835.27	0.48
USACE	6285	200YR	2359.00	375.07	379.80	379.15	379.92	0.003621	5.48	1016.74	828.90	0.48
USACE	6285	500YR	2885.00	375.07	380.04	379.29	380.18	0.003570	5.66	1176.69	847.62	0.49
USACE	6285	SEPT2011	965.00	375.07	378.95	378.61	379.07	0.003839	4.81	507.89	670.35	0.48
USACE	6117	2YR	388.00	374.12	377.77	377.48	377.92	0.002691	4.01	232.22	352.05	0.40
USACE	6117	5YR	660.00	374.12	378.12	377.88	378.25	0.002732	4.33	364.97	414.04	0.41
USACE	6117	10YR	904.00	374.12	378.33	378.05	378.46	0.002843	4.60	453.87	439.05	0.42
USACE	6117	25YR	1312.00	374.12	378.59	378.25	378.74	0.003208	5.10	566.96	546.43	0.45
USACE	6117	50YR	1639.00	374.12	378.77	378.37	378.94	0.003365	5.39	651.62	572.69	0.47
USACE	6117	100YR	1992.00	374.12	378.95	378.49	379.13	0.003430	5.60	739.20	598.84	0.48
USACE	6117	100YRPLUS	2605.00	374.12	379.24	378.66	379.44	0.003449	5.86	879.52	624.98	0.48
USACE	6117	200YR	2359.00	374.12	379.13	378.61	379.32	0.003443	5.76	824.94	614.53	0.48
USACE	6117	500YR	2885.00	374.12	379.36	378.75	379.58	0.003465	5.98	939.38	633.30	0.48
USACE	6117	SEPT2011	965.00	374.12	378.37	378.09	378.51	0.002893	4.67	472.62	470.31	0.43
USACE	5979	2YR	388.00	374.01	377.30	377.03	377.48	0.003751	4.33	152.66	231.05	0.47
USACE	5979	5YR	660.00	374.01	377.61	377.45	377.80	0.003923	4.77	241.16	324.54	0.48
USACE	5979	10YR	904.00	374.01	377.84	377.65	378.02	0.003691	4.86	323.88	398.68	0.48
USACE	5979	25YR	1312.00	374.01	378.12	377.86	378.29	0.003250	4.82	438.35	452.48	0.45
USACE	5979	50YR	1639.00	374.01	378.31	378.01	378.49	0.003039	4.82	517.48	483.06	0.44
USACE	5979	100YR	1992.00	374.01	378.49	378.09	378.70	0.002893	4.86	596.57	509.33	0.43
USACE	5979	100YRPLUS	2605.00	374.01	378.79	378.26	379.02	0.002693	4.93	727.22	546.06	0.42
USACE	5979	200YR	2359.00	374.01	378.68	378.19	378.90	0.002760	4.90	676.02	530.86	0.43
USACE	5979	500YR	2885.00	374.01	378.91	378.32	379.16	0.002643	4.97	783.19	563.26	0.42
USACE	5979	SEPT2011	965.00	374.01	377.89	377.67	378.06	0.003635	4.87	342.74	411.32	0.47
USACE	5856	2YR	388.00	372.50	376.76	376.76	377.01	0.003757	5.01	143.86	252.14	0.48
USACE	5856	5YR	660.00	372.50	377.09	377.01	377.32	0.003769	5.34	233.25	290.16	0.49
USACE	5856	10YR	904.00	372.50	377.27	377.17	377.52	0.004151	5.78	288.56	311.24	0.52
USACE	5856	25YR	1312.00	372.50	377.54	377.37	377.82	0.004326	6.17	373.74	327.97	0.53
USACE	5856	50YR	1639.00	372.50	377.74	377.51	378.04	0.004364	6.39	435.68	341.36	0.54
USACE	5856	100YR	1992.00	372.50	377.92	377.64	378.25	0.004417	6.61	496.16	361.26	0.55
USACE	5856	100YRPLUS	2605.00	372.50	378.22	377.85	378.59	0.004429	6.90	594.25	421.49	0.55
USACE	5856	200YR	2359.00	372.50	378.11	377.77	378.46	0.004397	6.77	557.23	396.49	0.55
USACE	5856	500YR	2885.00	372.50	378.32	377.93	378.72	0.004601	7.13	628.30	434.47	0.56

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5856	SEPT2011	965.00	372.50	377.32	377.21	377.57	0.004162	5.84	302.89	314.20	0.52
USACE	5798	2YR	388.00	371.30	376.47	376.47	376.68	0.003264	4.89	183.76	360.67	0.43
USACE	5798	5YR	660.00	371.30	377.06	376.66	377.12	0.001184	3.22	398.54	513.35	0.26
USACE	5798	10YR	904.00	371.30	377.23	376.80	377.30	0.001387	3.58	462.94	539.82	0.29
USACE	5798	25YR	1312.00	371.30	377.49	376.96	377.59	0.001554	3.92	563.79	568.80	0.31
USACE	5798	50YR	1639.00	371.30	377.68	377.08	377.79	0.001632	4.12	638.54	604.61	0.32
USACE	5798	100YR	1992.00	371.30	377.86	377.18	378.00	0.001700	4.30	713.51	629.20	0.33
USACE	5798	100YRPLUS	2605.00	371.30	378.16	377.34	378.32	0.001735	4.51	836.66	642.11	0.33
USACE	5798	200YR	2359.00	371.30	378.05	377.28	378.20	0.001710	4.42	790.63	638.56	0.33
USACE	5798	500YR	2885.00	371.30	378.26	377.42	378.44	0.001818	4.67	877.83	645.58	0.34
USACE	5798	SEPT2011	965.00	371.30	377.27	376.83	377.35	0.001409	3.63	479.96	548.63	0.29
USACE	5776 Weaver Road		Bridge									
USACE	5744	2YR	388.00	371.14	374.97	374.97	375.46	0.009460	7.00	86.13	292.64	0.70
USACE	5744	5YR	660.00	371.14	375.26	375.10	375.41	0.004653	5.21	295.99	371.87	0.50
USACE	5744	10YR	904.00	371.14	375.49	375.24	375.63	0.004502	5.36	387.79	413.90	0.50
USACE	5744	25YR	1312.00	371.14	375.81	375.43	375.95	0.004207	5.49	524.77	441.58	0.49
USACE	5744	50YR	1639.00	371.14	376.02	375.57	376.17	0.004148	5.65	615.57	483.34	0.49
USACE	5744	100YR	1992.00	371.14	376.23	375.69	376.39	0.004097	5.80	704.93	534.04	0.49
USACE	5744	100YRPLUS	2605.00	371.14	376.55	375.87	376.73	0.004031	6.03	846.06	569.03	0.49
USACE	5744	200YR	2359.00	371.14	376.42	375.80	376.60	0.004060	5.94	790.92	561.15	0.49
USACE	5744	500YR	2885.00	371.14	376.68	375.93	376.87	0.004027	6.14	904.56	577.24	0.49
USACE	5744	SEPT2011	965.00	371.14	375.54	375.23	375.69	0.004472	5.40	410.08	420.82	0.50
USACE	5676	2YR	388.00	371.13	374.55	374.13	374.67	0.003381	3.96	222.35	257.78	0.43
USACE	5676	5YR	660.00	371.13	375.03	374.53	375.14	0.003145	4.28	398.95	429.01	0.43
USACE	5676	10YR	904.00	371.13	375.25	374.61	375.37	0.003336	4.61	497.09	449.60	0.45
USACE	5676	25YR	1312.00	371.13	375.57	375.09	375.70	0.003510	5.03	645.94	485.51	0.47
USACE	5676	50YR	1639.00	371.13	375.78	375.22	375.91	0.003544	5.25	750.09	506.28	0.47
USACE	5676	100YR	1992.00	371.13	375.99	375.36	376.13	0.003564	5.45	853.68	522.36	0.48
USACE	5676	100YRPLUS	2605.00	371.13	376.31	375.58	376.47	0.003577	5.75	1019.14	560.01	0.48
USACE	5676	200YR	2359.00	371.13	376.18	375.47	376.34	0.003586	5.65	953.74	543.25	0.48
USACE	5676	500YR	2885.00	371.13	376.45	375.66	376.61	0.003603	5.89	1087.67	596.68	0.49
USACE	5676	SEPT2011	965.00	371.13	375.30	374.61	375.42	0.003384	4.69	520.29	456.12	0.45
USACE	5538	2YR	388.00	371.12	374.01		374.10	0.004981	3.76	198.30	209.97	0.49
USACE	5538	5YR	660.00	371.12	374.45		374.57	0.005728	4.66	344.51	406.78	0.55
USACE	5538	10YR	904.00	371.12	374.67		374.79	0.005472	4.85	436.03	421.33	0.54
USACE	5538	25YR	1312.00	371.12	374.97		375.10	0.005391	5.20	566.46	442.94	0.55
USACE	5538	50YR	1639.00	371.12	375.18		375.32	0.005383	5.45	657.68	452.27	0.56
USACE	5538	100YR	1992.00	371.12	375.38		375.53	0.005392	5.69	748.92	462.37	0.56
USACE	5538	100YRPLUS	2605.00	371.12	375.69		375.86	0.005480	6.11	895.69	485.51	0.58
USACE	5538	200YR	2359.00	371.12	375.57		375.73	0.005413	5.93	837.79	472.27	0.57
USACE	5538	500YR	2885.00	371.12	375.81		376.00	0.005532	6.29	956.92	493.07	0.58
USACE	5538	SEPT2011	965.00	371.12	374.72		374.84	0.005445	4.90	456.76	424.23	0.55
USACE	5353	2YR	388.00	370.78	373.00		373.09	0.006034	3.84	222.09	325.79	0.54
USACE	5353	5YR	660.00	370.78	373.24		373.36	0.007499	4.71	304.30	366.57	0.62
USACE	5353	10YR	904.00	370.78	373.42		373.57	0.008158	5.23	372.32	387.97	0.65
USACE	5353	25YR	1312.00	370.78	373.66		373.84	0.008845	5.88	469.39	404.78	0.70
USACE	5353	50YR	1639.00	370.78	373.84		374.04	0.009146	6.29	540.78	416.90	0.72
USACE	5353	100YR	1992.00	370.78	374.01		374.23	0.009384	6.67	614.04	432.14	0.73
USACE	5353	100YRPLUS	2605.00	370.78	374.27		374.53	0.009784	7.26	727.34	447.62	0.76
USACE	5353	200YR	2359.00	370.78	374.17		374.42	0.009664	7.05	683.25	442.76	0.75
USACE	5353	500YR	2885.00	370.78	374.38		374.66	0.009807	7.46	777.48	451.74	0.77
USACE	5353	SEPT2011	965.00	370.78	373.47		373.62	0.008200	5.33	391.06	395.96	0.66
USACE	5167	2YR	388.00	370.49	371.91		371.95	0.006126	3.10	283.48	539.91	0.52
USACE	5167	5YR	660.00	370.49	372.18		372.22	0.004969	3.23	437.46	603.64	0.48
USACE	5167	10YR	904.00	370.49	372.35		372.40	0.004796	3.43	543.37	619.03	0.49
USACE	5167	25YR	1312.00	370.49	372.61		372.67	0.004515	3.69	706.71	642.03	0.48
USACE	5167	50YR	1639.00	370.49	372.77		372.85	0.004492	3.90	814.99	647.47	0.49
USACE	5167	100YR	1992.00	370.49	372.96		373.04	0.004409	4.10	934.21	667.03	0.49
USACE	5167	100YRPLUS	2605.00	370.49	373.23		373.33	0.004279	4.38	1120.34	685.77	0.49
USACE	5167	200YR	2359.00	370.49	373.12		373.21	0.004342	4.27	1045.57	674.44	0.49
USACE	5167	500YR	2885.00	370.49	373.35		373.45	0.004247	4.50	1205.04	697.76	0.50
USACE	5167	SEPT2011	965.00	370.49	372.39		372.45	0.004759	3.48	570.26	628.47	0.49
USACE	4984	2YR	388.00	369.48	371.03		371.06	0.003968	2.37	284.67	437.54	0.41
USACE	4984	5YR	660.00	369.48	371.31		371.35	0.004579	2.99	424.66	550.22	0.46
USACE	4984	10YR	904.00	369.48	371.49		371.55	0.004570	3.26	529.92	571.42	0.47
USACE	4984	25YR	1312.00	369.48	371.78		371.85	0.004470	3.63	705.36	633.37	0.48
USACE	4984	50YR	1639.00	369.48	371.99		372.06	0.004202	3.78	837.20	656.53	0.47
USACE	4984	100YR	1992.00	369.48	372.20		372.27	0.003973	3.93	978.00	687.21	0.47
USACE	4984	100YRPLUS	2605.00	369.48	372.53		372.61	0.003513	4.07	1212.37	711.17	0.45
USACE	4984	200YR	2359.00	369.48	372.40		372.48	0.003683	4.02	1117.89	699.93	0.46
USACE	4984	500YR	2885.00	369.48	372.67		372.76	0.003390	4.14	1312.74	723.46	0.45
USACE	4984	SEPT2011	965.00	369.48	371.54		371.59	0.004605	3.34	553.95	578.26	0.47
USACE	4807	2YR	388.00	368.99	370.27		370.30	0.004714	2.56	276.25	456.14	0.47
USACE	4807	5YR	660.00	368.99	370.57		370.61	0.003849	2.78	415.66	474.07	0.44
USACE	4807	10YR	904.00	368.99	370.80		370.85	0.003420	2.94	529.11	490.30	0.43
USACE	4807	25YR	1312.00	368.99	371.15		371.21	0.002980	3.17	704.11	514.06	0.41
USACE	4807	50YR	1639.00	368.99	371.40		371.46	0.002768	3.32	832.20	527.43	0.41
USACE	4807	100YR	1992.00	368.99	371.64		371.71	0.002632	3.48	960.04	541.36	0.40

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4807	100YRPLUS	2605.00	368.99	372.02		372.10	0.002447	3.72	1170.81	561.81	0.40
USACE	4807	200YR	2359.00	368.99	371.87		371.94	0.002519	3.63	1086.79	553.48	0.40
USACE	4807	500YR	2885.00	368.99	372.17		372.26	0.002403	3.83	1259.28	570.02	0.40
USACE	4807	SEPT2011	965.00	368.99	370.86		370.91	0.003334	2.98	556.29	493.64	0.42
USACE	4497	2YR	388.00	367.66	369.29		369.33	0.002418	2.37	278.79	305.35	0.36
USACE	4497	5YR	660.00	367.66	369.65		369.71	0.002447	2.79	394.23	327.35	0.37
USACE	4497	10YR	904.00	367.66	369.91		369.98	0.002527	3.11	480.78	342.51	0.39
USACE	4497	25YR	1312.00	367.66	370.28		370.37	0.002654	3.57	612.49	368.58	0.41
USACE	4497	50YR	1639.00	367.66	370.53		370.64	0.002729	3.87	705.74	377.16	0.42
USACE	4497	100YR	1992.00	367.66	370.78		370.90	0.002786	4.15	799.42	384.67	0.43
USACE	4497	100YRPLUS	2605.00	367.66	371.14		371.29	0.002945	4.62	944.31	401.01	0.45
USACE	4497	200YR	2359.00	367.66	371.00		371.14	0.002877	4.44	888.19	393.97	0.44
USACE	4497	500YR	2885.00	367.66	371.31		371.47	0.002959	4.79	1010.19	406.35	0.46
USACE	4497	SEPT2011	965.00	367.66	369.97		370.04	0.002535	3.18	502.12	347.97	0.39
USACE	4278	2YR	388.00	366.88	368.59		368.64	0.004043	2.88	238.23	289.34	0.45
USACE	4278	5YR	660.00	366.88	368.94		369.01	0.004107	3.43	351.24	343.77	0.48
USACE	4278	10YR	904.00	366.88	369.19		369.28	0.004042	3.74	439.82	366.09	0.48
USACE	4278	25YR	1312.00	366.88	369.57		369.67	0.003798	4.10	584.86	401.68	0.48
USACE	4278	50YR	1639.00	366.88	369.82		369.93	0.003731	4.36	686.64	420.47	0.49
USACE	4278	100YR	1992.00	366.88	370.06		370.18	0.003718	4.64	792.73	447.10	0.50
USACE	4278	100YRPLUS	2605.00	366.88	370.43		370.57	0.003567	4.95	962.93	465.07	0.50
USACE	4278	200YR	2359.00	366.88	370.29		370.42	0.003644	4.84	896.68	461.46	0.50
USACE	4278	500YR	2885.00	366.88	370.60		370.74	0.003551	5.11	1040.63	482.76	0.50
USACE	4278	SEPT2011	965.00	366.88	369.26		369.34	0.003990	3.81	464.16	375.70	0.48
USACE	4025	2YR	388.00	365.31	367.46		367.56	0.004552	3.94	189.81	231.45	0.51
USACE	4025	5YR	660.00	365.31	367.87		367.99	0.004097	4.28	289.94	260.10	0.50
USACE	4025	10YR	904.00	365.31	368.17		368.29	0.003815	4.48	369.16	272.56	0.49
USACE	4025	25YR	1312.00	365.31	368.59		368.73	0.003685	4.87	490.91	321.28	0.50
USACE	4025	50YR	1639.00	365.31	368.86		369.02	0.003485	5.03	586.94	358.22	0.49
USACE	4025	100YR	1992.00	365.31	369.14		369.30	0.003307	5.18	689.26	381.95	0.49
USACE	4025	100YRPLUS	2605.00	365.31	369.56		369.73	0.003105	5.41	857.94	413.01	0.48
USACE	4025	200YR	2359.00	365.31	369.40		369.57	0.003183	5.32	791.00	404.16	0.48
USACE	4025	500YR	2885.00	365.31	369.74		369.92	0.003020	5.50	933.14	422.50	0.48
USACE	4025	SEPT2011	965.00	365.31	368.24		368.37	0.003820	4.57	388.22	280.12	0.50
USACE	3827	2YR	388.00	364.00	367.02		367.06	0.001546	2.91	286.06	252.13	0.31
USACE	3827	5YR	660.00	364.00	367.37		367.44	0.001964	3.56	376.72	260.65	0.36
USACE	3827	10YR	904.00	364.00	367.64		367.72	0.002213	4.00	448.80	273.34	0.39
USACE	3827	25YR	1312.00	364.00	368.03		368.14	0.002415	4.50	558.29	283.45	0.41
USACE	3827	50YR	1639.00	364.00	368.31		368.43	0.002532	4.83	636.51	289.51	0.43
USACE	3827	100YR	1992.00	364.00	368.58		368.72	0.002623	5.13	715.14	294.81	0.44
USACE	3827	100YRPLUS	2605.00	364.00	368.99		369.17	0.002735	5.58	839.58	300.77	0.46
USACE	3827	200YR	2359.00	364.00	368.83		368.99	0.002695	5.41	791.14	298.53	0.45
USACE	3827	500YR	2885.00	364.00	369.17		369.35	0.002786	5.77	891.69	303.16	0.46
USACE	3827	SEPT2011	965.00	364.00	367.70		367.79	0.002252	4.08	466.05	275.04	0.39
USACE	3604	2YR	388.00	363.91	366.06	366.06	366.30	0.012913	6.09	145.05	240.00	0.84
USACE	3604	5YR	660.00	363.91	366.41		366.61	0.009456	5.95	232.77	250.88	0.74
USACE	3604	10YR	904.00	363.91	366.71		366.90	0.007546	5.83	308.36	257.17	0.68
USACE	3604	25YR	1312.00	363.91	367.10		367.31	0.006664	6.08	411.70	270.54	0.65
USACE	3604	50YR	1639.00	363.91	367.38		367.60	0.006177	6.25	487.55	276.38	0.64
USACE	3604	100YR	1992.00	363.91	367.64		367.88	0.005985	6.51	559.21	282.34	0.64
USACE	3604	100YRPLUS	2605.00	363.91	368.04		368.31	0.005865	6.96	674.84	299.45	0.64
USACE	3604	200YR	2359.00	363.91	367.88		368.14	0.005879	6.77	629.96	291.43	0.64
USACE	3604	500YR	2885.00	363.91	368.20		368.49	0.005847	7.16	723.88	306.27	0.65
USACE	3604	SEPT2011	965.00	363.91	366.77		366.96	0.007386	5.87	324.18	258.82	0.67
USACE	3441	2YR	388.00	361.86	365.26		365.38	0.002292	3.65	223.01	238.03	0.37
USACE	3441	5YR	660.00	361.86	365.67		365.82	0.002789	4.39	328.54	269.82	0.42
USACE	3441	10YR	904.00	361.86	365.98		366.14	0.003013	4.82	413.09	292.95	0.44
USACE	3441	25YR	1312.00	361.86	366.37		366.55	0.003272	5.37	531.35	311.62	0.47
USACE	3441	50YR	1639.00	361.86	366.63		366.84	0.003494	5.79	616.82	330.45	0.49
USACE	3441	100YR	1992.00	361.86	366.88		367.10	0.003666	6.15	699.92	342.17	0.50
USACE	3441	100YRPLUS	2605.00	361.86	367.27		367.52	0.003881	6.67	836.53	362.55	0.52
USACE	3441	200YR	2359.00	361.86	367.12		367.36	0.003804	6.48	783.72	355.70	0.52
USACE	3441	500YR	2885.00	361.86	367.42		367.69	0.003961	6.88	893.98	369.21	0.53
USACE	3441	SEPT2011	965.00	361.86	366.04		366.21	0.003057	4.91	432.19	296.34	0.44
USACE	3277	2YR	388.00	361.38	364.41	364.35	364.69	0.009361	5.15	150.50	234.51	0.60
USACE	3277	5YR	660.00	361.38	364.82		365.07	0.008584	5.50	254.52	271.80	0.59
USACE	3277	10YR	904.00	361.38	365.08		365.34	0.008767	5.91	329.08	295.80	0.60
USACE	3277	25YR	1312.00	361.38	365.44		365.72	0.008786	6.38	440.57	323.39	0.62
USACE	3277	50YR	1639.00	361.38	365.68		365.97	0.008890	6.72	518.84	340.24	0.63
USACE	3277	100YR	1992.00	361.38	365.91		366.21	0.008781	6.97	600.62	353.94	0.63
USACE	3277	100YRPLUS	2605.00	361.38	366.26		366.59	0.008892	7.43	729.43	382.82	0.64
USACE	3277	200YR	2359.00	361.38	366.13		366.44	0.008834	7.25	679.34	371.58	0.64
USACE	3277	500YR	2885.00	361.38	366.41		366.75	0.008875	7.60	787.18	395.54	0.64
USACE	3277	SEPT2011	965.00	361.38	365.14		365.41	0.008759	5.99	347.07	300.87	0.60
USACE	3073	2YR	388.00	360.18	363.54		363.66	0.002935	3.90	238.66	319.19	0.41
USACE	3073	5YR	660.00	360.18	363.91		364.04	0.003170	4.41	378.05	408.09	0.44
USACE	3073	10YR	904.00	360.18	364.17		364.29	0.003196	4.67	486.45	433.08	0.45
USACE	3073	25YR	1312.00	360.18	364.52		364.65	0.003248	5.02	645.89	468.16	0.46
USACE	3073	50YR	1639.00	360.18	364.76		364.90	0.003243	5.24	762.87	490.15	0.46

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3073	100YR	1992.00	360.18	365.00		365.14	0.003274	5.46	879.41	511.19	0.47
USACE	3073	100YRPLUS	2605.00	360.18	365.32		365.48	0.003404	5.86	1051.39	534.61	0.48
USACE	3073	200YR	2359.00	360.18	365.20		365.35	0.003333	5.69	987.93	527.43	0.48
USACE	3073	500YR	2885.00	360.18	365.46		365.63	0.003477	6.04	1125.28	547.51	0.49
USACE	3073	SEPT2011	965.00	360.18	364.22		364.35	0.003214	4.73	511.49	440.01	0.45
USACE	2877	2YR	388.00	359.81	362.81	362.54	362.90	0.005450	3.64	223.94	315.11	0.43
USACE	2877	5YR	660.00	359.81	363.15	362.89	363.25	0.005310	3.96	338.86	349.70	0.44
USACE	2877	10YR	904.00	359.81	363.39	362.94	363.50	0.005506	4.28	424.20	379.74	0.45
USACE	2877	25YR	1312.00	359.81	363.71	363.14	363.84	0.005651	4.67	554.18	422.98	0.47
USACE	2877	50YR	1639.00	359.81	363.94	363.28	364.07	0.005860	4.98	654.72	471.13	0.48
USACE	2877	100YR	1992.00	359.81	364.16	363.43	364.31	0.005909	5.22	765.47	522.46	0.49
USACE	2877	100YRPLUS	2605.00	359.81	364.48	363.61	364.63	0.005805	5.48	941.04	596.12	0.49
USACE	2877	200YR	2359.00	359.81	364.36	363.55	364.51	0.005835	5.39	875.72	569.19	0.49
USACE	2877	500YR	2885.00	359.81	364.64	363.71	364.79	0.005400	5.43	1031.16	622.88	0.48
USACE	2877	SEPT2011	965.00	359.81	363.46	362.96	363.57	0.005210	4.24	453.17	386.47	0.44
USACE	2731	2YR	406.00	359.48	362.20		362.27	0.003424	3.54	296.63	421.98	0.43
USACE	2731	5YR	705.00	359.48	362.49		362.57	0.004022	4.18	422.48	462.61	0.47
USACE	2731	10YR	967.00	359.48	362.69		362.79	0.004350	4.59	519.81	496.86	0.50
USACE	2731	25YR	1415.00	359.48	362.99		363.10	0.004499	5.02	674.36	534.32	0.52
USACE	2731	50YR	1783.00	359.48	363.21		363.33	0.004425	5.23	795.69	554.78	0.52
USACE	2731	100YR	2185.00	359.48	363.45		363.57	0.004258	5.38	927.76	576.02	0.52
USACE	2731	100YRPLUS	2858.00	359.48	363.81		363.94	0.003907	5.52	1142.46	598.99	0.50
USACE	2731	200YR	2609.00	359.48	363.68		363.81	0.004059	5.49	1062.57	592.39	0.51
USACE	2731	500YR	3230.00	359.48	364.01		364.14	0.003746	5.59	1258.51	612.19	0.50
USACE	2731	SEPT2011	1091.00	359.48	362.78		362.88	0.004392	4.71	562.87	503.21	0.51
USACE	2528	2YR	406.00	358.39	361.20	361.08	361.31	0.006815	4.42	235.50	420.78	0.58
USACE	2528	5YR	705.00	358.39	361.53	361.27	361.63	0.005414	4.41	388.54	492.01	0.53
USACE	2528	10YR	967.00	358.39	361.78	361.40	361.87	0.004650	4.39	512.90	543.88	0.50
USACE	2528	25YR	1415.00	358.39	362.16	361.56	362.25	0.003865	4.42	711.24	600.69	0.47
USACE	2528	50YR	1783.00	358.39	362.44	361.70	362.53	0.003490	4.48	863.14	640.19	0.45
USACE	2528	100YR	2185.00	358.39	362.73	361.80	362.82	0.003161	4.52	1025.44	710.48	0.44
USACE	2528	100YRPLUS	2858.00	358.39	363.18	361.98	363.27	0.002712	4.56	1296.73	797.48	0.41
USACE	2528	200YR	2609.00	358.39	363.01	361.93	363.10	0.002928	4.59	1190.18	765.91	0.42
USACE	2528	500YR	3230.00	358.39	363.40	362.08	363.50	0.002606	4.64	1432.14	835.64	0.41
USACE	2528	SEPT2011	1091.00	358.39	361.89	361.44	361.98	0.004386	4.40	570.24	569.82	0.49
USACE	2338	2YR	406.00	357.56	360.35	359.95	360.40	0.003606	2.98	334.80	369.51	0.35
USACE	2338	5YR	705.00	357.56	360.80	360.18	360.85	0.003317	3.23	514.34	440.04	0.35
USACE	2338	10YR	967.00	357.56	361.11	360.32	361.17	0.003152	3.39	648.00	487.41	0.35
USACE	2338	25YR	1415.00	357.56	361.55	360.46	361.61	0.003074	3.67	840.69	650.92	0.35
USACE	2338	50YR	1783.00	357.56	361.85	360.70	361.93	0.003058	3.88	978.49	697.89	0.36
USACE	2338	100YR	2185.00	357.56	362.17	360.83	362.25	0.003024	4.07	1118.28	734.31	0.36
USACE	2338	100YRPLUS	2858.00	357.56	362.67	361.04	362.76	0.002883	4.30	1344.09	799.59	0.36
USACE	2338	200YR	2609.00	357.56	362.46	360.96	362.55	0.003014	4.26	1251.91	773.62	0.36
USACE	2338	500YR	3230.00	357.56	362.89	361.13	362.99	0.002936	4.48	1442.41	837.06	0.36
USACE	2338	SEPT2011	1091.00	357.56	361.24	360.38	361.30	0.003100	3.47	706.40	556.04	0.35
USACE	2122	2YR	406.00	355.82	359.38	358.97	359.47	0.004707	3.72	213.86	220.06	0.42
USACE	2122	5YR	705.00	355.82	359.90	359.28	360.00	0.004297	4.04	345.53	296.61	0.41
USACE	2122	10YR	967.00	355.82	360.26	359.46	360.37	0.003955	4.19	465.12	360.60	0.40
USACE	2122	25YR	1415.00	355.82	360.72	359.77	360.84	0.003758	4.45	642.45	400.81	0.40
USACE	2122	50YR	1783.00	355.82	361.04	359.95	361.17	0.003646	4.63	775.51	500.26	0.40
USACE	2122	100YR	2185.00	355.82	361.36	360.19	361.50	0.003596	4.83	920.16	571.83	0.40
USACE	2122	100YRPLUS	2858.00	355.82	361.86	360.45	362.00	0.003830	5.36	1174.66	700.74	0.42
USACE	2122	200YR	2609.00	355.82	361.66	360.38	361.80	0.003584	5.04	1066.29	654.01	0.41
USACE	2122	500YR	3230.00	355.82	362.09	360.61	362.23	0.003735	5.45	1305.34	727.54	0.42
USACE	2122	SEPT2011	1091.00	355.82	360.40	359.55	360.51	0.003915	4.28	517.46	374.40	0.41
USACE	1863	2YR	406.00	355.39	358.45	357.86	358.57	0.002660	3.67	263.21	278.75	0.39
USACE	1863	5YR	705.00	355.39	359.00	358.35	359.13	0.002653	4.16	431.92	328.44	0.41
USACE	1863	10YR	967.00	355.39	359.37	358.60	359.51	0.002775	4.56	561.08	513.60	0.42
USACE	1863	25YR	1415.00	355.39	359.83	358.95	359.98	0.002897	5.05	745.07	568.60	0.44
USACE	1863	50YR	1783.00	355.39	360.16	359.15	360.32	0.002923	5.34	882.56	597.98	0.45
USACE	1863	100YR	2185.00	355.39	360.47	359.57	360.64	0.002958	5.63	1016.82	632.41	0.46
USACE	1863	100YRPLUS	2858.00	355.39	360.92	359.72	361.11	0.003067	6.09	1212.78	675.30	0.47
USACE	1863	200YR	2609.00	355.39	360.76	359.61	360.95	0.003027	5.93	1143.98	665.26	0.47
USACE	1863	500YR	3230.00	355.39	361.14	359.87	361.34	0.003132	6.33	1309.92	706.09	0.48
USACE	1863	SEPT2011	1091.00	355.39	359.51	358.70	359.65	0.002798	4.70	616.12	528.62	0.43
USACE	1652	2YR	406.00	355.11	357.23	357.06	357.45	0.014891	5.28	169.70	178.99	0.70
USACE	1652	5YR	705.00	355.11	357.59	357.36	357.93	0.019212	6.79	244.35	224.83	0.82
USACE	1652	10YR	967.00	355.11	357.84	357.68	358.24	0.020772	7.60	303.10	267.71	0.87
USACE	1652	25YR	1415.00	355.11	358.26	358.04	358.68	0.019423	8.19	410.05	451.34	0.86
USACE	1652	50YR	1783.00	355.11	358.58	358.22	359.02	0.018821	8.66	497.81	514.01	0.86
USACE	1652	100YR	2185.00	355.11	358.90	358.50	359.36	0.017755	8.98	593.15	567.30	0.85
USACE	1652	100YRPLUS	2858.00	355.11	359.34	358.79	359.82	0.016556	9.40	733.29	646.13	0.84
USACE	1652	200YR	2609.00	355.11	359.19	358.73	359.66	0.017012	9.27	683.31	637.08	0.85
USACE	1652	500YR	3230.00	355.11	359.56	358.99	360.05	0.016112	9.62	802.33	657.05	0.84
USACE	1652	SEPT2011	1091.00	355.11	357.96	357.82	358.37	0.020573	7.81	332.13	342.56	0.87
USACE	1495	2YR	406.00	354.25	356.27	355.78	356.32	0.003915	2.98	250.54	269.65	0.43
USACE	1495	5YR	705.00	354.25	356.72	356.02	356.79	0.003386	3.31	375.89	370.96	0.42
USACE	1495	10YR	967.00	354.25	357.09	356.19	357.17	0.002932	3.47	483.83	453.20	0.40
USACE	1495	25YR	1415.00	354.25	357.59	356.42	357.68	0.002692	3.79	638.14	534.69	0.40

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1495	50YR	1783.00	354.25	357.92	356.56	358.03	0.002702	4.09	743.21	590.04	0.41
USACE	1495	100YR	2185.00	354.25	358.25	356.75	358.37	0.002724	4.39	855.40	648.33	0.42
USACE	1495	100YRPLUS	2858.00	354.25	358.68	357.01	358.83	0.002817	4.84	1013.03	718.90	0.43
USACE	1495	200YR	2609.00	354.25	358.53	356.92	358.67	0.002790	4.68	956.31	688.59	0.43
USACE	1495	500YR	3230.00	354.25	358.89	357.15	359.05	0.002898	5.07	1088.12	732.52	0.44
USACE	1495	SEPT2011	1091.00	354.25	357.24	356.25	357.32	0.002807	3.55	530.62	474.45	0.40
USACE	1330	2YR	406.00	353.59	355.64	355.09	355.70	0.003756	3.10	237.64	222.89	0.43
USACE	1330	5YR	705.00	353.59	356.17	355.34	356.24	0.003243	3.48	364.34	249.85	0.42
USACE	1330	10YR	967.00	353.59	356.58	355.51	356.67	0.003179	3.88	476.66	299.42	0.43
USACE	1330	25YR	1415.00	353.59	357.11	355.78	357.20	0.003193	4.40	652.53	372.96	0.44
USACE	1330	50YR	1783.00	353.59	357.45	355.98	357.56	0.003044	4.61	786.67	460.49	0.44
USACE	1330	100YR	2185.00	353.59	357.80	356.16	357.91	0.002847	4.76	932.51	550.63	0.43
USACE	1330	100YRPLUS	2858.00	353.59	358.23	356.45	358.36	0.002923	5.18	1123.68	620.82	0.45
USACE	1330	200YR	2609.00	353.59	358.08	356.39	358.20	0.002901	5.04	1053.40	599.43	0.44
USACE	1330	500YR	3230.00	353.59	358.43	356.54	358.57	0.002933	5.35	1216.46	648.33	0.45
USACE	1330	SEPT2011	1091.00	353.59	356.74	355.58	356.83	0.003226	4.07	526.37	324.69	0.44
USACE	1081	2YR	406.00	352.26	354.70		354.78	0.003564	3.37	217.73	184.75	0.43
USACE	1081	5YR	705.00	352.26	355.33		355.42	0.003321	3.93	351.35	249.26	0.44
USACE	1081	10YR	967.00	352.26	355.76		355.87	0.003196	4.29	468.12	307.27	0.44
USACE	1081	25YR	1415.00	352.26	356.34		356.45	0.002845	4.56	667.03	377.53	0.43
USACE	1081	50YR	1783.00	352.26	356.72		356.83	0.002747	4.79	817.77	426.04	0.43
USACE	1081	100YR	2185.00	352.26	357.10		357.22	0.002657	5.02	994.78	496.01	0.43
USACE	1081	100YRPLUS	2858.00	352.26	357.55		357.67	0.002528	5.23	1222.89	525.70	0.42
USACE	1081	200YR	2609.00	352.26	357.40		357.52	0.002553	5.14	1142.95	515.60	0.42
USACE	1081	500YR	3230.00	352.26	357.75		357.88	0.002546	5.39	1327.66	537.03	0.43
USACE	1081	SEPT2011	1091.00	352.26	355.94		356.04	0.003108	4.39	524.32	332.61	0.44
USACE	874	2YR	406.00	350.36	353.85		354.01	0.003852	4.38	173.62	136.07	0.47
USACE	874	5YR	705.00	350.36	354.43		354.64	0.004320	5.28	260.51	165.13	0.51
USACE	874	10YR	967.00	350.36	354.80		355.06	0.004788	5.97	327.81	192.07	0.55
USACE	874	25YR	1415.00	350.36	355.31		355.63	0.005562	7.02	437.23	242.27	0.60
USACE	874	50YR	1783.00	350.36	355.66		356.01	0.005836	7.58	526.87	278.60	0.63
USACE	874	100YR	2185.00	350.36	356.00		356.39	0.006232	8.22	630.47	337.30	0.66
USACE	874	100YRPLUS	2858.00	350.36	356.46		356.86	0.006233	8.73	803.46	404.36	0.67
USACE	874	200YR	2609.00	350.36	356.29		356.70	0.006332	8.62	736.93	389.46	0.67
USACE	874	500YR	3230.00	350.36	356.68		357.08	0.006025	8.82	893.55	419.98	0.66
USACE	874	SEPT2011	1091.00	350.36	354.96		355.23	0.004970	6.25	358.02	203.09	0.56
USACE	683	2YR	406.00	349.16	353.02		353.24	0.004163	4.87	173.21	173.95	0.50
USACE	683	5YR	705.00	349.16	353.68		353.88	0.003606	5.18	308.09	241.15	0.48
USACE	683	10YR	967.00	349.16	354.03		354.24	0.003732	5.59	395.49	266.56	0.49
USACE	683	25YR	1415.00	349.16	354.50		354.73	0.003829	6.11	531.02	298.35	0.51
USACE	683	50YR	1783.00	349.16	354.84		355.08	0.003880	6.45	634.93	321.99	0.52
USACE	683	100YR	2185.00	349.16	355.15		355.40	0.004024	6.85	739.84	349.40	0.53
USACE	683	100YRPLUS	2858.00	349.16	355.59		355.86	0.004148	7.34	898.36	377.75	0.55
USACE	683	200YR	2609.00	349.16	355.43		355.70	0.004064	7.13	841.12	364.20	0.54
USACE	683	500YR	3230.00	349.16	355.80		356.09	0.004182	7.56	982.05	390.97	0.55
USACE	683	SEPT2011	1091.00	349.16	354.16		354.38	0.003831	5.79	432.44	277.05	0.50
USACE	495	2YR	406.00	347.77	351.82	351.05	352.29	0.005915	5.83	102.94	119.21	0.59
USACE	495	5YR	705.00	347.77	352.48	352.19	352.99	0.006021	6.70	201.89	192.39	0.61
USACE	495	10YR	967.00	347.77	352.90	352.76	353.37	0.005559	6.91	292.02	230.12	0.60
USACE	495	25YR	1415.00	347.77	353.52	353.15	353.92	0.004699	6.98	446.89	273.58	0.56
USACE	495	50YR	1783.00	347.77	353.87	353.37	354.27	0.004624	7.26	546.24	293.51	0.57
USACE	495	100YR	2185.00	347.77	354.20	353.68	354.59	0.004487	7.46	646.30	308.31	0.56
USACE	495	100YRPLUS	2858.00	347.77	354.62	354.03	355.03	0.004612	7.94	777.12	321.33	0.58
USACE	495	200YR	2609.00	347.77	354.46	353.90	354.87	0.004623	7.81	728.09	317.39	0.58
USACE	495	500YR	3230.00	347.77	354.85		355.26	0.004542	8.08	851.61	334.66	0.58
USACE	495	SEPT2011	1091.00	347.77	353.08	352.91	353.52	0.005240	6.91	335.15	240.00	0.59
USACE	329	2YR	406.00	347.55	350.66	350.66	351.15	0.008027	6.71	110.62	114.09	0.71
USACE	329	5YR	705.00	347.55	351.13	351.13	351.74	0.009444	8.09	168.27	129.42	0.79
USACE	329	10YR	967.00	347.55	351.50	351.50	352.15	0.009678	8.80	218.44	144.67	0.82
USACE	329	25YR	1415.00	347.55	351.88	351.88	352.71	0.011609	10.30	275.63	160.50	0.91
USACE	329	50YR	1783.00	347.55	352.33	352.33	353.12	0.010383	10.48	356.82	188.33	0.88
USACE	329	100YR	2185.00	347.55	352.61	352.60	353.45	0.010705	11.08	409.37	197.89	0.90
USACE	329	100YRPLUS	2858.00	347.55	353.13		353.93	0.009476	11.18	523.04	226.75	0.86
USACE	329	200YR	2609.00	347.55	352.95	352.86	353.76	0.009746	11.08	483.68	222.40	0.87
USACE	329	500YR	3230.00	347.55	353.37		354.18	0.009278	11.40	578.26	235.34	0.86
USACE	329	SEPT2011	1091.00	347.55	351.62	351.62	352.32	0.010170	9.22	235.69	147.51	0.84
USACE	191	2YR	406.00	345.26	347.87	347.65	348.54	0.011836	6.59	63.55	37.04	0.83
USACE	191	5YR	705.00	345.26	348.86	348.43	349.71	0.008820	7.48	103.92	45.53	0.77
USACE	191	10YR	967.00	345.26	349.80	348.97	350.56	0.005749	7.27	186.64	129.58	0.65
USACE	191	25YR	1415.00	345.26	351.55		351.88	0.001958	5.44	503.07	229.18	0.40
USACE	191	50YR	1783.00	345.26	351.97		352.35	0.002160	6.00	607.62	270.20	0.43
USACE	191	100YR	2185.00	345.26	352.28		352.71	0.002387	6.51	690.98	274.53	0.46
USACE	191	100YRPLUS	2858.00	345.26	352.70		353.20	0.002719	7.25	807.72	280.52	0.49
USACE	191	200YR	2609.00	345.26	352.57		353.03	0.002578	6.97	769.75	278.51	0.48
USACE	191	500YR	3230.00	345.26	352.89		353.44	0.002921	7.66	860.56	283.24	0.51
USACE	191	SEPT2011	1091.00	345.26	350.27		350.89	0.004320	6.80	253.06	150.42	0.57
USACE	128	2YR	411.00	344.32	347.08	346.98	347.76	0.012329	7.31	73.05	97.16	0.86
USACE	128	5YR	714.00	344.32	348.62	347.68	349.14	0.004734	6.43	148.51	151.57	0.58
USACE	128	10YR	980.00	344.32	349.61	348.19	350.16	0.003723	6.66	197.02	188.14	0.54

HEC-RAS Plan: Existing River: DellingerRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	128	25YR	1434.00	344.32	351.63	348.95	351.69	0.000585	3.34	885.18	268.36	0.23
USACE	128	50YR	1808.00	344.32	352.06	349.51	352.14	0.000657	3.69	1012.00	306.55	0.24
USACE	128	100YR	2214.00	344.32	352.37	350.09	352.46	0.000757	4.07	1109.51	316.31	0.26
USACE	128	100YRPLUS	2895.00	344.32	352.81	350.99	352.92	0.000910	4.64	1249.24	329.66	0.29
USACE	128	200YR	2643.00	344.32	352.66	350.66	352.77	0.000851	4.43	1202.95	326.06	0.28
USACE	128	500YR	3272.00	344.32	353.00	350.98	353.13	0.000996	4.93	1314.16	335.18	0.30
USACE	128	SEPT2011	1098.00	344.32	350.06	348.39	350.62	0.003365	6.72	218.77	196.80	0.52
USACE	89 Auction Road		Culvert									
USACE	48	2YR	411.00	344.08	347.24	346.18	347.40	0.002265	3.67	141.65	73.65	0.39
USACE	48	5YR	714.00	344.08	348.22	346.74	348.45	0.002141	4.37	208.36	189.79	0.40
USACE	48	10YR	980.00	344.08	348.90	347.16	349.18	0.002156	4.89	256.88	248.33	0.41
USACE	48	25YR	1434.00	344.08	349.99	347.77	350.19	0.001292	4.39	467.55	373.54	0.33
USACE	48	50YR	1808.00	344.08	350.70	348.23	350.86	0.000938	4.05	651.75	463.07	0.29
USACE	48	100YR	2214.00	344.08	351.04	348.67	351.20	0.000897	4.10	752.55	469.51	0.28
USACE	48	100YRPLUS	2895.00	344.08	351.76	349.36	351.91	0.000663	3.78	971.50	486.08	0.25
USACE	48	200YR	2643.00	344.08	351.49	349.11	351.64	0.000744	3.91	888.42	480.64	0.26
USACE	48	500YR	3272.00	344.08	352.04	349.70	352.19	0.000639	3.81	1057.01	491.12	0.24
USACE	48	SEPT2011	1098.00	344.08	349.16	347.34	349.47	0.002187	5.12	276.09	265.90	0.42
USACE	7	2YR	411.00	344.07	346.65	346.21	347.15	0.007604	5.82	82.51	46.37	0.69
USACE	7	5YR	714.00	344.07	347.44	347.00	348.16	0.007601	7.12	122.09	54.31	0.72
USACE	7	10YR	980.00	344.07	347.99	347.57	348.85	0.007601	7.95	153.51	61.42	0.74
USACE	7	25YR	1434.00	344.07	348.73	348.38	349.82	0.007612	9.02	202.80	161.04	0.77
USACE	7	50YR	1808.00	344.07	349.23	349.21	350.45	0.007611	9.71	247.59	328.77	0.78
USACE	7	100YR	2214.00	344.07	349.90	349.90	350.88	0.005334	8.87	339.74	400.06	0.67
USACE	7	100YRPLUS	2895.00	344.07	350.22	350.22	351.51	0.006117	9.86	397.98	427.75	0.72
USACE	7	200YR	2643.00	344.07	350.18	350.18	351.29	0.005392	9.21	389.71	424.33	0.68
USACE	7	500YR	3272.00	344.07	350.55	350.55	351.81	0.005144	9.39	466.80	455.41	0.67
USACE	7	SEPT2011	1098.00	344.07	348.20	347.80	349.12	0.007613	8.26	166.64	64.23	0.75

HEC-RAS Plan: Existing River: DoeRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	16142 16142	2YR	220.00	442.41	445.01		445.48	0.008250	5.60	42.82	334.40	0.67
USACE	16142 16142	5YR	371.00	442.41	445.25	445.25	446.31	0.016196	8.42	49.07	406.13	0.95
USACE	16142 16142	10YR	496.00	442.41	446.18	446.18	446.46	0.004249	5.35	241.41	483.44	0.52
USACE	16142 16142	25YR	704.00	442.41	446.33	446.33	446.66	0.005258	6.14	317.84	495.41	0.58
USACE	16142 16142	50YR	869.00	442.41	446.48	446.48	446.78	0.005280	6.32	389.72	509.46	0.58
USACE	16142 16142	100YR	1045.00	442.41	446.53	446.53	446.90	0.006642	7.15	416.26	524.08	0.65
USACE	16142 16142	100YRPLUS	1367.00	442.41	446.68	446.68	447.10	0.007853	7.98	497.39	573.03	0.72
USACE	16142 16142	200YR	1228.00	442.41	446.63	446.63	447.02	0.007092	7.53	473.93	552.10	0.68
USACE	16142 16142	500YR	1483.00	442.41	446.76	446.76	447.17	0.007690	8.02	548.93	603.94	0.71
USACE	16142 16142	SEPT2011	805.00	442.41	446.44	446.44	446.73	0.005004	6.11	372.06	506.22	0.57
USACE	16003	2YR	220.00	441.72	444.59	443.80	444.74	0.002982	3.56	148.12	667.25	0.41
USACE	16003	5YR	371.00	441.72	444.79	444.74	444.95	0.003662	4.16	258.13	760.23	0.46
USACE	16003	10YR	496.00	441.72	444.91		445.06	0.003909	4.43	343.46	774.85	0.48
USACE	16003	25YR	704.00	441.72	445.08		445.21	0.003742	4.52	478.46	787.89	0.47
USACE	16003	50YR	869.00	441.72	445.20		445.31	0.003588	4.55	575.18	798.79	0.47
USACE	16003	100YR	1045.00	441.72	445.32		445.42	0.003488	4.60	668.02	809.22	0.46
USACE	16003	100YRPLUS	1367.00	441.72	445.50		445.60	0.003353	4.69	821.18	826.50	0.46
USACE	16003	200YR	1228.00	441.72	445.43		445.53	0.003380	4.64	759.40	820.70	0.46
USACE	16003	500YR	1483.00	441.72	445.57		445.67	0.003301	4.71	873.56	829.98	0.46
USACE	16003	SEPT2011	805.00	441.72	445.15		445.27	0.003649	4.54	538.51	796.13	0.47
USACE	15854	2YR	220.00	441.13	444.03	443.36	444.23	0.003928	3.94	123.38	648.40	0.46
USACE	15854	5YR	371.00	441.13	444.26	444.21	444.40	0.003687	4.07	274.04	683.01	0.46
USACE	15854	10YR	496.00	441.13	444.43		444.53	0.003033	3.86	390.78	698.56	0.42
USACE	15854	25YR	704.00	441.13	444.60		444.70	0.003040	4.04	516.55	716.72	0.42
USACE	15854	50YR	869.00	441.13	444.72		444.81	0.003069	4.17	601.22	724.03	0.43
USACE	15854	100YR	1045.00	441.13	444.84		444.93	0.003058	4.27	687.58	733.54	0.43
USACE	15854	100YRPLUS	1367.00	441.13	445.03		445.12	0.003043	4.44	830.00	745.03	0.44
USACE	15854	200YR	1228.00	441.13	444.97		445.06	0.002868	4.26	787.21	742.48	0.42
USACE	15854	500YR	1483.00	441.13	445.10		445.19	0.003004	4.48	881.60	749.41	0.43
USACE	15854	SEPT2011	805.00	441.13	444.71		444.79	0.002726	3.92	593.73	723.36	0.40
USACE	15673	2YR	220.00	440.06	443.44	442.59	443.61	0.002925	3.82	171.03	723.57	0.41
USACE	15673	5YR	371.00	440.06	443.61	443.61	443.76	0.003405	4.29	294.42	744.64	0.45
USACE	15673	10YR	496.00	440.06	443.66	443.66	443.86	0.004617	5.06	335.78	750.28	0.52
USACE	15673	25YR	704.00	440.06	443.79	443.79	443.98	0.005294	5.57	431.32	789.84	0.56
USACE	15673	50YR	869.00	440.06	443.87	443.87	444.07	0.005662	5.87	501.88	819.85	0.59
USACE	15673	100YR	1045.00	440.06	443.93	443.93	444.15	0.006456	6.35	551.39	833.33	0.63
USACE	15673	100YRPLUS	1367.00	440.06	444.03	444.03	444.28	0.007797	7.12	634.12	875.94	0.69
USACE	15673	200YR	1228.00	440.06	443.95	443.95	444.22	0.008293	7.22	566.77	836.15	0.71
USACE	15673	500YR	1483.00	440.06	444.05	444.05	444.32	0.008504	7.46	652.26	877.70	0.72
USACE	15673	SEPT2011	805.00	440.06	443.79	443.79	444.04	0.006688	6.27	437.48	791.97	0.63
USACE	15517	2YR	220.00	439.22	442.01	441.89	442.65	0.017022	6.64	39.13	700.68	0.79
USACE	15517	5YR	371.00	439.22	442.47	442.47	442.60	0.005524	4.30	278.69	758.28	0.47
USACE	15517	10YR	496.00	439.22	442.54	442.54	442.68	0.006623	4.79	328.47	763.03	0.51
USACE	15517	25YR	704.00	439.22	442.70		442.81	0.005704	4.62	451.94	789.85	0.48
USACE	15517	50YR	869.00	439.22	442.82		442.91	0.005202	4.53	540.82	802.15	0.46
USACE	15517	100YR	1045.00	439.22	442.90		443.00	0.005479	4.74	602.30	817.77	0.48
USACE	15517	100YRPLUS	1367.00	439.22	443.08		443.17	0.005092	4.74	738.68	850.02	0.46
USACE	15517	200YR	1228.00	439.22	443.02		443.11	0.005041	4.66	689.43	836.46	0.46
USACE	15517	500YR	1483.00	439.22	443.11		443.21	0.005537	4.97	758.08	853.74	0.48
USACE	15517	SEPT2011	805.00	439.22	442.78		442.88	0.005206	4.50	512.88	798.37	0.46
USACE	15427 15427	2YR	220.00	439.02	441.78	441.78	441.89	0.003472	3.61	214.11	1001.46	0.43
USACE	15427 15427	5YR	371.00	439.02	441.90	441.90	442.01	0.004584	4.29	306.07	1013.43	0.50
USACE	15427 15427	10YR	496.00	439.02	441.96	441.96	442.09	0.005592	4.82	357.70	1021.45	0.55
USACE	15427 15427	25YR	704.00	439.02	442.02	442.02	442.20	0.007744	5.78	413.08	1029.88	0.66
USACE	15427 15427	50YR	869.00	439.02	442.06	442.06	442.27	0.009657	6.52	444.93	1035.45	0.73
USACE	15427 15427	100YR	1045.00	439.02	442.13	442.13	442.34	0.009767	6.69	506.02	1045.14	0.74
USACE	15427 15427	100YRPLUS	1367.00	439.02	442.19	442.19	442.45	0.012747	7.76	557.25	1055.68	0.85
USACE	15427 15427	200YR	1228.00	439.02	442.16	442.16	442.40	0.012091	7.49	525.98	1048.73	0.83
USACE	15427 15427	500YR	1483.00	439.02	442.26	442.26	442.49	0.011436	7.47	611.81	1060.85	0.81
USACE	15427 15427	SEPT2011	805.00	439.02	442.04	442.04	442.24	0.009261	6.35	427.06	1032.51	0.72
USACE	15348	2YR	220.00	437.75	440.98		441.09	0.002926	3.65	110.77	899.41	0.40
USACE	15348	5YR	371.00	437.75	441.15	441.15	441.35	0.005287	5.12	172.34	959.36	0.54
USACE	15348	10YR	496.00	437.75	441.29	441.29	441.44	0.004586	4.93	313.03	1009.26	0.51
USACE	15348	25YR	704.00	437.75	441.39		441.54	0.005099	5.32	420.37	1028.89	0.54
USACE	15348	50YR	869.00	437.75	441.49		441.62	0.004917	5.34	517.47	1060.18	0.53
USACE	15348	100YR	1045.00	437.75	441.57		441.70	0.004628	5.27	608.19	1070.89	0.52
USACE	15348	100YRPLUS	1367.00	437.75	441.71		441.83	0.004295	5.23	759.32	1089.88	0.50
USACE	15348	200YR	1228.00	437.75	441.65		441.77	0.004385	5.22	695.87	1076.10	0.51
USACE	15348	500YR	1483.00	437.75	441.75		441.87	0.004254	5.24	805.37	1093.75	0.50
USACE	15348	SEPT2011	805.00	437.75	441.44		441.59	0.005107	5.39	472.73	1053.55	0.54
USACE	15252	2YR	276.00	437.74	440.64	440.63	440.73	0.004371	3.88	290.27	1000.77	0.47
USACE	15252	5YR	462.00	437.74	440.81	440.72	440.87	0.003569	3.69	461.50	1036.49	0.43
USACE	15252	10YR	620.00	437.74	440.92	440.77	440.97	0.003521	3.78	573.49	1073.81	0.43
USACE	15252	25YR	876.00	437.74	441.01	440.82	441.07	0.004391	4.33	675.80	1098.19	0.48
USACE	15252	50YR	1078.00	437.74	441.10	440.88	441.16	0.004405	4.44	775.87	1117.81	0.49
USACE	15252	100YR	1294.00	437.74	441.18	440.92	441.25	0.004570	4.62	867.14	1134.80	0.50
USACE	15252	100YRPLUS	1692.00	437.74	441.32		441.39	0.004663	4.83	1026.46	1149.32	0.51
USACE	15252	200YR	1516.00	437.74	441.26		441.33	0.004620	4.74	959.28	1144.60	0.50
USACE	15252	500YR	1826.00	437.74	441.37		441.44	0.004669	4.88	1078.26	1155.28	0.51
USACE	15252	SEPT2011	981.00	437.74	441.06	440.85	441.12	0.004401	4.39	727.52	1101.22	0.49
USACE	15067	2YR	276.00	437.35	439.40	439.40	439.53	0.010669	5.02	181.80	589.46	0.70

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	15067	5YR	462.00	437.35	439.49	439.49	439.66	0.015121	6.21	235.80	603.56	0.85
USACE	15067	10YR	620.00	437.35	439.57	439.56	439.74	0.016486	6.68	283.57	614.68	0.89
USACE	15067	25YR	876.00	437.35	439.80	439.65	439.91	0.009787	5.60	431.09	664.51	0.70
USACE	15067	50YR	1078.00	437.35	439.99	439.72	440.08	0.008119	5.41	569.34	802.00	0.65
USACE	15067	100YR	1294.00	437.35	440.12		440.20	0.007104	5.27	677.38	832.72	0.61
USACE	15067	100YRPLUS	1692.00	437.35	440.33		440.41	0.005971	5.12	860.05	872.94	0.57
USACE	15067	200YR	1516.00	437.35	440.24		440.32	0.006453	5.19	781.07	863.58	0.59
USACE	15067	500YR	1826.00	437.35	440.39		440.47	0.005752	5.11	914.42	885.24	0.56
USACE	15067	SEPT2011	981.00	437.35	439.90	439.69	440.00	0.008785	5.47	498.64	758.47	0.67
USACE	14876	2YR	276.00	434.75	438.52		438.55	0.001135	2.35	346.42	487.00	0.24
USACE	14876	5YR	462.00	434.75	438.73		438.77	0.001569	2.89	450.77	530.39	0.29
USACE	14876	10YR	620.00	434.75	438.91		438.95	0.001726	3.14	547.47	556.20	0.31
USACE	14876	25YR	876.00	434.75	439.11		439.16	0.002012	3.54	666.37	603.66	0.34
USACE	14876	50YR	1078.00	434.75	439.25		439.31	0.002332	3.91	750.20	649.42	0.36
USACE	14876	100YR	1294.00	434.75	439.39		439.45	0.002429	4.09	842.46	663.25	0.37
USACE	14876	100YRPLUS	1692.00	434.75	439.57		439.65	0.002873	4.59	968.04	703.40	0.41
USACE	14876	200YR	1516.00	434.75	439.50		439.57	0.002594	4.31	919.30	681.15	0.39
USACE	14876	500YR	1826.00	434.75	439.65		439.73	0.002821	4.61	1024.50	708.53	0.41
USACE	14876	SEPT2011	981.00	434.75	439.17		439.22	0.002268	3.79	698.64	624.51	0.36
USACE	14819 14819	2YR	276.00	434.75	438.17	438.17	438.38	0.005714	4.66	161.27	436.35	0.54
USACE	14819 14819	5YR	462.00	434.75	438.37	438.37	438.56	0.006271	5.16	252.69	467.84	0.58
USACE	14819 14819	10YR	620.00	434.75	438.43	438.43	438.69	0.008974	6.27	279.67	486.06	0.69
USACE	14819 14819	25YR	876.00	434.75	438.57	438.57	438.87	0.010788	7.12	347.44	505.66	0.77
USACE	14819 14819	50YR	1078.00	434.75	438.66	438.66	438.98	0.011617	7.56	396.83	524.30	0.80
USACE	14819 14819	100YR	1294.00	434.75	438.74	438.74	439.10	0.013139	8.19	439.07	542.93	0.85
USACE	14819 14819	100YRPLUS	1692.00	434.75	438.92	438.92	439.27	0.013146	8.53	535.92	564.17	0.86
USACE	14819 14819	200YR	1516.00	434.75	438.83	438.83	439.20	0.013761	8.56	487.39	559.21	0.88
USACE	14819 14819	500YR	1826.00	434.75	438.92	438.92	439.32	0.015093	9.15	539.12	565.52	0.92
USACE	14819 14819	SEPT2011	981.00	434.75	438.65	438.65	438.92	0.009965	6.98	391.50	522.09	0.74
USACE	14800 Private Drive		Culvert									
USACE	14783 14783	2YR	276.00	434.57	437.15	437.13	437.31	0.008300	4.94	150.67	379.52	0.64
USACE	14783 14783	5YR	462.00	434.57	437.38		437.54	0.008176	5.31	225.25	427.68	0.65
USACE	14783 14783	10YR	620.00	434.57	437.55		437.70	0.008004	5.53	293.80	455.30	0.65
USACE	14783 14783	25YR	876.00	434.57	437.77		437.91	0.007385	5.66	399.36	483.94	0.63
USACE	14783 14783	50YR	1078.00	434.57	437.92		438.06	0.006961	5.71	473.54	496.03	0.62
USACE	14783 14783	100YR	1294.00	434.57	438.07		438.21	0.006764	5.84	547.19	514.24	0.62
USACE	14783 14783	100YRPLUS	1692.00	434.57	438.31		438.46	0.006428	6.02	673.55	536.61	0.61
USACE	14783 14783	200YR	1516.00	434.57	438.21		438.35	0.006589	5.95	619.51	530.23	0.61
USACE	14783 14783	500YR	1826.00	434.57	438.38		438.53	0.006427	6.11	713.48	547.66	0.61
USACE	14783 14783	SEPT2011	981.00	434.57	437.85		437.99	0.007145	5.69	438.83	490.38	0.63
USACE	14715	2YR	276.00	434.56	436.86		436.91	0.003352	3.26	246.75	479.51	0.41
USACE	14715	5YR	462.00	434.56	437.12		437.16	0.003004	3.35	372.02	500.21	0.40
USACE	14715	10YR	620.00	434.56	437.28		437.33	0.003017	3.53	455.40	513.82	0.41
USACE	14715	25YR	876.00	434.56	437.50		437.56	0.003100	3.80	571.13	532.69	0.42
USACE	14715	50YR	1078.00	434.56	437.65		437.71	0.003183	3.99	652.06	548.79	0.43
USACE	14715	100YR	1294.00	434.56	437.80		437.86	0.003261	4.18	731.79	560.37	0.44
USACE	14715	100YRPLUS	1692.00	434.56	438.04		438.11	0.003326	4.46	868.59	577.30	0.45
USACE	14715	200YR	1516.00	434.56	437.93		438.00	0.003298	4.34	810.12	570.75	0.44
USACE	14715	500YR	1826.00	434.56	438.11		438.19	0.003353	4.55	910.40	581.19	0.45
USACE	14715	SEPT2011	981.00	434.56	437.58		437.64	0.003150	3.91	614.05	542.01	0.42
USACE	14523 14523	2YR	276.00	433.84	436.24		436.31	0.002916	3.17	218.57	407.27	0.39
USACE	14523 14523	5YR	462.00	433.84	436.52		436.59	0.002976	3.49	350.50	563.54	0.41
USACE	14523 14523	10YR	620.00	433.84	436.70		436.76	0.002929	3.64	458.12	625.10	0.41
USACE	14523 14523	25YR	876.00	433.84	436.92		436.99	0.002843	3.80	602.39	656.92	0.41
USACE	14523 14523	50YR	1078.00	433.84	437.11		437.17	0.002562	3.77	725.07	672.94	0.39
USACE	14523 14523	100YR	1294.00	433.84	437.22		437.29	0.002776	4.02	800.11	679.85	0.41
USACE	14523 14523	100YRPLUS	1692.00	433.84	437.44		437.51	0.002917	4.32	951.56	709.81	0.43
USACE	14523 14523	200YR	1516.00	433.84	437.34		437.41	0.002915	4.23	880.82	697.42	0.42
USACE	14523 14523	500YR	1826.00	433.84	437.51		437.59	0.002913	4.39	1003.09	715.56	0.43
USACE	14523 14523	SEPT2011	981.00	433.84	437.02		437.08	0.002701	3.79	665.21	663.61	0.40
USACE	14343	2YR	276.00	432.69	435.29	435.29	435.50	0.007578	4.80	141.49	335.23	0.62
USACE	14343	5YR	462.00	432.69	435.49	435.49	435.72	0.008786	5.54	214.19	384.64	0.68
USACE	14343	10YR	620.00	432.69	435.60	435.60	435.86	0.010201	6.19	258.79	403.42	0.74
USACE	14343	25YR	876.00	432.69	435.75	435.75	436.05	0.011859	6.98	322.15	437.88	0.81
USACE	14343	50YR	1078.00	432.69	435.77	435.77	436.18	0.016460	8.28	332.77	444.70	0.96
USACE	14343	100YR	1294.00	432.69	435.98	435.98	436.32	0.013244	7.86	438.10	537.21	0.87
USACE	14343	100YRPLUS	1692.00	432.69	436.13	436.13	436.49	0.014389	8.50	516.20	550.80	0.92
USACE	14343	200YR	1516.00	432.69	436.07	436.07	436.41	0.013608	8.16	487.25	547.76	0.89
USACE	14343	500YR	1826.00	432.69	436.16	436.16	436.54	0.015219	8.81	533.91	552.69	0.94
USACE	14343	SEPT2011	981.00	432.69	435.77	435.77	436.12	0.013933	7.60	330.07	442.95	0.88
USACE	14124 14124	2YR	276.00	431.70	433.62		433.69	0.003981	3.24	190.13	338.35	0.46
USACE	14124 14124	5YR	462.00	431.70	433.86		433.93	0.004008	3.58	273.71	359.54	0.48
USACE	14124 14124	10YR	620.00	431.70	434.04		434.12	0.003848	3.75	340.60	376.99	0.47
USACE	14124 14124	25YR	876.00	431.70	434.29		434.37	0.003709	3.99	435.97	393.60	0.47
USACE	14124 14124	50YR	1078.00	431.70	434.46		434.55	0.003652	4.16	505.12	408.08	0.48
USACE	14124 14124	100YR	1294.00	431.70	434.65		434.75	0.003610	4.36	590.81	475.48	0.48
USACE	14124 14124	100YRPLUS	1692.00	431.70	434.99		435.09	0.003051	4.35	757.98	514.91	0.45
USACE	14124 14124	200YR	1516.00	431.70	434.84		434.94	0.003321	4.38	681.79	502.84	0.47
USACE	14124 14124	500YR	1826.00	431.70	435.10		435.20	0.002874	4.33	815.05	521.19	0.44
USACE	14124 14124	SEPT2011	981.00	431.70	434.38		434.47	0.003664	4.07	472.08	398.20	0.48

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	13916	2YR	276.00	430.90	432.77		432.87	0.003822	3.36	163.58	286.53	0.46
USACE	13916	5YR	462.00	430.90	433.09		433.18	0.003271	3.50	259.79	319.95	0.44
USACE	13916	10YR	620.00	430.90	433.28		433.38	0.003249	3.72	325.31	344.94	0.44
USACE	13916	25YR	876.00	430.90	433.59		433.69	0.002935	3.86	438.51	393.94	0.43
USACE	13916	50YR	1078.00	430.90	433.82		433.92	0.002617	3.87	532.47	414.67	0.41
USACE	13916	100YR	1294.00	430.90	434.07		434.16	0.002300	3.84	636.45	432.41	0.39
USACE	13916	100YRPLUS	1692.00	430.90	434.50		434.59	0.001900	3.82	834.85	489.20	0.37
USACE	13916	200YR	1516.00	430.90	434.31		434.39	0.002076	3.84	742.17	458.84	0.38
USACE	13916	500YR	1826.00	430.90	434.65		434.73	0.001761	3.79	906.03	498.38	0.36
USACE	13916	SEPT2011	981.00	430.90	433.71		433.81	0.002760	3.86	487.62	405.44	0.42
USACE	13724 13724	2YR	276.00	429.75	432.37		432.43	0.001469	2.50	220.46	292.89	0.30
USACE	13724 13724	5YR	462.00	429.75	432.47		432.57	0.003053	3.71	247.92	298.10	0.43
USACE	13724 13724	10YR	620.00	429.75	432.72		432.82	0.002679	3.72	326.13	320.86	0.41
USACE	13724 13724	25YR	876.00	429.75	433.14		433.23	0.002000	3.57	471.48	364.04	0.37
USACE	13724 13724	50YR	1078.00	429.75	433.43		433.51	0.001720	3.52	580.76	387.52	0.35
USACE	13724 13724	100YR	1294.00	429.75	433.73		433.80	0.001497	3.48	699.24	412.61	0.33
USACE	13724 13724	100YRPLUS	1692.00	429.75	434.22		434.29	0.001243	3.46	911.80	453.17	0.30
USACE	13724 13724	200YR	1516.00	429.75	434.00		434.07	0.001366	3.49	812.95	436.68	0.32
USACE	13724 13724	500YR	1826.00	429.75	434.38		434.45	0.001174	3.45	986.51	471.19	0.30
USACE	13724 13724	SEPT2011	981.00	429.75	433.30		433.38	0.001827	3.53	529.83	375.81	0.35
USACE	13521	2YR	276.00	427.95	430.85	430.85	431.68	0.014923	8.33	46.61	46.15	0.95
USACE	13521	5YR	462.00	427.95	432.09		432.16	0.001490	3.48	326.57	323.44	0.32
USACE	13521	10YR	620.00	427.95	432.40		432.46	0.001265	3.39	431.52	348.37	0.30
USACE	13521	25YR	876.00	427.95	432.91		432.96	0.000931	3.15	619.49	391.57	0.26
USACE	13521	50YR	1078.00	427.95	433.23		433.28	0.000837	3.13	748.21	414.34	0.25
USACE	13521	100YR	1294.00	427.95	433.55		433.59	0.000760	3.12	882.64	433.35	0.24
USACE	13521	100YRPLUS	1692.00	427.95	434.07		434.11	0.000679	3.14	1114.95	467.18	0.23
USACE	13521	200YR	1516.00	427.95	433.83		433.87	0.000723	3.15	1006.96	452.04	0.24
USACE	13521	500YR	1826.00	427.95	434.23		434.28	0.000651	3.14	1194.66	477.13	0.23
USACE	13521	SEPT2011	981.00	427.95	433.09		433.13	0.000869	3.13	689.46	405.53	0.26
USACE	13248 13248	2YR	276.00	427.51	430.67		430.72	0.000960	2.35	237.34	286.32	0.25
USACE	13248 13248	5YR	462.00	427.51	432.03		432.04	0.000175	1.31	684.24	364.21	0.11
USACE	13248 13248	10YR	620.00	427.51	432.32		432.34	0.000204	1.48	793.40	376.47	0.12
USACE	13248 13248	25YR	876.00	427.51	432.83		432.85	0.000213	1.63	990.21	404.59	0.13
USACE	13248 13248	50YR	1078.00	427.51	433.15		433.16	0.000224	1.74	1124.41	434.75	0.13
USACE	13248 13248	100YR	1294.00	427.51	433.46		433.48	0.000231	1.84	1264.45	448.45	0.14
USACE	13248 13248	100YRPLUS	1692.00	427.51	433.98		434.00	0.000242	2.00	1502.82	475.76	0.14
USACE	13248 13248	200YR	1516.00	427.51	433.74		433.76	0.000241	1.94	1391.66	464.22	0.14
USACE	13248 13248	500YR	1826.00	427.51	434.15		434.17	0.000242	2.04	1584.15	482.59	0.14
USACE	13248 13248	SEPT2011	981.00	427.51	433.00		433.02	0.000218	1.69	1063.41	427.94	0.13
USACE	12885	2YR	276.00	427.28	430.41		430.44	0.000594	1.86	253.28	223.29	0.20
USACE	12885	5YR	462.00	427.28	431.97		431.98	0.000135	1.20	660.71	296.60	0.10
USACE	12885	10YR	620.00	427.28	432.25		432.27	0.000173	1.41	745.73	309.33	0.12
USACE	12885	25YR	876.00	427.28	432.75		432.77	0.000199	1.62	908.77	344.34	0.13
USACE	12885	50YR	1078.00	427.28	433.06		433.08	0.000219	1.77	1017.81	360.13	0.13
USACE	12885	100YR	1294.00	427.28	433.37		433.40	0.000233	1.90	1133.53	380.87	0.14
USACE	12885	100YRPLUS	1692.00	427.28	433.88		433.91	0.000253	2.09	1334.55	412.44	0.15
USACE	12885	200YR	1516.00	427.28	433.65		433.68	0.000249	2.02	1239.34	395.61	0.15
USACE	12885	500YR	1826.00	427.28	434.05		434.08	0.000256	2.14	1404.74	418.73	0.15
USACE	12885	SEPT2011	981.00	427.28	432.92		432.94	0.000208	1.70	968.61	353.41	0.13
USACE	12778	2YR	276.00	427.32	430.36	429.53	430.38	0.000557	1.72	285.83	254.26	0.19
USACE	12778	5YR	462.00	427.32	431.96	429.79	431.97	0.000109	1.05	758.87	321.54	0.09
USACE	12778	10YR	620.00	427.32	432.24	429.95	432.25	0.000138	1.24	848.92	325.54	0.10
USACE	12778	25YR	876.00	427.32	432.74	430.15	432.75	0.000160	1.43	1012.55	334.63	0.11
USACE	12778	50YR	1078.00	427.32	433.04	430.29	433.06	0.000179	1.57	1116.97	344.49	0.12
USACE	12778	100YR	1294.00	427.32	433.35	430.41	433.38	0.000195	1.71	1225.01	350.91	0.13
USACE	12778	100YRPLUS	1692.00	427.32	433.86	430.61	433.89	0.000220	1.92	1406.84	370.99	0.14
USACE	12778	200YR	1516.00	427.32	433.63	430.53	433.65	0.000213	1.84	1321.14	360.54	0.13
USACE	12778	500YR	1826.00	427.32	434.03	430.70	434.06	0.000226	1.98	1469.71	376.35	0.14
USACE	12778	SEPT2011	981.00	427.32	432.91	430.23	432.92	0.000169	1.50	1070.06	339.50	0.12
USACE	12678	2YR	357.00	426.74	430.32	428.42	430.34	0.000312	1.47	338.89	282.57	0.15
USACE	12678	5YR	603.00	426.74	431.95	429.08	431.96	0.000111	1.16	766.22	334.34	0.09
USACE	12678	10YR	816.00	426.74	432.22	429.32	432.24	0.000159	1.44	830.60	340.89	0.11
USACE	12678	25YR	1163.00	426.74	432.70	429.63	432.73	0.000215	1.78	947.19	353.85	0.13
USACE	12678	50YR	1435.00	426.74	433.00	429.83	433.04	0.000261	2.03	1019.22	363.54	0.15
USACE	12678	100YR	1725.00	426.74	433.30	430.02	433.35	0.000303	2.27	1092.29	373.92	0.16
USACE	12678	100YRPLUS	2256.00	426.74	433.79	430.33	433.85	0.000376	2.66	1211.03	391.20	0.18
USACE	12678	200YR	2024.00	426.74	433.56	430.20	433.62	0.000350	2.51	1155.54	382.33	0.17
USACE	12678	500YR	2441.00	426.74	433.95	430.43	434.02	0.000397	2.78	1250.73	397.65	0.19
USACE	12678	SEPT2011	1303.00	426.74	432.87	429.73	432.90	0.000237	1.91	987.27	358.72	0.14
USACE	12622 12622	2YR	357.00	425.32	430.27	427.11	430.32	0.000293	1.82	204.41	282.93	0.15
USACE	12622 12622	5YR	603.00	425.32	431.93	427.68	431.95	0.000110	1.37	645.85	354.64	0.10
USACE	12622 12622	10YR	816.00	425.32	432.19	428.08	432.22	0.000165	1.73	690.80	362.37	0.12
USACE	12622 12622	25YR	1163.00	425.32	432.66	428.65	432.71	0.000240	2.19	771.95	368.24	0.15
USACE	12622 12622	50YR	1435.00	425.32	432.95	429.06	433.01	0.000303	2.53	821.17	373.81	0.17
USACE	12622 12622	100YR	1725.00	425.32	433.24	429.46	433.32	0.000366	2.86	870.75	383.70	0.18
USACE	12622 12622	100YRPLUS	2256.00	425.32	433.70	430.15	433.81	0.000479	3.40	950.18	417.81	0.21
USACE	12622 12622	200YR	2024.00	425.32	433.48	429.86	433.58	0.000436	3.18	912.88	398.94	0.20
USACE	12622 12622	500YR	2441.00	425.32	433.85	430.36	433.98	0.000515	3.57	976.57	421.74	0.22
USACE	12622 12622	SEPT2011	1303.00	425.32	432.82	428.87	432.88	0.000271	2.36	799.50	371.36	0.16
USACE	12584 Doe Run Road		Culvert									

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	12542 12542	2YR	357.00	423.79	428.99	425.63	429.02	0.000250	1.57	229.19	132.30	0.14
USACE	12542 12542	5YR	603.00	423.79	429.34	426.20	429.42	0.000468	2.27	307.89	148.69	0.19
USACE	12542 12542	10YR	816.00	423.79	429.64	426.64	429.76	0.000664	2.83	345.06	171.63	0.23
USACE	12542 12542	25YR	1163.00	423.79	430.07	427.26	430.24	0.000936	3.55	403.71	202.00	0.27
USACE	12542 12542	50YR	1435.00	423.79	430.36	427.65	430.58	0.001113	4.02	447.21	221.65	0.30
USACE	12542 12542	100YR	1725.00	423.79	430.64	428.02	430.90	0.001275	4.44	491.00	236.01	0.33
USACE	12542 12542	100YRPLUS	2256.00	423.79	431.10	428.62	431.42	0.001490	5.05	566.90	267.51	0.36
USACE	12542 12542	200YR	2024.00	423.79	430.90	428.37	431.20	0.001407	4.81	534.27	257.52	0.34
USACE	12542 12542	500YR	2441.00	423.79	431.25	428.81	431.59	0.001538	5.22	593.00	272.99	0.36
USACE	12542 12542	SEPT2011	1303.00	423.79	430.22	427.48	430.42	0.001031	3.80	426.39	214.65	0.29
USACE	12447	2YR	357.00	423.78	428.51	428.51	428.87	0.005063	5.81	113.92	154.06	0.52
USACE	12447	5YR	603.00	423.78	428.95		429.25	0.004581	5.94	184.22	163.94	0.51
USACE	12447	10YR	816.00	423.78	429.31		429.58	0.003917	5.80	244.79	174.53	0.47
USACE	12447	25YR	1163.00	423.78	429.80		430.06	0.003406	5.77	332.37	187.37	0.45
USACE	12447	50YR	1435.00	423.78	430.12		430.40	0.003153	5.79	394.48	196.63	0.44
USACE	12447	100YR	1725.00	423.78	430.42		430.71	0.002938	5.79	454.61	205.72	0.43
USACE	12447	100YRPLUS	2256.00	423.78	430.91		431.24	0.002671	5.83	557.51	216.64	0.41
USACE	12447	200YR	2024.00	423.78	430.70		431.02	0.002758	5.79	514.10	212.38	0.42
USACE	12447	500YR	2441.00	423.78	431.06		431.41	0.002621	5.87	591.29	220.81	0.41
USACE	12447	SEPT2011	1303.00	423.78	429.97		430.24	0.003272	5.79	365.15	192.10	0.44
USACE	12340	2YR	357.00	423.74	428.33		428.44	0.001456	3.44	205.22	172.72	0.31
USACE	12340	5YR	603.00	423.74	428.76		428.90	0.001897	4.23	280.83	181.60	0.37
USACE	12340	10YR	816.00	423.74	429.10		429.26	0.002030	4.60	343.02	187.01	0.38
USACE	12340	25YR	1163.00	423.74	429.57		429.75	0.002148	5.06	433.32	193.97	0.40
USACE	12340	50YR	1435.00	423.74	429.89		430.09	0.002246	5.40	496.46	201.51	0.41
USACE	12340	100YR	1725.00	423.74	430.20		430.41	0.002291	5.66	559.47	209.35	0.42
USACE	12340	100YRPLUS	2256.00	423.74	430.70		430.94	0.002320	6.03	668.59	222.99	0.43
USACE	12340	200YR	2024.00	423.74	430.49		430.72	0.002309	5.88	622.27	217.47	0.43
USACE	12340	500YR	2441.00	423.74	430.86		431.11	0.002333	6.16	704.82	230.32	0.43
USACE	12340	SEPT2011	1303.00	423.74	429.74		429.93	0.002198	5.24	466.56	197.48	0.41
USACE	12237	2YR	357.00	423.60	427.84	427.84	428.16	0.005431	5.94	130.99	163.49	0.57
USACE	12237	5YR	603.00	423.60	428.38	428.14	428.62	0.004161	5.75	225.51	181.31	0.51
USACE	12237	10YR	816.00	423.60	428.78	428.35	428.98	0.003528	5.64	298.23	187.36	0.48
USACE	12237	25YR	1163.00	423.60	429.28	428.61	429.48	0.003230	5.81	393.73	195.79	0.47
USACE	12237	50YR	1435.00	423.60	429.61	428.79	429.82	0.003116	5.96	459.09	201.24	0.46
USACE	12237	100YR	1725.00	423.60	429.92	428.96	430.14	0.003066	6.15	522.45	208.59	0.46
USACE	12237	100YRPLUS	2256.00	423.60	430.43	429.25	430.67	0.002960	6.41	632.33	234.88	0.46
USACE	12237	200YR	2024.00	423.60	430.22	429.11	430.45	0.003000	6.30	585.84	215.89	0.46
USACE	12237	500YR	2441.00	423.60	430.59	429.34	430.84	0.002921	6.48	668.98	255.54	0.46
USACE	12237	SEPT2011	1303.00	423.60	429.45	428.71	429.66	0.003154	5.88	428.53	198.67	0.46
USACE	12052 12052	2YR	357.00	423.50	427.28	426.07	427.45	0.002017	3.59	140.20	108.43	0.37
USACE	12052 12052	5YR	603.00	423.50	427.76	427.02	428.01	0.002648	4.55	204.48	157.40	0.43
USACE	12052 12052	10YR	816.00	423.50	428.10	427.44	428.38	0.002937	5.10	259.78	173.54	0.46
USACE	12052 12052	25YR	1163.00	423.50	428.56	427.94	428.88	0.003140	5.69	343.69	189.29	0.49
USACE	12052 12052	50YR	1435.00	423.50	428.88	428.18	429.22	0.003187	6.02	406.42	198.39	0.50
USACE	12052 12052	100YR	1725.00	423.50	429.20	428.43	429.55	0.003147	6.26	470.50	203.17	0.50
USACE	12052 12052	100YRPLUS	2256.00	423.50	429.74	428.82	430.11	0.003025	6.58	582.23	227.70	0.50
USACE	12052 12052	200YR	2024.00	423.50	429.51	428.63	429.88	0.003090	6.46	534.66	219.95	0.50
USACE	12052 12052	500YR	2441.00	423.50	429.91	428.93	430.29	0.002970	6.66	619.39	243.21	0.50
USACE	12052 12052	SEPT2011	1303.00	423.50	428.73	428.08	429.06	0.003176	5.88	376.52	194.92	0.49
USACE	11758	2YR	357.00	423.30	426.55	426.32	426.71	0.003176	4.28	172.82	195.52	0.45
USACE	11758	5YR	603.00	423.30	427.03	426.62	427.18	0.002796	4.47	269.42	203.93	0.44
USACE	11758	10YR	816.00	423.30	427.38	426.80	427.53	0.002582	4.60	341.16	206.72	0.43
USACE	11758	25YR	1163.00	423.30	427.88	427.05	428.03	0.002366	4.79	444.38	209.53	0.42
USACE	11758	50YR	1435.00	423.30	428.22	427.22	428.38	0.002265	4.95	516.79	211.21	0.41
USACE	11758	100YR	1725.00	423.30	428.56	427.37	428.73	0.002182	5.10	589.00	212.86	0.41
USACE	11758	100YRPLUS	2256.00	423.30	429.13	427.64	429.32	0.002101	5.39	710.65	218.48	0.41
USACE	11758	200YR	2024.00	423.30	428.89	427.52	429.07	0.002126	5.26	659.22	215.51	0.41
USACE	11758	500YR	2441.00	423.30	429.32	427.72	429.51	0.002060	5.47	752.00	223.92	0.41
USACE	11758	SEPT2011	1303.00	423.30	428.06	427.14	428.22	0.002297	4.86	483.20	210.43	0.41
USACE	11441 11441	2YR	357.00	422.68	425.79		425.88	0.002128	3.45	196.16	166.10	0.37
USACE	11441 11441	5YR	603.00	422.68	426.32		426.42	0.002025	3.80	286.03	171.45	0.37
USACE	11441 11441	10YR	816.00	422.68	426.69		426.80	0.002039	4.09	349.09	174.79	0.38
USACE	11441 11441	25YR	1163.00	422.68	427.20		427.34	0.002045	4.48	439.68	178.43	0.39
USACE	11441 11441	50YR	1435.00	422.68	427.55		427.70	0.002061	4.75	502.54	180.61	0.40
USACE	11441 11441	100YR	1725.00	422.68	427.89		428.07	0.002070	5.00	565.18	182.75	0.40
USACE	11441 11441	100YRPLUS	2256.00	422.68	428.45		428.66	0.002104	5.43	668.39	186.01	0.41
USACE	11441 11441	200YR	2024.00	422.68	428.22		428.41	0.002082	5.25	625.38	184.69	0.41
USACE	11441 11441	500YR	2441.00	422.68	428.64		428.86	0.002097	5.55	703.89	187.10	0.42
USACE	11441 11441	SEPT2011	1303.00	422.68	427.39		427.54	0.002028	4.60	474.60	179.64	0.39
USACE	11079	2YR	357.00	421.50	424.63		424.86	0.003833	4.63	129.85	120.97	0.50
USACE	11079	5YR	603.00	421.50	425.15		425.41	0.003947	5.29	198.28	137.93	0.52
USACE	11079	10YR	816.00	421.50	425.51		425.79	0.003966	5.69	248.58	143.84	0.53
USACE	11079	25YR	1163.00	421.50	426.02		426.33	0.003881	6.16	323.76	151.29	0.54
USACE	11079	50YR	1435.00	421.50	426.37		426.71	0.003805	6.45	378.12	155.89	0.54
USACE	11079	100YR	1725.00	421.50	426.71		427.07	0.003748	6.72	431.66	159.49	0.54
USACE	11079	100YRPLUS	2256.00	421.50	427.24		427.64	0.003804	7.26	516.92	165.64	0.56
USACE	11079	200YR	2024.00	421.50	427.04		427.41	0.003706	6.98	483.86	163.19	0.55
USACE	11079	500YR	2441.00	421.50	427.45		427.86	0.003663	7.32	552.74	168.04	0.55
USACE	11079	SEPT2011	1303.00	421.50	426.29		426.59	0.003471	6.08	364.95	154.81	0.51

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	10831 10831	2YR	392.00	421.35	423.67		423.81	0.004352	4.16	160.39	142.31	0.51
USACE	10831 10831	5YR	674.00	421.35	424.09		424.28	0.005055	5.06	220.69	149.29	0.57
USACE	10831 10831	10YR	920.00	421.35	424.39		424.63	0.005393	5.64	266.12	153.61	0.60
USACE	10831 10831	25YR	1344.00	421.35	424.83		425.14	0.005808	6.47	335.92	161.65	0.64
USACE	10831 10831	50YR	1683.00	421.35	425.14		425.50	0.006039	7.01	387.02	167.74	0.66
USACE	10831 10831	100YR	2048.00	421.35	425.44		425.85	0.006188	7.49	437.94	172.06	0.68
USACE	10831 10831	100YRPLUS	2678.00	421.35	425.91		426.40	0.006349	8.20	520.27	178.94	0.70
USACE	10831 10831	200YR	2429.00	421.35	425.73		426.19	0.006303	7.94	488.35	176.40	0.69
USACE	10831 10831	500YR	2966.00	421.35	426.10		426.63	0.006419	8.49	555.29	181.64	0.71
USACE	10831 10831	SEPT2011	1613.00	421.35	425.08		425.43	0.006003	6.91	376.83	166.79	0.65
USACE	10603	2YR	392.00	420.50	422.48		422.60	0.006668	4.68	163.26	185.06	0.61
USACE	10603	5YR	674.00	420.50	422.89		423.04	0.005898	5.04	239.27	187.44	0.60
USACE	10603	10YR	920.00	420.50	423.18		423.35	0.005671	5.37	294.29	189.00	0.60
USACE	10603	25YR	1344.00	420.50	423.62		423.84	0.005386	5.84	378.79	191.38	0.60
USACE	10603	50YR	1683.00	420.50	423.93		424.18	0.005284	6.18	438.25	192.90	0.60
USACE	10603	100YR	2048.00	420.50	424.24		424.52	0.005222	6.52	497.01	194.42	0.61
USACE	10603	100YRPLUS	2678.00	420.50	424.71		425.05	0.005181	7.06	588.88	196.78	0.62
USACE	10603	200YR	2429.00	420.50	424.53		424.85	0.005190	6.85	553.81	195.88	0.62
USACE	10603	500YR	2966.00	420.50	424.90		425.27	0.005178	7.28	627.79	197.77	0.62
USACE	10603	SEPT2011	1613.00	420.50	423.87		424.12	0.005301	6.11	426.40	192.59	0.60
USACE	10312 10312	2YR	392.00	418.43	421.26		421.38	0.002889	3.89	197.99	203.11	0.43
USACE	10312 10312	5YR	674.00	418.43	421.68		421.82	0.003093	4.45	283.66	205.66	0.46
USACE	10312 10312	10YR	920.00	418.43	421.98		422.14	0.003210	4.84	345.44	207.50	0.47
USACE	10312 10312	25YR	1344.00	418.43	422.41		422.61	0.003399	5.40	435.26	210.54	0.50
USACE	10312 10312	50YR	1683.00	418.43	422.71		422.94	0.003488	5.77	499.68	212.70	0.51
USACE	10312 10312	100YR	2048.00	418.43	423.01		423.27	0.003572	6.12	563.12	214.86	0.52
USACE	10312 10312	100YRPLUS	2678.00	418.43	423.47		423.78	0.003681	6.65	662.52	217.64	0.54
USACE	10312 10312	200YR	2429.00	418.43	423.29		423.58	0.003642	6.45	624.58	216.70	0.53
USACE	10312 10312	500YR	2966.00	418.43	423.66		423.99	0.003729	6.87	704.24	218.67	0.54
USACE	10312 10312	SEPT2011	1613.00	418.43	422.65		422.88	0.003470	5.70	486.90	212.26	0.51
USACE	10082	2YR	392.00	416.66	420.10	420.06	420.39	0.007012	6.04	139.47	168.75	0.66
USACE	10082	5YR	674.00	416.66	420.51		420.80	0.006743	6.53	212.33	185.29	0.66
USACE	10082	10YR	920.00	416.66	420.81		421.10	0.006560	6.84	267.57	193.71	0.66
USACE	10082	25YR	1344.00	416.66	421.23		421.56	0.006331	7.29	352.14	202.09	0.66
USACE	10082	50YR	1683.00	416.66	421.53		421.88	0.006211	7.59	413.02	207.33	0.66
USACE	10082	100YR	2048.00	416.66	421.82		422.20	0.006131	7.90	473.45	211.77	0.67
USACE	10082	100YRPLUS	2678.00	416.66	422.27		422.70	0.006039	8.37	570.03	219.64	0.67
USACE	10082	200YR	2429.00	416.66	422.10		422.51	0.006071	8.19	532.84	216.57	0.67
USACE	10082	500YR	2966.00	416.66	422.46		422.91	0.005985	8.55	611.92	221.97	0.68
USACE	10082	SEPT2011	1613.00	416.66	421.47		421.82	0.006236	7.54	400.79	206.40	0.66
USACE	9811 9811	2YR	392.00	416.17	418.78		418.91	0.004096	4.14	180.55	197.38	0.50
USACE	9811 9811	5YR	674.00	416.17	419.19		419.34	0.004194	4.70	261.52	203.38	0.52
USACE	9811 9811	10YR	920.00	416.17	419.47		419.65	0.004280	5.09	320.17	207.07	0.53
USACE	9811 9811	25YR	1344.00	416.17	419.89		420.11	0.004407	5.66	408.18	213.22	0.55
USACE	9811 9811	50YR	1683.00	416.17	420.18		420.43	0.004513	6.06	469.97	217.39	0.57
USACE	9811 9811	100YR	2048.00	416.17	420.47		420.75	0.004560	6.42	533.10	221.56	0.58
USACE	9811 9811	100YRPLUS	2678.00	416.17	420.90		421.24	0.004666	6.98	631.67	228.03	0.59
USACE	9811 9811	200YR	2429.00	416.17	420.74		421.05	0.004631	6.77	593.60	225.49	0.59
USACE	9811 9811	500YR	2966.00	416.17	421.09		421.44	0.004700	7.21	674.08	230.57	0.60
USACE	9811 9811	SEPT2011	1613.00	416.17	420.12		420.37	0.004480	5.98	458.09	216.60	0.56
USACE	9635	2YR	392.00	415.93	417.79		417.97	0.007257	4.59	144.77	171.25	0.64
USACE	9635	5YR	674.00	415.93	418.15		418.38	0.007276	5.27	209.68	178.89	0.66
USACE	9635	10YR	920.00	415.93	418.42		418.68	0.007179	5.70	258.12	182.51	0.67
USACE	9635	25YR	1344.00	415.93	418.83		419.14	0.006916	6.24	334.09	192.08	0.67
USACE	9635	50YR	1683.00	415.93	419.11		419.46	0.006759	6.60	388.62	196.74	0.68
USACE	9635	100YR	2048.00	415.93	419.37		419.77	0.006724	6.97	441.24	200.88	0.69
USACE	9635	100YRPLUS	2678.00	415.93	419.77		420.24	0.006792	7.57	522.29	206.35	0.70
USACE	9635	200YR	2429.00	415.93	419.62		420.06	0.006742	7.33	491.65	204.38	0.69
USACE	9635	500YR	2966.00	415.93	419.93		420.44	0.006858	7.83	556.04	208.50	0.71
USACE	9635	SEPT2011	1613.00	415.93	419.05		419.39	0.006783	6.53	377.77	195.86	0.68
USACE	9449	2YR	392.00	414.26	416.76		416.88	0.004633	3.98	177.28	195.56	0.52
USACE	9449	5YR	674.00	414.26	417.22		417.35	0.004175	4.37	270.58	214.34	0.51
USACE	9449	10YR	920.00	414.26	417.53		417.68	0.003964	4.64	339.14	221.06	0.50
USACE	9449	25YR	1344.00	414.26	417.97		418.15	0.003931	5.12	437.84	230.54	0.52
USACE	9449	50YR	1683.00	414.26	418.26		418.47	0.003983	5.47	506.08	238.36	0.53
USACE	9449	100YR	2048.00	414.26	418.52		418.76	0.004087	5.83	570.03	249.10	0.54
USACE	9449	100YRPLUS	2678.00	414.26	418.90		419.19	0.004297	6.39	668.53	267.04	0.56
USACE	9449	200YR	2429.00	414.26	418.76		419.03	0.004212	6.18	630.75	259.84	0.55
USACE	9449	500YR	2966.00	414.26	419.06		419.37	0.004404	6.64	710.10	272.35	0.57
USACE	9449	SEPT2011	1613.00	414.26	418.20		418.41	0.003963	5.40	492.87	236.72	0.52
USACE	9262 9262	2YR	392.00	413.27	415.67		415.91	0.005832	4.90	138.51	157.69	0.59
USACE	9262 9262	5YR	674.00	413.27	416.04		416.35	0.006951	5.95	199.26	174.58	0.67
USACE	9262 9262	10YR	920.00	413.27	416.28		416.66	0.007790	6.70	243.55	188.01	0.72
USACE	9262 9262	25YR	1344.00	413.27	416.63		417.09	0.008479	7.59	314.18	213.76	0.76
USACE	9262 9262	50YR	1683.00	413.27	416.87		417.38	0.008842	8.14	368.53	241.28	0.79
USACE	9262 9262	100YR	2048.00	413.27	417.10		417.64	0.009004	8.59	425.43	258.66	0.80
USACE	9262 9262	100YRPLUS	2678.00	413.27	417.44		418.04	0.009101	9.18	519.28	293.70	0.82
USACE	9262 9262	200YR	2429.00	413.27	417.31		417.89	0.009070	8.96	482.44	280.15	0.82
USACE	9262 9262	500YR	2966.00	413.27	417.59		418.20	0.009071	9.39	563.02	308.97	0.82
USACE	9262 9262	SEPT2011	1613.00	413.27	416.83		417.32	0.008765	8.04	358.00	237.29	0.78
USACE	9045	2YR	392.00	412.52	414.57	414.24	414.69	0.005066	4.07	186.86	265.07	0.54

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9045	5YR	674.00	412.52	414.96		415.08	0.004549	4.40	297.04	307.15	0.53
USACE	9045	10YR	920.00	412.52	415.23		415.36	0.004249	4.60	383.48	328.82	0.52
USACE	9045	25YR	1344.00	412.52	415.59		415.74	0.004182	5.00	506.13	350.09	0.53
USACE	9045	50YR	1683.00	412.52	415.83		416.00	0.004181	5.29	593.58	377.29	0.54
USACE	9045	100YR	2048.00	412.52	416.07		416.25	0.004165	5.55	685.38	397.22	0.54
USACE	9045	100YRPLUS	2678.00	412.52	416.44		416.64	0.004112	5.92	837.24	430.78	0.55
USACE	9045	200YR	2429.00	412.52	416.29		416.49	0.004142	5.79	777.58	417.00	0.55
USACE	9045	500YR	2966.00	412.52	416.59		416.80	0.004108	6.08	904.16	446.58	0.55
USACE	9045	SEPT2011	1613.00	412.52	415.78		415.95	0.004176	5.23	575.87	372.55	0.53
USACE	8837 8837	2YR	392.00	410.28	413.56		413.73	0.004290	4.47	204.67	251.93	0.49
USACE	8837 8837	5YR	674.00	410.28	413.98		414.15	0.004445	5.04	317.51	296.00	0.52
USACE	8837 8837	10YR	920.00	410.28	414.27		414.44	0.004542	5.42	409.50	346.57	0.53
USACE	8837 8837	25YR	1344.00	410.28	414.66		414.84	0.004448	5.79	559.27	404.82	0.53
USACE	8837 8837	50YR	1683.00	410.28	414.93		415.11	0.004366	6.00	669.72	431.18	0.53
USACE	8837 8837	100YR	2048.00	410.28	415.18		415.37	0.004365	6.26	782.52	464.46	0.54
USACE	8837 8837	100YRPLUS	2678.00	410.28	415.56		415.76	0.004366	6.63	970.45	525.60	0.55
USACE	8837 8837	200YR	2429.00	410.28	415.41		415.61	0.004354	6.48	896.32	498.40	0.54
USACE	8837 8837	500YR	2966.00	410.28	415.72		415.93	0.004335	6.77	1056.73	554.20	0.55
USACE	8837 8837	SEPT2011	1613.00	410.28	414.87		415.06	0.004376	5.96	648.17	427.20	0.53
USACE	8646	2YR	392.00	409.82	412.90		412.99	0.003321	3.98	252.59	303.42	0.43
USACE	8646	5YR	674.00	409.82	413.30		413.39	0.003392	4.42	381.43	342.46	0.45
USACE	8646	10YR	920.00	409.82	413.57		413.67	0.003464	4.73	477.34	367.02	0.46
USACE	8646	25YR	1344.00	409.82	413.95		414.07	0.003550	5.16	624.56	399.77	0.48
USACE	8646	50YR	1683.00	409.82	414.21		414.34	0.003653	5.47	729.31	422.83	0.49
USACE	8646	100YR	2048.00	409.82	414.45		414.59	0.003720	5.75	834.13	441.95	0.50
USACE	8646	100YRPLUS	2678.00	409.82	414.81		414.97	0.003851	6.19	1000.32	470.89	0.51
USACE	8646	200YR	2429.00	409.82	414.68		414.83	0.003796	6.02	936.62	459.80	0.51
USACE	8646	500YR	2966.00	409.82	414.96		415.13	0.003938	6.40	1072.26	486.74	0.52
USACE	8646	SEPT2011	1613.00	409.82	414.16		414.29	0.003624	5.41	709.28	419.17	0.49
USACE	8476	2YR	392.00	409.27	412.44	411.91	412.50	0.002389	3.21	285.08	326.86	0.37
USACE	8476	5YR	674.00	409.27	412.76	412.27	412.85	0.003032	3.94	393.92	353.09	0.42
USACE	8476	10YR	920.00	409.27	412.98	412.45	413.09	0.003380	4.38	476.06	370.57	0.45
USACE	8476	25YR	1344.00	409.27	413.30	412.67	413.43	0.003890	5.04	597.89	398.89	0.49
USACE	8476	50YR	1683.00	409.27	413.52	412.83	413.67	0.004165	5.44	687.31	417.53	0.51
USACE	8476	100YR	2048.00	409.27	413.73	412.98	413.90	0.004401	5.82	776.67	434.13	0.53
USACE	8476	100YRPLUS	2678.00	409.27	414.05	413.19	414.24	0.004725	6.37	918.17	458.24	0.56
USACE	8476	200YR	2429.00	409.27	413.93	413.13	414.11	0.004612	6.16	864.01	449.91	0.55
USACE	8476	500YR	2966.00	409.27	414.18	413.31	414.39	0.004826	6.57	978.80	465.75	0.57
USACE	8476	SEPT2011	1613.00	409.27	413.47	412.81	413.62	0.004139	5.38	668.34	414.54	0.51
USACE	8399 8399	2YR	392.00	408.30	412.34	411.41	412.38	0.000903	2.43	329.50	333.36	0.24
USACE	8399 8399	5YR	674.00	408.30	412.61	411.97	412.69	0.001437	3.24	424.67	367.81	0.30
USACE	8399 8399	10YR	920.00	408.30	412.81	412.17	412.90	0.001752	3.70	499.58	385.49	0.34
USACE	8399 8399	25YR	1344.00	408.30	413.09	412.43	413.21	0.002197	4.35	609.44	409.11	0.38
USACE	8399 8399	50YR	1683.00	408.30	413.28	412.60	413.43	0.002417	4.71	692.17	422.15	0.40
USACE	8399 8399	100YR	2048.00	408.30	413.47	412.74	413.63	0.002657	5.08	773.69	440.49	0.43
USACE	8399 8399	100YRPLUS	2678.00	408.30	413.77	412.95	413.96	0.002886	5.53	905.74	455.65	0.45
USACE	8399 8399	200YR	2429.00	408.30	413.66	412.87	413.83	0.002791	5.35	855.76	449.12	0.44
USACE	8399 8399	500YR	2966.00	408.30	413.89	413.03	414.09	0.003005	5.74	961.31	465.85	0.46
USACE	8399 8399	SEPT2011	1613.00	408.30	413.24	412.57	413.38	0.002398	4.66	673.68	419.85	0.40
USACE	8382 Private Drive		Bridge									
USACE	8362 8362	2YR	392.00	407.68	411.68	411.68	411.97	0.006093	5.72	160.72	292.29	0.59
USACE	8362 8362	5YR	674.00	407.68	411.95	411.95	412.28	0.007562	6.76	243.23	319.19	0.66
USACE	8362 8362	10YR	920.00	407.68	412.10	412.10	412.47	0.008847	7.54	292.46	326.85	0.72
USACE	8362 8362	25YR	1344.00	407.68	412.36	412.32	412.74	0.009295	8.11	377.85	339.74	0.75
USACE	8362 8362	50YR	1683.00	407.68	412.58		412.94	0.008584	8.11	453.72	356.07	0.73
USACE	8362 8362	100YR	2048.00	407.68	412.80		413.15	0.007891	8.07	533.81	372.87	0.71
USACE	8362 8362	100YRPLUS	2678.00	407.68	413.13		413.48	0.007168	8.10	659.60	386.13	0.68
USACE	8362 8362	200YR	2429.00	407.68	413.01		413.35	0.007376	8.07	612.20	380.94	0.69
USACE	8362 8362	500YR	2966.00	407.68	413.28		413.63	0.006836	8.09	716.88	391.42	0.67
USACE	8362 8362	SEPT2011	1613.00	407.68	412.54	412.46	412.90	0.008669	8.09	439.21	353.34	0.73
USACE	8269	2YR	392.00	407.66	411.16		411.25	0.003394	4.22	259.61	380.62	0.43
USACE	8269	5YR	674.00	407.66	411.45		411.55	0.003916	4.82	374.24	415.57	0.47
USACE	8269	10YR	920.00	407.66	411.66		411.76	0.003982	5.06	460.70	426.89	0.48
USACE	8269	25YR	1344.00	407.66	411.98		412.09	0.003814	5.25	598.79	435.10	0.47
USACE	8269	50YR	1683.00	407.66	412.21		412.33	0.003686	5.37	700.60	442.29	0.47
USACE	8269	100YR	2048.00	407.66	412.45		412.58	0.003493	5.43	808.54	448.60	0.46
USACE	8269	100YRPLUS	2678.00	407.66	412.80		412.94	0.003407	5.65	965.91	455.26	0.46
USACE	8269	200YR	2429.00	407.66	412.67		412.81	0.003403	5.54	908.40	452.82	0.46
USACE	8269	500YR	2966.00	407.66	412.96		413.11	0.003323	5.70	1038.87	458.57	0.46
USACE	8269	SEPT2011	1613.00	407.66	412.17		412.29	0.003650	5.31	683.83	441.18	0.47
USACE	8144	2YR	392.00	407.63	410.79	410.54	410.87	0.002784	3.88	312.44	540.29	0.41
USACE	8144	5YR	674.00	407.63	411.10	410.86	411.16	0.002431	3.90	483.49	564.09	0.39
USACE	8144	10YR	920.00	407.63	411.33	410.92	411.38	0.002245	3.93	610.92	574.46	0.38
USACE	8144	25YR	1344.00	407.63	411.69	411.06	411.74	0.001932	3.91	822.05	591.08	0.36
USACE	8144	50YR	1683.00	407.63	411.94	411.15	412.00	0.001804	3.95	972.75	602.92	0.35
USACE	8144	100YR	2048.00	407.63	412.20	411.24	412.26	0.001701	4.01	1132.75	625.70	0.35
USACE	8144	100YRPLUS	2678.00	407.63	412.56	411.38	412.63	0.001647	4.17	1362.68	647.61	0.35
USACE	8144	200YR	2429.00	407.63	412.44	411.33	412.50	0.001633	4.07	1281.09	636.47	0.34
USACE	8144	500YR	2966.00	407.63	412.73	411.44	412.80	0.001627	4.24	1471.35	668.16	0.35
USACE	8144	SEPT2011	1613.00	407.63	411.91	411.13	411.96	0.001768	3.89	952.47	601.18	0.35

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	7938 7938	2YR	392.00	407.62	410.26	409.82	410.35	0.002228	3.04	266.49	491.72	0.35
USACE	7938 7938	5YR	674.00	407.62	410.66	410.26	410.73	0.001822	3.06	472.80	608.95	0.33
USACE	7938 7938	10YR	920.00	407.62	410.93	410.42	410.99	0.001646	3.09	621.89	627.57	0.32
USACE	7938 7938	25YR	1344.00	407.62	411.35	410.62	411.41	0.001363	3.08	877.45	746.73	0.30
USACE	7938 7938	50YR	1683.00	407.62	411.63	410.73	411.69	0.001273	3.14	1055.48	1012.19	0.29
USACE	7938 7938	100YR	2048.00	407.62	411.90	410.83	411.96	0.001257	3.27	1238.97	1129.28	0.29
USACE	7938 7938	100YRPLUS	2678.00	407.62	412.28	411.00	412.35	0.001200	3.40	1505.02	1217.81	0.29
USACE	7938 7938	200YR	2429.00	407.62	412.15	410.94	412.22	0.001188	3.31	1415.95	1200.40	0.29
USACE	7938 7938	500YR	2966.00	407.62	412.45	411.06	412.52	0.001155	3.42	1629.94	1232.59	0.28
USACE	7938 7938	SEPT2011	1613.00	407.62	411.61	410.70	411.66	0.001218	3.06	1040.40	1007.17	0.28
USACE	7729	2YR	392.00	406.99	410.02	409.25	410.05	0.000901	2.09	434.27	713.24	0.23
USACE	7729	5YR	674.00	406.99	410.45	409.66	410.47	0.000820	2.20	720.53	923.59	0.22
USACE	7729	10YR	920.00	406.99	410.72	409.83	410.75	0.000788	2.29	922.57	1011.70	0.22
USACE	7729	25YR	1344.00	406.99	411.18	410.06	411.21	0.000675	2.31	1278.57	1160.58	0.21
USACE	7729	50YR	1683.00	406.99	411.46	410.17	411.49	0.000671	2.42	1505.96	1280.43	0.21
USACE	7729	100YR	2048.00	406.99	411.74	410.28	411.77	0.000655	2.50	1736.18	1336.91	0.21
USACE	7729	100YRPLUS	2678.00	406.99	412.12	410.46	412.15	0.000677	2.69	2055.97	1629.88	0.22
USACE	7729	200YR	2429.00	406.99	412.00	410.40	412.03	0.000650	2.59	1952.76	1497.49	0.21
USACE	7729	500YR	2966.00	406.99	412.30	410.52	412.33	0.000669	2.74	2210.00	1686.78	0.22
USACE	7729	SEPT2011	1613.00	406.99	411.45	410.15	411.48	0.000630	2.34	1494.70	1278.38	0.21
USACE	7573 7573	2YR	660.00	405.97	409.78	409.22	409.83	0.001933	3.44	538.66	574.15	0.34
USACE	7573 7573	5YR	1094.00	405.97	410.20	409.52	410.26	0.001939	3.75	810.80	684.71	0.35
USACE	7573 7573	10YR	1477.00	405.97	410.48	409.67	410.54	0.001890	3.90	1006.13	711.06	0.35
USACE	7573 7573	25YR	2223.00	405.97	410.94	409.89	411.01	0.002096	4.42	1379.84	1100.12	0.38
USACE	7573 7573	50YR	2850.00	405.97	411.22	410.15	411.29	0.002051	4.56	1634.80	1199.29	0.38
USACE	7573 7573	100YR	3516.00	405.97	411.50	410.30	411.57	0.002028	4.72	1892.96	1364.77	0.38
USACE	7573 7573	100YRPLUS	4598.00	405.97	411.86	410.50	411.95	0.002072	5.01	2249.39	1614.46	0.39
USACE	7573 7573	200YR	4202.00	405.97	411.75	410.43	411.83	0.002014	4.87	2138.11	1587.48	0.38
USACE	7573 7573	500YR	5198.00	405.97	412.03	410.51	412.12	0.002135	5.19	2421.62	1662.71	0.39
USACE	7573 7573	SEPT2011	2824.00	405.97	411.21	410.02	411.28	0.002051	4.56	1625.28	1196.96	0.38
USACE	7431	2YR	660.00	405.68	409.48	408.97	409.54	0.002171	3.60	482.32	475.58	0.36
USACE	7431	5YR	1094.00	405.68	409.89	409.23	409.96	0.002325	4.04	690.50	553.05	0.38
USACE	7431	10YR	1477.00	405.68	410.16	409.36	410.24	0.002435	4.34	867.77	730.31	0.39
USACE	7431	25YR	2223.00	405.68	410.59	409.67	410.68	0.002534	4.76	1186.36	1008.75	0.41
USACE	7431	50YR	2850.00	405.68	410.86	409.85	410.95	0.002742	5.16	1405.02	1277.54	0.43
USACE	7431	100YR	3516.00	405.68	411.12	410.03	411.22	0.003002	5.60	1652.21	1499.08	0.45
USACE	7431	100YRPLUS	4598.00	405.68	411.46	410.29	411.58	0.003286	6.14	2014.59	1576.84	0.48
USACE	7431	200YR	4202.00	405.68	411.35	410.21	411.47	0.003290	6.05	1899.46	1554.74	0.48
USACE	7431	500YR	5198.00	405.68	411.63	410.39	411.75	0.003253	6.24	2196.28	1608.09	0.48
USACE	7431	SEPT2011	2824.00	405.68	410.85	409.79	410.94	0.002734	5.14	1396.63	1266.36	0.43
USACE	7280	2YR	660.00	405.34	408.93	408.64	409.09	0.004265	4.86	334.64	392.66	0.50
USACE	7280	5YR	1094.00	405.34	409.35	409.00	409.50	0.004008	5.16	516.03	524.11	0.50
USACE	7280	10YR	1477.00	405.34	409.62	409.18	409.77	0.004027	5.44	669.34	874.45	0.51
USACE	7280	25YR	2223.00	405.34	410.06	409.50	410.20	0.003925	5.80	982.51	1126.37	0.51
USACE	7280	50YR	2850.00	405.34	410.29	409.55	410.45	0.004197	6.22	1178.83	1251.35	0.53
USACE	7280	100YR	3516.00	405.34	410.51	409.83	410.68	0.004405	6.59	1380.62	1332.58	0.55
USACE	7280	100YRPLUS	4598.00	405.34	410.82	410.15	411.00	0.004460	6.94	1693.23	1472.72	0.56
USACE	7280	200YR	4202.00	405.34	410.71	409.95	410.89	0.004488	6.86	1580.72	1413.28	0.56
USACE	7280	500YR	5198.00	405.34	410.99	410.19	411.18	0.004529	7.16	1868.36	1559.58	0.57
USACE	7280	SEPT2011	2824.00	405.34	410.28	409.55	410.44	0.004190	6.21	1171.22	1249.49	0.53
USACE	7152	2YR	660.00	403.00	408.64	408.24	408.74	0.001728	3.77	461.62	571.17	0.33
USACE	7152	5YR	1094.00	403.00	409.02	408.51	409.13	0.002109	4.42	679.22	868.07	0.37
USACE	7152	10YR	1477.00	403.00	409.28	408.67	409.38	0.002186	4.67	887.63	1143.64	0.38
USACE	7152	25YR	2223.00	403.00	409.68	409.00	409.80	0.002490	5.27	1302.25	1424.52	0.41
USACE	7152	50YR	2850.00	403.00	409.92	409.25	410.03	0.002446	5.38	1566.72	1458.06	0.41
USACE	7152	100YR	3516.00	403.00	410.14	409.27	410.25	0.002398	5.47	1824.06	1487.67	0.41
USACE	7152	100YRPLUS	4598.00	403.00	410.47	409.76	410.58	0.002358	5.63	2201.54	1530.55	0.41
USACE	7152	200YR	4202.00	403.00	410.35	409.69	410.46	0.002370	5.57	2067.44	1516.46	0.41
USACE	7152	500YR	5198.00	403.00	410.63	409.81	410.75	0.002343	5.72	2400.14	1565.25	0.41
USACE	7152	SEPT2011	2824.00	403.00	409.91	409.24	410.02	0.002443	5.37	1557.44	1456.98	0.41
USACE	7009 7009	2YR	660.00	402.98	408.32		408.43	0.002643	4.56	444.43	682.42	0.40
USACE	7009 7009	5YR	1094.00	402.98	408.66		408.77	0.002906	5.05	674.11	889.24	0.42
USACE	7009 7009	10YR	1477.00	402.98	408.90		409.01	0.003070	5.38	865.88	1016.88	0.44
USACE	7009 7009	25YR	2223.00	402.98	409.30		409.41	0.002979	5.60	1240.34	1244.90	0.44
USACE	7009 7009	50YR	2850.00	402.98	409.55		409.65	0.002814	5.62	1490.76	1275.21	0.43
USACE	7009 7009	100YR	3516.00	402.98	409.78		409.88	0.002742	5.71	1726.97	1327.15	0.43
USACE	7009 7009	100YRPLUS	4598.00	402.98	410.10		410.21	0.002764	5.95	2072.39	1387.66	0.43
USACE	7009 7009	200YR	4202.00	402.98	409.99		410.10	0.002783	5.89	1947.85	1371.96	0.43
USACE	7009 7009	500YR	5198.00	402.98	410.27		410.39	0.002738	6.04	2257.29	1421.13	0.43
USACE	7009 7009	SEPT2011	2824.00	402.98	409.54		409.64	0.002802	5.60	1483.93	1274.57	0.43
USACE	6917	2YR	660.00	402.94	408.08	407.87	408.18	0.002892	4.59	470.20	684.81	0.41
USACE	6917	5YR	1094.00	402.94	408.39	408.07	408.49	0.003200	5.09	687.74	828.24	0.44
USACE	6917	10YR	1477.00	402.94	408.63	408.24	408.73	0.003106	5.20	872.46	899.73	0.44
USACE	6917	25YR	2223.00	402.94	409.02	408.47	409.12	0.003276	5.65	1216.24	1095.11	0.46
USACE	6917	50YR	2850.00	402.94	409.28	408.59	409.38	0.003213	5.80	1479.04	1199.44	0.45
USACE	6917	100YR	3516.00	402.94	409.52	408.76	409.62	0.002992	5.77	1746.47	1261.62	0.44
USACE	6917	100YRPLUS	4598.00	402.94	409.86	408.93	409.96	0.002829	5.85	2112.32	1331.42	0.43
USACE	6917	200YR	4202.00	402.94	409.74	408.84	409.84	0.002895	5.83	1979.66	1313.26	0.44
USACE	6917	500YR	5198.00	402.94	410.03	408.98	410.13	0.002757	5.89	2305.59	1349.55	0.43
USACE	6917	SEPT2011	2824.00	402.94	409.27	408.59	409.37	0.003184	5.77	1474.05	1197.28	0.45
USACE	6808	2YR	660.00	402.93	407.63	407.51	407.81	0.003713	5.24	395.81	649.47	0.47

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6808	5YR	1094.00	402.93	408.04	407.79	408.16	0.002870	4.94	700.50	794.80	0.42
USACE	6808	10YR	1477.00	402.93	408.31	407.94	408.41	0.002687	4.98	922.84	898.89	0.42
USACE	6808	25YR	2223.00	402.93	408.71	408.16	408.80	0.002609	5.19	1299.01	1085.50	0.41
USACE	6808	50YR	2850.00	402.93	408.97	408.30	409.06	0.002552	5.32	1578.53	1159.50	0.41
USACE	6808	100YR	3516.00	402.93	409.22	408.44	409.32	0.002562	5.50	1866.12	1253.17	0.42
USACE	6808	100YRPLUS	4598.00	402.93	409.58	408.67	409.67	0.002379	5.53	2285.14	1295.17	0.41
USACE	6808	200YR	4202.00	402.93	409.45	408.60	409.55	0.002422	5.50	2134.69	1273.32	0.41
USACE	6808	500YR	5198.00	402.93	409.76	408.67	409.86	0.002277	5.53	2507.41	1310.40	0.40
USACE	6808	SEPT2011	2824.00	402.93	408.97	408.28	409.06	0.002504	5.27	1578.86	1159.59	0.41
USACE	6702	2YR	660.00	402.85	407.50	407.09	407.55	0.001384	2.91	618.10	1006.30	0.28
USACE	6702	5YR	1094.00	402.85	407.89	407.31	407.94	0.001381	3.13	919.34	1208.72	0.29
USACE	6702	10YR	1477.00	402.85	408.14	407.44	408.19	0.001467	3.37	1133.54	1290.05	0.30
USACE	6702	25YR	2223.00	402.85	408.52	407.67	408.58	0.001598	3.74	1482.06	1349.41	0.32
USACE	6702	50YR	2850.00	402.85	408.77	407.80	408.84	0.001661	3.97	1721.21	1364.23	0.33
USACE	6702	100YR	3516.00	402.85	409.02	407.92	409.09	0.001709	4.17	1952.96	1380.16	0.34
USACE	6702	100YRPLUS	4598.00	402.85	409.36	408.14	409.45	0.001810	4.49	2281.68	1402.30	0.35
USACE	6702	200YR	4202.00	402.85	409.24	408.07	409.32	0.001774	4.38	2164.27	1392.17	0.34
USACE	6702	500YR	5198.00	402.85	409.55	408.24	409.64	0.001841	4.64	2457.74	1414.90	0.35
USACE	6702	SEPT2011	2824.00	402.85	408.78	407.80	408.84	0.001617	3.92	1726.14	1364.47	0.32
USACE	6616	2YR	660.00	402.80	407.42	406.90	407.45	0.000801	2.28	793.50	1120.03	0.22
USACE	6616	5YR	1094.00	402.80	407.81	407.10	407.84	0.000828	2.49	1111.63	1164.77	0.23
USACE	6616	10YR	1477.00	402.80	408.05	407.23	408.08	0.000914	2.73	1314.48	1181.60	0.24
USACE	6616	25YR	2223.00	402.80	408.42	407.40	408.46	0.001087	3.15	1625.09	1204.95	0.26
USACE	6616	50YR	2850.00	402.80	408.66	407.53	408.71	0.001230	3.47	1835.87	1221.16	0.28
USACE	6616	100YR	3516.00	402.80	408.90	407.65	408.96	0.001339	3.75	2043.76	1236.16	0.30
USACE	6616	100YRPLUS	4598.00	402.80	409.23	407.82	409.31	0.001502	4.15	2337.02	1250.13	0.32
USACE	6616	200YR	4202.00	402.80	409.11	407.76	409.18	0.001450	4.01	2232.31	1245.19	0.31
USACE	6616	500YR	5198.00	402.80	409.41	407.90	409.49	0.001561	4.32	2495.20	1256.76	0.33
USACE	6616	SEPT2011	2824.00	402.80	408.67	407.52	408.72	0.001193	3.42	1843.47	1221.76	0.28
USACE	6527	2YR	678.00	402.73	407.36	406.73	407.38	0.000708	2.22	826.32	998.92	0.21
USACE	6527	5YR	1118.00	402.73	407.74	406.93	407.77	0.000811	2.54	1121.50	1058.64	0.23
USACE	6527	10YR	1519.00	402.73	407.97	407.06	408.00	0.000957	2.87	1303.89	1078.27	0.25
USACE	6527	25YR	2282.00	402.73	408.31	407.26	408.36	0.001218	3.41	1579.01	1100.78	0.28
USACE	6527	50YR	2935.00	402.73	408.53	407.41	408.59	0.001442	3.83	1762.02	1113.49	0.31
USACE	6527	100YR	3638.00	402.73	408.75	407.54	408.83	0.001641	4.22	1943.09	1126.18	0.33
USACE	6527	100YRPLUS	4758.00	402.73	409.06	407.73	409.15	0.001916	4.74	2198.89	1145.92	0.37
USACE	6527	200YR	4363.00	402.73	408.95	407.67	409.04	0.001843	4.58	2105.74	1139.94	0.36
USACE	6527	500YR	5404.00	402.73	409.23	407.83	409.33	0.002044	5.00	2338.20	1154.58	0.38
USACE	6527	SEPT2011	2953.00	402.73	408.54	407.41	408.60	0.001442	3.84	1769.19	1114.12	0.31
USACE	6452 6452	2YR	678.00	402.70	407.29	406.58	407.32	0.000877	2.40	735.77	871.93	0.23
USACE	6452 6452	5YR	1118.00	402.70	407.66	406.84	407.70	0.000996	2.74	1005.62	900.54	0.25
USACE	6452 6452	10YR	1519.00	402.70	407.87	407.05	407.92	0.001198	3.12	1164.20	915.97	0.28
USACE	6452 6452	25YR	2282.00	402.70	408.18	407.33	408.25	0.001574	3.77	1397.87	946.51	0.32
USACE	6452 6452	50YR	2935.00	402.70	408.38	407.47	408.47	0.001910	4.28	1554.63	962.49	0.36
USACE	6452 6452	100YR	3638.00	402.70	408.57	407.62	408.68	0.002212	4.74	1706.46	978.22	0.39
USACE	6452 6452	100YRPLUS	4758.00	402.70	408.84	407.82	408.98	0.002654	5.39	1919.99	1004.78	0.43
USACE	6452 6452	200YR	4363.00	402.70	408.74	407.75	408.87	0.002535	5.19	1839.44	993.42	0.42
USACE	6452 6452	500YR	5404.00	402.70	408.99	407.91	409.15	0.002873	5.72	2038.41	1026.17	0.45
USACE	6452 6452	SEPT2011	2953.00	402.70	408.39	407.48	408.48	0.001908	4.28	1561.52	963.27	0.36
USACE	6415 Penryn Road		Culvert									
USACE	6376 6376	2YR	678.00	401.84	406.42	406.42	407.10	0.007782	7.59	142.27	349.41	0.70
USACE	6376 6376	5YR	1118.00	401.84	407.12	407.12	407.55	0.005412	7.12	397.22	733.85	0.60
USACE	6376 6376	10YR	1519.00	401.84	407.40	407.40	407.80	0.005462	7.46	563.38	841.93	0.61
USACE	6376 6376	25YR	2282.00	401.84	407.74	407.74	408.15	0.006088	8.26	799.33	962.45	0.66
USACE	6376 6376	50YR	2935.00	401.84	407.92	407.92	408.36	0.006981	9.05	926.23	972.16	0.71
USACE	6376 6376	100YR	3638.00	401.84	408.06	408.06	408.56	0.007987	9.87	1037.32	986.46	0.76
USACE	6376 6376	100YRPLUS	4758.00	401.84	408.29	408.29	408.85	0.009145	10.86	1210.21	1014.29	0.82
USACE	6376 6376	200YR	4363.00	401.84	408.22	408.22	408.75	0.008722	10.52	1155.46	1004.73	0.80
USACE	6376 6376	500YR	5404.00	401.84	408.62	408.42	409.04	0.006912	9.81	1466.18	1050.05	0.72
USACE	6376 6376	SEPT2011	2953.00	401.84	407.91	407.91	408.36	0.007093	9.12	924.92	972.08	0.71
USACE	6300 6300	2YR	723.00	401.70	405.59	405.23	405.65	0.002270	3.10	577.54	664.35	0.30
USACE	6300 6300	5YR	1187.00	401.70	406.02	405.42	406.07	0.001956	3.12	876.32	737.76	0.28
USACE	6300 6300	10YR	1618.00	401.70	406.38	405.55	406.43	0.001769	3.16	1151.77	813.84	0.27
USACE	6300 6300	25YR	2422.00	401.70	406.93	405.76	406.98	0.001478	3.14	1600.95	892.92	0.26
USACE	6300 6300	50YR	3117.00	401.70	407.33	405.90	407.38	0.001356	3.18	1941.36	931.24	0.25
USACE	6300 6300	100YR	3862.00	401.70	407.72	406.02	407.78	0.001265	3.22	2280.48	960.03	0.24
USACE	6300 6300	100YRPLUS	5051.00	401.70	408.26	406.26	408.32	0.001204	3.35	2755.28	995.97	0.24
USACE	6300 6300	200YR	4773.00	401.70	408.14	406.22	408.20	0.001214	3.32	2648.93	988.22	0.24
USACE	6300 6300	500YR	5910.00	401.70	408.62	406.30	408.68	0.001174	3.44	3075.76	1018.50	0.24
USACE	6300 6300	SEPT2011	3254.00	401.70	407.41	405.91	407.46	0.001328	3.18	2009.70	937.28	0.25
USACE	6131	2YR	723.00	401.66	405.21		405.25	0.002394	2.73	532.92	517.70	0.29
USACE	6131	5YR	1187.00	401.66	405.69		405.73	0.001999	2.78	803.41	595.71	0.27
USACE	6131	10YR	1618.00	401.66	406.08		406.13	0.001729	2.79	1049.98	652.61	0.26
USACE	6131	25YR	2422.00	401.66	406.67		406.72	0.001566	2.94	1455.20	732.39	0.25
USACE	6131	50YR	3117.00	401.66	407.08		407.14	0.001524	3.09	1767.65	778.14	0.25
USACE	6131	100YR	3862.00	401.66	407.48		407.54	0.001521	3.26	2089.89	836.91	0.26
USACE	6131	100YRPLUS	5051.00	401.66	408.03		408.10	0.001461	3.43	2567.31	892.26	0.26
USACE	6131	200YR	4773.00	401.66	407.91		407.97	0.001487	3.41	2458.39	885.66	0.26
USACE	6131	500YR	5910.00	401.66	408.39		408.46	0.001428	3.54	2897.65	930.62	0.26
USACE	6131	SEPT2011	3254.00	401.66	407.16		407.22	0.001543	3.15	1830.95	797.03	0.26

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5954	2YR	723.00	401.40	404.83		404.87	0.001930	2.43	529.34	432.54	0.26
USACE	5954	5YR	1187.00	401.40	405.36		405.41	0.001729	2.60	775.87	493.69	0.25
USACE	5954	10YR	1618.00	401.40	405.78		405.83	0.001639	2.74	995.41	551.82	0.25
USACE	5954	25YR	2422.00	401.40	406.38		406.44	0.001640	3.03	1337.13	606.18	0.26
USACE	5954	50YR	3117.00	401.40	406.78		406.85	0.001692	3.27	1593.47	647.55	0.27
USACE	5954	100YR	3862.00	401.40	407.18		407.25	0.001723	3.49	1856.27	683.50	0.27
USACE	5954	100YRPLUS	5051.00	401.40	407.72		407.81	0.001737	3.75	2243.14	726.49	0.28
USACE	5954	200YR	4773.00	401.40	407.60		407.69	0.001750	3.71	2152.71	719.69	0.28
USACE	5954	500YR	5910.00	401.40	408.08		408.18	0.001793	3.97	2510.87	774.14	0.29
USACE	5954	SEPT2011	3254.00	401.40	406.86		406.93	0.001705	3.32	1643.48	655.87	0.27
USACE	5713	2YR	723.00	400.80	404.32		404.37	0.002205	2.84	461.61	352.58	0.29
USACE	5713	5YR	1187.00	400.80	404.88		404.94	0.002197	3.18	676.62	409.23	0.30
USACE	5713	10YR	1618.00	400.80	405.32		405.39	0.002107	3.36	865.39	448.95	0.30
USACE	5713	25YR	2422.00	400.80	405.88		405.97	0.002290	3.83	1139.39	522.53	0.32
USACE	5713	50YR	3117.00	400.80	406.27		406.37	0.002350	4.09	1355.25	569.62	0.32
USACE	5713	100YR	3862.00	400.80	406.65		406.76	0.002451	4.39	1574.85	609.40	0.33
USACE	5713	100YRPLUS	5051.00	400.80	407.19		407.32	0.002480	4.71	1913.54	657.95	0.34
USACE	5713	200YR	4773.00	400.80	407.06		407.19	0.002434	4.60	1834.86	639.79	0.34
USACE	5713	500YR	5910.00	400.80	407.53		407.67	0.002537	4.94	2145.15	714.10	0.35
USACE	5713	SEPT2011	3254.00	400.80	406.35		406.45	0.002364	4.15	1396.90	575.46	0.33
USACE	5543 5543	2YR	723.00	400.65	403.92		403.97	0.002531	2.77	447.55	341.92	0.30
USACE	5543 5543	5YR	1187.00	400.65	404.48		404.54	0.002551	3.16	652.80	402.19	0.31
USACE	5543 5543	10YR	1618.00	400.65	404.90		404.98	0.002802	3.60	839.70	503.39	0.33
USACE	5543 5543	25YR	2422.00	400.65	405.46		405.55	0.002791	3.95	1140.24	576.51	0.34
USACE	5543 5543	50YR	3117.00	400.65	405.85		405.95	0.002728	4.15	1373.63	610.51	0.34
USACE	5543 5543	100YR	3862.00	400.65	406.22		406.33	0.002673	4.33	1611.39	662.32	0.34
USACE	5543 5543	100YRPLUS	5051.00	400.65	406.76		406.88	0.002612	4.59	1992.30	738.88	0.35
USACE	5543 5543	200YR	4773.00	400.65	406.64		406.76	0.002626	4.53	1904.68	724.75	0.35
USACE	5543 5543	500YR	5910.00	400.65	407.10		407.23	0.002582	4.75	2250.64	778.52	0.35
USACE	5543 5543	SEPT2011	3254.00	400.65	405.92		406.02	0.002698	4.17	1419.38	618.98	0.34
USACE	5388	2YR	723.00	400.40	403.56		403.60	0.002196	2.57	475.02	348.73	0.28
USACE	5388	5YR	1187.00	400.40	404.09		404.15	0.002444	3.07	681.43	431.36	0.31
USACE	5388	10YR	1618.00	400.40	404.50		404.56	0.002516	3.38	874.82	511.34	0.32
USACE	5388	25YR	2422.00	400.40	405.05		405.13	0.002516	3.72	1179.47	578.55	0.32
USACE	5388	50YR	3117.00	400.40	405.45		405.54	0.002458	3.92	1419.90	618.52	0.33
USACE	5388	100YR	3862.00	400.40	405.83		405.93	0.002440	4.12	1661.95	654.90	0.33
USACE	5388	100YRPLUS	5051.00	400.40	406.37		406.48	0.002491	4.47	2045.43	751.00	0.34
USACE	5388	200YR	4773.00	400.40	406.25		406.36	0.002475	4.39	1957.58	731.41	0.34
USACE	5388	500YR	5910.00	400.40	406.72		406.84	0.002453	4.62	2311.99	790.12	0.34
USACE	5388	SEPT2011	3254.00	400.40	405.53		405.62	0.002473	3.97	1466.83	630.80	0.33
USACE	5236	2YR	723.00	400.30	403.23		403.27	0.002245	2.23	502.03	394.33	0.27
USACE	5236	5YR	1187.00	400.30	403.76		403.80	0.002159	2.54	719.92	443.60	0.28
USACE	5236	10YR	1618.00	400.30	404.16		404.21	0.002119	2.77	910.51	489.29	0.28
USACE	5236	25YR	2422.00	400.30	404.71		404.78	0.002182	3.15	1187.09	524.24	0.30
USACE	5236	50YR	3117.00	400.30	405.11		405.19	0.002215	3.41	1404.87	560.43	0.30
USACE	5236	100YR	3862.00	400.30	405.48		405.58	0.002245	3.64	1619.11	580.96	0.31
USACE	5236	100YRPLUS	5051.00	400.30	406.01		406.13	0.002300	3.99	1937.57	625.86	0.32
USACE	5236	200YR	4773.00	400.30	405.89		406.01	0.002301	3.92	1864.96	618.95	0.32
USACE	5236	500YR	5910.00	400.30	406.35		406.48	0.002318	4.19	2154.15	643.40	0.32
USACE	5236	SEPT2011	3254.00	400.30	405.18		405.27	0.002220	3.45	1446.43	566.19	0.30
USACE	5068 5068	2YR	723.00	399.97	402.86	402.00	402.90	0.002166	2.38	489.29	370.02	0.27
USACE	5068 5068	5YR	1187.00	399.97	403.40	402.24	403.45	0.002050	2.66	700.75	405.08	0.28
USACE	5068 5068	10YR	1618.00	399.97	403.79	402.44	403.86	0.002110	2.94	870.77	443.72	0.29
USACE	5068 5068	25YR	2422.00	399.97	404.32	402.73	404.40	0.002258	3.35	1108.74	460.99	0.30
USACE	5068 5068	50YR	3117.00	399.97	404.70	402.92	404.80	0.002421	3.70	1288.62	490.21	0.32
USACE	5068 5068	100YR	3862.00	399.97	405.05	403.17	405.17	0.002553	4.01	1463.14	597.20	0.33
USACE	5068 5068	100YRPLUS	5051.00	399.97	405.56	403.47	405.70	0.002681	4.41	1724.94	757.28	0.35
USACE	5068 5068	200YR	4773.00	399.97	405.45	403.40	405.59	0.002655	4.32	1665.42	730.64	0.34
USACE	5068 5068	500YR	5910.00	399.97	405.89	403.71	406.05	0.002751	4.66	1902.91	796.15	0.35
USACE	5068 5068	SEPT2011	3254.00	399.97	404.77	403.01	404.87	0.002447	3.76	1321.98	515.25	0.32
USACE	4932	2YR	723.00	399.62	402.53	401.73	402.58	0.002656	2.71	463.21	373.45	0.31
USACE	4932	5YR	1187.00	399.62	403.10	401.96	403.15	0.002369	2.95	694.54	440.28	0.30
USACE	4932	10YR	1618.00	399.62	403.51	402.23	403.57	0.002185	3.09	881.48	592.07	0.30
USACE	4932	25YR	2422.00	399.62	404.01	402.50	404.09	0.002412	3.55	1121.12	656.53	0.32
USACE	4932	50YR	3117.00	399.62	404.37	402.75	404.47	0.002542	3.87	1300.35	700.64	0.33
USACE	4932	100YR	3862.00	399.62	404.70	402.91	404.82	0.002681	4.18	1470.46	739.27	0.34
USACE	4932	100YRPLUS	5051.00	399.62	405.19	403.29	405.34	0.002841	4.60	1721.40	797.01	0.36
USACE	4932	200YR	4773.00	399.62	405.08	403.23	405.22	0.002799	4.50	1665.28	788.70	0.36
USACE	4932	500YR	5910.00	399.62	405.51	403.48	405.67	0.002932	4.87	1889.41	814.44	0.37
USACE	4932	SEPT2011	3254.00	399.62	404.43	402.79	404.54	0.002573	3.93	1333.08	706.28	0.33
USACE	4765	2YR	723.00	399.03	402.11	401.22	402.16	0.002359	3.05	436.05	455.31	0.36
USACE	4765	5YR	1187.00	399.03	402.68	401.50	402.76	0.002443	3.61	628.77	597.39	0.38
USACE	4765	10YR	1618.00	399.03	403.05	401.72	403.14	0.003034	4.36	793.87	701.73	0.43
USACE	4765	25YR	2422.00	399.03	403.51	402.03	403.63	0.003258	4.94	1016.15	747.97	0.45
USACE	4765	50YR	3117.00	399.03	403.85	402.34	403.99	0.003328	5.30	1188.15	785.08	0.47
USACE	4765	100YR	3862.00	399.03	404.16	402.69	404.32	0.003472	5.69	1346.38	812.43	0.48
USACE	4765	100YRPLUS	5051.00	399.03	404.61	403.18	404.80	0.003635	6.22	1582.76	854.17	0.50
USACE	4765	200YR	4773.00	399.03	404.51	402.72	404.70	0.003612	6.11	1529.57	843.59	0.50
USACE	4765	500YR	5910.00	399.03	404.91	403.35	405.12	0.003709	6.54	1742.53	880.08	0.51
USACE	4765	SEPT2011	3254.00	399.03	403.91	402.37	404.05	0.003353	5.37	1218.50	788.36	0.47
USACE	4637	2YR	723.00	398.47	401.83	400.91	401.89	0.001933	3.15	462.31	466.20	0.33

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4637	5YR	1187.00	398.47	402.35	401.25	402.43	0.002537	4.04	652.44	639.06	0.39
USACE	4637	10YR	1618.00	398.47	402.65	401.45	402.75	0.003073	4.70	798.70	694.29	0.43
USACE	4637	25YR	2422.00	398.47	403.07	401.85	403.20	0.003344	5.28	1024.90	743.52	0.46
USACE	4637	50YR	3117.00	398.47	403.40	402.03	403.55	0.003545	5.72	1208.29	803.09	0.48
USACE	4637	100YR	3862.00	398.47	403.71	402.23	403.87	0.003547	5.98	1388.07	866.82	0.49
USACE	4637	100YRPLUS	5051.00	398.47	404.15	402.79	404.34	0.003597	6.40	1652.97	938.40	0.50
USACE	4637	200YR	4773.00	398.47	404.05	402.79	404.23	0.003586	6.31	1592.71	922.57	0.49
USACE	4637	500YR	5910.00	398.47	404.45	403.06	404.65	0.003590	6.64	1836.89	979.48	0.50
USACE	4637	SEPT2011	3254.00	398.47	403.46	402.04	403.61	0.003548	5.77	1242.74	838.13	0.48
USACE	4506 4506	2YR	723.00	398.46	401.56	400.62	401.61	0.002276	2.94	470.57	639.64	0.35
USACE	4506 4506	5YR	1187.00	398.46	401.99	400.89	402.06	0.003117	3.87	729.85	810.98	0.42
USACE	4506 4506	10YR	1618.00	398.46	402.27	401.15	402.34	0.002959	4.03	913.30	869.47	0.41
USACE	4506 4506	25YR	2422.00	398.46	402.71	401.53	402.79	0.002717	4.24	1205.78	939.95	0.41
USACE	4506 4506	50YR	3117.00	398.46	403.04	401.75	403.13	0.002620	4.43	1424.12	990.57	0.41
USACE	4506 4506	100YR	3862.00	398.46	403.36	401.75	403.46	0.002562	4.63	1635.07	1090.84	0.41
USACE	4506 4506	100YRPLUS	5051.00	398.46	403.80	401.75	403.93	0.002521	4.92	1935.64	1196.66	0.41
USACE	4506 4506	200YR	4773.00	398.46	403.70	401.75	403.82	0.002528	4.86	1868.34	1185.20	0.41
USACE	4506 4506	500YR	5910.00	398.46	404.11	401.75	404.24	0.002480	5.10	2140.18	1248.41	0.41
USACE	4506 4506	SEPT2011	3254.00	398.46	403.10	401.75	403.19	0.002604	4.46	1465.03	999.50	0.41
USACE	4356	2YR	723.00	398.44	401.25	400.34	401.28	0.002032	2.58	618.38	725.60	0.32
USACE	4356	5YR	1187.00	398.44	401.67	400.73	401.71	0.001748	2.72	887.63	920.29	0.31
USACE	4356	10YR	1618.00	398.44	401.95	400.88	402.00	0.001781	2.96	1072.09	1000.30	0.32
USACE	4356	25YR	2422.00	398.44	402.40	400.88	402.46	0.001800	3.30	1367.49	1099.00	0.33
USACE	4356	50YR	3117.00	398.44	402.73	400.88	402.80	0.001834	3.56	1584.71	1155.92	0.34
USACE	4356	100YR	3862.00	398.44	403.05	401.50	403.13	0.001870	3.82	1793.50	1222.82	0.35
USACE	4356	100YRPLUS	5051.00	398.44	403.49	401.69	403.59	0.001929	4.18	2089.48	1292.63	0.36
USACE	4356	200YR	4773.00	398.44	403.39	401.65	403.49	0.001917	4.10	2023.16	1277.67	0.36
USACE	4356	500YR	5910.00	398.44	403.80	401.83	403.91	0.001941	4.39	2293.95	1341.16	0.36
USACE	4356	SEPT2011	3254.00	398.44	402.79	401.38	402.86	0.001837	3.61	1625.59	1161.51	0.34
USACE	4183	2YR	723.00	398.20	400.81	399.91	400.86	0.002964	3.17	462.99	689.40	0.39
USACE	4183	5YR	1187.00	398.20	401.25	400.30	401.31	0.003056	3.68	728.07	794.82	0.41
USACE	4183	10YR	1618.00	398.20	401.55	400.59	401.61	0.002831	3.82	907.85	868.09	0.41
USACE	4183	25YR	2422.00	398.20	402.00	401.06	402.08	0.002666	4.11	1191.01	993.41	0.40
USACE	4183	50YR	3117.00	398.20	402.33	401.20	402.42	0.002622	4.35	1396.99	1029.07	0.41
USACE	4183	100YR	3862.00	398.20	402.64	401.35	402.74	0.002605	4.58	1593.44	1064.98	0.41
USACE	4183	100YRPLUS	5051.00	398.20	403.07	401.56	403.20	0.002624	4.94	1869.27	1114.81	0.42
USACE	4183	200YR	4773.00	398.20	402.97	401.51	403.10	0.002624	4.86	1807.00	1101.54	0.42
USACE	4183	500YR	5910.00	398.20	403.38	401.69	403.52	0.002567	5.12	2066.18	1141.37	0.42
USACE	4183	SEPT2011	3254.00	398.20	402.39	401.23	402.48	0.002612	4.39	1435.59	1033.89	0.41
USACE	4043 4043	2YR	723.00	397.30	400.29	399.55	400.39	0.003700	3.99	413.66	505.16	0.45
USACE	4043 4043	5YR	1187.00	397.30	400.83	400.04	400.91	0.002699	3.90	720.81	628.36	0.40
USACE	4043 4043	10YR	1618.00	397.30	401.17	400.14	401.24	0.002381	3.94	948.12	701.28	0.38
USACE	4043 4043	25YR	2422.00	397.30	401.66	400.21	401.74	0.002153	4.11	1307.62	754.01	0.37
USACE	4043 4043	50YR	3117.00	397.30	402.00	400.16	402.09	0.002073	4.27	1568.99	800.33	0.37
USACE	4043 4043	100YR	3862.00	397.30	402.32	401.06	402.42	0.002019	4.43	1828.04	883.74	0.37
USACE	4043 4043	100YRPLUS	5051.00	397.30	402.77	401.30	402.88	0.001926	4.62	2206.56	946.53	0.37
USACE	4043 4043	200YR	4773.00	397.30	402.67	401.25	402.77	0.001954	4.59	2119.51	933.76	0.37
USACE	4043 4043	500YR	5910.00	397.30	403.10	401.45	403.21	0.001840	4.71	2492.69	1010.49	0.36
USACE	4043 4043	SEPT2011	3254.00	397.30	402.07	400.92	402.15	0.002050	4.29	1620.22	807.70	0.37
USACE	3895	2YR	723.00	396.90	399.87		399.93	0.002593	3.25	449.42	387.70	0.38
USACE	3895	5YR	1187.00	396.90	400.45		400.51	0.002620	3.79	699.88	517.75	0.39
USACE	3895	10YR	1618.00	396.90	400.81		400.88	0.002567	4.06	904.61	598.26	0.40
USACE	3895	25YR	2422.00	396.90	401.32		401.41	0.002455	4.38	1233.10	669.84	0.40
USACE	3895	50YR	3117.00	396.90	401.67		401.76	0.002418	4.60	1468.05	702.24	0.40
USACE	3895	100YR	3862.00	396.90	401.99		402.09	0.002418	4.84	1699.13	734.36	0.40
USACE	3895	100YRPLUS	5051.00	396.90	402.44		402.56	0.002408	5.15	2041.39	786.79	0.41
USACE	3895	200YR	4773.00	396.90	402.34		402.45	0.002424	5.10	1960.35	768.37	0.41
USACE	3895	500YR	5910.00	396.90	402.79		402.91	0.002224	5.18	2322.31	832.08	0.40
USACE	3895	SEPT2011	3254.00	396.90	401.74		401.83	0.002398	4.63	1515.46	708.52	0.40
USACE	3718	2YR	723.00	396.01	399.49	398.59	399.54	0.001875	3.16	485.78	364.46	0.33
USACE	3718	5YR	1187.00	396.01	400.02	398.85	400.09	0.002148	3.79	718.14	480.99	0.36
USACE	3718	10YR	1618.00	396.01	400.38	399.11	400.45	0.002239	4.13	898.86	535.58	0.37
USACE	3718	25YR	2422.00	396.01	400.89	399.46	400.98	0.002306	4.56	1189.93	599.69	0.39
USACE	3718	50YR	3117.00	396.01	401.24	399.59	401.34	0.002324	4.82	1402.43	646.20	0.39
USACE	3718	100YR	3862.00	396.01	401.56	400.01	401.67	0.002315	5.02	1619.58	701.77	0.40
USACE	3718	100YRPLUS	5051.00	396.01	402.03	400.38	402.15	0.002217	5.22	1967.37	939.67	0.39
USACE	3718	200YR	4773.00	396.01	401.92	400.34	402.04	0.002246	5.18	1883.91	907.96	0.39
USACE	3718	500YR	5910.00	396.01	402.41	400.59	402.54	0.001985	5.17	2268.17	1061.76	0.38
USACE	3718	SEPT2011	3254.00	396.01	401.31	399.92	401.41	0.002303	4.84	1448.77	658.02	0.39
USACE	3578 3578	2YR	723.00	395.97	399.21		399.26	0.002050	2.86	481.20	397.23	0.33
USACE	3578 3578	5YR	1187.00	395.97	399.72		399.79	0.002216	3.40	707.60	504.12	0.36
USACE	3578 3578	10YR	1618.00	395.97	400.07		400.14	0.002228	3.69	893.54	554.97	0.37
USACE	3578 3578	25YR	2422.00	395.97	400.57		400.66	0.002329	4.16	1194.80	638.07	0.39
USACE	3578 3578	50YR	3117.00	395.97	400.92		401.02	0.002275	4.37	1424.52	688.51	0.39
USACE	3578 3578	100YR	3862.00	395.97	401.25		401.35	0.002216	4.55	1669.46	790.30	0.39
USACE	3578 3578	100YRPLUS	5051.00	395.97	401.74		401.85	0.002005	4.65	2076.52	859.81	0.37
USACE	3578 3578	200YR	4773.00	395.97	401.62		401.73	0.002069	4.65	1976.21	847.29	0.38
USACE	3578 3578	500YR	5910.00	395.97	402.17		402.28	0.001690	4.52	2459.44	921.63	0.35
USACE	3578 3578	SEPT2011	3254.00	395.97	401.00		401.09	0.002215	4.37	1478.70	712.76	0.38
USACE	3366	2YR	723.00	395.49	398.68	397.90	398.75	0.002837	3.69	431.49	380.78	0.40
USACE	3366	5YR	1187.00	395.49	399.16	398.16	399.25	0.002908	4.18	642.77	479.30	0.42

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3366	10YR	1618.00	395.49	399.53	398.52	399.62	0.002761	4.38	829.26	546.63	0.41
USACE	3366	25YR	2422.00	395.49	400.03	398.96	400.13	0.002643	4.69	1121.33	627.08	0.41
USACE	3366	50YR	3117.00	395.49	400.40	399.18	400.51	0.002496	4.84	1369.55	711.29	0.41
USACE	3366	100YR	3862.00	395.49	400.76	399.38	400.87	0.002299	4.89	1649.14	837.18	0.40
USACE	3366	100YRPLUS	5051.00	395.49	401.33	399.66	401.44	0.001867	4.75	2153.53	960.27	0.36
USACE	3366	200YR	4773.00	395.49	401.20	399.62	401.30	0.001979	4.81	2025.81	935.95	0.37
USACE	3366	500YR	5910.00	395.49	401.85	399.85	401.94	0.001408	4.39	2655.17	1057.00	0.32
USACE	3366	SEPT2011	3254.00	395.49	400.50	399.21	400.61	0.002351	4.76	1443.64	761.25	0.40
USACE	3189	2YR	752.00	393.16	398.21		398.30	0.002368	3.99	474.50	420.05	0.37
USACE	3189	5YR	1243.00	393.16	398.69		398.78	0.002412	4.38	686.65	473.07	0.38
USACE	3189	10YR	1690.00	393.16	399.04		399.15	0.002575	4.78	868.87	535.68	0.40
USACE	3189	25YR	2518.00	393.16	399.56		399.67	0.002536	5.11	1159.55	581.55	0.41
USACE	3189	50YR	3230.00	393.16	399.96		400.08	0.002429	5.27	1407.10	655.74	0.40
USACE	3189	100YR	4014.00	393.16	400.36		400.48	0.002189	5.25	1711.86	821.50	0.39
USACE	3189	100YRPLUS	5250.00	393.16	401.02		401.13	0.001674	4.94	2289.09	925.97	0.34
USACE	3189	200YR	4965.00	393.16	400.86		400.97	0.001799	5.04	2143.09	889.52	0.36
USACE	3189	500YR	6234.00	393.16	401.62		401.71	0.001265	4.56	2866.10	1016.55	0.30
USACE	3189	SEPT2011	3450.00	393.16	400.07		400.19	0.002374	5.28	1485.28	713.00	0.40
USACE	2984 2984	2YR	752.00	393.00	397.60		397.73	0.003328	4.60	405.93	381.40	0.44
USACE	2984 2984	5YR	1243.00	393.00	398.08		398.20	0.003303	4.99	610.37	457.55	0.44
USACE	2984 2984	10YR	1690.00	393.00	398.44		398.57	0.003067	5.10	785.34	494.04	0.43
USACE	2984 2984	25YR	2518.00	393.00	399.00		399.13	0.002804	5.29	1071.24	534.07	0.42
USACE	2984 2984	50YR	3230.00	393.00	399.43		399.56	0.002600	5.39	1308.25	575.51	0.41
USACE	2984 2984	100YR	4014.00	393.00	399.89		400.02	0.002273	5.33	1588.13	638.64	0.39
USACE	2984 2984	100YRPLUS	5250.00	393.00	400.67		400.79	0.001619	4.90	2112.69	714.18	0.34
USACE	2984 2984	200YR	4965.00	393.00	400.49		400.60	0.001761	5.01	1982.08	677.74	0.35
USACE	2984 2984	500YR	6234.00	393.00	401.36		401.45	0.001194	4.49	2625.80	781.90	0.29
USACE	2984 2984	SEPT2011	3450.00	393.00	399.56		399.69	0.002520	5.39	1382.68	588.74	0.41
USACE	2787	2YR	752.00	392.90	397.22		397.27	0.001557	3.13	549.02	409.26	0.30
USACE	2787	5YR	1243.00	392.90	397.62		397.69	0.001969	3.79	716.16	430.52	0.35
USACE	2787	10YR	1690.00	392.90	397.99		398.07	0.001969	4.04	881.11	447.83	0.35
USACE	2787	25YR	2518.00	392.90	398.54		398.65	0.002068	4.51	1137.88	491.13	0.37
USACE	2787	50YR	3230.00	392.90	399.01		399.12	0.001892	4.59	1378.23	526.37	0.36
USACE	2787	100YR	4014.00	392.90	399.53		399.64	0.001614	4.53	1655.39	543.52	0.34
USACE	2787	100YRPLUS	5250.00	392.90	400.41		400.51	0.001191	4.28	2152.30	589.21	0.30
USACE	2787	200YR	4965.00	392.90	400.20		400.31	0.001283	4.35	2030.41	578.79	0.31
USACE	2787	500YR	6234.00	392.90	401.15		401.25	0.000926	4.06	2603.75	631.06	0.27
USACE	2787	SEPT2011	3450.00	392.90	399.15		399.26	0.001819	4.59	1453.56	530.93	0.35
USACE	2624	2YR	752.00	392.80	396.99		397.03	0.001339	2.75	553.39	364.52	0.29
USACE	2624	5YR	1243.00	392.80	397.28		397.35	0.002176	3.74	659.47	375.24	0.37
USACE	2624	10YR	1690.00	392.80	397.64		397.73	0.002248	4.09	805.06	432.77	0.39
USACE	2624	25YR	2518.00	392.80	398.18		398.29	0.002249	4.51	1048.23	464.42	0.40
USACE	2624	50YR	3230.00	392.80	398.68		398.80	0.001946	4.54	1289.52	492.39	0.38
USACE	2624	100YR	4014.00	392.80	399.26		399.38	0.001581	4.43	1578.30	513.63	0.35
USACE	2624	100YRPLUS	5250.00	392.80	400.21		400.32	0.001117	4.18	2084.14	546.45	0.30
USACE	2624	200YR	4965.00	392.80	399.99		400.10	0.001208	4.24	1962.78	538.55	0.31
USACE	2624	500YR	6234.00	392.80	401.00		401.10	0.000871	4.00	2527.16	586.16	0.27
USACE	2624	SEPT2011	3450.00	392.80	398.84		398.96	0.001840	4.52	1367.93	498.19	0.37
USACE	2484	2YR	752.00	392.70	396.83	395.70	396.87	0.001033	2.48	598.45	357.38	0.25
USACE	2484	5YR	1243.00	392.70	396.97	396.00	397.05	0.002206	3.74	649.51	371.08	0.37
USACE	2484	10YR	1690.00	392.70	397.33	396.25	397.42	0.002266	4.07	785.41	391.93	0.38
USACE	2484	25YR	2518.00	392.70	397.86	396.46	397.98	0.002327	4.54	999.03	412.29	0.40
USACE	2484	50YR	3230.00	392.70	398.41	396.70	398.53	0.001960	4.54	1233.20	440.00	0.37
USACE	2484	100YR	4014.00	392.70	399.03	396.94	399.16	0.001560	4.41	1515.51	460.62	0.34
USACE	2484	100YRPLUS	5250.00	392.70	400.05	397.29	400.17	0.001105	4.18	1995.87	486.46	0.30
USACE	2484	200YR	4965.00	392.70	399.81	397.22	399.93	0.001193	4.23	1881.74	481.41	0.31
USACE	2484	500YR	6234.00	392.70	400.86	397.52	400.98	0.000878	4.05	2402.64	515.70	0.27
USACE	2484	SEPT2011	3450.00	392.70	398.58	396.76	398.70	0.001839	4.51	1310.14	445.71	0.36
USACE	2369 2369	2YR	752.00	392.23	395.96	395.92	396.52	0.013820	7.91	165.62	300.33	0.90
USACE	2369 2369	5YR	1243.00	392.23	396.73	396.34	396.80	0.001992	3.62	658.75	382.88	0.36
USACE	2369 2369	10YR	1690.00	392.23	397.08	396.34	397.17	0.002052	3.94	796.74	416.98	0.37
USACE	2369 2369	25YR	2518.00	392.23	397.61	396.35	397.72	0.002084	4.36	1033.25	470.63	0.38
USACE	2369 2369	50YR	3230.00	392.23	398.21	396.52	398.32	0.001609	4.20	1335.98	527.15	0.34
USACE	2369 2369	100YR	4014.00	392.23	398.89	396.75	398.99	0.001197	3.97	1712.54	578.89	0.30
USACE	2369 2369	100YRPLUS	5250.00	392.23	399.97	397.09	400.05	0.000797	3.66	2375.53	655.88	0.26
USACE	2369 2369	200YR	4965.00	392.23	399.72	397.01	399.81	0.000869	3.73	2216.39	639.18	0.26
USACE	2369 2369	500YR	6234.00	392.23	400.81	397.34	400.88	0.000610	3.48	2956.25	729.27	0.23
USACE	2369 2369	SEPT2011	3450.00	392.23	398.40	396.60	398.51	0.001477	4.14	1437.78	541.57	0.33
USACE	2310	2YR	752.00	391.80	395.92	395.30	396.01	0.002360	3.88	426.77	293.07	0.39
USACE	2310	5YR	1243.00	391.80	396.61	395.59	396.68	0.001887	3.96	648.93	368.04	0.36
USACE	2310	10YR	1690.00	391.80	396.95	395.79	397.04	0.002012	4.33	781.18	406.95	0.37
USACE	2310	25YR	2518.00	391.80	397.47	396.14	397.60	0.002109	4.79	1010.59	467.09	0.39
USACE	2310	50YR	3230.00	391.80	398.11	396.39	398.23	0.001580	4.52	1331.28	528.80	0.35
USACE	2310	100YR	4014.00	391.80	398.82	396.70	398.93	0.001143	4.18	1724.56	576.06	0.30
USACE	2310	100YRPLUS	5250.00	391.80	399.92	397.07	400.01	0.000757	3.80	2400.59	656.05	0.25
USACE	2310	200YR	4965.00	391.80	399.67	396.95	399.76	0.000827	3.88	2238.73	639.08	0.26
USACE	2310	500YR	6234.00	391.80	400.77	397.28	400.85	0.000581	3.59	2987.62	729.09	0.22
USACE	2310	SEPT2011	3450.00	391.80	398.31	396.52	398.43	0.001436	4.42	1439.19	543.75	0.33
USACE	2289 Private Drive		Mult Open									
USACE	2264	2YR	752.00	391.25	395.92	395.08	395.98	0.001356	3.13	509.48	352.58	0.30

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	2264	5YR	1243.00	391.25	396.59	395.39	396.65	0.001150	3.26	766.71	408.61	0.29
USACE	2264	10YR	1690.00	391.25	396.92	395.64	397.00	0.001279	3.63	908.06	435.97	0.31
USACE	2264	25YR	2518.00	391.25	397.44	396.02	397.55	0.001408	4.10	1144.63	470.96	0.33
USACE	2264	50YR	3230.00	391.25	398.08	396.26	398.18	0.001123	3.98	1457.73	512.26	0.30
USACE	2264	100YR	4014.00	391.25	398.78	396.51	398.87	0.000866	3.78	1834.17	641.55	0.27
USACE	2264	100YRPLUS	5250.00	391.25	399.87	396.83	399.96	0.000598	3.50	2443.83	956.68	0.23
USACE	2264	200YR	4965.00	391.25	399.62	396.75	399.71	0.000647	3.56	2302.99	870.80	0.24
USACE	2264	500YR	6234.00	391.25	400.73	397.06	400.81	0.000472	3.35	2919.27	1096.77	0.21
USACE	2264	SEPT2011	3450.00	391.25	398.28	396.35	398.37	0.001042	3.92	1560.97	527.19	0.29
USACE	2181	2YR	752.00	391.10	395.56	394.06	395.78	0.002439	4.52	263.19	172.44	0.40
USACE	2181	5YR	1243.00	391.10	396.05	394.99	396.40	0.003845	6.14	392.24	354.09	0.52
USACE	2181	10YR	1690.00	391.10	396.30	396.16	396.72	0.004617	6.98	487.99	415.21	0.57
USACE	2181	25YR	2518.00	391.10	397.17	396.57	397.37	0.002172	5.37	873.52	487.97	0.40
USACE	2181	50YR	3230.00	391.10	397.92	396.79	398.06	0.001264	4.46	1245.10	548.85	0.31
USACE	2181	100YR	4014.00	391.10	398.68	397.00	398.79	0.000824	3.89	1653.86	598.27	0.26
USACE	2181	100YRPLUS	5250.00	391.10	399.81	397.27	399.91	0.000487	3.30	2312.07	647.97	0.20
USACE	2181	200YR	4965.00	391.10	399.55	397.21	399.65	0.000545	3.42	2158.63	641.67	0.21
USACE	2181	500YR	6234.00	391.10	400.68	397.46	400.77	0.000349	2.99	2826.43	925.16	0.18
USACE	2181	SEPT2011	3450.00	391.10	398.14	396.85	398.27	0.001104	4.27	1360.56	562.82	0.30
USACE	2072	2YR	752.00	391.00	395.42	395.01	395.52	0.001817	3.66	376.77	394.88	0.35
USACE	2072	5YR	1243.00	391.00	396.05	395.28	396.13	0.000975	3.00	616.32	471.45	0.26
USACE	2072	10YR	1690.00	391.00	396.29	395.47	396.41	0.001080	3.28	718.73	493.03	0.28
USACE	2072	25YR	2518.00	391.00	397.11	395.74	397.24	0.000547	2.63	1078.17	517.74	0.20
USACE	2072	50YR	3230.00	391.00	397.87	395.94	397.99	0.000342	2.28	1420.80	544.42	0.17
USACE	2072	100YR	4014.00	391.00	398.62	396.16	398.75	0.000245	2.09	1774.40	567.98	0.14
USACE	2072	100YRPLUS	5250.00	391.00	399.75	396.44	399.88	0.000170	1.93	2325.57	605.69	0.12
USACE	2072	200YR	4965.00	391.00	399.49	396.38	399.62	0.000183	1.96	2197.61	597.83	0.13
USACE	2072	500YR	6234.00	391.00	400.62	396.67	400.74	0.000135	1.85	2771.32	735.94	0.11
USACE	2072	SEPT2011	3450.00	391.00	398.09	396.00	398.21	0.000306	2.21	1522.85	549.86	0.16
USACE	1919 1919	2YR	752.00	390.06	395.20	394.55	395.29	0.001259	3.56	407.51	433.52	0.30
USACE	1919 1919	5YR	1243.00	390.06	395.91	394.95	396.00	0.000840	3.22	640.29	519.49	0.25
USACE	1919 1919	10YR	1690.00	390.06	396.13	395.19	396.25	0.001066	3.73	723.86	548.48	0.29
USACE	1919 1919	25YR	2518.00	390.06	397.04	395.50	397.15	0.000546	2.97	1096.51	575.55	0.21
USACE	1919 1919	50YR	3230.00	390.06	397.83	395.75	397.94	0.000356	2.60	1433.48	603.93	0.17
USACE	1919 1919	100YR	4014.00	390.06	398.59	396.00	398.71	0.000263	2.39	1774.46	624.41	0.15
USACE	1919 1919	100YRPLUS	5250.00	390.06	399.73	396.28	399.85	0.000187	2.21	2293.32	643.65	0.13
USACE	1919 1919	200YR	4965.00	390.06	399.47	396.23	399.59	0.000201	2.25	2173.85	639.17	0.13
USACE	1919 1919	500YR	6234.00	390.06	400.60	396.50	400.72	0.000153	2.12	2698.27	673.44	0.12
USACE	1919 1919	SEPT2011	3450.00	390.06	398.05	395.83	398.16	0.000322	2.52	1532.50	609.10	0.17
USACE	1769	2YR	752.00	390.00	395.07	394.19	395.13	0.000821	2.56	455.41	470.25	0.23
USACE	1769	5YR	1243.00	390.00	395.83	394.49	395.89	0.000508	2.26	706.93	572.05	0.18
USACE	1769	10YR	1690.00	390.00	396.01	394.70	396.11	0.000698	2.71	772.60	596.75	0.21
USACE	1769	25YR	2518.00	390.00	396.96	395.04	397.08	0.000433	2.40	1126.26	737.41	0.17
USACE	1769	50YR	3230.00	390.00	397.77	395.28	397.89	0.000317	2.24	1434.58	853.72	0.15
USACE	1769	100YR	4014.00	390.00	398.54	395.61	398.67	0.000256	2.16	1736.43	912.64	0.14
USACE	1769	100YRPLUS	5250.00	390.00	399.68	395.98	399.82	0.000201	2.11	2188.53	968.49	0.13
USACE	1769	200YR	4965.00	390.00	399.42	395.90	399.55	0.000212	2.12	2085.04	959.72	0.13
USACE	1769	500YR	6234.00	390.00	400.55	396.23	400.69	0.000173	2.08	2534.61	1073.02	0.12
USACE	1769	SEPT2011	3450.00	390.00	397.99	395.37	398.11	0.000295	2.21	1522.99	868.52	0.15
USACE	1612	2YR	752.00	389.90	395.02	393.73	395.06	0.000220	1.33	598.98	530.54	0.12
USACE	1612	5YR	1243.00	389.90	395.79	394.12	395.85	0.000161	1.28	870.39	554.33	0.10
USACE	1612	10YR	1690.00	389.90	395.96	394.29	396.05	0.000236	1.58	929.52	559.39	0.13
USACE	1612	25YR	2518.00	389.90	396.93	394.63	397.04	0.000175	1.54	1283.89	600.92	0.11
USACE	1612	50YR	3230.00	389.90	397.73	394.90	397.85	0.000142	1.51	1593.00	693.98	0.10
USACE	1612	100YR	4014.00	389.90	398.51	395.18	398.64	0.000123	1.51	1893.44	719.87	0.10
USACE	1612	100YRPLUS	5250.00	389.90	399.64	395.60	399.79	0.000104	1.53	2334.99	859.41	0.09
USACE	1612	200YR	4965.00	389.90	399.38	395.50	399.53	0.000108	1.53	2234.04	835.18	0.09
USACE	1612	500YR	6234.00	389.90	400.51	395.89	400.67	0.000093	1.55	2672.48	893.49	0.09
USACE	1612	SEPT2011	3450.00	389.90	397.96	394.98	398.08	0.000135	1.51	1681.32	707.91	0.10
USACE	1462	2YR	752.00	389.80	395.01	393.49	395.04	0.000117	1.00	716.08	536.57	0.09
USACE	1462	5YR	1243.00	389.80	395.78	393.83	395.83	0.000103	1.05	999.37	564.56	0.08
USACE	1462	10YR	1690.00	389.80	395.94	394.08	396.02	0.000157	1.33	1058.57	569.73	0.10
USACE	1462	25YR	2518.00	389.80	396.91	394.35	397.01	0.000130	1.36	1429.07	651.86	0.10
USACE	1462	50YR	3230.00	389.80	397.72	394.62	397.83	0.000111	1.37	1748.23	750.68	0.09
USACE	1462	100YR	4014.00	389.80	398.50	394.89	398.62	0.000100	1.40	2056.17	781.91	0.09
USACE	1462	100YRPLUS	5250.00	389.80	399.64	395.30	399.77	0.000088	1.44	2508.49	951.47	0.09
USACE	1462	200YR	4965.00	389.80	399.38	395.21	399.51	0.000091	1.43	2405.08	929.82	0.09
USACE	1462	500YR	6234.00	389.80	400.51	395.59	400.66	0.000081	1.47	2854.09	997.55	0.08
USACE	1462	SEPT2011	3450.00	389.80	397.95	394.70	398.06	0.000107	1.37	1838.78	760.15	0.09
USACE	1329	2YR	752.00	389.70	395.00	393.47	395.02	0.000067	0.77	792.58	454.11	0.07
USACE	1329	5YR	1243.00	389.70	395.78	393.58	395.81	0.000068	0.87	1100.97	503.11	0.07
USACE	1329	10YR	1690.00	389.70	395.94	393.84	395.99	0.000086	1.00	1249.42	520.47	0.08
USACE	1329	25YR	2518.00	389.70	396.92	394.23	396.99	0.000076	1.06	1685.08	757.71	0.07
USACE	1329	50YR	3230.00	389.70	397.74	394.51	397.81	0.000067	1.08	2058.87	811.38	0.07
USACE	1329	100YR	4014.00	389.70	398.51	394.80	398.60	0.000062	1.12	2420.91	832.89	0.07
USACE	1329	100YRPLUS	5250.00	389.70	399.66	395.14	399.75	0.000057	1.17	2959.44	976.40	0.07
USACE	1329	200YR	4965.00	389.70	399.40	395.05	399.49	0.000058	1.16	2834.61	948.64	0.07
USACE	1329	500YR	6234.00	389.70	400.53	395.41	400.63	0.000052	1.19	3380.81	1042.24	0.07
USACE	1329	SEPT2011	3450.00	389.70	397.96	394.59	398.04	0.000065	1.09	2165.07	817.54	0.07
USACE	1268	2YR	769.00	389.00	395.00	393.01	395.01	0.000139	1.37	912.91	495.49	0.10
USACE	1268	5YR	1272.00	389.00	395.78	393.47	395.79	0.000184	1.71	1188.85	612.32	0.12

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1268	10YR	1731.00	389.00	395.95	393.48	395.96	0.000137	1.50	1573.81	646.39	0.10
USACE	1268	25YR	2574.00	389.00	396.94	393.49	396.96	0.000113	1.50	2241.56	741.58	0.10
USACE	1268	50YR	3294.00	389.00	397.75	393.83	397.78	0.000096	1.47	2752.36	804.85	0.09
USACE	1268	100YR	4089.00	389.00	398.53	394.17	398.57	0.000086	1.48	3245.69	924.73	0.09
USACE	1268	100YRPLUS	5348.00	389.00	399.68	394.67	399.72	0.000075	1.50	3969.82	1039.32	0.08
USACE	1268	200YR	5057.00	389.00	399.42	394.57	399.46	0.000077	1.49	3804.36	1010.38	0.08
USACE	1268	500YR	6369.00	389.00	400.56	394.91	400.60	0.000069	1.51	4522.68	1201.39	0.08
USACE	1268	SEPT2011	3507.00	389.00	397.98	393.92	398.01	0.000092	1.47	2897.46	833.51	0.09
USACE	1232 Oak Street		Mult Open									
USACE	1199	2YR	769.00	388.62	394.35	391.81	394.40	0.000501	2.45	567.79	471.71	0.19
USACE	1199	5YR	1272.00	388.62	395.02	392.45	395.09	0.000668	3.07	772.77	572.02	0.22
USACE	1199	10YR	1731.00	388.62	395.85	393.07	395.88	0.000160	1.65	1614.31	741.37	0.11
USACE	1199	25YR	2574.00	388.62	396.85	393.81	396.88	0.000149	1.74	2116.61	886.77	0.11
USACE	1199	50YR	3294.00	388.62	397.69	394.31	397.72	0.000134	1.77	2556.03	1031.10	0.11
USACE	1199	100YR	4089.00	388.62	398.48	394.69	398.52	0.000123	1.80	2976.42	1203.21	0.10
USACE	1199	100YRPLUS	5348.00	388.62	399.63	395.14	399.67	0.000111	1.85	3589.78	1317.58	0.10
USACE	1199	200YR	5057.00	388.62	399.36	395.05	399.40	0.000114	1.84	3447.57	1301.74	0.10
USACE	1199	500YR	6369.00	388.62	400.50	395.45	400.54	0.000104	1.89	4051.87	1356.31	0.10
USACE	1199	SEPT2011	3507.00	388.62	397.91	394.45	397.94	0.000131	1.78	2673.39	1064.86	0.11
USACE	1175	2YR	769.00	388.62	393.97	393.56	394.29	0.003438	5.26	272.95	413.32	0.46
USACE	1175	5YR	1272.00	388.62	394.84	394.23	395.03	0.001993	4.57	521.89	566.24	0.37
USACE	1175	10YR	1731.00	388.62	395.69	394.48	395.83	0.001208	3.96	768.76	662.05	0.29
USACE	1175	25YR	2574.00	388.62	396.78	394.86	396.86	0.000162	1.63	1609.15	882.09	0.11
USACE	1175	50YR	3294.00	388.62	397.62	395.14	397.70	0.000121	1.52	2040.76	986.98	0.10
USACE	1175	100YR	4089.00	388.62	398.41	395.41	398.50	0.000101	1.48	2449.81	1129.84	0.09
USACE	1175	100YRPLUS	5348.00	388.62	399.55	395.79	399.65	0.000083	1.46	3046.37	1305.74	0.08
USACE	1175	200YR	5057.00	388.62	399.29	395.79	399.38	0.000086	1.47	2907.90	1289.89	0.08
USACE	1175	500YR	6369.00	388.62	400.42	395.79	400.52	0.000074	1.46	3495.63	1351.73	0.08
USACE	1175	SEPT2011	3507.00	388.62	397.84	395.22	397.93	0.000114	1.50	2155.03	1030.12	0.09
USACE	1158	2YR	769.00	388.05	394.05	391.63	394.17	0.000896	2.98	409.04	479.90	0.25
USACE	1158	5YR	1272.00	388.05	394.85	392.47	394.99	0.000955	3.43	632.76	678.71	0.26
USACE	1158	10YR	1731.00	388.05	395.69	393.40	395.80	0.000783	3.43	869.57	867.29	0.24
USACE	1158	25YR	2574.00	388.05	396.80	394.36	396.83	0.000215	2.01	2164.93	1069.56	0.13
USACE	1158	50YR	3294.00	388.05	397.64	394.72	397.67	0.000175	1.95	2700.01	1245.92	0.12
USACE	1158	100YR	4089.00	388.05	398.43	395.07	398.46	0.000153	1.94	3206.08	1280.99	0.12
USACE	1158	100YRPLUS	5348.00	388.05	399.58	395.53	399.62	0.000131	1.95	3943.83	1368.87	0.11
USACE	1158	200YR	5057.00	388.05	399.32	395.43	399.35	0.000136	1.95	3772.70	1353.38	0.11
USACE	1158	500YR	6369.00	388.05	400.45	395.79	400.49	0.000119	1.97	4499.30	1428.06	0.11
USACE	1158	SEPT2011	3507.00	388.05	397.86	394.82	397.89	0.000168	1.95	2841.37	1257.37	0.12
USACE	1125 Railroad		Bridge									
USACE	1095	2YR	769.00	388.95	394.01	392.75	394.11	0.001107	3.17	535.49	411.91	0.27
USACE	1095	5YR	1272.00	388.95	394.86	393.44	394.94	0.000871	3.18	926.14	601.86	0.25
USACE	1095	10YR	1731.00	388.95	395.69	393.83	395.75	0.000610	2.95	1330.07	711.61	0.22
USACE	1095	25YR	2574.00	388.95	396.74	394.35	396.79	0.000500	2.98	1891.22	962.76	0.20
USACE	1095	50YR	3294.00	388.95	397.54	394.60	397.59	0.000415	2.92	2357.98	1193.72	0.19
USACE	1095	100YR	4089.00	388.95	398.36	394.85	398.40	0.000335	2.81	2841.83	1244.60	0.17
USACE	1095	100YRPLUS	5348.00	388.95	399.53	395.18	399.57	0.000265	2.72	3534.34	1331.53	0.15
USACE	1095	200YR	5057.00	388.95	399.26	395.11	399.30	0.000279	2.74	3374.31	1312.45	0.16
USACE	1095	500YR	6369.00	388.95	400.40	395.44	400.45	0.000231	2.69	4051.74	1416.10	0.15
USACE	1095	SEPT2011	3507.00	388.95	397.77	394.67	397.82	0.000388	2.88	2494.42	1205.38	0.18
USACE	1027	2YR	769.00	388.92	394.01	392.42	394.05	0.000252	1.46	585.30	325.95	0.13
USACE	1027	5YR	1272.00	388.92	394.85	392.80	394.90	0.000253	1.65	883.90	394.82	0.13
USACE	1027	10YR	1731.00	388.92	395.68	393.08	395.73	0.000208	1.65	1260.80	537.74	0.12
USACE	1027	25YR	2574.00	388.92	396.72	393.50	396.77	0.000178	1.71	1796.33	819.37	0.11
USACE	1027	50YR	3294.00	388.92	397.52	393.74	397.57	0.000158	1.73	2257.08	964.02	0.11
USACE	1027	100YR	4089.00	388.92	398.33	394.13	398.39	0.000135	1.71	2731.28	1035.92	0.10
USACE	1027	100YRPLUS	5348.00	388.92	399.50	394.61	399.56	0.000113	1.70	3411.00	1133.24	0.10
USACE	1027	200YR	5057.00	388.92	399.23	394.53	399.29	0.000118	1.71	3253.79	1111.00	0.10
USACE	1027	500YR	6369.00	388.92	400.37	395.05	400.43	0.000102	1.71	3919.13	1227.58	0.09
USACE	1027	SEPT2011	3507.00	388.92	397.75	393.88	397.80	0.000150	1.72	2390.79	980.30	0.11
USACE	997	2YR	769.00	386.80	393.93	392.17	394.02	0.000936	3.14	519.71	320.68	0.25
USACE	997	5YR	1272.00	386.80	394.77	393.04	394.88	0.001020	3.64	785.71	407.35	0.27
USACE	997	10YR	1731.00	386.80	395.62	393.46	395.71	0.000775	3.48	1117.37	512.40	0.24
USACE	997	25YR	2574.00	386.80	396.67	394.04	396.75	0.000667	3.56	1542.23	826.82	0.23
USACE	997	50YR	3294.00	386.80	397.47	394.50	397.55	0.000621	3.67	1871.61	923.61	0.22
USACE	997	100YR	4089.00	386.80	398.29	394.79	398.37	0.000552	3.68	2213.64	992.76	0.21
USACE	997	100YRPLUS	5348.00	386.80	399.45	395.42	399.54	0.000487	3.74	2702.47	1098.31	0.20
USACE	997	200YR	5057.00	386.80	399.18	395.34	399.27	0.000502	3.74	2589.41	1071.95	0.21
USACE	997	500YR	6369.00	386.80	400.33	395.69	400.42	0.000452	3.81	3067.28	1168.59	0.20
USACE	997	SEPT2011	3507.00	386.80	397.70	394.65	397.78	0.000597	3.67	1968.20	940.07	0.22
USACE	962 Railroad		Bridge									
USACE	926	2YR	770.00	386.90	393.78	392.05	393.91	0.001194	3.83	507.67	287.32	0.29
USACE	926	5YR	1272.00	386.90	394.75	393.16	394.86	0.001034	3.97	825.17	374.78	0.28
USACE	926	10YR	1729.00	386.90	395.49	393.59	395.58	0.000863	3.90	1116.43	440.36	0.26
USACE	926	25YR	2526.00	386.90	396.58	394.23	396.66	0.000638	3.69	1590.92	607.27	0.23
USACE	926	50YR	3223.00	386.90	397.40	394.61	397.47	0.000536	3.60	1962.59	811.62	0.21
USACE	926	100YR	4003.00	386.90	398.24	394.97	398.30	0.000458	3.53	2349.19	870.61	0.20
USACE	926	100YRPLUS	5235.00	386.90	399.41	395.40	399.48	0.000387	3.50	2895.41	969.82	0.19
USACE	926	200YR	4936.00	386.90	399.14	395.27	399.20	0.000400	3.50	2769.20	951.96	0.19

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	926	500YR	6239.00	386.90	400.28	395.70	400.35	0.000351	3.51	3301.86	1059.99	0.18
USACE	926	SEPT2011	3437.00	386.90	397.64	394.73	397.71	0.000511	3.58	2072.41	829.81	0.21
USACE	890	2YR	770.00	386.80	393.75	392.77	393.86	0.001431	3.92	477.52	288.56	0.31
USACE	890	5YR	1272.00	386.80	394.73	393.42	394.81	0.000947	3.59	784.56	365.08	0.26
USACE	890	10YR	1729.00	386.80	395.48	393.76	395.54	0.000730	3.41	1060.34	412.46	0.23
USACE	890	25YR	2526.00	386.80	396.57	394.08	396.63	0.000532	3.21	1513.67	544.02	0.20
USACE	890	50YR	3223.00	386.80	397.39	394.39	397.45	0.000445	3.14	1869.63	725.94	0.19
USACE	890	100YR	4003.00	386.80	398.22	394.65	398.28	0.000381	3.08	2238.90	805.82	0.18
USACE	890	100YRPLUS	5235.00	386.80	399.40	395.05	399.46	0.000323	3.07	2759.85	927.02	0.17
USACE	890	200YR	4936.00	386.80	399.12	394.94	399.19	0.000334	3.07	2639.68	876.26	0.17
USACE	890	500YR	6239.00	386.80	400.27	395.32	400.34	0.000295	3.09	3146.97	1001.96	0.16
USACE	890	SEPT2011	3437.00	386.80	397.63	394.45	397.69	0.000424	3.12	1974.55	751.20	0.18
USACE	800	2YR	770.00	386.70	393.65	391.73	393.74	0.001193	3.05	464.41	297.48	0.23
USACE	800	5YR	1272.00	386.70	394.66	393.24	394.73	0.000736	2.67	757.31	348.91	0.18
USACE	800	10YR	1729.00	386.70	395.40	393.50	395.49	0.000582	2.55	1000.67	392.28	0.17
USACE	800	25YR	2526.00	386.70	396.49	393.81	396.58	0.000463	2.49	1406.73	489.18	0.15
USACE	800	50YR	3223.00	386.70	397.31	394.06	397.41	0.000392	2.44	1746.19	609.25	0.14
USACE	800	100YR	4003.00	386.70	398.14	394.32	398.25	0.000337	2.39	2096.06	709.79	0.13
USACE	800	100YRPLUS	5235.00	386.70	399.31	394.67	399.43	0.000289	2.38	2588.33	821.37	0.12
USACE	800	200YR	4936.00	386.70	399.04	394.59	399.16	0.000297	2.38	2474.88	808.92	0.13
USACE	800	500YR	6239.00	386.70	400.18	394.99	400.31	0.000265	2.40	2953.58	899.38	0.12
USACE	800	SEPT2011	3437.00	386.70	397.55	394.12	397.65	0.000374	2.42	1845.70	662.12	0.14
USACE	719	2YR	770.00	386.52	393.42	392.31	393.59	0.002384	4.23	388.09	220.93	0.32
USACE	719	5YR	1272.00	386.52	394.51	393.06	394.64	0.001593	3.91	657.61	271.02	0.27
USACE	719	10YR	1729.00	386.52	395.28	393.55	395.41	0.001257	3.75	877.44	304.03	0.25
USACE	719	25YR	2526.00	386.52	396.38	394.01	396.53	0.000995	3.66	1243.85	400.35	0.22
USACE	719	50YR	3223.00	386.52	397.22	394.33	397.36	0.000826	3.55	1572.89	520.96	0.21
USACE	719	100YR	4003.00	386.52	398.06	394.66	398.21	0.000678	3.41	1913.54	600.66	0.19
USACE	719	100YRPLUS	5235.00	386.52	399.23	395.07	399.39	0.000559	3.34	2389.47	697.38	0.18
USACE	719	200YR	4936.00	386.52	398.96	394.97	399.12	0.000580	3.35	2280.01	678.27	0.18
USACE	719	500YR	6239.00	386.52	400.10	395.46	400.28	0.000504	3.33	2741.58	761.74	0.17
USACE	719	SEPT2011	3437.00	386.52	397.46	394.40	397.60	0.000776	3.50	1670.09	555.06	0.20
USACE	640	2YR	770.00	386.40	393.31	391.77	393.43	0.001656	3.62	457.92	230.20	0.27
USACE	640	5YR	1272.00	386.40	394.42	392.48	394.53	0.001412	3.77	731.26	265.07	0.26
USACE	640	10YR	1729.00	386.40	395.21	393.09	395.31	0.001326	3.94	955.15	314.89	0.25
USACE	640	25YR	2526.00	386.40	396.33	393.61	396.43	0.001218	4.15	1321.22	398.53	0.25
USACE	640	50YR	3223.00	386.40	397.17	393.99	397.28	0.001131	4.26	1639.33	490.38	0.24
USACE	640	100YR	4003.00	386.40	398.03	394.38	398.13	0.001027	4.30	2008.69	593.19	0.24
USACE	640	100YRPLUS	5235.00	386.40	399.23	394.83	399.32	0.000894	4.32	2609.00	684.15	0.22
USACE	640	200YR	4936.00	386.40	398.95	394.71	399.05	0.000930	4.33	2460.57	665.70	0.23
USACE	640	500YR	6239.00	386.40	400.11	395.29	400.21	0.000793	4.27	3122.35	752.91	0.21
USACE	640	SEPT2011	3437.00	386.40	397.42	394.03	397.52	0.001091	4.25	1740.35	550.06	0.24
USACE	520	2YR	770.00	386.00	393.10	391.37	393.23	0.001627	3.75	438.30	201.82	0.27
USACE	520	5YR	1272.00	386.00	394.22	392.30	394.35	0.001507	4.06	684.92	234.49	0.27
USACE	520	10YR	1729.00	386.00	395.01	392.81	395.14	0.001464	4.31	879.92	260.05	0.27
USACE	520	25YR	2526.00	386.00	396.13	393.45	396.27	0.001409	4.63	1200.62	352.79	0.27
USACE	520	50YR	3223.00	386.00	396.99	393.88	397.13	0.001340	4.80	1482.19	448.04	0.27
USACE	520	100YR	4003.00	386.00	397.85	394.28	397.99	0.001241	4.89	1807.83	550.00	0.27
USACE	520	100YRPLUS	5235.00	386.00	399.07	394.83	399.20	0.001125	5.00	2330.46	636.43	0.26
USACE	520	200YR	4936.00	386.00	398.78	394.74	398.92	0.001164	5.01	2199.97	620.69	0.26
USACE	520	500YR	6239.00	386.00	399.97	395.27	400.10	0.001022	5.01	2782.53	703.08	0.25
USACE	520	SEPT2011	3437.00	386.00	397.23	393.97	397.38	0.001322	4.85	1570.57	490.94	0.27
USACE	348	2YR	770.00	385.93	392.70	390.63	392.90	0.002197	4.34	339.89	163.51	0.32
USACE	348	5YR	1272.00	385.93	393.85	391.93	394.05	0.002022	4.70	545.81	204.06	0.32
USACE	348	10YR	1729.00	385.93	394.65	392.62	394.85	0.001948	4.97	693.16	230.28	0.32
USACE	348	25YR	2526.00	385.93	395.76	393.44	395.99	0.001933	5.42	901.52	275.12	0.32
USACE	348	50YR	3223.00	385.93	396.60	393.89	396.84	0.001928	5.75	1060.30	341.25	0.33
USACE	348	100YR	4003.00	385.93	397.45	394.32	397.72	0.001918	6.07	1223.33	475.19	0.33
USACE	348	100YRPLUS	5235.00	385.93	398.63	394.89	398.94	0.001927	6.53	1452.48	547.95	0.34
USACE	348	200YR	4936.00	385.93	398.36	394.75	398.65	0.001925	6.43	1398.96	532.02	0.34
USACE	348	500YR	6239.00	385.93	399.51	395.31	399.84	0.001928	6.86	1625.32	613.34	0.34
USACE	348	SEPT2011	3437.00	385.93	396.84	394.01	397.09	0.001925	5.84	1106.45	374.21	0.33
USACE	223	2YR	770.00	385.80	391.68	390.69	392.38	0.008097	7.13	152.44	78.54	0.59
USACE	223	5YR	1272.00	385.80	392.93	392.39	393.58	0.006569	7.53	287.88	154.55	0.55
USACE	223	10YR	1729.00	385.80	393.85	392.98	394.43	0.005410	7.54	399.56	186.80	0.51
USACE	223	25YR	2526.00	385.80	394.96	393.74	395.58	0.005122	8.11	537.86	232.27	0.51
USACE	223	50YR	3223.00	385.80	395.78	394.26	396.44	0.005020	8.58	641.59	265.16	0.51
USACE	223	100YR	4003.00	385.80	396.60	394.78	397.31	0.004924	9.03	748.03	418.18	0.51
USACE	223	100YRPLUS	5235.00	385.80	397.72	395.49	398.52	0.004928	9.72	894.60	573.29	0.52
USACE	223	200YR	4936.00	385.80	397.46	395.33	398.24	0.004926	9.56	860.40	560.47	0.52
USACE	223	500YR	6239.00	385.80	398.55	396.01	399.42	0.004920	10.21	1005.45	616.72	0.53
USACE	223	SEPT2011	3437.00	385.80	396.01	394.41	396.69	0.004989	8.71	671.79	277.63	0.51
USACE	123	2YR	770.00	385.38	391.09	389.65	391.64	0.006092	6.20	140.79	50.82	0.50
USACE	123	5YR	1272.00	385.38	392.10	391.11	392.89	0.007123	7.63	199.81	65.46	0.56
USACE	123	10YR	1729.00	385.38	392.83	391.95	393.77	0.007452	8.46	251.67	78.87	0.59
USACE	123	25YR	2526.00	385.38	393.94	393.17	394.95	0.006679	8.90	343.97	162.52	0.57
USACE	123	50YR	3223.00	385.38	394.72	393.82	395.83	0.006210	9.16	414.76	184.75	0.56
USACE	123	100YR	4003.00	385.38	395.51	394.40	396.73	0.005779	9.38	490.84	221.29	0.55
USACE	123	100YRPLUS	5235.00	385.38	396.67	395.23	397.97	0.005072	9.52	620.83	309.01	0.52
USACE	123	200YR	4936.00	385.38	396.39	395.02	397.68	0.005254	9.51	588.78	284.43	0.53
USACE	123	500YR	6239.00	385.38	397.51	396.05	398.89	0.004640	9.59	720.77	347.69	0.51

HEC-RAS Plan: Existing River: DoeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	123	SEPT2011	3437.00	385.38	394.95	393.98	396.09	0.006079	9.23	435.92	191.00	0.55
USACE	33	2YR	770.00	385.00	390.96	389.19	391.27	0.002052	4.85	207.05	85.70	0.39
USACE	33	5YR	1272.00	385.00	392.07	390.59	392.45	0.002051	5.58	308.52	96.62	0.41
USACE	33	10YR	1729.00	385.00	392.87	391.20	393.30	0.002051	6.08	388.65	121.71	0.42
USACE	33	25YR	2526.00	385.00	393.98	392.02	394.49	0.002050	6.75	515.55	204.98	0.43
USACE	33	50YR	3223.00	385.00	394.80	392.58	395.37	0.002053	7.22	612.58	399.86	0.43
USACE	33	100YR	4003.00	385.00	395.62	393.28	396.26	0.002051	7.67	713.11	512.24	0.44
USACE	33	100YRPLUS	5235.00	385.00	396.78	394.08	397.52	0.002051	8.29	859.05	586.79	0.45
USACE	33	200YR	4936.00	385.00	396.51	393.90	397.23	0.002053	8.15	824.51	557.21	0.45
USACE	33	500YR	6239.00	385.00	397.63	394.61	398.46	0.002052	8.73	970.97	659.59	0.46
USACE	33	SEPT2011	3437.00	385.00	395.03	392.76	395.62	0.002052	7.35	640.98	470.72	0.44

HEC-RAS Plan: Existing River: DoeRunTrib Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	7963	2YR	209.00	452.91	455.57		455.73	0.004167	4.25	103.52	123.55	0.50
USACE	7963	5YR	298.00	452.91	455.86		456.02	0.003984	4.51	142.57	141.48	0.50
USACE	7963	10YR	395.00	452.91	456.09		456.27	0.004272	4.95	177.76	163.82	0.53
USACE	7963	25YR	615.00	452.91	456.53		456.71	0.004221	5.42	255.70	192.41	0.54
USACE	7963	50YR	771.00	452.91	456.72		456.92	0.004598	5.89	293.08	200.35	0.57
USACE	7963	100YR	951.00	452.91	457.01		457.21	0.004246	5.98	354.20	215.78	0.55
USACE	7963	100YRPLUS	1244.00	452.91	457.36		457.57	0.004045	6.21	432.68	226.28	0.55
USACE	7963	200YR	1121.00	452.91	457.23		457.43	0.004072	6.09	402.23	223.06	0.54
USACE	7963	500YR	1344.00	452.91	457.46		457.68	0.004096	6.35	454.94	230.07	0.55
USACE	7963	SEPT2011	645.00	452.91	456.52		456.72	0.004717	5.72	254.13	191.95	0.57
USACE	7736	2YR	209.00	451.17	454.16	454.16	454.54	0.006542	5.70	65.96	91.85	0.63
USACE	7736	5YR	298.00	451.17	454.42	454.36	454.83	0.007000	6.29	91.03	102.31	0.67
USACE	7736	10YR	395.00	451.17	454.71	454.62	455.09	0.006424	6.45	124.38	119.80	0.65
USACE	7736	25YR	615.00	451.17	455.14	455.04	455.53	0.006443	7.06	187.65	153.48	0.67
USACE	7736	50YR	771.00	451.17	455.46		455.79	0.005465	6.88	235.93	157.45	0.62
USACE	7736	100YR	951.00	451.17	455.55		455.98	0.007013	7.92	251.01	158.90	0.71
USACE	7736	100YRPLUS	1244.00	451.17	455.81		456.32	0.007839	8.74	293.02	163.81	0.76
USACE	7736	200YR	1121.00	451.17	455.69		456.18	0.007748	8.52	273.04	161.70	0.75
USACE	7736	500YR	1344.00	451.17	455.94		456.43	0.007519	8.74	314.15	165.78	0.74
USACE	7736	SEPT2011	645.00	451.17	455.30		455.61	0.005127	6.48	211.92	155.49	0.60
USACE	7421	2YR	290.00	448.83	452.08	452.08	452.39	0.005489	5.56	107.43	162.61	0.59
USACE	7421	5YR	461.00	448.83	452.33	452.33	452.70	0.006892	6.60	143.78	170.09	0.67
USACE	7421	10YR	587.00	448.83	452.47	452.47	452.89	0.007810	7.25	164.79	172.43	0.72
USACE	7421	25YR	790.00	448.83	452.66	452.66	453.17	0.009114	8.16	193.33	174.69	0.79
USACE	7421	50YR	1040.00	448.83	452.88	452.88	453.47	0.010140	8.98	225.71	177.19	0.84
USACE	7421	100YR	1304.00	448.83	453.34	453.08	453.81	0.007342	8.28	293.32	183.41	0.73
USACE	7421	100YRPLUS	1705.00	448.83	453.91	453.34	454.34	0.005720	7.99	380.64	194.24	0.66
USACE	7421	200YR	1573.00	448.83	453.77	453.27	454.19	0.005859	7.91	358.02	191.19	0.66
USACE	7421	500YR	1927.00	448.83	454.24	453.48	454.65	0.004994	7.81	431.96	203.99	0.62
USACE	7421	SEPT2011	954.00	448.83	452.81	452.81	453.37	0.009787	8.70	215.26	176.40	0.82
USACE	7258	2YR	290.00	448.28	451.24	450.16	451.32	0.001232	2.55	189.53	208.44	0.28
USACE	7258	5YR	461.00	448.28	451.67	450.87	451.76	0.001332	2.94	262.82	215.49	0.30
USACE	7258	10YR	587.00	448.28	451.93	451.03	452.03	0.001388	3.18	308.36	218.77	0.31
USACE	7258	25YR	790.00	448.28	452.29	451.26	452.41	0.001472	3.51	372.37	224.28	0.33
USACE	7258	50YR	1040.00	448.28	452.68	451.48	452.81	0.001543	3.85	442.51	229.22	0.34
USACE	7258	100YR	1304.00	448.28	453.11	451.69	453.25	0.001490	4.04	520.74	234.86	0.34
USACE	7258	100YRPLUS	1705.00	448.28	453.69	451.96	453.85	0.001434	4.31	628.09	241.30	0.34
USACE	7258	200YR	1573.00	448.28	453.55	451.87	453.70	0.001390	4.16	602.26	239.85	0.33
USACE	7258	500YR	1927.00	448.28	454.03	452.10	454.20	0.001358	4.38	691.98	244.81	0.33
USACE	7258	SEPT2011	954.00	448.28	452.55	451.41	452.68	0.001527	3.74	418.70	227.67	0.34
USACE	7054	2YR	290.00	447.40	450.44	450.25	450.81	0.005875	5.66	92.87	113.55	0.61
USACE	7054	5YR	461.00	447.40	450.91	450.76	451.25	0.005324	6.00	149.08	172.49	0.60
USACE	7054	10YR	587.00	447.40	451.18	450.94	451.52	0.005086	6.21	182.87	186.51	0.59
USACE	7054	25YR	790.00	447.40	451.32	451.19	451.81	0.007165	7.57	200.65	188.14	0.71
USACE	7054	50YR	1040.00	447.40	451.78	451.46	452.23	0.006102	7.58	258.07	192.77	0.67
USACE	7054	100YR	1304.00	447.40	452.36	451.69	452.74	0.004574	7.18	331.95	197.61	0.59
USACE	7054	100YRPLUS	1705.00	447.40	452.98	452.01	453.37	0.004049	7.36	412.90	202.36	0.57
USACE	7054	200YR	1573.00	447.40	452.89	451.91	453.25	0.003768	7.01	400.95	201.67	0.55
USACE	7054	500YR	1927.00	447.40	453.37	452.17	453.76	0.003597	7.28	464.93	205.32	0.54
USACE	7054	SEPT2011	954.00	447.40	451.59	451.37	452.07	0.006751	7.72	234.55	190.97	0.70
USACE	6800	2YR	290.00	445.78	448.84	448.84	449.23	0.006710	5.80	85.50	114.40	0.65
USACE	6800	5YR	461.00	445.78	449.16	449.16	449.63	0.007952	6.83	117.97	146.00	0.72
USACE	6800	10YR	587.00	445.78	449.34	449.34	449.87	0.008737	7.46	137.03	152.66	0.76
USACE	6800	25YR	790.00	445.78	450.13	449.58	450.44	0.004114	5.98	220.69	163.34	0.54
USACE	6800	50YR	1040.00	445.78	451.09	449.85	451.30	0.002240	5.13	324.22	171.89	0.41
USACE	6800	100YR	1304.00	445.78	451.82	450.10	452.03	0.001771	5.02	405.54	176.79	0.38
USACE	6800	100YRPLUS	1705.00	445.78	452.43	450.45	452.68	0.001864	5.52	474.26	180.09	0.39
USACE	6800	200YR	1573.00	445.78	452.41	450.34	452.62	0.001610	5.12	472.07	179.99	0.37
USACE	6800	500YR	1927.00	445.78	452.86	450.62	453.12	0.001746	5.59	523.98	182.87	0.39
USACE	6800	SEPT2011	954.00	445.78	450.79	449.77	451.02	0.002586	5.28	292.18	169.50	0.44
USACE	6506	2YR	290.00	444.20	447.21	446.98	447.40	0.004407	4.79	118.39	160.55	0.53
USACE	6506	5YR	461.00	444.20	447.68	447.68	447.87	0.003909	5.05	172.30	166.62	0.51
USACE	6506	10YR	587.00	444.20	448.88	447.41	448.95	0.001062	3.29	315.34	182.68	0.28
USACE	6506	25YR	790.00	444.20	449.89	447.64	449.96	0.000683	3.04	442.25	192.58	0.23
USACE	6506	50YR	1040.00	444.20	450.91	447.89	450.98	0.000532	3.02	572.45	199.99	0.21
USACE	6506	100YR	1304.00	444.20	451.66	448.14	451.73	0.000513	3.20	670.02	207.41	0.21
USACE	6506	100YRPLUS	1705.00	444.20	452.24	448.47	452.34	0.000620	3.71	747.44	214.27	0.24
USACE	6506	200YR	1573.00	444.20	452.25	448.36	452.34	0.000525	3.42	748.73	214.40	0.22
USACE	6506	500YR	1927.00	444.20	452.68	448.62	452.79	0.000621	3.86	806.54	219.44	0.24
USACE	6506	SEPT2011	954.00	444.20	450.61	447.81	450.67	0.000558	3.00	533.04	197.66	0.22
USACE	6361	2YR	290.00	443.17	446.16	446.16	446.60	0.006893	6.07	81.03	181.69	0.66
USACE	6361	5YR	461.00	443.17	446.93	446.51	447.19	0.003737	5.31	151.82	199.83	0.51
USACE	6361	10YR	587.00	443.17	448.77	446.72	448.84	0.000630	2.92	331.20	220.62	0.23
USACE	6361	25YR	790.00	443.17	449.81	447.00	449.88	0.000489	2.90	437.37	230.64	0.20
USACE	6361	50YR	1040.00	443.17	450.83	447.29	450.91	0.000433	3.02	544.29	240.92	0.20
USACE	6361	100YR	1304.00	443.17	451.57	447.57	451.66	0.000449	3.28	623.36	246.88	0.20
USACE	6361	100YRPLUS	1705.00	443.17	452.13	447.96	452.26	0.000573	3.88	684.15	252.34	0.23
USACE	6361	200YR	1573.00	443.17	452.16	447.84	452.26	0.000481	3.56	687.17	252.63	0.21
USACE	6361	500YR	1927.00	443.17	452.57	448.15	452.70	0.000592	4.07	732.81	257.97	0.24
USACE	6361	SEPT2011	954.00	443.17	450.53	447.20	450.60	0.000439	2.96	512.12	238.01	0.20

HEC-RAS Plan: Existing River: DoeRunTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6134	2YR	290.00	441.68	445.26	444.22	445.51	0.003368	4.83	99.16	162.28	0.47
USACE	6134	5YR	461.00	441.68	446.63	444.75	446.74	0.001192	3.62	205.68	216.28	0.30
USACE	6134	10YR	587.00	441.68	448.70	444.83	448.74	0.000304	2.34	394.35	260.08	0.16
USACE	6134	25YR	790.00	441.68	449.75	445.85	449.80	0.000272	2.43	501.59	275.80	0.15
USACE	6134	50YR	1040.00	441.68	450.78	446.17	450.84	0.000264	2.60	610.11	287.71	0.15
USACE	6134	100YR	1304.00	441.68	451.52	446.49	451.59	0.000292	2.89	691.57	307.10	0.16
USACE	6134	100YRPLUS	1705.00	441.68	452.06	446.91	452.16	0.000384	3.44	757.68	320.01	0.19
USACE	6134	200YR	1573.00	441.68	452.10	446.79	452.18	0.000320	3.15	762.69	320.72	0.17
USACE	6134	500YR	1927.00	441.68	452.49	447.15	452.60	0.000401	3.61	813.46	327.06	0.20
USACE	6134	SEPT2011	954.00	441.68	450.47	446.07	450.53	0.000261	2.53	577.46	284.04	0.15
USACE	6054	2YR	290.00	440.67	445.18	443.42	445.29	0.001143	3.25	132.96	62.25	0.28
USACE	6054	5YR	461.00	440.67	446.55	443.96	446.66	0.000825	3.34	201.47	82.35	0.25
USACE	6054	10YR	587.00	440.67	448.64	444.28	448.71	0.000356	2.72	305.88	197.22	0.17
USACE	6054	25YR	790.00	440.67	449.67	444.86	449.76	0.000391	3.10	357.35	231.02	0.19
USACE	6054	50YR	1040.00	440.67	450.69	445.33	450.79	0.000429	3.50	482.13	275.55	0.20
USACE	6054	100YR	1304.00	440.67	451.40	445.77	451.54	0.000494	3.94	545.39	291.97	0.22
USACE	6054	100YRPLUS	1705.00	440.67	451.89	446.34	452.08	0.000687	4.80	591.61	305.39	0.26
USACE	6054	200YR	1573.00	440.67	451.96	446.16	452.12	0.000568	4.38	598.25	306.93	0.23
USACE	6054	500YR	1927.00	440.67	452.31	446.64	452.52	0.000738	5.10	632.54	316.23	0.27
USACE	6054	SEPT2011	954.00	440.67	450.39	445.19	450.49	0.000415	3.37	456.96	271.33	0.19
USACE	6025 Cool Spring Road		Bridge									
USACE	6001	2YR	290.00	440.29	444.09	443.69	444.77	0.008238	6.80	47.41	23.49	0.71
USACE	6001	5YR	461.00	440.29	444.69	444.50	445.73	0.010061	8.53	62.50	26.46	0.81
USACE	6001	10YR	587.00	440.29	445.05	444.98	446.33	0.011227	9.60	72.16	28.50	0.86
USACE	6001	25YR	790.00	440.29	445.66	445.66	447.18	0.011243	10.62	90.82	32.03	0.89
USACE	6001	50YR	1040.00	440.29	446.37	446.37	448.06	0.010648	11.40	115.20	36.50	0.88
USACE	6001	100YR	1304.00	440.29	447.03	447.03	448.84	0.010155	12.06	140.59	40.86	0.88
USACE	6001	100YRPLUS	1705.00	440.29	447.89	447.89	449.86	0.009612	12.86	178.42	47.04	0.88
USACE	6001	200YR	1573.00	440.29	447.62	447.62	449.55	0.009794	12.63	165.91	45.08	0.88
USACE	6001	500YR	1927.00	440.29	448.23	448.23	450.36	0.009874	13.48	194.86	49.53	0.90
USACE	6001	SEPT2011	954.00	440.29	446.15	446.15	447.77	0.010722	11.12	107.31	35.11	0.88
USACE	5949	2YR	290.00	440.29	443.72	443.33	444.30	0.007815	6.36	52.57	29.55	0.69
USACE	5949	5YR	461.00	440.29	444.20	444.02	445.15	0.010525	8.25	68.26	37.11	0.83
USACE	5949	10YR	587.00	440.29	444.62	444.62	445.65	0.009992	8.76	85.39	42.45	0.82
USACE	5949	25YR	790.00	440.29	445.14	445.14	446.30	0.009912	9.56	108.35	46.36	0.84
USACE	5949	50YR	1040.00	440.29	445.67	445.67	446.99	0.009913	10.38	133.92	49.80	0.86
USACE	5949	100YR	1304.00	440.29	446.18	446.18	447.61	0.009713	11.02	159.96	53.41	0.86
USACE	5949	100YRPLUS	1705.00	440.29	446.80	446.80	448.43	0.009799	11.97	194.98	187.31	0.88
USACE	5949	200YR	1573.00	440.29	446.60	446.60	448.17	0.009813	11.69	183.37	182.64	0.88
USACE	5949	500YR	1927.00	440.29	447.12	447.12	448.84	0.009792	12.40	214.01	193.69	0.89
USACE	5949	SEPT2011	954.00	440.29	445.50	445.50	446.76	0.009910	10.12	125.38	48.68	0.85
USACE	5843	2YR	290.00	440.28	443.26		443.58	0.004979	4.98	75.53	48.74	0.56
USACE	5843	5YR	461.00	440.28	443.78		444.21	0.005574	5.99	101.54	51.37	0.61
USACE	5843	10YR	587.00	440.28	444.07		444.60	0.006031	6.63	116.94	52.64	0.65
USACE	5843	25YR	790.00	440.28	444.46		445.13	0.006801	7.59	137.77	54.32	0.70
USACE	5843	50YR	1040.00	440.28	444.84		445.71	0.007838	8.70	158.53	55.94	0.76
USACE	5843	100YR	1304.00	440.28	445.16		446.25	0.009006	9.81	176.59	57.57	0.83
USACE	5843	100YRPLUS	1705.00	440.28	445.52	445.41	447.00	0.011067	11.47	197.91	59.45	0.93
USACE	5843	200YR	1573.00	440.28	445.42	445.23	446.76	0.010298	10.91	191.91	58.93	0.89
USACE	5843	500YR	1927.00	440.28	445.70	445.70	447.39	0.012164	12.33	208.47	60.36	0.98
USACE	5843	SEPT2011	954.00	440.28	444.71		445.52	0.007518	8.35	151.55	55.40	0.74
USACE	5681	2YR	290.00	439.15	442.72		442.95	0.002819	4.40	102.39	97.77	0.44
USACE	5681	5YR	461.00	439.15	443.35		443.57	0.002476	4.66	167.15	108.53	0.42
USACE	5681	10YR	587.00	439.15	443.70		443.92	0.002406	4.87	205.41	112.25	0.42
USACE	5681	25YR	790.00	439.15	444.15		444.39	0.002411	5.22	257.14	116.47	0.43
USACE	5681	50YR	1040.00	439.15	444.59		444.86	0.002509	5.67	309.52	120.01	0.45
USACE	5681	100YR	1304.00	439.15	444.99		445.29	0.002629	6.10	357.46	122.97	0.46
USACE	5681	100YRPLUS	1705.00	439.15	445.50		445.85	0.002801	6.69	420.94	126.11	0.49
USACE	5681	200YR	1573.00	439.15	445.35		445.68	0.002726	6.49	402.01	125.21	0.48
USACE	5681	500YR	1927.00	439.15	445.74		446.13	0.002907	7.00	451.96	127.58	0.50
USACE	5681	SEPT2011	954.00	439.15	444.44		444.70	0.002509	5.55	290.90	118.85	0.44
USACE	5554	2YR	290.00	438.17	442.40		442.64	0.002046	4.29	92.54	68.15	0.39
USACE	5554	5YR	461.00	438.17	442.77		443.19	0.003272	5.78	125.43	98.67	0.50
USACE	5554	10YR	587.00	438.17	443.02		443.51	0.003787	6.46	151.15	105.36	0.54
USACE	5554	25YR	790.00	438.17	443.38		443.95	0.004360	7.29	190.14	116.68	0.59
USACE	5554	50YR	1040.00	438.17	443.59	443.53	444.35	0.005700	8.59	215.80	119.45	0.67
USACE	5554	100YR	1304.00	438.17	443.86	443.84	444.73	0.006498	9.49	247.83	123.33	0.73
USACE	5554	100YRPLUS	1705.00	438.17	444.24	444.24	445.24	0.007232	10.49	297.00	130.86	0.78
USACE	5554	200YR	1573.00	438.17	444.11	444.11	445.09	0.007106	10.24	280.12	128.99	0.77
USACE	5554	500YR	1927.00	438.17	444.43	444.43	445.49	0.007587	10.97	321.39	133.43	0.80
USACE	5554	SEPT2011	954.00	438.17	443.60		444.23	0.004741	7.84	216.91	119.56	0.62
USACE	5382	2YR	333.00	437.84	441.46	441.01	442.00	0.006821	6.72	84.71	108.63	0.68
USACE	5382	5YR	546.00	437.84	442.02	442.02	442.45	0.005622	6.82	170.10	184.51	0.63
USACE	5382	10YR	708.00	437.84	442.22	442.21	442.67	0.006064	7.35	208.74	197.95	0.66
USACE	5382	25YR	966.00	437.84	442.47	442.47	442.97	0.006984	8.22	260.50	215.40	0.72
USACE	5382	50YR	1195.00	437.84	442.69		443.19	0.006928	8.48	309.04	218.04	0.72
USACE	5382	100YR	1523.00	437.84	442.99		443.48	0.006761	8.76	373.76	220.96	0.72
USACE	5382	100YRPLUS	1992.00	437.84	443.37		443.87	0.006530	9.08	458.96	225.11	0.72

HEC-RAS Plan: Existing River: DoeRunTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5382	200YR	1852.00	437.84	443.26		443.76	0.006580	8.98	434.65	223.87	0.72
USACE	5382	500YR	2289.00	437.84	443.59		444.10	0.006454	9.29	507.94	227.33	0.72
USACE	5382	SEPT2011	1203.00	437.84	442.70		443.20	0.006925	8.49	310.67	218.13	0.72
USACE	5207	2YR	333.00	437.03	440.30	439.88	440.73	0.007356	6.64	85.11	88.92	0.69
USACE	5207	5YR	546.00	437.03	441.09	440.51	441.34	0.004352	5.99	208.53	195.52	0.55
USACE	5207	10YR	708.00	437.03	441.10	441.08	441.52	0.007096	7.67	211.00	195.79	0.70
USACE	5207	25YR	966.00	437.03	441.57	441.29	441.85	0.004928	6.92	303.69	204.48	0.60
USACE	5207	50YR	1195.00	437.03	441.74	441.47	442.07	0.005506	7.51	339.36	206.87	0.64
USACE	5207	100YR	1523.00	437.03	442.07	441.65	442.41	0.005205	7.68	409.13	211.09	0.63
USACE	5207	100YRPLUS	1992.00	437.03	442.41	441.90	442.79	0.005542	8.30	480.06	213.60	0.65
USACE	5207	200YR	1852.00	437.03	442.31	441.83	442.68	0.005443	8.12	459.97	212.89	0.65
USACE	5207	500YR	2289.00	437.03	442.60		443.01	0.005710	8.64	521.40	215.04	0.67
USACE	5207	SEPT2011	1203.00	437.03	441.75	441.46	442.08	0.005496	7.52	341.17	206.98	0.64
USACE	5067	2YR	333.00	436.45	438.65	438.57	439.35	0.013438	7.31	55.43	35.85	0.90
USACE	5067	5YR	546.00	436.45	439.21	439.13	440.25	0.015017	9.07	77.90	64.80	0.99
USACE	5067	10YR	708.00	436.45	439.97	439.97	440.53	0.007006	7.35	173.29	146.29	0.71
USACE	5067	25YR	966.00	436.45	440.18	440.18	440.91	0.009064	8.70	205.94	170.16	0.81
USACE	5067	50YR	1195.00	436.45	440.58	440.58	441.18	0.007228	8.34	281.48	194.01	0.74
USACE	5067	100YR	1523.00	436.45	440.79	440.79	441.48	0.008194	9.19	323.64	197.96	0.79
USACE	5067	100YRPLUS	1992.00	436.45	441.21		441.88	0.007552	9.40	407.72	205.53	0.77
USACE	5067	200YR	1852.00	436.45	441.09		441.76	0.007779	9.37	382.36	203.48	0.78
USACE	5067	500YR	2289.00	436.45	441.46		442.11	0.007152	9.47	459.17	208.61	0.76
USACE	5067	SEPT2011	1203.00	436.45	440.58	440.58	441.18	0.007252	8.36	282.60	194.13	0.74
USACE	4813	2YR	333.00	434.03	437.89		438.04	0.002247	4.17	136.75	93.32	0.40
USACE	4813	5YR	546.00	434.03	438.44		438.64	0.002737	5.08	207.31	151.02	0.45
USACE	4813	10YR	708.00	434.03	438.77		439.00	0.002974	5.59	260.47	177.65	0.47
USACE	4813	25YR	966.00	434.03	439.20		439.46	0.003268	6.24	344.59	207.49	0.50
USACE	4813	50YR	1195.00	434.03	439.50		439.76	0.003166	6.40	408.26	213.28	0.50
USACE	4813	100YR	1523.00	434.03	439.88		440.14	0.003100	6.64	489.83	220.04	0.50
USACE	4813	100YRPLUS	1992.00	434.03	440.34		440.62	0.003039	6.95	594.05	226.32	0.50
USACE	4813	200YR	1852.00	434.03	440.20		440.47	0.003087	6.89	562.14	224.69	0.51
USACE	4813	500YR	2289.00	434.03	440.60		440.89	0.003035	7.14	652.65	228.79	0.51
USACE	4813	SEPT2011	1203.00	434.03	439.51		439.77	0.003165	6.41	410.32	213.45	0.50
USACE	4556	2YR	333.00	433.54	436.70	436.65	437.06	0.007806	6.30	115.83	128.39	0.67
USACE	4556	5YR	546.00	433.54	437.11		437.50	0.008364	7.17	171.16	139.32	0.72
USACE	4556	10YR	708.00	433.54	437.37		437.79	0.008581	7.66	209.35	148.94	0.73
USACE	4556	25YR	966.00	433.54	437.72		438.17	0.008759	8.26	262.12	154.71	0.75
USACE	4556	50YR	1195.00	433.54	437.99		438.47	0.009045	8.80	305.29	162.75	0.78
USACE	4556	100YR	1523.00	433.54	438.34		438.86	0.009175	9.37	363.85	171.81	0.79
USACE	4556	100YRPLUS	1992.00	433.54	438.78		439.35	0.009254	10.04	441.34	182.75	0.81
USACE	4556	200YR	1852.00	433.54	438.66		439.20	0.009120	9.79	418.41	176.71	0.80
USACE	4556	500YR	2289.00	433.54	439.04		439.63	0.009147	10.33	488.33	186.78	0.81
USACE	4556	SEPT2011	1203.00	433.54	438.00		438.48	0.009048	8.82	306.76	162.95	0.78
USACE	4339	2YR	333.00	432.42	435.43		435.63	0.005215	5.15	156.08	192.60	0.55
USACE	4339	5YR	546.00	432.42	435.84		436.03	0.005191	5.64	236.27	202.99	0.56
USACE	4339	10YR	708.00	432.42	436.08		436.28	0.005307	6.00	285.35	205.57	0.58
USACE	4339	25YR	966.00	432.42	436.42		436.64	0.005328	6.41	356.82	208.98	0.59
USACE	4339	50YR	1195.00	432.42	436.70		436.93	0.005317	6.72	414.56	211.41	0.60
USACE	4339	100YR	1523.00	432.42	437.06		437.31	0.005261	7.09	491.40	213.98	0.60
USACE	4339	100YRPLUS	1992.00	432.42	437.52		437.80	0.005189	7.53	591.82	217.38	0.61
USACE	4339	200YR	1852.00	432.42	437.39		437.66	0.005208	7.41	562.82	216.38	0.60
USACE	4339	500YR	2289.00	432.42	437.80		438.09	0.005143	7.78	651.45	219.43	0.61
USACE	4339	SEPT2011	1203.00	432.42	436.71		436.94	0.005315	6.73	416.52	211.48	0.60
USACE	4072	2YR	333.00	431.04	433.94		434.11	0.006309	4.94	157.89	176.89	0.58
USACE	4072	5YR	546.00	431.04	434.33		434.52	0.006300	5.49	229.89	182.97	0.59
USACE	4072	10YR	708.00	431.04	434.60		434.79	0.006017	5.72	278.69	184.97	0.59
USACE	4072	25YR	966.00	431.04	434.98		435.18	0.005710	6.04	348.82	187.86	0.59
USACE	4072	50YR	1195.00	431.04	435.28		435.49	0.005505	6.29	406.01	190.13	0.58
USACE	4072	100YR	1523.00	431.04	435.65		435.89	0.005436	6.67	477.66	192.92	0.59
USACE	4072	100YRPLUS	1992.00	431.04	436.12		436.40	0.005416	7.17	569.43	196.38	0.60
USACE	4072	200YR	1852.00	431.04	435.99		436.25	0.005418	7.03	543.03	195.41	0.60
USACE	4072	500YR	2289.00	431.04	436.39		436.69	0.005422	7.47	622.95	198.35	0.61
USACE	4072	SEPT2011	1203.00	431.04	435.29		435.50	0.005503	6.30	407.84	190.20	0.58
USACE	3817	2YR	333.00	429.58	432.55		432.69	0.004846	4.65	161.01	157.50	0.52
USACE	3817	5YR	546.00	429.58	433.04		433.19	0.004310	4.95	241.58	171.90	0.50
USACE	3817	10YR	708.00	429.58	433.32		433.47	0.004387	5.29	289.26	176.98	0.52
USACE	3817	25YR	966.00	429.58	433.61		433.81	0.005057	6.02	342.47	180.65	0.56
USACE	3817	50YR	1195.00	429.58	433.84		434.07	0.005596	6.60	383.32	183.65	0.60
USACE	3817	100YR	1523.00	429.58	434.18		434.45	0.005824	7.13	446.85	188.63	0.62
USACE	3817	100YRPLUS	1992.00	429.58	434.62		434.93	0.006023	7.76	530.88	195.19	0.64
USACE	3817	200YR	1852.00	429.58	434.49		434.79	0.005971	7.58	506.53	192.99	0.63
USACE	3817	500YR	2289.00	429.58	434.87		435.21	0.006137	8.11	580.31	199.67	0.65
USACE	3817	SEPT2011	1203.00	429.58	433.85		434.08	0.005598	6.61	385.05	183.77	0.60
USACE	3492	2YR	333.00	427.24	430.27	430.27	430.66	0.008267	6.08	114.80	142.13	0.65
USACE	3492	5YR	546.00	427.24	430.60	430.60	431.08	0.010374	7.34	164.55	162.48	0.74
USACE	3492	10YR	708.00	427.24	430.86	430.86	431.35	0.010394	7.76	209.80	181.99	0.75
USACE	3492	25YR	966.00	427.24	431.27		431.68	0.008619	7.63	285.64	189.05	0.70
USACE	3492	50YR	1195.00	427.24	431.63		432.00	0.007339	7.49	355.46	197.44	0.65
USACE	3492	100YR	1523.00	427.24	431.99		432.36	0.007101	7.79	426.28	199.57	0.65

HEC-RAS Plan: Existing River: DoeRunTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3492	100YRPLUS	1992.00	427.24	432.43		432.83	0.006938	8.21	516.04	201.74	0.65
USACE	3492	200YR	1852.00	427.24	432.31		432.70	0.006984	8.09	490.11	201.11	0.65
USACE	3492	500YR	2289.00	427.24	432.71		433.12	0.006761	8.40	571.42	203.04	0.65
USACE	3492	SEPT2011	1203.00	427.24	431.64		432.00	0.007346	7.50	357.03	197.50	0.65
USACE	3244	2YR	333.00	424.99	428.59		428.80	0.002710	4.14	129.88	113.99	0.41
USACE	3244	5YR	546.00	424.99	428.94		429.28	0.004252	5.55	170.51	122.66	0.52
USACE	3244	10YR	708.00	424.99	429.29		429.65	0.004357	5.98	219.94	150.09	0.54
USACE	3244	25YR	966.00	424.99	429.62		430.07	0.005079	6.83	272.13	159.35	0.59
USACE	3244	50YR	1195.00	424.99	429.91		430.42	0.005549	7.45	319.41	179.19	0.62
USACE	3244	100YR	1523.00	424.99	430.34		430.85	0.005298	7.74	398.18	186.13	0.61
USACE	3244	100YRPLUS	1992.00	424.99	430.92		431.41	0.004813	7.95	509.44	193.83	0.60
USACE	3244	200YR	1852.00	424.99	430.75		431.25	0.004962	7.91	476.43	191.89	0.60
USACE	3244	500YR	2289.00	424.99	431.28		431.76	0.004540	8.05	581.15	208.57	0.59
USACE	3244	SEPT2011	1203.00	424.99	429.92		430.43	0.005526	7.45	321.79	179.34	0.62
USACE	2963	2YR	333.00	423.22	426.08	426.08	427.17	0.015991	8.68	49.37	30.14	0.96
USACE	2963	5YR	546.00	423.22	427.15	427.15	427.73	0.007136	7.33	178.02	160.55	0.68
USACE	2963	10YR	708.00	423.22	427.41	427.41	428.03	0.007677	7.96	219.86	162.78	0.71
USACE	2963	25YR	966.00	423.22	427.97		428.48	0.006251	7.85	311.36	169.45	0.66
USACE	2963	50YR	1195.00	423.22	428.51		428.93	0.004863	7.48	411.56	190.45	0.59
USACE	2963	100YR	1523.00	423.22	429.17		429.52	0.003909	7.28	541.38	207.87	0.54
USACE	2963	100YRPLUS	1992.00	423.22	429.94		430.25	0.003247	7.23	705.31	217.42	0.50
USACE	2963	200YR	1852.00	423.22	429.72		430.04	0.003401	7.23	658.31	214.99	0.51
USACE	2963	500YR	2289.00	423.22	430.37		430.67	0.003005	7.27	799.80	221.45	0.49
USACE	2963	SEPT2011	1203.00	423.22	428.53		428.94	0.004818	7.47	415.26	190.84	0.59
USACE	2758	2YR	333.00	421.86	425.39	424.47	425.61	0.003117	4.44	178.20	145.52	0.44
USACE	2758	5YR	546.00	421.86	426.32	425.37	426.48	0.002140	4.37	317.43	154.60	0.38
USACE	2758	10YR	708.00	421.86	426.88	425.63	427.04	0.001876	4.46	405.39	158.11	0.36
USACE	2758	25YR	966.00	421.86	427.61	425.99	427.78	0.001724	4.71	523.34	163.06	0.36
USACE	2758	50YR	1195.00	421.86	428.13	426.24	428.31	0.001724	5.01	609.21	167.64	0.36
USACE	2758	100YR	1523.00	421.86	428.76	426.57	428.96	0.001776	5.44	718.42	292.13	0.38
USACE	2758	100YRPLUS	1992.00	421.86	429.52	426.98	429.75	0.001814	5.92	859.29	308.35	0.39
USACE	2758	200YR	1852.00	421.86	429.31	426.87	429.53	0.001803	5.78	818.25	306.26	0.38
USACE	2758	500YR	2289.00	421.86	429.95	427.22	430.19	0.001842	6.19	941.47	312.84	0.39
USACE	2758	SEPT2011	1203.00	421.86	428.15	426.25	428.33	0.001721	5.02	612.46	167.87	0.36
USACE	2521	2YR	333.00	420.78	424.10	423.37	424.59	0.005824	5.98	78.35	105.24	0.60
USACE	2521	5YR	546.00	420.78	425.11	424.46	425.69	0.005094	6.75	137.69	169.99	0.59
USACE	2521	10YR	708.00	420.78	425.66	424.89	426.30	0.005038	7.29	174.33	204.47	0.59
USACE	2521	25YR	966.00	420.78	426.31	425.50	427.06	0.005230	8.11	231.07	226.87	0.62
USACE	2521	50YR	1195.00	420.78	426.78	426.09	427.58	0.005342	8.66	279.33	236.45	0.63
USACE	2521	100YR	1523.00	420.78	427.35	426.72	428.22	0.005405	9.28	343.88	244.62	0.65
USACE	2521	100YRPLUS	1992.00	420.78	428.03	427.39	428.98	0.005580	10.09	424.61	254.68	0.67
USACE	2521	200YR	1852.00	420.78	427.84	427.20	428.76	0.005527	9.86	401.33	251.47	0.66
USACE	2521	500YR	2289.00	420.78	428.40	427.71	429.40	0.005665	10.52	472.84	261.00	0.68
USACE	2521	SEPT2011	1203.00	420.78	426.81	426.12	427.61	0.005250	8.63	283.25	237.17	0.63
USACE	2300	2YR	337.00	419.43	423.12	421.98	423.51	0.003981	5.23	86.92	47.44	0.50
USACE	2300	5YR	553.00	419.43	424.23	422.98	424.72	0.003617	6.03	151.64	79.45	0.50
USACE	2300	10YR	717.00	419.43	424.86	423.49	425.36	0.003353	6.33	205.79	176.64	0.49
USACE	2300	25YR	980.00	419.43	425.48	424.48	426.06	0.003571	7.06	272.14	196.55	0.52
USACE	2300	50YR	1205.00	419.43	425.92	425.01	426.55	0.003744	7.59	323.37	210.41	0.54
USACE	2300	100YR	1538.00	419.43	426.45	425.59	427.15	0.003949	8.24	393.11	226.62	0.56
USACE	2300	100YRPLUS	2011.00	419.43	427.12	426.18	427.87	0.004062	8.90	484.71	234.69	0.58
USACE	2300	200YR	1872.00	419.43	426.92	426.09	427.67	0.004055	8.74	457.72	232.01	0.58
USACE	2300	500YR	2320.00	419.43	427.45	426.63	428.26	0.004277	9.41	532.40	240.02	0.60
USACE	2300	SEPT2011	1223.00	419.43	425.95	425.04	426.59	0.003748	7.62	327.66	211.49	0.54
USACE	2114	2YR	337.00	418.84	421.75	421.26	422.42	0.008759	6.73	58.32	26.29	0.72
USACE	2114	5YR	553.00	418.84	422.29	422.09	423.51	0.012647	9.11	72.92	28.16	0.89
USACE	2114	10YR	717.00	418.84	422.93	422.93	424.25	0.011015	9.59	101.42	59.99	0.86
USACE	2114	25YR	980.00	418.84	423.97	423.97	425.08	0.007537	9.28	186.40	137.16	0.74
USACE	2114	50YR	1205.00	418.84	424.39	424.39	425.54	0.007486	9.77	233.61	227.76	0.74
USACE	2114	100YR	1538.00	418.84	424.94	424.94	426.12	0.007363	10.34	299.77	256.11	0.75
USACE	2114	100YRPLUS	2011.00	418.84	425.47	425.47	426.79	0.007907	11.35	369.63	270.20	0.79
USACE	2114	200YR	1872.00	418.84	425.34	425.34	426.61	0.007631	11.00	352.47	266.56	0.77
USACE	2114	500YR	2320.00	418.84	425.85	425.85	427.17	0.007719	11.64	422.67	282.46	0.79
USACE	2114	SEPT2011	1223.00	418.84	424.42	424.42	425.58	0.007519	9.83	236.66	230.63	0.75
USACE	1950	2YR	337.00	416.80	420.72	419.93	421.22	0.005833	5.80	76.25	78.00	0.59
USACE	1950	5YR	553.00	416.80	421.42	421.19	421.97	0.005710	6.58	141.25	104.94	0.60
USACE	1950	10YR	717.00	416.80	421.71	421.55	422.35	0.006379	7.32	172.79	109.61	0.64
USACE	1950	25YR	980.00	416.80	422.11	421.97	422.86	0.007185	8.27	217.66	116.80	0.69
USACE	1950	50YR	1205.00	416.80	422.65	422.28	423.30	0.005927	8.10	282.87	128.33	0.64
USACE	1950	100YR	1538.00	416.80	423.64	422.59	424.08	0.003589	7.12	418.65	143.49	0.51
USACE	1950	100YRPLUS	2011.00	416.80	424.48	423.16	424.88	0.002986	7.09	544.37	241.25	0.48
USACE	1950	200YR	1872.00	416.80	424.25	423.03	424.66	0.003111	7.07	509.14	199.48	0.49
USACE	1950	500YR	2320.00	416.80	424.91	423.41	425.31	0.002840	7.20	615.21	306.79	0.47
USACE	1950	SEPT2011	1223.00	416.80	422.71	422.30	423.34	0.005722	8.03	290.98	130.27	0.63
USACE	1830	2YR	337.00	415.60	419.01	419.01	420.07	0.015907	8.34	46.31	31.88	0.92
USACE	1830	5YR	553.00	415.60	420.45	420.45	421.19	0.007023	7.48	131.30	128.54	0.66
USACE	1830	10YR	717.00	415.60	420.85	420.85	421.55	0.006699	7.78	183.34	136.74	0.66
USACE	1830	25YR	980.00	415.60	421.58	421.24	422.09	0.004779	7.28	281.64	174.44	0.57
USACE	1830	50YR	1205.00	415.60	422.35	421.50	422.71	0.003120	6.46	387.10	191.75	0.47

HEC-RAS Plan: Existing River: DoeRunTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1830	100YR	1538.00	415.60	423.46	421.84	423.71	0.001963	5.75	539.93	212.35	0.38
USACE	1830	100YRPLUS	2011.00	415.60	424.29	422.24	424.56	0.001876	6.06	656.63	337.36	0.38
USACE	1830	200YR	1872.00	415.60	424.06	422.13	424.33	0.001888	5.96	624.80	328.91	0.38
USACE	1830	500YR	2320.00	415.60	424.72	422.47	425.00	0.001909	6.33	717.43	355.06	0.39
USACE	1830	SEPT2011	1223.00	415.60	422.43	421.52	422.77	0.002969	6.36	398.33	194.54	0.46
USACE	1775	2YR	337.00	414.17	418.90	416.37	419.03	0.001016	2.96	121.50	37.53	0.26
USACE	1775	5YR	553.00	414.17	419.65	417.11	419.89	0.001520	4.05	151.48	44.80	0.32
USACE	1775	10YR	717.00	414.17	420.13	417.58	420.45	0.001818	4.71	172.01	57.01	0.36
USACE	1775	25YR	980.00	414.17	421.54	418.26	421.87	0.001425	4.87	234.00	179.54	0.33
USACE	1775	50YR	1205.00	414.17	422.30	418.80	422.57	0.001123	4.64	389.20	214.45	0.30
USACE	1775	100YR	1538.00	414.17	423.40	419.57	423.63	0.000906	4.56	527.45	308.40	0.27
USACE	1775	100YRPLUS	2011.00	414.17	424.21	420.46	424.49	0.000991	5.06	622.22	351.58	0.29
USACE	1775	200YR	1872.00	414.17	423.99	420.18	424.26	0.000963	4.91	597.03	340.44	0.28
USACE	1775	500YR	2320.00	414.17	424.61	420.93	424.92	0.001076	5.43	669.37	385.25	0.30
USACE	1775	SEPT2011	1223.00	414.17	422.38	418.84	422.64	0.001083	4.59	408.61	218.02	0.29
USACE	1746 Doe Run Road		Bridge									
USACE	1708	2YR	337.00	413.99	418.41	417.41	418.81	0.004711	5.25	77.90	73.94	0.52
USACE	1708	5YR	553.00	413.99	418.75	418.57	419.50	0.008034	7.33	100.46	96.41	0.69
USACE	1708	10YR	717.00	413.99	419.05	419.05	419.95	0.009154	8.27	123.64	116.30	0.75
USACE	1708	25YR	980.00	413.99	419.60	419.60	420.53	0.008636	8.80	171.30	131.16	0.75
USACE	1708	50YR	1205.00	413.99	419.91	419.91	420.93	0.009089	9.46	198.20	163.53	0.77
USACE	1708	100YR	1538.00	413.99	420.20	420.20	421.17	0.008913	9.75	262.61	195.40	0.78
USACE	1708	100YRPLUS	2011.00	413.99	420.61	420.61	421.73	0.009709	10.74	310.63	239.06	0.82
USACE	1708	200YR	1872.00	413.99	420.50	420.50	421.57	0.009444	10.45	297.74	231.73	0.81
USACE	1708	500YR	2320.00	413.99	420.86	420.86	422.06	0.010075	11.28	339.88	263.24	0.84
USACE	1708	SEPT2011	1223.00	413.99	419.93	419.93	420.96	0.009130	9.51	200.16	165.63	0.78
USACE	1641	2YR	337.00	413.99	418.06	418.06	418.42	0.006636	5.60	111.18	164.28	0.58
USACE	1641	5YR	553.00	413.99	418.40	418.40	418.80	0.007656	6.48	170.40	184.13	0.64
USACE	1641	10YR	717.00	413.99	418.57	418.57	419.02	0.008606	7.12	202.42	188.20	0.68
USACE	1641	25YR	980.00	413.99	418.80	418.80	419.31	0.009863	7.96	246.16	192.81	0.74
USACE	1641	50YR	1205.00	413.99	418.97	418.97	419.54	0.010831	8.60	278.40	196.40	0.78
USACE	1641	100YR	1538.00	413.99	419.20	419.19	419.83	0.011701	9.30	324.83	201.53	0.82
USACE	1641	100YRPLUS	2011.00	413.99	419.50	419.45	420.21	0.012367	10.04	386.96	223.58	0.85
USACE	1641	200YR	1872.00	413.99	419.42	419.38	420.10	0.012183	9.84	369.28	210.67	0.84
USACE	1641	500YR	2320.00	413.99	419.68	419.65	420.42	0.012678	10.44	423.78	246.19	0.87
USACE	1641	SEPT2011	1223.00	413.99	418.98	418.98	419.55	0.010945	8.66	280.45	196.66	0.79
USACE	1495	2YR	337.00	413.99	416.94	416.91	417.19	0.007761	5.53	140.52	216.95	0.64
USACE	1495	5YR	553.00	413.99	417.26		417.49	0.007381	5.88	218.63	263.07	0.64
USACE	1495	10YR	717.00	413.99	417.43		417.66	0.007474	6.16	263.93	270.06	0.65
USACE	1495	25YR	980.00	413.99	417.65		417.90	0.007873	6.65	323.39	277.72	0.67
USACE	1495	50YR	1205.00	413.99	417.83		418.09	0.007816	6.89	375.02	286.89	0.68
USACE	1495	100YR	1538.00	413.99	418.06		418.35	0.007866	7.24	442.15	294.25	0.69
USACE	1495	100YRPLUS	2011.00	413.99	418.36		418.67	0.007837	7.64	532.29	305.76	0.70
USACE	1495	200YR	1872.00	413.99	418.28		418.58	0.007842	7.52	506.46	302.21	0.69
USACE	1495	500YR	2320.00	413.99	418.54		418.87	0.007837	7.88	586.85	312.47	0.70
USACE	1495	SEPT2011	1223.00	413.99	417.85		418.11	0.007816	6.91	378.88	287.35	0.68
USACE	1255	2YR	337.00	413.49	415.65		415.73	0.004590	3.76	202.83	289.15	0.49
USACE	1255	5YR	553.00	413.49	415.92		416.01	0.004970	4.28	285.38	334.48	0.52
USACE	1255	10YR	717.00	413.49	416.09		416.19	0.004869	4.46	343.63	342.32	0.52
USACE	1255	25YR	980.00	413.49	416.34		416.44	0.004597	4.64	429.53	348.38	0.51
USACE	1255	50YR	1205.00	413.49	416.51		416.63	0.004640	4.88	492.43	357.96	0.52
USACE	1255	100YR	1538.00	413.49	416.76		416.90	0.004534	5.12	584.03	370.63	0.52
USACE	1255	100YRPLUS	2011.00	413.49	417.05		417.21	0.004656	5.52	691.43	382.92	0.54
USACE	1255	200YR	1872.00	413.49	416.97		417.12	0.004594	5.39	662.79	380.38	0.53
USACE	1255	500YR	2320.00	413.49	417.21		417.38	0.004756	5.76	753.55	388.24	0.55
USACE	1255	SEPT2011	1223.00	413.49	416.53		416.65	0.004628	4.89	498.07	359.49	0.52
USACE	1034	2YR	337.00	411.33	413.88	413.88	414.17	0.011916	6.11	122.93	241.94	0.78
USACE	1034	5YR	553.00	411.33	414.17	414.17	414.43	0.010833	6.41	208.57	333.30	0.76
USACE	1034	10YR	717.00	411.33	414.29	414.29	414.57	0.011845	6.95	246.90	356.48	0.81
USACE	1034	25YR	980.00	411.33	414.42	414.42	414.77	0.014155	7.89	291.00	382.04	0.89
USACE	1034	50YR	1205.00	411.33	414.54	414.54	414.92	0.015063	8.40	331.18	402.47	0.93
USACE	1034	100YR	1538.00	411.33	414.68	414.68	415.11	0.016948	9.22	377.56	419.51	0.99
USACE	1034	100YRPLUS	2011.00	411.33	414.87	414.87	415.36	0.017848	9.91	447.82	451.11	1.03
USACE	1034	200YR	1872.00	411.33	414.81	414.81	415.29	0.017949	9.80	425.20	444.71	1.03
USACE	1034	500YR	2320.00	411.33	414.99	414.98	415.51	0.018213	10.28	489.47	461.86	1.05
USACE	1034	SEPT2011	1223.00	411.33	414.55	414.55	414.93	0.015186	8.45	333.77	403.43	0.93
USACE	795	2YR	337.00	409.32	411.96	411.83	412.07	0.004437	3.96	215.46	382.40	0.49
USACE	795	5YR	553.00	409.32	412.25	412.02	412.35	0.004015	4.11	341.18	565.33	0.47
USACE	795	10YR	717.00	409.32	412.42	412.09	412.52	0.003955	4.28	425.69	627.04	0.47
USACE	795	25YR	980.00	409.32	412.63	412.25	412.73	0.003986	4.53	534.18	703.58	0.48
USACE	795	50YR	1205.00	409.32	412.79	412.40	412.90	0.004007	4.72	621.79	779.62	0.49
USACE	795	100YR	1538.00	409.32	412.99	412.51	413.11	0.004202	5.05	728.99	870.51	0.51
USACE	795	100YRPLUS	2011.00	409.32	413.23	412.64	413.36	0.004292	5.36	863.98	964.29	0.52
USACE	795	200YR	1872.00	409.32	413.16	412.62	413.29	0.004271	5.27	826.03	945.98	0.51
USACE	795	500YR	2320.00	409.32	413.37	412.75	413.51	0.004319	5.53	945.45	1038.62	0.52
USACE	795	SEPT2011	1223.00	409.32	412.81	412.40	412.91	0.004017	4.74	628.21	782.76	0.49
USACE	564	2YR	337.00	409.31	411.21	410.78	411.25	0.002815	2.60	306.91	437.68	0.37
USACE	564	5YR	553.00	409.31	411.48	410.94	411.53	0.003095	3.04	425.69	681.12	0.40

HEC-RAS Plan: Existing River: DoeRunTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	564	10YR	717.00	409.31	411.66	411.08	411.71	0.003066	3.23	568.84	860.58	0.40
USACE	564	25YR	980.00	409.31	411.88	411.21	411.93	0.002947	3.39	731.12	1076.95	0.40
USACE	564	50YR	1205.00	409.31	412.05	411.28	412.10	0.002906	3.54	862.40	1199.02	0.41
USACE	564	100YR	1538.00	409.31	412.28	411.47	412.33	0.002640	3.59	1043.30	1236.99	0.39
USACE	564	100YRPLUS	2011.00	409.31	412.51	411.61	412.57	0.002636	3.80	1233.84	1269.85	0.40
USACE	564	200YR	1872.00	409.31	412.45	411.60	412.50	0.002637	3.74	1179.95	1264.47	0.40
USACE	564	500YR	2320.00	409.31	412.65	411.79	412.72	0.002630	3.92	1348.58	1307.76	0.40
USACE	564	SEPT2011	1223.00	409.31	412.06	411.32	412.12	0.002899	3.55	871.94	1202.82	0.41
USACE	306	2YR	337.00	408.38	410.02	409.84	410.12	0.007352	3.90	181.87	899.61	0.59
USACE	306	5YR	553.00	408.38	410.35	409.99	410.44	0.005805	4.00	282.38	1115.23	0.54
USACE	306	10YR	717.00	408.38	410.51	410.15	410.62	0.005888	4.28	341.75	1229.83	0.56
USACE	306	25YR	980.00	408.38	410.74	410.29	410.87	0.005942	4.65	434.96	1381.45	0.57
USACE	306	50YR	1205.00	408.38	410.92	410.40	411.05	0.005819	4.86	512.38	1489.37	0.57
USACE	306	100YR	1538.00	408.38	411.16	410.56	411.30	0.006280	5.40	625.88	1626.77	0.60
USACE	306	100YRPLUS	2011.00	408.38	411.39	410.78	411.55	0.006162	5.68	750.83	1664.64	0.61
USACE	306	200YR	1872.00	408.38	411.33	410.73	411.48	0.006210	5.61	714.92	1653.18	0.61
USACE	306	500YR	2320.00	408.38	411.54	410.86	411.71	0.006070	5.83	827.15	1682.08	0.61
USACE	306	SEPT2011	1223.00	408.38	410.94	410.41	411.06	0.005823	4.88	518.01	1493.43	0.57
USACE	130	2YR	337.00	406.90	409.22	409.22	409.28	0.003263	3.23	247.31	771.25	0.41
USACE	130	5YR	553.00	406.90	409.42	409.23	409.51	0.004808	4.19	321.18	925.74	0.51
USACE	130	10YR	717.00	406.90	409.58	409.23	409.67	0.004801	4.40	384.90	1040.76	0.51
USACE	130	25YR	980.00	406.90	409.82	409.39	409.92	0.004806	4.70	485.33	1189.06	0.52
USACE	130	50YR	1205.00	406.90	410.01	409.48	410.11	0.004805	4.93	575.89	1403.54	0.53
USACE	130	100YR	1538.00	406.90	410.20	409.61	410.32	0.004809	5.17	678.35	1556.52	0.53
USACE	130	100YRPLUS	2011.00	406.90	410.45	409.76	410.59	0.004802	5.46	808.50	1744.79	0.54
USACE	130	200YR	1872.00	406.90	410.38	409.73	410.51	0.004804	5.38	771.81	1713.49	0.54
USACE	130	500YR	2320.00	406.90	410.60	409.90	410.74	0.004801	5.63	886.19	1779.22	0.55
USACE	130	SEPT2011	1223.00	406.90	410.02	409.49	410.12	0.004802	4.94	581.87	1411.58	0.53

HEC-RAS Plan: Existing River: ErismanRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6991	2YR	165.00	378.95	382.39		382.41	0.000809	1.95	192.72	185.68	0.21
USACE	6991	5YR	264.00	378.95	382.71		382.74	0.000965	2.30	253.94	196.85	0.23
USACE	6991	10YR	343.00	378.95	382.91		382.94	0.001086	2.54	294.36	206.06	0.25
USACE	6991	25YR	471.00	378.95	383.25		383.29	0.001107	2.75	366.44	218.09	0.26
USACE	6991	50YR	569.00	378.95	383.42		383.47	0.001222	2.98	405.10	225.19	0.27
USACE	6991	100YR	672.00	378.95	383.59		383.64	0.001330	3.20	443.10	232.40	0.29
USACE	6991	100YRPLUS	879.00	378.95	383.88		383.95	0.001524	3.60	513.97	246.66	0.31
USACE	6991	200YR	776.00	378.95	383.74		383.80	0.001442	3.42	479.59	241.23	0.30
USACE	6991	500YR	919.00	378.95	383.93		384.00	0.001552	3.66	527.09	248.65	0.31
USACE	6991	SEPT2011	426.00	378.95	383.15		383.19	0.001071	2.65	345.23	214.59	0.25
USACE	6901	2YR	165.00	378.85	382.18	381.13	382.30	0.001680	3.25	82.38	86.08	0.33
USACE	6901	5YR	264.00	378.85	382.36	381.87	382.58	0.003017	4.54	99.26	116.58	0.45
USACE	6901	10YR	343.00	378.85	382.37	382.16	382.73	0.005019	5.86	100.20	122.24	0.58
USACE	6901	25YR	471.00	378.85	382.57	382.57	383.04	0.006561	6.98	124.39	152.98	0.67
USACE	6901	50YR	569.00	378.85	382.76	382.76	383.21	0.006294	7.10	150.85	169.00	0.66
USACE	6901	100YR	672.00	378.85	382.90	382.90	383.37	0.006613	7.46	169.90	173.18	0.69
USACE	6901	100YRPLUS	879.00	378.85	383.10	383.10	383.64	0.007431	8.20	200.13	176.54	0.73
USACE	6901	200YR	776.00	378.85	383.01	383.01	383.51	0.007009	7.83	186.03	175.01	0.71
USACE	6901	500YR	919.00	378.85	383.13	383.13	383.69	0.007624	8.35	204.99	177.06	0.74
USACE	6901	SEPT2011	426.00	378.85	382.48	382.35	382.95	0.006467	6.81	113.32	140.09	0.66
USACE	6815	2YR	165.00	378.00	382.19	380.79	382.22	0.000320	1.74	182.02	172.16	0.16
USACE	6815	5YR	264.00	378.00	382.40	381.30	382.44	0.000491	2.24	218.78	180.48	0.20
USACE	6815	10YR	343.00	378.00	382.46	381.55	382.52	0.000721	2.74	229.65	182.48	0.24
USACE	6815	25YR	471.00	378.00	382.68	381.94	382.74	0.000845	3.07	269.11	198.54	0.26
USACE	6815	50YR	569.00	378.00	382.82	382.08	382.89	0.000918	3.27	295.81	209.06	0.28
USACE	6815	100YR	672.00	378.00	382.89	382.19	382.98	0.001115	3.64	308.99	210.56	0.31
USACE	6815	100YRPLUS	879.00	378.00	383.08	382.35	383.20	0.001341	4.11	344.65	213.91	0.34
USACE	6815	200YR	776.00	378.00	382.95	382.27	383.07	0.001314	4.00	321.12	211.91	0.33
USACE	6815	500YR	919.00	378.00	383.13	382.38	383.25	0.001349	4.15	353.62	214.54	0.34
USACE	6815	SEPT2011	426.00	378.00	382.62	381.86	382.68	0.000788	2.94	257.93	187.44	0.25
USACE	6784	2YR	165.00	377.26	382.18	380.56	382.20	0.000344	1.85	180.23	223.42	0.16
USACE	6784	5YR	264.00	377.26	382.39	381.18	382.42	0.000498	2.30	222.32	243.11	0.20
USACE	6784	10YR	343.00	377.26	382.44	381.88	382.49	0.000731	2.81	233.37	245.02	0.24
USACE	6784	25YR	471.00	377.26	382.65	382.05	382.71	0.000811	3.06	279.40	262.36	0.26
USACE	6784	50YR	569.00	377.26	382.79	382.15	382.86	0.000856	3.21	311.35	267.00	0.26
USACE	6784	100YR	672.00	377.26	382.86	382.25	382.94	0.001037	3.57	326.18	269.14	0.29
USACE	6784	100YRPLUS	879.00	377.26	383.05	382.40	383.15	0.001217	3.97	368.95	275.30	0.32
USACE	6784	200YR	776.00	377.26	382.92	382.33	383.02	0.001220	3.91	339.81	271.30	0.32
USACE	6784	500YR	919.00	377.26	383.09	382.43	383.20	0.001213	3.99	380.15	276.63	0.32
USACE	6784	SEPT2011	426.00	377.26	382.59	382.01	382.65	0.000765	2.95	266.29	260.29	0.25
USACE	6759 Mount Joy Road		Culvert									
USACE	6727	2YR	165.00	376.18	379.05		379.53	0.008062	5.59	30.76	20.92	0.72
USACE	6727	5YR	264.00	376.18	379.69	379.34	380.29	0.007082	6.39	47.02	40.93	0.71
USACE	6727	10YR	343.00	376.18	380.24	380.24	380.66	0.004462	5.79	93.38	128.54	0.59
USACE	6727	25YR	471.00	376.18	380.50	380.50	380.91	0.004501	6.14	129.44	148.20	0.60
USACE	6727	50YR	569.00	376.18	380.63	380.63	381.06	0.004705	6.45	150.35	157.66	0.61
USACE	6727	100YR	672.00	376.18	380.78	380.78	381.20	0.004701	6.63	174.38	179.03	0.62
USACE	6727	100YRPLUS	879.00	376.18	380.98	380.98	381.42	0.004865	6.99	212.38	197.32	0.63
USACE	6727	200YR	776.00	376.18	380.92	380.92	381.32	0.004411	6.59	200.73	193.53	0.60
USACE	6727	500YR	919.00	376.18	381.01	381.01	381.46	0.004882	7.05	219.56	201.70	0.64
USACE	6727	SEPT2011	426.00	376.18	380.43	380.43	380.83	0.004296	5.92	120.18	143.37	0.58
USACE	6679	2YR	165.00	376.18	378.49	378.34	379.06	0.009801	6.25	29.02	21.77	0.81
USACE	6679	5YR	264.00	376.18	378.89	378.89	379.78	0.011914	7.87	39.92	52.47	0.92
USACE	6679	10YR	343.00	376.18	379.47	379.47	379.84	0.004846	5.83	93.20	110.93	0.61
USACE	6679	25YR	471.00	376.18	379.67	379.67	380.08	0.005310	6.39	117.15	124.04	0.65
USACE	6679	50YR	569.00	376.18	379.79	379.79	380.24	0.005698	6.80	133.08	135.57	0.67
USACE	6679	100YR	672.00	376.18	379.89	379.89	380.39	0.006195	7.23	146.75	146.50	0.71
USACE	6679	100YRPLUS	879.00	376.18	380.14	380.14	380.65	0.005750	7.32	187.34	167.26	0.69
USACE	6679	200YR	776.00	376.18	380.08	380.08	380.53	0.005239	6.91	176.97	165.35	0.66
USACE	6679	500YR	919.00	376.18	380.18	380.18	380.69	0.005790	7.40	193.31	168.92	0.69
USACE	6679	SEPT2011	426.00	376.18	379.60	379.60	380.00	0.005233	6.25	108.38	118.63	0.64
USACE	6619	2YR	165.00	375.95	378.05	377.82	378.50	0.007855	5.71	33.73	26.23	0.73
USACE	6619	5YR	264.00	375.95	378.59	378.23	379.05	0.006446	6.12	67.18	124.34	0.69
USACE	6619	10YR	343.00	375.95	378.84	378.84	379.15	0.004635	5.54	102.61	150.21	0.60
USACE	6619	25YR	471.00	375.95	379.17		379.38	0.002980	4.80	155.31	169.66	0.49
USACE	6619	50YR	569.00	375.95	379.37		379.56	0.002474	4.57	189.82	178.58	0.45
USACE	6619	100YR	672.00	375.95	379.54		379.73	0.002183	4.44	220.96	183.54	0.43
USACE	6619	100YRPLUS	879.00	375.95	379.82		380.02	0.001974	4.45	272.17	191.55	0.41
USACE	6619	200YR	776.00	375.95	379.69		379.88	0.002032	4.41	248.64	187.99	0.41
USACE	6619	500YR	919.00	375.95	379.87		380.07	0.001937	4.45	281.80	192.95	0.41
USACE	6619	SEPT2011	426.00	375.95	379.05		379.30	0.003564	5.11	135.14	163.90	0.53
USACE	6591	2YR	165.00	375.26	377.92	377.47	378.28	0.005258	5.29	41.81	39.34	0.62
USACE	6591	5YR	264.00	375.26	378.67	378.41	378.79	0.001796	3.74	127.09	177.50	0.38
USACE	6591	10YR	343.00	375.26	378.85	378.62	378.96	0.001655	3.73	159.08	187.80	0.37
USACE	6591	25YR	471.00	375.26	379.18	378.75	379.28	0.001140	3.31	225.02	205.18	0.31
USACE	6591	50YR	569.00	375.26	379.38	378.84	379.47	0.001002	3.21	265.72	213.10	0.29
USACE	6591	100YR	672.00	375.26	379.55	378.91	379.65	0.000943	3.21	302.94	220.97	0.29
USACE	6591	100YRPLUS	879.00	375.26	379.82	379.06	379.94	0.000914	3.31	365.35	232.67	0.29
USACE	6591	200YR	776.00	375.26	379.70	378.99	379.81	0.000917	3.25	336.50	227.70	0.28

HEC-RAS Plan: Existing River: ErismanRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6591	500YR	919.00	375.26	379.87	379.08	380.00	0.000905	3.32	377.19	234.54	0.28
USACE	6591	SEPT2011	426.00	375.26	379.07	378.71	379.17	0.001285	3.43	202.02	199.58	0.33
USACE	6570 Private Drive		Bridge									
USACE	6540	2YR	165.00	375.26	377.78	377.54	377.95	0.003327	4.06	72.14	89.11	0.49
USACE	6540	5YR	264.00	375.26	378.12	377.70	378.29	0.003068	4.31	118.50	184.72	0.48
USACE	6540	10YR	343.00	375.26	378.34	377.70	378.46	0.002339	3.98	162.60	212.68	0.42
USACE	6540	25YR	471.00	375.26	378.62	378.29	378.72	0.001675	3.59	225.36	231.88	0.36
USACE	6540	50YR	569.00	375.26	378.81	378.38	378.91	0.001380	3.40	270.31	242.47	0.33
USACE	6540	100YR	672.00	375.26	378.99	378.46	379.09	0.001175	3.25	315.46	251.80	0.31
USACE	6540	100YRPLUS	879.00	375.26	379.29	378.58	379.40	0.000993	3.16	392.78	266.38	0.29
USACE	6540	200YR	776.00	375.26	379.15	378.52	379.25	0.001081	3.21	353.96	259.05	0.30
USACE	6540	500YR	919.00	375.26	379.35	378.60	379.46	0.000963	3.15	407.75	269.26	0.29
USACE	6540	SEPT2011	426.00	375.26	378.53	378.26	378.64	0.001838	3.69	204.78	226.52	0.38
USACE	6492	2YR	165.00	374.89	377.40	377.40	377.68	0.008701	5.40	57.16	164.89	0.69
USACE	6492	5YR	264.00	374.89	377.63	377.63	377.98	0.010581	6.42	77.92	178.85	0.77
USACE	6492	10YR	343.00	374.89	377.78	377.78	378.17	0.011356	6.97	92.89	188.22	0.81
USACE	6492	25YR	471.00	374.89	377.99	377.99	378.44	0.012531	7.75	114.03	220.92	0.86
USACE	6492	50YR	569.00	374.89	378.11	378.11	378.63	0.013860	8.40	126.43	252.26	0.91
USACE	6492	100YR	672.00	374.89	378.23	378.23	378.81	0.014861	8.97	139.87	269.88	0.95
USACE	6492	100YRPLUS	879.00	374.89	378.50	378.50	379.12	0.014593	9.48	172.43	302.40	0.96
USACE	6492	200YR	776.00	374.89	378.39	378.39	378.98	0.014172	9.11	159.06	293.23	0.94
USACE	6492	500YR	919.00	374.89	378.54	378.54	379.18	0.014807	9.63	177.17	304.37	0.97
USACE	6492	SEPT2011	426.00	374.89	377.92	377.92	378.36	0.012159	7.50	107.04	207.04	0.85
USACE	6394	2YR	165.00	373.65	376.23	376.23	376.40	0.009021	4.90	87.08	211.50	0.67
USACE	6394	5YR	264.00	373.65	376.37	376.37	376.57	0.011169	5.76	115.60	229.35	0.76
USACE	6394	10YR	343.00	373.65	376.52	376.46	376.70	0.009936	5.72	145.89	240.29	0.72
USACE	6394	25YR	471.00	373.65	376.72	376.57	376.89	0.008972	5.80	189.61	261.19	0.70
USACE	6394	50YR	569.00	373.65	376.86	376.65	377.02	0.008513	5.89	221.75	283.94	0.69
USACE	6394	100YR	672.00	373.65	376.99	376.73	377.16	0.008072	5.95	253.31	303.81	0.68
USACE	6394	100YRPLUS	879.00	373.65	377.23	376.87	377.40	0.007337	6.05	312.17	318.45	0.65
USACE	6394	200YR	776.00	373.65	377.11	376.79	377.28	0.007675	6.00	283.58	310.99	0.66
USACE	6394	500YR	919.00	373.65	377.27	376.90	377.45	0.007171	6.05	323.72	321.47	0.65
USACE	6394	SEPT2011	426.00	373.65	376.65	376.53	376.82	0.009249	5.76	174.51	254.17	0.71
USACE	6250	2YR	165.00	373.65	375.28		375.32	0.004162	2.79	111.55	170.49	0.44
USACE	6250	5YR	264.00	373.65	375.54		375.60	0.004119	3.16	160.70	194.64	0.45
USACE	6250	10YR	343.00	373.65	375.70		375.77	0.004209	3.41	192.69	203.38	0.47
USACE	6250	25YR	471.00	373.65	375.92		376.00	0.004251	3.72	237.63	211.23	0.48
USACE	6250	50YR	569.00	373.65	376.07		376.15	0.004252	3.92	270.03	217.37	0.48
USACE	6250	100YR	672.00	373.65	376.21		376.31	0.004262	4.10	301.64	222.58	0.49
USACE	6250	100YRPLUS	879.00	373.65	376.48		376.59	0.004295	4.45	362.14	235.01	0.50
USACE	6250	200YR	776.00	373.65	376.35		376.45	0.004280	4.28	332.01	227.91	0.50
USACE	6250	500YR	919.00	373.65	376.53		376.64	0.004303	4.51	374.06	238.56	0.50
USACE	6250	SEPT2011	426.00	373.65	375.85		375.92	0.004240	3.62	222.30	208.40	0.47
USACE	6043	2YR	165.00	372.50	374.17		374.24	0.006663	3.41	89.38	135.77	0.54
USACE	6043	5YR	264.00	372.50	374.43		374.52	0.006718	3.89	134.40	191.22	0.56
USACE	6043	10YR	343.00	372.50	374.60		374.69	0.006417	4.09	166.92	196.18	0.56
USACE	6043	25YR	471.00	372.50	374.83		374.94	0.006132	4.37	214.08	205.17	0.56
USACE	6043	50YR	569.00	372.50	375.00		375.11	0.005964	4.55	248.89	218.07	0.56
USACE	6043	100YR	672.00	372.50	375.15		375.27	0.005879	4.74	282.26	225.32	0.56
USACE	6043	100YRPLUS	879.00	372.50	375.41		375.54	0.005848	5.09	342.55	235.09	0.57
USACE	6043	200YR	776.00	372.50	375.28		375.41	0.005839	4.92	313.20	229.79	0.57
USACE	6043	500YR	919.00	372.50	375.46		375.59	0.005872	5.17	353.87	237.91	0.58
USACE	6043	SEPT2011	426.00	372.50	374.76		374.86	0.006196	4.27	198.43	202.21	0.56
USACE	5865	2YR	165.00	371.00	373.37		373.43	0.003298	3.00	126.48	188.15	0.40
USACE	5865	5YR	264.00	371.00	373.62		373.69	0.003377	3.32	175.36	197.93	0.41
USACE	5865	10YR	343.00	371.00	373.79		373.86	0.003580	3.60	208.54	210.96	0.43
USACE	5865	25YR	471.00	371.00	374.01		374.09	0.003767	3.94	256.54	222.69	0.45
USACE	5865	50YR	569.00	371.00	374.17		374.26	0.003867	4.16	292.95	236.59	0.46
USACE	5865	100YR	672.00	371.00	374.31		374.41	0.003959	4.37	328.07	246.96	0.47
USACE	5865	100YRPLUS	879.00	371.00	374.56		374.67	0.004086	4.71	390.97	257.61	0.48
USACE	5865	200YR	776.00	371.00	374.44		374.55	0.004029	4.55	360.64	253.22	0.48
USACE	5865	500YR	919.00	371.00	374.61		374.72	0.004107	4.76	402.27	259.04	0.48
USACE	5865	SEPT2011	426.00	371.00	373.93		374.01	0.003726	3.83	239.93	218.98	0.44
USACE	5722	2YR	165.00	370.06	372.73	372.61	372.84	0.005163	4.12	104.70	201.39	0.51
USACE	5722	5YR	264.00	370.06	372.93	372.62	373.06	0.005748	4.63	143.85	212.64	0.55
USACE	5722	10YR	343.00	370.06	373.06	372.88	373.20	0.006108	4.96	170.18	220.30	0.57
USACE	5722	25YR	471.00	370.06	373.26	373.02	373.40	0.006363	5.34	210.66	233.52	0.59
USACE	5722	50YR	569.00	370.06	373.40	373.09	373.55	0.006458	5.58	241.65	249.18	0.60
USACE	5722	100YR	672.00	370.06	373.52	373.19	373.69	0.006565	5.80	270.94	260.01	0.61
USACE	5722	100YRPLUS	879.00	370.06	373.76	373.32	373.94	0.006515	6.10	328.10	283.39	0.61
USACE	5722	200YR	776.00	370.06	373.65	373.25	373.82	0.006547	5.96	300.25	271.02	0.61
USACE	5722	500YR	919.00	370.06	373.80	373.32	373.98	0.006572	6.17	337.27	287.05	0.62
USACE	5722	SEPT2011	426.00	370.06	373.19	372.97	373.33	0.006260	5.21	197.09	228.76	0.58
USACE	5561	2YR	165.00	370.00	371.39	371.32	371.56	0.013600	4.86	65.23	135.56	0.81
USACE	5561	5YR	264.00	370.00	371.62		371.79	0.011246	5.02	97.69	145.96	0.76
USACE	5561	10YR	343.00	370.00	371.79		371.96	0.010037	5.11	121.87	151.53	0.74
USACE	5561	25YR	471.00	370.00	372.02		372.20	0.008766	5.26	158.04	158.48	0.70
USACE	5561	50YR	569.00	370.00	372.19		372.38	0.008161	5.41	186.66	170.33	0.69

HEC-RAS Plan: Existing River: ErismanRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5561	100YR	672.00	370.00	372.36		372.55	0.007571	5.51	215.21	177.57	0.67
USACE	5561	100YRPLUS	879.00	370.00	372.66		372.86	0.006687	5.67	271.51	191.35	0.65
USACE	5561	200YR	776.00	370.00	372.51		372.71	0.007087	5.59	243.36	184.02	0.66
USACE	5561	500YR	919.00	370.00	372.72		372.92	0.006534	5.70	282.33	193.70	0.64
USACE	5561	SEPT2011	426.00	370.00	371.94		372.11	0.009143	5.21	145.60	156.08	0.71
USACE	5395	2YR	165.00	368.54	370.45	370.11	370.52	0.003443	3.09	97.95	178.87	0.43
USACE	5395	5YR	264.00	368.54	370.74	370.32	370.83	0.003395	3.43	135.77	188.95	0.44
USACE	5395	10YR	343.00	368.54	370.95	370.43	371.04	0.003353	3.65	163.02	195.98	0.45
USACE	5395	25YR	471.00	368.54	371.24	370.59	371.34	0.003235	3.92	204.01	203.81	0.45
USACE	5395	50YR	569.00	368.54	371.43	370.69	371.55	0.003218	4.12	232.49	210.34	0.45
USACE	5395	100YR	672.00	368.54	371.62	370.79	371.75	0.003199	4.31	260.67	216.01	0.46
USACE	5395	100YRPLUS	879.00	368.54	371.96	370.99	372.10	0.003182	4.64	313.39	226.42	0.47
USACE	5395	200YR	776.00	368.54	371.79	370.89	371.93	0.003214	4.49	286.78	220.89	0.46
USACE	5395	500YR	919.00	368.54	372.02	371.03	372.17	0.003169	4.69	323.65	228.59	0.47
USACE	5395	SEPT2011	426.00	368.54	371.14	370.54	371.24	0.003280	3.83	189.99	201.46	0.45
USACE	5145	2YR	165.00	367.99	369.65		369.70	0.003056	2.83	109.68	133.89	0.41
USACE	5145	5YR	264.00	367.99	369.96		370.02	0.003055	3.20	151.99	142.57	0.42
USACE	5145	10YR	343.00	367.99	370.18		370.25	0.002975	3.40	184.03	149.25	0.42
USACE	5145	25YR	471.00	367.99	370.49		370.57	0.002917	3.70	231.94	160.13	0.43
USACE	5145	50YR	569.00	367.99	370.70		370.79	0.002820	3.86	266.37	164.69	0.43
USACE	5145	100YR	672.00	367.99	370.90		371.00	0.002728	3.99	300.35	168.90	0.42
USACE	5145	100YRPLUS	879.00	367.99	371.28		371.39	0.002516	4.18	366.89	184.02	0.42
USACE	5145	200YR	776.00	367.99	371.09		371.19	0.002652	4.11	332.31	177.53	0.42
USACE	5145	500YR	919.00	367.99	371.35		371.46	0.002463	4.20	380.54	186.23	0.41
USACE	5145	SEPT2011	426.00	367.99	370.39		370.47	0.002886	3.58	216.32	155.81	0.42
USACE	4985	2YR	165.00	367.61	369.30		369.33	0.001750	2.04	138.22	164.89	0.30
USACE	4985	5YR	264.00	367.61	369.64		369.67	0.001571	2.23	195.47	176.93	0.30
USACE	4985	10YR	343.00	367.61	369.88		369.91	0.001455	2.34	238.90	186.10	0.29
USACE	4985	25YR	471.00	367.61	370.20		370.25	0.001374	2.51	302.37	201.15	0.29
USACE	4985	50YR	569.00	367.61	370.43		370.47	0.001329	2.63	348.98	212.88	0.29
USACE	4985	100YR	672.00	367.61	370.64		370.69	0.001293	2.74	395.83	221.01	0.29
USACE	4985	100YRPLUS	879.00	367.61	371.04		371.09	0.001237	2.93	485.81	234.03	0.29
USACE	4985	200YR	776.00	367.61	370.83		370.89	0.001286	2.85	438.54	227.61	0.29
USACE	4985	500YR	919.00	367.61	371.12		371.17	0.001215	2.95	504.51	236.15	0.29
USACE	4985	SEPT2011	426.00	367.61	370.11		370.14	0.001367	2.44	282.80	197.78	0.29
USACE	4824	2YR	276.00	367.31	368.97		369.00	0.002203	2.35	192.64	201.20	0.34
USACE	4824	5YR	443.00	367.31	369.31		369.36	0.002211	2.70	263.18	212.52	0.35
USACE	4824	10YR	577.00	367.31	369.56		369.62	0.002140	2.90	317.84	223.62	0.36
USACE	4824	25YR	794.00	367.31	369.89		369.95	0.002162	3.21	392.04	233.12	0.37
USACE	4824	50YR	963.00	367.31	370.10		370.18	0.002199	3.44	443.72	240.43	0.38
USACE	4824	100YR	1142.00	367.31	370.31		370.40	0.002246	3.65	494.88	249.51	0.38
USACE	4824	100YRPLUS	1494.00	367.31	370.70		370.81	0.002230	3.97	594.67	260.50	0.39
USACE	4824	200YR	1324.00	367.31	370.49		370.59	0.002340	3.88	539.23	254.33	0.40
USACE	4824	500YR	1574.00	367.31	370.78		370.89	0.002243	4.05	614.85	262.74	0.39
USACE	4824	SEPT2011	727.00	367.31	369.79		369.85	0.002160	3.12	369.73	230.31	0.36
USACE	4691	2YR	276.00	365.40	368.86	367.79	368.87	0.000514	1.66	287.10	250.40	0.17
USACE	4691	5YR	443.00	365.40	369.16	367.98	369.19	0.000763	2.16	340.88	263.33	0.22
USACE	4691	10YR	577.00	365.40	369.40	368.10	369.44	0.000892	2.46	382.46	271.69	0.24
USACE	4691	25YR	794.00	365.40	369.69	368.26	369.75	0.001114	2.90	434.85	279.49	0.27
USACE	4691	50YR	963.00	365.40	369.89	368.37	369.96	0.001273	3.22	469.83	284.48	0.29
USACE	4691	100YR	1142.00	365.40	370.08	368.49	370.16	0.001433	3.52	502.95	289.28	0.31
USACE	4691	100YRPLUS	1494.00	365.40	370.43	368.70	370.55	0.001663	4.02	566.23	299.73	0.34
USACE	4691	200YR	1324.00	365.40	370.22	368.60	370.33	0.001634	3.85	528.79	293.25	0.33
USACE	4691	500YR	1574.00	365.40	370.50	368.74	370.63	0.001723	4.13	578.24	302.19	0.35
USACE	4691	SEPT2011	727.00	365.40	369.60	368.21	369.65	0.001052	2.78	419.19	277.28	0.26
USACE	4647	2YR	276.00	364.32	368.84	367.06	368.86	0.000283	1.66	312.11	246.46	0.14
USACE	4647	5YR	443.00	364.32	369.13	367.80	369.16	0.000482	2.27	357.49	255.50	0.19
USACE	4647	10YR	577.00	364.32	369.36	367.92	369.40	0.000610	2.63	392.79	263.20	0.21
USACE	4647	25YR	794.00	364.32	369.64	368.13	369.70	0.000829	3.19	436.60	275.61	0.25
USACE	4647	50YR	963.00	364.32	369.82	368.27	369.91	0.000995	3.58	465.56	284.03	0.28
USACE	4647	100YR	1142.00	364.32	370.00	368.41	370.10	0.001168	3.97	492.74	295.93	0.30
USACE	4647	100YRPLUS	1494.00	364.32	370.33	368.65	370.47	0.001449	4.60	545.01	316.51	0.34
USACE	4647	200YR	1324.00	364.32	370.13	368.54	370.26	0.001381	4.38	512.99	306.95	0.33
USACE	4647	500YR	1574.00	364.32	370.39	368.70	370.55	0.001520	4.74	554.69	320.62	0.35
USACE	4647	SEPT2011	727.00	364.32	369.55	368.07	369.61	0.000765	3.03	423.50	271.70	0.24
USACE	4618 Rohrer Road		Culvert									
USACE	4584	2YR	276.00	363.75	366.47	365.95	366.88	0.006430	5.34	65.28	84.95	0.62
USACE	4584	5YR	443.00	363.75	366.84	366.80	367.39	0.007686	6.47	99.06	94.38	0.70
USACE	4584	10YR	577.00	363.75	367.13	367.13	367.70	0.007567	6.88	130.83	120.84	0.71
USACE	4584	25YR	794.00	363.75	367.45	367.45	368.09	0.008085	7.61	170.82	133.45	0.74
USACE	4584	50YR	963.00	363.75	367.66	367.66	368.34	0.008335	8.06	200.86	146.16	0.76
USACE	4584	100YR	1142.00	363.75	367.86	367.86	368.58	0.008510	8.45	230.45	152.04	0.78
USACE	4584	100YRPLUS	1494.00	363.75	368.16	368.16	368.98	0.009417	9.36	276.89	162.68	0.83
USACE	4584	200YR	1324.00	363.75	368.00	368.00	368.79	0.009227	9.03	252.22	156.16	0.81
USACE	4584	500YR	1574.00	363.75	368.23	368.23	369.07	0.009517	9.52	288.33	166.72	0.83
USACE	4584	SEPT2011	727.00	363.75	367.35	367.35	367.98	0.008016	7.43	158.21	129.54	0.74
USACE	4471	2YR	276.00	363.43	365.64		365.91	0.010092	6.05	87.03	101.24	0.76
USACE	4471	5YR	443.00	363.43	365.98		366.29	0.010158	6.74	123.08	114.06	0.79

HEC-RAS Plan: Existing River: ErismanRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4471	10YR	577.00	363.43	366.20		366.54	0.010236	7.20	149.36	123.92	0.80
USACE	4471	25YR	794.00	363.43	366.51		366.89	0.010254	7.78	190.09	138.62	0.82
USACE	4471	50YR	963.00	363.43	366.72		367.14	0.010242	8.16	220.54	150.53	0.83
USACE	4471	100YR	1142.00	363.43	366.92		367.36	0.010194	8.49	251.69	161.19	0.83
USACE	4471	100YRPLUS	1494.00	363.43	367.26		367.75	0.010088	9.03	310.12	177.48	0.84
USACE	4471	200YR	1324.00	363.43	367.10		367.57	0.010126	8.79	282.87	171.53	0.84
USACE	4471	500YR	1574.00	363.43	367.33		367.83	0.010037	9.13	322.81	179.54	0.84
USACE	4471	SEPT2011	727.00	363.43	366.42		366.79	0.010278	7.63	177.93	135.22	0.81
USACE	4300	2YR	276.00	362.13	363.80	363.66	364.02	0.011975	5.60	87.04	105.27	0.80
USACE	4300	5YR	443.00	362.13	364.10	363.91	364.38	0.012110	6.36	120.23	113.72	0.83
USACE	4300	10YR	577.00	362.13	364.31	364.08	364.63	0.012062	6.84	145.15	120.72	0.85
USACE	4300	25YR	794.00	362.13	364.60		364.97	0.012252	7.52	180.37	128.76	0.87
USACE	4300	50YR	963.00	362.13	364.79		365.21	0.012416	7.99	205.65	134.53	0.89
USACE	4300	100YR	1142.00	362.13	364.97		365.43	0.012522	8.41	230.66	138.96	0.90
USACE	4300	100YRPLUS	1494.00	362.13	365.29		365.83	0.012427	9.04	276.61	144.00	0.92
USACE	4300	200YR	1324.00	362.13	365.14		365.64	0.012536	8.76	254.46	141.63	0.91
USACE	4300	500YR	1574.00	362.13	365.36		365.92	0.012400	9.17	286.72	145.23	0.92
USACE	4300	SEPT2011	727.00	362.13	364.51		364.87	0.012178	7.32	169.93	126.38	0.87
USACE	4099	2YR	276.00	359.83	361.26		361.47	0.013500	5.28	81.44	93.58	0.83
USACE	4099	5YR	443.00	359.83	361.59		361.86	0.013010	6.04	113.41	102.09	0.84
USACE	4099	10YR	577.00	359.83	361.80		362.12	0.012958	6.56	136.26	108.70	0.86
USACE	4099	25YR	794.00	359.83	362.12		362.50	0.012406	7.15	171.81	115.46	0.86
USACE	4099	50YR	963.00	359.83	362.35		362.77	0.011969	7.51	198.71	120.90	0.86
USACE	4099	100YR	1142.00	359.83	362.57		363.02	0.011541	7.84	226.37	125.86	0.86
USACE	4099	100YRPLUS	1494.00	359.83	362.96		363.48	0.011121	8.45	276.97	135.44	0.86
USACE	4099	200YR	1324.00	359.83	362.78		363.27	0.011277	8.16	253.29	131.42	0.86
USACE	4099	500YR	1574.00	359.83	363.04		363.57	0.011046	8.57	288.04	137.41	0.87
USACE	4099	SEPT2011	727.00	359.83	362.02		362.39	0.012585	6.98	160.98	113.37	0.86
USACE	3945	2YR	276.00	357.80	359.91		360.08	0.006391	4.84	107.36	108.22	0.61
USACE	3945	5YR	443.00	357.80	360.33		360.52	0.006039	5.36	155.96	122.16	0.61
USACE	3945	10YR	577.00	357.80	360.61		360.82	0.005779	5.65	191.21	128.41	0.61
USACE	3945	25YR	794.00	357.80	361.00		361.23	0.005520	6.06	242.89	135.58	0.61
USACE	3945	50YR	963.00	357.80	361.27		361.52	0.005415	6.35	280.28	141.50	0.62
USACE	3945	100YR	1142.00	357.80	361.53		361.80	0.005341	6.63	317.92	147.31	0.62
USACE	3945	100YRPLUS	1494.00	357.80	361.98		362.28	0.005181	7.07	385.58	155.80	0.62
USACE	3945	200YR	1324.00	357.80	361.78		362.06	0.005260	6.88	354.15	152.33	0.62
USACE	3945	500YR	1574.00	357.80	362.07		362.38	0.005152	7.15	400.05	158.49	0.62
USACE	3945	SEPT2011	727.00	357.80	360.89		361.11	0.005589	5.94	227.28	133.28	0.61
USACE	3733	2YR	276.00	356.80	358.78		358.90	0.004816	4.01	112.80	94.48	0.53
USACE	3733	5YR	443.00	356.80	359.19		359.35	0.005043	4.71	153.67	102.14	0.56
USACE	3733	10YR	577.00	356.80	359.47		359.66	0.005208	5.17	182.47	107.22	0.58
USACE	3733	25YR	794.00	356.80	359.84		360.08	0.005426	5.79	223.29	111.93	0.60
USACE	3733	50YR	963.00	356.80	360.09		360.36	0.005553	6.20	251.91	114.80	0.62
USACE	3733	100YR	1142.00	356.80	360.34		360.64	0.005610	6.55	280.50	117.44	0.63
USACE	3733	100YRPLUS	1494.00	356.80	360.77		361.13	0.005746	7.18	333.52	133.57	0.65
USACE	3733	200YR	1324.00	356.80	360.57		360.90	0.005694	6.89	307.57	121.36	0.64
USACE	3733	500YR	1574.00	356.80	360.86		361.23	0.005762	7.31	345.81	135.55	0.65
USACE	3733	SEPT2011	727.00	356.80	359.73		359.96	0.005362	5.61	211.28	110.69	0.59
USACE	3529	2YR	276.00	355.25	357.37		357.60	0.008635	5.63	85.90	83.56	0.71
USACE	3529	5YR	443.00	355.25	357.79		358.05	0.008222	6.26	128.61	108.06	0.72
USACE	3529	10YR	577.00	355.25	358.06		358.34	0.008093	6.66	157.85	114.42	0.72
USACE	3529	25YR	794.00	355.25	358.43		358.75	0.007821	7.15	201.89	121.28	0.73
USACE	3529	50YR	963.00	355.25	358.69		359.04	0.007642	7.47	233.83	125.21	0.73
USACE	3529	100YR	1142.00	355.25	358.93		359.30	0.007629	7.82	264.14	128.54	0.74
USACE	3529	100YRPLUS	1494.00	355.25	359.34		359.78	0.007683	8.45	318.12	132.86	0.75
USACE	3529	200YR	1324.00	355.25	359.15		359.56	0.007637	8.15	292.98	130.93	0.74
USACE	3529	500YR	1574.00	355.25	359.43		359.87	0.007715	8.59	329.51	133.91	0.76
USACE	3529	SEPT2011	727.00	355.25	358.32		358.63	0.007919	7.02	188.53	119.40	0.73
USACE	3370	2YR	276.00	353.06	355.59	355.49	355.99	0.011515	6.96	86.02	84.07	0.80
USACE	3370	5YR	443.00	353.06	356.01	355.90	356.46	0.011846	7.87	123.69	96.49	0.84
USACE	3370	10YR	577.00	353.06	356.27	356.15	356.75	0.012053	8.43	149.50	102.07	0.86
USACE	3370	25YR	794.00	353.06	356.64	356.44	357.17	0.012327	9.20	188.40	111.80	0.88
USACE	3370	50YR	963.00	353.06	356.89	356.65	357.47	0.012638	9.77	217.92	122.55	0.90
USACE	3370	100YR	1142.00	353.06	357.11	356.92	357.73	0.012767	10.22	245.95	128.24	0.92
USACE	3370	100YRPLUS	1494.00	353.06	357.50	357.25	358.18	0.012962	10.97	297.42	137.96	0.94
USACE	3370	200YR	1324.00	353.06	357.32	357.10	357.97	0.012895	10.63	273.06	133.63	0.93
USACE	3370	500YR	1574.00	353.06	357.58	357.33	358.27	0.012985	11.12	308.58	139.81	0.94
USACE	3370	SEPT2011	727.00	353.06	356.53	356.36	357.05	0.012222	8.97	176.60	108.34	0.87
USACE	3160	2YR	276.00	351.62	354.02		354.19	0.006205	4.97	118.17	123.53	0.59
USACE	3160	5YR	443.00	351.62	354.40		354.60	0.006403	5.61	168.28	139.86	0.61
USACE	3160	10YR	577.00	351.62	354.63		354.86	0.006554	6.01	202.09	146.25	0.63
USACE	3160	25YR	794.00	351.62	354.96		355.21	0.006807	6.59	251.52	156.32	0.65
USACE	3160	50YR	963.00	351.62	355.19		355.46	0.006913	6.95	287.35	162.59	0.66
USACE	3160	100YR	1142.00	351.62	355.40		355.70	0.006966	7.27	323.56	168.24	0.67
USACE	3160	100YRPLUS	1494.00	351.62	355.80		356.13	0.006987	7.80	391.42	178.44	0.69
USACE	3160	200YR	1324.00	351.62	355.61		355.93	0.006981	7.55	359.10	173.49	0.68
USACE	3160	500YR	1574.00	351.62	355.88		356.22	0.006991	7.90	406.15	180.58	0.69
USACE	3160	SEPT2011	727.00	351.62	354.87		355.11	0.006731	6.42	236.76	153.21	0.64
USACE	2973	2YR	276.00	350.40	352.94		353.11	0.005481	4.87	127.24	141.74	0.56

HEC-RAS Plan: Existing River: ErismanRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	2973	5YR	443.00	350.40	353.35		353.52	0.005160	5.26	191.51	168.10	0.55
USACE	2973	10YR	577.00	350.40	353.62		353.79	0.004850	5.42	239.22	180.50	0.55
USACE	2973	25YR	794.00	350.40	353.97		354.15	0.004652	5.71	303.42	187.99	0.54
USACE	2973	50YR	963.00	350.40	354.21		354.39	0.004554	5.91	348.83	192.15	0.54
USACE	2973	100YR	1142.00	350.40	354.43		354.63	0.004522	6.12	392.67	195.93	0.55
USACE	2973	100YRPLUS	1494.00	350.40	354.83		355.05	0.004516	6.53	472.38	203.63	0.56
USACE	2973	200YR	1324.00	350.40	354.65		354.86	0.004498	6.33	435.20	199.82	0.55
USACE	2973	500YR	1574.00	350.40	354.92		355.14	0.004511	6.62	489.60	205.21	0.56
USACE	2973	SEPT2011	727.00	350.40	353.86		354.04	0.004709	5.63	284.37	186.22	0.54
USACE	2748	2YR	276.00	349.49	351.92		352.02	0.004196	4.13	144.37	136.14	0.48
USACE	2748	5YR	443.00	349.49	352.31		352.44	0.004407	4.71	202.49	155.12	0.51
USACE	2748	10YR	577.00	349.49	352.59		352.72	0.004581	5.13	247.15	174.30	0.53
USACE	2748	25YR	794.00	349.49	352.95		353.10	0.004588	5.55	313.76	192.37	0.54
USACE	2748	50YR	963.00	349.49	353.20		353.37	0.004529	5.79	364.77	205.93	0.54
USACE	2748	100YR	1142.00	349.49	353.45		353.62	0.004427	5.99	416.02	215.93	0.54
USACE	2748	100YRPLUS	1494.00	349.49	353.87		354.06	0.004277	6.31	511.87	233.49	0.54
USACE	2748	200YR	1324.00	349.49	353.68		353.85	0.004384	6.19	466.44	227.50	0.54
USACE	2748	500YR	1574.00	349.49	353.96		354.15	0.004241	6.38	533.06	237.01	0.54
USACE	2748	SEPT2011	727.00	349.49	352.84		352.99	0.004592	5.43	293.44	186.78	0.54
USACE	2523	2YR	276.00	349.09	351.12		351.18	0.003256	3.19	172.74	167.67	0.41
USACE	2523	5YR	443.00	349.09	351.52		351.59	0.003139	3.57	242.54	180.91	0.42
USACE	2523	10YR	577.00	349.09	351.79		351.87	0.003095	3.82	291.81	189.11	0.42
USACE	2523	25YR	794.00	349.09	352.16		352.25	0.003032	4.15	364.15	197.86	0.43
USACE	2523	50YR	963.00	349.09	352.42		352.52	0.003030	4.39	416.38	205.35	0.44
USACE	2523	100YR	1142.00	349.09	352.67		352.79	0.002995	4.59	469.14	211.38	0.44
USACE	2523	100YRPLUS	1494.00	349.09	353.12		353.25	0.002909	4.92	566.31	219.50	0.44
USACE	2523	200YR	1324.00	349.09	352.91		353.03	0.002949	4.77	520.48	216.01	0.44
USACE	2523	500YR	1574.00	349.09	353.22		353.35	0.002893	4.98	587.23	221.01	0.44
USACE	2523	SEPT2011	727.00	349.09	352.05		352.14	0.003039	4.05	342.76	195.13	0.43
USACE	2312	2YR	276.00	348.52	350.62		350.66	0.001883	2.42	201.79	167.27	0.31
USACE	2312	5YR	443.00	348.52	351.03		351.08	0.001891	2.77	271.47	175.17	0.33
USACE	2312	10YR	577.00	348.52	351.29		351.35	0.001942	3.02	317.70	179.62	0.34
USACE	2312	25YR	794.00	348.52	351.66		351.74	0.001973	3.33	386.04	186.95	0.35
USACE	2312	50YR	963.00	348.52	351.92		352.01	0.001973	3.53	435.08	191.37	0.35
USACE	2312	100YR	1142.00	348.52	352.18		352.27	0.001961	3.71	485.24	199.19	0.35
USACE	2312	100YRPLUS	1494.00	348.52	352.64		352.75	0.001926	4.00	579.34	208.93	0.36
USACE	2312	200YR	1324.00	348.52	352.42		352.53	0.001941	3.87	534.86	204.69	0.36
USACE	2312	500YR	1574.00	348.52	352.73		352.85	0.001920	4.06	599.61	210.70	0.36
USACE	2312	SEPT2011	727.00	348.52	351.55		351.62	0.001963	3.24	366.04	184.87	0.34
USACE	2104	2YR	276.00	347.71	349.61	349.52	349.90	0.009256	4.88	90.29	109.75	0.68
USACE	2104	5YR	443.00	347.71	349.90	349.80	350.29	0.009516	5.52	122.61	114.47	0.70
USACE	2104	10YR	577.00	347.71	350.16		350.58	0.008281	5.61	153.15	119.28	0.67
USACE	2104	25YR	794.00	347.71	350.51		350.98	0.007541	5.91	195.77	125.67	0.66
USACE	2104	50YR	963.00	347.71	350.79	350.47	351.28	0.006810	6.01	230.97	130.92	0.63
USACE	2104	100YR	1142.00	347.71	351.02	350.66	351.55	0.006563	6.24	262.65	134.94	0.63
USACE	2104	100YRPLUS	1494.00	347.71	351.41	350.98	352.03	0.006564	6.76	316.15	141.85	0.64
USACE	2104	200YR	1324.00	347.71	351.24	350.84	351.81	0.006490	6.49	291.95	138.84	0.63
USACE	2104	500YR	1574.00	347.71	351.48	351.06	352.13	0.006625	6.88	326.70	143.06	0.65
USACE	2104	SEPT2011	727.00	347.71	350.42		350.87	0.007616	5.79	183.87	123.89	0.66
USACE	1821	2YR	276.00	345.81	347.33		347.40	0.007968	3.40	156.13	157.36	0.51
USACE	1821	5YR	443.00	345.81	347.71		347.80	0.007615	3.92	218.93	168.67	0.52
USACE	1821	10YR	577.00	345.81	347.85		347.97	0.009591	4.62	242.12	171.89	0.59
USACE	1821	25YR	794.00	345.81	348.05		348.22	0.012160	5.57	277.49	176.82	0.68
USACE	1821	50YR	963.00	345.81	348.10		348.33	0.016439	6.57	285.62	177.98	0.79
USACE	1821	100YR	1142.00	345.81	348.19		348.48	0.019814	7.40	301.11	180.17	0.87
USACE	1821	100YRPLUS	1494.00	345.81	348.45	347.91	348.83	0.022254	8.46	351.28	192.61	0.94
USACE	1821	200YR	1324.00	345.81	348.31		348.66	0.021876	8.07	323.89	186.72	0.93
USACE	1821	500YR	1574.00	345.81	348.53	347.97	348.91	0.022079	8.60	365.52	195.06	0.94
USACE	1821	SEPT2011	727.00	345.81	347.98		348.14	0.011735	5.34	264.46	174.94	0.66
USACE	1609	2YR	276.00	342.71	344.78	344.78	345.18	0.014006	6.77	77.92	117.02	0.86
USACE	1609	5YR	443.00	342.71	345.12	345.12	345.58	0.014890	7.78	123.92	149.65	0.91
USACE	1609	10YR	577.00	342.71	345.53		345.87	0.010164	7.19	194.26	191.75	0.77
USACE	1609	25YR	794.00	342.71	346.10		346.34	0.006777	6.67	344.25	333.70	0.65
USACE	1609	50YR	963.00	342.71	346.50		346.66	0.004559	5.91	480.31	352.22	0.55
USACE	1609	100YR	1142.00	342.71	346.88		347.01	0.003365	5.43	620.36	371.33	0.48
USACE	1609	100YRPLUS	1494.00	342.71	347.56		347.65	0.002256	4.93	882.65	405.45	0.40
USACE	1609	200YR	1324.00	342.71	347.25		347.35	0.002646	5.10	760.81	390.12	0.43
USACE	1609	500YR	1574.00	342.71	347.72		347.81	0.002039	4.80	951.62	414.12	0.38
USACE	1609	SEPT2011	727.00	342.71	345.95		346.20	0.007288	6.70	294.47	303.99	0.67
USACE	1374	2YR	294.00	342.09	344.34	343.35	344.36	0.000950	1.88	347.01	345.60	0.23
USACE	1374	5YR	485.00	342.09	344.85	343.53	344.87	0.001003	2.22	471.00	365.50	0.24
USACE	1374	10YR	636.00	342.09	345.24	343.65	345.27	0.000957	2.39	571.42	380.90	0.24
USACE	1374	25YR	879.00	342.09	345.81	343.82	345.85	0.000897	2.59	718.41	397.12	0.24
USACE	1374	50YR	1071.00	342.09	346.20	343.95	346.24	0.000874	2.74	821.85	406.97	0.24
USACE	1374	100YR	1276.00	342.09	346.60	344.06	346.64	0.000852	2.88	926.86	416.52	0.24
USACE	1374	100YRPLUS	1669.00	342.09	347.29	344.27	347.35	0.000820	3.12	1114.63	434.45	0.24
USACE	1374	200YR	1486.00	342.09	346.98	344.18	347.03	0.000834	3.02	1028.71	426.07	0.24
USACE	1374	500YR	1787.00	342.09	347.47	344.36	347.52	0.000827	3.20	1161.55	438.93	0.25
USACE	1374	SEPT2011	819.00	342.09	345.65	343.78	345.68	0.000942	2.58	675.88	393.57	0.25

HEC-RAS Plan: Existing River: ErismanRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1098	2YR	559.00	340.37	342.60	342.60	343.04	0.031637	8.36	161.41	148.75	1.04
USACE	1098	5YR	992.00	340.37	343.79		343.96	0.008206	5.82	400.60	224.37	0.57
USACE	1098	10YR	1304.00	340.37	344.34		344.49	0.006167	5.60	525.43	235.51	0.51
USACE	1098	25YR	1794.00	340.37	344.99		345.14	0.005173	5.71	684.28	249.34	0.48
USACE	1098	50YR	2170.00	340.37	345.41		345.57	0.004837	5.87	790.03	254.30	0.47
USACE	1098	100YR	2571.00	340.37	345.83		346.00	0.004588	6.04	897.76	263.72	0.47
USACE	1098	100YRPLUS	3362.00	340.37	346.53		346.73	0.004329	6.39	1087.87	273.36	0.46
USACE	1098	200YR	2983.00	340.37	346.22		346.40	0.004398	6.21	1001.83	269.22	0.46
USACE	1098	500YR	3551.00	340.37	346.71		346.91	0.004205	6.43	1137.45	275.33	0.46
USACE	1098	SEPT2011	1634.00	340.37	344.82		344.97	0.005248	5.60	641.22	247.09	0.48
USACE	849	2YR	559.00	336.43	342.18		342.22	0.000868	2.55	588.32	250.72	0.20
USACE	849	5YR	992.00	336.43	343.41		343.45	0.000839	2.88	920.95	286.72	0.20
USACE	849	10YR	1304.00	336.43	343.92		343.97	0.000955	3.24	1072.16	300.49	0.22
USACE	849	25YR	1794.00	336.43	344.53		344.59	0.001137	3.74	1259.50	310.47	0.24
USACE	849	50YR	2170.00	336.43	344.93		345.00	0.001265	4.08	1382.38	315.29	0.26
USACE	849	100YR	2571.00	336.43	345.32		345.40	0.001395	4.43	1507.84	329.27	0.27
USACE	849	100YRPLUS	3362.00	336.43	346.00		346.10	0.001556	4.93	1737.14	343.40	0.29
USACE	849	200YR	2983.00	336.43	345.70		345.78	0.001471	4.68	1634.35	336.22	0.28
USACE	849	500YR	3551.00	336.43	346.19		346.28	0.001555	4.99	1801.82	345.66	0.29
USACE	849	SEPT2011	1634.00	336.43	344.39		344.44	0.001053	3.55	1213.38	308.78	0.23
USACE	631	2YR	559.00	335.17	342.08		342.10	0.000355	1.94	738.72	230.13	0.13
USACE	631	5YR	992.00	335.17	343.28		343.31	0.000471	2.50	1030.82	261.54	0.16
USACE	631	10YR	1304.00	335.17	343.76		343.81	0.000588	2.91	1160.15	270.07	0.18
USACE	631	25YR	1794.00	335.17	344.33		344.39	0.000785	3.52	1314.96	278.57	0.21
USACE	631	50YR	2170.00	335.17	344.68		344.76	0.000928	3.93	1415.30	282.00	0.23
USACE	631	100YR	2571.00	335.17	345.04		345.13	0.001083	4.35	1515.55	289.20	0.25
USACE	631	100YRPLUS	3362.00	335.17	345.65		345.78	0.001366	5.10	1697.79	302.77	0.28
USACE	631	200YR	2983.00	335.17	345.38		345.49	0.001221	4.73	1617.53	296.02	0.27
USACE	631	500YR	3551.00	335.17	345.84		345.97	0.001382	5.19	1753.86	305.02	0.28
USACE	631	SEPT2011	1634.00	335.17	344.20		344.25	0.000705	3.30	1279.11	277.27	0.20
USACE	349	2YR	559.00	334.47	342.03	337.76	342.04	0.000132	1.26	1119.68	290.73	0.08
USACE	349	5YR	992.00	334.47	343.21	338.29	343.23	0.000186	1.66	1466.22	321.52	0.10
USACE	349	10YR	1304.00	334.47	343.68	338.66	343.70	0.000243	1.97	1605.76	375.55	0.12
USACE	349	25YR	1794.00	334.47	344.21	339.29	344.24	0.000343	2.43	1763.90	397.12	0.14
USACE	349	50YR	2170.00	334.47	344.54	339.52	344.58	0.000423	2.76	1863.02	409.37	0.16
USACE	349	100YR	2571.00	334.47	344.87	339.81	344.91	0.000506	3.09	1959.81	420.61	0.17
USACE	349	100YRPLUS	3362.00	334.47	345.44	340.26	345.50	0.000665	3.67	2128.71	442.29	0.20
USACE	349	200YR	2983.00	334.47	345.19	340.01	345.25	0.000584	3.39	2056.39	431.82	0.19
USACE	349	500YR	3551.00	334.47	345.61	340.33	345.68	0.000686	3.77	2181.98	450.06	0.20
USACE	349	SEPT2011	1634.00	334.47	344.10	339.13	344.12	0.000303	2.27	1729.38	393.62	0.13
USACE	202	2YR	559.00	333.88	342.02	337.24	342.02	0.000060	0.90	1300.36	403.04	0.06
USACE	202	5YR	988.00	333.88	343.20	337.70	343.21	0.000094	1.24	1637.59	422.33	0.07
USACE	202	10YR	1307.00	333.88	343.66	338.10	343.67	0.000128	1.50	1774.86	428.06	0.09
USACE	202	25YR	1806.00	333.88	344.18	338.52	344.20	0.000186	1.87	1931.47	432.25	0.10
USACE	202	50YR	2188.00	333.88	344.51	338.98	344.53	0.000232	2.14	2029.89	434.50	0.12
USACE	202	100YR	2595.00	333.88	344.82	339.19	344.86	0.000281	2.40	2126.36	436.84	0.13
USACE	202	100YRPLUS	3394.00	333.88	345.37	339.56	345.42	0.000376	2.87	2295.61	440.64	0.15
USACE	202	200YR	3016.00	333.88	345.14	339.38	345.18	0.000329	2.65	2223.24	439.21	0.14
USACE	202	500YR	3598.00	333.88	345.55	339.63	345.60	0.000391	2.96	2349.96	441.66	0.15
USACE	202	SEPT2011	1663.00	333.88	344.07	338.32	344.09	0.000167	1.76	1897.44	431.47	0.10
USACE	133	2YR	559.00	333.38	341.95	336.37	342.00	0.000323	2.15	366.73	419.07	0.13
USACE	133	5YR	988.00	333.38	343.19	337.41	343.20	0.000066	1.06	1798.18	437.14	0.06
USACE	133	10YR	1307.00	333.38	343.65	337.98	343.66	0.000094	1.31	1913.83	441.97	0.07
USACE	133	25YR	1806.00	333.38	344.17	338.76	344.19	0.000144	1.69	2043.76	447.03	0.09
USACE	133	50YR	2188.00	333.38	344.49	339.28	344.52	0.000187	1.96	2124.61	450.50	0.11
USACE	133	100YR	2595.00	333.38	344.81	339.83	344.84	0.000233	2.23	2203.28	453.82	0.12
USACE	133	100YRPLUS	3394.00	333.38	345.35	340.79	345.40	0.000327	2.73	2340.00	459.66	0.14
USACE	133	200YR	3016.00	333.38	345.12	340.34	345.16	0.000281	2.49	2281.81	456.92	0.13
USACE	133	500YR	3598.00	333.38	345.53	341.02	345.58	0.000346	2.83	2383.83	466.85	0.15
USACE	133	SEPT2011	1663.00	333.38	344.06	338.56	344.07	0.000128	1.58	2015.74	445.87	0.09
USACE	87 Auction Road		Culvert									
USACE	42	2YR	559.00	333.05	337.59	335.90	337.88	0.003705	4.45	175.33	196.11	0.39
USACE	42	5YR	988.00	333.05	338.47	337.31	338.76	0.003701	5.08	408.72	257.44	0.41
USACE	42	10YR	1307.00	333.05	338.93	337.94	339.23	0.003701	5.40	530.36	262.99	0.41
USACE	42	25YR	1806.00	333.05	339.55	338.60	339.85	0.003700	5.81	693.06	318.57	0.42
USACE	42	50YR	2188.00	333.05	339.95	338.86	340.27	0.003703	6.08	802.80	341.66	0.43
USACE	42	100YR	2595.00	333.05	340.36	339.11	340.68	0.003700	6.33	911.05	354.33	0.43
USACE	42	100YRPLUS	3394.00	333.05	341.07	339.55	341.42	0.003702	6.77	1104.58	378.30	0.44
USACE	42	200YR	3016.00	333.05	340.74	339.37	341.08	0.003702	6.57	1015.42	363.95	0.44
USACE	42	500YR	3598.00	333.05	341.23	339.64	341.59	0.003702	6.88	1151.12	386.80	0.44
USACE	42	SEPT2011	1663.00	333.05	339.38	338.49	339.69	0.003701	5.70	649.15	305.30	0.42

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	10764	2YR	69.00	515.70	517.19	517.11	517.59	0.020375	5.13	13.44	13.66	0.91
USACE	10764	5YR	110.00	515.70	517.60	517.48	518.09	0.017835	5.63	19.53	15.53	0.88
USACE	10764	10YR	143.00	515.70	517.87	517.72	518.43	0.016090	6.04	23.79	16.67	0.87
USACE	10764	25YR	196.00	515.70	518.24	518.05	518.91	0.014325	6.60	30.33	18.31	0.85
USACE	10764	50YR	236.00	515.70	518.53	518.28	519.25	0.012819	6.86	36.15	29.43	0.82
USACE	10764	100YR	279.00	515.70	518.69	518.69	519.53	0.013782	7.46	41.45	36.30	0.86
USACE	10764	100YRPLUS	365.00	515.70	519.22	519.22	519.96	0.009994	7.28	65.50	53.67	0.76
USACE	10764	200YR	322.00	515.70	518.92	518.92	519.77	0.012570	7.59	50.62	42.87	0.84
USACE	10764	500YR	380.00	515.70	519.27	519.27	520.02	0.009892	7.34	68.53	54.88	0.76
USACE	10764	SEPT2011	111.00	515.70	517.61	517.49	518.11	0.017714	5.63	19.70	15.57	0.88
USACE	10604	2YR	69.00	512.60	514.62		514.90	0.013569	4.23	16.62	13.29	0.63
USACE	10604	5YR	110.00	512.60	515.01		515.43	0.015245	5.27	22.07	15.08	0.69
USACE	10604	10YR	143.00	512.60	515.24		515.79	0.016832	6.01	25.77	16.18	0.74
USACE	10604	25YR	196.00	512.60	515.59	515.32	516.32	0.018342	6.96	31.67	18.47	0.79
USACE	10604	50YR	236.00	512.60	515.80	515.54	516.68	0.019936	7.67	36.72	31.39	0.84
USACE	10604	100YR	279.00	512.60	516.16	516.16	516.96	0.016142	7.52	49.44	39.43	0.77
USACE	10604	100YRPLUS	365.00	512.60	516.62	516.62	517.38	0.013681	7.64	70.11	49.00	0.73
USACE	10604	200YR	322.00	512.60	516.41	516.41	517.19	0.014724	7.59	59.97	44.81	0.75
USACE	10604	500YR	380.00	512.60	516.68	516.68	517.44	0.013550	7.69	73.10	50.05	0.73
USACE	10604	SEPT2011	111.00	512.60	515.01		515.44	0.015292	5.29	22.19	15.12	0.69
USACE	10447	2YR	69.00	511.11	513.13	512.66	513.29	0.007747	3.53	28.16	35.16	0.49
USACE	10447	5YR	110.00	511.11	513.49	513.06	513.69	0.007835	4.08	42.63	42.25	0.51
USACE	10447	10YR	143.00	511.11	513.73	513.30	513.95	0.007897	4.41	52.81	44.84	0.52
USACE	10447	25YR	196.00	511.11	514.00	513.56	514.27	0.008697	5.01	65.46	48.33	0.56
USACE	10447	50YR	236.00	511.11	514.20	513.74	514.50	0.008896	5.34	75.52	52.25	0.58
USACE	10447	100YR	279.00	511.11	514.37	513.89	514.70	0.009416	5.72	84.59	55.43	0.60
USACE	10447	100YRPLUS	365.00	511.11	514.70	514.15	515.07	0.009725	6.25	103.86	61.72	0.62
USACE	10447	200YR	322.00	511.11	514.53	514.04	514.89	0.009808	6.05	93.61	58.87	0.62
USACE	10447	500YR	380.00	511.11	514.75	514.21	515.13	0.009739	6.32	107.02	62.12	0.62
USACE	10447	SEPT2011	111.00	511.11	513.50	513.07	513.70	0.007836	4.09	42.96	42.34	0.51
USACE	10201	2YR	69.00	508.69	510.14	510.03	510.38	0.020032	4.05	21.28	33.74	0.73
USACE	10201	5YR	110.00	508.69	510.39	510.28	510.70	0.020968	4.83	30.33	44.09	0.78
USACE	10201	10YR	143.00	508.69	510.54	510.48	510.91	0.021651	5.32	37.82	53.57	0.80
USACE	10201	25YR	196.00	508.69	510.78	510.78	511.16	0.019781	5.66	53.61	75.43	0.79
USACE	10201	50YR	236.00	508.69	510.89	510.89	511.30	0.020460	6.02	62.21	78.41	0.81
USACE	10201	100YR	279.00	508.69	511.02	511.02	511.44	0.019845	6.22	72.73	83.18	0.81
USACE	10201	100YRPLUS	365.00	508.69	511.20	511.20	511.68	0.020988	6.81	87.77	85.26	0.85
USACE	10201	200YR	322.00	508.69	511.12	511.12	511.56	0.019727	6.44	81.64	84.40	0.82
USACE	10201	500YR	380.00	508.69	511.22	511.22	511.71	0.021225	6.91	90.10	85.58	0.85
USACE	10201	SEPT2011	111.00	508.69	510.39	510.29	510.71	0.020980	4.85	30.57	44.38	0.78
USACE	10005	2YR	69.00	507.49	508.40	508.08	508.42	0.005698	1.81	57.69	111.04	0.37
USACE	10005	5YR	110.00	507.49	508.57	508.21	508.61	0.006109	2.16	78.15	123.53	0.40
USACE	10005	10YR	143.00	507.49	508.69	508.28	508.73	0.006322	2.38	92.98	131.58	0.42
USACE	10005	25YR	196.00	507.49	508.85	508.38	508.91	0.006496	2.67	116.19	146.44	0.43
USACE	10005	50YR	236.00	507.49	508.95	508.43	509.01	0.006609	2.84	130.22	148.58	0.44
USACE	10005	100YR	279.00	507.49	509.04	508.51	509.11	0.006690	3.00	144.47	154.55	0.45
USACE	10005	100YRPLUS	365.00	507.49	509.21	508.62	509.29	0.006986	3.30	169.39	160.37	0.47
USACE	10005	200YR	322.00	507.49	509.13	508.59	509.20	0.006889	3.16	156.94	157.48	0.46
USACE	10005	500YR	380.00	507.49	509.23	508.53	509.32	0.007066	3.36	173.21	161.25	0.47
USACE	10005	SEPT2011	111.00	507.49	508.57	508.22	508.61	0.006121	2.17	78.57	123.94	0.40
USACE	9777	2YR	69.00	505.15	506.32	506.25	506.39	0.015693	2.92	38.89	124.42	0.61
USACE	9777	5YR	110.00	505.15	506.46	506.34	506.54	0.014733	3.19	55.69	138.82	0.61
USACE	9777	10YR	143.00	505.15	506.56	506.41	506.65	0.014102	3.36	68.81	173.45	0.61
USACE	9777	25YR	196.00	505.15	506.68	506.50	506.79	0.014068	3.64	84.66	186.34	0.62
USACE	9777	50YR	236.00	505.15	506.77	506.57	506.88	0.013974	3.82	95.65	188.68	0.63
USACE	9777	100YR	279.00	505.15	506.85	506.63	506.98	0.013847	3.98	106.77	192.03	0.63
USACE	9777	100YRPLUS	365.00	505.15	507.03	506.72	507.17	0.012742	4.17	130.04	203.18	0.62
USACE	9777	200YR	322.00	505.15	506.94	506.67	507.08	0.013161	4.07	118.88	198.91	0.62
USACE	9777	500YR	380.00	505.15	507.06	506.74	507.20	0.012434	4.19	134.42	208.20	0.62
USACE	9777	SEPT2011	111.00	505.15	506.46	506.35	506.54	0.014684	3.19	56.11	139.55	0.61
USACE	9531	2YR	69.00	500.88	502.29	502.29	502.47	0.016517	4.14	29.62	81.60	0.80
USACE	9531	5YR	110.00	500.88	502.45	502.45	502.66	0.017237	4.76	43.73	92.17	0.84
USACE	9531	10YR	143.00	500.88	502.54	502.54	502.77	0.017985	5.16	52.54	95.52	0.87
USACE	9531	25YR	196.00	500.88	502.68	502.67	502.94	0.017867	5.58	66.23	99.55	0.89
USACE	9531	50YR	236.00	500.88	502.77	502.74	503.04	0.017872	5.85	75.24	108.79	0.90
USACE	9531	100YR	279.00	500.88	502.86	502.81	503.15	0.017901	6.12	84.54	124.29	0.91
USACE	9531	100YRPLUS	365.00	500.88	502.99	502.96	503.34	0.019850	6.82	98.12	135.30	0.97
USACE	9531	200YR	322.00	500.88	502.93	502.89	503.25	0.019038	6.50	91.38	131.16	0.94
USACE	9531	500YR	380.00	500.88	503.01	502.96	503.37	0.020383	6.97	99.94	136.13	0.99
USACE	9531	SEPT2011	111.00	500.88	502.45	502.45	502.66	0.017312	4.77	43.97	92.28	0.84
USACE	9245	2YR	69.00	497.26	498.94	498.56	499.06	0.007724	3.03	33.00	54.24	0.48
USACE	9245	5YR	110.00	497.26	499.24	498.84	499.38	0.007768	3.49	51.02	69.38	0.49
USACE	9245	10YR	143.00	497.26	499.43	499.06	499.59	0.007655	3.75	65.15	79.06	0.50
USACE	9245	25YR	196.00	497.26	499.69	499.29	499.86	0.007267	4.01	88.35	95.03	0.50
USACE	9245	50YR	236.00	497.26	499.86		500.03	0.006988	4.15	105.56	108.55	0.50
USACE	9245	100YR	279.00	497.26	500.04		500.21	0.006731	4.29	125.25	116.25	0.49

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9245	100YRPLUS	365.00	497.26	500.36		500.53	0.005822	4.35	164.78	126.11	0.47
USACE	9245	200YR	322.00	497.26	500.20		500.37	0.006217	4.31	144.90	119.74	0.48
USACE	9245	500YR	380.00	497.26	500.42		500.58	0.005647	4.35	172.01	127.53	0.46
USACE	9245	SEPT2011	111.00	497.26	499.24	498.85	499.39	0.007769	3.50	51.45	69.76	0.49
USACE	8992	2YR	69.00	494.36	495.57	495.57	495.98	0.021358	5.20	13.61	17.61	0.98
USACE	8992	5YR	110.00	494.36	495.88	495.88	496.42	0.018798	5.99	19.44	19.49	0.97
USACE	8992	10YR	143.00	494.36	496.10	496.10	496.73	0.017558	6.47	23.84	20.74	0.96
USACE	8992	25YR	196.00	494.36	496.41	496.41	497.15	0.016219	7.10	30.55	22.54	0.96
USACE	8992	50YR	236.00	494.36	496.62	496.62	497.43	0.015467	7.50	35.45	23.77	0.95
USACE	8992	100YR	279.00	494.36	496.84	496.84	497.72	0.014646	7.83	40.76	25.04	0.94
USACE	8992	100YRPLUS	365.00	494.36	497.19	497.19	498.23	0.014513	8.62	49.89	27.77	0.96
USACE	8992	200YR	322.00	494.36	497.01	497.01	497.98	0.014671	8.26	45.19	26.06	0.95
USACE	8992	500YR	380.00	494.36	497.24	497.24	498.31	0.014593	8.76	51.36	28.38	0.97
USACE	8992	SEPT2011	111.00	494.36	495.89	495.89	496.43	0.018748	6.00	19.58	19.53	0.97
USACE	8770	2YR	69.00	492.10	493.99	493.47	494.13	0.003758	3.08	25.25	76.97	0.45
USACE	8770	5YR	110.00	492.10	494.39	493.77	494.58	0.003888	3.68	34.94	82.58	0.47
USACE	8770	10YR	143.00	492.10	494.66	493.99	494.89	0.003996	4.08	43.06	92.37	0.49
USACE	8770	25YR	196.00	492.10	495.03	494.27	495.29	0.003883	4.48	57.07	100.85	0.50
USACE	8770	50YR	236.00	492.10	495.13	494.46	495.47	0.004801	5.11	61.22	103.77	0.56
USACE	8770	100YR	279.00	492.10	495.32	494.79	495.69	0.004962	5.44	69.86	109.70	0.57
USACE	8770	100YRPLUS	365.00	492.10	495.64	495.11	496.07	0.005239	6.01	85.78	136.01	0.60
USACE	8770	200YR	322.00	492.10	495.49	494.96	495.89	0.005066	5.72	78.28	129.03	0.58
USACE	8770	500YR	380.00	492.10	495.69	495.19	496.13	0.005300	6.10	88.28	138.10	0.60
USACE	8770	SEPT2011	111.00	492.10	494.41	493.79	494.60	0.003862	3.69	35.27	82.79	0.47
USACE	8582	2YR	69.00	490.96	492.28	492.28	492.72	0.020636	5.32	13.26	108.67	0.97
USACE	8582	5YR	110.00	490.96	492.62	492.62	493.18	0.018048	6.11	19.07	116.04	0.95
USACE	8582	10YR	143.00	490.96	492.86	492.86	493.50	0.016411	6.55	23.85	121.84	0.94
USACE	8582	25YR	196.00	490.96	493.18	493.18	493.94	0.015610	7.24	31.10	132.59	0.94
USACE	8582	50YR	236.00	490.96	493.62	493.62	494.21	0.009504	6.54	48.09	165.76	0.76
USACE	8582	100YR	279.00	490.96	493.79	493.79	494.41	0.009438	6.84	56.38	169.45	0.77
USACE	8582	100YRPLUS	365.00	490.96	494.09	494.09	494.75	0.009419	7.36	71.83	176.46	0.78
USACE	8582	200YR	322.00	490.96	493.94	493.94	494.59	0.009594	7.16	63.72	172.81	0.78
USACE	8582	500YR	380.00	490.96	494.13	494.13	494.81	0.009377	7.43	74.54	177.51	0.78
USACE	8582	SEPT2011	111.00	490.96	492.63	492.63	493.19	0.017912	6.11	19.24	116.26	0.95
USACE	8334	2YR	69.00	485.34	486.57	486.57	486.94	0.018642	4.95	15.67	26.37	0.92
USACE	8334	5YR	110.00	485.34	486.89	486.89	487.27	0.014112	5.28	26.93	41.57	0.84
USACE	8334	10YR	143.00	485.34	487.04	487.04	487.48	0.014810	5.82	33.35	49.46	0.88
USACE	8334	25YR	196.00	485.34	487.32	487.32	487.72	0.011807	5.88	49.08	60.73	0.81
USACE	8334	50YR	236.00	485.34	487.43	487.43	487.88	0.012466	6.31	55.88	62.89	0.84
USACE	8334	100YR	279.00	485.34	487.55	487.55	488.03	0.012491	6.61	63.92	65.61	0.85
USACE	8334	100YRPLUS	365.00	485.34	487.73	487.73	488.30	0.013740	7.37	76.06	69.24	0.91
USACE	8334	200YR	322.00	485.34	487.66	487.66	488.17	0.012563	6.90	71.43	67.94	0.86
USACE	8334	500YR	380.00	485.34	487.76	487.76	488.35	0.013874	7.49	78.27	70.13	0.91
USACE	8334	SEPT2011	111.00	485.34	486.90	486.90	487.28	0.014024	5.28	27.23	41.88	0.84
USACE	8079	2YR	69.00	481.97	483.56	483.30	483.79	0.008451	3.88	19.16	23.16	0.64
USACE	8079	5YR	110.00	481.97	483.86	483.71	484.16	0.008670	4.59	30.44	47.22	0.68
USACE	8079	10YR	143.00	481.97	483.99	483.92	484.35	0.009920	5.20	36.80	51.49	0.73
USACE	8079	25YR	196.00	481.97	484.21	484.21	484.62	0.010150	5.74	49.29	61.82	0.76
USACE	8079	50YR	236.00	481.97	484.38	484.32	484.78	0.009118	5.80	60.59	65.07	0.73
USACE	8079	100YR	279.00	481.97	484.44	484.42	484.94	0.011196	6.54	64.10	66.80	0.81
USACE	8079	100YRPLUS	365.00	481.97	484.70	484.68	485.21	0.010429	6.85	82.80	74.01	0.80
USACE	8079	200YR	322.00	481.97	484.58	484.58	485.08	0.010644	6.68	74.13	71.46	0.80
USACE	8079	500YR	380.00	481.97	484.73	484.71	485.26	0.010515	6.95	85.26	74.74	0.81
USACE	8079	SEPT2011	111.00	481.97	483.86	483.73	484.16	0.008694	4.60	30.67	47.35	0.68
USACE	7885	2YR	69.00	478.97	480.33	480.33	480.81	0.035151	5.55	13.19	16.47	0.97
USACE	7885	5YR	110.00	478.97	480.71	480.71	481.30	0.029197	6.26	20.30	25.06	0.94
USACE	7885	10YR	143.00	478.97	481.05	481.05	481.60	0.021608	6.22	31.15	36.36	0.84
USACE	7885	25YR	196.00	478.97	481.42	481.42	481.97	0.017903	6.45	48.34	55.19	0.79
USACE	7885	50YR	236.00	478.97	481.53	481.53	482.19	0.020867	7.20	54.36	61.55	0.85
USACE	7885	100YR	279.00	478.97	481.84	481.84	482.39	0.015615	6.80	76.03	74.25	0.76
USACE	7885	100YRPLUS	365.00	478.97	482.09	482.09	482.70	0.016352	7.42	95.61	80.06	0.79
USACE	7885	200YR	322.00	478.97	481.97	481.97	482.55	0.016244	7.16	85.48	77.20	0.78
USACE	7885	500YR	380.00	478.97	482.14	482.14	482.74	0.016138	7.46	99.59	80.67	0.78
USACE	7885	SEPT2011	111.00	478.97	480.73	480.73	481.31	0.028901	6.26	20.58	26.31	0.93
USACE	7691	2YR	69.00	476.04	477.59		477.66	0.005859	2.77	47.81	58.83	0.42
USACE	7691	5YR	110.00	476.04	477.91		478.00	0.005918	3.21	67.08	62.14	0.44
USACE	7691	10YR	143.00	476.04	478.14		478.24	0.005815	3.46	81.66	65.31	0.44
USACE	7691	25YR	196.00	476.04	478.47		478.58	0.005675	3.80	103.87	70.94	0.45
USACE	7691	50YR	236.00	476.04	478.65		478.77	0.005934	4.10	116.96	73.40	0.47
USACE	7691	100YR	279.00	476.04	478.81		478.96	0.006695	4.55	129.54	85.70	0.50
USACE	7691	100YRPLUS	365.00	476.04	479.07		479.26	0.007455	5.12	152.89	90.85	0.54
USACE	7691	200YR	322.00	476.04	479.00		479.16	0.006534	4.71	146.16	89.71	0.50
USACE	7691	500YR	380.00	476.04	479.10		479.30	0.007769	5.26	155.17	91.23	0.55
USACE	7691	SEPT2011	111.00	476.04	477.93		478.02	0.005734	3.18	68.29	62.35	0.43
USACE	7512	2YR	115.00	473.34	474.96	474.96	475.40	0.023998	5.59	25.53	34.34	0.85

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	7512	5YR	190.00	473.34	475.42	475.42	475.90	0.019387	6.12	44.98	54.21	0.80
USACE	7512	10YR	251.00	473.34	475.66	475.66	476.17	0.018893	6.55	58.66	61.61	0.81
USACE	7512	25YR	349.00	473.34	475.96	475.96	476.52	0.018838	7.17	78.52	74.13	0.82
USACE	7512	50YR	419.00	473.34	476.16	476.16	476.73	0.017837	7.37	95.58	91.77	0.81
USACE	7512	100YR	493.00	473.34	476.39	476.39	476.93	0.015965	7.39	117.90	99.89	0.78
USACE	7512	100YRPLUS	645.00	473.34	476.72	476.64	477.24	0.014442	7.57	152.46	111.85	0.76
USACE	7512	200YR	569.00	473.34	476.51	476.50	477.09	0.016747	7.78	129.83	102.81	0.80
USACE	7512	500YR	677.00	473.34	476.80		477.30	0.013725	7.50	161.64	113.49	0.74
USACE	7512	SEPT2011	200.00	473.34	475.47	475.47	475.95	0.018917	6.16	47.73	55.96	0.79
USACE	7349	2YR	115.00	470.56	474.38		474.41	0.000837	1.78	134.39	88.40	0.18
USACE	7349	5YR	190.00	470.56	474.69		474.75	0.001469	2.51	163.69	98.12	0.24
USACE	7349	10YR	251.00	470.56	474.89		474.97	0.001953	3.00	183.70	103.42	0.27
USACE	7349	25YR	349.00	470.56	475.16		475.27	0.002683	3.68	212.03	110.48	0.33
USACE	7349	50YR	419.00	470.56	475.33		475.46	0.003078	4.05	231.64	112.76	0.35
USACE	7349	100YR	493.00	470.56	475.47		475.62	0.003597	4.48	247.15	114.48	0.38
USACE	7349	100YRPLUS	645.00	470.56	475.75		475.96	0.004421	5.18	280.50	118.43	0.43
USACE	7349	200YR	569.00	470.56	475.66		475.83	0.003825	4.76	269.31	117.00	0.40
USACE	7349	500YR	677.00	470.56	475.80		476.01	0.004619	5.34	286.26	119.16	0.44
USACE	7349	SEPT2011	200.00	470.56	474.72		474.78	0.001568	2.60	166.22	98.60	0.24
USACE	7274	2YR	115.00	468.05	474.35	470.44	474.37	0.000363	1.43	169.81	107.37	0.11
USACE	7274	5YR	190.00	468.05	474.64	471.19	474.68	0.000699	2.05	201.13	111.76	0.15
USACE	7274	10YR	251.00	468.05	474.81	471.71	474.87	0.000993	2.49	221.24	114.55	0.18
USACE	7274	25YR	349.00	468.05	475.04	472.66	475.13	0.001493	3.14	247.81	118.45	0.23
USACE	7274	50YR	419.00	468.05	475.19	473.05	475.30	0.001830	3.53	266.00	120.47	0.25
USACE	7274	100YR	493.00	468.05	475.30	473.38	475.43	0.002270	3.98	278.78	121.87	0.28
USACE	7274	100YRPLUS	645.00	468.05	475.53	474.06	475.72	0.003081	4.75	307.42	124.91	0.33
USACE	7274	200YR	569.00	468.05	475.47	473.66	475.63	0.002536	4.28	300.31	124.22	0.30
USACE	7274	500YR	677.00	468.05	475.57	474.32	475.76	0.003281	4.92	311.81	125.31	0.34
USACE	7274	SEPT2011	200.00	468.05	474.66	471.28	474.70	0.000756	2.14	203.51	112.08	0.16
USACE	7250 Private Drive		Culvert									
USACE	7224	2YR	115.00	467.55	470.24		470.43	0.004919	3.50	35.04	19.08	0.41
USACE	7224	5YR	190.00	467.55	470.45		470.87	0.009810	5.25	39.26	20.00	0.59
USACE	7224	10YR	251.00	467.55	470.63		471.26	0.013585	6.46	42.75	20.74	0.70
USACE	7224	25YR	349.00	467.55	470.80	470.62	471.86	0.021087	8.39	47.04	31.32	0.88
USACE	7224	50YR	419.00	467.55	471.45	471.45	472.19	0.012495	7.40	93.91	90.20	0.70
USACE	7224	100YR	493.00	467.55	471.68	471.68	472.43	0.012278	7.66	115.28	92.90	0.70
USACE	7224	100YRPLUS	645.00	467.55	472.03	472.03	472.85	0.012965	8.36	148.21	96.20	0.73
USACE	7224	200YR	569.00	467.55	471.88	471.88	472.65	0.012371	7.96	133.85	94.85	0.71
USACE	7224	500YR	677.00	467.55	472.09	472.09	472.93	0.013157	8.51	154.26	96.90	0.74
USACE	7224	SEPT2011	200.00	467.55	470.49		470.94	0.010400	5.45	39.90	20.13	0.60
USACE	7182	2YR	115.00	467.55	469.80	469.80	470.12	0.007823	4.90	46.58	115.35	0.65
USACE	7182	5YR	190.00	467.55	470.10	470.10	470.45	0.008358	5.63	82.20	119.38	0.69
USACE	7182	10YR	251.00	467.55	470.26	470.26	470.66	0.009526	6.30	100.76	121.45	0.74
USACE	7182	25YR	349.00	467.55	470.48	470.48	470.94	0.010606	7.08	127.96	124.30	0.79
USACE	7182	50YR	419.00	467.55	470.61	470.61	471.11	0.011353	7.58	144.43	125.99	0.83
USACE	7182	100YR	493.00	467.55	470.75	470.75	471.28	0.011790	7.99	161.71	127.66	0.85
USACE	7182	100YRPLUS	645.00	467.55	470.96	470.96	471.58	0.013398	8.95	188.75	129.70	0.92
USACE	7182	200YR	569.00	467.55	470.86	470.86	471.44	0.012444	8.44	176.70	128.85	0.88
USACE	7182	500YR	677.00	467.55	471.00	471.00	471.64	0.013477	9.08	195.20	130.15	0.92
USACE	7182	SEPT2011	200.00	467.55	470.13	470.13	470.49	0.008540	5.74	85.59	119.75	0.69
USACE	7061	2YR	115.00	465.88	468.05	467.64	468.29	0.010123	4.25	42.89	71.18	0.57
USACE	7061	5YR	190.00	465.88	468.55		468.75	0.007673	4.38	93.94	126.39	0.52
USACE	7061	10YR	251.00	465.88	468.78		468.99	0.007798	4.71	124.19	136.06	0.53
USACE	7061	25YR	349.00	465.88	469.08		469.29	0.007511	5.00	166.08	141.54	0.53
USACE	7061	50YR	419.00	465.88	469.27		469.48	0.007407	5.19	193.09	145.40	0.54
USACE	7061	100YR	493.00	465.88	469.45		469.67	0.007287	5.36	219.77	147.81	0.54
USACE	7061	100YRPLUS	645.00	465.88	469.76		469.99	0.007433	5.77	266.27	152.34	0.55
USACE	7061	200YR	569.00	465.88	469.61		469.84	0.007292	5.55	244.46	150.13	0.54
USACE	7061	500YR	677.00	465.88	469.81		470.06	0.007498	5.86	275.02	153.24	0.55
USACE	7061	SEPT2011	200.00	465.88	468.57		468.79	0.008043	4.51	96.89	128.32	0.53
USACE	6905	2YR	115.00	464.37	466.53	466.10	466.79	0.009314	4.42	45.69	79.61	0.56
USACE	6905	5YR	190.00	464.37	466.78	466.78	467.17	0.013623	5.79	68.31	97.86	0.69
USACE	6905	10YR	251.00	464.37	466.99	466.99	467.40	0.013981	6.23	88.66	101.56	0.71
USACE	6905	25YR	349.00	464.37	467.24	467.21	467.69	0.014993	6.90	115.10	106.30	0.75
USACE	6905	50YR	419.00	464.37	467.41	467.33	467.88	0.015233	7.25	133.43	110.15	0.76
USACE	6905	100YR	493.00	464.37	467.58	467.50	468.07	0.015495	7.60	152.62	117.81	0.78
USACE	6905	100YRPLUS	645.00	464.37	467.89		468.40	0.015264	8.06	191.45	127.60	0.78
USACE	6905	200YR	569.00	464.37	467.74	467.65	468.25	0.015526	7.88	172.37	125.03	0.78
USACE	6905	500YR	677.00	464.37	467.95		468.46	0.015064	8.12	199.77	128.69	0.78
USACE	6905	SEPT2011	200.00	464.37	466.83	466.83	467.21	0.013103	5.77	73.48	98.93	0.68
USACE	6702	2YR	115.00	461.82	463.52	463.52	463.94	0.022845	5.45	29.48	49.49	0.83
USACE	6702	5YR	190.00	461.82	464.08		464.40	0.013175	5.22	63.01	64.39	0.67
USACE	6702	10YR	251.00	461.82	464.39		464.72	0.011858	5.47	83.96	76.47	0.65
USACE	6702	25YR	349.00	461.82	464.81		465.14	0.010421	5.75	117.51	83.03	0.62
USACE	6702	50YR	419.00	461.82	465.07		465.40	0.009660	5.89	139.27	85.14	0.61

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6702	100YR	493.00	461.82	465.32		465.65	0.009056	6.03	161.25	87.23	0.60
USACE	6702	100YRPLUS	645.00	461.82	465.81		466.15	0.008061	6.27	205.20	91.36	0.58
USACE	6702	200YR	569.00	461.82	465.57		465.91	0.008504	6.15	183.51	89.29	0.59
USACE	6702	500YR	677.00	461.82	465.91		466.25	0.007919	6.32	213.98	92.19	0.58
USACE	6702	SEPT2011	200.00	461.82	464.13		464.45	0.012965	5.27	66.25	64.99	0.66
USACE	6434	2YR	115.00	459.13	461.16	460.52	461.28	0.005216	3.14	55.83	49.73	0.41
USACE	6434	5YR	190.00	459.13	461.42	460.85	461.64	0.008178	4.31	69.62	54.09	0.53
USACE	6434	10YR	251.00	459.13	461.66	461.11	461.94	0.009128	4.90	83.02	57.45	0.57
USACE	6434	25YR	349.00	459.13	461.97	461.45	462.33	0.010593	5.74	101.08	60.82	0.63
USACE	6434	50YR	419.00	459.13	462.16	461.66	462.58	0.011507	6.26	112.65	62.88	0.66
USACE	6434	100YR	493.00	459.13	462.33	461.85	462.82	0.012473	6.79	123.68	64.73	0.70
USACE	6434	100YRPLUS	645.00	459.13	462.59	462.20	463.24	0.015169	7.92	140.86	67.46	0.78
USACE	6434	200YR	569.00	459.13	462.46	462.03	463.03	0.013912	7.38	132.34	66.14	0.74
USACE	6434	500YR	677.00	459.13	462.64	462.26	463.32	0.015673	8.14	144.34	68.00	0.79
USACE	6434	SEPT2011	200.00	459.13	461.47	460.90	461.70	0.008282	4.40	72.14	54.76	0.54
USACE	6158	2YR	115.00	457.14	458.39	458.39	458.57	0.024452	4.42	45.13	110.48	0.80
USACE	6158	5YR	190.00	457.14	458.73	458.53	458.85	0.012520	3.89	84.98	120.81	0.61
USACE	6158	10YR	251.00	457.14	458.90		459.02	0.011960	4.11	104.74	122.01	0.60
USACE	6158	25YR	349.00	457.14	459.14		459.28	0.011070	4.39	134.28	123.76	0.60
USACE	6158	50YR	419.00	457.14	459.29		459.44	0.010701	4.57	153.28	124.78	0.59
USACE	6158	100YR	493.00	457.14	459.45		459.61	0.010207	4.72	173.24	125.84	0.59
USACE	6158	100YRPLUS	645.00	457.14	459.79		459.96	0.008832	4.87	216.41	128.09	0.56
USACE	6158	200YR	569.00	457.14	459.63		459.80	0.009334	4.78	195.89	127.02	0.57
USACE	6158	500YR	677.00	457.14	459.85		460.03	0.008651	4.91	224.83	128.53	0.56
USACE	6158	SEPT2011	200.00	457.14	458.76	458.55	458.88	0.012578	3.95	87.96	120.99	0.61
USACE	5836	2YR	115.00	453.30	455.94	455.02	456.05	0.003513	2.97	64.19	82.01	0.35
USACE	5836	5YR	190.00	453.30	456.17	455.76	456.35	0.005457	3.96	85.01	105.56	0.45
USACE	5836	10YR	251.00	453.30	456.42	456.00	456.60	0.005353	4.19	113.60	116.87	0.45
USACE	5836	25YR	349.00	453.30	456.75	456.28	456.93	0.005377	4.52	153.14	124.90	0.46
USACE	5836	50YR	419.00	453.30	456.94	456.43	457.14	0.005371	4.71	178.08	127.80	0.46
USACE	5836	100YR	493.00	453.30	457.12	456.57	457.32	0.005496	4.94	200.83	130.53	0.47
USACE	5836	100YRPLUS	645.00	453.30	457.35	456.78	457.60	0.006527	5.62	231.22	133.72	0.52
USACE	5836	200YR	569.00	453.30	457.23	456.69	457.46	0.006090	5.32	215.69	132.10	0.50
USACE	5836	500YR	677.00	453.30	457.40	456.83	457.66	0.006693	5.74	237.61	134.38	0.53
USACE	5836	SEPT2011	200.00	453.30	456.23	455.79	456.40	0.005334	3.97	90.87	111.30	0.44
USACE	5571	2YR	115.00	451.79	453.47	453.47	454.00	0.026678	5.98	22.36	28.66	0.92
USACE	5571	5YR	190.00	451.79	454.10	454.10	454.38	0.010837	4.96	72.90	122.65	0.63
USACE	5571	10YR	251.00	451.79	454.23	454.23	454.54	0.012271	5.51	89.02	127.09	0.68
USACE	5571	25YR	349.00	451.79	454.40	454.40	454.76	0.014003	6.20	111.19	131.29	0.73
USACE	5571	50YR	419.00	451.79	454.50	454.50	454.90	0.015107	6.64	124.81	133.43	0.77
USACE	5571	100YR	493.00	451.79	454.61	454.59	455.03	0.015646	6.97	139.64	135.46	0.78
USACE	5571	100YRPLUS	645.00	451.79	454.95		455.30	0.012195	6.71	186.44	138.57	0.71
USACE	5571	200YR	569.00	451.79	454.80		455.17	0.013399	6.77	164.62	137.14	0.74
USACE	5571	500YR	677.00	451.79	455.02		455.36	0.011790	6.70	195.27	139.07	0.70
USACE	5571	SEPT2011	200.00	451.79	454.12	454.12	454.41	0.011305	5.09	75.05	123.27	0.64
USACE	5401	2YR	115.00	450.52	452.89		452.93	0.001202	2.09	115.16	124.58	0.26
USACE	5401	5YR	190.00	450.52	453.20		453.25	0.001523	2.58	154.36	129.05	0.29
USACE	5401	10YR	251.00	450.52	453.39		453.45	0.001769	2.93	179.11	131.56	0.32
USACE	5401	25YR	349.00	450.52	453.59		453.68	0.002305	3.52	206.07	133.59	0.37
USACE	5401	50YR	419.00	450.52	453.71		453.83	0.002650	3.89	223.05	134.80	0.40
USACE	5401	100YR	493.00	450.52	453.86		453.99	0.002858	4.17	243.29	136.22	0.42
USACE	5401	100YRPLUS	645.00	450.52	454.12		454.28	0.003308	4.73	278.41	138.56	0.46
USACE	5401	200YR	569.00	450.52	453.98		454.12	0.003192	4.51	258.58	137.26	0.45
USACE	5401	500YR	677.00	450.52	454.16		454.32	0.003456	4.87	283.52	138.90	0.47
USACE	5401	SEPT2011	200.00	450.52	453.20		453.26	0.001654	2.70	155.47	129.16	0.31
USACE	5320	2YR	115.00	448.87	452.84	451.19	452.86	0.000504	1.69	142.80	112.84	0.16
USACE	5320	5YR	190.00	448.87	453.13	451.95	453.17	0.000797	2.25	176.27	117.77	0.21
USACE	5320	10YR	251.00	448.87	453.30	452.37	453.35	0.001029	2.64	196.86	119.80	0.24
USACE	5320	25YR	349.00	448.87	453.47	452.51	453.54	0.001514	3.29	217.18	121.71	0.29
USACE	5320	50YR	419.00	448.87	453.57	452.66	453.66	0.001865	3.71	229.57	122.44	0.32
USACE	5320	100YR	493.00	448.87	453.70	452.77	453.81	0.002122	4.05	245.89	123.40	0.35
USACE	5320	100YRPLUS	645.00	448.87	453.92	452.98	454.07	0.002679	4.70	273.12	124.98	0.39
USACE	5320	200YR	569.00	448.87	453.79	452.88	453.92	0.002501	4.45	256.53	124.02	0.38
USACE	5320	500YR	677.00	448.87	453.95	453.03	454.10	0.002855	4.87	276.24	125.16	0.41
USACE	5320	SEPT2011	200.00	448.87	453.13	452.03	453.17	0.000881	2.36	176.48	117.79	0.22
USACE	5310 Private Drive		Culvert									
USACE	5293	2YR	115.00	447.92	449.29	449.29	449.82	0.024090	5.79	19.85	19.33	1.01
USACE	5293	5YR	190.00	447.92	449.74	449.74	450.41	0.022149	6.56	28.96	21.89	1.00
USACE	5293	10YR	251.00	447.92	450.03	450.03	450.80	0.021147	7.03	35.70	23.41	1.00
USACE	5293	25YR	349.00	447.92	450.42	450.42	451.36	0.019568	7.78	45.10	25.64	1.00
USACE	5293	50YR	419.00	447.92	450.99	450.99	451.68	0.010658	6.85	74.22	85.63	0.77
USACE	5293	100YR	493.00	447.92	451.26	451.26	451.88	0.008902	6.71	99.12	96.02	0.72
USACE	5293	100YRPLUS	645.00	447.92	451.55	451.55	452.22	0.009047	7.23	127.82	102.17	0.73
USACE	5293	200YR	569.00	447.92	451.42	451.42	452.05	0.008865	6.95	114.65	99.36	0.72
USACE	5293	500YR	677.00	447.92	451.56	451.56	452.28	0.009761	7.53	129.06	102.47	0.76

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5293	SEPT2011	200.00	447.92	449.79	449.79	450.47	0.022003	6.65	30.10	22.19	1.01
USACE	5258	2YR	115.00	447.01	448.31	448.31	448.74	0.024845	5.27	21.93	26.81	1.00
USACE	5258	5YR	190.00	447.01	448.65	448.65	449.24	0.021655	6.17	31.68	29.54	0.99
USACE	5258	10YR	251.00	447.01	448.90	448.90	449.59	0.019893	6.70	39.27	31.50	0.98
USACE	5258	25YR	349.00	447.01	449.24	449.24	450.08	0.018638	7.46	50.37	34.02	0.98
USACE	5258	50YR	419.00	447.01	449.43	449.43	450.41	0.019147	8.07	57.02	37.67	1.01
USACE	5258	100YR	493.00	447.01	450.01	450.01	450.68	0.009914	6.90	94.34	90.86	0.76
USACE	5258	100YRPLUS	645.00	447.01	450.36	450.36	451.04	0.009232	7.24	128.10	102.24	0.75
USACE	5258	200YR	569.00	447.01	450.21	450.21	450.87	0.009190	6.99	113.88	99.11	0.74
USACE	5258	500YR	677.00	447.01	450.41	450.41	451.11	0.009240	7.34	133.91	103.46	0.75
USACE	5258	SEPT2011	200.00	447.01	448.70	448.70	449.30	0.021314	6.26	32.94	29.88	0.99
USACE	5100	2YR	115.00	445.74	447.33		447.41	0.003025	2.72	66.02	83.90	0.40
USACE	5100	5YR	190.00	445.74	447.48		447.62	0.005150	3.79	79.21	90.01	0.53
USACE	5100	10YR	251.00	445.74	447.70		447.85	0.004979	4.07	100.32	101.90	0.54
USACE	5100	25YR	349.00	445.74	447.96		448.14	0.005314	4.59	130.31	135.86	0.57
USACE	5100	50YR	419.00	445.74	448.13		448.33	0.005506	4.93	155.56	158.38	0.58
USACE	5100	100YR	493.00	445.74	448.27	447.72	448.48	0.005276	5.04	179.86	167.31	0.58
USACE	5100	100YRPLUS	645.00	445.74	448.54	447.99	448.74	0.004897	5.20	224.56	173.54	0.57
USACE	5100	200YR	569.00	445.74	448.42	447.90	448.62	0.004948	5.08	204.47	170.89	0.56
USACE	5100	500YR	677.00	445.74	448.59	448.03	448.79	0.004831	5.24	233.53	174.64	0.56
USACE	5100	SEPT2011	200.00	445.74	447.53		447.67	0.004936	3.79	83.70	91.83	0.52
USACE	4956	2YR	155.00	444.70	445.99	445.99	446.38	0.017883	5.65	39.11	74.80	0.94
USACE	4956	5YR	254.00	444.70	446.37	446.37	446.60	0.009237	4.94	97.48	174.56	0.71
USACE	4956	10YR	341.00	444.70	446.47	446.47	446.74	0.011210	5.67	113.81	177.64	0.79
USACE	4956	25YR	481.00	444.70	446.63	446.63	446.94	0.012119	6.28	142.79	182.38	0.83
USACE	4956	50YR	587.00	444.70	446.73	446.73	447.08	0.012693	6.68	162.03	185.34	0.86
USACE	4956	100YR	694.00	444.70	446.81	446.81	447.20	0.013898	7.18	176.59	187.37	0.91
USACE	4956	100YRPLUS	908.00	444.70	446.96	446.96	447.43	0.015532	7.98	204.83	191.26	0.97
USACE	4956	200YR	805.00	444.70	446.88	446.88	447.32	0.015149	7.68	190.07	189.25	0.95
USACE	4956	500YR	959.00	444.70	446.99	446.99	447.48	0.015831	8.14	211.25	192.00	0.98
USACE	4956	SEPT2011	281.00	444.70	446.41	446.41	446.65	0.009520	5.11	104.36	175.86	0.72
USACE	4670	2YR	155.00	441.89	443.52		443.60	0.004919	3.24	79.65	105.31	0.50
USACE	4670	5YR	254.00	441.89	443.83		443.93	0.005084	3.81	118.09	135.48	0.53
USACE	4670	10YR	341.00	441.89	444.04		444.15	0.004981	4.09	148.12	148.16	0.53
USACE	4670	25YR	481.00	441.89	444.33		444.46	0.004724	4.40	194.58	164.87	0.53
USACE	4670	50YR	587.00	441.89	444.52		444.66	0.004577	4.59	225.92	171.59	0.53
USACE	4670	100YR	694.00	441.89	444.70		444.84	0.004420	4.73	256.73	177.49	0.53
USACE	4670	100YRPLUS	908.00	441.89	445.00		445.16	0.004236	5.01	312.49	185.45	0.53
USACE	4670	200YR	805.00	441.89	444.86		445.01	0.004308	4.88	286.34	181.81	0.53
USACE	4670	500YR	959.00	441.89	445.07		445.23	0.004221	5.08	324.83	187.35	0.53
USACE	4670	SEPT2011	281.00	441.89	443.90		444.01	0.005083	3.92	127.81	141.04	0.53
USACE	4289	2YR	155.00	439.18	441.06		441.26	0.007844	4.66	61.08	92.88	0.65
USACE	4289	5YR	254.00	439.18	441.37		441.59	0.007533	5.16	92.93	107.54	0.66
USACE	4289	10YR	341.00	439.18	441.58		441.82	0.007761	5.61	116.10	117.67	0.68
USACE	4289	25YR	481.00	439.18	441.82		442.11	0.008438	6.30	146.11	126.75	0.73
USACE	4289	50YR	587.00	439.18	441.98		442.30	0.008864	6.74	165.72	130.04	0.75
USACE	4289	100YR	694.00	439.18	442.11		442.47	0.009398	7.18	183.47	134.30	0.78
USACE	4289	100YRPLUS	908.00	439.18	442.35		442.77	0.010204	7.92	215.61	139.17	0.82
USACE	4289	200YR	805.00	439.18	442.24		442.63	0.009867	7.59	200.34	136.79	0.81
USACE	4289	500YR	959.00	439.18	442.40		442.84	0.010312	8.07	223.49	140.84	0.83
USACE	4289	SEPT2011	281.00	439.18	441.44		441.67	0.007575	5.30	100.39	110.30	0.67
USACE	3902	2YR	155.00	436.40	438.21	437.98	438.49	0.007379	4.60	48.74	92.90	0.64
USACE	3902	5YR	254.00	436.40	438.49	438.45	438.82	0.008155	5.39	77.49	113.35	0.69
USACE	3902	10YR	341.00	436.40	438.68	438.68	439.04	0.008321	5.81	102.30	132.73	0.71
USACE	3902	25YR	481.00	436.40	438.94		439.30	0.008153	6.21	137.41	140.29	0.71
USACE	3902	50YR	587.00	436.40	439.11		439.48	0.008014	6.45	161.81	145.37	0.72
USACE	3902	100YR	694.00	436.40	439.27		439.65	0.007818	6.64	185.54	149.54	0.72
USACE	3902	100YRPLUS	908.00	436.40	439.57		439.96	0.007359	6.92	231.20	156.13	0.71
USACE	3902	200YR	805.00	436.40	439.43		439.81	0.007591	6.80	209.30	152.89	0.71
USACE	3902	500YR	959.00	436.40	439.63		440.03	0.007302	6.99	241.46	158.07	0.71
USACE	3902	SEPT2011	281.00	436.40	438.55	438.51	438.90	0.008242	5.54	85.28	127.52	0.70
USACE	3670	2YR	155.00	434.60	436.93	436.48	437.12	0.004787	4.03	67.32	121.38	0.52
USACE	3670	5YR	254.00	434.60	437.24		437.42	0.004495	4.34	109.17	136.80	0.52
USACE	3670	10YR	341.00	434.60	437.46		437.64	0.004339	4.55	139.27	140.78	0.52
USACE	3670	25YR	481.00	434.60	437.74		437.93	0.004338	4.90	179.16	144.98	0.53
USACE	3670	50YR	587.00	434.60	437.93		438.13	0.004301	5.10	206.36	146.48	0.53
USACE	3670	100YR	694.00	434.60	438.09		438.31	0.004315	5.31	231.16	147.99	0.54
USACE	3670	100YRPLUS	908.00	434.60	438.39		438.63	0.004443	5.73	274.74	151.18	0.56
USACE	3670	200YR	805.00	434.60	438.25		438.48	0.004375	5.53	254.47	149.57	0.55
USACE	3670	500YR	959.00	434.60	438.45		438.70	0.004474	5.83	284.42	151.93	0.56
USACE	3670	SEPT2011	281.00	434.60	437.31		437.49	0.004464	4.42	118.65	138.02	0.52
USACE	3351	2YR	155.00	432.27	434.98	434.43	435.26	0.007286	4.64	53.49	101.61	0.53
USACE	3351	5YR	254.00	432.27	435.35	435.25	435.63	0.007443	5.17	103.25	174.78	0.55
USACE	3351	10YR	341.00	432.27	435.54	435.48	435.84	0.007924	5.58	139.46	190.33	0.57
USACE	3351	25YR	481.00	432.27	435.79		436.09	0.008375	6.06	187.60	194.99	0.60

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3351	50YR	587.00	432.27	435.95		436.26	0.008813	6.41	217.74	199.52	0.62
USACE	3351	100YR	694.00	432.27	436.09		436.41	0.009116	6.70	246.19	202.20	0.63
USACE	3351	100YRPLUS	908.00	432.27	436.36		436.69	0.009314	7.11	300.79	206.26	0.65
USACE	3351	200YR	805.00	432.27	436.23		436.56	0.009262	6.93	274.91	204.46	0.64
USACE	3351	500YR	959.00	432.27	436.41		436.75	0.009337	7.20	313.13	207.09	0.65
USACE	3351	SEPT2011	281.00	432.27	435.42	435.33	435.70	0.007508	5.28	116.20	184.98	0.55
USACE	3001	2YR	155.00	429.56	432.10		432.38	0.009623	4.84	49.86	60.71	0.59
USACE	3001	5YR	254.00	429.56	432.49	432.40	432.78	0.009250	5.34	95.62	155.78	0.60
USACE	3001	10YR	341.00	429.56	432.75		433.01	0.008505	5.47	136.75	170.14	0.59
USACE	3001	25YR	481.00	429.56	433.06		433.30	0.007884	5.67	192.11	177.96	0.57
USACE	3001	50YR	587.00	429.56	433.29		433.51	0.007298	5.72	232.09	180.66	0.56
USACE	3001	100YR	694.00	429.56	433.49		433.71	0.006850	5.77	269.79	182.97	0.55
USACE	3001	100YRPLUS	908.00	429.56	433.86		434.07	0.006343	5.94	337.20	187.05	0.54
USACE	3001	200YR	805.00	429.56	433.69		433.91	0.006534	5.85	306.00	185.13	0.54
USACE	3001	500YR	959.00	429.56	433.94		434.15	0.006247	5.98	352.46	188.00	0.53
USACE	3001	SEPT2011	281.00	429.56	432.57	432.49	432.85	0.009211	5.44	107.51	160.25	0.60
USACE	2798	2YR	155.00	428.64	430.74		430.83	0.005885	3.39	103.26	111.30	0.45
USACE	2798	5YR	254.00	428.64	431.07		431.18	0.006493	4.00	140.81	115.86	0.49
USACE	2798	10YR	341.00	428.64	431.32		431.45	0.006794	4.41	169.84	120.21	0.51
USACE	2798	25YR	481.00	428.64	431.73		431.87	0.006257	4.73	220.55	126.56	0.51
USACE	2798	50YR	587.00	428.64	431.96		432.12	0.006425	5.06	250.42	130.95	0.52
USACE	2798	100YR	694.00	428.64	432.19		432.36	0.006445	5.33	281.49	137.57	0.53
USACE	2798	100YRPLUS	908.00	428.64	432.61		432.80	0.006241	5.70	341.05	146.92	0.53
USACE	2798	200YR	805.00	428.64	432.42		432.60	0.006318	5.53	313.87	142.38	0.53
USACE	2798	500YR	959.00	428.64	432.73		432.91	0.006013	5.71	357.98	148.96	0.52
USACE	2798	SEPT2011	281.00	428.64	431.17		431.28	0.006304	4.07	152.54	117.60	0.49
USACE	2472	2YR	191.00	426.26	428.48		428.63	0.007589	3.93	105.82	141.38	0.50
USACE	2472	5YR	304.00	426.26	428.86		429.01	0.006830	4.22	161.78	148.88	0.49
USACE	2472	10YR	400.00	426.26	429.12		429.28	0.006625	4.46	200.80	151.84	0.49
USACE	2472	25YR	571.00	426.26	429.42		429.62	0.007580	5.14	246.67	154.23	0.54
USACE	2472	50YR	717.00	426.26	429.75		429.95	0.006882	5.28	298.78	156.81	0.52
USACE	2472	100YR	864.00	426.26	430.05		430.25	0.006556	5.47	344.87	158.74	0.52
USACE	2472	100YRPLUS	1130.00	426.26	430.44		430.67	0.006796	5.98	407.80	160.79	0.54
USACE	2472	200YR	1010.00	426.26	430.28		430.49	0.006628	5.74	381.54	159.94	0.53
USACE	2472	500YR	1213.00	426.26	430.55		430.79	0.006920	6.15	424.92	161.35	0.54
USACE	2472	SEPT2011	354.00	426.26	429.00		429.15	0.006705	4.35	182.74	150.60	0.49
USACE	2177	2YR	191.00	423.27	425.68		425.98	0.010780	5.12	66.63	64.98	0.63
USACE	2177	5YR	304.00	423.27	426.09		426.45	0.011344	5.93	100.73	94.72	0.67
USACE	2177	10YR	400.00	423.27	426.35		426.73	0.011626	6.41	127.98	112.07	0.69
USACE	2177	25YR	571.00	423.27	426.87		427.20	0.008954	6.34	189.39	122.41	0.62
USACE	2177	50YR	717.00	423.27	427.03		427.44	0.010869	7.21	209.19	125.21	0.69
USACE	2177	100YR	864.00	423.27	427.20		427.67	0.012233	7.89	229.94	127.74	0.74
USACE	2177	100YRPLUS	1130.00	423.27	427.61		428.10	0.011642	8.29	283.51	132.44	0.73
USACE	2177	200YR	1010.00	423.27	427.41		427.91	0.012142	8.18	258.04	130.46	0.74
USACE	2177	500YR	1213.00	423.27	427.74		428.23	0.011270	8.33	301.11	133.66	0.73
USACE	2177	SEPT2011	354.00	423.27	426.24		426.61	0.011413	6.18	116.10	109.41	0.68
USACE	1948	2YR	191.00	421.49	424.29	423.87	424.49	0.004192	4.30	87.79	117.67	0.49
USACE	1948	5YR	304.00	421.49	424.66	424.36	424.87	0.004403	4.84	132.46	126.93	0.51
USACE	1948	10YR	400.00	421.49	424.92	424.57	425.14	0.004390	5.13	166.30	132.05	0.52
USACE	1948	25YR	571.00	421.49	425.05		425.40	0.006970	6.65	183.32	133.95	0.66
USACE	1948	50YR	717.00	421.49	425.51		425.78	0.004974	6.15	247.29	141.50	0.57
USACE	1948	100YR	864.00	421.49	426.02		426.23	0.003538	5.65	320.53	149.11	0.49
USACE	1948	100YRPLUS	1130.00	421.49	426.70		426.88	0.002723	5.49	424.54	157.21	0.44
USACE	1948	200YR	1010.00	421.49	426.42		426.61	0.002946	5.49	381.92	154.15	0.45
USACE	1948	500YR	1213.00	421.49	426.85		427.04	0.002662	5.55	449.68	159.14	0.44
USACE	1948	SEPT2011	354.00	421.49	424.79	424.49	425.01	0.004487	5.04	149.33	129.70	0.52
USACE	1710	2YR	191.00	420.31	422.61	422.61	423.01	0.010100	5.81	58.51	86.55	0.73
USACE	1710	5YR	304.00	420.31	422.96	422.96	423.37	0.009744	6.37	97.47	120.96	0.74
USACE	1710	10YR	400.00	420.31	423.17	423.17	423.61	0.010189	6.91	124.31	133.39	0.77
USACE	1710	25YR	571.00	420.31	423.97		424.15	0.003902	5.13	237.06	147.57	0.50
USACE	1710	50YR	717.00	420.31	425.11		425.19	0.001300	3.61	415.56	169.31	0.30
USACE	1710	100YR	864.00	420.31	425.72		425.79	0.000983	3.42	521.92	178.20	0.27
USACE	1710	100YRPLUS	1130.00	420.31	426.45		426.52	0.000867	3.51	653.72	185.91	0.26
USACE	1710	200YR	1010.00	420.31	426.16		426.23	0.000890	3.43	601.14	183.43	0.26
USACE	1710	500YR	1213.00	420.31	426.61		426.68	0.000873	3.58	683.47	186.88	0.26
USACE	1710	SEPT2011	354.00	420.31	423.10	423.10	423.51	0.009530	6.55	114.76	129.52	0.74
USACE	1519	2YR	191.00	417.97	420.23	420.18	420.53	0.011371	5.75	65.68	81.45	0.74
USACE	1519	5YR	304.00	417.97	421.51	420.46	421.58	0.001789	3.23	202.35	157.40	0.32
USACE	1519	10YR	400.00	417.97	422.46	420.64	422.49	0.000697	2.40	334.98	179.92	0.21
USACE	1519	25YR	571.00	417.97	423.94	420.95	423.96	0.000301	1.94	549.84	195.77	0.14
USACE	1519	50YR	717.00	417.97	425.08	421.11	425.10	0.000202	1.80	719.24	206.83	0.12
USACE	1519	100YR	864.00	417.97	425.68	421.43	425.71	0.000199	1.89	811.14	213.40	0.12
USACE	1519	100YRPLUS	1130.00	417.97	426.40	421.74	426.43	0.000228	2.15	921.51	228.31	0.13
USACE	1519	200YR	1010.00	417.97	426.12	421.64	426.14	0.000212	2.03	877.92	220.41	0.13
USACE	1519	500YR	1213.00	417.97	426.56	421.81	426.59	0.000241	2.25	946.04	231.11	0.14
USACE	1519	SEPT2011	354.00	417.97	422.02	420.56	422.06	0.001022	2.70	273.17	174.49	0.25

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1465	2YR	191.00	416.91	420.17	418.66	420.28	0.001437	2.82	82.10	78.27	0.29
USACE	1465	5YR	304.00	416.91	421.40	419.15	421.51	0.000931	2.88	134.12	157.10	0.25
USACE	1465	10YR	400.00	416.91	422.32	419.43	422.43	0.000742	2.94	176.97	186.89	0.23
USACE	1465	25YR	571.00	416.91	423.80	420.12	423.92	0.000562	3.04	252.21	197.39	0.21
USACE	1465	50YR	717.00	416.91	424.94	420.48	425.05	0.000473	3.10	313.02	214.10	0.20
USACE	1465	100YR	864.00	416.91	425.66	420.82	425.69	0.000185	2.06	678.92	249.51	0.13
USACE	1465	100YRPLUS	1130.00	416.91	426.36	421.37	426.41	0.000226	2.41	756.26	267.91	0.14
USACE	1465	200YR	1010.00	416.91	426.09	421.13	426.13	0.000205	2.25	726.04	260.14	0.13
USACE	1465	500YR	1213.00	416.91	426.51	421.53	426.57	0.000243	2.52	773.00	273.35	0.15
USACE	1465	SEPT2011	354.00	416.91	421.89	419.35	422.00	0.000819	2.91	156.51	182.33	0.24
USACE	1428 Old Line Road		Culvert									
USACE	1389	2YR	191.00	416.78	418.72	418.59	419.13	0.012358	5.39	40.29	48.85	0.78
USACE	1389	5YR	304.00	416.78	419.01	419.01	419.67	0.015856	6.88	51.70	54.82	0.91
USACE	1389	10YR	400.00	416.78	419.29	419.29	420.06	0.015833	7.56	63.83	72.55	0.93
USACE	1389	25YR	571.00	416.78	419.79	419.79	420.60	0.013075	7.94	90.11	116.46	0.87
USACE	1389	50YR	717.00	416.78	419.96	419.96	420.55	0.010544	7.45	149.79	120.90	0.79
USACE	1389	100YR	864.00	416.78	420.14	420.14	420.78	0.010939	7.91	171.87	124.72	0.82
USACE	1389	100YRPLUS	1130.00	416.78	420.42	420.42	421.15	0.011695	8.69	207.06	131.09	0.86
USACE	1389	200YR	1010.00	416.78	420.30	420.30	420.99	0.011295	8.33	192.17	128.33	0.84
USACE	1389	500YR	1213.00	416.78	420.50	420.50	421.26	0.011892	8.91	217.50	133.21	0.87
USACE	1389	SEPT2011	354.00	416.78	419.14	419.14	419.88	0.016407	7.33	57.13	57.20	0.93
USACE	1351	2YR	191.00	416.78	418.54	418.38	418.68	0.005790	3.86	83.95	119.81	0.56
USACE	1351	5YR	304.00	416.78	418.81	418.56	418.97	0.005772	4.32	117.31	123.14	0.57
USACE	1351	10YR	400.00	416.78	418.89	418.70	419.12	0.007890	5.20	127.27	123.90	0.67
USACE	1351	25YR	571.00	416.78	419.14		419.42	0.008463	5.85	158.15	126.24	0.71
USACE	1351	50YR	717.00	416.78	419.36		419.67	0.008178	6.15	186.27	128.44	0.71
USACE	1351	100YR	864.00	416.78	419.58		419.91	0.007688	6.35	215.57	131.35	0.70
USACE	1351	100YRPLUS	1130.00	416.78	419.94		420.30	0.007242	6.73	263.37	136.41	0.70
USACE	1351	200YR	1010.00	416.78	419.79		420.13	0.007308	6.53	243.48	134.25	0.69
USACE	1351	500YR	1213.00	416.78	420.05		420.42	0.007085	6.82	278.18	137.86	0.69
USACE	1351	SEPT2011	354.00	416.78	418.91	418.65	419.08	0.005817	4.50	129.93	124.10	0.58
USACE	1258	2YR	191.00	416.26	417.50	417.50	417.73	0.020068	5.52	59.74	109.02	0.97
USACE	1258	5YR	304.00	416.26	417.66	417.66	417.98	0.023217	6.56	77.93	113.50	1.07
USACE	1258	10YR	400.00	416.26	418.05		418.25	0.010324	5.30	123.99	126.03	0.75
USACE	1258	25YR	571.00	416.26	418.51		418.68	0.006436	4.97	184.54	137.12	0.62
USACE	1258	50YR	717.00	416.26	418.84		419.02	0.005110	4.91	231.41	143.10	0.57
USACE	1258	100YR	864.00	416.26	419.14		419.31	0.004424	4.95	274.61	148.22	0.54
USACE	1258	100YRPLUS	1130.00	416.26	419.55		419.75	0.003985	5.17	336.47	151.70	0.52
USACE	1258	200YR	1010.00	416.26	419.40		419.58	0.003987	5.00	313.44	150.46	0.52
USACE	1258	500YR	1213.00	416.26	419.67		419.88	0.003865	5.23	355.28	152.71	0.52
USACE	1258	SEPT2011	354.00	416.26	417.73	417.73	418.08	0.023703	6.89	85.69	115.10	1.09
USACE	1050	2YR	191.00	413.00	415.73		415.96	0.004633	4.46	64.47	63.56	0.53
USACE	1050	5YR	304.00	413.00	416.83		416.93	0.001431	3.25	162.65	114.52	0.31
USACE	1050	10YR	400.00	413.00	417.88		417.93	0.000514	2.33	300.48	151.42	0.20
USACE	1050	25YR	571.00	413.00	418.31		418.36	0.000602	2.69	367.77	165.13	0.22
USACE	1050	50YR	717.00	413.00	418.64		418.70	0.000627	2.87	424.50	172.96	0.22
USACE	1050	100YR	864.00	413.00	418.95		419.01	0.000640	3.01	477.81	181.17	0.23
USACE	1050	100YRPLUS	1130.00	413.00	419.36		419.44	0.000696	3.29	553.75	189.72	0.24
USACE	1050	200YR	1010.00	413.00	419.21		419.28	0.000649	3.13	526.68	186.66	0.23
USACE	1050	500YR	1213.00	413.00	419.48		419.56	0.000703	3.36	577.79	192.60	0.24
USACE	1050	SEPT2011	354.00	413.00	417.17		417.25	0.001099	3.04	203.43	125.49	0.28
USACE	989	2YR	191.00	411.35	415.58	414.37	415.76	0.001980	3.90	70.42	73.43	0.36
USACE	989	5YR	304.00	411.35	416.70	415.27	416.84	0.001211	3.64	119.50	101.27	0.29
USACE	989	10YR	400.00	411.35	417.86	415.58	417.90	0.000336	2.22	313.75	149.27	0.16
USACE	989	25YR	571.00	411.35	418.28	416.04	418.33	0.000394	2.51	377.27	156.28	0.18
USACE	989	50YR	717.00	411.35	418.62	416.36	418.67	0.000415	2.67	428.96	160.95	0.18
USACE	989	100YR	864.00	411.35	418.92	416.65	418.97	0.000432	2.80	476.16	165.08	0.19
USACE	989	100YRPLUS	1130.00	411.35	419.32	417.11	419.40	0.000489	3.09	540.96	170.56	0.20
USACE	989	200YR	1010.00	411.35	419.18	416.92	419.25	0.000449	2.92	518.30	168.47	0.19
USACE	989	500YR	1213.00	411.35	419.44	417.26	419.53	0.000516	3.21	568.87	172.54	0.21
USACE	989	SEPT2011	354.00	411.35	417.02	415.44	417.16	0.001179	3.75	134.29	107.36	0.29
USACE	957 Hernley Road		Bridge									
USACE	924	2YR	191.00	411.32	414.40	414.31	415.28	0.015029	7.54	26.35	15.76	0.90
USACE	924	5YR	304.00	411.32	415.14	415.14	416.22	0.013055	8.54	40.70	25.77	0.88
USACE	924	10YR	400.00	411.32	415.94	415.94	416.80	0.008266	7.99	69.47	52.42	0.73
USACE	924	25YR	571.00	411.32	416.78	416.78	417.31	0.004939	7.08	156.59	139.08	0.59
USACE	924	50YR	717.00	411.32	416.98	416.98	417.56	0.005549	7.72	182.67	145.59	0.62
USACE	924	100YR	864.00	411.32	417.16	417.16	417.78	0.005980	8.22	207.13	151.39	0.65
USACE	924	100YRPLUS	1130.00	411.32	417.43	417.43	418.13	0.006844	9.11	242.84	159.97	0.70
USACE	924	200YR	1010.00	411.32	417.32	417.32	417.98	0.006447	8.71	227.78	156.32	0.68
USACE	924	500YR	1213.00	411.32	417.51	417.51	418.23	0.007037	9.33	253.62	162.50	0.72
USACE	924	SEPT2011	354.00	411.32	415.57	415.57	416.54	0.010195	8.28	53.96	34.76	0.80
USACE	876	2YR	191.00	411.32	414.21	414.21	414.50	0.007462	5.42	67.93	103.89	0.65

HEC-RAS Plan: Existing River: OrchardRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	876	5YR	304.00	411.32	414.48	414.48	414.80	0.008145	6.13	99.26	121.03	0.69
USACE	876	10YR	400.00	411.32	414.75	414.75	415.02	0.006589	5.91	131.38	134.76	0.63
USACE	876	25YR	571.00	411.32	415.01	414.83	415.32	0.007237	6.59	162.76	142.47	0.67
USACE	876	50YR	717.00	411.32	415.26	414.98	415.58	0.006818	6.75	193.47	147.91	0.66
USACE	876	100YR	864.00	411.32	415.49	415.13	415.82	0.006565	6.93	221.49	153.52	0.66
USACE	876	100YRPLUS	1130.00	411.32	415.84	415.35	416.21	0.006466	7.34	264.97	166.05	0.66
USACE	876	200YR	1010.00	411.32	415.70	415.25	416.05	0.006311	7.08	248.36	161.74	0.65
USACE	876	500YR	1213.00	411.32	415.94	415.42	416.32	0.006467	7.47	277.33	169.25	0.67
USACE	876	SEPT2011	354.00	411.32	414.62	414.56	414.91	0.007475	6.08	114.95	127.34	0.67
USACE	671	2YR	191.00	409.81	412.30	412.00	412.64	0.007104	5.24	48.09	35.24	0.65
USACE	671	5YR	304.00	409.81	412.64	412.40	413.17	0.009654	6.76	60.51	42.31	0.77
USACE	671	10YR	400.00	409.81	412.92	412.60	413.58	0.010548	7.62	80.42	92.45	0.82
USACE	671	25YR	571.00	409.81	413.39	413.39	413.98	0.008809	7.76	125.34	99.91	0.77
USACE	671	50YR	717.00	409.81	413.61	413.61	414.26	0.009318	8.36	148.05	101.89	0.81
USACE	671	100YR	864.00	409.81	413.82	413.80	414.52	0.009651	8.86	169.83	105.81	0.83
USACE	671	100YRPLUS	1130.00	409.81	414.20	414.18	414.94	0.009583	9.45	211.92	138.86	0.84
USACE	671	200YR	1010.00	409.81	414.05	413.98	414.78	0.009794	9.30	194.21	125.74	0.84
USACE	671	500YR	1213.00	409.81	414.29	414.26	415.05	0.009683	9.64	221.88	147.16	0.85
USACE	671	SEPT2011	354.00	409.81	412.79	412.57	413.39	0.010176	7.23	68.54	78.02	0.80
USACE	523	2YR	191.00	408.87	410.71	410.67	411.16	0.014734	6.34	48.44	66.66	0.90
USACE	523	5YR	304.00	408.87	411.15	411.15	411.58	0.011706	6.67	85.17	87.66	0.83
USACE	523	10YR	400.00	408.87	411.34	411.34	411.84	0.012563	7.35	102.31	90.45	0.88
USACE	523	25YR	571.00	408.87	411.61	411.61	412.23	0.014144	8.44	127.48	94.40	0.95
USACE	523	50YR	717.00	408.87	411.83	411.83	412.52	0.014748	9.12	148.48	99.03	0.98
USACE	523	100YR	864.00	408.87	412.06	412.06	412.79	0.014501	9.55	172.25	108.27	0.99
USACE	523	100YRPLUS	1130.00	408.87	412.38	412.38	413.20	0.014821	10.35	208.09	116.96	1.02
USACE	523	200YR	1010.00	408.87	412.24	412.24	413.03	0.014655	10.00	192.50	112.60	1.00
USACE	523	500YR	1213.00	408.87	412.48	412.48	413.32	0.014580	10.49	220.61	120.66	1.01
USACE	523	SEPT2011	354.00	408.87	411.26	411.26	411.72	0.012031	7.01	94.79	89.23	0.85
USACE	390	2YR	191.00	407.09	408.80	408.74	409.16	0.015538	5.86	45.10	50.52	0.90
USACE	390	5YR	304.00	407.09	409.12	409.05	409.60	0.016056	6.88	62.10	58.98	0.94
USACE	390	10YR	400.00	407.09	409.36	409.26	409.92	0.016003	7.51	78.38	82.21	0.96
USACE	390	25YR	571.00	407.09	409.75	409.75	410.32	0.013779	7.89	115.43	105.77	0.92
USACE	390	50YR	717.00	407.09	409.95	409.92	410.59	0.014378	8.53	137.16	111.03	0.96
USACE	390	100YR	864.00	407.09	410.17	410.16	410.83	0.013788	8.85	163.58	122.82	0.95
USACE	390	100YRPLUS	1130.00	407.09	410.54	410.48	411.21	0.012344	9.13	211.09	131.49	0.92
USACE	390	200YR	1010.00	407.09	410.38	410.36	411.04	0.012950	9.02	190.07	128.47	0.93
USACE	390	500YR	1213.00	407.09	410.65		411.31	0.012036	9.22	224.86	133.28	0.91
USACE	390	SEPT2011	354.00	407.09	409.25	409.19	409.77	0.016011	7.22	70.17	67.50	0.95
USACE	218	2YR	191.00	405.11	407.02	406.89	407.25	0.007814	4.54	61.77	141.17	0.65
USACE	218	5YR	304.00	405.11	407.34	407.14	407.62	0.008060	5.22	84.87	146.03	0.68
USACE	218	10YR	400.00	405.11	407.56	407.32	407.89	0.008279	5.71	101.48	149.10	0.70
USACE	218	25YR	571.00	405.11	407.90	407.61	408.31	0.008511	6.42	128.04	153.93	0.73
USACE	218	50YR	717.00	405.11	408.15	407.82	408.62	0.008673	6.93	148.58	158.13	0.75
USACE	218	100YR	864.00	405.11	408.39	408.02	408.92	0.008699	7.35	168.64	162.16	0.76
USACE	218	100YRPLUS	1130.00	405.11	408.77	408.36	409.40	0.008873	8.06	202.66	172.16	0.79
USACE	218	200YR	1010.00	405.11	408.61	408.20	409.19	0.008782	7.75	187.76	168.12	0.78
USACE	218	500YR	1213.00	405.11	408.88	408.45	409.53	0.008835	8.22	213.27	174.04	0.79
USACE	218	SEPT2011	354.00	405.11	407.46	407.24	407.77	0.008180	5.49	93.76	147.68	0.69
USACE	34	2YR	191.00	403.32	405.30	405.26	405.56	0.011013	5.52	60.14	134.49	0.76
USACE	34	5YR	304.00	403.32	405.59	405.48	405.89	0.011007	6.16	82.48	168.38	0.79
USACE	34	10YR	400.00	403.32	405.80	405.64	406.14	0.011003	6.60	98.89	174.73	0.80
USACE	34	25YR	571.00	403.32	406.12	405.90	406.54	0.011011	7.26	124.67	181.16	0.82
USACE	34	50YR	717.00	403.32	406.37	406.09	406.84	0.011007	7.74	144.66	208.03	0.83
USACE	34	100YR	864.00	403.32	406.60	406.28	407.13	0.011009	8.18	163.85	227.93	0.84
USACE	34	100YRPLUS	1130.00	403.32	406.97	406.58	407.60	0.011004	8.85	195.55	266.57	0.86
USACE	34	200YR	1010.00	403.32	406.81	406.43	407.39	0.011006	8.56	181.62	253.51	0.85
USACE	34	500YR	1213.00	403.32	407.08	406.69	407.73	0.011004	9.05	204.90	281.01	0.86
USACE	34	SEPT2011	354.00	403.32	405.70	405.56	406.03	0.011004	6.39	91.25	173.94	0.79

HEC-RAS Plan: Existing River: RifeRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	17813	2YR	221.00	459.28	462.04		462.23	0.006643	3.84	90.23	106.31	0.47
USACE	17813	5YR	376.00	459.28	462.52		462.76	0.007177	4.60	160.43	172.80	0.51
USACE	17813	10YR	504.00	459.28	462.84		463.09	0.006819	4.85	218.94	185.95	0.51
USACE	17813	25YR	718.00	459.28	463.31		463.54	0.005958	5.02	306.62	188.46	0.49
USACE	17813	50YR	896.00	459.28	463.65		463.88	0.005525	5.16	371.54	190.24	0.48
USACE	17813	100YR	1078.00	459.28	463.99		464.21	0.005136	5.27	435.31	192.17	0.46
USACE	17813	100YRPLUS	1410.00	459.28	464.53		464.76	0.004739	5.51	540.35	196.09	0.46
USACE	17813	200YR	1262.00	459.28	464.28		464.51	0.004968	5.44	491.83	193.93	0.46
USACE	17813	500YR	1515.00	459.28	464.68		464.91	0.004702	5.61	569.54	197.39	0.46
USACE	17813	SEPT2011	447.00	459.28	462.71		462.95	0.006987	4.76	194.26	183.44	0.51
USACE	17547	2YR	221.00	457.89	460.07		460.27	0.008135	3.82	80.06	80.50	0.51
USACE	17547	5YR	376.00	457.89	460.75		460.97	0.006301	4.19	139.75	100.49	0.48
USACE	17547	10YR	504.00	457.89	461.18		461.41	0.005810	4.49	185.61	114.89	0.47
USACE	17547	25YR	718.00	457.89	461.74		462.01	0.005509	4.93	255.71	132.43	0.47
USACE	17547	50YR	896.00	457.89	462.12		462.41	0.005415	5.25	307.68	140.70	0.48
USACE	17547	100YR	1078.00	457.89	462.46		462.78	0.005466	5.59	358.87	153.77	0.49
USACE	17547	100YRPLUS	1410.00	457.89	463.00		463.37	0.005579	6.13	445.21	171.73	0.50
USACE	17547	200YR	1262.00	457.89	462.77		463.11	0.005446	5.85	405.95	158.12	0.49
USACE	17547	500YR	1515.00	457.89	463.15		463.53	0.005590	6.26	470.68	174.45	0.50
USACE	17547	SEPT2011	447.00	457.89	460.99		461.22	0.005990	4.36	165.41	108.53	0.47
USACE	17242	2YR	221.00	455.34	458.26		458.45	0.004535	3.53	74.20	73.74	0.40
USACE	17242	5YR	376.00	455.34	458.72	457.74	459.03	0.006339	4.68	120.11	113.89	0.49
USACE	17242	10YR	504.00	455.34	458.96		459.36	0.007740	5.46	147.88	115.73	0.55
USACE	17242	25YR	718.00	455.34	459.32		459.83	0.009282	6.43	190.12	119.04	0.61
USACE	17242	50YR	896.00	455.34	459.60		460.18	0.009970	7.02	223.93	121.81	0.64
USACE	17242	100YR	1078.00	455.34	459.88		460.51	0.010275	7.48	258.40	124.72	0.66
USACE	17242	100YRPLUS	1410.00	455.34	460.38		461.07	0.010269	8.08	321.54	130.40	0.67
USACE	17242	200YR	1262.00	455.34	460.16		460.83	0.010339	7.84	293.25	127.79	0.67
USACE	17242	500YR	1515.00	455.34	460.53		461.23	0.010173	8.22	341.64	132.05	0.67
USACE	17242	SEPT2011	447.00	455.34	458.86	458.14	459.22	0.007110	5.12	136.45	114.98	0.52
USACE	16936	2YR	221.00	453.41	455.85	455.48	456.18	0.014122	4.68	59.59	97.02	0.66
USACE	16936	5YR	376.00	453.41	456.48		456.74	0.008865	4.56	143.03	150.31	0.55
USACE	16936	10YR	504.00	453.41	456.89		457.11	0.006698	4.46	205.63	152.96	0.49
USACE	16936	25YR	718.00	453.41	457.48		457.68	0.005117	4.49	296.87	156.23	0.45
USACE	16936	50YR	896.00	453.41	457.91		458.11	0.004475	4.57	364.38	158.25	0.43
USACE	16936	100YR	1078.00	453.41	458.31		458.51	0.004067	4.68	428.22	160.13	0.41
USACE	16936	100YRPLUS	1410.00	453.41	458.97		459.18	0.003645	4.91	534.24	163.74	0.40
USACE	16936	200YR	1262.00	453.41	458.68		458.89	0.003811	4.81	487.74	161.91	0.41
USACE	16936	500YR	1515.00	453.41	459.16		459.38	0.003545	4.97	566.44	164.99	0.40
USACE	16936	SEPT2011	447.00	453.41	456.72		456.95	0.007482	4.49	178.54	151.82	0.52
USACE	16575	2YR	221.00	450.59	453.46		453.63	0.004113	3.41	78.02	49.61	0.39
USACE	16575	5YR	376.00	450.59	454.07		454.35	0.005084	4.41	110.70	55.92	0.44
USACE	16575	10YR	504.00	450.59	454.43		454.80	0.006012	5.16	131.28	59.76	0.49
USACE	16575	25YR	718.00	450.59	454.93		455.45	0.007287	6.23	162.98	67.59	0.55
USACE	16575	50YR	896.00	450.59	455.28		455.91	0.008184	6.98	187.30	72.79	0.60
USACE	16575	100YR	1078.00	450.59	455.59		456.34	0.008968	7.66	210.98	77.45	0.63
USACE	16575	100YRPLUS	1410.00	450.59	456.08	455.26	457.03	0.010151	8.73	250.02	82.04	0.68
USACE	16575	200YR	1262.00	450.59	455.87		456.73	0.009630	8.26	233.09	79.65	0.66
USACE	16575	500YR	1515.00	450.59	456.22	455.59	457.23	0.010508	9.04	261.72	83.90	0.70
USACE	16575	SEPT2011	447.00	450.59	454.29		454.61	0.005567	4.83	122.80	58.03	0.47
USACE	16290	2YR	221.00	449.29	451.37		451.67	0.013404	4.61	60.82	70.71	0.65
USACE	16290	5YR	376.00	449.29	451.88	451.50	452.23	0.011852	5.23	116.40	124.69	0.64
USACE	16290	10YR	504.00	449.29	452.22		452.57	0.010660	5.48	159.03	131.04	0.62
USACE	16290	25YR	718.00	449.29	452.68		453.05	0.009536	5.83	222.02	137.24	0.60
USACE	16290	50YR	896.00	449.29	453.02		453.40	0.009036	6.11	268.44	140.57	0.60
USACE	16290	100YR	1078.00	449.29	453.33		453.72	0.008707	6.37	312.22	143.49	0.60
USACE	16290	100YRPLUS	1410.00	449.29	453.82		454.26	0.008365	6.82	384.79	147.62	0.60
USACE	16290	200YR	1262.00	449.29	453.61		454.03	0.008497	6.63	353.28	145.84	0.60
USACE	16290	500YR	1515.00	449.29	453.97		454.42	0.008290	6.95	406.39	148.82	0.60
USACE	16290	SEPT2011	447.00	449.29	452.07		452.42	0.011294	5.40	139.65	128.47	0.63
USACE	15879	2YR	221.00	446.06	448.85		448.93	0.003821	2.73	131.14	103.17	0.35
USACE	15879	5YR	376.00	446.06	449.36		449.48	0.004124	3.32	191.46	125.58	0.38
USACE	15879	10YR	504.00	446.06	449.68		449.82	0.004389	3.73	232.49	130.26	0.40
USACE	15879	25YR	718.00	446.06	450.13		450.30	0.004741	4.29	291.93	136.58	0.43
USACE	15879	50YR	896.00	446.06	450.45		450.66	0.004932	4.68	337.01	140.17	0.44
USACE	15879	100YR	1078.00	446.06	450.77		451.00	0.005026	5.00	381.38	143.18	0.46
USACE	15879	100YRPLUS	1410.00	446.06	451.28		451.55	0.005154	5.52	455.95	147.86	0.47
USACE	15879	200YR	1262.00	446.06	451.06		451.31	0.005113	5.30	423.23	145.82	0.46
USACE	15879	500YR	1515.00	446.06	451.44		451.72	0.005156	5.65	479.16	149.16	0.47
USACE	15879	SEPT2011	447.00	446.06	449.56		449.68	0.004201	3.53	216.30	128.48	0.39
USACE	15602	2YR	221.00	444.98	446.88		447.10	0.013930	4.31	78.55	93.53	0.65
USACE	15602	5YR	376.00	444.98	447.32		447.59	0.012956	4.97	126.22	114.84	0.65
USACE	15602	10YR	504.00	444.98	447.64		447.93	0.011778	5.28	163.57	118.37	0.64
USACE	15602	25YR	718.00	444.98	448.13		448.44	0.010161	5.63	222.79	122.65	0.61
USACE	15602	50YR	896.00	444.98	448.50		448.82	0.009238	5.87	268.80	124.97	0.60
USACE	15602	100YR	1078.00	444.98	448.85		449.19	0.008621	6.10	312.68	127.30	0.59
USACE	15602	100YRPLUS	1410.00	444.98	449.43		449.80	0.007875	6.49	387.99	132.07	0.58
USACE	15602	200YR	1262.00	444.98	449.18		449.54	0.008167	6.32	355.05	130.00	0.58
USACE	15602	500YR	1515.00	444.98	449.63		450.00	0.007518	6.55	414.19	133.74	0.57
USACE	15602	SEPT2011	447.00	444.98	447.46		447.76	0.013361	5.30	142.58	116.52	0.67

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	15243	2YR	221.00	442.09	444.78		444.87	0.003426	2.88	125.94	111.27	0.35
USACE	15243	5YR	376.00	442.09	445.45		445.56	0.003036	3.26	206.84	125.18	0.34
USACE	15243	10YR	504.00	442.09	445.89		446.01	0.002933	3.52	263.55	133.35	0.34
USACE	15243	25YR	718.00	442.09	446.48		446.62	0.002920	3.92	343.30	139.23	0.35
USACE	15243	50YR	896.00	442.09	446.88		447.04	0.002993	4.24	399.85	143.51	0.36
USACE	15243	100YR	1078.00	442.09	447.26		447.43	0.003023	4.51	455.28	147.44	0.37
USACE	15243	100YRPLUS	1410.00	442.09	447.85		448.06	0.003168	5.01	544.16	155.01	0.39
USACE	15243	200YR	1262.00	442.09	447.61		447.80	0.003065	4.77	507.62	151.36	0.38
USACE	15243	500YR	1515.00	442.09	448.20		448.40	0.002829	4.94	599.29	161.31	0.37
USACE	15243	SEPT2011	447.00	442.09	445.80		445.90	0.002611	3.26	251.36	132.01	0.32
USACE	15008	2YR	259.00	440.66	443.75		443.92	0.004707	3.61	108.40	82.74	0.41
USACE	15008	5YR	437.00	440.66	444.28		444.55	0.006061	4.68	157.55	110.36	0.48
USACE	15008	10YR	590.00	440.66	444.59		444.94	0.007092	5.42	194.38	125.53	0.53
USACE	15008	25YR	853.00	440.66	445.07		445.49	0.007820	6.23	257.07	141.21	0.57
USACE	15008	50YR	1061.00	440.66	445.38		445.86	0.008359	6.81	304.06	155.75	0.60
USACE	15008	100YR	1285.00	440.66	445.64		446.19	0.009177	7.44	345.72	168.17	0.63
USACE	15008	100YRPLUS	1681.00	440.66	446.49		446.95	0.006708	7.17	507.36	209.73	0.56
USACE	15008	200YR	1518.00	440.66	445.98		446.56	0.008980	7.75	407.48	187.23	0.64
USACE	15008	500YR	1844.00	440.66	447.27		447.58	0.004047	6.13	686.56	240.89	0.44
USACE	15008	SEPT2011	567.00	440.66	444.55		444.88	0.006986	5.33	188.83	124.36	0.53
USACE	14687	2YR	259.00	439.45	441.96		442.15	0.006733	3.88	116.90	166.47	0.48
USACE	14687	5YR	437.00	439.45	442.48		442.66	0.005785	4.18	211.60	191.60	0.46
USACE	14687	10YR	590.00	439.45	442.86		443.03	0.005009	4.27	285.92	196.38	0.44
USACE	14687	25YR	853.00	439.45	443.36		443.54	0.004799	4.64	384.91	205.56	0.44
USACE	14687	50YR	1061.00	439.45	443.73		443.91	0.004507	4.82	462.06	211.39	0.44
USACE	14687	100YR	1285.00	439.45	444.29		444.45	0.003410	4.59	582.11	215.81	0.39
USACE	14687	100YRPLUS	1681.00	439.45	445.96		446.05	0.001339	3.58	952.58	226.34	0.26
USACE	14687	200YR	1518.00	439.45	445.11		445.23	0.002150	4.09	761.54	220.69	0.32
USACE	14687	500YR	1844.00	439.45	446.95		447.02	0.000853	3.16	1183.36	242.34	0.21
USACE	14687	SEPT2011	567.00	439.45	442.81		442.98	0.005052	4.24	276.30	195.81	0.44
USACE	14413	2YR	259.00	437.94	440.51		440.65	0.004451	3.34	130.35	114.99	0.40
USACE	14413	5YR	437.00	437.94	441.05		441.23	0.004744	3.99	197.52	142.69	0.42
USACE	14413	10YR	590.00	437.94	441.39		441.61	0.005321	4.57	249.49	158.66	0.46
USACE	14413	25YR	853.00	437.94	441.97		442.20	0.004926	4.93	343.56	169.08	0.45
USACE	14413	50YR	1061.00	437.94	442.67		442.85	0.003316	4.54	465.54	175.26	0.38
USACE	14413	100YR	1285.00	437.94	443.59		443.72	0.002046	4.05	629.56	182.58	0.31
USACE	14413	100YRPLUS	1681.00	437.94	445.68		445.76	0.000833	3.23	1035.26	207.50	0.21
USACE	14413	200YR	1518.00	437.94	444.68		444.78	0.001264	3.61	833.39	194.14	0.25
USACE	14413	500YR	1844.00	437.94	446.76		446.82	0.000580	2.95	1268.50	227.98	0.18
USACE	14413	SEPT2011	567.00	437.94	441.35		441.56	0.005281	4.51	242.27	157.68	0.46
USACE	14120	2YR	259.00	436.49	438.87	438.30	439.05	0.006651	3.70	102.12	108.88	0.47
USACE	14120	5YR	437.00	436.49	439.44	438.85	439.65	0.005932	4.17	177.51	150.07	0.47
USACE	14120	10YR	590.00	436.49	439.98	439.14	440.16	0.004468	4.12	264.50	177.12	0.42
USACE	14120	25YR	853.00	436.49	441.16	439.55	441.27	0.002020	3.46	490.95	202.68	0.30
USACE	14120	50YR	1061.00	436.49	442.19	439.77	442.27	0.001195	3.08	711.52	231.85	0.24
USACE	14120	100YR	1285.00	436.49	443.31	440.07	443.36	0.000712	2.70	973.49	245.10	0.19
USACE	14120	100YRPLUS	1681.00	436.49	445.57	440.40	445.60	0.000326	2.24	1545.65	300.19	0.13
USACE	14120	200YR	1518.00	436.49	444.50	440.27	444.54	0.000478	2.48	1267.90	270.43	0.16
USACE	14120	500YR	1844.00	436.49	446.68	440.52	446.71	0.000233	2.06	1841.49	318.98	0.12
USACE	14120	SEPT2011	567.00	436.49	439.89	439.10	440.08	0.004755	4.17	248.91	175.12	0.43
USACE	13855	2YR	259.00	434.85	437.87	436.96	437.98	0.002629	3.08	157.73	152.48	0.34
USACE	13855	5YR	437.00	434.85	438.67	437.58	438.77	0.001993	3.23	269.44	164.94	0.31
USACE	13855	10YR	590.00	434.85	439.43	437.85	439.52	0.001399	3.11	378.13	173.43	0.27
USACE	13855	25YR	853.00	434.85	440.87	438.22	440.94	0.000800	2.88	582.38	186.32	0.22
USACE	13855	50YR	1061.00	434.85	441.98	438.46	442.05	0.000586	2.78	740.66	215.07	0.19
USACE	13855	100YR	1285.00	434.85	443.16	438.71	443.21	0.000453	2.73	907.08	248.39	0.17
USACE	13855	100YRPLUS	1681.00	434.85	445.47	439.06	445.52	0.000288	2.59	1235.44	310.17	0.14
USACE	13855	200YR	1518.00	434.85	444.37	438.92	444.43	0.000362	2.69	1080.12	271.11	0.16
USACE	13855	500YR	1844.00	434.85	446.60	439.19	446.65	0.000234	2.50	1395.97	339.92	0.13
USACE	13855	SEPT2011	567.00	434.85	439.31	437.80	439.40	0.001480	3.13	360.87	171.78	0.28
USACE	13734	2YR	259.00	434.05	436.27	436.27	437.04	0.025952	7.07	36.62	23.21	0.99
USACE	13734	5YR	437.00	434.05	437.44	436.96	438.11	0.012333	6.53	67.28	30.41	0.73
USACE	13734	10YR	590.00	434.05	438.40	437.43	439.03	0.007479	6.33	94.16	60.26	0.60
USACE	13734	25YR	853.00	434.05	439.98	438.13	440.59	0.004400	6.25	138.34	127.21	0.49
USACE	13734	50YR	1061.00	434.05	441.12	438.61	441.74	0.003434	6.33	170.14	201.66	0.45
USACE	13734	100YR	1285.00	434.05	442.29	439.10	442.93	0.002808	6.43	202.97	240.77	0.42
USACE	13734	100YRPLUS	1681.00	434.05	444.66	439.90	445.28	0.001883	6.35	269.18	328.27	0.36
USACE	13734	200YR	1518.00	434.05	443.51	439.56	444.16	0.002342	6.51	237.05	292.00	0.39
USACE	13734	500YR	1844.00	434.05	445.83	440.21	446.42	0.001545	6.21	302.07	344.68	0.33
USACE	13734	SEPT2011	567.00	434.05	438.26	437.37	438.89	0.007948	6.35	90.23	57.23	0.62
USACE	13683 Rife Run Road		Culvert									
USACE	13636	2YR	259.00	433.44	436.44	435.64	436.76	0.006336	4.60	58.19	102.88	0.53
USACE	13636	5YR	437.00	433.44	436.97	436.30	437.57	0.008982	6.27	72.56	125.34	0.65
USACE	13636	10YR	590.00	433.44	437.29	436.78	438.16	0.011431	7.59	81.19	139.49	0.75
USACE	13636	25YR	853.00	433.44	437.70	437.49	439.12	0.015862	9.68	92.23	150.45	0.90
USACE	13636	50YR	1061.00	433.44	437.99	437.99	439.85	0.018843	11.11	100.09	164.99	0.99
USACE	13636	100YR	1285.00	433.44	438.50	438.50	440.61	0.018127	11.84	113.98	197.32	0.99
USACE	13636	100YRPLUS	1681.00	433.44	439.34	439.34	441.85	0.017229	12.95	136.52	220.39	1.00

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	13636	200YR	1518.00	433.44	439.00	439.00	441.36	0.017588	12.52	127.44	215.38	1.00
USACE	13636	500YR	1844.00	433.44	439.65	439.65	442.34	0.017027	13.38	145.00	231.15	1.00
USACE	13636	SEPT2011	567.00	433.44	437.25	436.71	438.08	0.011050	7.40	80.04	137.13	0.73
USACE	13544	2YR	259.00	432.97	436.01	435.28	436.19	0.004635	3.54	94.61	86.52	0.44
USACE	13544	5YR	437.00	432.97	436.53	435.86	436.78	0.005102	4.32	137.88	96.60	0.48
USACE	13544	10YR	590.00	432.97	436.82	436.20	437.14	0.006012	5.04	161.72	103.04	0.53
USACE	13544	25YR	853.00	432.97	437.20	436.62	437.67	0.007509	6.13	193.89	114.66	0.60
USACE	13544	50YR	1061.00	432.97	437.46	436.89	438.03	0.008565	6.89	215.31	117.20	0.65
USACE	13544	100YR	1285.00	432.97	437.69	437.17	438.40	0.009677	7.65	235.23	120.03	0.70
USACE	13544	100YRPLUS	1681.00	432.97	438.06	437.61	438.98	0.011452	8.86	266.12	123.60	0.78
USACE	13544	200YR	1518.00	432.97	437.91	437.43	438.75	0.010771	8.39	253.77	122.08	0.75
USACE	13544	500YR	1844.00	432.97	438.19	437.78	439.21	0.012187	9.34	277.19	127.05	0.80
USACE	13544	SEPT2011	567.00	432.97	436.78	436.15	437.09	0.005846	4.93	158.75	102.26	0.52
USACE	13269	2YR	259.00	431.11	433.89	433.85	434.28	0.011223	5.61	82.75	123.13	0.68
USACE	13269	5YR	437.00	431.11	434.30	434.30	434.72	0.011782	6.45	140.09	154.75	0.71
USACE	13269	10YR	590.00	431.11	434.62		435.00	0.010422	6.57	190.75	162.01	0.68
USACE	13269	25YR	853.00	431.11	435.16		435.49	0.008115	6.51	283.85	184.53	0.62
USACE	13269	50YR	1061.00	431.11	435.53		435.84	0.006997	6.47	353.91	192.18	0.59
USACE	13269	100YR	1285.00	431.11	435.91		436.19	0.006106	6.44	426.76	196.88	0.56
USACE	13269	100YRPLUS	1681.00	431.11	436.52		436.78	0.005063	6.43	548.75	201.68	0.52
USACE	13269	200YR	1518.00	431.11	436.28		436.55	0.005399	6.41	500.53	200.07	0.53
USACE	13269	500YR	1844.00	431.11	436.80		437.06	0.004554	6.34	606.88	205.07	0.50
USACE	13269	SEPT2011	567.00	431.11	434.57		434.96	0.010712	6.58	182.63	161.18	0.69
USACE	13011	2YR	259.00	429.98	432.72		432.80	0.003233	2.84	198.19	199.55	0.34
USACE	13011	5YR	437.00	429.98	433.30		433.37	0.002679	3.02	317.23	209.03	0.32
USACE	13011	10YR	590.00	429.98	433.73		433.81	0.002384	3.14	408.58	213.20	0.31
USACE	13011	25YR	853.00	429.98	434.38		434.45	0.002206	3.41	549.87	230.21	0.31
USACE	13011	50YR	1061.00	429.98	434.80		434.89	0.002092	3.56	649.85	235.14	0.30
USACE	13011	100YR	1285.00	429.98	435.23		435.31	0.002012	3.71	750.10	240.14	0.30
USACE	13011	100YRPLUS	1681.00	429.98	435.89		435.99	0.001937	3.98	912.92	249.31	0.30
USACE	13011	200YR	1518.00	429.98	435.64		435.73	0.001943	3.86	850.13	245.40	0.30
USACE	13011	500YR	1844.00	429.98	436.19		436.30	0.001949	4.14	990.74	270.16	0.31
USACE	13011	SEPT2011	567.00	429.98	433.69		433.76	0.002362	3.09	398.70	212.75	0.31
USACE	12798	2YR	307.00	429.56	431.77		431.90	0.005366	3.39	149.23	126.24	0.43
USACE	12798	5YR	543.00	429.56	432.38		432.55	0.005386	4.07	227.87	135.23	0.45
USACE	12798	10YR	755.00	429.56	432.81		433.02	0.005469	4.55	288.73	143.62	0.46
USACE	12798	25YR	1110.00	429.56	433.42		433.69	0.005598	5.21	384.61	165.55	0.48
USACE	12798	50YR	1392.00	429.56	433.85		434.14	0.005523	5.58	456.36	171.72	0.49
USACE	12798	100YR	1695.00	429.56	434.26		434.58	0.005476	5.93	528.74	178.30	0.50
USACE	12798	100YRPLUS	2217.00	429.56	434.92		435.28	0.005342	6.42	648.22	187.85	0.50
USACE	12798	200YR	2014.00	429.56	434.67		435.01	0.005407	6.24	601.86	184.06	0.50
USACE	12798	500YR	2458.00	429.56	435.21		435.58	0.005234	6.59	703.96	192.45	0.50
USACE	12798	SEPT2011	733.00	429.56	432.77		432.97	0.005463	4.50	282.73	143.05	0.46
USACE	12479	2YR	307.00	427.42	430.09		430.25	0.004984	3.62	146.12	146.95	0.42
USACE	12479	5YR	543.00	427.42	430.67		430.87	0.005166	4.29	232.84	151.15	0.45
USACE	12479	10YR	755.00	427.42	431.11		431.33	0.005117	4.69	299.95	154.03	0.46
USACE	12479	25YR	1110.00	427.42	431.74		431.99	0.005076	5.25	397.75	158.73	0.47
USACE	12479	50YR	1392.00	427.42	432.17		432.45	0.005070	5.62	467.62	162.69	0.48
USACE	12479	100YR	1695.00	427.42	432.59		432.90	0.005050	5.97	536.85	165.25	0.48
USACE	12479	100YRPLUS	2217.00	427.42	433.25		433.61	0.005084	6.53	647.73	172.43	0.49
USACE	12479	200YR	2014.00	427.42	433.00		433.35	0.005044	6.31	605.64	168.57	0.49
USACE	12479	500YR	2458.00	427.42	433.53		433.92	0.005167	6.81	697.59	179.31	0.50
USACE	12479	SEPT2011	733.00	427.42	431.07		431.29	0.005121	4.65	293.37	153.73	0.45
USACE	12198	2YR	307.00	425.88	428.64		428.79	0.005436	3.46	148.28	136.44	0.43
USACE	12198	5YR	543.00	425.88	429.35		429.51	0.004466	3.84	251.02	150.74	0.41
USACE	12198	10YR	755.00	425.88	429.80		429.98	0.004428	4.23	319.70	154.83	0.42
USACE	12198	25YR	1110.00	425.88	430.43		430.64	0.004446	4.78	418.29	159.70	0.43
USACE	12198	50YR	1392.00	425.88	430.86		431.10	0.004467	5.15	487.86	162.56	0.44
USACE	12198	100YR	1695.00	425.88	431.28		431.55	0.004494	5.50	556.93	165.65	0.45
USACE	12198	100YRPLUS	2217.00	425.88	431.93		432.25	0.004549	6.04	665.84	170.53	0.46
USACE	12198	200YR	2014.00	425.88	431.69		431.99	0.004518	5.83	625.20	168.69	0.46
USACE	12198	500YR	2458.00	425.88	432.20		432.54	0.004583	6.26	712.40	172.69	0.47
USACE	12198	SEPT2011	733.00	425.88	429.76		429.93	0.004427	4.19	313.06	154.49	0.42
USACE	11755	2YR	307.00	423.88	426.94		427.07	0.002923	3.00	131.55	109.28	0.33
USACE	11755	5YR	543.00	423.88	427.61		427.80	0.003459	3.81	238.66	180.60	0.37
USACE	11755	10YR	755.00	423.88	428.07		428.27	0.003471	4.17	323.13	184.48	0.38
USACE	11755	25YR	1110.00	423.88	428.70		428.93	0.003519	4.66	439.72	187.30	0.39
USACE	11755	50YR	1392.00	423.88	429.12		429.37	0.003581	5.00	518.96	189.38	0.40
USACE	11755	100YR	1695.00	423.88	429.52		429.80	0.003663	5.34	595.58	191.97	0.41
USACE	11755	100YRPLUS	2217.00	423.88	430.13		430.46	0.003785	5.85	714.95	195.96	0.43
USACE	11755	200YR	2014.00	423.88	429.90		430.21	0.003744	5.66	669.87	194.46	0.42
USACE	11755	500YR	2458.00	423.88	430.40		430.74	0.003808	6.05	767.79	197.57	0.43
USACE	11755	SEPT2011	733.00	423.88	428.03		428.23	0.003472	4.14	314.94	184.28	0.38
USACE	11500	2YR	307.00	423.23	426.26		426.32	0.002776	2.54	235.72	181.46	0.31
USACE	11500	5YR	543.00	423.23	426.95		427.02	0.002475	2.90	362.26	186.35	0.31
USACE	11500	10YR	755.00	423.23	427.41		427.49	0.002532	3.24	447.73	189.38	0.32
USACE	11500	25YR	1110.00	423.23	427.99		428.10	0.002782	3.80	559.49	193.19	0.34
USACE	11500	50YR	1392.00	423.23	428.38		428.51	0.002983	4.19	634.43	195.73	0.36
USACE	11500	100YR	1695.00	423.23	428.74		428.90	0.003191	4.58	706.18	198.24	0.38

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	11500	100YRPLUS	2217.00	423.23	429.30		429.50	0.003497	5.18	818.44	203.02	0.40
USACE	11500	200YR	2014.00	423.23	429.09		429.27	0.003380	4.96	776.06	200.67	0.39
USACE	11500	500YR	2458.00	423.23	429.55		429.76	0.003650	5.46	868.46	208.93	0.42
USACE	11500	SEPT2011	733.00	423.23	427.36		427.44	0.002524	3.21	439.55	189.10	0.32
USACE	11029	2YR	307.00	420.76	423.93	423.35	424.21	0.008627	4.67	95.42	85.71	0.55
USACE	11029	5YR	543.00	420.76	424.42	424.06	424.86	0.011372	6.12	163.73	187.26	0.65
USACE	11029	10YR	755.00	420.76	424.74	424.63	425.24	0.012428	6.88	225.35	204.79	0.69
USACE	11029	25YR	1110.00	420.76	425.19	425.04	425.72	0.012344	7.52	320.30	208.74	0.71
USACE	11029	50YR	1392.00	420.76	425.53	425.26	426.06	0.011767	7.81	391.30	210.63	0.70
USACE	11029	100YR	1695.00	420.76	425.89		426.40	0.010968	8.00	466.14	212.44	0.69
USACE	11029	100YRPLUS	2217.00	420.76	426.47		426.97	0.009721	8.21	590.26	215.04	0.66
USACE	11029	200YR	2014.00	420.76	426.25		426.75	0.010177	8.14	542.59	214.04	0.67
USACE	11029	500YR	2458.00	420.76	426.73		427.23	0.009199	8.28	646.79	216.31	0.65
USACE	11029	SEPT2011	733.00	420.76	424.71	424.59	425.20	0.012350	6.81	219.25	203.36	0.69
USACE	10769	2YR	307.00	419.76	422.16		422.25	0.006286	3.29	197.49	208.27	0.45
USACE	10769	5YR	543.00	419.76	422.69		422.78	0.005494	3.69	308.27	213.58	0.44
USACE	10769	10YR	755.00	419.76	423.11		423.21	0.004918	3.92	399.18	218.07	0.43
USACE	10769	25YR	1110.00	419.76	423.76		423.87	0.004226	4.21	543.67	227.74	0.41
USACE	10769	50YR	1392.00	419.76	424.22		424.34	0.003854	4.39	650.34	232.44	0.40
USACE	10769	100YR	1695.00	419.76	424.68		424.80	0.003592	4.57	756.13	235.87	0.39
USACE	10769	100YRPLUS	2217.00	419.76	425.38		425.52	0.003299	4.86	923.38	239.90	0.39
USACE	10769	200YR	2014.00	419.76	425.11		425.25	0.003393	4.75	860.39	238.39	0.39
USACE	10769	500YR	2458.00	419.76	425.69		425.84	0.003181	4.97	998.21	241.68	0.38
USACE	10769	SEPT2011	733.00	419.76	423.07		423.17	0.004978	3.90	389.82	217.60	0.43
USACE	10244	2YR	307.00	416.08	419.68		419.84	0.003507	3.54	156.05	136.00	0.37
USACE	10244	5YR	543.00	416.08	420.51		420.67	0.003087	3.93	274.37	150.60	0.36
USACE	10244	10YR	755.00	416.08	421.09		421.26	0.002933	4.22	364.98	160.12	0.36
USACE	10244	25YR	1110.00	416.08	421.89		422.07	0.002842	4.64	496.85	171.98	0.36
USACE	10244	50YR	1392.00	416.08	422.40		422.60	0.002887	4.99	586.73	180.42	0.37
USACE	10244	100YR	1695.00	416.08	422.90		423.12	0.002883	5.27	678.66	186.56	0.38
USACE	10244	100YRPLUS	2217.00	416.08	423.62		423.87	0.003011	5.80	816.09	203.34	0.39
USACE	10244	200YR	2014.00	416.08	423.36		423.59	0.002938	5.59	765.13	192.51	0.38
USACE	10244	500YR	2458.00	416.08	423.91		424.19	0.003108	6.06	879.63	220.21	0.40
USACE	10244	SEPT2011	733.00	416.08	421.04		421.20	0.002939	4.18	356.28	159.24	0.36
USACE	9985	2YR	307.00	415.28	418.44		418.69	0.005696	4.28	100.64	73.88	0.46
USACE	9985	5YR	543.00	415.28	419.13		419.51	0.006758	5.44	156.52	87.02	0.52
USACE	9985	10YR	755.00	415.28	419.61		420.08	0.007450	6.24	201.09	99.12	0.56
USACE	9985	25YR	1110.00	415.28	420.23		420.85	0.008569	7.39	272.44	122.22	0.62
USACE	9985	50YR	1392.00	415.28	420.61		421.32	0.009248	8.11	320.16	128.71	0.65
USACE	9985	100YR	1695.00	415.28	420.98		421.81	0.009963	8.84	370.67	141.76	0.68
USACE	9985	100YRPLUS	2217.00	415.28	421.54		422.48	0.010537	9.73	453.57	151.81	0.71
USACE	9985	200YR	2014.00	415.28	421.33		422.24	0.010413	9.44	421.73	149.36	0.71
USACE	9985	500YR	2458.00	415.28	421.79		422.77	0.010644	10.05	490.76	154.89	0.72
USACE	9985	SEPT2011	733.00	415.28	419.57		420.03	0.007385	6.17	196.78	96.99	0.56
USACE	9701	2YR	307.00	413.84	416.31	416.05	416.63	0.009484	5.08	97.69	94.45	0.63
USACE	9701	5YR	543.00	413.84	416.93	416.59	417.30	0.008971	5.89	164.41	124.27	0.64
USACE	9701	10YR	755.00	413.84	417.31	416.98	417.73	0.009127	6.50	213.80	135.77	0.66
USACE	9701	25YR	1110.00	413.84	417.86	417.44	418.33	0.008910	7.19	294.95	157.52	0.67
USACE	9701	50YR	1392.00	413.84	418.20	417.67	418.71	0.008781	7.59	349.68	159.90	0.68
USACE	9701	100YR	1695.00	413.84	418.52	418.05	419.06	0.008805	8.01	401.27	161.74	0.69
USACE	9701	100YRPLUS	2217.00	413.84	418.99	418.41	419.61	0.009107	8.73	477.53	165.06	0.71
USACE	9701	200YR	2014.00	413.84	418.82	418.26	419.41	0.008923	8.43	449.91	163.48	0.70
USACE	9701	500YR	2458.00	413.84	419.17	418.57	419.83	0.009409	9.10	507.09	166.71	0.73
USACE	9701	SEPT2011	733.00	413.84	417.27	416.95	417.69	0.009127	6.45	208.80	134.79	0.66
USACE	9461	2YR	307.00	411.83	414.07	413.92	414.44	0.008647	5.19	75.41	88.34	0.67
USACE	9461	5YR	543.00	411.83	414.51	414.46	415.01	0.009888	6.39	119.06	105.52	0.74
USACE	9461	10YR	755.00	411.83	414.83	414.76	415.41	0.010035	7.04	154.94	114.04	0.77
USACE	9461	25YR	1110.00	411.83	415.26	415.15	415.96	0.010783	8.06	206.03	130.78	0.81
USACE	9461	50YR	1392.00	411.83	415.54	415.48	416.32	0.011039	8.65	244.89	141.38	0.84
USACE	9461	100YR	1695.00	411.83	415.82	415.74	416.66	0.011135	9.17	285.91	152.12	0.85
USACE	9461	100YRPLUS	2217.00	411.83	416.24	416.17	417.17	0.011083	9.85	353.85	166.56	0.86
USACE	9461	200YR	2014.00	411.83	416.08	416.02	416.98	0.011170	9.63	327.48	161.76	0.86
USACE	9461	500YR	2458.00	411.83	416.44	416.32	417.38	0.010798	10.03	386.78	171.95	0.86
USACE	9461	SEPT2011	733.00	411.83	414.80	414.73	415.37	0.010010	6.98	151.45	113.21	0.76
USACE	9179	2YR	307.00	409.26	412.78		412.98	0.003251	4.00	123.63	187.18	0.45
USACE	9179	5YR	543.00	409.26	413.26		413.46	0.003120	4.41	216.28	192.47	0.45
USACE	9179	10YR	755.00	409.26	413.56		413.78	0.003310	4.84	273.23	194.46	0.47
USACE	9179	25YR	1110.00	409.26	414.00		414.24	0.003349	5.30	360.24	198.58	0.48
USACE	9179	50YR	1392.00	409.26	414.32		414.58	0.003328	5.58	424.35	203.57	0.49
USACE	9179	100YR	1695.00	409.26	414.62		414.90	0.003340	5.86	485.93	207.21	0.50
USACE	9179	100YRPLUS	2217.00	409.26	415.14		415.44	0.003186	6.17	594.87	214.71	0.49
USACE	9179	200YR	2014.00	409.26	414.94		415.23	0.003266	6.08	551.75	211.51	0.50
USACE	9179	500YR	2458.00	409.26	415.32		415.64	0.003264	6.40	634.03	217.95	0.50
USACE	9179	SEPT2011	733.00	409.26	413.53		413.75	0.003295	4.80	267.68	194.27	0.47
USACE	8963	2YR	307.00	408.00	411.88		412.15	0.004595	4.70	106.68	139.26	0.52
USACE	8963	5YR	543.00	408.00	412.39		412.66	0.004526	5.27	190.99	185.41	0.53
USACE	8963	10YR	755.00	408.00	412.79		413.03	0.003768	5.22	268.03	196.11	0.50
USACE	8963	25YR	1110.00	408.00	413.27		413.51	0.003550	5.53	364.37	205.83	0.49
USACE	8963	50YR	1392.00	408.00	413.59		413.85	0.003536	5.82	432.82	217.72	0.50

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8963	100YR	1695.00	408.00	413.90		414.17	0.003531	6.09	499.81	226.31	0.50
USACE	8963	100YRPLUS	2217.00	408.00	414.37		414.69	0.003896	6.84	618.59	278.14	0.54
USACE	8963	200YR	2014.00	408.00	414.19		414.49	0.003703	6.51	570.59	251.20	0.52
USACE	8963	500YR	2458.00	408.00	414.58		414.90	0.003717	6.86	678.24	285.11	0.53
USACE	8963	SEPT2011	733.00	408.00	412.75		412.99	0.003849	5.24	259.97	195.39	0.50
USACE	8714	2YR	307.00	406.81	410.65	409.79	410.97	0.004957	4.67	80.62	419.36	0.54
USACE	8714	5YR	543.00	406.81	411.68	411.00	411.86	0.002298	4.05	232.13	654.49	0.39
USACE	8714	10YR	755.00	406.81	412.29	411.27	412.42	0.001613	3.79	366.58	719.11	0.34
USACE	8714	25YR	1110.00	406.81	412.75	411.85	412.90	0.001716	4.22	486.15	766.96	0.36
USACE	8714	50YR	1392.00	406.81	413.10	412.01	413.25	0.001659	4.36	580.90	800.99	0.35
USACE	8714	100YR	1695.00	406.81	413.41	412.26	413.57	0.001638	4.53	671.35	817.66	0.36
USACE	8714	100YRPLUS	2217.00	406.81	413.88	412.61	414.06	0.001676	4.86	811.27	858.16	0.36
USACE	8714	200YR	2014.00	406.81	413.71	412.42	413.88	0.001664	4.74	757.98	846.04	0.36
USACE	8714	500YR	2458.00	406.81	414.06	412.75	414.26	0.001801	5.14	871.08	891.15	0.38
USACE	8714	SEPT2011	733.00	406.81	412.23	411.26	412.37	0.001646	3.80	354.00	713.66	0.34
USACE	8607	2YR	307.00	406.00	410.45	408.90	410.62	0.001847	3.45	119.83	399.08	0.35
USACE	8607	5YR	543.00	406.00	411.58	409.87	411.69	0.001036	3.18	294.26	508.28	0.27
USACE	8607	10YR	755.00	406.00	412.19	410.71	412.29	0.000874	3.21	430.52	559.61	0.26
USACE	8607	25YR	1110.00	406.00	412.63	411.12	412.75	0.001108	3.82	545.87	600.71	0.29
USACE	8607	50YR	1392.00	406.00	412.97	411.58	413.10	0.001139	4.04	644.24	616.28	0.30
USACE	8607	100YR	1695.00	406.00	413.27	411.81	413.42	0.001222	4.34	736.23	643.61	0.32
USACE	8607	100YRPLUS	2217.00	406.00	413.73	412.22	413.90	0.001325	4.75	884.06	680.75	0.33
USACE	8607	200YR	2014.00	406.00	413.56	412.11	413.72	0.001271	4.57	828.50	661.79	0.32
USACE	8607	500YR	2458.00	406.00	413.91	412.28	414.09	0.001386	4.95	946.03	698.28	0.34
USACE	8607	SEPT2011	733.00	406.00	412.14	410.68	412.23	0.000887	3.20	417.66	557.05	0.26
USACE	8536	2YR	307.00	405.47	409.72	409.34	410.25	0.010717	5.84	52.57	185.42	0.76
USACE	8536	5YR	543.00	405.47	410.74	410.18	411.37	0.008073	6.36	85.85	320.43	0.70
USACE	8536	10YR	755.00	405.47	411.53	410.72	412.04	0.004954	5.96	140.35	463.12	0.57
USACE	8536	25YR	1110.00	405.47	412.47	411.71	412.64	0.001624	4.02	438.14	535.23	0.34
USACE	8536	50YR	1392.00	405.47	412.81	411.91	412.99	0.001583	4.18	530.55	574.93	0.34
USACE	8536	100YR	1695.00	405.47	413.11	412.11	413.31	0.001573	4.34	617.67	592.77	0.35
USACE	8536	100YRPLUS	2217.00	405.47	413.56	412.41	413.78	0.001576	4.61	751.15	609.56	0.35
USACE	8536	200YR	2014.00	405.47	413.39	412.30	413.61	0.001570	4.50	701.44	603.55	0.35
USACE	8536	500YR	2458.00	405.47	413.73	412.48	413.96	0.001608	4.75	803.08	615.15	0.36
USACE	8536	SEPT2011	733.00	405.47	411.42	410.67	411.97	0.005565	6.17	131.09	454.95	0.61
USACE	8509 Hernley Road		Culvert									
USACE	8478	2YR	307.00	405.21	409.96	408.26	410.16	0.002290	3.63	84.80	238.29	0.38
USACE	8478	5YR	543.00	405.21	410.67	409.21	410.94	0.002568	4.47	162.77	328.74	0.42
USACE	8478	10YR	755.00	405.21	411.10	409.84	411.42	0.002818	5.05	208.05	394.11	0.45
USACE	8478	25YR	1110.00	405.21	411.77	410.90	412.02	0.002158	4.90	383.25	431.54	0.40
USACE	8478	50YR	1392.00	405.21	412.22	411.22	412.45	0.001948	4.95	481.82	452.87	0.39
USACE	8478	100YR	1695.00	405.21	412.64	411.51	412.88	0.001830	5.06	580.95	477.63	0.38
USACE	8478	100YRPLUS	2217.00	405.21	413.31	411.85	413.54	0.001623	5.15	750.82	504.82	0.36
USACE	8478	200YR	2014.00	405.21	413.05	411.78	413.28	0.001705	5.12	682.87	492.17	0.37
USACE	8478	500YR	2458.00	405.21	413.57	412.06	413.80	0.001590	5.23	819.25	514.72	0.36
USACE	8478	SEPT2011	733.00	405.21	411.00	409.79	411.34	0.003021	5.14	197.31	390.28	0.46
USACE	8423	2YR	307.00	404.99	409.94	407.68	410.03	0.000921	2.51	177.55	332.61	0.25
USACE	8423	5YR	543.00	404.99	410.69	408.59	410.78	0.000876	2.81	307.10	363.12	0.25
USACE	8423	10YR	755.00	404.99	411.13	409.66	411.23	0.000923	3.09	398.75	400.25	0.26
USACE	8423	25YR	1110.00	404.99	411.77	410.26	411.88	0.000935	3.41	552.30	439.47	0.27
USACE	8423	50YR	1392.00	404.99	412.21	410.51	412.32	0.000912	3.56	672.92	467.73	0.27
USACE	8423	100YR	1695.00	404.99	412.64	410.75	412.75	0.000865	3.64	796.03	472.39	0.26
USACE	8423	100YRPLUS	2217.00	404.99	413.31	411.11	413.42	0.000799	3.76	990.20	476.18	0.26
USACE	8423	200YR	2014.00	404.99	413.05	410.99	413.16	0.000830	3.73	913.79	474.69	0.26
USACE	8423	500YR	2458.00	404.99	413.56	411.26	413.68	0.000796	3.85	1063.94	477.59	0.26
USACE	8423	SEPT2011	733.00	404.99	411.03	409.49	411.14	0.000996	3.16	376.44	395.08	0.27
USACE	7912	2YR	811.00	402.71	408.62		408.98	0.003124	5.35	238.33	220.16	0.47
USACE	7912	5YR	1443.00	402.71	409.41		409.77	0.003131	6.03	442.42	278.10	0.48
USACE	7912	10YR	1977.00	402.71	409.90		410.25	0.003000	6.29	580.85	286.43	0.48
USACE	7912	25YR	2863.00	402.71	410.59		410.94	0.002830	6.63	783.23	300.34	0.48
USACE	7912	50YR	3565.00	402.71	411.04		411.41	0.002813	6.93	920.13	309.61	0.48
USACE	7912	100YR	4324.00	402.71	411.46		411.86	0.002826	7.25	1054.00	317.40	0.49
USACE	7912	100YRPLUS	5655.00	402.71	412.11		412.55	0.002898	7.79	1263.60	333.89	0.50
USACE	7912	200YR	5108.00	402.71	411.86		412.28	0.002863	7.57	1180.72	327.09	0.49
USACE	7912	500YR	6198.00	402.71	412.35		412.81	0.002916	7.98	1344.87	338.22	0.50
USACE	7912	SEPT2011	1836.00	402.71	409.79		410.14	0.002978	6.18	549.88	285.02	0.48
USACE	7472	2YR	811.00	401.60	407.69		407.88	0.001907	4.13	337.60	252.07	0.36
USACE	7472	5YR	1443.00	401.60	408.61		408.77	0.001575	4.30	614.12	351.03	0.34
USACE	7472	10YR	1977.00	401.60	409.11		409.28	0.001548	4.55	796.62	375.54	0.34
USACE	7472	25YR	2863.00	401.60	409.89		410.05	0.001381	4.70	1106.05	424.84	0.33
USACE	7472	50YR	3565.00	401.60	410.34		410.52	0.001388	4.94	1302.76	445.35	0.34
USACE	7472	100YR	4324.00	401.60	410.77		410.96	0.001405	5.18	1496.28	460.36	0.34
USACE	7472	100YRPLUS	5655.00	401.60	411.40		411.61	0.001468	5.60	1794.28	487.71	0.36
USACE	7472	200YR	5108.00	401.60	411.15		411.36	0.001438	5.43	1677.53	477.38	0.35
USACE	7472	500YR	6198.00	401.60	411.64		411.86	0.001476	5.74	1913.82	495.72	0.36
USACE	7472	SEPT2011	1836.00	401.60	409.05		409.20	0.001443	4.36	773.02	371.37	0.33
USACE	7263	2YR	811.00	401.03	407.47		407.56	0.001038	3.22	468.79	324.66	0.27
USACE	7263	5YR	1443.00	401.03	408.43		408.51	0.000881	3.38	839.13	434.61	0.26

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	7263	10YR	1977.00	401.03	408.93		409.01	0.000911	3.65	1065.97	471.68	0.27
USACE	7263	25YR	2863.00	401.03	409.72		409.81	0.000827	3.79	1468.61	540.30	0.26
USACE	7263	50YR	3565.00	401.03	410.17		410.27	0.000851	4.02	1719.98	581.62	0.27
USACE	7263	100YR	4324.00	401.03	410.59		410.70	0.000919	4.34	1969.61	613.13	0.28
USACE	7263	100YRPLUS	5655.00	401.03	411.22		411.34	0.000956	4.67	2364.82	648.16	0.29
USACE	7263	200YR	5108.00	401.03	410.98		411.09	0.000931	4.52	2210.78	631.01	0.28
USACE	7263	500YR	6198.00	401.03	411.46		411.59	0.000973	4.80	2524.33	668.33	0.29
USACE	7263	SEPT2011	1836.00	401.03	408.88		408.96	0.000830	3.47	1043.95	469.74	0.25
USACE	6926	2YR	869.00	400.01	407.31		407.35	0.000381	2.22	788.27	421.58	0.17
USACE	6926	5YR	1552.00	400.01	408.27		408.31	0.000370	2.44	1219.50	480.22	0.17
USACE	6926	10YR	2191.00	400.01	408.74		408.80	0.000454	2.84	1451.84	514.69	0.19
USACE	6926	25YR	3254.00	400.01	409.53		409.60	0.000495	3.20	1876.45	561.70	0.21
USACE	6926	50YR	4081.00	400.01	409.96		410.04	0.000553	3.51	2122.05	574.95	0.22
USACE	6926	100YR	4953.00	400.01	410.36		410.45	0.000610	3.80	2351.42	584.52	0.23
USACE	6926	100YRPLUS	6478.00	400.01	410.96		411.07	0.000700	4.27	2705.49	603.08	0.25
USACE	6926	200YR	5859.00	400.01	410.73		410.83	0.000663	4.08	2569.64	594.31	0.24
USACE	6926	500YR	7137.00	400.01	411.19		411.31	0.000737	4.45	2844.84	612.67	0.26
USACE	6926	SEPT2011	2135.00	400.01	408.70		408.76	0.000449	2.81	1430.52	505.65	0.19
USACE	6614	2YR	869.00	399.41	407.24	404.63	407.26	0.000197	1.69	896.85	392.28	0.12
USACE	6614	5YR	1552.00	399.41	408.19	405.32	408.22	0.000251	2.12	1370.82	457.38	0.14
USACE	6614	10YR	2191.00	399.41	408.63	405.75	408.67	0.000337	2.56	1579.92	484.42	0.17
USACE	6614	25YR	3254.00	399.41	409.40	406.34	409.45	0.000418	3.06	1980.63	560.61	0.19
USACE	6614	50YR	4081.00	399.41	409.81	406.73	409.88	0.000489	3.42	2215.15	582.85	0.21
USACE	6614	100YR	4953.00	399.41	410.18	407.00	410.27	0.000556	3.76	2437.13	596.96	0.23
USACE	6614	100YRPLUS	6478.00	399.41	410.75	407.15	410.86	0.000662	4.28	2781.00	619.74	0.25
USACE	6614	200YR	5859.00	399.41	410.53	407.01	410.63	0.000619	4.07	2649.40	609.97	0.24
USACE	6614	500YR	7137.00	399.41	410.96	407.34	411.08	0.000705	4.48	2916.35	628.71	0.26
USACE	6614	SEPT2011	2135.00	399.41	408.59	405.71	408.63	0.000331	2.53	1560.65	482.76	0.17
USACE	6512	2YR	869.00	399.10	406.97	402.95	407.17	0.000726	3.66	238.55	385.05	0.25
USACE	6512	5YR	1552.00	399.10	408.17	404.21	408.19	0.000154	1.88	1565.74	443.52	0.12
USACE	6512	10YR	2191.00	399.10	408.61	405.21	408.65	0.000224	2.35	1762.86	460.99	0.14
USACE	6512	25YR	3254.00	399.10	409.36	406.67	409.41	0.000306	2.92	2127.52	505.25	0.17
USACE	6512	50YR	4081.00	399.10	409.76	407.33	409.84	0.000376	3.33	2333.66	521.91	0.19
USACE	6512	100YR	4953.00	399.10	410.12	407.07	410.22	0.000459	3.77	2527.71	551.20	0.21
USACE	6512	100YRPLUS	6478.00	399.10	410.67	407.27	410.79	0.000591	4.44	2839.56	591.49	0.24
USACE	6512	200YR	5859.00	399.10	410.46	407.27	410.57	0.000540	4.18	2719.41	577.55	0.23
USACE	6512	500YR	7137.00	399.10	410.88	407.27	411.01	0.000637	4.66	2964.50	598.55	0.25
USACE	6512	SEPT2011	2135.00	399.10	408.57	405.14	408.61	0.000218	2.32	1744.84	458.65	0.14
USACE	6486 Private Drive		Bridge									
USACE	6457	2YR	869.00	398.69	403.89	403.00	404.77	0.006510	7.53	115.56	60.93	0.68
USACE	6457	5YR	1552.00	398.69	405.11	405.11	405.87	0.004993	7.91	334.40	238.15	0.62
USACE	6457	10YR	2191.00	398.69	405.84	405.61	406.46	0.004065	7.81	536.59	314.54	0.57
USACE	6457	25YR	3254.00	398.69	407.00	406.14	407.38	0.002490	6.90	956.51	409.38	0.46
USACE	6457	50YR	4081.00	398.69	407.74	406.43	408.04	0.001924	6.49	1275.02	444.63	0.41
USACE	6457	100YR	4953.00	398.69	408.38	406.53	408.65	0.001640	6.32	1568.31	467.62	0.39
USACE	6457	100YRPLUS	6478.00	398.69	409.35	407.35	409.60	0.001389	6.26	2044.51	515.13	0.36
USACE	6457	200YR	5859.00	398.69	408.98	407.17	409.24	0.001464	6.25	1860.06	498.04	0.37
USACE	6457	500YR	7137.00	398.69	409.75	407.54	409.99	0.001293	6.21	2256.35	532.16	0.35
USACE	6457	SEPT2011	2135.00	398.69	405.84	405.60	406.43	0.003842	7.60	537.73	314.70	0.56
USACE	6372	2YR	869.00	398.21	403.69	402.89	404.14	0.003789	5.91	222.57	191.66	0.52
USACE	6372	5YR	1552.00	398.21	405.05	404.16	405.28	0.001920	5.11	610.24	352.78	0.39
USACE	6372	10YR	2191.00	398.21	405.88	404.61	406.05	0.001390	4.79	916.84	388.50	0.34
USACE	6372	25YR	3254.00	398.21	406.98	405.25	407.13	0.001042	4.63	1369.45	428.21	0.30
USACE	6372	50YR	4081.00	398.21	407.71	405.53	407.85	0.000939	4.68	1690.33	466.35	0.29
USACE	6372	100YR	4953.00	398.21	408.35	405.85	408.49	0.000870	4.74	1995.88	489.33	0.28
USACE	6372	100YRPLUS	6478.00	398.21	409.31	406.20	409.46	0.000811	4.91	2484.04	525.19	0.28
USACE	6372	200YR	5859.00	398.21	408.95	406.06	409.09	0.000826	4.83	2296.04	512.35	0.28
USACE	6372	500YR	7137.00	398.21	409.71	406.37	409.86	0.000791	4.99	2699.41	548.11	0.28
USACE	6372	SEPT2011	2135.00	398.21	405.88	404.57	406.04	0.001318	4.66	917.25	388.54	0.33
USACE	6271	2YR	869.00	397.89	403.40		403.74	0.003608	5.44	282.73	187.39	0.46
USACE	6271	5YR	1552.00	397.89	404.86		405.08	0.002084	5.04	631.87	297.56	0.37
USACE	6271	10YR	2191.00	397.89	405.71		405.90	0.001709	5.00	900.20	322.32	0.34
USACE	6271	25YR	3254.00	397.89	406.82		407.00	0.001490	5.18	1264.27	332.29	0.33
USACE	6271	50YR	4081.00	397.89	407.55		407.73	0.001422	5.37	1506.94	338.44	0.33
USACE	6271	100YR	4953.00	397.89	408.17		408.38	0.001425	5.64	1721.31	343.43	0.33
USACE	6271	100YRPLUS	6478.00	397.89	409.11		409.35	0.001468	6.11	2047.38	352.25	0.34
USACE	6271	200YR	5859.00	397.89	408.76		408.98	0.001439	5.91	1924.22	348.12	0.34
USACE	6271	500YR	7137.00	397.89	409.51		409.75	0.001469	6.28	2187.74	357.14	0.34
USACE	6271	SEPT2011	2135.00	397.89	405.72		405.90	0.001605	4.85	904.12	322.44	0.33
USACE	6022	2YR	886.00	396.39	402.41		402.85	0.003451	5.59	215.76	87.12	0.46
USACE	6022	5YR	1580.00	396.39	403.83		404.39	0.003479	6.70	469.01	218.19	0.48
USACE	6022	10YR	2219.00	396.39	404.64		405.25	0.003622	7.43	662.26	254.81	0.50
USACE	6022	25YR	3320.00	396.39	405.58		406.36	0.004237	8.76	941.21	323.40	0.55
USACE	6022	50YR	4189.00	396.39	406.42		407.13	0.003803	8.87	1223.62	349.29	0.53
USACE	6022	100YR	5105.00	396.39	407.05		407.77	0.003785	9.28	1447.05	360.68	0.54
USACE	6022	100YRPLUS	6676.00	396.39	407.97		408.73	0.003798	9.90	1787.52	373.39	0.55
USACE	6022	200YR	6058.00	396.39	407.63		408.37	0.003781	9.66	1660.21	369.02	0.54
USACE	6022	500YR	7406.00	396.39	408.36		409.14	0.003813	10.17	1932.97	378.13	0.55
USACE	6022	SEPT2011	2234.00	396.39	404.65		405.27	0.003620	7.44	666.82	255.16	0.50

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5812	2YR	886.00	395.61	401.77	399.57	402.19	0.002834	5.35	267.17	239.04	0.42
USACE	5812	5YR	1580.00	395.61	403.55		403.81	0.001649	4.97	763.49	304.87	0.33
USACE	5812	10YR	2219.00	395.61	404.38		404.65	0.001680	5.41	1022.37	318.02	0.34
USACE	5812	25YR	3320.00	395.61	405.29		405.63	0.002015	6.38	1314.36	326.57	0.38
USACE	5812	50YR	4189.00	395.61	406.12		406.46	0.001955	6.68	1589.80	335.35	0.38
USACE	5812	100YR	5105.00	395.61	406.70		407.09	0.002136	7.26	1786.58	343.11	0.40
USACE	5812	100YRPLUS	6676.00	395.61	407.56		408.02	0.002414	8.15	2083.85	353.33	0.43
USACE	5812	200YR	6058.00	395.61	407.24		407.67	0.002307	7.81	1972.77	349.79	0.42
USACE	5812	500YR	7406.00	395.61	407.92		408.41	0.002525	8.51	2211.45	357.16	0.45
USACE	5812	SEPT2011	2234.00	395.61	404.40		404.67	0.001680	5.42	1028.09	318.24	0.34
USACE	5457	2YR	886.00	394.16	399.94		400.72	0.006170	7.20	142.01	44.36	0.60
USACE	5457	5YR	1580.00	394.16	401.31	400.34	402.61	0.007547	9.50	251.23	160.46	0.69
USACE	5457	10YR	2219.00	394.16	402.53	402.11	403.58	0.005589	9.28	563.20	324.22	0.61
USACE	5457	25YR	3320.00	394.16	403.62		404.51	0.004851	9.51	945.82	361.17	0.59
USACE	5457	50YR	4189.00	394.16	405.25		405.69	0.002385	7.53	1557.60	387.80	0.42
USACE	5457	100YR	5105.00	394.16	405.77		406.25	0.002582	8.11	1760.19	393.70	0.45
USACE	5457	100YRPLUS	6676.00	394.16	406.52		407.07	0.002913	9.03	2056.94	399.87	0.48
USACE	5457	200YR	6058.00	394.16	406.25		406.77	0.002775	8.67	1948.64	397.81	0.46
USACE	5457	500YR	7406.00	394.16	406.84		407.42	0.003043	9.40	2184.39	402.74	0.49
USACE	5457	SEPT2011	2234.00	394.16	402.56	402.48	403.60	0.005532	9.26	573.57	330.67	0.61
USACE	5168	2YR	886.00	393.20	398.80		399.31	0.003583	5.91	176.53	61.40	0.49
USACE	5168	5YR	1580.00	393.20	399.96		400.80	0.004624	7.82	251.47	68.51	0.58
USACE	5168	10YR	2219.00	393.20	400.65	399.72	401.89	0.006001	9.63	327.92	133.68	0.67
USACE	5168	25YR	3320.00	393.20	402.46		403.30	0.003586	8.80	703.70	246.64	0.54
USACE	5168	50YR	4189.00	393.20	404.88		405.18	0.001190	6.03	1395.81	314.99	0.33
USACE	5168	100YR	5105.00	393.20	405.32		405.68	0.001399	6.72	1536.90	325.53	0.36
USACE	5168	100YRPLUS	6676.00	393.20	405.94		406.40	0.001756	7.81	1743.77	342.45	0.40
USACE	5168	200YR	6058.00	393.20	405.71		406.14	0.001616	7.39	1668.48	337.20	0.39
USACE	5168	500YR	7406.00	393.20	406.20		406.71	0.001912	8.27	1834.47	351.60	0.42
USACE	5168	SEPT2011	2234.00	393.20	400.67	399.74	401.92	0.006015	9.65	330.23	134.43	0.68
USACE	5004	2YR	886.00	392.58	398.01	397.20	398.60	0.005133	6.50	181.21	89.61	0.58
USACE	5004	5YR	1580.00	392.58	399.36	398.26	399.99	0.004382	7.30	353.78	188.78	0.56
USACE	5004	10YR	2219.00	392.58	400.38	399.44	400.95	0.003490	7.33	516.75	331.53	0.51
USACE	5004	25YR	3320.00	392.58	402.59	400.25	402.80	0.001167	5.17	1405.71	362.71	0.31
USACE	5004	50YR	4189.00	392.58	404.89	400.83	405.00	0.000499	3.96	2271.90	397.38	0.21
USACE	5004	100YR	5105.00	392.58	405.33	401.38	405.47	0.000599	4.46	2448.53	411.65	0.23
USACE	5004	100YRPLUS	6676.00	392.58	405.95	401.87	406.13	0.000783	5.28	2698.82	433.16	0.27
USACE	5004	200YR	6058.00	392.58	405.73	401.69	405.89	0.000705	4.95	2609.16	423.87	0.26
USACE	5004	500YR	7406.00	392.58	406.20	402.10	406.41	0.000950	5.90	2819.28	453.88	0.30
USACE	5004	SEPT2011	2234.00	392.58	400.41	399.45	400.97	0.003467	7.32	520.92	332.17	0.51
USACE	4871	2YR	886.00	392.07	397.78		398.12	0.002030	4.81	243.83	132.61	0.39
USACE	4871	5YR	1580.00	392.07	399.14		399.55	0.001994	5.66	441.07	159.11	0.41
USACE	4871	10YR	2219.00	392.07	400.15		400.57	0.001863	6.06	611.16	177.72	0.40
USACE	4871	25YR	3320.00	392.07	402.26		402.62	0.001253	5.92	1096.40	361.25	0.34
USACE	4871	50YR	4189.00	392.07	404.77		404.93	0.000494	4.37	2124.11	432.67	0.23
USACE	4871	100YR	5105.00	392.07	405.19		405.38	0.000594	4.90	2305.58	435.87	0.25
USACE	4871	100YRPLUS	6676.00	392.07	405.76		406.02	0.000772	5.77	2557.23	440.23	0.29
USACE	4871	200YR	6058.00	392.07	405.56		405.79	0.000700	5.43	2468.30	438.45	0.27
USACE	4871	500YR	7406.00	392.07	405.99		406.28	0.000856	6.14	2657.60	442.23	0.30
USACE	4871	SEPT2011	2234.00	392.07	400.18		400.60	0.001856	6.07	615.71	178.27	0.40
USACE	4689	2YR	886.00	391.42	396.82	395.65	397.54	0.004791	6.91	147.20	75.90	0.59
USACE	4689	5YR	1580.00	391.42	398.29	397.52	399.03	0.003906	7.60	317.66	156.22	0.56
USACE	4689	10YR	2219.00	391.42	399.86	398.58	400.23	0.001873	6.18	665.77	279.35	0.40
USACE	4689	25YR	3320.00	391.42	402.26	399.60	402.41	0.000655	4.42	1460.33	366.65	0.25
USACE	4689	50YR	4189.00	391.42	404.77	400.06	404.84	0.000260	3.25	2442.35	429.91	0.16
USACE	4689	100YR	5105.00	391.42	405.19	400.44	405.28	0.000318	3.67	2609.46	510.30	0.18
USACE	4689	100YRPLUS	6676.00	391.42	405.76	400.96	405.88	0.000423	4.36	2841.94	561.54	0.21
USACE	4689	200YR	6058.00	391.42	405.56	400.77	405.67	0.000379	4.08	2759.81	555.38	0.20
USACE	4689	500YR	7406.00	391.42	405.98	401.17	406.13	0.000477	4.68	2934.49	567.19	0.23
USACE	4689	SEPT2011	2234.00	391.42	399.89	398.57	400.26	0.001851	6.16	674.59	288.41	0.40
USACE	4623	2YR	886.00	391.20	396.86	394.89	397.23	0.002140	5.12	218.69	104.93	0.41
USACE	4623	5YR	1580.00	391.20	398.34	396.39	398.75	0.001940	5.82	412.02	226.86	0.41
USACE	4623	10YR	2219.00	391.20	399.81	397.65	400.11	0.001225	5.31	647.82	494.01	0.33
USACE	4623	25YR	3320.00	391.20	402.12	398.73	402.35	0.000741	4.90	1016.66	597.41	0.27
USACE	4623	50YR	4189.00	391.20	404.78	399.23	404.82	0.000139	2.48	2977.68	796.55	0.12
USACE	4623	100YR	5105.00	391.20	405.20	399.68	405.25	0.000173	2.83	3154.06	805.20	0.14
USACE	4623	100YRPLUS	6676.00	391.20	405.80	400.39	405.84	0.000149	2.71	4586.19	829.38	0.13
USACE	4623	200YR	6058.00	391.20	405.59	400.12	405.63	0.000134	2.54	4454.86	821.11	0.12
USACE	4623	500YR	7406.00	391.20	406.03	400.69	406.08	0.000167	2.89	4735.25	842.58	0.14
USACE	4623	SEPT2011	2234.00	391.20	399.84	397.66	400.14	0.001218	5.31	652.51	495.53	0.33
USACE	4571	2YR	886.00	391.00	396.86	394.74	397.09	0.001663	3.84	238.61	103.94	0.34
USACE	4571	5YR	1580.00	391.00	398.31	395.75	398.63	0.001641	4.70	377.28	238.00	0.36
USACE	4571	10YR	2219.00	391.00	399.70	396.49	400.04	0.001327	4.93	516.35	543.63	0.33
USACE	4571	25YR	3320.00	391.00	401.93	397.86	402.29	0.000998	5.17	739.40	658.62	0.30
USACE	4571	50YR	4189.00	391.00	404.78	398.53	404.81	0.000109	2.05	3324.62	885.86	0.11
USACE	4571	100YR	5105.00	391.00	405.20	399.14	405.24	0.000135	2.34	3524.65	899.28	0.12
USACE	4571	100YRPLUS	6676.00	391.00	405.80	400.07	405.83	0.000119	2.27	5054.24	924.64	0.11
USACE	4571	200YR	6058.00	391.00	405.59	399.71	405.62	0.000108	2.13	4907.61	916.17	0.11
USACE	4571	500YR	7406.00	391.00	406.03	400.46	406.07	0.000133	2.43	5222.21	950.52	0.12

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4571	SEPT2011	2234.00	391.00	399.73	396.49	400.07	0.001324	4.94	519.11	544.67	0.33
USACE	4532	2YR	886.00	390.88	396.85	394.57	397.00	0.000994	3.13	305.49	428.47	0.27
USACE	4532	5YR	1580.00	390.88	398.30	395.41	398.53	0.001106	4.03	422.73	453.13	0.30
USACE	4532	10YR	2219.00	390.88	399.68	396.02	399.97	0.001013	4.47	534.54	483.33	0.30
USACE	4532	25YR	3320.00	390.88	401.90	396.93	402.25	0.000876	5.00	714.12	714.94	0.29
USACE	4532	50YR	4189.00	390.88	404.78	397.57	404.80	0.000053	1.48	4148.36	910.26	0.07
USACE	4532	100YR	5105.00	390.88	405.20	398.20	405.23	0.000068	1.71	4338.43	948.54	0.09
USACE	4532	100YRPLUS	6676.00	390.88	405.80	399.19	405.82	0.000068	1.76	5958.25	992.00	0.09
USACE	4532	200YR	6058.00	390.88	405.59	398.82	405.62	0.000060	1.64	5814.43	976.33	0.08
USACE	4532	500YR	7406.00	390.88	406.03	399.62	406.06	0.000076	1.89	6125.05	1028.27	0.09
USACE	4532	SEPT2011	2234.00	390.88	399.71	396.04	400.00	0.001013	4.48	536.76	491.43	0.30
USACE	4479 Old Line Road		Bridge									
USACE	4444	2YR	886.00	390.74	396.14	394.59	396.62	0.003185	5.66	169.68	117.09	0.48
USACE	4444	5YR	1580.00	390.74	396.52	395.97	397.75	0.007356	9.11	190.27	180.70	0.75
USACE	4444	10YR	2219.00	390.74	396.90	396.90	398.89	0.010784	11.63	210.93	214.60	0.92
USACE	4444	25YR	3320.00	390.74	398.21	398.21	399.28	0.005703	9.87	554.89	281.95	0.69
USACE	4444	50YR	4189.00	390.74	398.50	398.50	399.84	0.007007	11.28	626.84	341.58	0.77
USACE	4444	100YR	5105.00	390.74	399.13	399.13	400.36	0.006188	11.26	807.44	413.77	0.74
USACE	4444	100YRPLUS	6676.00	390.74	399.59	399.59	401.06	0.007288	12.73	964.73	471.29	0.81
USACE	4444	200YR	6058.00	390.74	399.53	399.53	400.80	0.006311	11.78	942.22	456.34	0.75
USACE	4444	500YR	7406.00	390.74	399.63	399.63	401.39	0.008669	13.93	981.45	482.32	0.88
USACE	4444	SEPT2011	2234.00	390.74	396.93	396.93	398.91	0.010702	11.63	212.47	215.85	0.91
USACE	4350	2YR	886.00	390.40	395.60	395.57	396.20	0.005746	7.10	226.96	240.55	0.63
USACE	4350	5YR	1580.00	390.40	396.36	396.23	396.83	0.004838	7.32	430.04	278.89	0.59
USACE	4350	10YR	2219.00	390.40	396.86	396.55	397.32	0.004649	7.67	575.63	364.52	0.59
USACE	4350	25YR	3320.00	390.40	397.50	397.04	397.98	0.004639	8.27	771.02	496.20	0.60
USACE	4350	50YR	4189.00	390.40	397.87	397.36	398.36	0.004939	8.89	1049.40	500.12	0.63
USACE	4350	100YR	5105.00	390.40	398.22	397.63	398.70	0.004683	8.97	1225.63	504.12	0.61
USACE	4350	100YRPLUS	6676.00	390.40	398.77	398.17	399.25	0.004330	9.10	1507.60	510.95	0.60
USACE	4350	200YR	6058.00	390.40	398.59	398.04	399.05	0.004333	8.95	1412.48	508.41	0.60
USACE	4350	500YR	7406.00	390.40	398.98	398.29	399.47	0.004343	9.29	1613.45	513.76	0.60
USACE	4350	SEPT2011	2234.00	390.40	396.87	396.55	397.33	0.004645	7.68	579.04	369.49	0.59
USACE	4175	2YR	886.00	390.01	394.94		395.33	0.003928	5.76	267.32	234.15	0.52
USACE	4175	5YR	1580.00	390.01	395.66		396.07	0.004066	6.59	449.17	278.32	0.55
USACE	4175	10YR	2219.00	390.01	396.12		396.57	0.004348	7.27	605.28	414.48	0.58
USACE	4175	25YR	3320.00	390.01	396.81		397.24	0.004132	7.74	927.58	491.15	0.58
USACE	4175	50YR	4189.00	390.01	397.21		397.62	0.003861	7.83	1124.31	497.84	0.56
USACE	4175	100YR	5105.00	390.01	397.61		398.00	0.003571	7.86	1324.48	502.32	0.55
USACE	4175	100YRPLUS	6676.00	390.01	398.21		398.61	0.003292	8.02	1630.45	508.66	0.53
USACE	4175	200YR	6058.00	390.01	398.04		398.42	0.003196	7.77	1543.58	507.10	0.52
USACE	4175	500YR	7406.00	390.01	398.40		398.82	0.003409	8.30	1726.15	510.38	0.55
USACE	4175	SEPT2011	2234.00	390.01	396.13		396.58	0.004356	7.29	609.56	417.50	0.58
USACE	3947	2YR	886.00	389.04	394.08	393.37	394.43	0.003836	5.75	272.13	285.49	0.52
USACE	3947	5YR	1580.00	389.04	394.80		395.16	0.003824	6.45	495.96	327.77	0.54
USACE	3947	10YR	2219.00	389.04	395.25		395.61	0.003853	6.90	646.19	345.50	0.55
USACE	3947	25YR	3320.00	389.04	395.81		396.26	0.004499	8.02	863.34	418.02	0.60
USACE	3947	50YR	4189.00	389.04	396.22		396.67	0.004427	8.34	1038.35	443.24	0.60
USACE	3947	100YR	5105.00	389.04	396.60		397.08	0.004498	8.77	1217.46	498.00	0.62
USACE	3947	100YRPLUS	6676.00	389.04	397.15		397.69	0.004927	9.69	1532.41	614.84	0.65
USACE	3947	200YR	6058.00	389.04	396.95		397.50	0.005057	9.63	1411.73	601.40	0.66
USACE	3947	500YR	7406.00	389.04	397.37		397.90	0.004746	9.72	1672.72	625.28	0.64
USACE	3947	SEPT2011	2234.00	389.04	395.26		395.62	0.003859	6.91	649.30	346.03	0.55
USACE	3735	2YR	886.00	388.08	393.13	392.80	393.58	0.004171	5.96	240.22	239.98	0.53
USACE	3735	5YR	1580.00	388.08	393.90		394.32	0.003960	6.55	477.93	370.72	0.54
USACE	3735	10YR	2219.00	388.08	394.39		394.79	0.003824	6.89	689.24	458.69	0.54
USACE	3735	25YR	3320.00	388.08	395.09		395.42	0.003204	6.86	1033.39	518.96	0.50
USACE	3735	50YR	4189.00	388.08	395.54		395.86	0.003025	7.00	1276.18	566.10	0.49
USACE	3735	100YR	5105.00	388.08	395.96		396.27	0.002897	7.15	1523.22	613.63	0.49
USACE	3735	100YRPLUS	6676.00	388.08	396.58		396.88	0.002538	7.11	1922.37	664.16	0.46
USACE	3735	200YR	6058.00	388.08	396.37		396.67	0.002608	7.06	1782.76	648.85	0.47
USACE	3735	500YR	7406.00	388.08	396.83		397.13	0.002438	7.12	2089.19	683.90	0.46
USACE	3735	SEPT2011	2234.00	388.08	394.41		394.80	0.003798	6.88	696.21	461.88	0.53
USACE	3520	2YR	889.00	387.02	392.55	391.97	392.81	0.002673	5.13	327.68	257.78	0.44
USACE	3520	5YR	1588.00	387.02	393.18		393.51	0.003336	6.29	506.67	313.07	0.50
USACE	3520	10YR	2226.00	387.02	393.60		393.98	0.003691	6.99	643.09	336.13	0.54
USACE	3520	25YR	3331.00	387.02	394.22		394.64	0.003999	7.83	863.36	374.09	0.57
USACE	3520	50YR	4207.00	387.02	394.65		395.10	0.004041	8.25	1029.24	394.91	0.58
USACE	3520	100YR	5131.00	387.02	395.09		395.54	0.003916	8.49	1203.88	413.32	0.58
USACE	3520	100YRPLUS	6710.00	387.02	395.70		396.19	0.003904	8.98	1476.26	466.65	0.58
USACE	3520	200YR	6093.00	387.02	395.49		395.97	0.003914	8.82	1379.74	454.27	0.58
USACE	3520	500YR	7459.00	387.02	395.95		396.45	0.003846	9.12	1596.08	482.26	0.58
USACE	3520	SEPT2011	2248.00	387.02	393.61		393.99	0.003707	7.02	647.51	337.41	0.54
USACE	3298	2YR	889.00	386.41	391.47	391.31	392.02	0.004576	6.66	234.13	242.36	0.58
USACE	3298	5YR	1588.00	386.41	392.22		392.68	0.004110	7.07	472.20	342.80	0.57
USACE	3298	10YR	2226.00	386.41	392.72		393.14	0.003838	7.28	648.35	369.41	0.56
USACE	3298	25YR	3331.00	386.41	393.40		393.80	0.003582	7.62	908.29	394.76	0.55
USACE	3298	50YR	4207.00	386.41	393.84		394.25	0.003543	7.94	1085.31	420.13	0.55
USACE	3298	100YR	5131.00	386.41	394.26		394.70	0.003609	8.37	1273.71	456.54	0.56

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3298	100YRPLUS	6710.00	386.41	394.92		395.36	0.003439	8.68	1589.38	495.47	0.56
USACE	3298	200YR	6093.00	386.41	394.68		395.13	0.003557	8.64	1472.73	494.24	0.56
USACE	3298	500YR	7459.00	386.41	395.21		395.65	0.003281	8.69	1732.85	497.50	0.55
USACE	3298	SEPT2011	2248.00	386.41	392.73		393.15	0.003829	7.29	654.09	370.03	0.56
USACE	3085	2YR	889.00	385.80	391.21	389.56	391.39	0.001514	4.22	422.05	325.90	0.34
USACE	3085	5YR	1588.00	385.80	391.76	391.18	392.00	0.002138	5.40	601.34	336.60	0.42
USACE	3085	10YR	2226.00	385.80	392.14	391.53	392.43	0.002543	6.17	737.56	363.66	0.46
USACE	3085	25YR	3331.00	385.80	392.74	391.97	393.08	0.002918	7.07	961.69	383.10	0.50
USACE	3085	50YR	4207.00	385.80	393.15	392.29	393.53	0.003037	7.53	1122.12	390.78	0.52
USACE	3085	100YR	5131.00	385.80	393.56	392.60	393.96	0.003121	7.94	1281.73	394.56	0.53
USACE	3085	100YRPLUS	6710.00	385.80	394.23	392.99	394.66	0.003028	8.31	1546.49	397.50	0.53
USACE	3085	200YR	6093.00	385.80	394.00	392.85	394.41	0.003003	8.11	1455.52	396.61	0.52
USACE	3085	500YR	7459.00	385.80	394.52	393.11	394.97	0.003002	8.48	1661.89	398.63	0.53
USACE	3085	SEPT2011	2248.00	385.80	392.15	391.54	392.45	0.002553	6.19	742.39	364.34	0.46
USACE	2825	2YR	889.00	385.50	390.22	390.22	390.69	0.005327	6.69	283.18	345.47	0.61
USACE	2825	5YR	1588.00	385.50	390.85	390.74	391.21	0.004561	6.87	525.91	416.44	0.58
USACE	2825	10YR	2226.00	385.50	391.41		391.68	0.003376	6.41	762.76	433.90	0.51
USACE	2825	25YR	3331.00	385.50	391.90		392.22	0.003874	7.32	991.11	494.80	0.56
USACE	2825	50YR	4207.00	385.50	392.33		392.65	0.003757	7.58	1209.71	530.64	0.55
USACE	2825	100YR	5131.00	385.50	392.83		393.13	0.003162	7.35	1486.84	558.84	0.52
USACE	2825	100YRPLUS	6710.00	385.50	393.62		393.89	0.002634	7.26	1947.84	619.33	0.48
USACE	2825	200YR	6093.00	385.50	393.38		393.65	0.002671	7.14	1801.87	598.48	0.48
USACE	2825	500YR	7459.00	385.50	393.94		394.21	0.002514	7.30	2151.84	647.23	0.47
USACE	2825	SEPT2011	2248.00	385.50	391.42		391.69	0.003376	6.42	768.36	434.41	0.51
USACE	2600	2YR	889.00	384.99	389.28		389.51	0.003933	5.25	325.09	253.40	0.51
USACE	2600	5YR	1588.00	384.99	390.11		390.32	0.003135	5.45	574.48	417.95	0.48
USACE	2600	10YR	2226.00	384.99	390.71		390.92	0.003204	6.03	918.36	635.95	0.49
USACE	2600	25YR	3331.00	384.99	391.24		391.43	0.002893	6.16	1259.45	652.89	0.48
USACE	2600	50YR	4207.00	384.99	391.84		391.99	0.002045	5.57	1656.53	672.70	0.41
USACE	2600	100YR	5131.00	384.99	392.47		392.60	0.001525	5.15	2091.49	699.60	0.36
USACE	2600	100YRPLUS	6710.00	384.99	393.34		393.46	0.001206	4.98	2712.66	736.96	0.32
USACE	2600	200YR	6093.00	384.99	393.09		393.21	0.001231	4.92	2530.26	730.51	0.33
USACE	2600	500YR	7459.00	384.99	393.68		393.80	0.001136	4.99	2965.66	747.49	0.32
USACE	2600	SEPT2011	2248.00	384.99	390.79		390.97	0.002819	5.72	968.13	639.07	0.46
USACE	2375	2YR	889.00	383.86	388.65		388.79	0.002610	4.55	461.40	407.48	0.42
USACE	2375	5YR	1588.00	383.86	389.83		389.89	0.001133	3.61	1092.71	680.49	0.29
USACE	2375	10YR	2226.00	383.86	390.52		390.56	0.000776	3.27	1580.37	731.46	0.24
USACE	2375	25YR	3331.00	383.86	390.99		391.05	0.000967	3.85	1935.20	766.63	0.28
USACE	2375	50YR	4207.00	383.86	391.65		391.71	0.000754	3.64	2448.44	791.21	0.25
USACE	2375	100YR	5131.00	383.86	392.32		392.38	0.000619	3.52	2991.99	828.36	0.23
USACE	2375	100YRPLUS	6710.00	383.86	393.21		393.27	0.000538	3.54	3756.75	872.71	0.22
USACE	2375	200YR	6093.00	383.86	392.96		393.02	0.000536	3.46	3539.13	868.67	0.22
USACE	2375	500YR	7459.00	383.86	393.56		393.62	0.000520	3.58	4061.15	879.14	0.22
USACE	2375	SEPT2011	2248.00	383.86	390.61		390.66	0.000697	3.13	1651.23	738.14	0.23
USACE	2146	2YR	889.00	382.20	388.31		388.39	0.001121	3.33	475.75	240.02	0.28
USACE	2146	5YR	1588.00	382.20	389.50		389.61	0.001276	4.17	893.60	509.59	0.31
USACE	2146	10YR	2226.00	382.20	390.28		390.36	0.000906	3.84	1315.79	568.07	0.27
USACE	2146	25YR	3331.00	382.20	390.65		390.78	0.001362	4.89	1533.73	604.47	0.33
USACE	2146	50YR	4207.00	382.20	391.38		391.49	0.001110	4.73	1999.96	690.87	0.31
USACE	2146	100YR	5131.00	382.20	392.10		392.20	0.000916	4.57	2513.72	774.54	0.28
USACE	2146	100YRPLUS	6710.00	382.20	393.03		393.12	0.000768	4.49	3272.48	858.12	0.26
USACE	2146	200YR	6093.00	382.20	392.78		392.87	0.000753	4.37	3063.39	832.03	0.26
USACE	2146	500YR	7459.00	382.20	393.38		393.47	0.000754	4.57	3582.43	908.75	0.26
USACE	2146	SEPT2011	2248.00	382.20	390.40		390.48	0.000811	3.68	1385.50	581.91	0.26
USACE	2015	2YR	889.00	381.41	388.09	386.63	388.23	0.001253	3.77	455.13	324.33	0.31
USACE	2015	5YR	1588.00	381.41	389.37	387.54	389.47	0.000835	3.61	873.05	488.80	0.26
USACE	2015	10YR	2226.00	381.41	390.19	388.24	390.26	0.000655	3.49	1406.28	555.36	0.24
USACE	2015	25YR	3331.00	381.41	390.49	388.79	390.62	0.001101	4.65	1579.49	588.96	0.31
USACE	2015	50YR	4207.00	381.41	391.25	389.09	391.36	0.000870	4.43	2040.16	622.26	0.28
USACE	2015	100YR	5131.00	381.41	391.99	389.36	392.09	0.000744	4.34	2518.04	670.09	0.26
USACE	2015	100YRPLUS	6710.00	381.41	392.92	389.94	393.02	0.000681	4.45	3156.12	716.30	0.25
USACE	2015	200YR	6093.00	381.41	392.68	389.77	392.78	0.000636	4.23	2988.03	696.93	0.24
USACE	2015	500YR	7459.00	381.41	393.27	390.11	393.38	0.000675	4.54	3410.64	732.33	0.25
USACE	2015	SEPT2011	2248.00	381.41	390.32	388.24	390.39	0.000581	3.33	1480.10	568.82	0.22
USACE	1802	2YR	920.00	380.49	387.88	384.72	388.03	0.000746	3.40	372.07	323.64	0.25
USACE	1802	5YR	1655.00	380.49	389.03	386.03	389.26	0.001019	4.48	535.61	382.60	0.30
USACE	1802	10YR	2335.00	380.49	390.05	387.40	390.14	0.000478	3.36	1329.75	441.23	0.21
USACE	1802	25YR	3525.00	380.49	390.22	388.37	390.40	0.000953	4.80	1402.35	444.97	0.30
USACE	1802	50YR	4482.00	380.49	391.00	389.03	391.17	0.000849	4.82	1780.15	490.93	0.28
USACE	1802	100YR	5492.00	380.49	391.76	389.53	391.92	0.000779	4.87	2155.49	511.38	0.27
USACE	1802	100YRPLUS	7182.00	380.49	392.68	389.64	392.86	0.000793	5.22	2647.07	580.00	0.28
USACE	1802	200YR	6552.00	380.49	392.45	389.54	392.62	0.000748	5.00	2520.58	555.34	0.27
USACE	1802	500YR	8057.00	380.49	393.02	389.87	393.21	0.000820	5.42	2857.23	629.03	0.29
USACE	1802	SEPT2011	2437.00	380.49	390.19	387.51	390.27	0.000467	3.35	1388.51	444.26	0.21
USACE	1745	2YR	920.00	380.30	387.64	385.66	387.93	0.001679	4.89	248.54	213.45	0.36
USACE	1745	5YR	1655.00	380.30	388.46	386.98	389.06	0.003010	7.16	303.64	347.56	0.49
USACE	1745	10YR	2335.00	380.30	388.76	387.75	389.80	0.004930	9.44	323.88	349.71	0.64
USACE	1745	25YR	3525.00	380.30	389.91	388.85	390.27	0.002238	7.05	1009.50	363.70	0.44
USACE	1745	50YR	4482.00	380.30	390.78	389.54	391.07	0.001714	6.61	1315.48	401.24	0.39

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1745	100YR	5492.00	380.30	391.56	389.71	391.83	0.001462	6.47	1595.36	421.35	0.37
USACE	1745	100YRPLUS	7182.00	380.30	392.53	390.16	392.77	0.001291	6.47	2127.02	467.56	0.35
USACE	1745	200YR	6552.00	380.30	392.31	390.00	392.54	0.001222	6.21	2028.30	453.24	0.34
USACE	1745	500YR	8057.00	380.30	392.85	390.37	393.14	0.001338	6.73	2281.84	473.49	0.36
USACE	1745	SEPT2011	2437.00	380.30	388.80	387.86	389.91	0.005263	9.79	326.03	349.93	0.66
USACE	1683 High Street		Bridge									
USACE	1636	2YR	920.00	380.36	387.02	385.05	387.38	0.001999	5.16	221.62	309.47	0.40
USACE	1636	5YR	1655.00	380.36	387.37	386.64	388.32	0.004944	8.47	244.39	367.46	0.63
USACE	1636	10YR	2335.00	380.36	387.66	387.46	389.27	0.007928	11.10	263.91	401.10	0.80
USACE	1636	25YR	3525.00	380.36	388.61	388.61	389.49	0.005060	9.78	689.96	492.84	0.66
USACE	1636	50YR	4482.00	380.36	389.05	388.84	390.03	0.005540	10.66	824.85	602.43	0.69
USACE	1636	100YR	5492.00	380.36	389.44	389.03	390.53	0.006083	11.57	958.88	651.65	0.73
USACE	1636	100YRPLUS	7182.00	380.36	390.35	389.90	390.76	0.002656	8.23	1888.12	722.67	0.49
USACE	1636	200YR	6552.00	380.36	390.30	389.74	390.65	0.002319	7.66	1857.18	707.03	0.46
USACE	1636	500YR	8057.00	380.36	390.70	390.12	391.09	0.002497	8.20	2085.57	771.34	0.48
USACE	1636	SEPT2011	2437.00	380.36	387.69	387.56	389.42	0.008470	11.51	265.71	402.43	0.83
USACE	1575	2YR	920.00	382.20	386.17	386.17	387.01	0.008710	8.27	161.45	291.49	0.78
USACE	1575	5YR	1655.00	382.20	387.11	387.11	387.86	0.007065	8.74	329.45	519.28	0.73
USACE	1575	10YR	2335.00	382.20	387.53	387.53	388.43	0.008090	9.94	404.54	549.18	0.80
USACE	1575	25YR	3525.00	382.20	388.61	388.20	388.98	0.003427	7.40	914.13	598.16	0.54
USACE	1575	50YR	4482.00	382.20	389.08	388.23	389.48	0.003394	7.75	1073.62	652.45	0.54
USACE	1575	100YR	5492.00	382.20	389.49	388.49	389.93	0.003520	8.23	1209.54	672.28	0.56
USACE	1575	100YRPLUS	7182.00	382.20	390.36	388.90	390.53	0.001306	5.43	2447.83	690.03	0.35
USACE	1575	200YR	6552.00	382.20	389.98	388.76	390.45	0.003347	8.41	1375.19	685.28	0.55
USACE	1575	500YR	8057.00	382.20	390.70	389.09	390.87	0.001284	5.55	2646.33	694.34	0.35
USACE	1575	SEPT2011	2437.00	382.20	387.57	387.57	388.51	0.008318	10.14	413.01	551.48	0.81
USACE	1495	2YR	920.00	382.00	386.27	385.65	386.43	0.001886	4.14	424.00	413.62	0.39
USACE	1495	5YR	1655.00	382.00	387.15	386.24	387.30	0.001542	4.33	693.47	501.46	0.36
USACE	1495	10YR	2335.00	382.00	387.75	386.54	387.91	0.001509	4.67	877.46	524.25	0.37
USACE	1495	25YR	3525.00	382.00	388.61	386.97	388.76	0.001228	4.68	1377.02	551.69	0.34
USACE	1495	50YR	4482.00	382.00	389.08	387.27	389.26	0.001305	5.08	1575.33	598.01	0.35
USACE	1495	100YR	5492.00	382.00	389.49	387.55	389.69	0.001417	5.51	1745.94	632.16	0.37
USACE	1495	100YRPLUS	7182.00	382.00	390.28	387.98	390.43	0.001038	5.08	2616.02	749.40	0.33
USACE	1495	200YR	6552.00	382.00	389.99	387.82	390.21	0.001407	5.76	1955.13	680.29	0.38
USACE	1495	500YR	8057.00	382.00	390.62	388.18	390.78	0.001045	5.25	2819.55	790.10	0.33
USACE	1495	SEPT2011	2437.00	382.00	387.78	386.57	387.96	0.001583	4.80	888.32	525.73	0.38
USACE	1395	2YR	920.00	382.40	386.19	384.65	386.26	0.001117	3.07	517.18	401.40	0.28
USACE	1395	5YR	1655.00	382.40	387.05	385.37	387.15	0.001184	3.64	793.98	504.60	0.30
USACE	1395	10YR	2335.00	382.40	387.65	385.80	387.77	0.001192	3.97	1006.43	559.04	0.31
USACE	1395	25YR	3525.00	382.40	388.57	386.37	388.64	0.000771	3.57	1855.49	586.89	0.26
USACE	1395	50YR	4482.00	382.40	389.04	386.75	389.13	0.000813	3.86	2138.70	601.50	0.27
USACE	1395	100YR	5492.00	382.40	389.45	387.14	389.55	0.000883	4.19	2387.68	618.15	0.28
USACE	1395	100YRPLUS	7182.00	382.40	390.21	387.55	390.33	0.000874	4.47	2867.54	742.61	0.28
USACE	1395	200YR	6552.00	382.40	389.96	387.41	390.07	0.000859	4.33	2706.69	702.24	0.28
USACE	1395	500YR	8057.00	382.40	390.55	387.76	390.67	0.000885	4.63	3091.62	764.46	0.29
USACE	1395	SEPT2011	2437.00	382.40	387.68	385.81	387.81	0.001260	4.10	1017.11	562.01	0.32
USACE	1174	2YR	920.00	379.00	386.07	383.40	386.12	0.000422	2.41	655.11	279.28	0.18
USACE	1174	5YR	1655.00	379.00	386.88	384.09	386.96	0.000638	3.25	902.08	316.64	0.23
USACE	1174	10YR	2335.00	379.00	387.45	384.68	387.56	0.000770	3.79	1086.33	324.89	0.26
USACE	1174	25YR	3525.00	379.00	388.30	385.68	388.45	0.000967	4.59	1374.76	367.27	0.29
USACE	1174	50YR	4482.00	379.00	388.71	386.08	388.90	0.001250	5.40	1525.98	415.07	0.34
USACE	1174	100YR	5492.00	379.00	389.05	386.52	389.29	0.001538	6.16	1662.39	442.39	0.37
USACE	1174	100YRPLUS	7182.00	379.00	389.72	387.06	390.03	0.002021	7.43	1964.56	540.99	0.44
USACE	1174	200YR	6552.00	379.00	389.50	386.88	389.79	0.001864	7.02	1859.83	510.43	0.42
USACE	1174	500YR	8057.00	379.00	390.02	387.30	390.37	0.002183	7.89	2123.14	586.84	0.45
USACE	1174	SEPT2011	2437.00	379.00	387.47	384.87	387.58	0.000829	3.94	1091.34	325.30	0.27
USACE	825	2YR	920.00	379.70	385.94	383.13	385.98	0.000373	2.27	746.38	291.55	0.17
USACE	825	5YR	1655.00	379.70	386.68	383.76	386.74	0.000607	3.15	970.34	325.21	0.22
USACE	825	10YR	2335.00	379.70	387.19	384.76	387.29	0.000803	3.82	1151.12	363.15	0.26
USACE	825	25YR	3525.00	379.70	387.96	385.32	388.10	0.001083	4.77	1462.60	443.96	0.31
USACE	825	50YR	4482.00	379.70	388.25	385.80	388.45	0.001454	5.67	1598.18	486.04	0.36
USACE	825	100YR	5492.00	379.70	388.46	386.09	388.71	0.001883	6.57	1700.83	516.72	0.41
USACE	825	100YRPLUS	7182.00	379.70	389.01	386.47	389.32	0.002145	7.34	2013.52	608.53	0.44
USACE	825	200YR	6552.00	379.70	388.83	386.44	389.12	0.002047	7.07	1908.71	578.63	0.43
USACE	825	500YR	8057.00	379.70	389.29	387.04	389.62	0.002180	7.56	2188.89	677.58	0.45
USACE	825	SEPT2011	2437.00	379.70	387.18	384.03	387.29	0.000881	4.00	1148.04	362.70	0.27
USACE	687	2YR	920.00	377.80	385.90	382.64	385.93	0.000248	1.99	799.02	335.84	0.14
USACE	687	5YR	1655.00	377.80	386.61	383.29	386.67	0.000434	2.82	1056.66	390.67	0.19
USACE	687	10YR	2335.00	377.80	387.11	383.77	387.19	0.000571	3.39	1257.54	412.42	0.22
USACE	687	25YR	3525.00	377.80	387.85	384.68	387.97	0.000738	4.10	1579.45	487.45	0.25
USACE	687	50YR	4482.00	377.80	388.10	385.15	388.27	0.001068	5.03	1693.91	538.97	0.30
USACE	687	100YR	5492.00	377.80	388.24	385.61	388.48	0.001561	6.15	1761.79	568.18	0.37
USACE	687	100YRPLUS	7182.00	377.80	388.71	386.48	389.03	0.002190	7.55	2016.00	664.00	0.44
USACE	687	200YR	6552.00	377.80	388.57	386.18	388.86	0.001953	7.05	1935.30	634.08	0.41
USACE	687	500YR	8057.00	377.80	388.95	386.73	389.31	0.002471	8.16	2156.64	721.31	0.47
USACE	687	SEPT2011	2437.00	377.80	387.09	383.84	387.18	0.000631	3.56	1250.41	411.90	0.23
USACE	569	2YR	903.00	377.70	385.87	382.35	385.90	0.000241	2.09	718.45	337.98	0.14
USACE	569	5YR	1611.00	377.70	386.54	383.12	386.62	0.000469	3.10	858.08	345.36	0.19

HEC-RAS Plan: Existing River: RifeRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	569	10YR	2278.00	377.70	386.99	383.64	387.12	0.000696	3.92	952.96	351.04	0.24
USACE	569	25YR	3453.00	377.70	387.51	384.39	387.80	0.001795	6.55	1193.47	665.15	0.39
USACE	569	50YR	4408.00	377.70	387.55	384.67	388.00	0.002800	8.20	1213.94	669.21	0.48
USACE	569	100YR	5427.00	377.70	388.04	385.68	388.27	0.001777	6.77	1873.96	721.37	0.39
USACE	569	100YRPLUS	7097.00	377.70	388.48	386.30	388.76	0.002066	7.52	2164.85	764.59	0.42
USACE	569	200YR	6491.00	377.70	388.35	386.07	388.62	0.001913	7.18	2080.85	750.62	0.41
USACE	569	500YR	8001.00	377.70	388.70	386.59	389.00	0.002190	7.86	2315.20	779.34	0.44
USACE	569	SEPT2011	2437.00	377.70	386.95	383.75	387.10	0.000818	4.23	943.96	350.42	0.26
USACE	546 Footbridge		Bridge									
USACE	523	2YR	903.00	377.50	385.80	382.34	385.84	0.000238	2.24	759.61	394.14	0.14
USACE	523	5YR	1611.00	377.50	386.37	383.00	386.46	0.000571	3.64	920.93	503.51	0.22
USACE	523	10YR	2278.00	377.50	386.68	383.60	386.83	0.000953	4.81	1041.95	584.16	0.29
USACE	523	25YR	3453.00	377.50	387.30	384.33	387.53	0.001440	6.20	1346.73	680.07	0.36
USACE	523	50YR	4408.00	377.50	387.67	384.85	387.92	0.001637	6.79	1539.37	691.95	0.39
USACE	523	100YR	5427.00	377.50	388.04	385.85	388.21	0.001232	6.04	2195.63	705.45	0.34
USACE	523	100YRPLUS	7097.00	377.50	388.48	386.00	388.69	0.001431	6.71	2509.74	746.91	0.37
USACE	523	200YR	6491.00	377.50	388.37	386.00	388.56	0.001319	6.39	2428.18	737.75	0.35
USACE	523	500YR	8001.00	377.50	388.71	387.47	388.93	0.001517	7.01	2672.63	771.74	0.38
USACE	523	SEPT2011	2437.00	377.50	386.55	383.71	386.74	0.001182	5.31	989.32	551.49	0.32
USACE	412	2YR	903.00	378.00	385.73	383.50	385.79	0.000581	3.29	688.25	561.37	0.22
USACE	412	5YR	1611.00	378.00	386.26	384.19	386.37	0.001001	4.53	958.52	906.80	0.29
USACE	412	10YR	2278.00	378.00	386.57	384.31	386.70	0.001263	5.23	1155.78	930.56	0.33
USACE	412	25YR	3453.00	378.00	387.19	385.94	387.33	0.001284	5.55	1562.75	955.51	0.34
USACE	412	50YR	4408.00	378.00	387.55	386.44	387.70	0.001410	5.98	1795.00	973.39	0.36
USACE	412	100YR	5427.00	378.00	387.88	386.64	388.06	0.001533	6.39	2019.91	1006.95	0.37
USACE	412	100YRPLUS	7097.00	378.00	388.29	386.95	388.51	0.001793	7.12	2297.62	1024.39	0.41
USACE	412	200YR	6491.00	378.00	388.20	386.83	388.39	0.001631	6.75	2233.81	1020.66	0.39
USACE	412	500YR	8001.00	378.00	388.50	387.09	388.74	0.001900	7.43	2442.16	1033.41	0.42
USACE	412	SEPT2011	2437.00	378.00	386.33	384.31	386.55	0.002068	6.55	1000.81	913.89	0.42
USACE	315	2YR	903.00	379.20	385.74	382.17	385.75	0.000122	1.42	1192.88	719.18	0.10
USACE	315	5YR	1611.00	379.20	386.26	382.73	386.30	0.000349	2.53	1480.08	990.49	0.17
USACE	315	10YR	2278.00	379.20	386.56	383.18	386.61	0.000482	3.06	1678.23	1025.75	0.21
USACE	315	25YR	3453.00	379.20	387.17	383.84	387.23	0.000571	3.53	2085.50	1054.04	0.23
USACE	315	50YR	4408.00	379.20	387.51	384.83	387.59	0.000673	3.94	2315.06	1065.48	0.25
USACE	315	100YR	5427.00	379.20	387.84	385.11	387.94	0.000768	4.33	2533.36	1076.79	0.27
USACE	315	100YRPLUS	7097.00	379.20	388.23	385.50	388.36	0.000963	5.00	2793.43	1091.82	0.30
USACE	315	200YR	6491.00	379.20	388.15	385.36	388.26	0.000861	4.70	2736.40	1088.53	0.28
USACE	315	500YR	8001.00	379.20	388.43	385.69	388.58	0.001054	5.32	2928.26	1098.65	0.32
USACE	315	SEPT2011	2437.00	379.20	386.33	383.27	386.40	0.000732	3.69	1524.76	996.07	0.25
USACE	112	2YR	903.00	378.20	385.72	381.44	385.73	0.000100	1.36	1485.15	1067.91	0.09
USACE	112	5YR	1611.00	378.20	386.22	382.01	386.24	0.000200	2.01	1780.30	1132.31	0.13
USACE	112	10YR	2278.00	378.20	386.50	382.44	386.52	0.000300	2.52	1948.11	1153.11	0.16
USACE	112	25YR	3453.00	378.20	387.09	383.11	387.13	0.000400	3.05	2306.53	1196.98	0.18
USACE	112	50YR	4408.00	378.20	387.41	383.60	387.47	0.000500	3.50	2503.34	1234.85	0.21
USACE	112	100YR	5427.00	378.20	387.72	385.05	387.79	0.000600	3.92	2690.00	1246.05	0.23
USACE	112	100YRPLUS	7097.00	378.20	388.07	385.33	388.17	0.000801	4.64	2902.45	1252.80	0.26
USACE	112	200YR	6491.00	378.20	388.00	385.23	388.09	0.000701	4.32	2862.70	1251.56	0.25
USACE	112	500YR	8001.00	378.20	388.25	385.48	388.37	0.000901	4.98	3013.17	1269.77	0.28
USACE	112	SEPT2011	2437.00	378.20	386.24	382.54	386.28	0.000450	3.02	1789.92	1132.68	0.19

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	16363	2YR	425.00	622.25	625.15	625.15	625.66	0.018036	7.17	127.55	127.85	0.81
USACE	16363	5YR	951.00	622.25	625.97	625.97	626.62	0.019727	9.09	253.98	173.05	0.88
USACE	16363	10YR	1441.00	622.25	626.41	626.41	627.21	0.022456	10.56	334.84	187.16	0.96
USACE	16363	25YR	2268.00	622.25	626.94	626.94	628.03	0.028490	12.98	439.22	222.27	1.11
USACE	16363	50YR	2980.00	622.25	627.68	627.68	628.63	0.022121	12.73	622.07	266.46	1.00
USACE	16363	100YR	3653.00	622.25	627.96	627.96	629.03	0.024146	13.80	698.33	271.99	1.06
USACE	16363	100YRPLUS	4777.00	622.25	628.39	628.39	629.64	0.026883	15.34	816.19	282.30	1.13
USACE	16363	200YR	4534.00	622.25	628.31	628.31	629.51	0.026036	14.96	795.05	280.47	1.11
USACE	16363	500YR	5777.00	622.25	628.73	628.73	630.15	0.029070	16.58	915.06	294.55	1.19
USACE	16363	SEPT2011	1724.00	622.25	626.60	626.60	627.50	0.024781	11.46	370.55	193.42	1.02
USACE	16042	2YR	425.00	597.44	600.10	600.10	600.92	0.015171	7.55	68.27	49.20	0.91
USACE	16042	5YR	951.00	597.44	601.22	601.22	602.46	0.014587	9.79	135.01	83.19	0.96
USACE	16042	10YR	1441.00	597.44	602.25	602.25	603.35	0.010221	9.84	243.22	119.59	0.84
USACE	16042	25YR	2268.00	597.44	603.15	603.15	604.41	0.010086	11.11	360.90	139.07	0.86
USACE	16042	50YR	2980.00	597.44	603.68	603.68	605.13	0.010825	12.27	436.53	146.97	0.90
USACE	16042	100YR	3653.00	597.44	604.16	604.16	605.75	0.011098	13.10	508.52	156.32	0.93
USACE	16042	100YRPLUS	4777.00	597.44	604.82	604.82	606.68	0.011919	14.53	615.91	169.81	0.98
USACE	16042	200YR	4534.00	597.44	604.67	604.67	606.49	0.011844	14.28	590.97	166.36	0.97
USACE	16042	500YR	5777.00	597.44	605.41	605.41	607.44	0.012054	15.45	721.87	185.41	1.00
USACE	16042	SEPT2011	1724.00	597.44	602.57	602.57	603.75	0.010374	10.40	282.70	127.01	0.85
USACE	15700	2YR	425.00	574.65	577.58	577.58	578.33	0.012843	7.39	75.52	61.14	0.85
USACE	15700	5YR	951.00	574.65	578.82	578.82	579.55	0.009090	8.23	209.81	143.24	0.77
USACE	15700	10YR	1441.00	574.65	579.33	579.33	580.20	0.010169	9.51	294.11	186.43	0.83
USACE	15700	25YR	2268.00	574.65	580.03	580.03	580.99	0.010457	10.72	437.34	214.25	0.86
USACE	15700	50YR	2980.00	574.65	580.46	580.46	581.54	0.011136	11.71	530.87	218.34	0.90
USACE	15700	100YR	3653.00	574.65	580.79	580.79	582.00	0.011977	12.66	603.67	221.35	0.95
USACE	15700	100YRPLUS	4777.00	574.65	581.28	581.28	582.69	0.013065	13.99	713.73	225.93	1.00
USACE	15700	200YR	4534.00	574.65	581.17	581.17	582.55	0.013013	13.78	687.80	224.85	1.00
USACE	15700	500YR	5777.00	574.65	581.71	581.71	583.24	0.013501	14.87	810.38	230.59	1.03
USACE	15700	SEPT2011	1724.00	574.65	579.64	579.64	580.51	0.009714	9.77	356.71	204.08	0.82
USACE	15407	2YR	425.00	562.21	564.24	564.24	564.81	0.030517	7.73	99.19	87.25	1.01
USACE	15407	5YR	951.00	562.21	565.05	565.05	565.97	0.033425	10.35	174.67	98.14	1.12
USACE	15407	10YR	1441.00	562.21	565.76	565.76	566.81	0.030024	11.50	252.05	133.94	1.11
USACE	15407	25YR	2268.00	562.21	566.68	566.68	567.90	0.027227	12.87	380.33	168.11	1.10
USACE	15407	50YR	2980.00	562.21	567.24	567.24	568.60	0.027135	13.94	466.27	191.36	1.12
USACE	15407	100YR	3653.00	562.21	567.70	567.70	569.17	0.026863	14.75	541.04	199.03	1.13
USACE	15407	100YRPLUS	4777.00	562.21	568.31	568.31	570.01	0.027827	16.15	642.30	205.65	1.17
USACE	15407	200YR	4534.00	562.21	568.20	568.20	569.84	0.027312	15.80	623.83	204.49	1.16
USACE	15407	500YR	5777.00	562.21	568.62	568.62	570.77	0.033281	18.27	695.06	219.94	1.29
USACE	15407	SEPT2011	1724.00	562.21	566.24	566.24	567.28	0.025673	11.62	316.40	157.86	1.05
USACE	15161	2YR	425.00	545.78	548.38	548.38	549.30	0.028816	7.71	57.19	36.06	0.98
USACE	15161	5YR	951.00	545.78	549.76	549.76	551.04	0.020771	9.40	124.68	57.79	0.91
USACE	15161	10YR	1441.00	545.78	550.70	550.70	552.24	0.018626	10.52	185.96	73.12	0.90
USACE	15161	25YR	2268.00	545.78	552.21	552.21	553.74	0.013660	11.03	329.47	122.17	0.81
USACE	15161	50YR	2980.00	545.78	552.40	552.40	554.75	0.020365	13.77	353.38	124.99	1.00
USACE	15161	100YR	3653.00	545.78	553.64	553.64	555.41	0.013117	12.54	535.76	154.93	0.83
USACE	15161	100YRPLUS	4777.00	545.78	554.44	554.44	556.42	0.013622	13.71	663.11	163.95	0.86
USACE	15161	200YR	4534.00	545.78	554.29	554.29	556.22	0.013398	13.43	639.37	162.72	0.85
USACE	15161	500YR	5777.00	545.78	554.93	554.93	557.23	0.015065	15.00	744.70	169.64	0.91
USACE	15161	SEPT2011	1724.00	545.78	551.22	551.22	552.80	0.017025	10.86	225.62	80.95	0.88
USACE	14904	2YR	425.00	533.75	536.62	536.62	537.58	0.029629	7.86	54.86	32.41	0.99
USACE	14904	5YR	951.00	533.75	538.06	538.06	539.43	0.021053	9.60	117.15	53.69	0.92
USACE	14904	10YR	1441.00	533.75	538.97	538.97	540.64	0.019683	10.88	175.13	72.86	0.93
USACE	14904	25YR	2268.00	533.75	540.07	540.07	542.20	0.019871	12.71	264.39	91.37	0.97
USACE	14904	50YR	2980.00	533.75	541.49	541.49	543.19	0.012744	11.91	446.31	145.62	0.80
USACE	14904	100YR	3653.00	533.75	541.72	541.72	543.98	0.016496	13.85	480.18	151.45	0.92
USACE	14904	100YRPLUS	4777.00	533.75	543.12	543.12	544.97	0.011874	13.26	730.72	193.43	0.80
USACE	14904	200YR	4534.00	533.75	542.94	542.94	544.77	0.012005	13.14	694.62	190.90	0.81
USACE	14904	500YR	5777.00	533.75	543.67	543.67	545.69	0.012529	14.21	838.43	198.37	0.84
USACE	14904	SEPT2011	1724.00	533.75	539.61	539.61	541.21	0.016343	10.87	225.72	82.35	0.86
USACE	14643	2YR	425.00	523.87	526.13	526.13	526.70	0.020511	6.55	97.41	100.29	0.83
USACE	14643	5YR	951.00	523.87	527.09	527.09	527.75	0.016721	7.77	234.53	212.30	0.81
USACE	14643	10YR	1441.00	523.87	527.46	527.46	528.36	0.021339	9.51	324.75	264.04	0.93
USACE	14643	25YR	2268.00	523.87	528.24	528.24	529.02	0.016776	9.72	545.48	294.43	0.85
USACE	14643	50YR	2980.00	523.87	528.57	528.57	529.47	0.018650	10.80	644.26	300.20	0.91
USACE	14643	100YR	3653.00	523.87	528.84	528.84	529.86	0.020170	11.70	727.13	304.32	0.96
USACE	14643	100YRPLUS	4777.00	523.87	529.26	529.26	530.45	0.022081	12.97	856.50	313.09	1.02
USACE	14643	200YR	4534.00	523.87	529.15	529.15	530.32	0.022247	12.83	821.84	310.36	1.02
USACE	14643	500YR	5777.00	523.87	529.60	529.60	530.91	0.023310	13.91	963.29	319.56	1.06
USACE	14643	SEPT2011	1724.00	523.87	527.93	527.93	528.62	0.015304	8.80	455.54	288.05	0.80
USACE	14424	2YR	425.00	513.53	516.19	515.98	516.87	0.017696	6.76	73.42	45.95	0.79
USACE	14424	5YR	951.00	513.53	517.33	517.33	518.55	0.019804	9.39	136.80	66.46	0.90
USACE	14424	10YR	1441.00	513.53	518.19	518.19	519.66	0.018765	10.62	198.23	76.67	0.91
USACE	14424	25YR	2268.00	513.53	519.25	519.25	521.18	0.019390	12.52	287.84	93.98	0.96
USACE	14424	50YR	2980.00	513.53	520.58	520.58	522.17	0.012970	11.89	487.62	190.13	0.81
USACE	14424	100YR	3653.00	513.53	521.30	521.30	522.86	0.011981	12.23	643.10	239.97	0.79
USACE	14424	100YRPLUS	4777.00	513.53	522.06	522.06	523.76	0.012427	13.30	844.62	298.39	0.82

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	14424	200YR	4534.00	513.53	521.68	521.68	523.58	0.014182	13.77	739.56	262.07	0.87
USACE	14424	500YR	5777.00	513.53	522.93	522.93	524.44	0.010562	13.12	1147.59	384.36	0.77
USACE	14424	SEPT2011	1724.00	513.53	518.58	518.58	520.21	0.018962	11.32	229.24	81.72	0.93
USACE	14169	2YR	425.00	510.39	513.61	512.92	513.95	0.007546	4.89	128.26	114.68	0.53
USACE	14169	5YR	951.00	510.39	514.79	514.16	515.18	0.006850	5.95	328.22	252.43	0.54
USACE	14169	10YR	1441.00	510.39	515.41	514.90	515.81	0.006638	6.48	498.70	303.15	0.54
USACE	14169	25YR	2268.00	510.39	516.06	515.53	516.55	0.007646	7.61	695.85	356.50	0.59
USACE	14169	50YR	2980.00	510.39	516.63	515.94	517.12	0.007332	8.00	885.55	384.55	0.59
USACE	14169	100YR	3653.00	510.39	517.17	516.12	517.63	0.006614	8.07	1069.70	391.06	0.57
USACE	14169	100YRPLUS	4777.00	510.39	517.82	516.77	518.32	0.006629	8.64	1300.91	406.74	0.58
USACE	14169	200YR	4534.00	510.39	517.67	516.68	518.17	0.006715	8.57	1247.58	404.18	0.58
USACE	14169	500YR	5777.00	510.39	518.37	517.09	518.89	0.006545	9.03	1496.24	429.62	0.59
USACE	14169	SEPT2011	1724.00	510.39	515.71	515.19	516.12	0.006658	6.77	585.18	332.11	0.55
USACE	13873	2YR	425.00	506.70	509.52	509.45	510.30	0.022710	7.24	69.31	50.21	0.89
USACE	13873	5YR	951.00	506.70	510.74	510.74	511.88	0.019979	9.23	152.99	96.56	0.90
USACE	13873	10YR	1441.00	506.70	511.59	511.59	512.77	0.016897	9.89	255.58	147.91	0.86
USACE	13873	25YR	2268.00	506.70	512.88	512.88	513.80	0.011166	9.63	554.26	292.80	0.73
USACE	13873	50YR	2980.00	506.70	513.31	513.31	514.32	0.012179	10.58	687.69	323.81	0.77
USACE	13873	100YR	3653.00	506.70	513.52	513.52	514.75	0.014691	11.91	759.32	334.74	0.85
USACE	13873	100YRPLUS	4777.00	506.70	514.10	514.10	515.41	0.015103	12.83	961.49	370.25	0.88
USACE	13873	200YR	4534.00	506.70	514.02	514.02	515.28	0.014630	12.52	930.35	361.22	0.86
USACE	13873	500YR	5777.00	506.70	514.48	514.48	515.91	0.016178	13.78	1112.53	429.18	0.92
USACE	13873	SEPT2011	1724.00	506.70	512.12	512.12	513.25	0.014450	9.92	356.26	233.40	0.81
USACE	13677	2YR	425.00	505.46	508.29	507.67	508.39	0.004589	3.53	253.30	240.72	0.41
USACE	13677	5YR	951.00	505.46	509.21	508.25	509.36	0.004826	4.53	442.36	291.41	0.44
USACE	13677	10YR	1441.00	505.46	509.80	508.66	510.00	0.005364	5.33	572.88	319.13	0.48
USACE	13677	25YR	2268.00	505.46	510.83	509.14	511.10	0.005472	6.30	826.27	410.80	0.50
USACE	13677	50YR	2980.00	505.46	511.43	509.55	511.73	0.005672	6.92	1009.68	503.03	0.52
USACE	13677	100YR	3653.00	505.46	511.93	509.88	512.25	0.005519	7.24	1183.58	565.41	0.52
USACE	13677	100YRPLUS	4777.00	505.46	512.73	510.42	513.09	0.005635	7.96	1495.76	633.75	0.54
USACE	13677	200YR	4534.00	505.46	512.55	510.34	512.91	0.005661	7.84	1424.86	620.72	0.54
USACE	13677	500YR	5777.00	505.46	513.19	511.06	513.60	0.005999	8.58	1690.81	673.28	0.56
USACE	13677	SEPT2011	1724.00	505.46	510.15	508.84	510.37	0.005309	5.62	654.65	333.16	0.48
USACE	13210	2YR	433.00	501.07	503.77	503.61	504.48	0.018614	6.92	75.82	66.24	0.81
USACE	13210	5YR	975.00	501.07	504.86	504.86	505.60	0.014887	8.05	248.69	233.44	0.78
USACE	13210	10YR	1479.00	501.07	505.47	505.47	506.17	0.013371	8.52	401.38	262.21	0.76
USACE	13210	25YR	2345.00	501.07	506.00	506.00	506.89	0.016216	10.21	549.42	286.18	0.85
USACE	13210	50YR	3082.00	501.07	506.43	506.43	507.38	0.016675	11.01	675.65	299.48	0.87
USACE	13210	100YR	3783.00	501.07	506.71	506.71	507.79	0.018485	12.02	760.61	307.45	0.93
USACE	13210	100YRPLUS	4947.00	501.07	507.15	507.09	508.40	0.020494	13.36	897.33	320.50	0.99
USACE	13210	200YR	4696.00	501.07	507.08	507.08	508.28	0.019618	12.97	876.79	318.36	0.97
USACE	13210	500YR	5989.00	501.07	507.71	507.55	508.91	0.018361	13.47	1083.06	339.68	0.95
USACE	13210	SEPT2011	1797.00	501.07	505.70	505.70	506.46	0.014154	9.11	465.67	275.28	0.78
USACE	12987	2YR	433.00	499.26	501.88		502.11	0.006235	4.20	178.15	212.05	0.48
USACE	12987	5YR	975.00	499.26	502.79		503.03	0.005823	5.02	447.47	350.10	0.49
USACE	12987	10YR	1479.00	499.26	503.34		503.58	0.005450	5.38	642.54	359.54	0.48
USACE	12987	25YR	2345.00	499.26	504.13		504.37	0.004940	5.80	930.61	367.25	0.47
USACE	12987	50YR	3082.00	499.26	504.72		504.97	0.004783	6.17	1150.01	386.03	0.48
USACE	12987	100YR	3783.00	499.26	505.22		505.49	0.004610	6.44	1348.33	398.54	0.47
USACE	12987	100YRPLUS	4947.00	499.26	505.99		506.28	0.004457	6.89	1662.80	426.92	0.48
USACE	12987	200YR	4696.00	499.26	505.83		506.12	0.004497	6.80	1596.18	421.89	0.48
USACE	12987	500YR	5989.00	499.26	506.62		506.92	0.004259	7.16	1937.66	444.79	0.47
USACE	12987	SEPT2011	1797.00	499.26	503.65		503.89	0.005206	5.54	755.33	363.00	0.48
USACE	12634	2YR	433.00	496.87	499.65		499.80	0.006753	3.94	208.02	184.74	0.48
USACE	12634	5YR	975.00	496.87	500.49		500.72	0.007364	5.17	383.48	221.44	0.53
USACE	12634	10YR	1479.00	496.87	501.07		501.34	0.007440	5.86	513.93	230.89	0.55
USACE	12634	25YR	2345.00	496.87	501.82		502.18	0.007999	6.91	690.72	242.32	0.59
USACE	12634	50YR	3082.00	496.87	502.36		502.78	0.008253	7.61	824.72	250.03	0.61
USACE	12634	100YR	3783.00	496.87	502.85		503.33	0.008355	8.18	950.40	261.19	0.63
USACE	12634	100YRPLUS	4947.00	496.87	503.67		504.20	0.007971	8.79	1169.93	278.16	0.63
USACE	12634	200YR	4696.00	496.87	503.49		504.01	0.008090	8.68	1121.51	274.68	0.63
USACE	12634	500YR	5989.00	496.87	504.40		504.95	0.007411	9.14	1378.65	294.20	0.62
USACE	12634	SEPT2011	1797.00	496.87	501.37		501.67	0.007672	6.28	582.97	235.99	0.57
USACE	12335	2YR	433.00	495.35	497.59		497.71	0.007249	3.82	205.01	215.74	0.49
USACE	12335	5YR	975.00	495.35	498.36		498.53	0.007328	4.83	381.61	239.69	0.52
USACE	12335	10YR	1479.00	495.35	498.91		499.12	0.007397	5.51	521.61	262.11	0.54
USACE	12335	25YR	2345.00	495.35	499.72		499.97	0.006729	6.12	737.01	267.32	0.54
USACE	12335	50YR	3082.00	495.35	500.41		500.68	0.005911	6.37	922.90	271.88	0.52
USACE	12335	100YR	3783.00	495.35	501.07		501.34	0.005181	6.51	1103.99	276.78	0.50
USACE	12335	100YRPLUS	4947.00	495.35	502.18		502.45	0.004163	6.62	1414.31	283.94	0.46
USACE	12335	200YR	4696.00	495.35	501.95		502.22	0.004335	6.59	1348.98	282.53	0.47
USACE	12335	500YR	5989.00	495.35	503.10		503.38	0.003625	6.75	1677.54	290.09	0.44
USACE	12335	SEPT2011	1797.00	495.35	499.21		499.44	0.007213	5.79	601.59	264.16	0.55
USACE	12099	2YR	433.00	494.03	495.90		495.98	0.008224	3.32	213.00	196.37	0.49
USACE	12099	5YR	975.00	494.03	496.72		496.84	0.007618	4.34	384.21	213.10	0.51
USACE	12099	10YR	1479.00	494.03	497.35		497.50	0.006936	4.89	519.77	216.88	0.51

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	12099	25YR	2345.00	494.03	498.43		498.61	0.005402	5.34	756.66	222.01	0.47
USACE	12099	50YR	3082.00	494.03	499.32		499.52	0.004467	5.57	956.21	225.67	0.45
USACE	12099	100YR	3783.00	494.03	500.12		500.33	0.003882	5.75	1138.63	228.92	0.43
USACE	12099	100YRPLUS	4947.00	494.03	501.40		501.63	0.003200	5.99	1435.46	234.18	0.40
USACE	12099	200YR	4696.00	494.03	501.14		501.37	0.003299	5.93	1375.27	233.00	0.41
USACE	12099	500YR	5989.00	494.03	502.39		502.65	0.002938	6.27	1674.62	265.15	0.39
USACE	12099	SEPT2011	1797.00	494.03	497.74		497.92	0.006344	5.10	606.43	219.03	0.50
USACE	11594	2YR	433.00	488.46	490.77		491.15	0.010934	4.94	87.87	44.63	0.61
USACE	11594	5YR	975.00	488.46	492.34		492.90	0.007735	6.09	183.74	78.65	0.56
USACE	11594	10YR	1479.00	488.46	493.54		494.16	0.006116	6.55	282.47	86.40	0.53
USACE	11594	25YR	2345.00	488.46	495.26		495.96	0.004875	7.17	442.78	99.86	0.49
USACE	11594	50YR	3082.00	488.46	496.31		497.11	0.004754	7.82	551.12	105.98	0.50
USACE	11594	100YR	3783.00	488.46	497.21		498.10	0.004669	8.35	649.03	112.88	0.51
USACE	11594	100YRPLUS	4947.00	488.46	498.61		499.63	0.004500	9.08	842.78	170.07	0.51
USACE	11594	200YR	4696.00	488.46	498.32		499.33	0.004566	8.97	794.76	161.34	0.51
USACE	11594	500YR	5989.00	488.46	499.72		500.79	0.004220	9.44	1073.41	260.31	0.50
USACE	11594	SEPT2011	1797.00	488.46	494.22		494.87	0.005514	6.79	342.86	91.83	0.51
USACE	11364	2YR	433.00	485.66	488.90		489.24	0.006425	4.68	93.90	35.93	0.49
USACE	11364	5YR	975.00	485.66	490.49		491.17	0.007199	6.66	156.31	43.30	0.56
USACE	11364	10YR	1479.00	485.66	491.62		492.56	0.007518	7.92	209.10	50.36	0.59
USACE	11364	25YR	2345.00	485.66	493.11	491.56	494.46	0.008074	9.62	314.66	101.58	0.64
USACE	11364	50YR	3082.00	485.66	494.32	492.78	495.72	0.007179	10.09	444.86	112.84	0.62
USACE	11364	100YR	3783.00	485.66	495.36	494.00	496.78	0.006529	10.42	569.90	127.51	0.60
USACE	11364	100YRPLUS	4947.00	485.66	496.99		498.43	0.005684	10.82	809.01	174.17	0.58
USACE	11364	200YR	4696.00	485.66	496.63		498.09	0.005921	10.80	748.97	162.32	0.59
USACE	11364	500YR	5989.00	485.66	498.56		499.78	0.004396	10.41	1129.81	217.08	0.52
USACE	11364	SEPT2011	1797.00	485.66	492.21		493.32	0.007786	8.63	244.73	65.05	0.61
USACE	11199	2YR	433.00	484.26	487.23		487.74	0.013556	5.73	75.53	34.25	0.68
USACE	11199	5YR	975.00	484.26	488.72		489.62	0.012240	7.61	129.88	38.37	0.70
USACE	11199	10YR	1479.00	484.26	489.80		491.01	0.011759	8.86	177.03	51.84	0.72
USACE	11199	25YR	2345.00	484.26	491.37		492.92	0.010664	10.21	265.47	60.75	0.72
USACE	11199	50YR	3082.00	484.26	492.44		494.27	0.010386	11.20	334.42	67.33	0.73
USACE	11199	100YR	3783.00	484.26	493.30	492.29	495.39	0.010379	12.05	394.63	71.90	0.74
USACE	11199	100YRPLUS	4947.00	484.26	494.89	493.48	497.17	0.009275	12.81	517.91	85.14	0.72
USACE	11199	200YR	4696.00	484.26	494.52	493.26	496.79	0.009612	12.72	487.59	81.46	0.73
USACE	11199	500YR	5989.00	484.26	496.67	494.50	498.79	0.007165	12.59	725.11	138.81	0.65
USACE	11199	SEPT2011	1797.00	484.26	490.40		491.76	0.011370	9.44	209.45	55.45	0.72
USACE	11030	2YR	433.00	482.20	485.45	484.54	485.86	0.009078	5.14	84.32	33.11	0.57
USACE	11030	5YR	975.00	482.20	487.01	485.92	487.79	0.009376	7.05	140.41	38.42	0.62
USACE	11030	10YR	1479.00	482.20	488.11	486.88	489.18	0.009557	8.36	184.64	42.89	0.65
USACE	11030	25YR	2345.00	482.20	489.74	488.31	491.23	0.009245	9.89	264.16	59.89	0.67
USACE	11030	50YR	3082.00	482.20	491.10	489.31	492.66	0.007923	10.35	392.66	109.70	0.64
USACE	11030	100YR	3783.00	482.20	492.43	490.90	493.85	0.006251	10.18	544.73	117.99	0.58
USACE	11030	100YRPLUS	4947.00	482.20	494.64	492.15	495.81	0.004292	9.70	816.94	140.42	0.50
USACE	11030	200YR	4696.00	482.20	494.16	491.94	495.38	0.004635	9.81	756.14	128.48	0.52
USACE	11030	500YR	5989.00	482.20	496.64	493.01	497.67	0.003261	9.40	1090.36	205.52	0.45
USACE	11030	SEPT2011	1797.00	482.20	488.73	487.43	489.97	0.009507	9.00	212.37	46.21	0.66
USACE	10889	2YR	433.00	481.15	484.82	483.28	484.99	0.003465	3.40	127.43	45.24	0.36
USACE	10889	5YR	975.00	481.15	486.33	484.40	486.70	0.004467	4.89	199.78	50.81	0.43
USACE	10889	10YR	1479.00	481.15	487.51	485.24	488.02	0.004355	5.72	264.50	59.51	0.44
USACE	10889	25YR	2345.00	481.15	489.34	486.41	490.01	0.003909	6.62	383.75	70.96	0.44
USACE	10889	50YR	3082.00	481.15	490.79	487.28	491.55	0.003512	7.10	497.13	87.65	0.43
USACE	10889	100YR	3783.00	481.15	492.15	488.05	492.93	0.003073	7.33	628.47	104.01	0.41
USACE	10889	100YRPLUS	4947.00	481.15	494.40	489.19	495.17	0.002387	7.41	868.00	127.01	0.38
USACE	10889	200YR	4696.00	481.15	493.91	488.95	494.69	0.002519	7.41	814.94	121.81	0.38
USACE	10889	500YR	5989.00	481.15	496.45	490.07	497.17	0.001900	7.34	1098.61	195.69	0.34
USACE	10889	SEPT2011	1797.00	481.15	488.21	485.71	488.78	0.004207	6.11	307.29	63.88	0.44
USACE	10769 Pennsylvania Tur		Culvert									
USACE	10545	2YR	433.00	478.40	482.06	480.39	482.25	0.003295	3.49	124.26	41.33	0.35
USACE	10545	5YR	975.00	478.40	483.33	481.61	483.80	0.005199	5.52	179.33	45.66	0.47
USACE	10545	10YR	1479.00	478.40	484.18	482.47	484.93	0.006504	6.97	219.71	49.72	0.54
USACE	10545	25YR	2345.00	478.40	485.01	483.72	486.38	0.009745	9.43	269.73	91.41	0.68
USACE	10545	50YR	3082.00	478.40	485.57	484.74	487.47	0.012219	11.20	312.54	124.05	0.77
USACE	10545	100YR	3783.00	478.40	485.99	485.78	488.43	0.014571	12.76	345.85	185.05	0.85
USACE	10545	100YRPLUS	4947.00	478.40	487.00	487.00	489.93	0.015000	14.16	427.24	268.99	0.88
USACE	10545	200YR	4696.00	478.40	486.68	486.68	489.62	0.015768	14.13	400.95	259.17	0.90
USACE	10545	500YR	5989.00	478.40	487.85	487.85	491.10	0.014892	15.10	497.99	277.54	0.90
USACE	10545	SEPT2011	1797.00	478.40	484.59	482.95	485.53	0.007398	7.82	241.21	59.56	0.58
USACE	10440	2YR	433.00	478.40	481.66	480.35	481.86	0.003899	3.68	120.95	48.14	0.39
USACE	10440	5YR	975.00	478.40	482.47	481.46	483.07	0.008288	6.34	164.60	81.81	0.59
USACE	10440	10YR	1479.00	478.40	483.02	482.53	483.98	0.011108	8.08	209.65	124.11	0.70
USACE	10440	25YR	2345.00	478.40	483.90	483.90	485.18	0.012366	9.67	315.28	196.83	0.76
USACE	10440	50YR	3082.00	478.40	484.46	484.46	485.92	0.013009	10.63	388.28	200.79	0.79
USACE	10440	100YR	3783.00	478.40	484.92	484.92	486.55	0.013487	11.41	449.96	204.17	0.82
USACE	10440	100YRPLUS	4947.00	478.40	485.60	485.60	487.49	0.014005	12.48	543.87	223.24	0.85
USACE	10440	200YR	4696.00	478.40	485.44	485.44	487.30	0.014066	12.31	522.24	220.83	0.84

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	10440	500YR	5989.00	478.40	486.15	486.15	488.26	0.014269	13.28	621.88	231.45	0.86
USACE	10440	SEPT2011	1797.00	478.40	483.30	483.05	484.46	0.012601	8.98	239.11	173.46	0.75
USACE	10246	2YR	433.00	478.35	480.04	480.01	480.38	0.020915	5.56	143.22	204.36	0.81
USACE	10246	5YR	975.00	478.35	481.05		481.27	0.009063	5.18	374.06	237.85	0.58
USACE	10246	10YR	1479.00	478.35	481.58		481.85	0.008843	5.83	503.15	245.27	0.59
USACE	10246	25YR	2345.00	478.35	482.33		482.67	0.008728	6.71	690.94	255.46	0.61
USACE	10246	50YR	3082.00	478.35	482.87		483.26	0.008717	7.33	829.66	261.33	0.62
USACE	10246	100YR	3783.00	478.35	483.32		483.76	0.008774	7.86	948.60	265.93	0.64
USACE	10246	100YRPLUS	4947.00	478.35	483.97		484.49	0.008940	8.64	1121.82	269.01	0.65
USACE	10246	200YR	4696.00	478.35	483.83		484.34	0.008915	8.48	1085.69	268.40	0.65
USACE	10246	500YR	5989.00	478.35	484.50		485.09	0.009027	9.24	1264.79	271.21	0.67
USACE	10246	SEPT2011	1797.00	478.35	481.88		482.17	0.008766	6.18	576.65	249.95	0.60
USACE	10077	2YR	433.00	475.23	478.25	477.36	478.53	0.006575	4.46	141.99	161.63	0.49
USACE	10077	5YR	975.00	475.23	478.77	478.77	479.40	0.013261	7.16	249.32	222.56	0.72
USACE	10077	10YR	1479.00	475.23	479.27	479.27	479.97	0.013871	8.08	364.96	246.88	0.75
USACE	10077	25YR	2345.00	475.23	479.81	479.81	480.68	0.015977	9.53	501.80	253.47	0.83
USACE	10077	50YR	3082.00	475.23	480.18	480.18	481.18	0.017496	10.56	596.21	256.79	0.88
USACE	10077	100YR	3783.00	475.23	480.49	480.49	481.61	0.018736	11.42	675.36	259.20	0.92
USACE	10077	100YRPLUS	4947.00	475.23	480.96	480.96	482.25	0.020044	12.57	797.82	262.57	0.96
USACE	10077	200YR	4696.00	475.23	480.87	480.87	482.12	0.019726	12.33	773.48	261.91	0.95
USACE	10077	500YR	5989.00	475.23	481.31	481.31	482.77	0.021353	13.55	891.59	265.17	1.01
USACE	10077	SEPT2011	1797.00	475.23	479.49	479.49	480.25	0.014611	8.64	420.62	249.67	0.78
USACE	9866	2YR	433.00	475.23	476.95		477.08	0.006758	3.68	155.11	242.00	0.58
USACE	9866	5YR	975.00	475.23	477.62		477.76	0.003795	3.59	321.29	254.45	0.47
USACE	9866	10YR	1479.00	475.23	478.05		478.23	0.003492	3.96	432.82	262.22	0.46
USACE	9866	25YR	2345.00	475.23	478.69		478.93	0.003043	4.37	602.07	263.80	0.45
USACE	9866	50YR	3082.00	475.23	479.15		479.44	0.002894	4.70	724.32	264.90	0.45
USACE	9866	100YR	3783.00	475.23	479.53		479.87	0.002859	5.02	825.22	265.73	0.46
USACE	9866	100YRPLUS	4947.00	475.23	480.08		480.49	0.002895	5.52	970.21	266.92	0.47
USACE	9866	200YR	4696.00	475.23	479.97		480.37	0.002866	5.41	942.43	266.69	0.47
USACE	9866	500YR	5989.00	475.23	480.50		480.99	0.002978	5.96	1082.41	267.83	0.48
USACE	9866	SEPT2011	1797.00	475.23	478.30		478.51	0.003264	4.11	499.24	262.84	0.46
USACE	9734	2YR	433.00	473.48	476.61		476.69	0.001596	2.78	242.32	271.74	0.32
USACE	9734	5YR	975.00	473.48	477.40		477.48	0.001284	3.01	469.25	300.03	0.30
USACE	9734	10YR	1479.00	473.48	477.83		477.94	0.001403	3.42	599.94	305.94	0.32
USACE	9734	25YR	2345.00	473.48	478.50		478.64	0.001409	3.84	808.50	317.86	0.33
USACE	9734	50YR	3082.00	473.48	478.98		479.15	0.001427	4.14	961.29	322.81	0.33
USACE	9734	100YR	3783.00	473.48	479.36		479.57	0.001467	4.43	1087.23	325.64	0.34
USACE	9734	100YRPLUS	4947.00	473.48	479.92		480.18	0.001552	4.87	1268.50	329.73	0.36
USACE	9734	200YR	4696.00	473.48	479.81		480.06	0.001523	4.77	1234.08	328.94	0.35
USACE	9734	500YR	5989.00	473.48	480.34		480.65	0.001637	5.25	1409.49	332.94	0.37
USACE	9734	SEPT2011	1797.00	473.48	478.09		478.22	0.001399	3.58	681.45	309.67	0.32
USACE	9678	2YR	433.00	473.01	476.55	475.00	476.62	0.000829	2.45	281.20	244.41	0.24
USACE	9678	5YR	975.00	473.01	477.31	476.39	477.41	0.001102	3.25	469.69	269.84	0.29
USACE	9678	10YR	1479.00	473.01	477.71	476.71	477.86	0.001409	3.91	574.23	275.20	0.33
USACE	9678	25YR	2345.00	473.01	478.36	477.15	478.55	0.001626	4.61	744.30	290.83	0.36
USACE	9678	50YR	3082.00	473.01	478.81	477.45	479.05	0.001821	5.16	867.16	305.69	0.39
USACE	9678	100YR	3783.00	473.01	479.20	477.70	479.46	0.001869	5.47	1028.47	311.91	0.40
USACE	9678	100YRPLUS	4947.00	473.01	479.73	478.06	480.05	0.002100	6.14	1196.69	327.20	0.43
USACE	9678	200YR	4696.00	473.01	479.63	477.98	479.94	0.002035	5.99	1164.90	323.90	0.42
USACE	9678	500YR	5989.00	473.01	480.14	478.35	480.52	0.002260	6.64	1333.31	336.30	0.45
USACE	9678	SEPT2011	1797.00	473.01	477.97	476.89	478.13	0.001497	4.19	641.23	282.99	0.34
USACE	9658 Private Drive		Bridge									
USACE	9635	2YR	433.00	472.89	476.06	475.81	476.29	0.006188	4.35	144.96	202.15	0.48
USACE	9635	5YR	975.00	472.89	476.74		476.94	0.005232	4.68	319.08	269.22	0.46
USACE	9635	10YR	1479.00	472.89	477.17		477.39	0.004819	4.87	436.20	275.14	0.45
USACE	9635	25YR	2345.00	472.89	477.75		478.01	0.004622	5.26	597.39	282.68	0.45
USACE	9635	50YR	3082.00	472.89	478.15		478.46	0.004613	5.58	713.72	289.83	0.46
USACE	9635	100YR	3783.00	472.89	478.50		478.85	0.004614	5.86	814.77	295.68	0.46
USACE	9635	100YRPLUS	4947.00	472.89	478.99		479.42	0.004706	6.29	962.08	303.86	0.47
USACE	9635	200YR	4696.00	472.89	478.89		479.30	0.004691	6.21	931.31	301.87	0.47
USACE	9635	500YR	5989.00	472.89	479.40		479.89	0.004770	6.64	1087.57	315.17	0.48
USACE	9635	SEPT2011	1797.00	472.89	477.41		477.64	0.004617	4.98	503.47	279.32	0.44
USACE	9551	2YR	433.00	472.18	475.18	475.18	475.58	0.010810	5.52	138.34	248.12	0.62
USACE	9551	5YR	975.00	472.18	475.78	475.78	476.23	0.012677	6.93	301.05	282.47	0.70
USACE	9551	10YR	1479.00	472.18	476.09	476.09	476.65	0.015126	8.08	391.42	286.19	0.78
USACE	9551	25YR	2345.00	472.18	476.51	476.51	477.21	0.018434	9.64	510.92	290.75	0.88
USACE	9551	50YR	3082.00	472.18	476.81	476.81	477.63	0.020388	10.67	597.99	294.55	0.93
USACE	9551	100YR	3783.00	472.18	477.05	477.05	477.98	0.022074	11.54	669.81	297.30	0.98
USACE	9551	100YRPLUS	4947.00	472.18	477.44	477.44	478.51	0.023329	12.57	787.92	302.01	1.02
USACE	9551	200YR	4696.00	472.18	477.36	477.36	478.40	0.023054	12.36	763.92	301.03	1.01
USACE	9551	500YR	5989.00	472.18	477.74	477.72	478.94	0.024660	13.46	877.77	305.10	1.06
USACE	9551	SEPT2011	1797.00	472.18	476.24	476.24	476.87	0.017166	8.85	432.02	287.62	0.83
USACE	9389	2YR	433.00	470.44	473.40	473.26	473.70	0.004957	4.88	143.18	205.08	0.56
USACE	9389	5YR	975.00	470.44	474.23	473.87	474.45	0.003459	4.97	334.03	260.40	0.49

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9389	10YR	1479.00	470.44	474.65		474.91	0.003719	5.59	449.44	285.52	0.52
USACE	9389	25YR	2345.00	470.44	475.13		475.47	0.004420	6.61	587.23	294.18	0.57
USACE	9389	50YR	3082.00	470.44	475.47		475.88	0.004809	7.27	688.33	299.71	0.61
USACE	9389	100YR	3783.00	470.44	475.84		476.28	0.004600	7.50	802.46	306.21	0.60
USACE	9389	100YRPLUS	4947.00	470.44	476.44		476.91	0.004218	7.77	989.49	317.54	0.59
USACE	9389	200YR	4696.00	470.44	476.32		476.78	0.004290	7.71	950.26	315.58	0.59
USACE	9389	500YR	5989.00	470.44	476.94		477.43	0.003955	7.97	1148.39	325.30	0.58
USACE	9389	SEPT2011	1797.00	470.44	474.89		475.17	0.003688	5.81	518.87	290.14	0.52
USACE	9228	2YR	433.00	469.19	471.65	471.65	472.20	0.022880	6.84	106.37	101.99	0.89
USACE	9228	5YR	975.00	469.19	472.55	472.55	473.29	0.021072	8.58	217.19	140.95	0.92
USACE	9228	10YR	1479.00	469.19	473.23	473.23	473.82	0.014872	8.37	361.77	267.39	0.80
USACE	9228	25YR	2345.00	469.19	473.89		474.39	0.011379	8.24	551.06	291.27	0.72
USACE	9228	50YR	3082.00	469.19	474.58		474.94	0.007012	7.18	756.59	306.80	0.58
USACE	9228	100YR	3783.00	469.19	475.11		475.44	0.005561	6.86	922.76	324.69	0.53
USACE	9228	100YRPLUS	4947.00	469.19	475.84		476.18	0.004474	6.72	1168.80	346.62	0.48
USACE	9228	200YR	4696.00	469.19	475.70		476.03	0.004629	6.72	1118.83	341.64	0.49
USACE	9228	500YR	5989.00	469.19	476.41		476.76	0.003972	6.72	1368.92	359.05	0.46
USACE	9228	SEPT2011	1797.00	469.19	473.40	473.40	474.05	0.015951	8.97	410.81	282.07	0.84
USACE	8979	2YR	433.00	467.59	469.70		469.75	0.004623	2.75	295.81	217.01	0.38
USACE	8979	5YR	975.00	467.59	471.05		471.10	0.002727	2.92	628.75	280.00	0.31
USACE	8979	10YR	1479.00	467.59	472.34		472.38	0.001440	2.75	996.16	291.38	0.24
USACE	8979	25YR	2345.00	467.59	473.37		473.44	0.001547	3.33	1305.21	305.93	0.26
USACE	8979	50YR	3082.00	467.59	474.03		474.11	0.001670	3.75	1511.51	320.65	0.28
USACE	8979	100YR	3783.00	467.59	474.55		474.65	0.001798	4.13	1680.02	327.56	0.29
USACE	8979	100YRPLUS	4947.00	467.59	475.27		475.40	0.002011	4.69	1919.84	336.01	0.31
USACE	8979	200YR	4696.00	467.59	475.13		475.25	0.001962	4.57	1872.60	334.42	0.31
USACE	8979	500YR	5989.00	467.59	475.83		475.98	0.002189	5.16	2108.43	343.94	0.33
USACE	8979	SEPT2011	1797.00	467.59	472.88		472.93	0.001331	2.88	1157.54	299.28	0.24
USACE	8796	2YR	433.00	466.36	468.91		469.00	0.003637	3.05	286.28	246.69	0.36
USACE	8796	5YR	975.00	466.36	470.74		470.79	0.001163	2.57	748.88	261.26	0.22
USACE	8796	10YR	1479.00	466.36	472.14		472.19	0.000789	2.58	1141.38	299.33	0.19
USACE	8796	25YR	2345.00	466.36	473.15		473.22	0.000963	3.19	1460.20	335.54	0.22
USACE	8796	50YR	3082.00	466.36	473.78		473.87	0.001106	3.64	1673.97	341.65	0.24
USACE	8796	100YR	3783.00	466.36	474.27		474.38	0.001242	4.03	1843.48	346.34	0.26
USACE	8796	100YRPLUS	4947.00	466.36	474.95		475.09	0.001461	4.63	2080.81	352.16	0.28
USACE	8796	200YR	4696.00	466.36	474.82		474.95	0.001412	4.50	2034.73	351.11	0.28
USACE	8796	500YR	5989.00	466.36	475.47		475.64	0.001646	5.11	2264.39	356.34	0.30
USACE	8796	SEPT2011	1797.00	466.36	472.70		472.75	0.000772	2.72	1311.76	321.57	0.20
USACE	8539	2YR	433.00	464.52	467.81	466.96	467.96	0.004771	3.87	230.67	315.66	0.42
USACE	8539	5YR	975.00	464.52	470.52	467.97	470.56	0.000743	2.44	810.31	382.84	0.19
USACE	8539	10YR	1479.00	464.52	472.07	468.38	472.08	0.000247	1.66	1973.09	403.35	0.11
USACE	8539	25YR	2345.00	464.52	473.04	468.91	473.07	0.000364	2.21	2384.04	435.46	0.14
USACE	8539	50YR	3082.00	464.52	473.65	469.28	473.69	0.000451	2.58	2651.27	439.40	0.16
USACE	8539	100YR	3783.00	464.52	474.13	469.60	474.17	0.000538	2.92	2864.17	462.25	0.17
USACE	8539	100YRPLUS	4947.00	464.52	474.76	470.09	474.83	0.000721	3.54	3168.31	485.09	0.20
USACE	8539	200YR	4696.00	464.52	474.64	469.99	474.70	0.000688	3.43	3108.41	483.01	0.20
USACE	8539	500YR	5989.00	464.52	475.26	470.47	475.33	0.000847	3.97	3408.52	493.07	0.22
USACE	8539	SEPT2011	1797.00	464.52	472.62	468.59	472.64	0.000261	1.80	2201.22	430.06	0.12
USACE	8473	2YR	433.00	463.50	467.56	465.63	467.74	0.002422	3.46	146.21	194.01	0.31
USACE	8473	5YR	975.00	463.50	470.17	466.97	470.42	0.001839	4.28	276.42	335.80	0.30
USACE	8473	10YR	1479.00	463.50	472.03	467.87	472.06	0.000334	2.16	1606.27	371.87	0.13
USACE	8473	25YR	2345.00	463.50	472.98	469.09	473.03	0.000486	2.80	1972.93	393.28	0.16
USACE	8473	50YR	3082.00	463.50	473.58	470.01	473.65	0.000613	3.28	2209.37	403.24	0.19
USACE	8473	100YR	3783.00	463.50	474.03	470.81	474.11	0.000733	3.70	2395.19	411.00	0.20
USACE	8473	100YRPLUS	4947.00	463.50	474.64	471.96	474.76	0.000934	4.35	2650.84	423.88	0.23
USACE	8473	200YR	4696.00	463.50	474.53	471.96	474.63	0.000889	4.21	2601.15	421.32	0.23
USACE	8473	500YR	5989.00	463.50	475.11	471.84	475.25	0.001110	4.87	2851.69	438.49	0.26
USACE	8473	SEPT2011	1797.00	463.50	472.58	468.36	472.61	0.000358	2.34	1815.00	385.58	0.14
USACE	8429 Mountain Road		Bridge									
USACE	8372	2YR	433.00	462.86	467.22	464.85	467.33	0.001422	2.83	173.27	216.33	0.25
USACE	8372	5YR	975.00	462.86	468.16	466.01	468.53	0.003458	5.08	221.33	280.99	0.40
USACE	8372	10YR	1479.00	462.86	469.07	466.87	469.24	0.001875	4.18	774.53	296.93	0.30
USACE	8372	25YR	2345.00	462.86	469.99	468.12	470.20	0.002150	4.93	1050.85	304.69	0.33
USACE	8372	50YR	3082.00	462.86	470.64	468.71	470.88	0.002364	5.49	1254.00	326.85	0.35
USACE	8372	100YR	3783.00	462.86	471.17	469.03	471.45	0.002611	6.03	1432.40	346.45	0.38
USACE	8372	100YRPLUS	4947.00	462.86	471.95	469.53	472.27	0.002768	6.61	1710.27	358.43	0.39
USACE	8372	200YR	4696.00	462.86	471.79	469.43	472.10	0.002740	6.50	1652.43	356.16	0.39
USACE	8372	500YR	5989.00	462.86	472.56	469.92	472.92	0.002953	7.14	1933.78	375.57	0.41
USACE	8372	SEPT2011	1797.00	462.86	469.45	467.39	469.63	0.001973	4.47	886.41	300.58	0.31
USACE	8301	2YR	433.00	462.86	466.71		467.06	0.008582	5.26	145.18	141.51	0.56
USACE	8301	5YR	975.00	462.86	467.78		468.17	0.007966	6.32	311.92	181.77	0.57
USACE	8301	10YR	1479.00	462.86	468.46		468.92	0.008216	7.16	451.68	221.33	0.60
USACE	8301	25YR	2345.00	462.86	469.37		469.86	0.007870	7.92	664.27	242.77	0.60
USACE	8301	50YR	3082.00	462.86	470.00		470.53	0.007769	8.48	822.41	259.93	0.61
USACE	8301	100YR	3783.00	462.86	470.50		471.07	0.007897	9.01	956.11	274.01	0.62
USACE	8301	100YRPLUS	4947.00	462.86	471.24		471.87	0.008075	9.79	1163.68	292.52	0.64

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8301	200YR	4696.00	462.86	471.09		471.71	0.008027	9.63	1120.23	288.07	0.64
USACE	8301	500YR	5989.00	462.86	471.81		472.50	0.008207	10.38	1336.20	309.76	0.65
USACE	8301	SEPT2011	1797.00	462.86	468.83		469.30	0.008091	7.49	535.21	234.34	0.60
USACE	8146	2YR	433.00	462.82	465.82	465.05	466.14	0.004312	4.72	135.24	146.81	0.52
USACE	8146	5YR	975.00	462.82	466.78	466.38	467.23	0.004816	6.19	304.82	192.74	0.58
USACE	8146	10YR	1479.00	462.82	467.36	466.93	467.91	0.005274	7.17	424.79	214.71	0.63
USACE	8146	25YR	2345.00	462.82	468.07	467.64	468.78	0.006072	8.56	581.19	227.79	0.69
USACE	8146	50YR	3082.00	462.82	468.60	468.08	469.42	0.006388	9.43	707.65	243.70	0.72
USACE	8146	100YR	3783.00	462.82	469.06	468.48	469.94	0.006474	10.03	820.32	251.61	0.74
USACE	8146	100YRPLUS	4947.00	462.82	469.65	469.08	470.69	0.006936	11.08	972.20	260.56	0.77
USACE	8146	200YR	4696.00	462.82	469.53	468.97	470.54	0.006834	10.86	941.45	258.92	0.77
USACE	8146	500YR	5989.00	462.82	470.15	469.54	471.29	0.007095	11.78	1103.32	266.20	0.79
USACE	8146	SEPT2011	1797.00	462.82	467.63	467.24	468.25	0.005696	7.78	483.09	219.80	0.66
USACE	7923	2YR	433.00	461.70	464.49	464.24	464.82	0.008779	4.99	141.84	189.54	0.58
USACE	7923	5YR	975.00	461.70	465.06	465.01	465.59	0.012784	7.00	259.30	209.59	0.73
USACE	7923	10YR	1479.00	461.70	465.50	465.48	466.12	0.013886	8.02	362.35	247.65	0.78
USACE	7923	25YR	2345.00	461.70	466.07	465.96	466.79	0.014819	9.21	505.50	261.71	0.83
USACE	7923	50YR	3082.00	461.70	466.41	466.32	467.27	0.016553	10.31	598.05	276.96	0.89
USACE	7923	100YR	3783.00	461.70	466.68	466.66	467.69	0.018325	11.31	676.30	293.32	0.94
USACE	7923	100YRPLUS	4947.00	461.70	467.11	467.11	468.27	0.019605	12.43	803.98	303.36	0.99
USACE	7923	200YR	4696.00	461.70	467.02	467.02	468.15	0.019404	12.22	776.83	301.30	0.98
USACE	7923	500YR	5989.00	461.70	467.40	467.39	468.74	0.021594	13.55	891.34	309.46	1.05
USACE	7923	SEPT2011	1797.00	461.70	465.74	465.66	466.38	0.013895	8.41	422.12	252.36	0.79
USACE	7636	2YR	433.00	460.28	463.30		463.39	0.002957	2.85	263.22	379.31	0.32
USACE	7636	5YR	975.00	460.28	463.89		463.98	0.002795	3.21	508.47	433.48	0.33
USACE	7636	10YR	1479.00	460.28	464.22		464.32	0.003146	3.65	650.61	452.32	0.35
USACE	7636	25YR	2345.00	460.28	464.66		464.80	0.003529	4.20	853.78	459.28	0.38
USACE	7636	50YR	3082.00	460.28	465.03		465.19	0.003521	4.46	1024.13	469.05	0.39
USACE	7636	100YR	3783.00	460.28	465.36		465.54	0.003443	4.65	1179.76	472.98	0.39
USACE	7636	100YRPLUS	4947.00	460.28	465.88		466.08	0.003258	4.87	1428.51	477.66	0.38
USACE	7636	200YR	4696.00	460.28	465.77		465.97	0.003307	4.83	1374.79	476.84	0.39
USACE	7636	500YR	5989.00	460.28	466.34		466.56	0.003065	5.00	1646.77	481.21	0.38
USACE	7636	SEPT2011	1797.00	460.28	464.38		464.50	0.003393	3.91	724.01	454.98	0.37
USACE	7397	2YR	433.00	458.90	461.98	461.98	462.31	0.007569	5.53	146.69	249.73	0.64
USACE	7397	5YR	975.00	458.90	462.44	462.44	462.86	0.009955	7.15	275.50	304.34	0.75
USACE	7397	10YR	1479.00	458.90	462.92		463.25	0.007498	6.90	441.32	379.13	0.67
USACE	7397	25YR	2345.00	458.90	463.60		463.85	0.005017	6.40	708.69	408.73	0.57
USACE	7397	50YR	3082.00	458.90	464.08		464.32	0.004187	6.31	910.11	426.91	0.53
USACE	7397	100YR	3783.00	458.90	464.49		464.73	0.003711	6.30	1088.18	439.59	0.50
USACE	7397	100YRPLUS	4947.00	458.90	465.12		465.36	0.003148	6.30	1369.69	452.82	0.47
USACE	7397	200YR	4696.00	458.90	464.98		465.22	0.003276	6.31	1307.32	450.68	0.48
USACE	7397	500YR	5989.00	458.90	465.65		465.90	0.002808	6.32	1612.17	464.31	0.45
USACE	7397	SEPT2011	1797.00	458.90	463.20		463.48	0.006132	6.59	547.59	392.30	0.62
USACE	7133	2YR	433.00	457.73	460.99		461.04	0.000823	2.12	312.50	189.31	0.23
USACE	7133	5YR	975.00	457.73	461.69		461.81	0.001511	3.36	460.19	237.32	0.33
USACE	7133	10YR	1479.00	457.73	462.15		462.31	0.001945	4.16	573.64	274.56	0.38
USACE	7133	25YR	2345.00	457.73	462.64		462.91	0.002747	5.36	713.94	288.39	0.46
USACE	7133	50YR	3082.00	457.73	463.06		463.38	0.003084	6.04	835.72	297.73	0.49
USACE	7133	100YR	3783.00	457.73	463.45		463.82	0.003218	6.51	954.23	307.72	0.51
USACE	7133	100YRPLUS	4947.00	457.73	464.10		464.52	0.003217	7.06	1159.14	329.00	0.52
USACE	7133	200YR	4696.00	457.73	463.95		464.36	0.003234	6.95	1111.95	320.06	0.52
USACE	7133	500YR	5989.00	457.73	464.67		465.12	0.003053	7.33	1353.34	342.15	0.51
USACE	7133	SEPT2011	1797.00	457.73	462.31		462.52	0.002345	4.70	620.65	281.00	0.42
USACE	6625	2YR	433.00	456.65	458.92	458.92	459.83	0.016557	7.70	58.06	37.36	0.98
USACE	6625	5YR	975.00	456.65	460.06	460.06	460.43	0.005952	6.30	327.91	392.34	0.64
USACE	6625	10YR	1479.00	456.65	460.45		460.78	0.005312	6.46	488.35	423.23	0.61
USACE	6625	25YR	2345.00	456.65	461.27		461.47	0.002909	5.51	849.29	454.05	0.47
USACE	6625	50YR	3082.00	456.65	461.90		462.06	0.002126	5.16	1136.86	469.59	0.41
USACE	6625	100YR	3783.00	456.65	462.47		462.62	0.001676	4.93	1409.94	482.78	0.37
USACE	6625	100YRPLUS	4947.00	456.65	463.31		463.45	0.001319	4.81	1823.55	502.51	0.34
USACE	6625	200YR	4696.00	456.65	463.12		463.26	0.001396	4.85	1728.09	497.32	0.35
USACE	6625	500YR	5989.00	456.65	464.02		464.16	0.001116	4.75	2185.15	517.22	0.32
USACE	6625	SEPT2011	1797.00	456.65	460.80		461.04	0.003803	5.83	640.09	438.31	0.53
USACE	5965	2YR	433.00	455.75	458.45	457.15	458.48	0.000516	1.66	448.89	388.19	0.18
USACE	5965	5YR	975.00	455.75	459.18	457.96	459.22	0.000665	2.22	747.96	432.17	0.22
USACE	5965	10YR	1479.00	455.75	459.78	458.25	459.83	0.000637	2.43	1015.78	456.03	0.22
USACE	5965	25YR	2345.00	455.75	460.71	458.63	460.77	0.000558	2.63	1457.36	489.18	0.21
USACE	5965	50YR	3082.00	455.75	461.41	458.88	461.46	0.000518	2.77	1804.03	515.52	0.21
USACE	5965	100YR	3783.00	455.75	462.04	459.07	462.10	0.000478	2.86	2137.68	539.87	0.20
USACE	5965	100YRPLUS	4947.00	455.75	462.93	459.39	463.00	0.000444	3.02	2633.79	567.91	0.20
USACE	5965	200YR	4696.00	455.75	462.72	459.27	462.79	0.000458	3.01	2516.70	562.68	0.20
USACE	5965	500YR	5989.00	455.75	463.68	459.62	463.75	0.000417	3.13	3065.17	628.63	0.20
USACE	5965	SEPT2011	1797.00	455.75	460.24	458.40	460.29	0.000536	2.41	1231.77	472.71	0.20
USACE	5605	2YR	489.00	454.35	457.94		458.07	0.003466	3.58	310.12	322.71	0.37
USACE	5605	5YR	958.00	454.35	458.61		458.74	0.003690	4.23	540.39	358.99	0.39
USACE	5605	10YR	1492.00	454.35	459.23		459.37	0.003461	4.55	766.08	366.13	0.39

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5605	25YR	2472.00	454.35	460.22		460.36	0.003009	4.87	1130.91	372.82	0.37
USACE	5605	50YR	3293.00	454.35	460.93		461.08	0.002789	5.10	1398.73	377.40	0.37
USACE	5605	100YR	4125.00	454.35	461.58		461.74	0.002661	5.34	1643.94	382.09	0.37
USACE	5605	100YRPLUS	5395.00	454.35	462.48		462.66	0.002509	5.65	1994.05	389.91	0.36
USACE	5605	200YR	5087.00	454.35	462.27		462.45	0.002540	5.57	1912.06	388.09	0.36
USACE	5605	500YR	6500.00	454.35	463.24		463.43	0.002369	5.85	2293.05	397.41	0.36
USACE	5605	SEPT2011	1976.00	454.35	459.73		459.87	0.003220	4.73	952.51	369.82	0.38
USACE	5281	2YR	489.00	453.42	456.90		456.98	0.003288	3.22	363.41	351.61	0.35
USACE	5281	5YR	958.00	453.42	457.71		457.77	0.002462	3.33	655.19	368.22	0.32
USACE	5281	10YR	1492.00	453.42	458.43		458.50	0.002130	3.52	924.73	376.51	0.30
USACE	5281	25YR	2472.00	453.42	459.51		459.59	0.001924	3.90	1338.51	401.20	0.30
USACE	5281	50YR	3293.00	453.42	460.27		460.36	0.001818	4.15	1650.09	415.17	0.30
USACE	5281	100YR	4125.00	453.42	460.94		461.04	0.001767	4.39	1932.25	424.86	0.30
USACE	5281	100YRPLUS	5395.00	453.42	461.88		461.99	0.001709	4.71	2340.77	454.12	0.30
USACE	5281	200YR	5087.00	453.42	461.66		461.77	0.001732	4.65	2241.81	445.24	0.30
USACE	5281	500YR	6500.00	453.42	462.68		462.80	0.001598	4.87	2716.04	478.72	0.30
USACE	5281	SEPT2011	1976.00	453.42	458.99		459.07	0.001987	3.70	1137.47	382.98	0.30
USACE	5009	2YR	489.00	453.17	456.28	455.24	456.34	0.001723	2.72	344.57	240.22	0.31
USACE	5009	5YR	958.00	453.17	457.11	455.81	457.20	0.001836	3.43	549.57	255.32	0.34
USACE	5009	10YR	1492.00	453.17	457.84	456.19	457.95	0.001928	4.03	731.69	263.41	0.36
USACE	5009	25YR	2472.00	453.17	458.89	456.70	459.04	0.002060	4.88	999.33	273.61	0.39
USACE	5009	50YR	3293.00	453.17	459.63	457.08	459.81	0.002136	5.45	1190.12	288.74	0.40
USACE	5009	100YR	4125.00	453.17	460.28	457.42	460.49	0.002227	5.97	1356.91	308.48	0.42
USACE	5009	100YRPLUS	5395.00	453.17	461.18	457.88	461.44	0.002306	6.64	1591.88	325.96	0.43
USACE	5009	200YR	5087.00	453.17	460.96	457.76	461.22	0.002294	6.49	1536.20	322.53	0.43
USACE	5009	500YR	6500.00	453.17	461.98	458.24	462.27	0.002267	7.05	1800.73	339.50	0.44
USACE	5009	SEPT2011	1976.00	453.17	458.39	456.47	458.52	0.001996	4.47	871.73	268.06	0.37
USACE	4757	2YR	489.00	451.88	455.65	455.05	455.75	0.003192	3.51	324.65	249.24	0.36
USACE	4757	5YR	958.00	451.88	456.47	455.53	456.59	0.003186	4.14	535.96	262.60	0.38
USACE	4757	10YR	1492.00	451.88	457.18	455.91	457.32	0.003250	4.69	724.41	271.08	0.39
USACE	4757	25YR	2472.00	451.88	458.19	456.46	458.38	0.003392	5.50	1007.80	316.28	0.42
USACE	4757	50YR	3293.00	451.88	458.90	456.83	459.13	0.003551	6.11	1217.27	396.60	0.43
USACE	4757	100YR	4125.00	451.88	459.54	457.17	459.79	0.003536	6.51	1424.62	419.97	0.44
USACE	4757	100YRPLUS	5395.00	451.88	460.47	457.63	460.74	0.003405	6.95	1728.19	468.71	0.44
USACE	4757	200YR	5087.00	451.88	460.24	457.52	460.51	0.003457	6.87	1653.28	453.83	0.44
USACE	4757	500YR	6500.00	451.88	461.33	458.01	461.61	0.003070	7.08	2029.37	501.02	0.43
USACE	4757	SEPT2011	1976.00	451.88	457.71	456.20	457.88	0.003328	5.12	871.05	283.32	0.40
USACE	4574	2YR	489.00	451.39	455.30		455.35	0.001553	2.43	417.09	271.47	0.25
USACE	4574	5YR	958.00	451.39	456.11		456.17	0.001715	2.98	637.81	277.62	0.27
USACE	4574	10YR	1492.00	451.39	456.79		456.88	0.001867	3.47	829.91	283.00	0.29
USACE	4574	25YR	2472.00	451.39	457.78		457.90	0.002081	4.18	1116.37	298.81	0.31
USACE	4574	50YR	3293.00	451.39	458.48		458.62	0.002180	4.63	1327.62	306.84	0.33
USACE	4574	100YR	4125.00	451.39	459.11		459.28	0.002248	5.02	1523.74	312.74	0.34
USACE	4574	100YRPLUS	5395.00	451.39	460.04		460.24	0.002239	5.45	1818.93	320.46	0.34
USACE	4574	200YR	5087.00	451.39	459.82		460.00	0.002254	5.36	1746.23	318.53	0.34
USACE	4574	500YR	6500.00	451.39	460.94		461.15	0.002073	5.64	2109.90	330.48	0.34
USACE	4574	SEPT2011	1976.00	451.39	457.31		457.41	0.001985	3.85	977.76	290.08	0.30
USACE	4363	2YR	489.00	451.31	454.71		454.84	0.004315	3.76	250.40	219.74	0.40
USACE	4363	5YR	958.00	451.31	455.54		455.66	0.003680	4.14	449.06	256.48	0.39
USACE	4363	10YR	1492.00	451.31	456.23		456.36	0.003361	4.45	633.17	274.34	0.38
USACE	4363	25YR	2472.00	451.31	457.21		457.36	0.003166	4.96	908.85	290.09	0.38
USACE	4363	50YR	3293.00	451.31	457.90		458.08	0.003102	5.34	1119.85	328.48	0.39
USACE	4363	100YR	4125.00	451.31	458.55		458.74	0.002901	5.53	1344.21	354.78	0.38
USACE	4363	100YRPLUS	5395.00	451.31	459.55		459.74	0.002491	5.63	1713.86	384.40	0.36
USACE	4363	200YR	5087.00	451.31	459.30		459.50	0.002591	5.62	1620.27	375.59	0.37
USACE	4363	500YR	6500.00	451.31	460.51		460.70	0.002161	5.68	2114.26	445.25	0.34
USACE	4363	SEPT2011	1976.00	451.31	456.74		456.89	0.003229	4.71	775.92	281.97	0.38
USACE	4113	2YR	489.00	449.93	453.97		454.08	0.002186	3.18	298.85	230.66	0.30
USACE	4113	5YR	958.00	449.93	454.78		454.92	0.002484	3.90	495.82	252.15	0.33
USACE	4113	10YR	1492.00	449.93	455.46		455.61	0.002697	4.47	671.70	271.67	0.35
USACE	4113	25YR	2472.00	449.93	456.41		456.61	0.002904	5.21	936.71	280.12	0.38
USACE	4113	50YR	3293.00	449.93	457.10		457.32	0.002965	5.66	1130.71	284.97	0.39
USACE	4113	100YR	4125.00	449.93	457.78		458.02	0.002889	5.96	1327.76	297.13	0.39
USACE	4113	100YRPLUS	5395.00	449.93	458.87		459.12	0.002559	6.15	1687.32	363.88	0.37
USACE	4113	200YR	5087.00	449.93	458.59		458.84	0.002676	6.16	1588.48	351.71	0.38
USACE	4113	500YR	6500.00	449.93	459.95		460.18	0.002050	5.97	2112.03	420.45	0.34
USACE	4113	SEPT2011	1976.00	449.93	455.96		456.14	0.002808	4.86	810.42	276.60	0.36
USACE	3851	2YR	489.00	449.51	453.19		453.35	0.003658	3.84	246.16	231.74	0.38
USACE	3851	5YR	958.00	449.51	454.00		454.16	0.003426	4.32	442.76	258.96	0.38
USACE	3851	10YR	1492.00	449.51	454.65		454.83	0.003416	4.77	620.86	285.35	0.39
USACE	3851	25YR	2472.00	449.51	455.62		455.81	0.003262	5.29	911.86	312.97	0.39
USACE	3851	50YR	3293.00	449.51	456.34		456.54	0.003014	5.51	1143.92	328.65	0.39
USACE	3851	100YR	4125.00	449.51	457.10		457.30	0.002618	5.54	1397.87	341.00	0.37
USACE	3851	100YRPLUS	5395.00	449.51	458.34		458.52	0.001954	5.33	1846.52	383.29	0.33
USACE	3851	200YR	5087.00	449.51	458.02		458.21	0.002113	5.40	1726.97	373.86	0.34
USACE	3851	500YR	6500.00	449.51	459.56		459.72	0.001431	4.99	2336.70	417.23	0.28
USACE	3851	SEPT2011	1976.00	449.51	455.15		455.34	0.003366	5.07	769.04	302.28	0.39

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3552	2YR	489.00	448.21	452.47		452.58	0.001876	3.20	306.90	265.84	0.29
USACE	3552	5YR	958.00	448.21	453.28		453.39	0.001966	3.74	554.23	343.01	0.31
USACE	3552	10YR	1492.00	448.21	453.98		454.09	0.001822	3.96	812.25	392.58	0.31
USACE	3552	25YR	2472.00	448.21	455.04		455.14	0.001570	4.16	1260.12	450.76	0.29
USACE	3552	50YR	3293.00	448.21	455.84		455.94	0.001364	4.20	1645.55	506.36	0.28
USACE	3552	100YR	4125.00	448.21	456.70		456.79	0.001096	4.06	2094.19	538.19	0.25
USACE	3552	100YRPLUS	5395.00	448.21	458.07		458.15	0.000770	3.78	2896.96	624.49	0.22
USACE	3552	200YR	5087.00	448.21	457.73		457.81	0.000846	3.87	2683.04	611.44	0.23
USACE	3552	500YR	6500.00	448.21	459.38		459.45	0.000542	3.47	3766.05	699.88	0.19
USACE	3552	SEPT2011	1976.00	448.21	454.53		454.64	0.001694	4.08	1036.28	424.66	0.30
USACE	3237	2YR	489.00	447.98	451.94		452.02	0.001740	2.93	349.80	304.51	0.28
USACE	3237	5YR	958.00	447.98	452.74		452.83	0.001752	3.38	602.07	323.43	0.29
USACE	3237	10YR	1492.00	447.98	453.48		453.57	0.001651	3.65	847.37	344.27	0.29
USACE	3237	25YR	2472.00	447.98	454.60		454.70	0.001451	3.92	1266.46	395.08	0.28
USACE	3237	50YR	3293.00	447.98	455.45		455.55	0.001280	4.01	1614.52	416.94	0.27
USACE	3237	100YR	4125.00	447.98	456.38		456.48	0.001061	3.97	2011.58	442.01	0.25
USACE	3237	100YRPLUS	5395.00	447.98	457.83		457.92	0.000788	3.83	2677.33	477.01	0.22
USACE	3237	200YR	5087.00	447.98	457.47		457.56	0.000852	3.88	2505.00	468.94	0.23
USACE	3237	500YR	6500.00	447.98	459.20		459.28	0.000594	3.64	3361.26	516.17	0.20
USACE	3237	SEPT2011	1976.00	447.98	454.06		454.16	0.001545	3.80	1057.67	373.40	0.28
USACE	2781	2YR	489.00	446.91	450.89		451.01	0.003097	3.54	315.17	271.01	0.35
USACE	2781	5YR	958.00	446.91	451.78		451.89	0.002656	3.86	560.79	282.39	0.34
USACE	2781	10YR	1492.00	446.91	452.58		452.69	0.002469	4.19	795.73	302.91	0.33
USACE	2781	25YR	2472.00	446.91	453.80		453.93	0.002177	4.57	1188.48	338.64	0.33
USACE	2781	50YR	3293.00	446.91	454.76		454.88	0.001887	4.69	1521.03	357.79	0.31
USACE	2781	100YR	4125.00	446.91	455.80		455.92	0.001578	4.70	1904.57	385.68	0.29
USACE	2781	100YRPLUS	5395.00	446.91	457.39		457.50	0.001185	4.59	2558.02	428.22	0.26
USACE	2781	200YR	5087.00	446.91	456.99		457.11	0.001284	4.64	2388.15	419.83	0.27
USACE	2781	500YR	6500.00	446.91	458.87		458.97	0.000897	4.39	3213.70	460.46	0.23
USACE	2781	SEPT2011	1976.00	446.91	453.21		453.33	0.002324	4.41	993.07	321.87	0.33
USACE	2464	2YR	489.00	446.05	450.23		450.29	0.001669	2.72	391.68	296.21	0.26
USACE	2464	5YR	958.00	446.05	451.24		451.30	0.001319	2.88	706.50	324.41	0.24
USACE	2464	10YR	1492.00	446.05	452.08		452.14	0.001250	3.14	987.03	346.47	0.24
USACE	2464	25YR	2472.00	446.05	453.36		453.43	0.001138	3.46	1449.48	374.28	0.24
USACE	2464	50YR	3293.00	446.05	454.36		454.44	0.001027	3.62	1838.25	402.40	0.23
USACE	2464	100YR	4125.00	446.05	455.47		455.54	0.000861	3.63	2306.67	452.96	0.22
USACE	2464	100YRPLUS	5395.00	446.05	457.16		457.22	0.000639	3.52	3116.78	502.27	0.19
USACE	2464	200YR	5087.00	446.05	456.74		456.80	0.000692	3.56	2906.89	494.37	0.20
USACE	2464	500YR	6500.00	446.05	458.69		458.75	0.000485	3.36	3915.86	540.38	0.17
USACE	2464	SEPT2011	1976.00	446.05	452.74		452.80	0.001189	3.31	1221.89	361.25	0.24
USACE	2242	2YR	489.00	445.65	449.89		449.96	0.001351	2.54	360.91	201.93	0.23
USACE	2242	5YR	958.00	445.65	450.89		450.98	0.001556	3.20	596.34	270.56	0.26
USACE	2242	10YR	1492.00	445.65	451.72		451.82	0.001588	3.61	840.60	312.88	0.27
USACE	2242	25YR	2472.00	445.65	453.05		453.15	0.001331	3.82	1287.45	358.86	0.26
USACE	2242	50YR	3293.00	445.65	454.11		454.20	0.001078	3.78	1674.87	379.59	0.24
USACE	2242	100YR	4125.00	445.65	455.27		455.36	0.000825	3.63	2135.63	413.07	0.21
USACE	2242	100YRPLUS	5395.00	445.65	457.01		457.09	0.000579	3.42	2889.99	451.60	0.18
USACE	2242	200YR	5087.00	445.65	456.58		456.66	0.000632	3.48	2695.86	443.96	0.19
USACE	2242	500YR	6500.00	445.65	458.58		458.65	0.000431	3.23	3627.47	484.57	0.16
USACE	2242	SEPT2011	1976.00	445.65	452.41		452.51	0.001469	3.75	1065.11	335.77	0.27
USACE	1829	2YR	489.00	445.07	449.21		449.30	0.001868	3.02	332.99	248.58	0.28
USACE	1829	5YR	958.00	445.07	450.26		450.34	0.001541	3.25	616.19	290.18	0.26
USACE	1829	10YR	1492.00	445.07	451.12		451.20	0.001434	3.50	870.10	307.13	0.26
USACE	1829	25YR	2472.00	445.07	452.56		452.65	0.001127	3.62	1365.13	369.54	0.24
USACE	1829	50YR	3293.00	445.07	453.72		453.80	0.000885	3.55	1808.21	392.92	0.22
USACE	1829	100YR	4125.00	445.07	454.98		455.05	0.000661	3.38	2321.94	424.68	0.19
USACE	1829	100YRPLUS	5395.00	445.07	456.81		456.87	0.000465	3.19	3134.08	461.74	0.17
USACE	1829	200YR	5087.00	445.07	456.36		456.42	0.000506	3.24	2927.23	453.37	0.17
USACE	1829	500YR	6500.00	445.07	458.43		458.49	0.000350	3.03	3908.78	493.35	0.15
USACE	1829	SEPT2011	1976.00	445.07	451.86		451.95	0.001279	3.60	1112.98	342.06	0.25
USACE	1517	2YR	489.00	444.47	448.85		448.90	0.001026	2.30	469.27	287.93	0.21
USACE	1517	5YR	958.00	444.47	449.95		449.99	0.000940	2.60	800.87	321.58	0.21
USACE	1517	10YR	1492.00	444.47	450.81		450.87	0.000934	2.89	1101.40	368.23	0.21
USACE	1517	25YR	2472.00	444.47	452.33		452.38	0.000732	2.99	1714.38	423.73	0.20
USACE	1517	50YR	3293.00	444.47	453.54		453.59	0.000585	2.96	2234.67	437.65	0.18
USACE	1517	100YR	4125.00	444.47	454.84		454.89	0.000453	2.87	2815.46	454.32	0.16
USACE	1517	100YRPLUS	5395.00	444.47	456.71		456.75	0.000345	2.81	3699.87	497.77	0.14
USACE	1517	200YR	5087.00	444.47	456.25		456.29	0.000369	2.83	3472.81	484.86	0.15
USACE	1517	500YR	6500.00	444.47	458.36		458.40	0.000264	2.68	4529.19	510.57	0.13
USACE	1517	SEPT2011	1976.00	444.47	451.60		451.65	0.000833	2.97	1405.22	415.67	0.20
USACE	1290	2YR	489.00	444.16	448.67	446.76	448.71	0.000680	2.40	485.02	347.04	0.21
USACE	1290	5YR	958.00	444.16	449.76	447.82	449.82	0.000676	2.82	830.25	481.74	0.22
USACE	1290	10YR	1492.00	444.16	450.62	448.30	450.68	0.000714	3.22	1109.77	541.88	0.23
USACE	1290	25YR	2472.00	444.16	452.16	448.95	452.23	0.000626	3.52	1612.33	613.01	0.23
USACE	1290	50YR	3293.00	444.16	453.39	449.36	453.46	0.000552	3.66	2011.78	643.07	0.22
USACE	1290	100YR	4125.00	444.16	454.71	449.72	454.78	0.000464	3.69	2443.69	686.99	0.21

HEC-RAS Plan: Existing River: ShearersCreek Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1290	100YRPLUS	5395.00	444.16	456.59	450.16	456.67	0.000383	3.76	3057.27	767.96	0.19
USACE	1290	200YR	5087.00	444.16	456.13	450.06	456.20	0.000402	3.75	2906.01	754.55	0.20
USACE	1290	500YR	6500.00	444.16	458.25	450.50	458.33	0.000327	3.79	3597.58	868.18	0.18
USACE	1290	SEPT2011	1976.00	444.16	451.42	448.66	451.48	0.000664	3.37	1369.15	593.10	0.23
USACE	1236	2YR	489.00	443.93	448.50	446.81	448.64	0.001367	3.46	235.54	225.71	0.30
USACE	1236	5YR	958.00	443.93	449.51	448.07	449.71	0.001758	4.55	351.43	294.66	0.36
USACE	1236	10YR	1492.00	443.93	450.25	448.71	450.55	0.002263	5.65	436.17	321.27	0.41
USACE	1236	25YR	2472.00	443.93	451.67	449.54	452.07	0.002346	6.66	600.25	420.25	0.44
USACE	1236	50YR	3293.00	443.93	452.84	450.12	453.29	0.002212	7.15	734.57	468.62	0.44
USACE	1236	100YR	4125.00	443.93	454.15	450.65	454.62	0.001921	7.34	885.07	532.11	0.42
USACE	1236	100YRPLUS	5395.00	443.93	456.00	451.38	456.50	0.001646	7.63	1097.54	602.23	0.40
USACE	1236	200YR	5087.00	443.93	455.54	451.20	456.04	0.001715	7.58	1044.80	582.46	0.40
USACE	1236	500YR	6500.00	443.93	458.17	451.96	458.29	0.000420	4.33	2635.43	710.43	0.21
USACE	1236	SEPT2011	1976.00	443.93	450.98	449.15	451.34	0.002322	6.20	520.78	385.20	0.43
USACE	1173 Lebanon Road (PA		Bridge									
USACE	1135	2YR	489.00	443.15	447.98	446.63	448.38	0.003424	5.38	142.33	126.97	0.47
USACE	1135	5YR	958.00	443.15	448.89	448.52	449.38	0.004074	6.71	274.12	163.86	0.53
USACE	1135	10YR	1492.00	443.15	449.67	449.16	450.17	0.004013	7.33	400.26	242.96	0.54
USACE	1135	25YR	2472.00	443.15	450.75	449.89	451.31	0.004063	8.27	581.44	267.08	0.56
USACE	1135	50YR	3293.00	443.15	451.49	450.39	452.10	0.004142	8.93	708.08	286.11	0.57
USACE	1135	100YR	4125.00	443.15	452.13	450.84	452.81	0.004257	9.56	819.99	327.96	0.59
USACE	1135	100YRPLUS	5395.00	443.15	452.98	451.44	453.76	0.004450	10.43	970.30	368.36	0.61
USACE	1135	200YR	5087.00	443.15	452.80	451.29	453.55	0.004382	10.21	937.17	357.60	0.60
USACE	1135	500YR	6500.00	443.15	453.64	451.91	454.51	0.004600	11.11	1088.27	400.29	0.63
USACE	1135	SEPT2011	1976.00	443.15	450.26	449.55	450.78	0.003946	7.76	498.93	254.53	0.54
USACE	1056	2YR	489.00	443.15	448.00		448.10	0.000972	2.91	296.15	217.00	0.25
USACE	1056	5YR	958.00	443.15	448.90		449.04	0.001254	3.78	499.75	238.75	0.30
USACE	1056	10YR	1492.00	443.15	449.65		449.83	0.001431	4.44	685.01	255.11	0.33
USACE	1056	25YR	2472.00	443.15	450.72		450.96	0.001607	5.27	968.45	271.98	0.36
USACE	1056	50YR	3293.00	443.15	451.46		451.73	0.001694	5.80	1173.49	281.32	0.37
USACE	1056	100YR	4125.00	443.15	452.12		452.42	0.001754	6.24	1369.01	328.26	0.38
USACE	1056	100YRPLUS	5395.00	443.15	453.01		453.33	0.001708	6.59	1681.56	364.66	0.39
USACE	1056	200YR	5087.00	443.15	452.81		453.12	0.001718	6.52	1609.85	359.64	0.38
USACE	1056	500YR	6500.00	443.15	453.72		454.03	0.001624	6.76	1945.64	382.43	0.38
USACE	1056	SEPT2011	1976.00	443.15	450.24		450.44	0.001504	4.85	837.56	264.57	0.34
USACE	791	2YR	489.00	443.15	447.77		447.80	0.001108	2.25	442.91	293.07	0.21
USACE	791	5YR	958.00	443.15	448.64		448.69	0.001173	2.68	708.31	312.46	0.23
USACE	791	10YR	1492.00	443.15	449.38		449.44	0.001246	3.07	942.96	325.76	0.24
USACE	791	25YR	2472.00	443.15	450.45		450.53	0.001303	3.56	1307.38	364.31	0.25
USACE	791	50YR	3293.00	443.15	451.21		451.29	0.001258	3.78	1594.62	390.96	0.25
USACE	791	100YR	4125.00	443.15	451.88		451.97	0.001200	3.92	1864.45	412.37	0.25
USACE	791	100YRPLUS	5395.00	443.15	452.80		452.90	0.001108	4.07	2253.40	434.58	0.25
USACE	791	200YR	5087.00	443.15	452.59		452.70	0.001120	4.02	2166.47	429.90	0.25
USACE	791	500YR	6500.00	443.15	453.51		453.63	0.001047	4.17	2571.79	455.02	0.24
USACE	791	SEPT2011	1976.00	443.15	449.97		450.03	0.001263	3.32	1138.15	341.29	0.24
USACE	520	2YR	489.00	443.15	447.33		447.40	0.002050	2.86	395.91	295.94	0.28
USACE	520	5YR	958.00	443.15	448.19		448.27	0.002053	3.36	668.44	340.98	0.29
USACE	520	10YR	1492.00	443.15	448.92		449.01	0.002026	3.73	933.29	382.72	0.30
USACE	520	25YR	2472.00	443.15	450.01		450.11	0.001851	4.08	1386.57	451.19	0.30
USACE	520	50YR	3293.00	443.15	450.79		450.89	0.001745	4.31	1775.37	530.95	0.29
USACE	520	100YR	4125.00	443.15	451.51		451.61	0.001538	4.33	2182.88	589.88	0.28
USACE	520	100YRPLUS	5395.00	443.15	452.49		452.58	0.001249	4.24	2783.08	634.59	0.26
USACE	520	200YR	5087.00	443.15	452.28		452.37	0.001294	4.24	2649.93	624.64	0.26
USACE	520	500YR	6500.00	443.15	453.24		453.33	0.001089	4.19	3276.39	666.45	0.24
USACE	520	SEPT2011	1976.00	443.15	449.53		449.62	0.001845	3.85	1179.51	422.10	0.29
USACE	300	2YR	489.00	443.10	447.04	445.66	447.08	0.001052	2.13	570.46	756.70	0.21
USACE	300	5YR	958.00	443.10	447.91	446.41	447.95	0.001027	2.46	938.45	812.50	0.21
USACE	300	10YR	1492.00	443.10	448.64	446.68	448.69	0.001072	2.79	1247.30	821.78	0.22
USACE	300	25YR	2472.00	443.10	449.72	447.28	449.79	0.001120	3.26	1718.27	843.80	0.23
USACE	300	50YR	3293.00	443.10	450.51	447.57	450.58	0.001129	3.55	2065.52	854.35	0.24
USACE	300	100YR	4125.00	443.10	451.24	447.83	451.32	0.001111	3.77	2396.40	875.61	0.24
USACE	300	100YRPLUS	5395.00	443.10	452.24	448.16	452.32	0.001086	4.05	2864.28	909.68	0.24
USACE	300	200YR	5087.00	443.10	452.02	448.08	452.11	0.001081	3.97	2763.52	902.59	0.24
USACE	300	500YR	6500.00	443.10	453.00	448.43	453.10	0.001079	4.27	3228.80	931.61	0.25
USACE	300	SEPT2011	1976.00	443.10	449.26	447.08	449.31	0.001042	2.98	1516.48	833.60	0.22
USACE	128	2YR	466.00	443.02	446.86	445.31	446.90	0.001000	2.13	509.73	513.46	0.20
USACE	128	5YR	939.00	443.02	447.74	446.50	447.78	0.001000	2.47	865.81	664.26	0.21
USACE	128	10YR	1440.00	443.02	448.46	446.69	448.51	0.001000	2.74	1166.50	677.82	0.22
USACE	128	25YR	2379.00	443.02	449.54	447.15	449.60	0.001000	3.12	1625.76	709.87	0.22
USACE	128	50YR	3178.00	443.02	450.32	447.44	450.39	0.001001	3.38	1959.37	722.38	0.23
USACE	128	100YR	4005.00	443.02	451.05	447.70	451.13	0.001000	3.62	2271.95	739.21	0.23
USACE	128	100YRPLUS	5238.00	443.02	452.05	448.02	452.14	0.001001	3.92	2711.48	814.27	0.24
USACE	128	200YR	4952.00	443.02	451.84	447.97	451.93	0.001002	3.86	2613.58	796.83	0.23
USACE	128	500YR	6345.00	443.02	452.81	448.33	452.92	0.001001	4.15	3072.22	852.56	0.24
USACE	128	SEPT2011	1957.00	443.02	449.08	446.98	449.14	0.001002	2.97	1430.37	695.01	0.22

HEC-RAS Plan: Existing River: ShearersCrTrib Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8388	2YR	177.00	724.43	725.96	725.74	726.29	0.018288	4.60	40.92	46.05	0.73
USACE	8388	5YR	394.00	724.43	726.60	726.60	727.20	0.020289	6.40	79.27	101.63	0.83
USACE	8388	10YR	593.00	724.43	727.00	727.00	727.71	0.020217	7.27	125.13	127.43	0.85
USACE	8388	25YR	950.00	724.43	727.63	727.63	728.33	0.016758	7.79	220.09	186.46	0.81
USACE	8388	50YR	1247.00	724.43	728.01	728.01	728.75	0.015951	8.26	283.52	236.09	0.80
USACE	8388	100YR	1575.00	724.43	728.25	728.25	729.14	0.018201	9.25	324.53	256.48	0.87
USACE	8388	100YRPLUS	2060.00	724.43	728.66	728.66	729.66	0.018776	10.10	396.67	276.84	0.90
USACE	8388	200YR	1924.00	724.43	728.48	728.48	729.52	0.020326	10.18	364.21	265.29	0.93
USACE	8388	500YR	2422.00	724.43	728.90	728.90	729.99	0.019596	10.74	441.03	300.05	0.93
USACE	8388	SEPT2011	932.00	724.43	727.61	727.61	728.31	0.016711	7.74	216.67	180.81	0.80
USACE	8149	2YR	177.00	720.09	721.81	721.69	722.19	0.016001	4.65	37.89	46.91	0.70
USACE	8149	5YR	394.00	720.09	722.51	722.51	722.91	0.009484	4.72	93.04	113.75	0.58
USACE	8149	10YR	593.00	720.09	722.76	722.76	723.25	0.012331	5.78	122.83	138.68	0.67
USACE	8149	25YR	950.00	720.09	723.12	723.12	723.82	0.010782	5.96	173.46	161.16	0.64
USACE	8149	50YR	1247.00	720.09	723.39	723.39	724.23	0.009626	6.00	212.57	175.17	0.61
USACE	8149	100YR	1575.00	720.09	723.68	723.68	724.65	0.008585	6.03	254.41	205.81	0.59
USACE	8149	100YRPLUS	2060.00	720.09	724.10	724.10	725.21	0.007220	5.99	317.27	246.15	0.55
USACE	8149	200YR	1924.00	720.09	723.97	723.97	725.06	0.007660	6.03	298.43	235.06	0.56
USACE	8149	500YR	2422.00	720.09	724.40	724.40	725.59	0.006548	6.01	363.79	297.71	0.53
USACE	8149	SEPT2011	932.00	720.09	723.10	723.10	723.79	0.011038	6.00	170.17	158.93	0.65
USACE	7866	2YR	177.00	713.54	715.13	715.13	715.66	0.035947	5.84	30.32	28.46	1.00
USACE	7866	5YR	394.00	713.54	715.90	715.90	716.72	0.027931	7.32	57.99	42.50	0.96
USACE	7866	10YR	593.00	713.54	716.50	716.50	717.45	0.022927	8.02	87.75	57.38	0.91
USACE	7866	25YR	950.00	713.54	717.47	717.47	718.42	0.015797	8.35	168.08	112.85	0.80
USACE	7866	50YR	1247.00	713.54	717.93	717.93	718.96	0.015508	9.00	220.05	152.93	0.81
USACE	7866	100YR	1575.00	713.54	718.32	718.32	719.49	0.015995	9.76	268.02	177.51	0.84
USACE	7866	100YRPLUS	2060.00	713.54	718.87	718.87	720.14	0.015835	10.53	339.02	199.99	0.85
USACE	7866	200YR	1924.00	713.54	718.73	718.73	719.97	0.015745	10.30	321.03	191.34	0.84
USACE	7866	500YR	2422.00	713.54	719.19	719.19	720.57	0.016295	11.16	382.02	218.76	0.87
USACE	7866	SEPT2011	932.00	713.54	717.42	717.42	718.38	0.016150	8.36	163.06	109.35	0.81
USACE	7580	2YR	177.00	698.97	700.85		701.19	0.018509	4.67	38.22	32.93	0.74
USACE	7580	5YR	394.00	698.97	701.47	701.35	702.20	0.023506	6.88	60.12	37.45	0.89
USACE	7580	10YR	593.00	698.97	701.89	701.89	702.95	0.026727	8.39	76.18	40.04	0.98
USACE	7580	25YR	950.00	698.97	702.70	702.70	704.10	0.023777	9.70	111.00	46.11	0.97
USACE	7580	50YR	1247.00	698.97	703.34	703.34	704.92	0.021185	10.37	143.41	56.31	0.95
USACE	7580	100YR	1575.00	698.97	704.09	704.09	705.68	0.017202	10.57	195.76	79.41	0.88
USACE	7580	100YRPLUS	2060.00	698.97	704.87	704.87	706.58	0.015614	11.20	262.53	91.37	0.86
USACE	7580	200YR	1924.00	698.97	704.64	704.64	706.35	0.016291	11.11	241.89	88.40	0.87
USACE	7580	500YR	2422.00	698.97	705.32	705.32	707.14	0.015472	11.76	303.62	94.32	0.87
USACE	7580	SEPT2011	932.00	698.97	702.66	702.66	704.05	0.024034	9.66	109.01	45.62	0.97
USACE	7295	2YR	177.00	692.03	693.69	693.69	694.31	0.032642	6.32	28.80	26.02	0.98
USACE	7295	5YR	394.00	692.03	694.61	694.61	695.47	0.023743	7.69	64.81	51.03	0.91
USACE	7295	10YR	593.00	692.03	695.25	695.25	696.18	0.019824	8.32	106.14	79.43	0.87
USACE	7295	25YR	950.00	692.03	696.13	696.13	697.02	0.015229	8.73	196.25	179.69	0.80
USACE	7295	50YR	1247.00	692.03	696.52	696.52	697.54	0.016198	9.63	241.44	202.48	0.84
USACE	7295	100YR	1575.00	692.03	696.95	696.95	698.07	0.016484	10.37	294.15	223.62	0.86
USACE	7295	100YRPLUS	2060.00	692.03	697.47	697.47	698.71	0.016726	11.23	364.65	238.21	0.88
USACE	7295	200YR	1924.00	692.03	697.34	697.34	698.54	0.016600	10.99	346.24	233.86	0.87
USACE	7295	500YR	2422.00	692.03	697.77	697.77	699.12	0.017611	11.96	406.26	247.46	0.91
USACE	7295	SEPT2011	932.00	692.03	696.11	696.11	696.99	0.015108	8.66	193.63	177.45	0.79
USACE	7062	2YR	177.00	680.65	682.21		682.59	0.022100	4.94	36.07	31.93	0.80
USACE	7062	5YR	394.00	680.65	682.90	682.77	683.63	0.023480	6.90	59.63	36.47	0.89
USACE	7062	10YR	593.00	680.65	683.31	683.31	684.40	0.026961	8.44	75.26	39.45	0.98
USACE	7062	25YR	950.00	680.65	684.18	684.18	685.55	0.022691	9.59	113.01	47.54	0.95
USACE	7062	50YR	1247.00	680.65	684.77	684.77	686.37	0.021264	10.42	143.75	57.03	0.95
USACE	7062	100YR	1575.00	680.65	685.18	685.18	687.16	0.023377	11.70	168.85	70.93	1.01
USACE	7062	100YRPLUS	2060.00	680.65	686.57	686.57	687.83	0.011553	9.97	365.69	173.02	0.75
USACE	7062	200YR	1924.00	680.65	686.40	686.40	687.66	0.011771	9.85	336.32	169.04	0.75
USACE	7062	500YR	2422.00	680.65	686.93	686.93	688.24	0.011661	10.44	428.73	179.36	0.76
USACE	7062	SEPT2011	932.00	680.65	684.14	684.14	685.49	0.022871	9.54	111.07	47.18	0.95
USACE	6839	2YR	177.00	674.58	675.90	675.90	676.43	0.035250	5.80	31.04	32.12	0.99
USACE	6839	5YR	394.00	674.58	676.58	676.58	677.49	0.032567	7.73	55.22	41.29	1.03
USACE	6839	10YR	593.00	674.58	677.28	677.28	678.19	0.021927	7.94	95.08	70.40	0.90
USACE	6839	25YR	950.00	674.58	678.02	678.02	679.08	0.019220	8.88	155.91	88.70	0.88
USACE	6839	50YR	1247.00	674.58	678.31	678.31	679.73	0.023693	10.44	183.91	115.69	0.99
USACE	6839	100YR	1575.00	674.58	679.05	679.05	680.21	0.016361	9.87	281.82	142.26	0.85
USACE	6839	100YRPLUS	2060.00	674.58	679.63	679.63	680.85	0.015507	10.47	369.27	160.65	0.84
USACE	6839	200YR	1924.00	674.58	679.44	679.44	680.67	0.016171	10.42	340.44	154.23	0.86
USACE	6839	500YR	2422.00	674.58	679.95	679.95	681.24	0.015719	11.01	422.04	167.08	0.86
USACE	6839	SEPT2011	932.00	674.58	677.97	677.97	679.04	0.019753	8.91	151.39	87.44	0.89

HEC-RAS Plan: Existing River: ShearersCrTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6639	2YR	177.00	665.45	667.41	667.41	667.98	0.035854	6.06	29.20	25.74	1.00
USACE	6639	5YR	394.00	665.45	668.28	668.28	669.13	0.026166	7.44	57.03	45.52	0.94
USACE	6639	10YR	593.00	665.45	668.86	668.86	669.87	0.022728	8.26	85.75	51.81	0.91
USACE	6639	25YR	950.00	665.45	669.64	669.64	670.93	0.021388	9.58	129.64	61.75	0.93
USACE	6639	50YR	1247.00	665.45	670.23	670.23	671.65	0.019736	10.25	168.61	70.29	0.91
USACE	6639	100YR	1575.00	665.45	670.77	670.77	672.38	0.019323	11.06	209.40	81.99	0.92
USACE	6639	100YRPLUS	2060.00	665.45	671.50	671.50	673.24	0.017866	11.77	274.23	93.89	0.91
USACE	6639	200YR	1924.00	665.45	671.38	671.38	673.01	0.017231	11.37	262.57	92.06	0.89
USACE	6639	500YR	2422.00	665.45	672.05	672.05	673.80	0.016294	12.02	327.87	101.53	0.89
USACE	6639	SEPT2011	932.00	665.45	669.60	669.60	670.88	0.021612	9.54	127.00	60.87	0.93
USACE	6414	2YR	177.00	652.51	654.24	654.24	654.84	0.035912	6.20	28.55	24.35	1.01
USACE	6414	5YR	394.00	652.51	655.11	655.11	655.97	0.030767	7.42	53.37	33.23	1.00
USACE	6414	10YR	593.00	652.51	655.71	655.71	656.74	0.025402	8.21	77.44	48.29	0.95
USACE	6414	25YR	950.00	652.51	656.54	656.54	657.81	0.021537	9.27	121.73	57.76	0.92
USACE	6414	50YR	1247.00	652.51	657.05	657.05	658.56	0.021517	10.24	153.45	68.56	0.94
USACE	6414	100YR	1575.00	652.51	657.92	657.92	659.26	0.015092	9.89	232.14	106.58	0.82
USACE	6414	100YRPLUS	2060.00	652.51	658.46	658.46	660.01	0.015916	10.94	290.91	112.56	0.86
USACE	6414	200YR	1924.00	652.51	658.34	658.34	659.81	0.015317	10.57	278.19	111.26	0.84
USACE	6414	500YR	2422.00	652.51	658.92	658.92	660.54	0.015268	11.36	345.79	124.16	0.85
USACE	6414	SEPT2011	932.00	652.51	656.51	656.51	657.76	0.021452	9.20	120.04	57.42	0.92
USACE	6193	2YR	177.00	649.07	651.11		651.25	0.007879	3.32	72.50	67.88	0.49
USACE	6193	5YR	394.00	649.07	651.78	651.17	652.05	0.009269	4.66	123.16	83.24	0.57
USACE	6193	10YR	593.00	649.07	652.22	651.62	652.59	0.010269	5.56	163.12	101.29	0.61
USACE	6193	25YR	950.00	649.07	652.88		653.37	0.010907	6.67	243.46	133.85	0.66
USACE	6193	50YR	1247.00	649.07	653.26		653.84	0.011547	7.40	296.04	140.88	0.69
USACE	6193	100YR	1575.00	649.07	653.67	653.15	654.32	0.011642	7.99	354.81	147.93	0.70
USACE	6193	100YRPLUS	2060.00	649.07	654.17	653.57	654.93	0.012034	8.79	431.98	158.01	0.73
USACE	6193	200YR	1924.00	649.07	654.04	653.45	654.77	0.011897	8.57	411.71	155.82	0.72
USACE	6193	500YR	2422.00	649.07	654.52	653.88	655.34	0.012110	9.27	489.38	167.09	0.74
USACE	6193	SEPT2011	932.00	649.07	652.92		653.38	0.009884	6.41	249.51	134.78	0.63
USACE	5935	2YR	177.00	645.94	646.84	646.76	647.08	0.050080	4.59	51.52	83.09	1.07
USACE	5935	5YR	394.00	645.94	647.30	647.22	647.68	0.039862	5.92	94.18	104.73	1.04
USACE	5935	10YR	593.00	645.94	647.66	647.36	648.15	0.034368	6.75	136.36	126.57	1.02
USACE	5935	25YR	950.00	645.94	648.06	648.06	648.73	0.034680	8.04	188.23	136.76	1.07
USACE	5935	50YR	1247.00	645.94	648.36	648.35	649.13	0.032791	8.68	229.74	139.43	1.07
USACE	5935	100YR	1575.00	645.94	648.63	648.63	649.54	0.033307	9.50	268.29	144.96	1.10
USACE	5935	100YRPLUS	2060.00	645.94	648.99	648.99	650.07	0.032889	10.41	321.85	148.13	1.12
USACE	5935	200YR	1924.00	645.94	648.89	648.89	649.93	0.033234	10.19	306.57	147.23	1.12
USACE	5935	500YR	2422.00	645.94	649.23	649.23	650.43	0.033364	11.08	356.56	150.17	1.14
USACE	5935	SEPT2011	932.00	645.94	647.94	647.94	648.71	0.042569	8.51	172.48	132.40	1.17
USACE	5694	2YR	177.00	635.33	636.70	636.49	637.03	0.036361	5.61	45.48	45.33	0.98
USACE	5694	5YR	394.00	635.33	637.30	637.22	637.89	0.042615	7.57	76.68	56.70	1.12
USACE	5694	10YR	593.00	635.33	637.67	637.66	638.49	0.048642	8.96	98.43	63.11	1.22
USACE	5694	25YR	950.00	635.33	638.60	638.60	639.48	0.032013	9.45	174.54	106.50	1.06
USACE	5694	50YR	1247.00	635.33	638.74	638.74	640.05	0.044717	11.58	189.95	112.90	1.26
USACE	5694	100YR	1575.00	635.33	639.48	639.48	640.47	0.026089	10.44	286.87	136.59	1.00
USACE	5694	100YRPLUS	2060.00	635.33	639.87	639.87	641.04	0.027598	11.56	341.79	144.29	1.05
USACE	5694	200YR	1924.00	635.33	639.79	639.79	640.89	0.026544	11.17	329.76	140.82	1.03
USACE	5694	500YR	2422.00	635.33	639.98	639.98	641.46	0.033958	13.07	357.42	152.30	1.17
USACE	5694	SEPT2011	932.00	635.33	638.59	638.59	639.45	0.031041	9.29	174.04	106.31	1.04
USACE	5408	2YR	177.00	624.53	625.96	625.96	626.43	0.037864	5.48	32.31	34.80	1.00
USACE	5408	5YR	394.00	624.53	626.62	626.62	627.37	0.032117	6.94	56.94	39.82	1.00
USACE	5408	10YR	593.00	624.53	627.11	627.11	628.07	0.028397	7.87	77.43	44.84	0.98
USACE	5408	25YR	950.00	624.53	627.89	627.89	629.08	0.023093	8.86	118.64	59.45	0.94
USACE	5408	50YR	1247.00	624.53	628.41	628.41	629.78	0.021581	9.59	151.17	69.67	0.93
USACE	5408	100YR	1575.00	624.53	628.95	628.95	630.45	0.019837	10.17	189.20	104.07	0.92
USACE	5408	100YRPLUS	2060.00	624.53	629.63	629.63	631.30	0.018302	10.90	242.33	117.21	0.91
USACE	5408	200YR	1924.00	624.53	629.42	629.42	631.08	0.019149	10.80	225.31	112.16	0.92
USACE	5408	500YR	2422.00	624.53	630.04	630.04	631.87	0.018169	11.51	276.37	123.85	0.91
USACE	5408	SEPT2011	932.00	624.53	627.86	627.86	629.04	0.023325	8.82	116.42	58.90	0.94
USACE	5113	2YR	177.00	614.75	616.69	616.53	617.07	0.023721	4.90	36.09	31.96	0.81
USACE	5113	5YR	394.00	614.75	617.40	617.25	618.09	0.023060	6.64	60.02	35.24	0.87
USACE	5113	10YR	593.00	614.75	617.87	617.78	618.84	0.024391	7.94	76.83	38.04	0.93
USACE	5113	25YR	950.00	614.75	618.60	618.60	619.98	0.024234	9.52	106.66	43.51	0.97
USACE	5113	50YR	1247.00	614.75	619.17	619.17	620.80	0.022723	10.36	133.09	50.27	0.96
USACE	5113	100YR	1575.00	614.75	619.88	619.88	621.58	0.019096	10.71	176.05	67.78	0.91
USACE	5113	100YRPLUS	2060.00	614.75	620.78	620.78	622.53	0.015887	11.09	244.26	110.41	0.86
USACE	5113	200YR	1924.00	614.75	620.59	620.59	622.29	0.015993	10.86	229.35	106.58	0.86
USACE	5113	500YR	2422.00	614.75	621.21	621.21	623.12	0.015997	11.73	279.74	123.75	0.87

HEC-RAS Plan: Existing River: ShearersCrTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5113	SEPT2011	932.00	614.75	618.56	618.56	619.93	0.024343	9.46	105.06	43.25	0.97
USACE	4849	2YR	177.00	607.11	609.45	609.37	610.05	0.029715	6.23	28.42	20.61	0.93
USACE	4849	5YR	394.00	607.11	610.34	610.34	611.40	0.027570	8.29	49.26	26.19	0.98
USACE	4849	10YR	593.00	607.11	611.05	611.05	612.37	0.024312	9.34	69.47	31.51	0.96
USACE	4849	25YR	950.00	607.11	612.43	612.43	613.53	0.013593	9.02	166.06	96.76	0.76
USACE	4849	50YR	1247.00	607.11	612.99	612.99	614.16	0.013217	9.66	230.79	129.79	0.77
USACE	4849	100YR	1575.00	607.11	613.56	613.56	614.68	0.011951	9.88	311.81	147.78	0.75
USACE	4849	100YRPLUS	2060.00	607.11	614.05	614.05	615.31	0.012965	10.90	385.05	153.21	0.79
USACE	4849	200YR	1924.00	607.11	613.93	613.93	615.14	0.012611	10.60	366.55	151.70	0.77
USACE	4849	500YR	2422.00	607.11	614.37	614.37	615.73	0.013659	11.58	434.21	157.44	0.82
USACE	4849	SEPT2011	932.00	607.11	612.39	612.39	613.49	0.013645	8.99	162.30	96.03	0.77
USACE	4574	2YR	177.00	598.76	600.58	600.58	601.15	0.035209	6.04	29.32	25.70	1.00
USACE	4574	5YR	394.00	598.76	601.40	601.40	602.28	0.029139	7.56	53.53	42.79	0.98
USACE	4574	10YR	593.00	598.76	602.01	602.01	603.09	0.024539	8.40	77.62	128.22	0.94
USACE	4574	25YR	950.00	598.76	603.07	603.07	604.15	0.016401	8.72	149.34	226.01	0.82
USACE	4574	50YR	1247.00	598.76	603.63	603.63	604.76	0.015027	9.21	205.54	241.03	0.80
USACE	4574	100YR	1575.00	598.76	604.07	604.07	605.32	0.015296	9.94	250.84	246.54	0.83
USACE	4574	100YRPLUS	2060.00	598.76	604.61	604.61	606.04	0.015788	10.90	309.57	258.23	0.85
USACE	4574	200YR	1924.00	598.76	604.47	604.47	605.84	0.015551	10.62	294.63	254.67	0.84
USACE	4574	500YR	2422.00	598.76	604.97	604.97	606.52	0.016077	11.52	349.68	264.42	0.87
USACE	4574	SEPT2011	932.00	598.76	603.04	603.04	604.11	0.016387	8.67	146.46	224.15	0.82
USACE	4293	2YR	177.00	589.56	591.31	591.05	591.61	0.018377	4.39	40.29	35.08	0.72
USACE	4293	5YR	394.00	589.56	591.86	591.82	592.44	0.022529	6.15	64.81	55.40	0.85
USACE	4293	10YR	593.00	589.56	592.26	592.26	593.00	0.021252	6.91	86.62	102.29	0.85
USACE	4293	25YR	950.00	589.56	592.75	592.75	593.83	0.020302	7.81	117.92	115.13	0.87
USACE	4293	50YR	1247.00	589.56	593.14	593.14	594.49	0.018056	8.10	144.20	133.50	0.84
USACE	4293	100YR	1575.00	589.56	593.56	593.56	595.18	0.015547	8.22	174.52	163.69	0.79
USACE	4293	100YRPLUS	2060.00	589.56	594.22	594.22	596.12	0.012009	8.15	224.08	176.13	0.72
USACE	4293	200YR	1924.00	589.56	594.05	594.05	595.86	0.012535	8.10	211.70	173.63	0.73
USACE	4293	500YR	2422.00	589.56	594.68	594.68	596.76	0.010400	8.15	260.23	187.41	0.68
USACE	4293	SEPT2011	932.00	589.56	592.73	592.73	593.79	0.020375	7.78	116.45	114.72	0.87
USACE	4062	2YR	242.00	581.98	583.01	583.01	583.40	0.069300	6.06	54.30	125.44	1.29
USACE	4062	5YR	551.00	581.98	583.59	583.59	584.26	0.052587	7.92	96.06	136.51	1.24
USACE	4062	10YR	838.00	581.98	584.04	584.04	584.91	0.045235	9.00	130.21	143.99	1.21
USACE	4062	25YR	1359.00	581.98	584.72	584.72	585.90	0.039165	10.48	185.08	161.37	1.19
USACE	4062	50YR	1792.00	581.98	585.21	585.21	586.60	0.036409	11.44	226.12	176.30	1.19
USACE	4062	100YR	2270.00	581.98	585.82	585.82	587.33	0.030734	11.94	283.46	199.22	1.13
USACE	4062	100YRPLUS	2969.00	581.98	586.42	586.42	588.21	0.030058	13.12	345.73	214.47	1.14
USACE	4062	200YR	2775.00	581.98	586.28	586.28	587.97	0.029536	12.72	331.50	211.35	1.13
USACE	4062	500YR	3493.00	581.98	586.90	586.90	588.81	0.028050	13.65	398.71	228.32	1.13
USACE	4062	SEPT2011	1133.00	581.98	584.44	584.44	585.49	0.041049	9.88	162.44	154.12	1.20
USACE	3690	2YR	242.00	571.82	573.22		573.41	0.013583	3.52	68.67	66.61	0.61
USACE	3690	5YR	551.00	571.82	573.91		574.23	0.014500	4.55	121.20	84.12	0.67
USACE	3690	10YR	838.00	571.82	574.44		574.83	0.011964	5.01	167.78	89.45	0.64
USACE	3690	25YR	1359.00	571.82	574.77	574.47	575.51	0.018513	6.92	202.25	133.97	0.81
USACE	3690	50YR	1792.00	571.82	575.14	574.98	576.05	0.018750	7.71	259.11	173.00	0.84
USACE	3690	100YR	2270.00	571.82	575.45	575.45	576.54	0.020013	8.56	313.27	181.35	0.88
USACE	3690	100YRPLUS	2969.00	571.82	575.98	575.92	577.17	0.018051	9.09	412.64	191.44	0.86
USACE	3690	200YR	2775.00	571.82	575.84	575.79	577.00	0.018534	8.96	385.64	189.15	0.87
USACE	3690	500YR	3493.00	571.82	576.35	576.22	577.59	0.016825	9.40	485.39	198.46	0.85
USACE	3690	SEPT2011	1133.00	571.82	574.63		575.22	0.016035	6.16	185.81	101.41	0.75
USACE	3472	2YR	242.00	566.75	568.39	568.39	568.96	0.033181	6.13	41.05	40.88	0.98
USACE	3472	5YR	551.00	566.75	569.29	569.29	570.09	0.025265	7.40	89.62	65.96	0.92
USACE	3472	10YR	838.00	566.75	569.70	569.70	570.86	0.029608	9.05	118.46	76.96	1.03
USACE	3472	25YR	1359.00	566.75	570.89	570.89	571.80	0.015494	8.56	264.04	154.67	0.79
USACE	3472	50YR	1792.00	566.75	571.38	571.38	572.37	0.015142	9.21	351.26	202.23	0.80
USACE	3472	100YR	2270.00	566.75	571.93	571.93	572.91	0.013718	9.53	472.16	231.25	0.78
USACE	3472	100YRPLUS	2969.00	566.75	572.29	572.29	573.48	0.015841	10.77	557.74	238.06	0.85
USACE	3472	200YR	2775.00	566.75	572.20	572.20	573.33	0.015231	10.43	535.88	236.32	0.83
USACE	3472	500YR	3493.00	566.75	572.54	572.54	573.87	0.017153	11.58	618.85	246.38	0.89
USACE	3472	SEPT2011	1133.00	566.75	570.49	570.49	571.46	0.018199	8.57	203.75	138.01	0.84
USACE	3235	2YR	242.00	560.86	564.30		564.38	0.001541	2.36	110.42	52.56	0.24
USACE	3235	5YR	551.00	560.86	565.49		565.68	0.002304	3.63	196.66	96.38	0.32
USACE	3235	10YR	838.00	560.86	566.21		566.48	0.002834	4.49	289.81	170.47	0.36
USACE	3235	25YR	1359.00	560.86	567.09		567.45	0.003277	5.40	453.58	196.41	0.40
USACE	3235	50YR	1792.00	560.86	567.64		568.05	0.003588	6.00	564.14	206.06	0.42
USACE	3235	100YR	2270.00	560.86	568.19		568.65	0.003804	6.54	680.52	218.74	0.44
USACE	3235	100YRPLUS	2969.00	560.86	568.86		569.39	0.004123	7.25	832.16	235.71	0.47
USACE	3235	200YR	2775.00	560.86	568.68		569.20	0.004044	7.06	790.82	230.62	0.46

HEC-RAS Plan: Existing River: ShearersCrTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3235	500YR	3493.00	560.86	569.29	567.76	569.88	0.004404	7.77	937.26	253.62	0.49
USACE	3235	SEPT2011	1133.00	560.86	566.75		567.08	0.003073	5.02	388.90	186.65	0.38
USACE	2859	2YR	242.00	560.86	562.45	562.21	562.84	0.028110	5.73	65.70	96.52	0.91
USACE	2859	5YR	551.00	560.86	563.09	563.09	563.63	0.025727	7.24	142.07	142.86	0.93
USACE	2859	10YR	838.00	560.86	563.50	563.50	564.11	0.024487	8.06	206.29	166.17	0.94
USACE	2859	25YR	1359.00	560.86	564.00	563.99	564.77	0.026111	9.49	294.16	209.20	1.00
USACE	2859	50YR	1792.00	560.86	564.41	564.33	565.23	0.024854	10.13	371.01	228.90	1.00
USACE	2859	100YR	2270.00	560.86	564.85	564.85	565.74	0.023762	10.80	466.33	268.35	1.00
USACE	2859	100YRPLUS	2969.00	560.86	565.26	565.13	566.28	0.024788	11.84	563.05	291.41	1.04
USACE	2859	200YR	2775.00	560.86	565.13	565.09	566.12	0.024760	11.59	533.16	280.89	1.03
USACE	2859	500YR	3493.00	560.86	565.56	565.51	566.63	0.024572	12.36	638.28	316.03	1.05
USACE	2859	SEPT2011	1133.00	560.86	563.77	563.77	564.50	0.026869	9.09	252.19	194.83	1.00
USACE	2592	2YR	242.00	554.32	556.40	556.40	556.73	0.018867	5.12	65.47	98.29	0.76
USACE	2592	5YR	551.00	554.32	556.93	556.93	557.40	0.020345	6.57	126.52	130.17	0.83
USACE	2592	10YR	838.00	554.32	557.27	557.27	557.83	0.021318	7.50	178.13	164.56	0.87
USACE	2592	25YR	1359.00	554.32	557.75	557.75	558.42	0.021476	8.54	264.10	188.51	0.90
USACE	2592	50YR	1792.00	554.32	558.04	558.04	558.82	0.023016	9.43	318.95	198.37	0.95
USACE	2592	100YR	2270.00	554.32	558.34	558.34	559.21	0.023272	10.09	379.98	206.74	0.97
USACE	2592	100YRPLUS	2969.00	554.32	558.70	558.70	559.71	0.024224	11.03	457.37	222.73	1.01
USACE	2592	200YR	2775.00	554.32	558.60	558.60	559.58	0.024116	10.80	435.68	218.55	1.00
USACE	2592	500YR	3493.00	554.32	558.96	558.96	560.06	0.024516	11.60	513.99	253.45	1.02
USACE	2592	SEPT2011	1133.00	554.32	557.58	557.58	558.19	0.020618	8.02	232.44	183.20	0.87
USACE	2363	2YR	242.00	546.48	548.40	548.03	548.67	0.013024	4.58	70.59	56.02	0.64
USACE	2363	5YR	551.00	546.48	549.01	548.79	549.65	0.020884	7.20	106.04	61.28	0.86
USACE	2363	10YR	838.00	546.48	549.56	549.33	550.44	0.021457	8.49	141.80	68.20	0.90
USACE	2363	25YR	1359.00	546.48	550.28	550.28	551.58	0.024288	10.54	196.37	84.26	1.00
USACE	2363	50YR	1792.00	546.48	550.92	550.92	552.34	0.021855	11.21	254.99	95.75	0.98
USACE	2363	100YR	2270.00	546.48	551.45	551.45	553.05	0.021629	12.09	307.10	100.56	0.99
USACE	2363	100YRPLUS	2969.00	546.48	552.16	552.16	554.00	0.021261	13.18	382.13	111.97	1.01
USACE	2363	200YR	2775.00	546.48	551.89	551.89	553.75	0.022807	13.18	352.15	107.51	1.03
USACE	2363	500YR	3493.00	546.48	552.78	552.78	554.67	0.019316	13.52	457.51	130.97	0.98
USACE	2363	SEPT2011	1133.00	546.48	550.01	549.87	551.12	0.022655	9.66	174.88	78.73	0.95
USACE	2144	2YR	242.00	541.91	543.60	543.60	544.28	0.033476	6.61	36.63	26.78	1.00
USACE	2144	5YR	551.00	541.91	544.79	544.79	545.48	0.017282	7.06	112.55	98.84	0.79
USACE	2144	10YR	838.00	541.91	545.28	545.28	546.12	0.018132	8.14	162.55	106.02	0.83
USACE	2144	25YR	1359.00	541.91	546.17	546.17	547.09	0.015578	8.99	274.07	145.20	0.81
USACE	2144	50YR	1792.00	541.91	546.58	546.58	547.64	0.016655	9.94	334.14	148.25	0.85
USACE	2144	100YR	2270.00	541.91	546.93	546.93	548.18	0.018455	11.03	387.13	161.41	0.90
USACE	2144	100YRPLUS	2969.00	541.91	547.64	547.64	548.92	0.016658	11.53	504.30	199.88	0.88
USACE	2144	200YR	2775.00	541.91	547.51	547.51	548.75	0.016479	11.27	481.64	196.62	0.87
USACE	2144	500YR	3493.00	541.91	547.96	547.96	549.36	0.017488	12.27	557.55	206.65	0.91
USACE	2144	SEPT2011	1133.00	541.91	545.77	545.77	546.72	0.017666	8.90	217.18	129.42	0.84
USACE	1919	2YR	242.00	532.50	534.30		534.62	0.018125	4.53	53.40	43.96	0.72
USACE	1919	5YR	551.00	532.50	534.80	534.78	535.61	0.030823	7.24	76.26	47.79	0.99
USACE	1919	10YR	838.00	532.50	535.33	535.33	536.40	0.028019	8.30	103.05	53.09	0.99
USACE	1919	25YR	1359.00	532.50	536.15	536.15	537.58	0.024735	9.66	150.46	68.96	0.98
USACE	1919	50YR	1792.00	532.50	536.90	536.90	538.36	0.019195	9.88	218.49	103.09	0.90
USACE	1919	100YR	2270.00	532.50	537.50	537.50	539.05	0.017412	10.38	284.67	116.04	0.88
USACE	1919	100YRPLUS	2969.00	532.50	538.36	538.36	539.95	0.014813	10.80	401.34	156.54	0.83
USACE	1919	200YR	2775.00	532.50	537.98	537.98	539.71	0.017343	11.12	346.02	136.40	0.89
USACE	1919	500YR	3493.00	532.50	538.81	538.81	540.48	0.014401	11.25	473.41	164.81	0.83
USACE	1919	SEPT2011	1133.00	532.50	535.83	535.83	537.09	0.025353	9.07	130.73	57.90	0.98
USACE	1659	2YR	242.00	525.91	527.55	527.55	528.13	0.036243	6.09	39.74	35.47	1.01
USACE	1659	5YR	551.00	525.91	528.48	528.48	529.10	0.020510	6.69	114.72	113.69	0.84
USACE	1659	10YR	838.00	525.91	528.95	528.95	529.66	0.019355	7.49	177.42	146.53	0.84
USACE	1659	25YR	1359.00	525.91	529.59	529.59	530.38	0.017832	8.39	292.26	185.75	0.84
USACE	1659	50YR	1792.00	525.91	529.99	529.99	530.86	0.017784	9.08	369.71	199.07	0.85
USACE	1659	100YR	2270.00	525.91	530.30	530.30	531.30	0.019092	9.95	431.55	201.68	0.90
USACE	1659	100YRPLUS	2969.00	525.91	530.72	530.72	531.87	0.019953	10.92	518.16	205.04	0.93
USACE	1659	200YR	2775.00	525.91	530.61	530.61	531.72	0.019722	10.66	495.22	204.16	0.93
USACE	1659	500YR	3493.00	525.91	531.00	531.00	532.26	0.020683	11.60	575.42	207.21	0.96
USACE	1659	SEPT2011	1133.00	525.91	529.39	529.39	530.12	0.017043	7.84	255.46	183.77	0.81
USACE	1392	2YR	242.00	518.04	519.96		520.18	0.009959	3.76	68.54	70.08	0.55
USACE	1392	5YR	551.00	518.04	520.65		521.08	0.012443	5.42	121.67	82.22	0.66
USACE	1392	10YR	838.00	518.04	521.07		521.70	0.014837	6.68	157.27	89.48	0.74
USACE	1392	25YR	1359.00	518.04	521.62	521.46	522.62	0.018642	8.54	210.02	101.39	0.86
USACE	1392	50YR	1792.00	518.04	522.06	521.85	523.33	0.020333	9.74	257.43	119.63	0.92
USACE	1392	100YR	2270.00	518.04	522.56	522.56	523.93	0.019062	10.30	318.77	124.66	0.91
USACE	1392	100YRPLUS	2969.00	518.04	523.11	523.11	524.73	0.019551	11.37	389.27	131.25	0.94

HEC-RAS Plan: Existing River: ShearersCrTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1392	200YR	2775.00	518.04	522.97	522.97	524.52	0.019317	11.07	370.99	129.41	0.93
USACE	1392	500YR	3493.00	518.04	523.48	523.48	525.28	0.020077	12.13	438.43	137.79	0.96
USACE	1392	SEPT2011	1133.00	518.04	521.38	521.17	522.24	0.017547	7.85	186.33	95.40	0.82
USACE	1113	2YR	242.00	513.10	514.79	514.79	515.41	0.035129	6.28	38.73	36.48	1.01
USACE	1113	5YR	551.00	513.10	515.78	515.71	516.55	0.021808	7.25	91.96	64.58	0.87
USACE	1113	10YR	838.00	513.10	516.52	516.34	517.33	0.016465	7.68	155.26	107.66	0.80
USACE	1113	25YR	1359.00	513.10	517.48	517.17	518.30	0.012848	8.20	262.77	120.94	0.74
USACE	1113	50YR	1792.00	513.10	518.12		518.99	0.011710	8.68	345.04	134.52	0.72
USACE	1113	100YR	2270.00	513.10	518.85		519.69	0.009887	8.81	444.63	141.55	0.68
USACE	1113	100YRPLUS	2969.00	513.10	519.58		520.54	0.009856	9.60	554.80	157.59	0.69
USACE	1113	200YR	2775.00	513.10	519.38		520.32	0.009942	9.43	523.62	154.31	0.69
USACE	1113	500YR	3493.00	513.10	520.10		521.12	0.009551	10.00	640.10	166.46	0.69
USACE	1113	SEPT2011	1133.00	513.10	517.10	516.88	517.90	0.013814	7.94	218.86	113.35	0.75
USACE	775	2YR	242.00	508.62	511.51		511.66	0.004165	3.13	86.91	61.41	0.38
USACE	775	5YR	551.00	508.62	512.31		512.66	0.006724	4.92	140.39	77.51	0.51
USACE	775	10YR	838.00	508.62	512.82		513.35	0.008457	6.15	183.30	91.60	0.59
USACE	775	25YR	1359.00	508.62	513.52		514.33	0.010661	7.81	253.58	107.28	0.68
USACE	775	50YR	1792.00	508.62	514.00	513.68	515.00	0.011735	8.82	306.49	112.37	0.73
USACE	775	100YR	2270.00	508.62	514.44	514.01	515.72	0.013664	10.11	363.43	142.75	0.79
USACE	775	100YRPLUS	2969.00	508.62	515.03	514.92	516.50	0.014217	11.10	449.42	148.50	0.83
USACE	775	200YR	2775.00	508.62	514.88	514.11	516.29	0.013954	10.81	427.95	146.93	0.81
USACE	775	500YR	3493.00	508.62	515.38	515.30	517.03	0.015072	11.91	503.02	154.42	0.86
USACE	775	SEPT2011	1133.00	508.62	513.25		513.94	0.009823	7.16	224.76	104.34	0.64
USACE	540	2YR	242.00	508.13	510.06		510.24	0.009581	3.81	98.40	114.54	0.55
USACE	540	5YR	551.00	508.13	511.08		511.23	0.005192	3.95	274.03	198.10	0.44
USACE	540	10YR	838.00	508.13	511.69		511.85	0.004453	4.22	398.55	214.45	0.42
USACE	540	25YR	1359.00	508.13	512.44		512.63	0.004413	4.84	562.49	223.97	0.43
USACE	540	50YR	1792.00	508.13	512.92		513.14	0.004643	5.37	672.19	233.89	0.45
USACE	540	100YR	2270.00	508.13	513.46		513.71	0.004584	5.77	803.00	261.48	0.46
USACE	540	100YRPLUS	2969.00	508.13	514.07		514.37	0.004781	6.37	973.80	290.76	0.48
USACE	540	200YR	2775.00	508.13	513.92		514.20	0.004731	6.22	928.99	286.13	0.47
USACE	540	500YR	3493.00	508.13	514.49		514.81	0.004804	6.70	1097.79	301.98	0.48
USACE	540	SEPT2011	1133.00	508.13	512.11		512.29	0.004580	4.65	489.15	220.15	0.43
USACE	258	2YR	242.00	504.94	507.39	506.69	507.67	0.008653	4.21	57.97	33.57	0.54
USACE	258	5YR	551.00	504.94	508.10	507.69	508.83	0.015407	6.92	86.78	55.72	0.75
USACE	258	10YR	838.00	504.94	508.72	508.72	509.64	0.015489	7.99	146.34	123.96	0.78
USACE	258	25YR	1359.00	504.94	509.58	509.58	510.53	0.013572	8.75	281.28	181.65	0.76
USACE	258	50YR	1792.00	504.94	510.13	510.13	511.06	0.012383	9.09	391.42	210.54	0.74
USACE	258	100YR	2270.00	504.94	510.43	510.43	511.53	0.014135	10.14	456.45	216.36	0.80
USACE	258	100YRPLUS	2969.00	504.94	511.02	511.02	512.16	0.013702	10.76	597.40	251.24	0.81
USACE	258	200YR	2775.00	504.94	510.87	510.87	512.00	0.013816	10.61	559.81	245.33	0.81
USACE	258	500YR	3493.00	504.94	511.31	511.31	512.54	0.014445	11.43	671.52	264.88	0.83
USACE	258	SEPT2011	1133.00	504.94	509.34	509.34	510.20	0.012711	8.14	239.51	171.02	0.73
USACE	95	2YR	242.00	504.66	506.27	505.79	506.35	0.007012	3.07	154.13	431.96	0.46
USACE	95	5YR	551.00	504.66	506.90	506.30	507.02	0.007012	3.95	282.80	500.73	0.49
USACE	95	10YR	838.00	504.66	507.32	506.57	507.47	0.007002	4.48	375.23	524.76	0.51
USACE	95	25YR	1359.00	504.66	507.95	507.01	508.14	0.007002	5.22	514.29	540.61	0.53
USACE	95	50YR	1792.00	504.66	508.39	507.27	508.62	0.007005	5.72	614.61	550.50	0.54
USACE	95	100YR	2270.00	504.66	508.84	507.52	509.10	0.007002	6.19	716.11	559.38	0.55
USACE	95	100YRPLUS	2969.00	504.66	509.44	507.86	509.75	0.007005	6.81	855.39	573.15	0.56
USACE	95	200YR	2775.00	504.66	509.28	507.76	509.57	0.007001	6.65	817.69	569.05	0.56
USACE	95	500YR	3493.00	504.66	509.87	508.08	510.21	0.006988	7.22	957.19	585.57	0.57
USACE	95	SEPT2011	1133.00	504.66	507.69	506.86	507.86	0.007011	4.93	457.01	535.04	0.52

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	16741	2YR	96.00	505.61	507.24		507.34	0.006597	3.11	46.56	55.35	0.45
USACE	16741	5YR	158.00	505.61	507.67		507.77	0.005231	3.28	71.93	62.95	0.42
USACE	16741	10YR	208.00	505.61	507.94		508.05	0.004982	3.50	89.60	69.23	0.42
USACE	16741	25YR	289.00	505.61	508.30		508.42	0.004762	3.78	116.26	78.35	0.42
USACE	16741	50YR	351.00	505.61	508.53		508.66	0.004499	3.90	134.91	80.69	0.41
USACE	16741	100YR	417.00	505.61	508.75		508.89	0.004375	4.05	152.96	83.16	0.41
USACE	16741	100YRPLUS	545.00	505.61	509.12		509.29	0.004348	4.36	184.79	88.73	0.42
USACE	16741	200YR	484.00	505.61	508.95		509.11	0.004337	4.21	169.92	85.77	0.42
USACE	16741	500YR	576.00	505.61	509.21		509.38	0.004417	4.47	192.44	91.74	0.43
USACE	16741	SEPT2011	169.00	505.61	507.72		507.83	0.005267	3.35	75.31	64.02	0.42
USACE	16583	2YR	96.00	504.10	505.81	505.67	506.08	0.009341	4.72	28.24	34.77	0.70
USACE	16583	5YR	158.00	504.10	506.04	505.99	506.49	0.013075	6.19	36.78	38.62	0.85
USACE	16583	10YR	208.00	504.10	506.23	506.22	506.76	0.014065	6.89	44.28	41.17	0.90
USACE	16583	25YR	289.00	504.10	506.50	506.48	507.14	0.014689	7.72	55.87	44.18	0.94
USACE	16583	50YR	351.00	504.10	506.68	506.68	507.40	0.015118	8.29	64.31	47.08	0.96
USACE	16583	100YR	417.00	504.10	506.90	506.90	507.67	0.014610	8.66	75.16	51.84	0.96
USACE	16583	100YRPLUS	545.00	504.10	507.27	507.27	508.08	0.013724	9.18	95.06	57.76	0.95
USACE	16583	200YR	484.00	504.10	507.10	507.10	507.90	0.014170	8.96	85.62	55.24	0.96
USACE	16583	500YR	576.00	504.10	507.35	507.35	508.18	0.013554	9.29	99.68	58.90	0.95
USACE	16583	SEPT2011	169.00	504.10	506.10	506.05	506.56	0.012671	6.25	39.31	39.82	0.84
USACE	16323	2YR	96.00	502.18	503.32	503.16	503.43	0.010917	3.81	39.45	67.14	0.71
USACE	16323	5YR	158.00	502.18	503.62		503.75	0.008264	4.02	61.07	73.51	0.64
USACE	16323	10YR	208.00	502.18	503.79		503.94	0.008192	4.38	73.84	75.83	0.66
USACE	16323	25YR	289.00	502.18	504.02		504.21	0.008380	4.90	91.81	80.12	0.68
USACE	16323	50YR	351.00	502.18	504.20		504.40	0.008070	5.16	106.14	82.46	0.68
USACE	16323	100YR	417.00	502.18	504.38		504.60	0.007664	5.36	121.40	84.58	0.67
USACE	16323	100YRPLUS	545.00	502.18	504.69		504.94	0.007392	5.79	148.40	91.41	0.68
USACE	16323	200YR	484.00	502.18	504.54		504.78	0.007690	5.65	134.85	89.15	0.68
USACE	16323	500YR	576.00	502.18	504.75		505.01	0.007381	5.90	154.26	92.38	0.68
USACE	16323	SEPT2011	169.00	502.18	503.64		503.78	0.008723	4.19	62.76	73.79	0.66
USACE	16059	2YR	96.00	498.73	500.56	500.39	500.87	0.008758	4.66	26.35	39.70	0.68
USACE	16059	5YR	158.00	498.73	500.86	500.79	501.29	0.010440	5.76	40.21	55.35	0.77
USACE	16059	10YR	208.00	498.73	501.07	501.07	501.53	0.010149	6.13	53.08	63.33	0.77
USACE	16059	25YR	289.00	498.73	501.36	501.34	501.83	0.009630	6.54	72.55	70.89	0.77
USACE	16059	50YR	351.00	498.73	501.52	501.49	502.03	0.010008	6.98	83.89	74.14	0.79
USACE	16059	100YR	417.00	498.73	501.67	501.60	502.23	0.010514	7.44	95.37	79.44	0.82
USACE	16059	100YRPLUS	545.00	498.73	501.93	501.92	502.56	0.010959	8.11	118.11	91.77	0.85
USACE	16059	200YR	484.00	498.73	501.83	501.73	502.41	0.010364	7.70	109.29	88.30	0.82
USACE	16059	500YR	576.00	498.73	501.99	501.99	502.63	0.010992	8.23	123.51	93.26	0.85
USACE	16059	SEPT2011	169.00	498.73	500.93	500.89	501.35	0.009674	5.70	44.55	58.01	0.74
USACE	15868	2YR	96.00	497.20	498.70	498.70	498.91	0.011659	4.13	36.07	90.57	0.71
USACE	15868	5YR	158.00	497.20	498.91	498.91	499.13	0.011409	4.61	57.15	108.26	0.72
USACE	15868	10YR	208.00	497.20	499.01	499.01	499.26	0.012827	5.13	67.44	109.47	0.77
USACE	15868	25YR	289.00	497.20	499.12	499.12	499.45	0.015918	6.01	79.36	111.28	0.87
USACE	15868	50YR	351.00	497.20	499.22	499.22	499.58	0.016007	6.31	91.49	114.94	0.89
USACE	15868	100YR	417.00	497.20	499.32	499.32	499.71	0.015990	6.58	103.22	116.25	0.89
USACE	15868	100YRPLUS	545.00	497.20	499.49	499.46	499.93	0.016665	7.14	122.29	118.37	0.93
USACE	15868	200YR	484.00	497.20	499.39	499.39	499.82	0.017433	7.05	111.03	117.12	0.94
USACE	15868	500YR	576.00	497.20	499.54	499.51	499.98	0.016178	7.16	128.26	119.02	0.92
USACE	15868	SEPT2011	169.00	497.20	498.92	498.92	499.16	0.012967	4.92	57.30	108.28	0.77
USACE	15752	2YR	96.00	496.73	497.76		497.79	0.003592	1.93	71.13	113.63	0.37
USACE	15752	5YR	158.00	496.73	497.92		497.97	0.004642	2.48	89.88	116.34	0.44
USACE	15752	10YR	208.00	496.73	498.08		498.14	0.004532	2.69	108.01	119.32	0.44
USACE	15752	25YR	289.00	496.73	498.31		498.38	0.004249	2.95	136.21	123.45	0.44
USACE	15752	50YR	351.00	496.73	498.46		498.54	0.004200	3.14	154.74	125.54	0.45
USACE	15752	100YR	417.00	496.73	498.60		498.70	0.004165	3.32	172.99	127.07	0.45
USACE	15752	100YRPLUS	545.00	496.73	498.85		498.97	0.004167	3.65	204.94	129.65	0.46
USACE	15752	200YR	484.00	496.73	498.73		498.84	0.004210	3.51	189.46	128.43	0.46
USACE	15752	500YR	576.00	496.73	498.91		499.03	0.004152	3.71	212.50	130.22	0.47
USACE	15752	SEPT2011	169.00	496.73	497.96		498.01	0.004567	2.52	94.30	117.04	0.44
USACE	15540	2YR	96.00	494.00	495.93	495.93	496.38	0.016483	5.45	19.57	33.21	0.86
USACE	15540	5YR	158.00	494.00	496.40	496.40	496.69	0.008741	4.92	57.99	119.66	0.66
USACE	15540	10YR	208.00	494.00	496.55	496.55	496.85	0.009198	5.32	74.15	126.35	0.68
USACE	15540	25YR	289.00	494.00	496.71	496.71	497.06	0.010559	6.03	93.02	131.77	0.74
USACE	15540	50YR	351.00	494.00	496.82	496.82	497.20	0.011097	6.41	107.06	137.63	0.77
USACE	15540	100YR	417.00	494.00	496.93	496.93	497.34	0.011841	6.83	119.61	141.46	0.80
USACE	15540	100YRPLUS	545.00	494.00	497.11	497.11	497.57	0.012805	7.47	142.47	146.85	0.84
USACE	15540	200YR	484.00	494.00	497.04	497.04	497.46	0.012052	7.11	133.35	145.59	0.81
USACE	15540	500YR	576.00	494.00	497.15	497.14	497.62	0.013023	7.62	147.48	147.55	0.85
USACE	15540	SEPT2011	169.00	494.00	496.43	496.43	496.72	0.008960	5.04	61.40	121.36	0.67
USACE	15500	2YR	96.00	492.61	495.58	494.78	495.78	0.004543	3.96	43.55	108.34	0.45
USACE	15500	5YR	158.00	492.61	495.76	495.76	496.07	0.007147	5.22	60.84	116.17	0.57
USACE	15500	10YR	208.00	492.61	495.92	495.92	496.25	0.007944	5.72	75.81	118.99	0.61
USACE	15500	25YR	289.00	492.61	496.10	496.10	496.48	0.009382	6.49	94.12	122.08	0.67
USACE	15500	50YR	351.00	492.61	496.23	496.23	496.64	0.010050	6.91	107.31	124.36	0.70
USACE	15500	100YR	417.00	492.61	496.33	496.33	496.78	0.011094	7.43	118.25	126.39	0.74
USACE	15500	100YRPLUS	545.00	492.61	496.53	496.53	497.04	0.012488	8.20	138.72	130.34	0.79

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	15500	200YR	484.00	492.61	496.44	496.44	496.92	0.011866	7.85	129.24	128.41	0.77
USACE	15500	500YR	576.00	492.61	496.57	496.57	497.10	0.012966	8.42	142.59	131.14	0.81
USACE	15500	SEPT2011	169.00	492.61	495.80	495.80	496.11	0.007334	5.34	64.39	116.87	0.58
USACE	15482 Private Drive		Culvert									
USACE	15465	2YR	96.00	492.66	494.97	494.97	495.20	0.008039	4.57	42.71	94.19	0.59
USACE	15465	5YR	158.00	492.66	495.17	495.17	495.44	0.009676	5.37	62.90	105.20	0.66
USACE	15465	10YR	208.00	492.66	495.32	495.32	495.59	0.009978	5.72	80.24	122.96	0.68
USACE	15465	25YR	289.00	492.66	495.47	495.47	495.76	0.010966	6.25	99.25	134.94	0.72
USACE	15465	50YR	351.00	492.66	495.55	495.55	495.87	0.011932	6.68	110.93	139.06	0.75
USACE	15465	100YR	417.00	492.66	495.64		495.97	0.012725	7.06	122.68	142.83	0.78
USACE	15465	100YRPLUS	545.00	492.66	495.84		496.17	0.011692	7.12	152.87	152.29	0.76
USACE	15465	200YR	484.00	492.66	495.74		496.07	0.012409	7.16	137.56	147.47	0.78
USACE	15465	500YR	576.00	492.66	495.90		496.21	0.011214	7.07	161.35	154.85	0.75
USACE	15465	SEPT2011	169.00	492.66	495.21	495.21	495.47	0.009675	5.43	66.74	109.05	0.66
USACE	15285	2YR	96.00	491.75	493.52		493.62	0.004728	2.92	46.74	52.11	0.46
USACE	15285	5YR	158.00	491.75	493.89		494.00	0.004266	3.30	82.84	131.04	0.46
USACE	15285	10YR	208.00	491.75	494.07		494.20	0.004302	3.56	108.07	144.62	0.47
USACE	15285	25YR	289.00	491.75	494.37		494.48	0.003706	3.66	153.07	160.47	0.45
USACE	15285	50YR	351.00	491.75	494.58		494.70	0.003554	3.82	190.49	188.28	0.45
USACE	15285	100YR	417.00	491.75	494.78		494.88	0.003083	3.76	228.56	194.60	0.42
USACE	15285	100YRPLUS	545.00	491.75	495.12		495.21	0.002588	3.75	295.56	205.31	0.39
USACE	15285	200YR	484.00	491.75	494.96		495.06	0.002759	3.74	264.70	198.79	0.40
USACE	15285	500YR	576.00	491.75	495.20		495.30	0.002489	3.76	314.21	220.50	0.39
USACE	15285	SEPT2011	169.00	491.75	493.95		494.06	0.004050	3.29	90.81	134.45	0.45
USACE	15098	2YR	267.00	490.06	492.33	492.13	492.48	0.006787	4.60	127.80	204.79	0.59
USACE	15098	5YR	444.00	490.06	492.63	492.43	492.81	0.007555	5.36	180.23	229.56	0.64
USACE	15098	10YR	587.00	490.06	492.87	492.56	493.05	0.007078	5.56	224.33	241.67	0.63
USACE	15098	25YR	821.00	490.06	493.17	492.76	493.38	0.007157	6.05	282.78	266.34	0.65
USACE	15098	50YR	1004.00	490.06	493.38	492.89	493.61	0.007166	6.36	325.22	277.32	0.66
USACE	15098	100YR	1198.00	490.06	493.56	493.03	493.81	0.007476	6.76	362.57	291.42	0.68
USACE	15098	100YRPLUS	1567.00	490.06	493.86	493.26	494.16	0.008018	7.44	427.54	306.06	0.71
USACE	15098	200YR	1397.00	490.06	493.74	493.15	494.01	0.007635	7.09	401.28	300.62	0.69
USACE	15098	500YR	1669.00	490.06	493.92	493.33	494.24	0.008266	7.65	441.68	307.98	0.72
USACE	15098	SEPT2011	497.00	490.06	492.72	492.49	492.90	0.007379	5.44	196.76	233.02	0.64
USACE	14865	2YR	267.00	487.61	489.86	489.86	490.29	0.013603	6.70	77.37	92.68	0.85
USACE	14865	5YR	444.00	487.61	490.39	490.39	490.77	0.010404	6.89	146.00	189.53	0.77
USACE	14865	10YR	587.00	487.61	490.56	490.56	490.98	0.011557	7.60	180.26	213.27	0.82
USACE	14865	25YR	821.00	487.61	490.84	490.84	491.27	0.011846	8.22	242.54	237.50	0.85
USACE	14865	50YR	1004.00	487.61	490.98	490.98	491.45	0.012548	8.74	278.25	246.46	0.88
USACE	14865	100YR	1198.00	487.61	491.15	491.12	491.62	0.012325	8.98	321.20	255.14	0.88
USACE	14865	100YRPLUS	1567.00	487.61	491.47		491.94	0.011724	9.33	407.63	280.25	0.87
USACE	14865	200YR	1397.00	487.61	491.34		491.81	0.012192	9.26	369.28	274.82	0.88
USACE	14865	500YR	1669.00	487.61	491.56		492.02	0.011392	9.34	431.11	283.28	0.86
USACE	14865	SEPT2011	497.00	487.61	490.46	490.46	490.85	0.010781	7.15	159.62	198.26	0.79
USACE	14660	2YR	267.00	485.54	488.21	488.07	488.42	0.005728	4.96	120.36	137.43	0.57
USACE	14660	5YR	444.00	485.54	488.60	488.34	488.83	0.006116	5.68	182.02	178.26	0.60
USACE	14660	10YR	587.00	485.54	488.86	488.55	489.09	0.005913	5.92	231.47	203.36	0.60
USACE	14660	25YR	821.00	485.54	489.21		489.44	0.005612	6.21	306.09	219.21	0.60
USACE	14660	50YR	1004.00	485.54	489.45		489.68	0.005509	6.44	359.50	232.47	0.60
USACE	14660	100YR	1198.00	485.54	489.62		489.88	0.005910	6.88	399.33	239.60	0.62
USACE	14660	100YRPLUS	1567.00	485.54	489.99		490.26	0.005757	7.22	490.24	253.15	0.62
USACE	14660	200YR	1397.00	485.54	489.82		490.09	0.005832	7.07	449.08	247.21	0.62
USACE	14660	500YR	1669.00	485.54	490.07		490.35	0.005812	7.35	511.94	258.17	0.63
USACE	14660	SEPT2011	497.00	485.54	488.73	488.41	488.95	0.005695	5.64	205.50	191.14	0.59
USACE	14350	2YR	267.00	483.49	485.33	485.30	485.68	0.015243	6.21	77.38	88.61	0.87
USACE	14350	5YR	444.00	483.49	485.75	485.64	486.14	0.013306	6.79	117.93	102.82	0.84
USACE	14350	10YR	587.00	483.49	486.00	485.85	486.43	0.013265	7.34	145.34	119.66	0.86
USACE	14350	25YR	821.00	483.49	486.31	486.20	486.82	0.013848	8.17	184.31	129.45	0.90
USACE	14350	50YR	1004.00	483.49	486.54	486.38	487.09	0.013920	8.65	213.46	134.97	0.91
USACE	14350	100YR	1198.00	483.49	486.89	486.56	487.40	0.011281	8.44	263.60	147.86	0.84
USACE	14350	100YRPLUS	1567.00	483.49	487.30	486.90	487.85	0.010789	8.95	326.16	157.65	0.84
USACE	14350	200YR	1397.00	483.49	487.12	486.74	487.65	0.010996	8.73	297.77	153.00	0.84
USACE	14350	500YR	1669.00	483.49	487.42	486.99	487.97	0.010492	9.02	345.15	160.89	0.83
USACE	14350	SEPT2011	497.00	483.49	485.80	485.72	486.24	0.014901	7.30	122.78	103.73	0.90
USACE	14056	2YR	267.00	479.83	481.49	481.44	481.83	0.011397	5.18	75.31	126.34	0.75
USACE	14056	5YR	444.00	479.83	481.81	481.80	482.27	0.012995	6.30	108.59	139.52	0.82
USACE	14056	10YR	587.00	479.83	482.03	482.01	482.55	0.013123	6.84	133.62	142.76	0.84
USACE	14056	25YR	821.00	479.83	482.38	482.30	482.96	0.012532	7.42	172.86	146.67	0.85
USACE	14056	50YR	1004.00	479.83	482.61	482.49	483.24	0.012364	7.85	199.71	149.09	0.85
USACE	14056	100YR	1198.00	479.83	482.69	482.69	483.50	0.015621	8.98	208.08	149.83	0.96
USACE	14056	100YRPLUS	1567.00	479.83	483.02	483.02	483.97	0.016184	9.88	247.07	153.84	1.00
USACE	14056	200YR	1397.00	479.83	482.87	482.87	483.76	0.015948	9.48	229.60	152.08	0.99
USACE	14056	500YR	1669.00	479.83	483.09	483.09	484.10	0.016678	10.18	255.33	154.69	1.02
USACE	14056	SEPT2011	497.00	479.83	481.94	481.88	482.38	0.011669	6.25	123.33	141.49	0.79
USACE	13766	2YR	267.00	476.29	478.41	478.41	478.80	0.009561	5.64	72.40	104.25	0.74

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	13766	5YR	444.00	476.29	478.82	478.82	479.20	0.008655	6.14	126.57	152.25	0.73
USACE	13766	10YR	587.00	476.29	479.02	479.02	479.43	0.008818	6.58	161.71	175.42	0.75
USACE	13766	25YR	821.00	476.29	479.25	479.25	479.73	0.009842	7.38	201.80	179.99	0.80
USACE	13766	50YR	1004.00	476.29	479.40	479.40	479.93	0.010426	7.88	229.58	182.36	0.83
USACE	13766	100YR	1198.00	476.29	479.86		480.21	0.006133	6.69	314.89	188.85	0.65
USACE	13766	100YRPLUS	1567.00	476.29	480.44		480.74	0.004358	6.30	427.34	198.37	0.57
USACE	13766	200YR	1397.00	476.29	480.20		480.51	0.004901	6.39	379.21	194.39	0.59
USACE	13766	500YR	1669.00	476.29	480.59		480.88	0.004064	6.24	457.07	200.83	0.55
USACE	13766	SEPT2011	497.00	476.29	478.85	478.85	479.29	0.009786	6.60	132.44	162.07	0.78
USACE	13580	2YR	267.00	472.60	475.18	475.02	475.66	0.009355	6.07	56.17	42.40	0.74
USACE	13580	5YR	444.00	472.60	477.78	475.55	477.84	0.000583	2.60	310.88	154.49	0.21
USACE	13580	10YR	587.00	472.60	478.68	475.91	478.72	0.000359	2.29	450.29	187.27	0.17
USACE	13580	25YR	821.00	472.60	479.24	476.72	479.30	0.000410	2.61	540.72	213.54	0.19
USACE	13580	50YR	1004.00	472.60	479.45	477.04	479.52	0.000512	2.99	574.51	224.57	0.21
USACE	13580	100YR	1198.00	472.60	479.80	477.30	479.88	0.000585	3.31	631.49	270.12	0.23
USACE	13580	100YRPLUS	1567.00	472.60	480.31	477.66	480.41	0.000706	3.82	726.24	302.94	0.25
USACE	13580	200YR	1397.00	472.60	480.08	477.50	480.18	0.000659	3.61	683.78	293.92	0.24
USACE	13580	500YR	1669.00	472.60	480.45	477.76	480.56	0.000728	3.93	753.25	310.21	0.26
USACE	13580	SEPT2011	497.00	472.60	478.31	475.68	478.36	0.000380	2.26	393.59	166.62	0.17
USACE	13492	2YR	267.00	469.42	474.37	473.50	474.96	0.006274	6.35	45.47	45.76	0.58
USACE	13492	5YR	444.00	469.42	477.23	474.48	477.64	0.002105	5.38	89.23	159.90	0.37
USACE	13492	10YR	587.00	469.42	478.66	475.12	478.69	0.000227	2.01	493.24	329.41	0.13
USACE	13492	25YR	821.00	469.42	479.22	476.05	479.26	0.000293	2.40	569.45	377.85	0.14
USACE	13492	50YR	1004.00	469.42	479.42	476.70	479.47	0.000384	2.78	597.31	381.68	0.17
USACE	13492	100YR	1198.00	469.42	479.76	477.34	479.82	0.000443	3.07	645.76	391.06	0.18
USACE	13492	100YRPLUS	1567.00	469.42	480.26	478.22	480.36	0.000560	3.57	721.54	403.30	0.20
USACE	13492	200YR	1397.00	469.42	480.04	477.96	480.11	0.000508	3.35	687.92	398.28	0.19
USACE	13492	500YR	1669.00	469.42	480.39	478.22	480.50	0.000587	3.69	742.92	407.13	0.21
USACE	13492	SEPT2011	497.00	469.42	478.30	474.74	478.32	0.000217	1.91	445.76	260.65	0.12
USACE	13462 Private Drive		Bridge									
USACE	13439	2YR	267.00	469.31	473.86	472.66	474.27	0.005793	5.15	52.50	24.44	0.56
USACE	13439	5YR	444.00	469.31	474.43	473.78	475.16	0.008041	6.93	67.57	28.77	0.69
USACE	13439	10YR	587.00	469.31	474.72	474.37	475.76	0.010207	8.28	76.43	31.65	0.79
USACE	13439	25YR	821.00	469.31	475.11	475.11	476.68	0.013550	10.24	89.68	37.71	0.92
USACE	13439	50YR	1004.00	469.31	476.09	476.09	477.21	0.007850	9.07	151.61	83.94	0.73
USACE	13439	100YR	1198.00	469.31	476.49	476.49	477.62	0.007563	9.38	187.66	99.80	0.72
USACE	13439	100YRPLUS	1567.00	469.31	477.02	477.02	478.23	0.007736	10.12	246.15	121.58	0.74
USACE	13439	200YR	1397.00	469.31	476.78	476.78	477.97	0.007691	9.82	218.86	111.43	0.74
USACE	13439	500YR	1669.00	469.31	477.22	477.22	478.38	0.007296	10.06	271.51	131.81	0.73
USACE	13439	SEPT2011	497.00	469.31	474.55	474.02	475.39	0.008802	7.43	71.12	29.70	0.72
USACE	13345	2YR	267.00	469.31	473.53		473.81	0.003189	4.54	95.54	85.99	0.44
USACE	13345	5YR	444.00	469.31	474.08		474.47	0.004065	5.68	148.99	107.86	0.51
USACE	13345	10YR	587.00	469.31	474.42		474.86	0.004440	6.28	187.08	116.31	0.54
USACE	13345	25YR	821.00	469.31	474.88		475.37	0.004791	6.99	243.96	127.71	0.57
USACE	13345	50YR	1004.00	469.31	475.19		475.71	0.005001	7.45	283.93	134.61	0.59
USACE	13345	100YR	1198.00	469.31	475.48		476.04	0.005121	7.84	325.08	141.50	0.60
USACE	13345	100YRPLUS	1567.00	469.31	475.98		476.58	0.005308	8.47	398.66	155.98	0.62
USACE	13345	200YR	1397.00	469.31	475.76		476.34	0.005228	8.19	364.96	148.24	0.61
USACE	13345	500YR	1669.00	469.31	476.11		476.73	0.005388	8.66	419.72	165.84	0.63
USACE	13345	SEPT2011	497.00	469.31	474.21		474.62	0.004212	5.91	163.77	111.44	0.52
USACE	13138	2YR	267.00	469.31	472.90		473.07	0.003707	3.57	105.59	114.60	0.37
USACE	13138	5YR	444.00	469.31	473.39		473.58	0.003959	4.10	163.23	121.77	0.39
USACE	13138	10YR	587.00	469.31	473.72		473.92	0.003925	4.34	205.13	128.07	0.40
USACE	13138	25YR	821.00	469.31	474.18		474.39	0.003945	4.70	265.69	138.59	0.41
USACE	13138	50YR	1004.00	469.31	474.48		474.71	0.003947	4.93	308.06	143.49	0.41
USACE	13138	100YR	1198.00	469.31	474.76		475.02	0.003989	5.17	350.32	150.13	0.42
USACE	13138	100YRPLUS	1567.00	469.31	475.25		475.53	0.004068	5.57	425.38	161.94	0.43
USACE	13138	200YR	1397.00	469.31	475.04		475.30	0.004002	5.37	391.98	155.95	0.42
USACE	13138	500YR	1669.00	469.31	475.37		475.67	0.004091	5.67	446.39	166.47	0.43
USACE	13138	SEPT2011	497.00	469.31	473.52		473.71	0.003975	4.21	179.04	124.99	0.40
USACE	12945	2YR	267.00	469.31	472.05		472.20	0.005623	3.83	108.35	105.01	0.45
USACE	12945	5YR	444.00	469.31	472.58		472.74	0.004802	4.07	167.79	117.38	0.43
USACE	12945	10YR	587.00	469.31	472.93		473.10	0.004589	4.30	210.96	129.06	0.43
USACE	12945	25YR	821.00	469.31	473.40		473.59	0.004408	4.62	274.57	142.98	0.43
USACE	12945	50YR	1004.00	469.31	473.71		473.91	0.004306	4.82	320.23	150.83	0.43
USACE	12945	100YR	1198.00	469.31	474.01		474.22	0.004169	4.98	366.47	156.65	0.43
USACE	12945	100YRPLUS	1567.00	469.31	474.50		474.74	0.004099	5.31	444.87	166.03	0.43
USACE	12945	200YR	1397.00	469.31	474.29		474.52	0.004112	5.16	410.74	162.73	0.43
USACE	12945	500YR	1669.00	469.31	474.63		474.88	0.004027	5.36	467.44	168.25	0.43
USACE	12945	SEPT2011	497.00	469.31	472.71		472.87	0.004693	4.14	183.49	119.95	0.42
USACE	12700	2YR	267.00	467.96	470.60		470.78	0.005949	4.10	94.82	72.72	0.46
USACE	12700	5YR	444.00	467.96	471.08		471.32	0.006955	4.99	131.56	84.09	0.52
USACE	12700	10YR	587.00	467.96	471.41		471.69	0.007151	5.44	161.08	92.66	0.53
USACE	12700	25YR	821.00	467.96	471.91		472.23	0.006901	5.89	211.31	106.52	0.54
USACE	12700	50YR	1004.00	467.96	472.21		472.55	0.007061	6.27	243.21	113.04	0.55
USACE	12700	100YR	1198.00	467.96	472.48		472.87	0.007313	6.67	275.90	122.06	0.57

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	12700	100YRPLUS	1567.00	467.96	472.93		473.37	0.007555	7.23	332.30	132.02	0.58
USACE	12700	200YR	1397.00	467.96	472.74		473.15	0.007473	7.00	307.52	128.83	0.58
USACE	12700	500YR	1669.00	467.96	473.04		473.50	0.007782	7.46	347.62	137.99	0.60
USACE	12700	SEPT2011	497.00	467.96	471.21		471.46	0.007051	5.18	142.69	87.51	0.52
USACE	12384	2YR	267.00	466.45	469.04		469.20	0.004257	4.07	124.02	112.52	0.48
USACE	12384	5YR	444.00	466.45	469.63		469.79	0.003498	4.32	194.36	127.50	0.46
USACE	12384	10YR	587.00	466.45	469.96		470.13	0.003489	4.65	237.72	135.31	0.46
USACE	12384	25YR	821.00	466.45	470.42		470.63	0.003764	5.29	307.22	168.60	0.49
USACE	12384	50YR	1004.00	466.45	470.70		470.92	0.003793	5.59	356.28	179.95	0.50
USACE	12384	100YR	1198.00	466.45	470.95		471.19	0.003856	5.88	402.70	188.10	0.51
USACE	12384	100YRPLUS	1567.00	466.45	471.39		471.66	0.003855	6.29	489.07	202.07	0.52
USACE	12384	200YR	1397.00	466.45	471.20		471.46	0.003866	6.12	450.62	197.21	0.52
USACE	12384	500YR	1669.00	466.45	471.50		471.78	0.003852	6.39	511.28	204.65	0.52
USACE	12384	SEPT2011	497.00	466.45	469.76		469.92	0.003498	4.45	210.63	130.13	0.46
USACE	12029	2YR	267.00	463.67	466.59		467.02	0.009449	5.33	54.80	33.50	0.61
USACE	12029	5YR	444.00	463.67	467.18	467.13	467.75	0.010469	6.49	92.77	92.36	0.66
USACE	12029	10YR	587.00	463.67	467.47	467.47	468.08	0.010716	6.99	122.33	105.10	0.68
USACE	12029	25YR	821.00	463.67	467.93	467.93	468.53	0.010016	7.37	178.30	140.67	0.67
USACE	12029	50YR	1004.00	463.67	468.13	468.13	468.78	0.010654	7.87	206.97	147.54	0.70
USACE	12029	100YR	1198.00	463.67	468.33	468.33	469.00	0.010892	8.22	236.66	151.31	0.71
USACE	12029	100YRPLUS	1567.00	463.67	468.61	468.61	469.38	0.012084	9.04	279.53	155.52	0.76
USACE	12029	200YR	1397.00	463.67	468.48	468.48	469.21	0.011582	8.69	260.35	153.67	0.74
USACE	12029	500YR	1669.00	463.67	468.68	468.68	469.48	0.012371	9.25	290.50	156.55	0.77
USACE	12029	SEPT2011	497.00	463.67	467.30	467.30	467.89	0.010515	6.68	104.59	98.95	0.67
USACE	11747	2YR	267.00	462.82	464.83		464.96	0.005327	3.36	120.11	182.58	0.44
USACE	11747	5YR	444.00	462.82	465.06		465.24	0.006952	4.15	162.78	188.25	0.51
USACE	11747	10YR	587.00	462.82	465.27		465.46	0.006701	4.35	202.63	191.56	0.51
USACE	11747	25YR	821.00	462.82	465.63		465.81	0.005592	4.38	271.82	195.06	0.47
USACE	11747	50YR	1004.00	462.82	465.92		466.10	0.004657	4.29	329.96	197.28	0.44
USACE	11747	100YR	1198.00	462.82	466.24		466.41	0.003863	4.18	393.16	199.26	0.41
USACE	11747	100YRPLUS	1567.00	462.82	466.82		466.98	0.002976	4.09	508.91	204.25	0.37
USACE	11747	200YR	1397.00	462.82	466.56		466.73	0.003285	4.10	457.07	201.23	0.38
USACE	11747	500YR	1669.00	462.82	466.99		467.15	0.002777	4.07	544.18	208.09	0.36
USACE	11747	SEPT2011	497.00	462.82	465.12		465.31	0.007260	4.33	174.38	189.53	0.52
USACE	11524	2YR	267.00	461.51	463.54		463.64	0.006746	3.48	124.88	167.10	0.48
USACE	11524	5YR	444.00	461.51	464.06		464.14	0.003611	3.07	216.00	179.25	0.37
USACE	11524	10YR	587.00	461.51	464.46		464.53	0.002700	2.97	288.21	192.05	0.33
USACE	11524	25YR	821.00	461.51	465.02		465.09	0.001977	2.91	399.36	204.88	0.29
USACE	11524	50YR	1004.00	461.51	465.41		465.48	0.001711	2.93	481.31	215.80	0.28
USACE	11524	100YR	1198.00	461.51	465.80		465.88	0.001510	2.95	568.99	228.41	0.26
USACE	11524	100YRPLUS	1567.00	461.51	466.47		466.55	0.001254	2.99	727.10	244.13	0.25
USACE	11524	200YR	1397.00	461.51	466.19		466.26	0.001338	2.96	657.93	237.50	0.25
USACE	11524	500YR	1669.00	461.51	466.67		466.75	0.001189	3.00	775.11	250.18	0.24
USACE	11524	SEPT2011	497.00	461.51	464.25		464.32	0.002866	2.89	250.38	182.14	0.33
USACE	11344	2YR	267.00	460.80	463.36	462.06	463.38	0.000541	1.55	281.91	194.95	0.18
USACE	11344	5YR	444.00	460.80	463.89	462.35	463.91	0.000598	1.87	389.01	215.96	0.20
USACE	11344	10YR	587.00	460.80	464.30	462.52	464.33	0.000560	1.99	482.68	249.39	0.20
USACE	11344	25YR	821.00	460.80	464.89	462.74	464.92	0.000525	2.15	623.04	300.75	0.20
USACE	11344	50YR	1004.00	460.80	465.29	462.88	465.32	0.000497	2.24	724.51	318.08	0.19
USACE	11344	100YR	1198.00	460.80	465.69	463.03	465.73	0.000476	2.33	829.32	334.77	0.19
USACE	11344	100YRPLUS	1567.00	460.80	466.38	463.29	466.42	0.000452	2.49	1014.61	367.76	0.19
USACE	11344	200YR	1397.00	460.80	466.08	463.17	466.12	0.000460	2.42	933.56	355.10	0.19
USACE	11344	500YR	1669.00	460.80	466.57	463.35	466.62	0.000433	2.50	1070.29	373.26	0.19
USACE	11344	SEPT2011	497.00	460.80	464.10	462.41	464.12	0.000544	1.87	435.79	234.17	0.19
USACE	11098	2YR	323.00	456.94	463.21	460.35	463.26	0.000434	2.43	235.64	167.79	0.18
USACE	11098	5YR	554.00	456.94	463.63	461.46	463.73	0.000803	3.47	278.48	191.72	0.25
USACE	11098	10YR	737.00	456.94	464.00	462.21	464.14	0.000984	3.99	316.34	223.79	0.28
USACE	11098	25YR	1040.00	456.94	464.51	462.90	464.70	0.001244	4.73	368.61	251.41	0.32
USACE	11098	50YR	1276.00	456.94	464.87	463.14	465.09	0.001408	5.20	404.98	278.90	0.34
USACE	11098	100YR	1534.00	456.94	465.22	463.41	465.48	0.001567	5.66	440.97	288.86	0.36
USACE	11098	100YRPLUS	2006.00	456.94	465.82	463.81	466.14	0.001793	6.37	501.75	297.22	0.39
USACE	11098	200YR	1796.00	456.94	465.56	463.64	465.86	0.001697	6.07	475.75	293.51	0.38
USACE	11098	500YR	2156.00	456.94	465.99	463.94	466.34	0.001858	6.58	519.45	299.82	0.40
USACE	11098	SEPT2011	644.00	456.94	463.82	461.83	463.94	0.000893	3.73	298.11	205.12	0.26
USACE	11080 Private Drive		Bridge									
USACE	11055	2YR	323.00	456.96	460.81		460.88	0.000538	2.07	161.87	54.34	0.19
USACE	11055	5YR	554.00	456.96	461.12		461.28	0.001189	3.25	179.06	59.80	0.29
USACE	11055	10YR	737.00	456.96	461.30		461.56	0.001782	4.11	191.43	83.71	0.36
USACE	11055	25YR	1040.00	456.96	461.50		461.95	0.003006	5.50	208.63	97.60	0.47
USACE	11055	50YR	1276.00	456.96	461.70		462.30	0.003763	6.35	229.21	105.10	0.53
USACE	11055	100YR	1534.00	456.96	461.89		462.66	0.004574	7.21	250.00	109.80	0.59
USACE	11055	100YRPLUS	2006.00	456.96	462.18	461.66	463.27	0.006112	8.67	282.46	119.66	0.69
USACE	11055	200YR	1796.00	456.96	462.06	461.06	463.00	0.005400	8.02	268.69	112.67	0.65
USACE	11055	500YR	2156.00	456.96	462.26	461.94	463.45	0.006602	9.11	292.01	122.50	0.72
USACE	11055	SEPT2011	644.00	456.96	461.22		461.43	0.001463	3.67	185.40	62.34	0.33

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	10978	2YR	323.00	456.96	460.43	460.43	460.71	0.006070	5.43	124.29	190.78	0.59
USACE	10978	5YR	554.00	456.96	460.70	460.70	461.04	0.007527	6.47	177.75	196.44	0.67
USACE	10978	10YR	737.00	456.96	460.83	460.83	461.25	0.009270	7.39	203.90	198.61	0.75
USACE	10978	25YR	1040.00	456.96	461.17		461.56	0.008295	7.50	271.95	204.28	0.72
USACE	10978	50YR	1276.00	456.96	461.41		461.79	0.007788	7.60	320.61	210.18	0.71
USACE	10978	100YR	1534.00	456.96	461.64		462.03	0.007430	7.74	370.76	220.05	0.70
USACE	10978	100YRPLUS	2006.00	456.96	462.01		462.43	0.007043	8.02	454.93	231.93	0.69
USACE	10978	200YR	1796.00	456.96	461.85		462.26	0.007205	7.90	418.05	227.04	0.69
USACE	10978	500YR	2156.00	456.96	462.13		462.55	0.006902	8.08	481.47	234.97	0.68
USACE	10978	SEPT2011	644.00	456.96	460.76	460.76	461.15	0.008679	7.03	188.88	197.37	0.72
USACE	10776	2YR	323.00	456.79	459.18		459.32	0.003916	4.02	149.50	174.95	0.49
USACE	10776	5YR	554.00	456.79	459.60		459.75	0.003739	4.43	227.67	190.87	0.49
USACE	10776	10YR	737.00	456.79	459.82		460.00	0.004075	4.89	269.74	195.48	0.52
USACE	10776	25YR	1040.00	456.79	460.15		460.36	0.004343	5.44	334.46	202.24	0.55
USACE	10776	50YR	1276.00	456.79	460.37		460.61	0.004504	5.80	380.26	208.70	0.56
USACE	10776	100YR	1534.00	456.79	460.61		460.87	0.004536	6.10	430.67	214.95	0.57
USACE	10776	100YRPLUS	2006.00	456.79	461.01		461.31	0.004496	6.52	519.20	225.07	0.58
USACE	10776	200YR	1796.00	456.79	460.83		461.12	0.004524	6.35	480.24	220.46	0.58
USACE	10776	500YR	2156.00	456.79	461.13		461.44	0.004469	6.63	546.85	229.28	0.58
USACE	10776	SEPT2011	644.00	456.79	459.72		459.88	0.003876	4.65	249.89	193.39	0.50
USACE	10490	2YR	323.00	455.16	457.37	457.37	457.65	0.010121	5.60	105.73	150.58	0.75
USACE	10490	5YR	554.00	455.16	457.62	457.62	458.00	0.012753	6.88	143.36	151.64	0.86
USACE	10490	10YR	737.00	455.16	457.88		458.25	0.010921	6.92	183.38	152.71	0.82
USACE	10490	25YR	1040.00	455.16	458.25		458.64	0.009555	7.17	240.15	154.16	0.78
USACE	10490	50YR	1276.00	455.16	458.52		458.93	0.008783	7.34	281.49	155.20	0.76
USACE	10490	100YR	1534.00	455.16	458.78		459.22	0.008236	7.54	323.23	156.30	0.75
USACE	10490	100YRPLUS	2006.00	455.16	459.21		459.71	0.007743	7.96	391.00	158.17	0.74
USACE	10490	200YR	1796.00	455.16	459.03		459.50	0.007919	7.77	361.87	157.37	0.74
USACE	10490	500YR	2156.00	455.16	459.34		459.85	0.007661	8.10	410.71	158.71	0.74
USACE	10490	SEPT2011	644.00	455.16	457.74		458.13	0.012003	6.95	162.27	152.17	0.85
USACE	10300	2YR	323.00	453.32	455.60	455.42	455.85	0.007953	5.44	101.56	105.31	0.68
USACE	10300	5YR	554.00	453.32	456.29		456.50	0.005025	5.29	180.44	123.85	0.57
USACE	10300	10YR	737.00	453.32	456.67		456.90	0.004689	5.59	230.98	139.08	0.57
USACE	10300	25YR	1040.00	453.32	457.20		457.44	0.004168	5.86	307.16	150.50	0.55
USACE	10300	50YR	1276.00	453.32	457.48		457.75	0.004270	6.24	349.99	154.35	0.56
USACE	10300	100YR	1534.00	453.32	457.73		458.04	0.004541	6.71	388.46	157.86	0.58
USACE	10300	100YRPLUS	2006.00	453.32	458.12		458.51	0.004906	7.42	452.47	163.40	0.62
USACE	10300	200YR	1796.00	453.32	457.96		458.31	0.004708	7.09	426.37	161.22	0.60
USACE	10300	500YR	2156.00	453.32	458.23		458.64	0.005040	7.64	470.36	164.88	0.63
USACE	10300	SEPT2011	644.00	453.32	456.48		456.70	0.004777	5.41	205.27	130.05	0.56
USACE	9967	2YR	323.00	450.50	453.94		454.25	0.003764	4.94	88.54	70.48	0.50
USACE	9967	5YR	554.00	450.50	454.46	453.88	454.94	0.005190	6.46	135.55	106.34	0.61
USACE	9967	10YR	737.00	450.50	454.76	454.61	455.32	0.005774	7.20	170.42	117.90	0.65
USACE	9967	25YR	1040.00	450.50	455.20	454.92	455.87	0.006502	8.21	227.52	152.75	0.70
USACE	9967	50YR	1276.00	450.50	455.52	455.40	456.18	0.006314	8.49	278.76	167.31	0.70
USACE	9967	100YR	1534.00	450.50	455.85		456.48	0.005872	8.58	334.95	175.18	0.68
USACE	9967	100YRPLUS	2006.00	450.50	456.41		456.99	0.005177	8.65	437.03	186.61	0.65
USACE	9967	200YR	1796.00	450.50	456.16		456.77	0.005538	8.68	391.77	183.82	0.67
USACE	9967	500YR	2156.00	450.50	456.57		457.14	0.004945	8.63	468.13	188.27	0.64
USACE	9967	SEPT2011	644.00	450.50	454.62	454.35	455.14	0.005513	6.85	153.45	115.01	0.63
USACE	9791	2YR	423.00	449.47	452.92	452.82	453.23	0.008575	5.52	141.58	149.80	0.57
USACE	9791	5YR	730.00	449.47	453.47	453.22	453.75	0.007533	5.81	229.92	165.49	0.55
USACE	9791	10YR	973.00	449.47	453.82		454.10	0.006906	5.94	288.89	167.92	0.54
USACE	9791	25YR	1374.00	449.47	454.33		454.62	0.006282	6.16	374.29	170.81	0.52
USACE	9791	50YR	1688.00	449.47	454.67		454.98	0.006020	6.35	433.26	172.51	0.52
USACE	9791	100YR	2029.00	449.47	455.01		455.35	0.005805	6.54	492.97	174.21	0.52
USACE	9791	100YRPLUS	2654.00	449.47	455.59		455.96	0.005554	6.88	593.94	177.93	0.51
USACE	9791	200YR	2375.00	449.47	455.34		455.69	0.005655	6.73	549.57	175.95	0.52
USACE	9791	500YR	2852.00	449.47	455.76		456.15	0.005496	6.98	624.39	179.27	0.51
USACE	9791	SEPT2011	853.00	449.47	453.65		453.93	0.007179	5.88	260.75	166.96	0.54
USACE	9583	2YR	423.00	448.00	450.98		451.33	0.009821	5.54	120.72	103.16	0.60
USACE	9583	5YR	730.00	448.00	451.55		451.95	0.009994	6.37	181.50	111.40	0.63
USACE	9583	10YR	973.00	448.00	451.89		452.35	0.010392	6.95	220.04	115.78	0.65
USACE	9583	25YR	1374.00	448.00	452.36		452.91	0.010927	7.74	276.28	122.41	0.68
USACE	9583	50YR	1688.00	448.00	452.69		453.30	0.011159	8.25	317.45	127.29	0.70
USACE	9583	100YR	2029.00	448.00	453.02		453.69	0.011244	8.69	360.16	131.62	0.71
USACE	9583	100YRPLUS	2654.00	448.00	453.57		454.34	0.011325	9.39	433.96	139.22	0.73
USACE	9583	200YR	2375.00	448.00	453.33		454.06	0.011294	9.09	401.26	135.48	0.72
USACE	9583	500YR	2852.00	448.00	453.73		454.53	0.011333	9.59	456.81	141.85	0.73
USACE	9583	SEPT2011	853.00	448.00	451.73		452.16	0.010219	6.67	201.42	113.56	0.64
USACE	9350	2YR	423.00	446.87	449.44		449.56	0.005660	3.78	179.95	148.65	0.45
USACE	9350	5YR	730.00	446.87	449.90		450.07	0.006237	4.49	249.21	152.15	0.48
USACE	9350	10YR	973.00	446.87	450.24		450.44	0.006185	4.84	300.40	153.88	0.49
USACE	9350	25YR	1374.00	446.87	450.74		450.99	0.005968	5.27	378.24	156.14	0.50
USACE	9350	50YR	1688.00	446.87	451.09		451.37	0.005890	5.57	432.72	157.70	0.50
USACE	9350	100YR	2029.00	446.87	451.44		451.75	0.005837	5.88	487.77	159.38	0.50
USACE	9350	100YRPLUS	2654.00	446.87	452.01		452.39	0.005798	6.38	580.30	162.50	0.51

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9350	200YR	2375.00	446.87	451.76		452.11	0.005807	6.16	540.19	161.06	0.51
USACE	9350	500YR	2852.00	446.87	452.18		452.58	0.005785	6.52	608.17	163.53	0.52
USACE	9350	SEPT2011	853.00	446.87	450.08		450.26	0.006193	4.67	276.11	153.17	0.49
USACE	9115	2YR	423.00	445.51	447.89		448.04	0.007520	4.08	151.71	129.88	0.51
USACE	9115	5YR	730.00	445.51	448.53		448.70	0.005617	4.24	236.10	134.38	0.46
USACE	9115	10YR	973.00	445.51	448.92		449.12	0.005239	4.49	289.76	137.29	0.45
USACE	9115	25YR	1374.00	445.51	449.43		449.67	0.005303	5.00	360.05	141.42	0.47
USACE	9115	50YR	1688.00	445.51	449.76		450.05	0.005454	5.38	407.51	144.24	0.48
USACE	9115	100YR	2029.00	445.51	450.11		450.44	0.005458	5.71	458.55	146.82	0.49
USACE	9115	100YRPLUS	2654.00	445.51	450.67		451.08	0.005528	6.24	542.09	150.20	0.50
USACE	9115	200YR	2375.00	445.51	450.44		450.81	0.005454	6.00	507.11	148.80	0.50
USACE	9115	500YR	2852.00	445.51	450.85		451.27	0.005509	6.38	568.30	151.23	0.50
USACE	9115	SEPT2011	853.00	445.51	448.73		448.91	0.005456	4.38	263.02	135.75	0.46
USACE	8914	2YR	423.00	444.11	447.50		447.54	0.001109	2.05	278.20	145.62	0.21
USACE	8914	5YR	730.00	444.11	448.09		448.15	0.001423	2.61	366.45	152.64	0.24
USACE	8914	10YR	973.00	444.11	448.46		448.54	0.001614	2.97	423.26	155.58	0.26
USACE	8914	25YR	1374.00	444.11	448.88		449.01	0.002032	3.57	490.03	158.35	0.30
USACE	8914	50YR	1688.00	444.11	449.15		449.32	0.002354	3.99	533.20	160.09	0.33
USACE	8914	100YR	2029.00	444.11	449.48		449.67	0.002545	4.34	585.12	162.15	0.34
USACE	8914	100YRPLUS	2654.00	444.11	449.98		450.24	0.002907	4.95	668.56	166.80	0.37
USACE	8914	200YR	2375.00	444.11	449.78		450.01	0.002720	4.67	634.86	164.85	0.36
USACE	8914	500YR	2852.00	444.11	450.15		450.42	0.002968	5.10	696.77	168.55	0.38
USACE	8914	SEPT2011	853.00	444.11	448.26		448.34	0.001564	2.83	393.14	154.30	0.26
USACE	8771	2YR	423.00	443.02	447.39		447.42	0.000588	2.24	352.62	163.28	0.20
USACE	8771	5YR	730.00	443.02	447.93		447.99	0.000900	3.02	446.14	180.55	0.25
USACE	8771	10YR	973.00	443.02	448.27		448.34	0.001173	3.61	508.71	198.81	0.29
USACE	8771	25YR	1374.00	443.02	448.64		448.75	0.001570	4.38	583.52	210.74	0.34
USACE	8771	50YR	1688.00	443.02	448.86		449.00	0.001926	4.99	631.94	223.34	0.38
USACE	8771	100YR	2029.00	443.02	449.15		449.32	0.002201	5.52	698.21	230.05	0.40
USACE	8771	100YRPLUS	2654.00	443.02	449.63		449.84	0.002442	6.13	810.40	238.55	0.43
USACE	8771	200YR	2375.00	443.02	449.44		449.64	0.002294	5.83	766.59	234.83	0.42
USACE	8771	500YR	2852.00	443.02	449.80		450.02	0.002446	6.25	851.19	241.73	0.43
USACE	8771	SEPT2011	853.00	443.02	448.09		448.16	0.001032	3.30	474.43	188.49	0.27
USACE	8611	2YR	423.00	441.60	447.39	444.16	447.40	0.000042	0.78	882.56	311.73	0.06
USACE	8611	5YR	730.00	441.60	447.94	444.53	447.95	0.000079	1.14	1025.19	320.53	0.08
USACE	8611	10YR	973.00	441.60	448.27	444.76	448.28	0.000110	1.39	1113.46	326.13	0.10
USACE	8611	25YR	1374.00	441.60	448.63	445.06	448.66	0.000174	1.81	1213.18	344.51	0.12
USACE	8611	50YR	1688.00	441.60	448.85	445.25	448.89	0.000230	2.13	1277.01	360.46	0.14
USACE	8611	100YR	2029.00	441.60	449.14	445.48	449.19	0.000275	2.39	1363.50	367.87	0.16
USACE	8611	100YRPLUS	2654.00	441.60	449.62	445.90	449.68	0.000349	2.81	1508.68	375.70	0.18
USACE	8611	200YR	2375.00	441.60	449.43	445.68	449.49	0.000313	2.62	1452.26	373.02	0.17
USACE	8611	500YR	2852.00	441.60	449.79	446.00	449.85	0.000363	2.92	1561.06	377.74	0.18
USACE	8611	SEPT2011	853.00	441.60	448.09	444.66	448.10	0.000096	1.27	1065.99	323.10	0.09
USACE	8523	2YR	423.00	440.24	447.38	443.88	447.39	0.000062	1.01	716.07	296.85	0.07
USACE	8523	5YR	730.00	440.24	447.92	444.88	447.93	0.000118	1.48	823.94	329.84	0.10
USACE	8523	10YR	973.00	440.24	448.24	445.56	448.27	0.000165	1.80	889.33	335.99	0.12
USACE	8523	25YR	1374.00	440.24	448.60	446.56	448.64	0.000256	2.32	960.13	341.90	0.15
USACE	8523	50YR	1688.00	440.24	448.81	447.18	448.86	0.000337	2.71	1002.02	345.06	0.17
USACE	8523	100YR	2029.00	440.24	449.08	447.18	449.15	0.000409	3.05	1057.57	352.33	0.19
USACE	8523	100YRPLUS	2654.00	440.24	449.53	447.19	449.63	0.000536	3.63	1147.98	370.92	0.22
USACE	8523	200YR	2375.00	440.24	449.36	447.19	449.44	0.000474	3.36	1113.59	364.16	0.21
USACE	8523	500YR	2852.00	440.24	449.69	447.19	449.80	0.000565	3.77	1180.52	375.72	0.23
USACE	8523	SEPT2011	853.00	440.24	448.07	445.24	448.09	0.000144	1.65	854.17	332.72	0.11
USACE	8497 Private Drive		Culvert									
USACE	8473	2YR	423.00	439.94	443.21		443.62	0.004807	5.15	86.01	41.55	0.55
USACE	8473	5YR	730.00	439.94	443.54	443.21	444.46	0.009516	7.82	100.38	46.61	0.80
USACE	8473	10YR	973.00	439.94	444.28	444.28	445.12	0.006913	7.73	170.24	132.30	0.70
USACE	8473	25YR	1374.00	439.94	444.79	444.79	445.72	0.007120	8.54	242.69	164.77	0.73
USACE	8473	50YR	1688.00	439.94	445.16	445.16	446.10	0.006892	8.88	313.87	208.63	0.73
USACE	8473	100YR	2029.00	439.94	445.50	445.50	446.41	0.006638	9.13	386.88	227.41	0.72
USACE	8473	100YRPLUS	2654.00	439.94	445.96	445.96	446.91	0.006693	9.73	497.94	251.52	0.74
USACE	8473	200YR	2375.00	439.94	445.81	445.81	446.71	0.006358	9.31	461.33	246.14	0.71
USACE	8473	500YR	2852.00	439.94	446.06	446.06	447.04	0.006837	9.96	525.36	255.27	0.75
USACE	8473	SEPT2011	853.00	439.94	443.60	443.50	444.81	0.012071	8.93	103.38	48.43	0.90
USACE	8410	2YR	423.00	439.94	442.85	442.37	443.20	0.008660	6.25	132.63	180.98	0.72
USACE	8410	5YR	730.00	439.94	443.34		443.65	0.007213	6.48	227.14	203.04	0.68
USACE	8410	10YR	973.00	439.94	443.63		443.95	0.006805	6.73	288.97	213.57	0.67
USACE	8410	25YR	1374.00	439.94	444.09		444.40	0.005918	6.87	389.20	225.31	0.64
USACE	8410	50YR	1688.00	439.94	444.42		444.73	0.005330	6.92	465.50	232.16	0.62
USACE	8410	100YR	2029.00	439.94	444.77		445.07	0.004823	6.97	546.72	239.10	0.60
USACE	8410	100YRPLUS	2654.00	439.94	445.37		445.67	0.004059	6.98	693.46	248.00	0.56
USACE	8410	200YR	2375.00	439.94	445.10		445.41	0.004380	6.99	627.87	244.34	0.58
USACE	8410	500YR	2852.00	439.94	445.55		445.86	0.003861	6.98	739.57	250.40	0.55
USACE	8410	SEPT2011	853.00	439.94	443.49		443.81	0.007038	6.63	258.81	209.31	0.68
USACE	8185	2YR	423.00	439.54	441.96		442.02	0.003088	2.46	222.92	184.85	0.32

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8185	5YR	730.00	439.54	442.49		442.57	0.003048	2.90	326.55	209.27	0.34
USACE	8185	10YR	973.00	439.54	442.84		442.93	0.002847	3.08	401.27	215.50	0.33
USACE	8185	25YR	1374.00	439.54	443.38		443.49	0.002571	3.32	521.73	228.72	0.33
USACE	8185	50YR	1688.00	439.54	443.78		443.90	0.002365	3.44	614.52	237.21	0.32
USACE	8185	100YR	2029.00	439.54	444.18		444.31	0.002190	3.55	711.43	244.66	0.31
USACE	8185	100YRPLUS	2654.00	439.54	444.87		445.01	0.001922	3.70	882.74	253.77	0.30
USACE	8185	200YR	2375.00	439.54	444.57		444.71	0.002021	3.63	807.34	249.25	0.31
USACE	8185	500YR	2852.00	439.54	445.08		445.22	0.001854	3.74	935.60	256.27	0.30
USACE	8185	SEPT2011	853.00	439.54	442.67		442.76	0.002948	3.00	364.68	212.54	0.34
USACE	8021	2YR	423.00	438.14	441.31		441.41	0.004629	3.71	191.32	180.40	0.41
USACE	8021	5YR	730.00	438.14	441.94		442.04	0.003475	3.72	309.70	201.05	0.37
USACE	8021	10YR	973.00	438.14	442.35		442.46	0.002978	3.73	395.62	210.55	0.35
USACE	8021	25YR	1374.00	438.14	442.97		443.08	0.002510	3.80	529.49	225.67	0.33
USACE	8021	50YR	1688.00	438.14	443.40		443.52	0.002288	3.87	630.71	238.28	0.32
USACE	8021	100YR	2029.00	438.14	443.84		443.96	0.002090	3.93	736.15	247.67	0.31
USACE	8021	100YRPLUS	2654.00	438.14	444.57		444.71	0.001852	4.04	924.42	266.32	0.29
USACE	8021	200YR	2375.00	438.14	444.25		444.39	0.001947	3.99	841.55	258.60	0.30
USACE	8021	500YR	2852.00	438.14	444.79		444.93	0.001805	4.09	983.00	273.30	0.29
USACE	8021	SEPT2011	853.00	438.14	442.15		442.26	0.003194	3.72	353.81	206.07	0.35
USACE	7825	2YR	423.00	437.22	440.07		440.41	0.005485	5.12	112.61	81.98	0.57
USACE	7825	5YR	730.00	437.22	440.69		441.13	0.006005	6.19	164.33	86.24	0.61
USACE	7825	10YR	973.00	437.22	441.07		441.60	0.006370	6.88	197.76	88.64	0.64
USACE	7825	25YR	1374.00	437.22	441.60		442.27	0.006854	7.83	245.72	91.86	0.68
USACE	7825	50YR	1688.00	437.22	441.97		442.74	0.007112	8.45	280.03	94.14	0.71
USACE	7825	100YR	2029.00	437.22	442.33		443.20	0.007407	9.08	313.86	96.42	0.73
USACE	7825	100YRPLUS	2654.00	437.22	442.89		443.96	0.007946	10.13	369.68	100.44	0.77
USACE	7825	200YR	2375.00	437.22	442.65		443.63	0.007716	9.68	345.52	98.73	0.75
USACE	7825	500YR	2852.00	437.22	443.06		444.18	0.008100	10.43	386.13	101.81	0.78
USACE	7825	SEPT2011	853.00	437.22	440.88		441.38	0.006245	6.57	181.32	87.51	0.63
USACE	7559	2YR	423.00	436.12	438.75		438.96	0.005239	4.96	141.73	111.73	0.57
USACE	7559	5YR	730.00	436.12	439.28		439.56	0.005508	5.83	203.07	117.36	0.61
USACE	7559	10YR	973.00	436.12	439.64		439.96	0.005563	6.34	245.69	120.51	0.62
USACE	7559	25YR	1374.00	436.12	440.16		440.54	0.005627	7.03	308.79	125.42	0.64
USACE	7559	50YR	1688.00	436.12	440.50		440.95	0.005740	7.53	353.33	129.90	0.66
USACE	7559	100YR	2029.00	436.12	440.85		441.35	0.005844	8.02	398.74	134.33	0.67
USACE	7559	100YRPLUS	2654.00	436.12	441.40		441.99	0.005998	8.79	474.76	139.97	0.69
USACE	7559	200YR	2375.00	436.12	441.17		441.72	0.005922	8.45	441.97	137.55	0.68
USACE	7559	500YR	2852.00	436.12	441.57		442.19	0.005996	8.99	498.83	141.74	0.70
USACE	7559	SEPT2011	853.00	436.12	439.49		439.78	0.005380	6.03	227.41	119.18	0.61
USACE	7230	2YR	462.00	434.36	437.20		437.31	0.004727	3.76	202.50	160.10	0.42
USACE	7230	5YR	809.00	434.36	437.76		437.90	0.004566	4.22	293.59	165.63	0.42
USACE	7230	10YR	1086.00	434.36	438.13		438.29	0.004552	4.54	354.36	168.53	0.43
USACE	7230	25YR	1543.00	434.36	438.64		438.85	0.004586	5.00	442.41	176.51	0.44
USACE	7230	50YR	1903.00	434.36	438.99		439.24	0.004573	5.28	506.03	184.02	0.45
USACE	7230	100YR	2293.00	434.36	439.34		439.62	0.004551	5.55	572.21	191.72	0.45
USACE	7230	100YRPLUS	2999.00	434.36	439.91		440.24	0.004553	5.99	684.09	203.89	0.46
USACE	7230	200YR	2691.00	434.36	439.67		439.98	0.004555	5.81	636.17	199.49	0.46
USACE	7230	500YR	3240.00	434.36	440.09		440.44	0.004540	6.11	721.26	207.05	0.46
USACE	7230	SEPT2011	977.00	434.36	437.99		438.14	0.004548	4.41	331.39	167.41	0.43
USACE	7002	2YR	462.00	433.23	436.00		436.14	0.005469	3.82	173.78	143.54	0.44
USACE	7002	5YR	809.00	433.23	436.51		436.71	0.005941	4.54	248.96	150.93	0.47
USACE	7002	10YR	1086.00	433.23	436.84		437.08	0.006186	4.98	299.12	154.38	0.49
USACE	7002	25YR	1543.00	433.23	437.31		437.61	0.006437	5.57	371.94	158.27	0.51
USACE	7002	50YR	1903.00	433.23	437.63		437.98	0.006599	5.97	423.71	161.42	0.53
USACE	7002	100YR	2293.00	433.23	437.95		438.35	0.006760	6.36	476.10	165.13	0.54
USACE	7002	100YRPLUS	2999.00	433.23	438.47		438.95	0.006906	6.94	562.31	168.44	0.56
USACE	7002	200YR	2691.00	433.23	438.25		438.70	0.006853	6.70	525.72	167.11	0.55
USACE	7002	500YR	3240.00	433.23	438.63		439.14	0.006939	7.11	590.14	169.44	0.56
USACE	7002	SEPT2011	977.00	433.23	436.72		436.94	0.006102	4.82	280.17	153.34	0.49
USACE	6767	2YR	462.00	432.41	434.96		435.08	0.003776	4.07	199.01	181.63	0.48
USACE	6767	5YR	809.00	432.41	435.46		435.61	0.003703	4.60	290.85	188.72	0.49
USACE	6767	10YR	1086.00	432.41	435.79		435.97	0.003609	4.91	355.14	192.59	0.49
USACE	6767	25YR	1543.00	432.41	436.26		436.48	0.003567	5.37	447.13	197.67	0.50
USACE	6767	50YR	1903.00	432.41	436.60		436.84	0.003533	5.68	513.36	201.13	0.51
USACE	6767	100YR	2293.00	432.41	436.92		437.20	0.003515	5.98	579.55	204.21	0.51
USACE	6767	100YRPLUS	2999.00	432.41	437.45		437.78	0.003512	6.47	688.79	209.03	0.52
USACE	6767	200YR	2691.00	432.41	437.23		437.53	0.003506	6.26	642.55	206.82	0.52
USACE	6767	500YR	3240.00	432.41	437.62		437.97	0.003505	6.61	724.74	210.85	0.53
USACE	6767	SEPT2011	977.00	432.41	435.66		435.83	0.003655	4.80	330.28	191.18	0.49
USACE	6538	2YR	462.00	431.78	434.14		434.23	0.003557	3.62	227.42	191.90	0.46
USACE	6538	5YR	809.00	431.78	434.66		434.78	0.003483	4.19	327.07	194.76	0.47
USACE	6538	10YR	1086.00	431.78	435.00		435.15	0.003484	4.56	393.76	196.56	0.48
USACE	6538	25YR	1543.00	431.78	435.47		435.65	0.003604	5.14	485.84	198.95	0.50
USACE	6538	50YR	1903.00	431.78	435.79		436.01	0.003686	5.53	550.36	200.63	0.51
USACE	6538	100YR	2293.00	431.78	436.10		436.36	0.003790	5.93	613.60	202.43	0.53
USACE	6538	100YRPLUS	2999.00	431.78	436.61		436.93	0.003960	6.58	717.20	205.45	0.55
USACE	6538	200YR	2691.00	431.78	436.40		436.69	0.003895	6.31	673.13	204.17	0.54

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6538	500YR	3240.00	431.78	436.78		437.11	0.003989	6.77	751.44	206.44	0.56
USACE	6538	SEPT2011	977.00	431.78	434.87		435.01	0.003475	4.42	368.69	195.91	0.48
USACE	6097	2YR	462.00	429.11	432.50	432.06	432.68	0.003611	4.91	204.82	199.54	0.49
USACE	6097	5YR	809.00	429.11	432.93		433.14	0.004124	5.72	291.71	204.27	0.54
USACE	6097	10YR	1086.00	429.11	433.20		433.44	0.004459	6.24	347.11	206.57	0.56
USACE	6097	25YR	1543.00	429.11	433.62		433.90	0.004596	6.79	434.44	210.43	0.58
USACE	6097	50YR	1903.00	429.11	433.92		434.23	0.004618	7.13	498.59	213.85	0.59
USACE	6097	100YR	2293.00	429.11	434.26		434.59	0.004442	7.34	571.75	218.17	0.59
USACE	6097	100YRPLUS	2999.00	429.11	434.89		435.23	0.003905	7.46	711.41	224.71	0.56
USACE	6097	200YR	2691.00	429.11	434.61		434.95	0.004153	7.43	649.48	221.96	0.57
USACE	6097	500YR	3240.00	429.11	435.11		435.45	0.003734	7.49	760.08	227.46	0.55
USACE	6097	SEPT2011	977.00	429.11	433.10		433.33	0.004357	6.06	325.69	205.69	0.55
USACE	5708	2YR	462.00	428.11	430.09		430.43	0.011040	5.23	104.57	106.44	0.76
USACE	5708	5YR	809.00	428.11	430.88		431.14	0.006909	5.51	212.10	173.60	0.65
USACE	5708	10YR	1086.00	428.11	431.31		431.56	0.005541	5.55	289.69	182.67	0.60
USACE	5708	25YR	1543.00	428.11	431.90		432.16	0.004527	5.74	400.23	189.72	0.56
USACE	5708	50YR	1903.00	428.11	432.41		432.66	0.003631	5.66	498.47	194.51	0.51
USACE	5708	100YR	2293.00	428.11	432.94		433.19	0.003002	5.62	602.78	199.34	0.48
USACE	5708	100YRPLUS	2999.00	428.11	433.82		434.07	0.002376	5.65	780.28	207.31	0.44
USACE	5708	200YR	2691.00	428.11	433.44		433.69	0.002609	5.64	703.43	204.00	0.45
USACE	5708	500YR	3240.00	428.11	434.09		434.34	0.002242	5.68	837.29	209.54	0.43
USACE	5708	SEPT2011	977.00	428.11	431.15		431.40	0.005952	5.52	260.52	179.84	0.61
USACE	5222	2YR	462.00	425.29	428.67		428.78	0.001565	3.28	203.37	122.87	0.33
USACE	5222	5YR	809.00	425.29	429.31		429.47	0.002031	4.23	297.42	157.23	0.38
USACE	5222	10YR	1086.00	425.29	429.64		429.86	0.002446	4.91	352.43	172.08	0.43
USACE	5222	25YR	1543.00	425.29	430.99		431.13	0.001190	4.14	594.48	186.79	0.31
USACE	5222	50YR	1903.00	425.29	431.65		431.79	0.001040	4.18	719.82	194.16	0.30
USACE	5222	100YR	2293.00	425.29	432.27		432.41	0.000954	4.27	842.32	199.17	0.29
USACE	5222	100YRPLUS	2999.00	425.29	433.23		433.38	0.000885	4.49	1037.13	208.18	0.29
USACE	5222	200YR	2691.00	425.29	432.82		432.97	0.000914	4.40	953.10	203.90	0.29
USACE	5222	500YR	3240.00	425.29	433.52		433.68	0.000872	4.57	1098.09	209.00	0.29
USACE	5222	SEPT2011	977.00	425.29	429.54		429.73	0.002239	4.62	335.16	170.29	0.41
USACE	4884	2YR	462.00	423.87	427.46	427.37	427.75	0.007742	5.68	161.99	174.05	0.56
USACE	4884	5YR	809.00	423.87	427.95		428.25	0.007978	6.33	254.08	202.88	0.58
USACE	4884	10YR	1086.00	423.87	428.47		428.68	0.005382	5.67	366.05	225.74	0.49
USACE	4884	25YR	1543.00	423.87	430.77		430.82	0.000617	2.56	926.27	248.58	0.18
USACE	4884	50YR	1903.00	423.87	431.46		431.51	0.000538	2.56	1098.68	251.21	0.17
USACE	4884	100YR	2293.00	423.87	432.10		432.16	0.000498	2.61	1260.71	254.37	0.16
USACE	4884	100YRPLUS	2999.00	423.87	433.08		433.14	0.000472	2.74	1519.26	276.06	0.16
USACE	4884	200YR	2691.00	423.87	432.66		432.73	0.000484	2.69	1406.52	267.26	0.16
USACE	4884	500YR	3240.00	423.87	433.38		433.44	0.000468	2.79	1601.66	280.60	0.16
USACE	4884	SEPT2011	977.00	423.87	428.18		428.47	0.007436	6.36	302.93	218.26	0.56
USACE	4688	2YR	462.00	423.27	426.29		426.50	0.005249	5.12	187.65	197.69	0.55
USACE	4688	5YR	809.00	423.27	427.64		427.70	0.001164	3.17	485.22	238.68	0.28
USACE	4688	10YR	1086.00	423.27	428.18		428.25	0.001028	3.24	618.26	249.94	0.27
USACE	4688	25YR	1543.00	423.27	430.72		430.75	0.000223	2.02	1340.71	311.85	0.13
USACE	4688	50YR	1903.00	423.27	431.42		431.45	0.000210	2.09	1559.78	317.76	0.13
USACE	4688	100YR	2293.00	423.27	432.06		432.09	0.000205	2.18	1766.79	325.31	0.13
USACE	4688	100YRPLUS	2999.00	423.27	433.04		433.08	0.000207	2.36	2095.36	345.94	0.14
USACE	4688	200YR	2691.00	423.27	432.62		432.66	0.000207	2.29	1952.78	338.20	0.13
USACE	4688	500YR	3240.00	423.27	433.34		433.38	0.000209	2.42	2198.70	351.65	0.14
USACE	4688	SEPT2011	977.00	423.27	427.81		427.89	0.001337	3.49	527.04	243.14	0.30
USACE	4497	2YR	462.00	421.90	425.86	424.80	425.96	0.001618	3.47	220.55	175.16	0.33
USACE	4497	5YR	809.00	421.90	427.48	425.24	427.54	0.000631	2.81	457.44	301.57	0.22
USACE	4497	10YR	1086.00	421.90	428.01	425.51	428.09	0.000700	3.17	534.61	323.90	0.24
USACE	4497	25YR	1543.00	421.90	430.67	426.08	430.71	0.000206	2.23	1011.73	419.13	0.14
USACE	4497	50YR	1903.00	421.90	431.35	426.35	431.40	0.000224	2.45	1121.89	427.57	0.14
USACE	4497	100YR	2293.00	421.90	431.99	426.61	432.05	0.000244	2.68	1223.57	433.72	0.15
USACE	4497	100YRPLUS	2999.00	421.90	432.95	427.02	433.03	0.000283	3.08	1377.12	457.86	0.17
USACE	4497	200YR	2691.00	421.90	432.54	426.84	432.61	0.000268	2.92	1311.76	445.52	0.16
USACE	4497	500YR	3240.00	421.90	433.24	427.15	433.33	0.000297	3.21	1423.52	464.99	0.17
USACE	4497	SEPT2011	977.00	421.90	427.61	425.41	427.69	0.000810	3.24	476.70	305.82	0.25
USACE	4445	2YR	462.00	421.11	425.55	423.89	425.81	0.002020	4.29	116.97	108.81	0.38
USACE	4445	5YR	809.00	421.11	426.99	424.81	427.39	0.002022	5.29	166.41	199.07	0.40
USACE	4445	10YR	1086.00	421.11	427.18	425.41	427.84	0.003220	6.83	172.92	204.65	0.51
USACE	4445	25YR	1543.00	421.11	430.31	426.26	430.61	0.000931	4.95	409.86	445.30	0.30
USACE	4445	50YR	1903.00	421.11	431.23	426.89	431.36	0.000427	3.59	743.27	468.12	0.20
USACE	4445	100YR	2293.00	421.11	431.85	427.50	432.00	0.000474	3.94	810.13	479.79	0.22
USACE	4445	100YRPLUS	2999.00	421.11	432.76	428.86	432.97	0.000563	4.55	910.05	492.86	0.24
USACE	4445	200YR	2691.00	421.11	432.37	428.53	432.56	0.000527	4.30	867.53	486.17	0.23
USACE	4445	500YR	3240.00	421.11	433.04	429.10	433.26	0.000594	4.75	939.99	515.89	0.25
USACE	4445	SEPT2011	977.00	421.11	426.83	425.17	427.46	0.003268	6.60	161.17	191.07	0.51
USACE	4409 Shumaker Road		Bridge									
USACE	4371	2YR	462.00	421.40	424.53	424.13	425.20	0.008481	6.99	75.27	106.21	0.75
USACE	4371	5YR	809.00	421.40	425.04	425.04	426.40	0.013800	10.00	92.14	111.33	0.98

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4371	10YR	1086.00	421.40	425.63	425.63	427.29	0.013543	11.08	111.53	118.34	1.00
USACE	4371	25YR	1543.00	421.40	425.81	425.81	426.55	0.008404	8.99	273.44	120.13	0.79
USACE	4371	50YR	1903.00	421.40	426.09	425.88	426.96	0.009168	9.83	307.48	122.95	0.84
USACE	4371	100YR	2293.00	421.40	426.38	426.20	427.36	0.009663	10.54	343.65	126.01	0.87
USACE	4371	100YRPLUS	2999.00	421.40	426.84	426.67	428.02	0.010377	11.65	403.50	131.01	0.91
USACE	4371	200YR	2691.00	421.40	426.65	426.47	427.74	0.010040	11.17	378.71	128.94	0.89
USACE	4371	500YR	3240.00	421.40	427.01	426.83	428.23	0.010415	11.92	425.00	132.74	0.92
USACE	4371	SEPT2011	977.00	421.40	425.41	425.41	426.95	0.013609	10.67	104.23	115.74	0.99
USACE	4322	2YR	462.00	421.40	424.61	423.84	424.73	0.002338	3.78	210.58	189.25	0.39
USACE	4322	5YR	809.00	421.40	425.05	424.35	425.23	0.003140	4.82	277.11	203.00	0.47
USACE	4322	10YR	1086.00	421.40	425.35	424.65	425.57	0.003555	5.43	322.21	211.61	0.50
USACE	4322	25YR	1543.00	421.40	425.77	424.97	426.07	0.004043	6.23	387.36	223.87	0.55
USACE	4322	50YR	1903.00	421.40	426.06	425.19	426.43	0.004316	6.75	433.55	231.21	0.57
USACE	4322	100YR	2293.00	421.40	426.37	425.41	426.79	0.004488	7.21	481.72	235.72	0.59
USACE	4322	100YRPLUS	2999.00	421.40	426.87	425.79	427.38	0.004770	7.95	559.53	242.10	0.62
USACE	4322	200YR	2691.00	421.40	426.66	425.63	427.13	0.004631	7.63	527.55	239.82	0.61
USACE	4322	500YR	3240.00	421.40	427.04	425.91	427.58	0.004784	8.14	586.82	244.30	0.62
USACE	4322	SEPT2011	977.00	421.40	425.28	424.44	425.48	0.003201	5.08	311.31	209.26	0.48
USACE	4216	2YR	506.00	421.40	423.93	423.93	424.25	0.009782	6.19	155.78	214.60	0.76
USACE	4216	5YR	901.00	421.40	424.39		424.70	0.008318	6.53	255.62	219.06	0.72
USACE	4216	10YR	1225.00	421.40	424.73		425.04	0.007358	6.67	328.96	221.59	0.70
USACE	4216	25YR	1757.00	421.40	425.19		425.52	0.006588	6.98	432.26	224.08	0.68
USACE	4216	50YR	2177.00	421.40	425.52		425.88	0.006226	7.22	505.48	225.82	0.67
USACE	4216	100YR	2633.00	421.40	425.84		426.23	0.005928	7.46	579.95	227.61	0.66
USACE	4216	100YRPLUS	3443.00	421.40	426.37		426.81	0.005616	7.89	700.37	230.86	0.66
USACE	4216	200YR	3099.00	421.40	426.15		426.57	0.005733	7.71	650.57	229.52	0.66
USACE	4216	500YR	3746.00	421.40	426.55		427.01	0.005541	8.05	742.24	231.98	0.66
USACE	4216	SEPT2011	1144.00	421.40	424.65		424.95	0.007565	6.64	311.31	221.14	0.70
USACE	4076	2YR	506.00	420.78	423.46		423.54	0.002419	3.35	260.10	229.31	0.39
USACE	4076	5YR	901.00	420.78	423.95		424.06	0.002518	3.88	373.80	234.12	0.41
USACE	4076	10YR	1225.00	420.78	424.29		424.42	0.002535	4.20	454.01	237.08	0.42
USACE	4076	25YR	1757.00	420.78	424.76		424.93	0.002574	4.65	566.69	239.40	0.43
USACE	4076	50YR	2177.00	420.78	425.09		425.29	0.002590	4.95	646.82	241.04	0.44
USACE	4076	100YR	2633.00	420.78	425.43		425.66	0.002593	5.23	728.62	243.05	0.44
USACE	4076	100YRPLUS	3443.00	420.78	425.97		426.24	0.002624	5.68	859.68	247.75	0.46
USACE	4076	200YR	3099.00	420.78	425.75		426.00	0.002617	5.50	805.28	245.28	0.45
USACE	4076	500YR	3746.00	420.78	426.15		426.45	0.002624	5.83	906.26	254.16	0.46
USACE	4076	SEPT2011	1144.00	420.78	424.20		424.33	0.002547	4.14	433.99	236.41	0.42
USACE	3489	2YR	506.00	418.40	421.54		421.76	0.003887	4.83	200.04	205.64	0.51
USACE	3489	5YR	901.00	418.40	422.12		422.33	0.003493	5.19	324.03	227.01	0.50
USACE	3489	10YR	1225.00	418.40	422.49		422.72	0.003367	5.46	411.38	240.36	0.50
USACE	3489	25YR	1757.00	418.40	423.01		423.25	0.003266	5.85	537.75	252.35	0.50
USACE	3489	50YR	2177.00	418.40	423.36		423.62	0.003220	6.13	627.99	260.32	0.50
USACE	3489	100YR	2633.00	418.40	423.71		423.99	0.003179	6.39	719.92	266.78	0.50
USACE	3489	100YRPLUS	3443.00	418.40	424.26		424.58	0.003129	6.80	871.00	276.61	0.51
USACE	3489	200YR	3099.00	418.40	424.04		424.34	0.003146	6.63	808.42	272.45	0.51
USACE	3489	500YR	3746.00	418.40	424.46		424.78	0.003116	6.95	924.62	280.26	0.51
USACE	3489	SEPT2011	1144.00	418.40	422.41		422.63	0.003384	5.39	390.77	237.97	0.50
USACE	3183	2YR	506.00	417.28	420.78		420.88	0.002071	3.76	267.96	215.69	0.38
USACE	3183	5YR	901.00	417.28	421.28		421.42	0.002481	4.55	378.87	226.38	0.42
USACE	3183	10YR	1225.00	417.28	421.62		421.78	0.002670	5.01	456.77	232.38	0.44
USACE	3183	25YR	1757.00	417.28	422.11		422.30	0.002846	5.58	571.33	239.73	0.47
USACE	3183	50YR	2177.00	417.28	422.44		422.67	0.002940	5.96	652.87	244.11	0.48
USACE	3183	100YR	2633.00	417.28	422.78		423.03	0.003007	6.31	736.17	248.39	0.49
USACE	3183	100YRPLUS	3443.00	417.28	423.32		423.62	0.003091	6.84	872.89	255.10	0.51
USACE	3183	200YR	3099.00	417.28	423.10		423.38	0.003059	6.62	816.37	252.48	0.50
USACE	3183	500YR	3746.00	417.28	423.51		423.82	0.003116	7.02	921.09	257.44	0.51
USACE	3183	SEPT2011	1144.00	417.28	421.54		421.69	0.002633	4.90	437.87	230.97	0.44
USACE	2740	2YR	506.00	416.04	418.84	418.84	419.18	0.009011	6.32	156.59	193.26	0.74
USACE	2740	5YR	901.00	416.04	419.37		419.67	0.007147	6.47	259.73	200.81	0.68
USACE	2740	10YR	1225.00	416.04	419.72		420.03	0.006452	6.65	331.30	204.48	0.66
USACE	2740	25YR	1757.00	416.04	420.22		420.55	0.005848	6.99	434.99	210.17	0.65
USACE	2740	50YR	2177.00	416.04	420.57		420.92	0.005573	7.25	508.36	215.66	0.64
USACE	2740	100YR	2633.00	416.04	420.91		421.29	0.005368	7.51	582.86	222.63	0.64
USACE	2740	100YRPLUS	3443.00	416.04	421.45		421.88	0.005150	7.96	705.85	232.60	0.64
USACE	2740	200YR	3099.00	416.04	421.23		421.64	0.005226	7.77	654.91	228.68	0.64
USACE	2740	500YR	3746.00	416.04	421.63		422.09	0.005093	8.11	749.43	235.67	0.64
USACE	2740	SEPT2011	1144.00	416.04	419.64		419.94	0.006568	6.59	314.53	203.62	0.66
USACE	2251	2YR	506.00	414.51	417.16		417.23	0.002057	3.13	280.81	214.48	0.36
USACE	2251	5YR	901.00	414.51	417.70		417.80	0.002276	3.78	399.98	226.50	0.39
USACE	2251	10YR	1225.00	414.51	418.05		418.17	0.002395	4.18	480.33	230.37	0.41
USACE	2251	25YR	1757.00	414.51	418.53		418.69	0.002580	4.75	591.71	234.44	0.43
USACE	2251	50YR	2177.00	414.51	418.86		419.05	0.002698	5.14	669.22	236.62	0.45
USACE	2251	100YR	2633.00	414.51	419.18		419.41	0.002796	5.51	747.28	238.65	0.46
USACE	2251	100YRPLUS	3443.00	414.51	419.71		419.98	0.002922	6.07	873.91	245.53	0.48
USACE	2251	200YR	3099.00	414.51	419.49		419.74	0.002877	5.85	821.37	241.97	0.48
USACE	2251	500YR	3746.00	414.51	419.89		420.18	0.002961	6.26	918.62	248.61	0.49

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	2251	SEPT2011	1144.00	414.51	417.96		418.08	0.002382	4.09	460.28	229.55	0.40
USACE	1653	2YR	506.00	412.59	415.15		415.32	0.005702	5.02	198.00	205.62	0.59
USACE	1653	5YR	901.00	412.59	415.70		415.87	0.004911	5.38	320.12	244.19	0.57
USACE	1653	10YR	1225.00	412.59	416.08		416.26	0.004498	5.61	420.55	282.11	0.56
USACE	1653	25YR	1757.00	412.59	416.59		416.79	0.004051	5.88	569.54	300.01	0.54
USACE	1653	50YR	2177.00	412.59	416.93		417.15	0.003833	6.07	674.14	308.82	0.53
USACE	1653	100YR	2633.00	412.59	417.26		417.50	0.003723	6.31	776.48	312.66	0.53
USACE	1653	100YRPLUS	3443.00	412.59	417.77		418.04	0.003656	6.73	937.94	318.12	0.54
USACE	1653	200YR	3099.00	412.59	417.57		417.82	0.003663	6.54	872.33	315.61	0.53
USACE	1653	500YR	3746.00	412.59	417.95		418.23	0.003646	6.88	993.05	319.46	0.54
USACE	1653	SEPT2011	1144.00	412.59	415.99		416.17	0.004541	5.53	394.69	273.83	0.56
USACE	1222	2YR	506.00	409.90	413.62		413.78	0.002408	4.31	252.26	221.83	0.41
USACE	1222	5YR	901.00	409.90	414.23		414.40	0.002483	4.88	394.99	243.40	0.43
USACE	1222	10YR	1225.00	409.90	414.61		414.80	0.002652	5.36	489.11	260.11	0.45
USACE	1222	25YR	1757.00	409.90	415.09		415.31	0.002902	6.01	619.04	277.94	0.48
USACE	1222	50YR	2177.00	409.90	415.43		415.67	0.003040	6.43	715.08	292.68	0.50
USACE	1222	100YR	2633.00	409.90	415.75		416.01	0.003132	6.79	810.15	301.82	0.51
USACE	1222	100YRPLUS	3443.00	409.90	416.25		416.55	0.003220	7.30	965.36	312.16	0.52
USACE	1222	200YR	3099.00	409.90	416.04		416.33	0.003201	7.11	901.56	309.48	0.52
USACE	1222	500YR	3746.00	409.90	416.42		416.74	0.003231	7.45	1019.81	314.24	0.53
USACE	1222	SEPT2011	1144.00	409.90	414.52		414.71	0.002602	5.24	467.69	256.82	0.45
USACE	978	2YR	506.00	409.30	412.26	412.00	412.77	0.007927	6.87	134.88	152.21	0.72
USACE	978	5YR	901.00	409.30	412.91	412.08	413.41	0.007283	7.58	249.19	203.37	0.72
USACE	978	10YR	1225.00	409.30	413.27		413.78	0.007138	8.01	326.43	223.70	0.72
USACE	978	25YR	1757.00	409.30	413.77		414.27	0.006656	8.40	443.24	241.24	0.71
USACE	978	50YR	2177.00	409.30	414.12		414.62	0.006392	8.67	527.99	252.32	0.71
USACE	978	100YR	2633.00	409.30	414.46		414.96	0.006135	8.89	614.78	261.13	0.70
USACE	978	100YRPLUS	3443.00	409.30	414.99		415.52	0.005754	9.22	756.75	270.03	0.69
USACE	978	200YR	3099.00	409.30	414.77		415.29	0.005900	9.09	698.11	266.77	0.69
USACE	978	500YR	3746.00	409.30	415.17		415.71	0.005647	9.33	806.41	272.52	0.69
USACE	978	SEPT2011	1144.00	409.30	413.19		413.69	0.007224	7.94	307.55	220.52	0.72
USACE	663	2YR	506.00	407.96	411.24		411.42	0.002391	4.01	223.68	219.92	0.40
USACE	663	5YR	901.00	407.96	411.72		411.95	0.002940	4.91	331.66	229.09	0.46
USACE	663	10YR	1225.00	407.96	412.11		412.34	0.002878	5.20	421.59	237.07	0.46
USACE	663	25YR	1757.00	407.96	412.63		412.89	0.002847	5.62	548.94	247.57	0.47
USACE	663	50YR	2177.00	407.96	412.98		413.26	0.002861	5.93	636.39	252.75	0.48
USACE	663	100YR	2633.00	407.96	413.32		413.62	0.002891	6.24	723.08	258.14	0.48
USACE	663	100YRPLUS	3443.00	407.96	413.86		414.20	0.002953	6.73	863.58	268.10	0.50
USACE	663	200YR	3099.00	407.96	413.64		413.96	0.002930	6.53	805.29	263.76	0.49
USACE	663	500YR	3746.00	407.96	414.04		414.40	0.002979	6.91	912.62	271.78	0.50
USACE	663	SEPT2011	1144.00	407.96	412.02		412.25	0.002886	5.13	400.32	235.00	0.46
USACE	445	2YR	506.00	407.08	410.99		411.07	0.000985	2.74	337.23	242.90	0.25
USACE	445	5YR	901.00	407.08	411.22		411.39	0.002142	4.20	392.57	247.00	0.38
USACE	445	10YR	1225.00	407.08	411.58		411.77	0.002305	4.63	482.64	252.94	0.40
USACE	445	25YR	1757.00	407.08	412.07		412.30	0.002533	5.22	609.32	263.80	0.42
USACE	445	50YR	2177.00	407.08	412.39		412.65	0.002692	5.63	695.72	270.11	0.44
USACE	445	100YR	2633.00	407.08	412.71		413.00	0.002822	6.00	782.68	275.53	0.46
USACE	445	100YRPLUS	3443.00	407.08	413.21		413.55	0.003050	6.62	922.47	286.84	0.48
USACE	445	200YR	3099.00	407.08	413.00		413.32	0.002970	6.38	863.74	282.07	0.47
USACE	445	500YR	3746.00	407.08	413.38		413.74	0.003107	6.81	972.14	289.90	0.49
USACE	445	SEPT2011	1144.00	407.08	411.49		411.68	0.002266	4.53	461.45	251.57	0.39
USACE	333	2YR	506.00	406.00	410.94	409.25	410.98	0.000497	2.36	453.46	438.66	0.20
USACE	333	5YR	901.00	406.00	411.09	409.72	411.18	0.001257	3.83	491.99	450.55	0.31
USACE	333	10YR	1225.00	406.00	411.43	410.50	411.55	0.001412	4.25	585.92	492.31	0.34
USACE	333	25YR	1757.00	406.00	411.90	410.80	412.05	0.001592	4.79	717.13	544.20	0.36
USACE	333	50YR	2177.00	406.00	412.22	410.99	412.38	0.001723	5.18	804.48	560.87	0.38
USACE	333	100YR	2633.00	406.00	412.52	411.19	412.71	0.001841	5.54	891.31	595.75	0.40
USACE	333	100YRPLUS	3443.00	406.00	413.00	411.49	413.23	0.002036	6.13	1027.95	617.54	0.42
USACE	333	200YR	3099.00	406.00	412.80	411.36	413.02	0.001960	5.89	970.91	609.14	0.41
USACE	333	500YR	3746.00	406.00	413.17	411.60	413.42	0.002112	6.34	1075.49	634.58	0.43
USACE	333	SEPT2011	1144.00	406.00	411.35	410.45	411.46	0.001376	4.15	563.81	483.56	0.33
USACE	252	2YR	506.00	404.73	409.17	409.17	410.48	0.013485	9.32	57.98	49.00	0.92
USACE	252	5YR	901.00	404.73	410.67	410.44	410.97	0.003217	5.89	315.43	306.86	0.48
USACE	252	10YR	1225.00	404.73	411.05	410.69	411.33	0.003046	6.04	406.84	390.79	0.47
USACE	252	25YR	1757.00	404.73	411.56	411.03	411.84	0.002881	6.26	528.49	464.39	0.47
USACE	252	50YR	2177.00	404.73	411.86	411.24	412.16	0.002948	6.56	601.46	492.06	0.48
USACE	252	100YR	2633.00	404.73	412.16	411.43	412.48	0.003011	6.85	672.68	514.94	0.49
USACE	252	100YRPLUS	3443.00	404.73	412.64	411.73	413.00	0.003001	7.19	828.26	559.48	0.49
USACE	252	200YR	3099.00	404.73	412.46	411.61	412.79	0.002924	6.97	776.97	534.08	0.48
USACE	252	500YR	3746.00	404.73	412.80	411.83	413.17	0.003010	7.32	875.16	574.16	0.50
USACE	252	SEPT2011	1144.00	404.73	410.96	410.63	411.25	0.003107	6.03	384.59	371.18	0.48
USACE	226 Hernley Road		Culvert									
USACE	200	2YR	506.00	404.63	409.83	409.83	410.30	0.004573	6.50	154.04	222.62	0.55
USACE	200	5YR	901.00	404.63	410.34	410.34	410.84	0.005343	7.58	258.60	267.89	0.61
USACE	200	10YR	1225.00	404.63	410.59	410.59	411.17	0.006395	8.57	311.66	297.28	0.67

HEC-RAS Plan: Existing River: ShumakerRdTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	200	25YR	1757.00	404.63	411.00	411.00	411.62	0.006988	9.43	404.91	390.39	0.71
USACE	200	50YR	2177.00	404.63	411.19	411.19	411.91	0.007981	10.31	450.87	398.22	0.76
USACE	200	100YR	2633.00	404.63	411.39	411.39	412.19	0.008826	11.10	498.79	407.14	0.81
USACE	200	100YRPLUS	3443.00	404.63	411.80	411.75	412.66	0.008999	11.72	600.41	433.11	0.82
USACE	200	200YR	3099.00	404.63	411.60	411.59	412.46	0.009313	11.67	549.39	417.25	0.83
USACE	200	500YR	3746.00	404.63	411.98	411.85	412.82	0.008692	11.73	644.88	444.22	0.81
USACE	200	SEPT2011	1144.00	404.63	410.54	410.54	411.09	0.006036	8.27	301.42	286.90	0.65
USACE	174	2YR	506.00	404.63	409.51	409.51	409.94	0.004367	5.97	156.44	252.23	0.54
USACE	174	5YR	901.00	404.63	409.98	409.98	410.47	0.005380	7.16	255.08	337.28	0.61
USACE	174	10YR	1225.00	404.63	410.24	410.24	410.79	0.006226	8.00	310.11	345.73	0.66
USACE	174	25YR	1757.00	404.63	410.63	410.57	411.23	0.006783	8.82	395.38	359.02	0.70
USACE	174	50YR	2177.00	404.63	410.92	410.79	411.54	0.006783	9.16	461.22	390.08	0.70
USACE	174	100YR	2633.00	404.63	411.22	411.01	411.86	0.006782	9.50	526.57	405.02	0.71
USACE	174	100YRPLUS	3443.00	404.63	411.68	411.34	412.38	0.006790	10.03	630.79	437.18	0.72
USACE	174	200YR	3099.00	404.63	411.49	411.20	412.16	0.006792	9.82	587.82	427.14	0.72
USACE	174	500YR	3746.00	404.63	411.85	411.46	412.56	0.006789	10.21	667.16	441.74	0.72
USACE	174	SEPT2011	1144.00	404.63	410.19	410.19	410.72	0.005887	7.73	300.19	344.76	0.64

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	14096	2YR	258.00	393.41	396.16	395.94	396.90	0.012363	6.97	41.23	24.21	0.82
USACE	14096	5YR	429.00	393.41	397.18	396.74	398.06	0.009162	7.70	69.39	123.48	0.75
USACE	14096	10YR	569.00	393.41	398.33	397.36	398.69	0.003197	5.57	159.11	265.36	0.47
USACE	14096	25YR	801.00	393.41	398.90	398.07	399.31	0.003394	6.22	214.57	369.79	0.49
USACE	14096	50YR	976.00	393.41	399.19	398.33	399.63	0.003588	6.64	249.61	388.88	0.51
USACE	14096	100YR	1143.00	393.41	399.42	398.79	399.90	0.003776	7.01	277.83	397.25	0.53
USACE	14096	100YRPLUS	1495.00	393.41	399.84	399.29	400.38	0.004124	7.69	328.78	400.94	0.56
USACE	14096	200YR	1292.00	393.41	399.62	399.06	400.12	0.003890	7.28	301.71	398.96	0.54
USACE	14096	500YR	1539.00	393.41	399.91	399.33	400.45	0.004071	7.70	337.30	401.56	0.56
USACE	14096	SEPT2011	864.00	393.41	399.00	398.14	399.43	0.003484	6.39	227.43	372.66	0.50
USACE	14047	2YR	258.00	392.11	395.96	395.05	396.38	0.004914	5.31	53.02	39.78	0.54
USACE	14047	5YR	429.00	392.11	397.00	395.82	397.60	0.004828	6.41	73.68	152.20	0.56
USACE	14047	10YR	569.00	392.11	398.40	396.36	398.51	0.000578	2.70	224.64	332.23	0.20
USACE	14047	25YR	801.00	392.11	398.97	397.16	399.12	0.000576	2.88	287.67	450.64	0.21
USACE	14047	50YR	976.00	392.11	399.26	397.70	399.44	0.000629	3.10	320.72	459.90	0.22
USACE	14047	100YR	1143.00	392.11	399.49	398.07	399.70	0.000686	3.32	347.09	473.58	0.23
USACE	14047	100YRPLUS	1495.00	392.11	399.89	398.22	400.18	0.000802	3.73	394.20	485.18	0.25
USACE	14047	200YR	1292.00	392.11	399.67	398.07	399.92	0.000732	3.49	368.88	477.90	0.24
USACE	14047	500YR	1539.00	392.11	399.96	398.22	400.25	0.000802	3.76	401.94	485.48	0.25
USACE	14047	SEPT2011	864.00	392.11	399.08	397.36	399.24	0.000597	2.97	299.92	454.72	0.21
USACE	14017 Marietta Avenue		Culvert									
USACE	13982	2YR	258.00	391.92	395.56	395.00	396.20	0.007785	6.49	41.24	17.79	0.69
USACE	13982	5YR	429.00	391.92	395.91	395.91	397.26	0.014165	9.47	47.38	18.92	0.94
USACE	13982	10YR	569.00	391.92	397.11	397.11	397.82	0.005466	7.31	94.80	91.07	0.62
USACE	13982	25YR	801.00	391.92	397.54	397.54	398.27	0.005149	7.55	128.53	108.50	0.61
USACE	13982	50YR	976.00	391.92	397.75	397.75	398.58	0.005380	7.95	145.69	122.01	0.63
USACE	13982	100YR	1143.00	391.92	397.91	397.91	398.86	0.005696	8.35	159.16	170.33	0.65
USACE	13982	100YRPLUS	1495.00	391.92	398.26	398.26	399.43	0.005935	8.91	187.29	226.52	0.67
USACE	13982	200YR	1292.00	391.92	398.06	398.06	399.11	0.005795	8.59	171.67	202.40	0.66
USACE	13982	500YR	1539.00	391.92	398.31	398.31	399.50	0.005838	8.89	191.82	235.47	0.67
USACE	13982	SEPT2011	864.00	391.92	397.61	397.61	398.38	0.005276	7.72	134.61	108.97	0.62
USACE	13940	2YR	258.00	391.92	395.40	395.40	395.79	0.005797	5.47	55.04	66.28	0.59
USACE	13940	5YR	429.00	391.92	395.72	395.72	396.24	0.005979	5.98	79.54	83.09	0.61
USACE	13940	10YR	569.00	391.92	395.93	395.93	396.57	0.005875	6.20	97.04	85.40	0.61
USACE	13940	25YR	801.00	391.92	396.27	396.27	397.07	0.005133	6.20	127.73	90.65	0.58
USACE	13940	50YR	976.00	391.92	396.49	396.49	397.41	0.004854	6.28	147.76	90.65	0.57
USACE	13940	100YR	1143.00	391.92	396.70	396.70	397.72	0.004535	6.29	166.91	90.65	0.56
USACE	13940	100YRPLUS	1495.00	391.92	397.10	397.10	398.32	0.004143	6.41	203.13	100.28	0.54
USACE	13940	200YR	1292.00	391.92	396.88	396.88	397.98	0.004345	6.34	182.71	90.65	0.55
USACE	13940	500YR	1539.00	391.92	397.15	397.15	398.39	0.004085	6.42	207.73	104.86	0.54
USACE	13940	SEPT2011	864.00	391.92	396.36	396.36	397.20	0.005001	6.22	135.32	90.65	0.57
USACE	13901	2YR	258.00	391.56	394.79	394.79	395.20	0.006467	5.61	57.47	59.94	0.63
USACE	13901	5YR	429.00	391.56	395.13	395.13	395.66	0.007534	6.59	79.25	73.56	0.69
USACE	13901	10YR	569.00	391.56	395.39	395.39	395.97	0.007264	6.87	100.19	85.84	0.69
USACE	13901	25YR	801.00	391.56	395.76	395.76	396.41	0.006673	7.10	136.67	113.47	0.68
USACE	13901	50YR	976.00	391.56	395.96	395.96	396.68	0.006634	7.36	160.24	117.45	0.68
USACE	13901	100YR	1143.00	391.56	396.13	396.13	396.92	0.006731	7.63	179.68	129.09	0.69
USACE	13901	100YRPLUS	1495.00	391.56	396.45	396.45	397.38	0.006753	8.07	218.72	158.93	0.70
USACE	13901	200YR	1292.00	391.56	396.27	396.27	397.12	0.006724	7.82	196.88	149.84	0.69
USACE	13901	500YR	1539.00	391.56	396.47	396.47	397.43	0.006968	8.22	220.85	159.50	0.71
USACE	13901	SEPT2011	864.00	391.56	395.83	395.83	396.51	0.006725	7.22	144.83	115.06	0.68
USACE	13865	2YR	258.00	391.20	394.74	394.03	394.78	0.000974	2.23	169.86	146.50	0.24
USACE	13865	5YR	429.00	391.20	395.00	394.30	395.08	0.001422	2.86	207.42	154.23	0.29
USACE	13865	10YR	569.00	391.20	395.21	394.48	395.31	0.001617	3.18	237.69	163.98	0.31
USACE	13865	25YR	801.00	391.20	395.51	394.68	395.65	0.001830	3.59	285.13	181.91	0.34
USACE	13865	50YR	976.00	391.20	395.70	394.81	395.87	0.001974	3.87	317.06	192.63	0.35
USACE	13865	100YR	1143.00	391.20	395.83	394.94	396.04	0.002210	4.18	339.37	198.37	0.37
USACE	13865	100YRPLUS	1495.00	391.20	396.14	395.17	396.40	0.002453	4.63	392.21	210.31	0.40
USACE	13865	200YR	1292.00	391.20	395.98	395.04	396.21	0.002271	4.35	364.98	203.74	0.38
USACE	13865	500YR	1539.00	391.20	396.20	395.20	396.46	0.002402	4.63	402.69	212.58	0.40
USACE	13865	SEPT2011	864.00	391.20	395.58	394.73	395.73	0.001912	3.72	295.45	185.03	0.34
USACE	13827	2YR	258.00	389.80	394.65	393.62	394.73	0.001150	3.18	169.88	158.98	0.27
USACE	13827	5YR	429.00	389.80	394.86	394.50	395.00	0.001929	4.26	204.88	163.63	0.36
USACE	13827	10YR	569.00	389.80	395.06	394.66	395.22	0.002247	4.73	238.05	169.96	0.39
USACE	13827	25YR	801.00	389.80	395.37	394.88	395.55	0.002484	5.20	292.62	180.09	0.41
USACE	13827	50YR	976.00	389.80	395.57	395.02	395.77	0.002633	5.50	329.34	186.96	0.43
USACE	13827	100YR	1143.00	389.80	395.70	395.14	395.93	0.002948	5.91	352.73	188.89	0.46
USACE	13827	100YRPLUS	1495.00	389.80	396.03	395.37	396.29	0.003112	6.33	415.59	195.36	0.47
USACE	13827	200YR	1292.00	389.80	395.86	395.24	396.10	0.002931	6.02	384.10	192.06	0.46
USACE	13827	500YR	1539.00	389.80	396.09	395.40	396.35	0.003008	6.27	428.57	196.22	0.47
USACE	13827	SEPT2011	864.00	389.80	395.44	394.92	395.63	0.002601	5.36	303.64	182.16	0.43
USACE	13812 Private Drive		Culvert									
USACE	13799	2YR	258.00	389.80	394.67		394.71	0.000655	2.26	192.65	146.55	0.20
USACE	13799	5YR	429.00	389.80	394.89		394.97	0.001142	3.09	225.30	150.73	0.26
USACE	13799	10YR	569.00	389.80	395.11		395.20	0.001344	3.46	258.45	157.35	0.29
USACE	13799	25YR	801.00	389.80	395.38		395.51	0.001672	4.02	303.51	167.94	0.33
USACE	13799	50YR	976.00	389.80	395.56		395.72	0.001873	4.36	334.26	172.84	0.35
USACE	13799	100YR	1143.00	389.80	395.71		395.89	0.002076	4.68	359.25	174.90	0.37
USACE	13799	100YRPLUS	1495.00	389.80	396.01		396.24	0.002361	5.19	412.31	179.51	0.40
USACE	13799	200YR	1292.00	389.80	395.86		396.06	0.002145	4.85	385.92	177.08	0.38

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	13799	500YR	1539.00	389.80	396.04		396.28	0.002396	5.25	418.47	180.22	0.40
USACE	13799	SEPT2011	864.00	389.80	395.45		395.59	0.001747	4.15	314.88	169.88	0.33
USACE	13756	2YR	258.00	389.80	393.61	393.61	394.41	0.009022	7.40	40.44	38.83	0.79
USACE	13756	5YR	429.00	389.80	394.33	394.33	394.77	0.004908	6.39	104.27	117.92	0.61
USACE	13756	10YR	569.00	389.80	394.58	394.58	395.00	0.004808	6.63	138.89	159.65	0.61
USACE	13756	25YR	801.00	389.80	394.81	394.81	395.29	0.005452	7.34	176.72	171.29	0.65
USACE	13756	50YR	976.00	389.80	394.95	394.95	395.48	0.005909	7.82	200.34	174.02	0.68
USACE	13756	100YR	1143.00	389.80	395.09	395.09	395.64	0.005948	8.04	225.71	176.92	0.69
USACE	13756	100YRPLUS	1495.00	389.80	395.31	395.31	395.96	0.006608	8.76	265.26	181.18	0.73
USACE	13756	200YR	1292.00	389.80	395.15	395.15	395.78	0.006706	8.61	236.66	178.16	0.74
USACE	13756	500YR	1539.00	389.80	395.34	395.34	395.99	0.006659	8.83	270.21	181.69	0.74
USACE	13756	SEPT2011	864.00	389.80	394.86	394.86	395.36	0.005631	7.53	185.42	172.31	0.67
USACE	13676	2YR	258.00	388.88	391.93	391.64	392.62	0.008618	6.69	40.21	21.36	0.78
USACE	13676	5YR	429.00	388.88	392.47	392.47	393.63	0.011325	8.82	52.73	25.70	0.93
USACE	13676	10YR	569.00	388.88	393.48	393.48	394.13	0.004963	7.17	108.81	80.28	0.65
USACE	13676	25YR	801.00	388.88	394.01	394.01	394.55	0.004041	7.05	168.95	149.96	0.60
USACE	13676	50YR	976.00	388.88	394.20	394.20	394.77	0.004192	7.39	197.44	169.30	0.61
USACE	13676	100YR	1143.00	388.88	394.35	394.35	394.96	0.004415	7.75	220.71	186.19	0.63
USACE	13676	100YRPLUS	1495.00	388.88	394.62	394.62	395.30	0.004769	8.36	265.24	203.16	0.66
USACE	13676	200YR	1292.00	388.88	394.49	394.49	395.11	0.004489	7.97	242.42	199.62	0.64
USACE	13676	500YR	1539.00	388.88	394.65	394.65	395.34	0.004879	8.48	268.83	203.71	0.67
USACE	13676	SEPT2011	864.00	388.88	394.09	394.09	394.63	0.004043	7.14	180.51	156.13	0.60
USACE	13541	2YR	258.00	387.69	390.84	390.37	391.43	0.008441	6.28	47.65	35.02	0.69
USACE	13541	5YR	429.00	387.69	391.67	391.67	392.16	0.005927	6.33	108.17	127.87	0.60
USACE	13541	10YR	569.00	387.69	392.01	391.91	392.45	0.005367	6.41	146.10	143.25	0.58
USACE	13541	25YR	801.00	387.69	392.59	392.22	392.95	0.004044	6.12	216.97	169.49	0.52
USACE	13541	50YR	976.00	387.69	392.96	392.41	393.29	0.003487	6.01	267.40	172.86	0.49
USACE	13541	100YR	1143.00	387.69	393.28	392.60	393.60	0.003171	5.99	310.76	175.68	0.47
USACE	13541	100YRPLUS	1495.00	387.69	393.85	392.90	394.18	0.002891	6.13	387.80	180.70	0.46
USACE	13541	200YR	1292.00	387.69	393.54	392.73	393.86	0.003006	6.02	345.57	177.85	0.46
USACE	13541	500YR	1539.00	387.69	393.91	392.93	394.25	0.002873	6.16	396.50	181.28	0.46
USACE	13541	SEPT2011	864.00	387.69	392.73	392.28	393.07	0.003827	6.08	235.31	170.73	0.51
USACE	13406	2YR	258.00	386.32	389.14	389.14	389.96	0.014215	7.69	41.31	27.05	0.92
USACE	13406	5YR	429.00	386.32	389.83	389.83	390.91	0.013790	9.09	61.39	49.42	0.95
USACE	13406	10YR	569.00	386.32	390.69	390.69	391.53	0.008342	8.42	106.88	162.30	0.77
USACE	13406	25YR	801.00	386.32	391.20	391.20	392.13	0.008488	9.26	144.29	185.76	0.79
USACE	13406	50YR	976.00	386.32	391.48	391.48	392.51	0.009078	9.99	165.38	216.05	0.83
USACE	13406	100YR	1143.00	386.32	391.74	391.74	392.85	0.009356	10.52	186.18	224.50	0.85
USACE	13406	100YRPLUS	1495.00	386.32	392.29	392.29	393.46	0.009133	11.18	233.13	250.84	0.85
USACE	13406	200YR	1292.00	386.32	391.98	391.98	393.12	0.009320	10.85	206.17	234.86	0.85
USACE	13406	500YR	1539.00	386.32	392.35	392.35	393.53	0.009113	11.25	238.55	252.67	0.85
USACE	13406	SEPT2011	864.00	386.32	391.32	391.32	392.27	0.008582	9.48	153.05	194.18	0.80
USACE	13259	2YR	258.00	383.70	386.56	386.07	386.97	0.006411	5.23	53.70	30.71	0.62
USACE	13259	5YR	429.00	383.70	387.30	386.70	387.86	0.006286	6.26	77.32	33.53	0.64
USACE	13259	10YR	569.00	383.70	387.82	387.13	388.49	0.006076	6.86	95.49	35.50	0.65
USACE	13259	25YR	801.00	383.70	388.30	387.75	389.28	0.007608	8.37	113.04	51.62	0.74
USACE	13259	50YR	976.00	383.70	388.47	388.17	389.86	0.010261	9.98	119.85	61.84	0.86
USACE	13259	100YR	1143.00	383.70	388.86	388.86	390.36	0.009975	10.45	141.07	76.28	0.87
USACE	13259	100YRPLUS	1495.00	383.70	389.91	389.91	391.06	0.006531	9.72	231.79	204.83	0.72
USACE	13259	200YR	1292.00	383.70	389.61	389.61	390.73	0.006514	9.36	201.07	174.61	0.72
USACE	13259	500YR	1539.00	383.70	389.97	389.97	391.13	0.006541	9.79	238.13	206.13	0.73
USACE	13259	SEPT2011	864.00	383.70	388.37	387.91	389.47	0.008446	8.91	115.52	53.81	0.78
USACE	13105	2YR	258.00	382.83	385.66	385.10	386.03	0.005679	5.34	60.20	33.19	0.60
USACE	13105	5YR	429.00	382.83	386.26	385.70	386.84	0.006936	6.81	81.45	38.64	0.68
USACE	13105	10YR	569.00	382.83	386.56	386.09	387.36	0.008681	8.10	97.58	69.32	0.78
USACE	13105	25YR	801.00	382.83	387.30	387.30	388.07	0.007258	8.46	169.13	122.68	0.73
USACE	13105	50YR	976.00	382.83	387.60	387.60	388.37	0.007103	8.78	209.07	142.12	0.74
USACE	13105	100YR	1143.00	382.83	387.85	387.85	388.62	0.007004	9.03	245.14	159.21	0.74
USACE	13105	100YRPLUS	1495.00	382.83	388.17	388.17	389.05	0.007969	10.07	295.32	180.71	0.79
USACE	13105	200YR	1292.00	382.83	388.02	388.02	388.81	0.007122	9.33	271.89	168.17	0.75
USACE	13105	500YR	1539.00	382.83	388.33	388.33	389.11	0.006931	9.59	323.95	206.94	0.74
USACE	13105	SEPT2011	864.00	382.83	387.45	387.45	388.19	0.006884	8.44	188.17	133.20	0.72
USACE	12949	2YR	283.00	381.29	384.59	383.98	385.08	0.006249	5.76	53.30	94.72	0.63
USACE	12949	5YR	474.00	381.29	385.31	385.31	385.85	0.005738	6.50	114.95	204.05	0.63
USACE	12949	10YR	635.00	381.29	385.60	385.60	386.18	0.006072	7.07	151.48	212.32	0.65
USACE	12949	25YR	906.00	381.29	386.14	385.96	386.65	0.005192	7.17	221.83	228.55	0.62
USACE	12949	50YR	1116.00	381.29	386.50	386.19	386.99	0.004739	7.24	271.77	240.78	0.60
USACE	12949	100YR	1332.00	381.29	386.83	386.39	387.31	0.004492	7.39	318.53	257.59	0.59
USACE	12949	100YRPLUS	1742.00	381.29	387.39	386.73	387.89	0.004298	7.77	403.72	288.80	0.59
USACE	12949	200YR	1522.00	381.29	387.10	386.55	387.58	0.004352	7.54	358.27	272.92	0.59
USACE	12949	500YR	1786.00	381.29	387.45	386.76	387.94	0.004245	7.78	413.01	290.75	0.59
USACE	12949	SEPT2011	956.00	381.29	386.23	386.01	386.73	0.005081	7.19	233.79	231.38	0.61
USACE	12793	2YR	283.00	380.32	383.30	382.89	383.95	0.008437	6.58	45.56	98.37	0.72
USACE	12793	5YR	474.00	380.32	384.10	384.10	384.74	0.006755	7.06	99.39	175.26	0.68
USACE	12793	10YR	635.00	380.32	384.43	384.43	385.12	0.007147	7.72	128.86	182.03	0.71
USACE	12793	25YR	906.00	380.32	384.85	384.85	385.64	0.007764	8.65	168.59	189.48	0.75
USACE	12793	50YR	1116.00	380.32	385.11	385.11	385.99	0.008311	9.32	193.62	193.94	0.78
USACE	12793	100YR	1332.00	380.32	385.36	385.36	386.32	0.008707	9.90	217.96	198.77	0.81
USACE	12793	100YRPLUS	1742.00	380.32	385.76	385.76	386.87	0.009437	10.89	258.47	206.54	0.86
USACE	12793	200YR	1522.00	380.32	385.55	385.55	386.58	0.009070	10.38	237.28	202.49	0.83
USACE	12793	500YR	1786.00	380.32	385.80	385.80	386.93	0.009538	11.00	262.25	207.35	0.86

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	12793	SEPT2011	956.00	380.32	384.92	384.92	385.73	0.007854	8.80	175.24	190.70	0.76
USACE	12609	2YR	283.00	379.92	381.90	381.54	382.20	0.009704	5.62	84.90	107.25	0.74
USACE	12609	5YR	474.00	379.92	382.31	382.18	382.62	0.008572	6.08	134.21	151.95	0.72
USACE	12609	10YR	635.00	379.92	382.58	382.41	382.91	0.007912	6.31	176.65	184.57	0.71
USACE	12609	25YR	906.00	379.92	382.94	382.70	383.28	0.007340	6.66	235.19	222.01	0.70
USACE	12609	50YR	1116.00	379.92	383.12	382.86	383.51	0.007806	7.17	265.71	232.40	0.73
USACE	12609	100YR	1332.00	379.92	383.30	383.03	383.74	0.008184	7.62	294.47	240.55	0.75
USACE	12609	100YRPLUS	1742.00	379.92	383.59	383.28	384.12	0.008901	8.42	341.63	258.96	0.80
USACE	12609	200YR	1522.00	379.92	383.44	383.15	383.92	0.008515	8.00	317.38	248.43	0.77
USACE	12609	500YR	1786.00	379.92	383.62	383.31	384.16	0.008951	8.49	346.57	261.17	0.80
USACE	12609	SEPT2011	956.00	379.92	382.99	382.74	383.34	0.007434	6.78	243.04	225.37	0.71
USACE	12509	2YR	283.00	378.64	381.24	381.24	381.49	0.005341	4.72	101.47	134.79	0.57
USACE	12509	5YR	474.00	378.64	381.53	381.45	381.87	0.006959	5.87	143.38	154.15	0.66
USACE	12509	10YR	635.00	378.64	381.71	381.66	382.12	0.008037	6.62	172.52	163.05	0.72
USACE	12509	25YR	906.00	378.64	382.03	381.96	382.49	0.008596	7.38	227.95	186.65	0.76
USACE	12509	50YR	1116.00	378.64	382.25	382.16	382.72	0.008297	7.62	270.32	194.98	0.76
USACE	12509	100YR	1332.00	378.64	382.45	382.31	382.93	0.008217	7.89	308.56	209.77	0.76
USACE	12509	100YRPLUS	1742.00	378.64	382.76	382.58	383.28	0.008147	8.34	374.35	233.85	0.77
USACE	12509	200YR	1522.00	378.64	382.60	382.44	383.10	0.008203	8.11	339.79	228.66	0.76
USACE	12509	500YR	1786.00	378.64	382.79	382.61	383.31	0.008134	8.38	381.09	234.82	0.77
USACE	12509	SEPT2011	956.00	378.64	382.09	382.02	382.55	0.008530	7.45	238.40	188.86	0.76
USACE	12395	2YR	283.00	377.48	380.29	380.29	380.61	0.007924	5.95	96.97	136.77	0.69
USACE	12395	5YR	474.00	377.48	380.59	380.58	380.96	0.009150	6.94	140.63	151.95	0.76
USACE	12395	10YR	635.00	377.48	380.92		381.23	0.007117	6.63	192.82	162.53	0.68
USACE	12395	25YR	906.00	377.48	381.34		381.63	0.006037	6.67	262.89	174.21	0.64
USACE	12395	50YR	1116.00	377.48	381.58		381.88	0.005841	6.88	308.42	200.10	0.64
USACE	12395	100YR	1332.00	377.48	381.81		382.11	0.005593	7.00	355.58	217.87	0.63
USACE	12395	100YRPLUS	1742.00	377.48	382.16		382.49	0.005237	7.19	435.61	230.63	0.62
USACE	12395	200YR	1522.00	377.48	381.98		382.29	0.005395	7.09	394.02	222.90	0.63
USACE	12395	500YR	1786.00	377.48	382.20		382.52	0.005207	7.21	443.86	232.46	0.62
USACE	12395	SEPT2011	956.00	377.48	381.40		381.69	0.005988	6.72	273.64	179.19	0.64
USACE	12257	2YR	283.00	376.64	379.93		379.99	0.001333	3.01	193.97	160.16	0.30
USACE	12257	5YR	474.00	376.64	380.37		380.45	0.001527	3.52	267.59	170.50	0.33
USACE	12257	10YR	635.00	376.64	380.65		380.74	0.001712	3.92	315.25	178.14	0.35
USACE	12257	25YR	906.00	376.64	381.02		381.14	0.001970	4.47	384.80	205.79	0.39
USACE	12257	50YR	1116.00	376.64	381.24		381.38	0.002113	4.79	431.94	211.93	0.40
USACE	12257	100YR	1332.00	376.64	381.45		381.60	0.002222	5.07	476.64	218.95	0.42
USACE	12257	100YRPLUS	1742.00	376.64	381.79		381.98	0.002409	5.53	554.09	239.55	0.44
USACE	12257	200YR	1522.00	376.64	381.61		381.78	0.002310	5.29	513.32	229.32	0.43
USACE	12257	500YR	1786.00	376.64	381.82		382.01	0.002422	5.57	562.41	240.80	0.44
USACE	12257	SEPT2011	956.00	376.64	381.07		381.20	0.002013	4.56	396.20	207.26	0.39
USACE	12135	2YR	283.00	375.59	379.80		379.85	0.000904	2.75	207.54	151.77	0.25
USACE	12135	5YR	474.00	375.59	380.21		380.29	0.001162	3.34	272.54	164.91	0.29
USACE	12135	10YR	635.00	375.59	380.46		380.55	0.001378	3.79	316.34	187.12	0.32
USACE	12135	25YR	906.00	375.59	380.80		380.92	0.001566	4.25	384.05	207.23	0.35
USACE	12135	50YR	1116.00	375.59	381.01		381.15	0.001723	4.58	428.55	221.11	0.37
USACE	12135	100YR	1332.00	375.59	381.20		381.36	0.001851	4.87	471.08	225.04	0.38
USACE	12135	100YRPLUS	1742.00	375.59	381.50		381.70	0.002097	5.39	541.59	238.20	0.41
USACE	12135	200YR	1522.00	375.59	381.35		381.52	0.001966	5.12	505.12	232.68	0.39
USACE	12135	500YR	1786.00	375.59	381.54		381.74	0.002115	5.44	549.29	239.79	0.41
USACE	12135	SEPT2011	956.00	375.59	380.85		380.98	0.001613	4.34	394.37	212.31	0.35
USACE	12089	2YR	283.00	374.08	379.79	376.75	379.82	0.000239	1.72	299.50	201.98	0.14
USACE	12089	5YR	474.00	374.08	380.20	377.55	380.24	0.000364	2.23	387.36	225.50	0.17
USACE	12089	10YR	635.00	374.08	380.44	378.10	380.50	0.000452	2.56	443.00	229.07	0.19
USACE	12089	25YR	906.00	374.08	380.79	378.92	380.86	0.000577	3.00	524.41	250.98	0.22
USACE	12089	50YR	1116.00	374.08	380.99	379.63	381.08	0.000674	3.32	575.84	256.05	0.23
USACE	12089	100YR	1332.00	374.08	381.18	379.76	381.28	0.000767	3.61	624.58	262.89	0.25
USACE	12089	100YRPLUS	1742.00	374.08	381.48	380.05	381.61	0.000936	4.12	705.52	277.31	0.28
USACE	12089	200YR	1522.00	374.08	381.32	379.94	381.44	0.000846	3.85	663.64	269.82	0.27
USACE	12089	500YR	1786.00	374.08	381.51	380.16	381.65	0.000951	4.16	714.37	278.63	0.28
USACE	12089	SEPT2011	956.00	374.08	380.83	379.44	380.91	0.000603	3.09	536.63	252.16	0.22
USACE	12066 Silver Spring Ro		Bridge									
USACE	12044	2YR	283.00	373.19	377.34		377.59	0.002206	4.08	79.90	55.42	0.39
USACE	12044	5YR	474.00	373.19	377.61	376.55	378.17	0.004544	6.16	101.52	91.01	0.56
USACE	12044	10YR	635.00	373.19	377.87	377.12	378.63	0.005919	7.35	126.18	101.66	0.65
USACE	12044	25YR	906.00	373.19	378.44	378.44	379.25	0.005969	8.07	196.21	158.77	0.67
USACE	12044	50YR	1116.00	373.19	378.79	378.79	379.58	0.005801	8.36	255.61	181.03	0.66
USACE	12044	100YR	1332.00	373.19	379.05	379.05	379.87	0.005939	8.75	305.51	195.56	0.68
USACE	12044	100YRPLUS	1742.00	373.19	379.43	379.43	380.31	0.006443	9.56	381.76	208.28	0.71
USACE	12044	200YR	1522.00	373.19	379.23	379.23	380.08	0.006246	9.18	340.36	201.27	0.70
USACE	12044	500YR	1786.00	373.19	379.48	379.48	380.36	0.006423	9.60	391.39	209.94	0.71
USACE	12044	SEPT2011	956.00	373.19	378.53	378.53	379.34	0.005906	8.14	211.38	168.31	0.66
USACE	11984	2YR	283.00	373.18	376.73	376.35	377.28	0.007477	6.59	73.00	80.54	0.69
USACE	11984	5YR	474.00	373.18	377.30	377.30	377.83	0.006936	7.18	135.85	124.85	0.69
USACE	11984	10YR	635.00	373.18	377.56	377.56	378.14	0.007685	7.93	169.26	131.97	0.73
USACE	11984	25YR	906.00	373.18	377.93	377.93	378.58	0.008522	8.90	218.55	140.00	0.78
USACE	11984	50YR	1116.00	373.18	378.10	378.10	378.87	0.009910	9.87	243.50	144.11	0.85
USACE	11984	100YR	1332.00	373.18	378.37	378.37	379.15	0.009774	10.21	283.52	157.88	0.85
USACE	11984	100YRPLUS	1742.00	373.18	378.75	378.62	379.65	0.010857	11.36	347.19	183.35	0.91
USACE	11984	200YR	1522.00	373.18	378.53	378.53	379.36	0.010248	10.71	309.70	165.83	0.88

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	11984	500YR	1786.00	373.18	378.85	378.85	379.69	0.009919	11.02	366.89	185.75	0.87
USACE	11984	SEPT2011	956.00	373.18	377.97	377.97	378.65	0.008815	9.12	225.13	140.92	0.80
USACE	11844	2YR	283.00	372.59	375.54	375.53	376.07	0.010090	7.11	75.81	113.91	0.77
USACE	11844	5YR	474.00	372.59	376.10	376.10	376.53	0.008159	7.26	152.42	148.42	0.71
USACE	11844	10YR	635.00	372.59	376.30	376.30	376.79	0.009382	8.10	182.63	153.74	0.77
USACE	11844	25YR	906.00	372.59	376.66		377.15	0.009546	8.72	238.04	161.22	0.79
USACE	11844	50YR	1116.00	372.59	376.91		377.41	0.009272	8.98	280.08	165.65	0.79
USACE	11844	100YR	1332.00	372.59	377.16		377.66	0.009047	9.22	320.86	170.04	0.78
USACE	11844	100YRPLUS	1742.00	372.59	377.59		378.15	0.009307	9.98	399.05	196.87	0.81
USACE	11844	200YR	1522.00	372.59	377.36		377.87	0.008950	9.46	355.63	175.75	0.79
USACE	11844	500YR	1786.00	372.59	377.63		378.19	0.009341	10.05	406.74	199.11	0.81
USACE	11844	SEPT2011	956.00	372.59	376.73		377.22	0.009235	8.70	250.66	162.56	0.78
USACE	11643	2YR	283.00	371.00	374.10		374.40	0.006407	5.41	96.09	106.17	0.60
USACE	11643	5YR	474.00	371.00	374.60		374.91	0.006132	5.98	164.36	176.16	0.61
USACE	11643	10YR	635.00	371.00	374.90		375.20	0.005826	6.21	219.26	190.31	0.60
USACE	11643	25YR	906.00	371.00	375.24		375.57	0.006214	6.84	286.79	203.83	0.63
USACE	11643	50YR	1116.00	371.00	375.46		375.82	0.006515	7.29	332.55	211.86	0.65
USACE	11643	100YR	1332.00	371.00	375.65	375.30	376.04	0.006911	7.75	374.39	219.55	0.68
USACE	11643	100YRPLUS	1742.00	371.00	375.98	375.59	376.42	0.007654	8.59	447.84	236.18	0.72
USACE	11643	200YR	1522.00	371.00	375.81	375.45	376.22	0.007267	8.15	408.36	226.05	0.70
USACE	11643	500YR	1786.00	371.00	376.01	375.62	376.46	0.007714	8.66	454.92	237.09	0.73
USACE	11643	SEPT2011	956.00	371.00	375.27		375.62	0.006590	7.08	292.51	204.85	0.65
USACE	11398	2YR	283.00	369.97	372.70	372.55	372.96	0.005284	4.62	109.00	168.81	0.54
USACE	11398	5YR	474.00	369.97	373.01	372.95	373.34	0.006682	5.66	170.56	216.12	0.62
USACE	11398	10YR	635.00	369.97	373.21	373.13	373.58	0.007469	6.29	214.94	241.52	0.67
USACE	11398	25YR	906.00	369.97	373.51	373.46	373.89	0.007652	6.81	294.66	282.51	0.69
USACE	11398	50YR	1116.00	369.97	373.68	373.60	374.07	0.007758	7.12	345.69	288.02	0.70
USACE	11398	100YR	1332.00	369.97	373.86	373.71	374.25	0.007729	7.36	395.63	291.67	0.70
USACE	11398	100YRPLUS	1742.00	369.97	374.18		374.57	0.007298	7.60	490.96	298.39	0.69
USACE	11398	200YR	1522.00	369.97	374.01	373.83	374.40	0.007518	7.47	440.79	295.01	0.70
USACE	11398	500YR	1786.00	369.97	374.21		374.60	0.007251	7.62	500.87	299.02	0.69
USACE	11398	SEPT2011	956.00	369.97	373.58	373.50	373.94	0.007179	6.70	315.85	285.75	0.67
USACE	11178	2YR	283.00	369.56	371.34	371.25	371.49	0.008369	4.17	131.30	236.19	0.63
USACE	11178	5YR	474.00	369.56	371.66	371.45	371.81	0.006824	4.34	205.36	256.97	0.59
USACE	11178	10YR	635.00	369.56	371.91	371.58	372.05	0.005946	4.44	262.81	265.76	0.56
USACE	11178	25YR	906.00	369.56	372.27	371.76	372.43	0.005358	4.72	352.85	308.47	0.55
USACE	11178	50YR	1116.00	369.56	372.52	371.89	372.68	0.004836	4.80	418.17	317.00	0.53
USACE	11178	100YR	1332.00	369.56	372.75	372.00	372.92	0.004476	4.90	480.26	325.18	0.52
USACE	11178	100YRPLUS	1742.00	369.56	373.16	372.20	373.34	0.004049	5.10	587.35	337.89	0.50
USACE	11178	200YR	1522.00	369.56	372.95	372.11	373.12	0.004206	4.98	533.08	331.63	0.51
USACE	11178	500YR	1786.00	369.56	373.21	372.21	373.38	0.003980	5.11	599.82	339.11	0.50
USACE	11178	SEPT2011	956.00	369.56	372.27	371.80	372.45	0.005955	4.98	353.05	308.50	0.58
USACE	10996	2YR	348.00	368.35	370.39		370.45	0.004179	3.21	203.04	211.02	0.45
USACE	10996	5YR	594.00	368.35	370.83		370.91	0.003741	3.58	305.98	249.08	0.44
USACE	10996	10YR	808.00	368.35	371.14		371.22	0.003608	3.86	383.42	266.76	0.45
USACE	10996	25YR	1159.00	368.35	371.54		371.65	0.003512	4.24	493.87	279.02	0.45
USACE	10996	50YR	1433.00	368.35	371.82		371.94	0.003448	4.49	573.01	286.59	0.46
USACE	10996	100YR	1711.00	368.35	372.07		372.20	0.003449	4.74	646.22	295.17	0.46
USACE	10996	100YRPLUS	2238.00	368.35	372.50		372.66	0.003428	5.13	775.98	307.24	0.47
USACE	10996	200YR	1963.00	368.35	372.29		372.43	0.003418	4.92	711.22	301.54	0.47
USACE	10996	500YR	2305.00	368.35	372.55		372.71	0.003433	5.18	791.33	308.83	0.47
USACE	10996	SEPT2011	1136.00	368.35	371.52		371.62	0.003517	4.22	486.96	278.14	0.45
USACE	10779	2YR	348.00	367.27	369.57		369.66	0.003488	3.36	190.04	180.92	0.43
USACE	10779	5YR	594.00	367.27	370.02		370.14	0.003709	3.99	279.23	218.46	0.46
USACE	10779	10YR	808.00	367.27	370.31		370.45	0.003842	4.39	345.60	235.02	0.48
USACE	10779	25YR	1159.00	367.27	370.70		370.87	0.003999	4.91	439.47	247.31	0.50
USACE	10779	50YR	1433.00	367.27	370.96		371.15	0.004152	5.29	505.78	260.12	0.51
USACE	10779	100YR	1711.00	367.27	371.20		371.41	0.004250	5.60	568.99	269.14	0.52
USACE	10779	100YRPLUS	2238.00	367.27	371.61		371.84	0.004387	6.12	681.44	284.99	0.54
USACE	10779	200YR	1963.00	367.27	371.41		371.63	0.004315	5.86	625.33	278.76	0.53
USACE	10779	500YR	2305.00	367.27	371.65		371.89	0.004408	6.18	694.51	286.51	0.55
USACE	10779	SEPT2011	1136.00	367.27	370.68		370.84	0.003986	4.88	433.72	246.39	0.49
USACE	10479	2YR	348.00	365.52	368.29		368.49	0.005715	4.78	140.26	177.11	0.56
USACE	10479	5YR	594.00	365.52	368.71		368.93	0.005922	5.45	225.60	222.59	0.59
USACE	10479	10YR	808.00	365.52	368.99		369.22	0.005986	5.85	289.53	239.23	0.60
USACE	10479	25YR	1159.00	365.52	369.35		369.61	0.006190	6.42	379.26	258.84	0.62
USACE	10479	50YR	1433.00	365.52	369.58		369.86	0.006377	6.81	439.54	268.05	0.64
USACE	10479	100YR	1711.00	365.52	369.79		370.09	0.006480	7.14	497.82	276.65	0.65
USACE	10479	100YRPLUS	2238.00	365.52	370.15		370.49	0.006736	7.73	600.30	297.45	0.67
USACE	10479	200YR	1963.00	365.52	369.97		370.29	0.006623	7.45	548.28	288.85	0.66
USACE	10479	500YR	2305.00	365.52	370.19		370.53	0.006758	7.80	612.38	298.70	0.67
USACE	10479	SEPT2011	1136.00	365.52	369.33		369.59	0.006176	6.39	373.92	258.18	0.62
USACE	10220	2YR	348.00	364.67	367.44		367.52	0.002688	3.33	205.56	245.88	0.39
USACE	10220	5YR	594.00	364.67	367.77		367.88	0.003063	3.89	290.24	263.02	0.42
USACE	10220	10YR	808.00	364.67	368.02		368.14	0.003204	4.22	357.14	281.47	0.44
USACE	10220	25YR	1159.00	364.67	368.34		368.48	0.003311	4.61	451.03	298.28	0.45
USACE	10220	50YR	1433.00	364.67	368.56		368.71	0.003353	4.84	517.20	316.06	0.46
USACE	10220	100YR	1711.00	364.67	368.75		368.93	0.003387	5.06	580.99	324.30	0.47
USACE	10220	100YRPLUS	2238.00	364.67	369.09		369.29	0.003413	5.39	695.44	357.20	0.48
USACE	10220	200YR	1963.00	364.67	368.92		369.11	0.003414	5.23	635.16	331.00	0.47
USACE	10220	500YR	2305.00	364.67	369.14		369.34	0.003392	5.41	711.27	359.70	0.48

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	10220	SEPT2011	1136.00	364.67	368.32		368.46	0.003308	4.59	445.33	297.16	0.45
USACE	9956	2YR	348.00	363.68	366.63		366.71	0.003650	3.89	238.26	346.82	0.45
USACE	9956	5YR	594.00	363.68	366.99		367.07	0.003115	3.96	368.76	367.11	0.42
USACE	9956	10YR	808.00	363.68	367.21		367.30	0.003181	4.22	451.32	377.77	0.43
USACE	9956	25YR	1159.00	363.68	367.52		367.62	0.003214	4.53	570.34	387.69	0.44
USACE	9956	50YR	1433.00	363.68	367.72		367.82	0.003343	4.81	646.25	392.93	0.46
USACE	9956	100YR	1711.00	363.68	367.91		368.02	0.003410	5.03	720.88	399.15	0.47
USACE	9956	100YRPLUS	2238.00	363.68	368.21		368.35	0.003676	5.51	844.39	418.21	0.49
USACE	9956	200YR	1963.00	363.68	368.05		368.18	0.003550	5.27	779.17	405.29	0.48
USACE	9956	500YR	2305.00	363.68	368.26		368.40	0.003639	5.53	864.04	420.47	0.49
USACE	9956	SEPT2011	1136.00	363.68	367.50		367.59	0.003250	4.54	560.87	386.99	0.45
USACE	9808	2YR	348.00	363.45	366.48	365.14	366.49	0.000701	1.91	430.01	383.95	0.20
USACE	9808	5YR	594.00	363.45	366.79	365.97	366.82	0.000967	2.41	553.37	396.06	0.24
USACE	9808	10YR	808.00	363.45	366.97	366.08	367.00	0.001254	2.85	622.81	403.72	0.28
USACE	9808	25YR	1159.00	363.45	367.23	366.25	367.28	0.001596	3.39	730.67	419.28	0.32
USACE	9808	50YR	1433.00	363.45	367.38	366.37	367.45	0.001877	3.78	796.95	427.85	0.35
USACE	9808	100YR	1711.00	363.45	367.55	366.48	367.63	0.002063	4.09	867.88	435.11	0.37
USACE	9808	100YRPLUS	2238.00	363.45	367.80	366.65	367.90	0.002434	4.63	979.68	444.48	0.41
USACE	9808	200YR	1963.00	363.45	367.67	366.57	367.76	0.002278	4.38	919.16	439.57	0.39
USACE	9808	500YR	2305.00	363.45	367.85	366.68	367.96	0.002402	4.64	1002.88	446.15	0.40
USACE	9808	SEPT2011	1136.00	363.45	367.20	366.25	367.25	0.001607	3.38	719.36	417.52	0.32
USACE	9749	2YR	348.00	362.20	366.43	365.88	366.45	0.000694	2.22	416.67	354.23	0.21
USACE	9749	5YR	594.00	362.20	366.72	365.97	366.76	0.001046	2.88	522.33	366.15	0.26
USACE	9749	10YR	808.00	362.20	366.87	366.07	366.92	0.001441	3.46	577.15	374.42	0.30
USACE	9749	25YR	1159.00	362.20	367.10	366.29	367.17	0.001946	4.17	664.57	393.89	0.35
USACE	9749	50YR	1433.00	362.20	367.22	366.41	367.32	0.002420	4.74	714.47	402.18	0.40
USACE	9749	100YR	1711.00	362.20	367.37	366.51	367.48	0.002737	5.15	772.61	409.04	0.42
USACE	9749	100YRPLUS	2238.00	362.20	367.58	366.71	367.73	0.003431	5.94	859.64	424.77	0.48
USACE	9749	200YR	1963.00	362.20	367.46	366.61	367.59	0.003142	5.59	810.13	417.61	0.46
USACE	9749	500YR	2305.00	362.20	367.63	366.73	367.79	0.003351	5.91	884.06	427.58	0.47
USACE	9749	SEPT2011	1136.00	362.20	367.07	366.28	367.15	0.001964	4.17	653.48	389.74	0.35
USACE	9722 Meadow Spring Ro		Mult Open									
USACE	9697	2YR	348.00	361.83	365.27	365.19	365.70	0.008612	6.47	97.65	127.79	0.69
USACE	9697	5YR	594.00	361.83	365.80	365.80	366.16	0.007443	6.77	201.56	285.66	0.66
USACE	9697	10YR	808.00	361.83	366.00	366.00	366.35	0.007745	7.19	262.74	319.37	0.68
USACE	9697	25YR	1159.00	361.83	366.30		366.62	0.007379	7.41	359.90	340.94	0.67
USACE	9697	50YR	1433.00	361.83	366.51		366.83	0.007370	7.68	433.40	353.94	0.68
USACE	9697	100YR	1711.00	361.83	366.69		367.01	0.006979	7.70	499.28	360.08	0.67
USACE	9697	100YRPLUS	2238.00	361.83	367.00		367.31	0.006514	7.81	612.50	370.32	0.65
USACE	9697	200YR	1963.00	361.83	366.85		367.16	0.006716	7.74	555.06	364.88	0.66
USACE	9697	500YR	2305.00	361.83	367.04		367.35	0.006477	7.83	625.92	371.55	0.65
USACE	9697	SEPT2011	1136.00	361.83	366.28		366.60	0.007424	7.41	353.38	339.51	0.67
USACE	9643	2YR	348.00	361.80	365.19		365.29	0.002744	4.00	205.53	243.80	0.40
USACE	9643	5YR	594.00	361.80	365.61		365.70	0.002601	4.25	319.29	316.91	0.40
USACE	9643	10YR	808.00	361.80	365.85		365.96	0.002697	4.53	404.72	366.50	0.41
USACE	9643	25YR	1159.00	361.80	366.17		366.28	0.002798	4.87	523.46	382.34	0.43
USACE	9643	50YR	1433.00	361.80	366.37		366.50	0.002854	5.08	602.33	392.11	0.44
USACE	9643	100YR	1711.00	361.80	366.54		366.68	0.002983	5.33	670.29	401.20	0.45
USACE	9643	100YRPLUS	2238.00	361.80	366.84		367.00	0.003132	5.71	792.09	413.26	0.46
USACE	9643	200YR	1963.00	361.80	366.69		366.84	0.003064	5.52	729.84	408.04	0.46
USACE	9643	500YR	2305.00	361.80	366.88		367.04	0.003149	5.75	806.66	414.78	0.47
USACE	9643	SEPT2011	1136.00	361.80	366.15		366.27	0.002791	4.85	516.62	381.62	0.43
USACE	9500	2YR	348.00	361.64	364.49	364.41	364.73	0.005599	5.20	136.12	182.13	0.59
USACE	9500	5YR	594.00	361.64	364.91	364.69	365.16	0.005600	5.80	225.48	261.34	0.61
USACE	9500	10YR	808.00	361.64	365.15	364.97	365.40	0.005630	6.14	291.39	301.84	0.62
USACE	9500	25YR	1159.00	361.64	365.46	365.16	365.71	0.005684	6.57	394.56	354.44	0.63
USACE	9500	50YR	1433.00	361.64	365.65		365.92	0.005808	6.89	463.22	368.68	0.64
USACE	9500	100YR	1711.00	361.64	365.84		366.10	0.005509	6.95	533.70	376.01	0.63
USACE	9500	100YRPLUS	2238.00	361.64	366.14		366.42	0.005281	7.17	651.60	400.70	0.63
USACE	9500	200YR	1963.00	361.64	365.99		366.26	0.005347	7.03	592.59	383.80	0.63
USACE	9500	500YR	2305.00	361.64	366.18		366.45	0.005282	7.21	665.06	402.58	0.63
USACE	9500	SEPT2011	1136.00	361.64	365.44	365.22	365.70	0.005662	6.54	389.01	352.73	0.63
USACE	9265	2YR	348.00	360.81	362.82		362.99	0.009664	4.97	119.53	139.35	0.71
USACE	9265	5YR	594.00	360.81	363.26		363.46	0.009233	5.75	187.93	181.59	0.73
USACE	9265	10YR	808.00	360.81	363.56		363.77	0.008279	5.99	249.48	225.36	0.71
USACE	9265	25YR	1159.00	360.81	364.01		364.21	0.006856	6.17	365.89	282.93	0.66
USACE	9265	50YR	1433.00	360.81	364.28		364.48	0.006039	6.17	444.86	300.26	0.63
USACE	9265	100YR	1711.00	360.81	364.58		364.78	0.005489	6.27	540.41	345.65	0.61
USACE	9265	100YRPLUS	2238.00	360.81	364.97		365.18	0.004985	6.45	686.37	388.99	0.59
USACE	9265	200YR	1963.00	360.81	364.78		364.98	0.005223	6.37	614.72	368.94	0.60
USACE	9265	500YR	2305.00	360.81	365.01		365.22	0.004930	6.46	702.39	390.50	0.59
USACE	9265	SEPT2011	1136.00	360.81	363.98		364.19	0.006943	6.17	359.25	281.79	0.67
USACE	9060	2YR	348.00	360.30	361.61	360.98	361.69	0.004314	2.46	151.93	241.63	0.44
USACE	9060	5YR	594.00	360.30	362.10	361.27	362.22	0.004124	3.17	218.06	272.81	0.47
USACE	9060	10YR	808.00	360.30	362.46	361.49	362.60	0.004031	3.63	269.29	284.97	0.48
USACE	9060	25YR	1159.00	360.30	362.97	361.80	363.15	0.004038	4.30	349.72	309.67	0.50
USACE	9060	50YR	1433.00	360.30	363.28	362.02	363.49	0.003993	4.65	403.46	331.52	0.51
USACE	9060	100YR	1711.00	360.30	363.58	362.22	363.82	0.003975	4.99	470.21	429.25	0.51
USACE	9060	100YRPLUS	2238.00	360.30	364.04	362.57	364.30	0.003719	5.31	607.37	478.75	0.51
USACE	9060	200YR	1963.00	360.30	363.82	362.39	364.07	0.003826	5.15	538.40	455.80	0.51

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	9060	500YR	2305.00	360.30	364.08	362.59	364.34	0.003719	5.36	621.63	479.65	0.51
USACE	9060	SEPT2011	1136.00	360.30	362.94	361.78	363.12	0.004041	4.26	345.20	308.86	0.50
USACE	8938	2YR	348.00	358.30	360.34	360.34	360.85	0.011586	6.13	73.69	223.22	0.81
USACE	8938	5YR	594.00	358.30	360.84	360.84	361.42	0.010577	6.93	120.99	251.76	0.81
USACE	8938	10YR	808.00	358.30	361.15	361.15	361.81	0.010632	7.57	154.52	277.67	0.83
USACE	8938	25YR	1159.00	358.30	361.53	361.53	362.32	0.011305	8.55	198.44	300.87	0.88
USACE	8938	50YR	1433.00	358.30	361.81	361.81	362.67	0.011260	9.06	232.70	320.61	0.89
USACE	8938	100YR	1711.00	358.30	362.05	362.05	362.99	0.011475	9.59	263.79	335.03	0.91
USACE	8938	100YRPLUS	2238.00	358.30	362.56	362.56	363.52	0.010213	9.92	343.87	399.47	0.87
USACE	8938	200YR	1963.00	358.30	362.34	362.34	363.28	0.010507	9.68	305.29	368.99	0.88
USACE	8938	500YR	2305.00	358.30	362.63	362.63	363.58	0.009941	9.90	356.75	410.67	0.87
USACE	8938	SEPT2011	1136.00	358.30	361.50	361.50	362.29	0.011435	8.54	194.64	298.97	0.88
USACE	8818	2YR	431.00	354.58	358.42	357.60	358.55	0.001625	3.48	190.56	156.63	0.34
USACE	8818	5YR	732.00	354.58	358.74	358.09	359.00	0.002903	4.95	228.57	166.24	0.46
USACE	8818	10YR	991.00	354.58	359.01	358.40	359.38	0.003898	6.01	265.18	210.74	0.54
USACE	8818	25YR	1413.00	354.58	359.31	358.79	359.84	0.005249	7.34	315.03	229.71	0.63
USACE	8818	50YR	1739.00	354.58	359.50	359.23	360.16	0.006243	8.24	347.78	240.48	0.69
USACE	8818	100YR	2072.00	354.58	359.66	359.50	360.45	0.007304	9.13	375.54	247.04	0.75
USACE	8818	100YRPLUS	2710.00	354.58	359.94	359.91	360.96	0.009107	10.60	426.16	264.58	0.85
USACE	8818	200YR	2379.00	354.58	359.81	359.70	360.70	0.008095	9.81	402.42	257.48	0.80
USACE	8818	500YR	2807.00	354.58	359.96	359.95	361.04	0.009456	10.84	431.89	266.52	0.87
USACE	8818	SEPT2011	1317.00	354.58	359.25	358.72	359.75	0.004944	7.05	304.61	225.55	0.61
USACE	8722	2YR	431.00	353.22	358.42		358.46	0.000346	2.00	380.67	241.05	0.16
USACE	8722	5YR	732.00	353.22	358.75		358.83	0.000649	2.86	462.50	251.27	0.23
USACE	8722	10YR	991.00	353.22	359.05		359.15	0.000828	3.36	538.60	263.25	0.26
USACE	8722	25YR	1413.00	353.22	359.38		359.52	0.001152	4.13	629.92	297.67	0.31
USACE	8722	50YR	1739.00	353.22	359.61		359.77	0.001334	4.57	698.10	305.11	0.33
USACE	8722	100YR	2072.00	353.22	359.80		360.00	0.001512	4.97	758.67	311.21	0.36
USACE	8722	100YRPLUS	2710.00	353.22	360.17		360.40	0.001749	5.56	873.92	323.64	0.39
USACE	8722	200YR	2379.00	353.22	359.99		360.20	0.001622	5.26	817.38	317.28	0.37
USACE	8722	500YR	2807.00	353.22	360.21		360.45	0.001791	5.66	889.10	325.77	0.39
USACE	8722	SEPT2011	1317.00	353.22	359.31		359.44	0.001078	3.96	610.10	287.82	0.30
USACE	8673	2YR	431.00	352.00	358.40	356.34	358.44	0.000406	2.15	370.98	219.28	0.17
USACE	8673	5YR	732.00	352.00	358.72	357.35	358.79	0.000715	2.99	443.94	235.32	0.23
USACE	8673	10YR	991.00	352.00	359.02	357.85	359.10	0.000869	3.41	515.33	257.63	0.26
USACE	8673	25YR	1413.00	352.00	359.34	358.12	359.45	0.001116	4.01	600.94	276.25	0.29
USACE	8673	50YR	1739.00	352.00	359.56	358.35	359.70	0.001255	4.36	662.72	285.03	0.31
USACE	8673	100YR	2072.00	352.00	359.75	358.55	359.92	0.001393	4.69	717.48	291.02	0.33
USACE	8673	100YRPLUS	2710.00	352.00	360.10	358.85	360.30	0.001554	5.14	822.55	301.17	0.35
USACE	8673	200YR	2379.00	352.00	359.93	358.71	360.11	0.001467	4.91	771.09	296.37	0.34
USACE	8673	500YR	2807.00	352.00	360.15	358.89	360.35	0.001583	5.21	836.21	302.53	0.36
USACE	8673	SEPT2011	1317.00	352.00	359.27	358.05	359.38	0.001062	3.89	582.88	272.80	0.29
USACE	8652 Silver Spring Ro		Bridge									
USACE	8626	2YR	431.00	350.95	355.59		356.22	0.005103	6.69	73.69	27.85	0.60
USACE	8626	5YR	732.00	350.95	356.02	355.80	357.42	0.010018	10.05	86.89	34.75	0.85
USACE	8626	10YR	991.00	350.95	357.29	357.29	357.90	0.004135	7.67	241.38	185.70	0.57
USACE	8626	25YR	1413.00	350.95	357.68	357.68	358.33	0.004641	8.50	315.96	197.38	0.61
USACE	8626	50YR	1739.00	350.95	358.24	357.85	358.70	0.003318	7.63	435.14	228.91	0.53
USACE	8626	100YR	2072.00	350.95	358.54		358.99	0.003230	7.76	506.41	246.28	0.52
USACE	8626	100YRPLUS	2710.00	350.95	359.16		359.57	0.002857	7.73	663.93	265.27	0.50
USACE	8626	200YR	2379.00	350.95	358.82		359.27	0.003230	7.96	575.29	256.34	0.53
USACE	8626	500YR	2807.00	350.95	359.24		359.65	0.002805	7.71	686.79	268.17	0.50
USACE	8626	SEPT2011	1317.00	350.95	357.62	357.62	358.24	0.004406	8.22	304.11	195.68	0.60
USACE	8578	2YR	431.00	350.95	355.24	354.80	355.94	0.005804	7.24	78.63	70.48	0.69
USACE	8578	5YR	732.00	350.95	355.99	355.99	356.74	0.005682	8.17	145.77	97.92	0.70
USACE	8578	10YR	991.00	350.95	356.50	356.37	357.23	0.005335	8.54	198.28	109.90	0.69
USACE	8578	25YR	1413.00	350.95	357.16	356.90	357.95	0.005341	9.33	277.09	136.61	0.71
USACE	8578	50YR	1739.00	350.95	357.59	356.96	358.40	0.005288	9.76	344.01	218.59	0.71
USACE	8578	100YR	2072.00	350.95	358.00	357.80	358.73	0.004708	9.64	418.06	245.28	0.68
USACE	8578	100YRPLUS	2710.00	350.95	358.64	358.22	359.32	0.004187	9.71	538.95	280.29	0.65
USACE	8578	200YR	2379.00	350.95	358.32	358.00	359.02	0.004436	9.68	477.35	269.66	0.67
USACE	8578	500YR	2807.00	350.95	358.73	358.25	359.41	0.004139	9.74	555.70	282.27	0.65
USACE	8578	SEPT2011	1317.00	350.95	357.04	356.80	357.77	0.004987	8.88	261.71	122.09	0.68
USACE	8468	2YR	431.00	350.80	355.05	354.19	355.38	0.002999	5.64	121.42	84.82	0.51
USACE	8468	5YR	732.00	350.80	355.75	355.22	356.15	0.003288	6.61	187.03	100.06	0.55
USACE	8468	10YR	991.00	350.80	356.23	355.61	356.68	0.003457	7.25	237.65	113.70	0.57
USACE	8468	25YR	1413.00	350.80	356.89	356.13	357.39	0.003541	7.97	319.06	164.61	0.59
USACE	8468	50YR	1739.00	350.80	357.31	356.48	357.84	0.003609	8.43	378.13	217.81	0.60
USACE	8468	100YR	2072.00	350.80	357.65	356.78	358.22	0.003696	8.85	430.32	256.07	0.61
USACE	8468	100YRPLUS	2710.00	350.80	358.24	357.39	358.87	0.003779	9.49	523.26	293.54	0.63
USACE	8468	200YR	2379.00	350.80	357.94	357.15	358.54	0.003754	9.19	475.53	285.31	0.62
USACE	8468	500YR	2807.00	350.80	358.32	357.43	358.96	0.003797	9.58	536.14	295.61	0.63
USACE	8468	SEPT2011	1317.00	350.80	356.75	356.01	357.24	0.003519	7.81	300.83	147.24	0.58
USACE	8303	2YR	431.00	350.70	354.37	354.15	354.78	0.004373	6.05	112.97	87.95	0.60
USACE	8303	5YR	732.00	350.70	354.90	354.71	355.45	0.005398	7.45	162.92	100.21	0.68
USACE	8303	10YR	991.00	350.70	355.27	355.06	355.92	0.006028	8.37	201.14	112.31	0.73
USACE	8303	25YR	1413.00	350.70	355.63	355.59	356.52	0.007738	10.04	244.73	124.83	0.84
USACE	8303	50YR	1739.00	350.70	355.91	355.91	356.92	0.008477	10.93	280.25	132.94	0.89
USACE	8303	100YR	2072.00	350.70	356.21	356.21	357.28	0.008609	11.48	321.38	139.98	0.90
USACE	8303	100YRPLUS	2710.00	350.70	356.68	356.68	357.89	0.009105	12.53	388.74	259.05	0.94

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8303	200YR	2379.00	350.70	356.45	356.45	357.58	0.008756	11.95	356.37	144.55	0.92
USACE	8303	500YR	2807.00	350.70	356.75	356.75	357.98	0.009125	12.65	399.27	261.11	0.94
USACE	8303	SEPT2011	1317.00	350.70	355.56	355.48	356.39	0.007358	9.68	235.69	122.97	0.81
USACE	8097	2YR	431.00	350.39	353.20	353.20	353.61	0.007313	6.61	132.74	164.15	0.74
USACE	8097	5YR	732.00	350.39	353.58	353.58	354.04	0.008046	7.62	200.80	190.06	0.79
USACE	8097	10YR	991.00	350.39	353.81	353.81	354.32	0.008981	8.46	244.36	201.51	0.85
USACE	8097	25YR	1413.00	350.39	354.21		354.71	0.008070	8.71	329.84	217.81	0.82
USACE	8097	50YR	1739.00	350.39	354.49		354.99	0.007696	8.95	391.73	238.80	0.81
USACE	8097	100YR	2072.00	350.39	354.74		355.25	0.007450	9.19	453.73	255.58	0.81
USACE	8097	100YRPLUS	2710.00	350.39	355.22		355.72	0.006661	9.37	586.61	288.70	0.78
USACE	8097	200YR	2379.00	350.39	354.95		355.48	0.007267	9.40	511.06	280.27	0.81
USACE	8097	500YR	2807.00	350.39	355.28		355.79	0.006613	9.42	604.30	290.00	0.78
USACE	8097	SEPT2011	1317.00	350.39	354.13		354.63	0.008243	8.66	310.98	214.02	0.83
USACE	7905	2YR	431.00	349.61	352.15	351.71	352.27	0.003716	3.87	213.35	204.70	0.45
USACE	7905	5YR	732.00	349.61	352.58	352.06	352.73	0.004118	4.58	307.91	232.28	0.49
USACE	7905	10YR	991.00	349.61	352.86	352.27	353.04	0.004457	5.09	375.03	247.36	0.52
USACE	7905	25YR	1413.00	349.61	353.23	352.57	353.45	0.004932	5.79	468.79	262.22	0.56
USACE	7905	50YR	1739.00	349.61	353.47	352.76	353.73	0.005202	6.23	533.66	269.32	0.58
USACE	7905	100YR	2072.00	349.61	353.70	352.94	353.98	0.005453	6.64	594.95	277.79	0.60
USACE	7905	100YRPLUS	2710.00	349.61	354.11	353.25	354.46	0.006159	7.57	717.17	319.48	0.65
USACE	7905	200YR	2379.00	349.61	353.88	353.08	354.20	0.005713	7.02	647.33	285.50	0.62
USACE	7905	500YR	2807.00	349.61	354.17	353.29	354.53	0.006228	7.68	734.80	324.39	0.65
USACE	7905	SEPT2011	1317.00	349.61	353.15	352.51	353.37	0.004832	5.64	448.74	259.65	0.55
USACE	7689	2YR	431.00	348.80	350.20	350.14	350.48	0.031376	6.35	116.21	186.44	1.14
USACE	7689	5YR	732.00	348.80	350.49	350.47	350.84	0.029192	7.33	180.83	242.08	1.16
USACE	7689	10YR	991.00	348.80	350.70	350.65	351.07	0.027149	7.81	231.06	254.93	1.14
USACE	7689	25YR	1413.00	348.80	350.97	350.88	351.40	0.024724	8.38	303.39	263.87	1.12
USACE	7689	50YR	1739.00	348.80	351.17	351.05	351.63	0.023088	8.70	356.24	269.07	1.10
USACE	7689	100YR	2072.00	348.80	351.36	351.19	351.85	0.022040	9.04	406.54	274.57	1.10
USACE	7689	100YRPLUS	2710.00	348.80	351.70	351.45	352.24	0.020040	9.51	500.78	283.34	1.07
USACE	7689	200YR	2379.00	348.80	351.52	351.31	352.04	0.021026	9.28	452.46	279.10	1.08
USACE	7689	500YR	2807.00	348.80	351.74	351.49	352.30	0.019813	9.58	514.39	284.46	1.07
USACE	7689	SEPT2011	1317.00	348.80	350.91	350.83	351.33	0.025301	8.27	287.23	262.20	1.13
USACE	7421	2YR	431.00	347.10	348.87		348.90	0.002300	2.29	377.04	428.13	0.33
USACE	7421	5YR	732.00	347.10	349.23		349.26	0.002305	2.65	534.40	455.64	0.35
USACE	7421	10YR	991.00	347.10	349.48		349.52	0.002295	2.88	650.39	470.75	0.35
USACE	7421	25YR	1413.00	347.10	349.85		349.90	0.002236	3.16	826.83	491.37	0.36
USACE	7421	50YR	1739.00	347.10	350.10		350.15	0.002208	3.36	952.20	505.16	0.36
USACE	7421	100YR	2072.00	347.10	350.33		350.39	0.002184	3.53	1069.71	513.59	0.36
USACE	7421	100YRPLUS	2710.00	347.10	350.72		350.80	0.002184	3.84	1276.29	532.13	0.37
USACE	7421	200YR	2379.00	347.10	350.53		350.60	0.002175	3.68	1172.67	522.70	0.37
USACE	7421	500YR	2807.00	347.10	350.78		350.86	0.002184	3.88	1306.19	534.56	0.37
USACE	7421	SEPT2011	1317.00	347.10	349.77		349.82	0.002243	3.10	788.79	487.44	0.36
USACE	7012	2YR	431.00	344.77	347.70		347.77	0.003555	3.65	280.32	337.37	0.43
USACE	7012	5YR	732.00	344.77	348.12		348.19	0.003179	3.88	430.27	374.06	0.42
USACE	7012	10YR	991.00	344.77	348.41		348.48	0.003042	4.06	541.06	394.95	0.42
USACE	7012	25YR	1413.00	344.77	348.80		348.88	0.002930	4.33	699.49	413.69	0.42
USACE	7012	50YR	1739.00	344.77	349.06		349.16	0.002880	4.52	810.56	425.84	0.42
USACE	7012	100YR	2072.00	344.77	349.30		349.40	0.002848	4.70	914.05	434.90	0.42
USACE	7012	100YRPLUS	2710.00	344.77	349.71		349.82	0.002802	4.98	1092.44	444.08	0.43
USACE	7012	200YR	2379.00	344.77	349.51		349.62	0.002814	4.84	1003.88	440.34	0.42
USACE	7012	500YR	2807.00	344.77	349.76		349.88	0.002800	5.03	1117.09	444.89	0.43
USACE	7012	SEPT2011	1317.00	344.77	348.72		348.80	0.002953	4.28	665.63	410.85	0.42
USACE	6761	2YR	431.00	344.02	346.92		347.00	0.002679	3.59	271.82	282.50	0.39
USACE	6761	5YR	732.00	344.02	347.33		347.43	0.002937	4.14	391.60	308.97	0.42
USACE	6761	10YR	991.00	344.02	347.60		347.71	0.003127	4.53	476.38	320.18	0.44
USACE	6761	25YR	1413.00	344.02	347.96		348.10	0.003363	5.04	594.43	329.18	0.47
USACE	6761	50YR	1739.00	344.02	348.20		348.35	0.003564	5.41	673.84	340.00	0.48
USACE	6761	100YR	2072.00	344.02	348.41		348.58	0.003760	5.76	746.79	347.79	0.50
USACE	6761	100YRPLUS	2710.00	344.02	348.78		348.98	0.004039	6.32	876.59	361.02	0.53
USACE	6761	200YR	2379.00	344.02	348.59		348.78	0.003904	6.04	811.01	354.76	0.52
USACE	6761	500YR	2807.00	344.02	348.83		349.04	0.004078	6.40	894.89	362.52	0.53
USACE	6761	SEPT2011	1317.00	344.02	347.89		348.02	0.003312	4.93	569.47	327.75	0.46
USACE	6430	2YR	431.00	343.08	345.72	345.56	345.84	0.004829	4.41	242.87	355.38	0.52
USACE	6430	5YR	732.00	343.08	346.00	345.77	346.14	0.005459	5.07	349.16	399.86	0.56
USACE	6430	10YR	991.00	343.08	346.19	345.91	346.35	0.005826	5.49	427.26	418.37	0.58
USACE	6430	25YR	1413.00	343.08	346.44	346.11	346.62	0.006249	6.04	535.81	432.85	0.61
USACE	6430	50YR	1739.00	343.08	346.62	346.23	346.81	0.006394	6.34	612.07	437.78	0.63
USACE	6430	100YR	2072.00	343.08	346.78	346.35	346.99	0.006491	6.61	684.28	441.34	0.64
USACE	6430	100YRPLUS	2710.00	343.08	347.07	346.55	347.31	0.006634	7.05	810.41	448.01	0.65
USACE	6430	200YR	2379.00	343.08	346.93	346.45	347.15	0.006546	6.82	747.29	444.42	0.64
USACE	6430	500YR	2807.00	343.08	347.11	346.57	347.35	0.006646	7.11	828.77	449.07	0.66
USACE	6430	SEPT2011	1317.00	343.08	346.39	346.08	346.57	0.006161	5.92	512.76	430.32	0.61
USACE	6133	2YR	431.00	342.00	343.50	343.40	343.60	0.013015	3.95	211.52	389.50	0.62
USACE	6133	5YR	732.00	342.00	343.76	343.54	343.87	0.011186	4.15	313.47	400.44	0.59
USACE	6133	10YR	991.00	342.00	343.95	343.65	344.07	0.010271	4.30	391.61	411.76	0.58
USACE	6133	25YR	1413.00	342.00	344.23	343.80	344.37	0.009230	4.50	506.44	455.63	0.56
USACE	6133	50YR	1739.00	342.00	344.40	343.91	344.56	0.008978	4.70	581.25	470.49	0.56
USACE	6133	100YR	2072.00	342.00	344.57	344.01	344.74	0.008816	4.89	651.32	477.47	0.56
USACE	6133	100YRPLUS	2710.00	342.00	344.86	344.19	345.06	0.008601	5.22	775.36	500.19	0.57
USACE	6133	200YR	2379.00	342.00	344.71	344.11	344.90	0.008748	5.06	710.83	490.78	0.57

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6133	500YR	2807.00	342.00	344.90	344.22	345.11	0.008582	5.27	793.09	501.19	0.57
USACE	6133	SEPT2011	1317.00	342.00	344.17	343.77	344.30	0.009445	4.46	480.89	451.47	0.57
USACE	5918	2YR	431.00	341.15	342.54	342.04	342.57	0.002476	2.19	348.43	463.73	0.37
USACE	5918	5YR	732.00	341.15	342.82	342.20	342.86	0.002571	2.61	480.55	480.98	0.40
USACE	5918	10YR	991.00	341.15	343.01	342.33	343.06	0.002690	2.92	572.96	490.65	0.42
USACE	5918	25YR	1413.00	341.15	343.26	342.50	343.33	0.002935	3.37	695.40	500.26	0.44
USACE	5918	50YR	1739.00	341.15	343.42	342.60	343.51	0.003069	3.65	778.45	504.27	0.46
USACE	5918	100YR	2072.00	341.15	343.59	342.71	343.69	0.003114	3.88	863.13	524.20	0.47
USACE	5918	100YRPLUS	2710.00	341.15	343.85	342.88	343.98	0.003303	4.33	1001.35	541.61	0.49
USACE	5918	200YR	2379.00	341.15	343.72	342.79	343.84	0.003175	4.09	934.84	535.29	0.48
USACE	5918	500YR	2807.00	341.15	343.90	342.90	344.03	0.003284	4.37	1025.28	543.78	0.49
USACE	5918	SEPT2011	1317.00	341.15	343.20	342.47	343.27	0.002914	3.28	667.21	498.21	0.44
USACE	5768	2YR	431.00	340.34	342.50	341.18	342.50	0.000154	0.79	720.85	547.95	0.10
USACE	5768	5YR	732.00	340.34	342.75	341.36	342.76	0.000255	1.10	897.51	565.84	0.13
USACE	5768	10YR	991.00	340.34	342.92	341.55	342.94	0.000341	1.34	995.92	576.77	0.16
USACE	5768	25YR	1413.00	340.34	343.14	341.67	343.17	0.000480	1.70	1124.11	592.07	0.19
USACE	5768	50YR	1739.00	340.34	343.29	341.77	343.32	0.000583	1.94	1211.93	605.14	0.21
USACE	5768	100YR	2072.00	340.34	343.44	341.86	343.48	0.000671	2.16	1305.71	638.13	0.23
USACE	5768	100YRPLUS	2710.00	340.34	343.69	342.03	343.74	0.000810	2.51	1458.74	649.57	0.25
USACE	5768	200YR	2379.00	340.34	343.57	341.94	343.62	0.000734	2.33	1386.18	645.08	0.24
USACE	5768	500YR	2807.00	340.34	343.73	342.06	343.79	0.000819	2.55	1487.35	652.37	0.26
USACE	5768	SEPT2011	1317.00	340.34	343.09	341.63	343.12	0.000452	1.62	1093.74	587.94	0.18
USACE	5657	2YR	453.00	339.90	342.49	341.60	342.49	0.000065	0.56	1033.38	757.13	0.07
USACE	5657	5YR	774.00	339.90	342.74	341.60	342.74	0.000097	0.73	1328.11	778.47	0.08
USACE	5657	10YR	1057.00	339.90	342.91	341.60	342.92	0.000139	0.92	1439.16	790.89	0.10
USACE	5657	25YR	1529.00	339.90	343.12	341.61	343.13	0.000218	1.22	1580.31	821.23	0.13
USACE	5657	50YR	1896.00	339.90	343.26	341.61	343.28	0.000281	1.43	1675.30	844.24	0.15
USACE	5657	100YR	2278.00	339.90	343.40	341.67	343.43	0.000336	1.61	1775.84	860.77	0.16
USACE	5657	100YRPLUS	2979.00	339.90	343.64	341.86	343.67	0.000430	1.92	1937.14	883.81	0.19
USACE	5657	200YR	2636.00	339.90	343.53	341.77	343.56	0.000385	1.77	1860.89	879.10	0.18
USACE	5657	500YR	3121.00	339.90	343.68	341.90	343.72	0.000449	1.98	1966.78	885.58	0.19
USACE	5657	SEPT2011	1418.00	339.90	343.07	341.61	343.08	0.000200	1.15	1546.94	813.97	0.12
USACE	5603	2YR	453.00	339.00	342.48	341.60	342.48	0.000069	0.69	1022.57	812.41	0.07
USACE	5603	5YR	774.00	339.00	342.73	341.61	342.74	0.000108	0.92	1286.11	847.87	0.09
USACE	5603	10YR	1057.00	339.00	342.90	341.61	342.91	0.000160	1.15	1398.49	890.24	0.11
USACE	5603	25YR	1529.00	339.00	343.10	341.67	343.12	0.000243	1.48	1540.72	932.32	0.14
USACE	5603	50YR	1896.00	339.00	343.24	341.78	343.26	0.000307	1.71	1634.67	962.71	0.16
USACE	5603	100YR	2278.00	339.00	343.38	341.88	343.41	0.000364	1.91	1733.17	980.54	0.17
USACE	5603	100YRPLUS	2979.00	339.00	343.61	342.06	343.65	0.000467	2.24	1890.69	1006.23	0.20
USACE	5603	200YR	2636.00	339.00	343.50	341.97	343.53	0.000418	2.08	1816.27	993.90	0.18
USACE	5603	500YR	3121.00	339.00	343.65	342.09	343.69	0.000487	2.31	1919.56	1008.78	0.20
USACE	5603	SEPT2011	1418.00	339.00	343.05	341.63	343.07	0.000224	1.41	1507.29	919.56	0.13
USACE	5576 Private Drive		Mult Open									
USACE	5550	2YR	453.00	337.84	340.84	340.54	340.90	0.002870	3.52	281.45	464.20	0.42
USACE	5550	5YR	774.00	337.84	341.13	340.73	341.20	0.002819	3.79	431.35	555.91	0.42
USACE	5550	10YR	1057.00	337.84	341.34	340.90	341.41	0.002764	3.95	555.07	638.77	0.42
USACE	5550	25YR	1529.00	337.84	341.60	341.06	341.68	0.002530	4.02	727.61	655.03	0.41
USACE	5550	50YR	1896.00	337.84	341.79	341.18	341.87	0.002396	4.07	852.00	667.62	0.40
USACE	5550	100YR	2278.00	337.84	341.97	341.21	342.07	0.002276	4.12	976.20	680.12	0.40
USACE	5550	100YRPLUS	2979.00	337.84	342.31	341.46	342.41	0.002033	4.15	1205.72	738.91	0.38
USACE	5550	200YR	2636.00	337.84	342.15	341.39	342.24	0.002155	4.15	1094.21	712.33	0.39
USACE	5550	500YR	3121.00	337.84	342.38	341.48	342.48	0.001947	4.11	1259.14	743.68	0.37
USACE	5550	SEPT2011	1418.00	337.84	341.54	341.04	341.62	0.002574	4.00	689.09	652.21	0.41
USACE	5358	2YR	453.00	337.83	340.43	340.12	340.49	0.002304	3.09	283.92	436.52	0.39
USACE	5358	5YR	774.00	337.83	340.71	340.31	340.78	0.002408	3.47	418.01	503.70	0.41
USACE	5358	10YR	1057.00	337.83	340.92	340.45	341.00	0.002368	3.65	529.33	550.70	0.42
USACE	5358	25YR	1529.00	337.83	341.22	340.64	341.31	0.002253	3.85	697.31	580.68	0.41
USACE	5358	50YR	1896.00	337.83	341.43	340.76	341.52	0.002145	3.95	820.16	594.93	0.41
USACE	5358	100YR	2278.00	337.83	341.63	340.87	341.73	0.002054	4.04	941.28	607.06	0.40
USACE	5358	100YRPLUS	2979.00	337.83	342.00	341.06	342.11	0.001829	4.11	1170.00	634.59	0.39
USACE	5358	200YR	2636.00	337.83	341.82	340.99	341.93	0.001936	4.08	1058.54	618.90	0.40
USACE	5358	500YR	3121.00	337.83	342.09	341.08	342.20	0.001737	4.07	1227.50	646.00	0.38
USACE	5358	SEPT2011	1418.00	337.83	341.15	340.59	341.24	0.002276	3.81	659.99	576.19	0.41
USACE	5136	2YR	453.00	336.65	339.83	339.65	339.95	0.002946	4.30	222.21	363.00	0.47
USACE	5136	5YR	774.00	336.65	340.23	339.91	340.32	0.002154	4.04	404.06	472.99	0.41
USACE	5136	10YR	1057.00	336.65	340.44	340.06	340.54	0.002161	4.24	506.97	481.38	0.42
USACE	5136	25YR	1529.00	336.65	340.76	340.24	340.86	0.002116	4.46	658.09	490.41	0.42
USACE	5136	50YR	1896.00	336.65	340.98	340.35	341.09	0.002058	4.58	767.42	499.09	0.42
USACE	5136	100YR	2278.00	336.65	341.19	340.45	341.32	0.001993	4.68	876.84	516.44	0.41
USACE	5136	100YRPLUS	2979.00	336.65	341.61	340.63	341.74	0.001746	4.69	1095.28	561.61	0.39
USACE	5136	200YR	2636.00	336.65	341.41	340.55	341.54	0.001856	4.68	989.36	534.00	0.40
USACE	5136	500YR	3121.00	336.65	341.73	340.66	341.85	0.001626	4.60	1156.52	571.62	0.38
USACE	5136	SEPT2011	1418.00	336.65	340.69	340.19	340.79	0.002108	4.40	626.27	488.70	0.42
USACE	5001	2YR	453.00	335.91	339.13	339.06	339.42	0.005227	5.76	189.30	261.42	0.63
USACE	5001	5YR	774.00	335.91	339.48	339.37	339.82	0.006413	6.93	295.34	354.71	0.71
USACE	5001	10YR	1057.00	335.91	339.74		340.06	0.006054	7.13	393.61	388.81	0.70
USACE	5001	25YR	1529.00	335.91	340.14		340.42	0.005358	7.24	558.93	446.52	0.67
USACE	5001	50YR	1896.00	335.91	340.43		340.68	0.004681	7.13	694.34	469.14	0.63
USACE	5001	100YR	2278.00	335.91	340.73		340.94	0.003863	6.80	835.80	482.31	0.58
USACE	5001	100YRPLUS	2979.00	335.91	341.27		341.44	0.002778	6.25	1107.29	525.32	0.50

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5001	200YR	2636.00	335.91	341.02		341.21	0.003171	6.44	980.24	507.92	0.53
USACE	5001	500YR	3121.00	335.91	341.42		341.59	0.002425	5.96	1190.88	540.47	0.47
USACE	5001	SEPT2011	1418.00	335.91	340.04		340.34	0.005629	7.29	517.88	435.18	0.68
USACE	4836	2YR	453.00	335.25	338.50	338.38	338.68	0.003593	5.03	204.11	276.99	0.53
USACE	4836	5YR	774.00	335.25	338.90	338.64	339.05	0.003105	5.10	316.98	289.66	0.50
USACE	4836	10YR	1057.00	335.25	339.18	338.80	339.34	0.002959	5.26	400.03	310.40	0.49
USACE	4836	25YR	1529.00	335.25	339.66	339.02	339.81	0.002387	5.15	555.07	327.50	0.45
USACE	4836	50YR	1896.00	335.25	340.02	339.17	340.16	0.001997	4.99	678.75	408.98	0.42
USACE	4836	100YR	2278.00	335.25	340.38	339.35	340.52	0.001668	4.80	811.19	464.68	0.39
USACE	4836	100YRPLUS	2979.00	335.25	340.99	339.57	341.13	0.001303	4.61	1047.39	534.89	0.35
USACE	4836	200YR	2636.00	335.25	340.72	339.44	340.86	0.001410	4.63	942.47	506.43	0.36
USACE	4836	500YR	3121.00	335.25	341.18	339.61	341.31	0.001161	4.45	1121.02	549.35	0.33
USACE	4836	SEPT2011	1418.00	335.25	339.51	338.97	339.67	0.002757	5.39	504.42	324.34	0.48
USACE	4644	2YR	510.00	333.68	337.42	337.42	337.81	0.005468	6.21	165.49	198.40	0.61
USACE	4644	5YR	880.00	333.68	337.95	337.84	338.28	0.004971	6.55	288.79	244.49	0.60
USACE	4644	10YR	1209.00	333.68	338.41	338.07	338.67	0.003899	6.26	402.37	466.18	0.54
USACE	4644	25YR	1760.00	333.68	339.03	338.37	339.27	0.003171	6.20	565.50	614.76	0.50
USACE	4644	50YR	2188.00	333.68	339.47	338.58	339.70	0.002836	6.21	684.69	740.46	0.48
USACE	4644	100YR	2634.00	333.68	339.89	338.76	340.12	0.002530	6.17	807.98	900.78	0.46
USACE	4644	100YRPLUS	3445.00	333.68	340.57	339.09	340.80	0.002200	6.21	1013.28	1048.84	0.43
USACE	4644	200YR	3057.00	333.68	340.29	338.93	340.51	0.002262	6.11	927.07	991.81	0.44
USACE	4644	500YR	3629.00	333.68	340.79	339.15	341.01	0.001998	6.05	1082.61	1064.70	0.42
USACE	4644	SEPT2011	1592.00	333.68	338.76	338.30	339.03	0.003850	6.57	491.94	556.85	0.54
USACE	4432	2YR	769.00	333.57	336.83		336.96	0.002360	3.90	360.54	275.54	0.40
USACE	4432	5YR	1296.00	333.57	337.42		337.57	0.002367	4.41	530.36	297.26	0.41
USACE	4432	10YR	1789.00	333.57	337.86		338.03	0.002396	4.80	664.83	312.29	0.42
USACE	4432	25YR	2622.00	333.57	338.49		338.69	0.002404	5.30	867.20	330.09	0.43
USACE	4432	50YR	3282.00	333.57	338.92		339.15	0.002405	5.63	1013.02	342.13	0.44
USACE	4432	100YR	3981.00	333.57	339.35		339.59	0.002378	5.91	1160.43	351.89	0.44
USACE	4432	100YRPLUS	5206.00	333.57	340.03		340.31	0.002306	6.29	1405.64	365.71	0.45
USACE	4432	200YR	4680.00	333.57	339.75		340.01	0.002339	6.14	1302.25	360.39	0.45
USACE	4432	500YR	5621.00	333.57	340.25		340.54	0.002268	6.39	1488.07	371.08	0.45
USACE	4432	SEPT2011	2225.00	333.57	338.20		338.39	0.002412	5.09	772.77	322.10	0.43
USACE	4193	2YR	769.00	332.98	336.34		336.43	0.001960	3.59	407.04	261.40	0.36
USACE	4193	5YR	1296.00	332.98	336.87		337.00	0.002344	4.37	549.25	276.51	0.41
USACE	4193	10YR	1789.00	332.98	337.26		337.42	0.002675	5.00	660.23	293.80	0.45
USACE	4193	25YR	2622.00	332.98	337.85		338.06	0.002919	5.74	840.89	318.47	0.48
USACE	4193	50YR	3282.00	332.98	338.29		338.52	0.002891	6.07	983.21	334.84	0.48
USACE	4193	100YR	3981.00	332.98	338.73		338.98	0.002800	6.33	1134.49	351.42	0.48
USACE	4193	100YRPLUS	5206.00	332.98	339.45		339.73	0.002592	6.62	1394.61	370.01	0.47
USACE	4193	200YR	4680.00	332.98	339.15		339.41	0.002682	6.51	1284.08	362.64	0.48
USACE	4193	500YR	5621.00	332.98	339.68		339.97	0.002528	6.70	1483.09	378.21	0.47
USACE	4193	SEPT2011	2225.00	332.98	337.58		337.76	0.002843	5.43	754.53	306.70	0.47
USACE	3953	2YR	769.00	332.99	335.24	335.11	335.53	0.009408	5.93	244.45	260.23	0.75
USACE	3953	5YR	1296.00	332.99	335.75	335.47	336.05	0.007768	6.29	385.39	291.59	0.71
USACE	3953	10YR	1789.00	332.99	336.23	335.71	336.50	0.005911	6.17	527.73	313.48	0.63
USACE	3953	25YR	2622.00	332.99	336.95	336.11	337.21	0.004304	6.10	750.21	346.25	0.56
USACE	3953	50YR	3282.00	332.99	337.47	336.34	337.73	0.003701	6.18	911.05	372.78	0.53
USACE	3953	100YR	3981.00	332.99	337.98	336.55	338.25	0.003293	6.29	1071.07	397.75	0.51
USACE	3953	100YRPLUS	5206.00	332.99	338.78	336.91	339.07	0.002853	6.50	1330.28	445.48	0.49
USACE	3953	200YR	4680.00	332.99	338.45	336.76	338.73	0.003014	6.41	1222.21	425.41	0.50
USACE	3953	500YR	5621.00	332.99	339.04	337.02	339.34	0.002726	6.55	1415.51	456.63	0.48
USACE	3953	SEPT2011	2225.00	332.99	336.62	335.96	336.88	0.004874	6.09	647.89	330.28	0.59
USACE	3684	2YR	769.00	331.10	334.25		334.36	0.002279	3.73	392.41	290.55	0.39
USACE	3684	5YR	1296.00	331.10	335.04		335.14	0.001668	3.76	630.91	312.73	0.35
USACE	3684	10YR	1789.00	331.10	335.63		335.73	0.001486	3.92	817.02	326.44	0.34
USACE	3684	25YR	2622.00	331.10	336.45		336.57	0.001343	4.20	1095.55	345.97	0.33
USACE	3684	50YR	3282.00	331.10	337.01		337.14	0.001290	4.41	1292.03	358.20	0.33
USACE	3684	100YR	3981.00	331.10	337.55		337.69	0.001241	4.60	1488.17	367.19	0.33
USACE	3684	100YRPLUS	5206.00	331.10	338.40		338.55	0.001186	4.90	1803.46	379.15	0.33
USACE	3684	200YR	4680.00	331.10	338.05		338.20	0.001204	4.77	1672.35	374.15	0.33
USACE	3684	500YR	5621.00	331.10	338.67		338.84	0.001165	4.99	1908.16	382.85	0.33
USACE	3684	SEPT2011	2225.00	331.10	336.08		336.19	0.001397	4.07	968.51	338.78	0.33
USACE	3485	2YR	769.00	330.26	333.97		334.04	0.001141	2.98	438.64	241.02	0.28
USACE	3485	5YR	1296.00	330.26	334.79		334.87	0.001098	3.38	654.13	284.70	0.29
USACE	3485	10YR	1789.00	330.26	335.38		335.48	0.001094	3.68	827.79	300.64	0.30
USACE	3485	25YR	2622.00	330.26	336.21		336.33	0.001104	4.11	1090.21	329.97	0.30
USACE	3485	50YR	3282.00	330.26	336.77		336.90	0.001103	4.37	1278.74	341.01	0.31
USACE	3485	100YR	3981.00	330.26	337.32		337.46	0.001106	4.63	1466.80	356.01	0.31
USACE	3485	100YRPLUS	5206.00	330.26	338.16		338.33	0.001103	5.00	1779.63	378.78	0.32
USACE	3485	200YR	4680.00	330.26	337.81		337.97	0.001109	4.86	1647.99	372.73	0.32
USACE	3485	500YR	5621.00	330.26	338.44		338.61	0.001090	5.09	1885.63	383.83	0.32
USACE	3485	SEPT2011	2225.00	330.26	335.84		335.94	0.001095	3.91	969.81	316.72	0.30
USACE	3220	2YR	769.00	329.22	333.23		333.51	0.003689	5.72	229.12	127.01	0.52
USACE	3220	5YR	1296.00	329.22	333.97		334.34	0.004067	6.77	331.77	148.22	0.56
USACE	3220	10YR	1789.00	329.22	334.51		334.93	0.004232	7.44	414.84	161.48	0.58
USACE	3220	25YR	2622.00	329.22	335.29		335.78	0.004230	8.19	549.29	181.15	0.60
USACE	3220	50YR	3282.00	329.22	335.82		336.35	0.004221	8.67	648.01	193.59	0.61
USACE	3220	100YR	3981.00	329.22	336.34		336.91	0.004141	9.05	752.20	207.23	0.61
USACE	3220	100YRPLUS	5206.00	329.22	337.17		337.78	0.003954	9.54	930.86	223.88	0.61
USACE	3220	200YR	4680.00	329.22	336.82		337.42	0.004033	9.34	855.13	217.25	0.61

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	3220	500YR	5621.00	329.22	337.45		338.07	0.003833	9.62	995.82	230.08	0.60
USACE	3220	SEPT2011	2225.00	329.22	334.95		335.40	0.004196	7.83	488.47	174.09	0.59
USACE	3012	2YR	769.00	328.80	332.49		332.69	0.003902	5.13	255.70	148.34	0.51
USACE	3012	5YR	1296.00	328.80	333.24		333.49	0.003688	5.76	382.19	186.11	0.52
USACE	3012	10YR	1789.00	328.80	333.78		334.07	0.003645	6.26	486.94	200.95	0.53
USACE	3012	25YR	2622.00	328.80	334.56		334.90	0.003734	7.06	653.96	227.78	0.55
USACE	3012	50YR	3282.00	328.80	335.13		335.49	0.003527	7.36	787.62	241.14	0.54
USACE	3012	100YR	3981.00	328.80	335.69		336.07	0.003320	7.60	927.47	254.00	0.53
USACE	3012	100YRPLUS	5206.00	328.80	336.60		337.00	0.002963	7.85	1165.69	269.49	0.52
USACE	3012	200YR	4680.00	328.80	336.22		336.62	0.003106	7.76	1065.25	264.24	0.52
USACE	3012	500YR	5621.00	328.80	336.92		337.32	0.002798	7.85	1253.22	273.69	0.50
USACE	3012	SEPT2011	2225.00	328.80	334.21		334.53	0.003733	6.74	576.73	218.00	0.54
USACE	2801	2YR	769.00	327.51	331.74		331.96	0.003037	5.08	272.99	174.97	0.45
USACE	2801	5YR	1296.00	327.51	332.54		332.78	0.002938	5.65	431.03	214.58	0.46
USACE	2801	10YR	1789.00	327.51	333.08		333.35	0.003018	6.15	554.03	237.93	0.47
USACE	2801	25YR	2622.00	327.51	333.90		334.19	0.002866	6.59	760.98	269.27	0.47
USACE	2801	50YR	3282.00	327.51	334.53		334.82	0.002669	6.78	937.75	297.00	0.46
USACE	2801	100YR	3981.00	327.51	335.16		335.44	0.002410	6.84	1135.77	324.25	0.44
USACE	2801	100YRPLUS	5206.00	327.51	336.17		336.45	0.002019	6.82	1480.88	355.76	0.41
USACE	2801	200YR	4680.00	327.51	335.76		336.03	0.002150	6.81	1336.15	342.99	0.42
USACE	2801	500YR	5621.00	327.51	336.54		336.80	0.001866	6.75	1611.86	366.22	0.40
USACE	2801	SEPT2011	2225.00	327.51	333.53		333.81	0.002933	6.40	665.25	255.96	0.47
USACE	2605	2YR	787.00	326.22	329.37	329.37	330.52	0.024134	9.56	113.64	51.28	1.00
USACE	2605	5YR	1327.00	326.22	330.65	330.65	331.61	0.014062	9.36	239.21	132.56	0.81
USACE	2605	10YR	1831.00	326.22	331.42	331.21	332.26	0.011072	9.31	351.65	158.39	0.74
USACE	2605	25YR	2698.00	326.22	332.66		333.30	0.007241	8.75	570.68	193.46	0.62
USACE	2605	50YR	3388.00	326.22	333.47		334.04	0.005863	8.55	734.97	211.10	0.57
USACE	2605	100YR	4125.00	326.22	334.23		334.76	0.005003	8.46	900.57	225.14	0.54
USACE	2605	100YRPLUS	5395.00	326.22	335.37		335.88	0.004125	8.43	1167.03	241.14	0.50
USACE	2605	200YR	4866.00	326.22	334.91		335.42	0.004437	8.43	1057.70	235.14	0.51
USACE	2605	500YR	5870.00	326.22	335.76		336.27	0.003900	8.44	1263.12	246.46	0.49
USACE	2605	SEPT2011	2310.00	326.22	332.14		332.84	0.008488	8.93	474.38	179.92	0.66
USACE	2366	2YR	787.00	323.79	328.02	326.42	328.36	0.003849	4.81	182.49	597.52	0.42
USACE	2366	5YR	1327.00	323.79	328.91	327.45	329.48	0.005086	6.32	242.57	613.55	0.50
USACE	2366	10YR	1831.00	323.79	329.53	328.22	330.32	0.006150	7.53	289.84	623.86	0.57
USACE	2366	25YR	2698.00	323.79	330.33	329.21	331.47	0.007724	9.24	357.56	632.85	0.65
USACE	2366	50YR	3388.00	323.79	330.84	330.08	332.26	0.008856	10.41	404.16	638.66	0.70
USACE	2366	100YR	4125.00	323.79	331.35	330.75	333.03	0.009695	11.44	453.81	644.42	0.74
USACE	2366	100YRPLUS	5395.00	323.79	332.10	331.76	334.21	0.010948	12.97	529.80	651.10	0.80
USACE	2366	200YR	4866.00	323.79	331.82	331.33	333.74	0.010393	12.34	500.37	648.69	0.78
USACE	2366	500YR	5870.00	323.79	332.35	332.10	334.62	0.011385	13.49	555.66	653.05	0.82
USACE	2366	SEPT2011	2310.00	323.79	330.00	328.85	330.98	0.007026	8.50	329.19	629.22	0.61
USACE	2115	2YR	787.00	323.30	326.07	326.07	326.78	0.011318	7.37	137.79	241.17	0.84
USACE	2115	5YR	1327.00	323.30	326.78	326.78	327.66	0.010601	8.52	215.19	265.24	0.85
USACE	2115	10YR	1831.00	323.30	327.24	327.24	328.28	0.010893	9.47	271.37	272.55	0.89
USACE	2115	25YR	2698.00	323.30	327.91	327.91	329.16	0.011036	10.69	357.97	281.29	0.92
USACE	2115	50YR	3388.00	323.30	328.35	328.35	329.77	0.011189	11.51	418.22	285.72	0.94
USACE	2115	100YR	4125.00	323.30	328.76	328.76	330.36	0.011576	12.37	473.89	289.36	0.97
USACE	2115	100YRPLUS	5395.00	323.30	329.42	329.42	331.30	0.011796	13.55	568.41	297.00	1.00
USACE	2115	200YR	4866.00	323.30	329.13	329.13	330.92	0.011888	13.15	526.89	293.37	0.99
USACE	2115	500YR	5870.00	323.30	329.65	329.65	331.63	0.011799	13.92	603.30	299.89	1.01
USACE	2115	SEPT2011	2310.00	323.30	327.63	327.63	328.79	0.010970	10.18	321.12	278.34	0.91
USACE	1860	2YR	787.00	318.93	323.74		323.89	0.001377	3.95	336.13	164.72	0.33
USACE	1860	5YR	1327.00	318.93	324.22		324.48	0.002236	5.38	420.47	179.56	0.42
USACE	1860	10YR	1831.00	318.93	324.95		325.22	0.002078	5.68	556.82	198.68	0.42
USACE	1860	25YR	2698.00	318.93	326.45		326.67	0.001341	5.33	879.40	230.42	0.35
USACE	1860	50YR	3388.00	318.93	327.24		327.46	0.001237	5.48	1066.07	241.38	0.34
USACE	1860	100YR	4125.00	318.93	328.12		328.34	0.001088	5.51	1282.55	252.55	0.33
USACE	1860	100YRPLUS	5395.00	318.93	329.33		329.56	0.000997	5.74	1597.42	267.82	0.32
USACE	1860	200YR	4866.00	318.93	328.87		329.10	0.001013	5.62	1477.47	262.16	0.32
USACE	1860	500YR	5870.00	318.93	329.71		329.95	0.000985	5.85	1700.66	272.28	0.32
USACE	1860	SEPT2011	2310.00	318.93	325.91		326.13	0.001468	5.29	757.17	218.81	0.36
USACE	1561	2YR	787.00	317.43	322.06	321.38	323.00	0.007803	8.33	123.42	65.48	0.72
USACE	1561	5YR	1327.00	317.43	323.66	323.10	323.87	0.001820	5.01	442.10	242.38	0.37
USACE	1561	10YR	1831.00	317.43	324.61		324.76	0.001021	4.16	686.24	272.53	0.28
USACE	1561	25YR	2698.00	317.43	326.32		326.42	0.000446	3.20	1169.74	295.90	0.20
USACE	1561	50YR	3388.00	317.43	327.13		327.23	0.000399	3.22	1414.60	310.17	0.19
USACE	1561	100YR	4125.00	317.43	328.03		328.13	0.000345	3.18	1707.93	348.47	0.18
USACE	1561	100YRPLUS	5395.00	317.43	329.26		329.37	0.000303	3.22	2148.30	364.86	0.17
USACE	1561	200YR	4866.00	317.43	328.80		328.91	0.000312	3.18	1981.90	359.52	0.17
USACE	1561	500YR	5870.00	317.43	329.65		329.77	0.000297	3.26	2290.44	369.12	0.17
USACE	1561	SEPT2011	2310.00	317.43	325.75		325.85	0.000519	3.29	1003.59	286.87	0.21
USACE	1384	2YR	787.00	315.49	319.60	319.60	321.15	0.013614	10.48	90.81	32.10	0.95
USACE	1384	5YR	1327.00	315.49	320.95	320.95	323.01	0.012660	12.38	137.83	37.58	0.96
USACE	1384	10YR	1831.00	315.49	324.44		324.60	0.000814	4.43	691.03	248.94	0.27
USACE	1384	25YR	2698.00	315.49	326.24		326.34	0.000389	3.47	1167.99	277.69	0.19
USACE	1384	50YR	3388.00	315.49	327.06		327.17	0.000359	3.51	1398.83	286.97	0.18
USACE	1384	100YR	4125.00	315.49	327.97		328.08	0.000316	3.47	1662.69	295.32	0.18
USACE	1384	100YRPLUS	5395.00	315.49	329.20		329.32	0.000295	3.57	2033.04	307.51	0.17
USACE	1384	200YR	4866.00	315.49	328.74		328.86	0.000297	3.50	1893.65	302.14	0.17
USACE	1384	500YR	5870.00	315.49	329.58		329.71	0.000295	3.64	2152.41	312.04	0.17

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1384	SEPT2011	2310.00	315.49	325.66		325.76	0.000439	3.55	1008.26	270.11	0.20
USACE	1240	2YR	787.00	315.48	319.11	318.64	319.54	0.005189	6.34	177.84	94.40	0.61
USACE	1240	5YR	1327.00	315.48	321.42	319.33	321.60	0.001258	4.41	453.83	144.92	0.33
USACE	1240	10YR	1831.00	315.48	324.43	319.83	324.51	0.000302	2.87	906.31	180.08	0.17
USACE	1240	25YR	2698.00	315.48	326.21	320.67	326.29	0.000290	3.18	1283.80	197.91	0.17
USACE	1240	50YR	3388.00	315.48	327.01	321.22	327.12	0.000324	3.53	1446.42	204.76	0.19
USACE	1240	100YR	4125.00	315.48	327.91	321.59	328.03	0.000338	3.80	1632.70	211.42	0.19
USACE	1240	100YRPLUS	5395.00	315.48	329.12	322.24	329.27	0.000376	4.26	1894.51	220.79	0.21
USACE	1240	200YR	4866.00	315.48	328.67	321.97	328.81	0.000357	4.06	1796.15	217.38	0.20
USACE	1240	500YR	5870.00	315.48	329.50	322.45	329.66	0.000393	4.44	1978.50	223.69	0.21
USACE	1240	SEPT2011	2310.00	315.48	325.63	320.19	325.71	0.000276	2.99	1171.32	192.44	0.17
USACE	1189	2YR	787.00	313.82	318.76	317.05	319.30	0.003087	6.07	134.86	90.31	0.49
USACE	1189	5YR	1327.00	313.82	320.52	318.22	321.32	0.002968	7.37	187.02	118.83	0.51
USACE	1189	10YR	1831.00	313.82	323.61	319.17	324.29	0.001501	6.80	278.73	172.12	0.39
USACE	1189	25YR	2698.00	313.82	326.19	320.63	326.28	0.000220	3.05	1276.56	208.35	0.15
USACE	1189	50YR	3388.00	313.82	326.99	321.68	327.10	0.000256	3.44	1403.68	219.09	0.17
USACE	1189	100YR	4125.00	313.82	327.88	322.72	328.01	0.000280	3.76	1544.56	232.86	0.18
USACE	1189	100YRPLUS	5395.00	313.82	329.07	325.31	329.25	0.000330	4.31	1734.20	251.07	0.20
USACE	1189	200YR	4866.00	313.82	328.63	323.72	328.78	0.000307	4.08	1664.11	244.20	0.19
USACE	1189	500YR	5870.00	313.82	329.44	325.31	329.63	0.000351	4.52	1793.05	257.37	0.20
USACE	1189	SEPT2011	2310.00	313.82	325.62	320.01	325.69	0.000203	2.84	1185.47	200.54	0.15
USACE	1164 Private Drive		Bridge									
USACE	1133	2YR	787.00	312.30	315.97	315.67	317.05	0.009973	8.58	97.87	47.25	0.83
USACE	1133	5YR	1327.00	312.30	316.77	316.77	318.67	0.013153	11.41	124.14	53.27	0.99
USACE	1133	10YR	1831.00	312.30	317.69	317.69	320.03	0.012427	12.69	153.92	60.84	1.00
USACE	1133	25YR	2698.00	312.30	318.77	318.77	320.87	0.010038	12.99	275.68	71.13	0.93
USACE	1133	50YR	3388.00	312.30	321.31	319.59	322.44	0.003768	10.04	488.21	96.19	0.60
USACE	1133	100YR	4125.00	312.30	324.54	320.35	325.11	0.001416	7.61	871.06	141.57	0.39
USACE	1133	100YRPLUS	5395.00	312.30	326.11	321.43	326.72	0.001346	8.06	1112.05	164.93	0.39
USACE	1133	200YR	4866.00	312.30	325.58	321.04	326.17	0.001339	7.83	1027.08	157.90	0.38
USACE	1133	500YR	5870.00	312.30	326.51	321.77	327.14	0.001365	8.27	1178.98	169.05	0.39
USACE	1133	SEPT2011	2310.00	312.30	318.45	318.45	321.20	0.012133	13.78	178.70	68.03	1.01
USACE	1066	2YR	787.00	311.47	315.39	315.35	316.30	0.009891	8.97	129.79	67.93	0.84
USACE	1066	5YR	1327.00	311.47	316.20	316.20	317.38	0.010709	10.70	188.11	75.95	0.90
USACE	1066	10YR	1831.00	311.47	316.83	316.83	318.20	0.010779	11.75	237.61	80.39	0.93
USACE	1066	25YR	2698.00	311.47	318.56		319.62	0.006088	10.77	385.62	91.64	0.73
USACE	1066	50YR	3388.00	311.47	321.43		321.96	0.002081	7.99	686.42	118.10	0.45
USACE	1066	100YR	4125.00	311.47	324.60		324.90	0.000876	6.27	1107.57	147.96	0.31
USACE	1066	100YRPLUS	5395.00	311.47	326.17		326.51	0.000895	6.85	1352.27	165.10	0.32
USACE	1066	200YR	4866.00	311.47	325.65		325.96	0.000858	6.54	1267.76	158.94	0.31
USACE	1066	500YR	5870.00	311.47	326.56		326.94	0.000942	7.15	1418.75	170.64	0.33
USACE	1066	SEPT2011	2310.00	311.47	317.45	317.30	318.88	0.009946	12.21	288.76	84.01	0.91
USACE	934	2YR	787.00	311.32	314.90		315.29	0.004537	5.45	186.40	106.29	0.53
USACE	934	5YR	1327.00	311.32	315.66		316.19	0.005024	6.61	274.70	124.81	0.58
USACE	934	10YR	1831.00	311.32	316.42		316.96	0.004335	6.89	375.52	140.36	0.56
USACE	934	25YR	2698.00	311.32	318.75		319.03	0.001485	5.27	744.77	168.77	0.35
USACE	934	50YR	3388.00	311.32	321.57		321.72	0.000530	3.93	1246.56	187.15	0.22
USACE	934	100YR	4125.00	311.32	324.69		324.78	0.000247	3.22	1857.80	205.53	0.16
USACE	934	100YRPLUS	5395.00	311.32	326.27		326.39	0.000262	3.58	2189.64	214.49	0.17
USACE	934	200YR	4866.00	311.32	325.74		325.85	0.000248	3.40	2076.80	211.28	0.16
USACE	934	500YR	5870.00	311.32	326.68		326.80	0.000277	3.75	2277.05	217.10	0.17
USACE	934	SEPT2011	2310.00	311.32	317.60		317.98	0.002487	6.05	554.52	159.58	0.44
USACE	809	2YR	787.00	310.89	314.03		314.56	0.007585	6.36	161.91	102.78	0.67
USACE	809	5YR	1327.00	310.89	314.88		315.47	0.006604	7.08	251.89	110.90	0.66
USACE	809	10YR	1831.00	310.89	315.92		316.42	0.004182	6.67	372.77	120.20	0.54
USACE	809	25YR	2698.00	310.89	318.57		318.85	0.001395	5.20	721.34	144.09	0.34
USACE	809	50YR	3388.00	310.89	321.49		321.65	0.000557	4.11	1185.21	173.52	0.23
USACE	809	100YR	4125.00	310.89	324.64		324.75	0.000267	3.40	1776.50	199.56	0.16
USACE	809	100YRPLUS	5395.00	310.89	326.22		326.35	0.000284	3.78	2098.30	208.68	0.17
USACE	809	200YR	4866.00	310.89	325.69		325.81	0.000269	3.59	1989.12	205.55	0.17
USACE	809	500YR	5870.00	310.89	326.62		326.76	0.000300	3.96	2182.69	211.13	0.18
USACE	809	SEPT2011	2310.00	310.89	317.33		317.68	0.002190	5.76	550.08	131.70	0.41
USACE	680	2YR	787.00	310.34	312.91		313.52	0.008483	6.51	138.06	77.28	0.74
USACE	680	5YR	1327.00	310.34	313.89		314.61	0.006651	7.23	221.29	91.21	0.69
USACE	680	10YR	1831.00	310.34	315.51		315.97	0.002808	6.08	382.21	107.17	0.48
USACE	680	25YR	2698.00	310.34	318.42		318.70	0.000998	4.91	729.81	133.13	0.31
USACE	680	50YR	3388.00	310.34	321.41		321.59	0.000429	3.98	1169.51	161.05	0.21
USACE	680	100YR	4125.00	310.34	324.60		324.72	0.000228	3.44	1734.60	194.26	0.16
USACE	680	100YRPLUS	5395.00	310.34	326.16		326.31	0.000254	3.90	2050.47	209.38	0.17
USACE	680	200YR	4866.00	310.34	325.64		325.78	0.000237	3.69	1942.57	204.21	0.17
USACE	680	500YR	5870.00	310.34	326.56		326.73	0.000272	4.10	2134.26	213.12	0.18
USACE	680	SEPT2011	2310.00	310.34	317.10		317.45	0.001521	5.37	562.31	119.79	0.37
USACE	530	2YR	787.00	307.57	311.12	311.01	312.06	0.010819	8.53	120.21	59.70	0.83
USACE	530	5YR	1327.00	307.57	313.26	311.97	313.81	0.003862	7.10	274.92	82.95	0.54
USACE	530	10YR	1831.00	307.57	315.18	312.67	315.59	0.002092	6.40	453.31	103.15	0.42
USACE	530	25YR	2698.00	307.57	318.27	313.65	318.55	0.001025	5.65	827.38	136.49	0.31
USACE	530	50YR	3388.00	307.57	321.32	314.32	321.51	0.000537	4.85	1243.87	163.69	0.23
USACE	530	100YR	4125.00	307.57	324.53	314.96	324.67	0.000325	4.35	1692.68	225.61	0.19
USACE	530	100YRPLUS	5395.00	307.57	326.07	316.08	326.26	0.000388	5.04	1908.27	278.84	0.21
USACE	530	200YR	4866.00	307.57	325.56	315.51	325.73	0.000354	4.72	1836.99	254.24	0.20

HEC-RAS Plan: Existing River: SilverSpRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	530	500YR	5870.00	307.57	326.45	316.40	326.67	0.000422	5.33	1962.05	305.97	0.22
USACE	530	SEPT2011	2310.00	307.57	316.89	313.21	317.23	0.001393	6.00	651.09	124.69	0.35
USACE	400	2YR	787.00	305.60	310.35	309.08	311.00	0.004872	6.97	136.84	80.58	0.58
USACE	400	5YR	1327.00	305.60	312.48	310.24	313.26	0.003532	7.70	207.99	145.44	0.53
USACE	400	10YR	1831.00	305.60	314.21	311.17	315.12	0.002994	8.28	266.04	174.50	0.51
USACE	400	25YR	2698.00	305.60	317.06	312.59	318.12	0.002366	8.96	361.36	203.74	0.47
USACE	400	50YR	3388.00	305.60	320.15	313.61	321.16	0.001623	8.74	464.72	220.57	0.41
USACE	400	100YR	4125.00	305.60	324.54	314.62	324.61	0.000141	3.08	2367.88	279.66	0.13
USACE	400	100YRPLUS	5395.00	305.60	326.08	316.26	326.19	0.000175	3.61	2622.60	372.71	0.14
USACE	400	200YR	4866.00	305.60	325.57	315.61	325.66	0.000158	3.38	2538.29	335.28	0.13
USACE	400	500YR	5870.00	305.60	326.47	316.83	326.58	0.000191	3.83	2686.26	390.20	0.15
USACE	400	SEPT2011	2310.00	305.60	315.78	311.97	316.78	0.002636	8.72	318.35	190.97	0.49
USACE	346 Prospect Road		Culvert									
USACE	283	2YR	787.00	304.36	309.27	307.32	309.67	0.002552	5.17	164.48	105.68	0.43
USACE	283	5YR	1327.00	304.36	310.39	308.37	311.11	0.003473	6.98	205.88	115.92	0.51
USACE	283	10YR	1831.00	304.36	310.82	309.22	312.00	0.005182	8.95	221.73	119.75	0.64
USACE	283	25YR	2698.00	304.36	311.32	310.51	313.50	0.008626	12.17	240.37	123.24	0.83
USACE	283	50YR	3388.00	304.36	311.64	311.45	314.77	0.011605	14.56	252.23	125.29	0.97
USACE	283	100YR	4125.00	304.36	314.06	312.38	314.79	0.002645	8.48	845.59	138.45	0.49
USACE	283	100YRPLUS	5395.00	304.36	314.77	313.50	315.78	0.003380	10.06	930.71	166.56	0.56
USACE	283	200YR	4866.00	304.36	314.57	313.50	315.44	0.002975	9.32	906.98	161.42	0.52
USACE	283	500YR	5870.00	304.36	314.94	313.51	316.08	0.003752	10.72	950.42	170.74	0.59
USACE	283	SEPT2011	2310.00	304.36	311.07	309.95	312.80	0.007212	10.84	230.96	121.48	0.76
USACE	224	2YR	790.00	303.96	307.93	307.93	309.13	0.014525	9.92	130.05	57.72	0.96
USACE	224	5YR	1331.00	303.96	309.10	309.10	310.55	0.012633	11.30	210.76	84.56	0.94
USACE	224	10YR	1835.00	303.96	310.01	310.01	311.49	0.010934	11.88	299.35	110.75	0.90
USACE	224	25YR	2702.00	303.96	311.06	311.06	312.67	0.010402	13.03	424.78	127.15	0.90
USACE	224	50YR	3395.00	303.96	311.67	311.67	313.43	0.010605	13.98	504.85	132.50	0.93
USACE	224	100YR	4134.00	303.96	312.22	312.22	314.15	0.011002	14.96	578.35	136.24	0.95
USACE	224	100YRPLUS	5406.00	303.96	313.34	313.34	315.21	0.009605	15.31	742.63	162.92	0.91
USACE	224	200YR	4879.00	303.96	312.84	312.84	314.82	0.010556	15.44	665.56	146.89	0.95
USACE	224	500YR	5893.00	303.96	313.66	313.66	315.53	0.009330	15.46	795.99	165.14	0.90
USACE	224	SEPT2011	2327.00	303.96	310.67	310.67	312.20	0.010354	12.48	376.35	122.68	0.89
USACE	135	2YR	790.00	302.40	307.79		308.11	0.003006	4.64	215.86	87.55	0.37
USACE	135	5YR	1331.00	302.40	308.84		309.33	0.003894	6.00	312.61	96.45	0.43
USACE	135	10YR	1835.00	302.40	309.61		310.24	0.004423	6.93	393.10	130.98	0.47
USACE	135	25YR	2702.00	302.40	310.14		311.07	0.006306	8.71	464.34	135.74	0.57
USACE	135	50YR	3395.00	302.40	310.44		311.62	0.007856	9.98	504.89	139.23	0.64
USACE	135	100YR	4134.00	302.40	310.73		312.16	0.009284	11.12	545.44	143.22	0.70
USACE	135	100YRPLUS	5406.00	302.40	311.34	311.34	312.98	0.009929	12.10	636.60	151.85	0.73
USACE	135	200YR	4879.00	302.40	311.10	311.10	312.65	0.009664	11.71	600.71	148.61	0.72
USACE	135	500YR	5893.00	302.40	311.52	311.52	313.26	0.010344	12.52	664.23	154.04	0.75
USACE	135	SEPT2011	2327.00	302.40	310.01		310.77	0.005190	7.81	446.92	134.62	0.51
USACE	51	2YR	790.00	301.42	306.63	306.63	307.64	0.008353	9.05	140.93	80.19	0.75
USACE	51	5YR	1331.00	301.42	307.56	307.56	308.78	0.009054	10.68	220.85	90.79	0.81
USACE	51	10YR	1835.00	301.42	308.14	308.14	309.61	0.010190	12.13	275.59	96.50	0.87
USACE	51	25YR	2702.00	301.42	309.64	309.64	310.56	0.005817	10.62	479.21	188.65	0.68
USACE	51	50YR	3395.00	301.42	309.99	309.99	310.99	0.006023	11.15	547.05	191.38	0.70
USACE	51	100YR	4134.00	301.42	310.22	310.22	311.42	0.006934	12.19	589.89	193.04	0.75
USACE	51	100YRPLUS	5406.00	301.42	310.65	310.65	312.12	0.007493	13.11	673.26	195.50	0.79
USACE	51	200YR	4879.00	301.42	310.45	310.45	311.83	0.007490	12.91	635.05	194.39	0.79
USACE	51	500YR	5893.00	301.42	310.71	310.71	312.39	0.008359	13.92	685.43	195.85	0.84
USACE	51	SEPT2011	2327.00	301.42	309.02	309.02	310.21	0.007680	11.53	379.71	143.60	0.77

HEC-RAS Plan: Existing River: SilverSpRnTrib Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	2956	2YR	234.00	346.52	349.33	349.33	349.66	0.006259	5.70	83.90	128.28	0.63
USACE	2956	5YR	374.00	346.52	349.60	349.60	349.98	0.007318	6.61	122.17	149.15	0.69
USACE	2956	10YR	480.00	346.52	349.88		350.18	0.006052	6.39	166.71	173.87	0.64
USACE	2956	25YR	665.00	346.52	350.19		350.47	0.005410	6.45	223.68	183.44	0.62
USACE	2956	50YR	830.00	346.52	350.43		350.70	0.005126	6.57	267.67	188.10	0.61
USACE	2956	100YR	1007.00	346.52	350.68		350.94	0.004786	6.63	314.58	193.16	0.59
USACE	2956	100YRPLUS	1317.00	346.52	351.03		351.31	0.004538	6.85	385.03	198.36	0.59
USACE	2956	200YR	1209.00	346.52	350.89		351.17	0.004786	6.87	356.89	196.57	0.60
USACE	2956	500YR	1475.00	346.52	351.16		351.45	0.004727	7.13	409.94	199.93	0.60
USACE	2956	SEPT2011	477.00	346.52	349.87		350.18	0.005994	6.36	166.52	173.81	0.64
USACE	2825	2YR	268.00	345.42	348.21	348.21	348.58	0.007208	5.73	83.72	122.16	0.67
USACE	2825	5YR	441.00	345.42	348.53	348.53	348.95	0.008091	6.63	125.64	134.75	0.72
USACE	2825	10YR	571.00	345.42	348.69	348.69	349.17	0.009249	7.37	146.77	138.15	0.78
USACE	2825	25YR	788.00	345.42	348.97	348.97	349.49	0.009560	7.99	187.83	153.61	0.81
USACE	2825	50YR	969.00	345.42	349.13	349.13	349.72	0.010326	8.60	213.37	158.46	0.85
USACE	2825	100YR	1194.00	345.42	349.33	349.33	349.97	0.010743	9.13	245.92	165.94	0.87
USACE	2825	100YRPLUS	1562.00	345.42	349.61	349.61	350.33	0.011435	9.92	292.50	173.48	0.91
USACE	2825	200YR	1406.00	345.42	349.49	349.49	350.18	0.011166	9.60	273.26	170.21	0.89
USACE	2825	500YR	1758.00	345.42	349.86		350.52	0.009796	9.60	338.64	186.22	0.85
USACE	2825	SEPT2011	571.00	345.42	348.69	348.69	349.17	0.009249	7.37	146.77	138.15	0.78
USACE	2693	2YR	268.00	344.55	346.92	346.92	347.22	0.006842	5.32	96.44	156.43	0.64
USACE	2693	5YR	441.00	344.55	347.63		347.74	0.002554	3.93	217.97	189.43	0.41
USACE	2693	10YR	571.00	344.55	347.97		348.07	0.002073	3.83	284.97	201.70	0.38
USACE	2693	25YR	788.00	344.55	348.32		348.43	0.002097	4.12	356.73	209.95	0.39
USACE	2693	50YR	969.00	344.55	348.66		348.78	0.001922	4.20	432.57	235.60	0.38
USACE	2693	100YR	1194.00	344.55	349.05		349.17	0.001670	4.18	526.45	244.34	0.36
USACE	2693	100YRPLUS	1562.00	344.55	349.58		349.70	0.001495	4.27	657.64	256.72	0.34
USACE	2693	200YR	1406.00	344.55	349.37		349.49	0.001546	4.22	605.08	251.38	0.35
USACE	2693	500YR	1758.00	344.55	349.85		349.97	0.001410	4.30	727.27	263.88	0.34
USACE	2693	SEPT2011	571.00	344.55	347.97		348.07	0.002073	3.83	284.97	201.70	0.38
USACE	2585	2YR	268.00	343.23	346.07	346.07	346.39	0.007558	5.98	98.13	165.32	0.68
USACE	2585	5YR	441.00	343.23	347.58		347.61	0.000544	2.23	419.04	256.15	0.20
USACE	2585	10YR	571.00	343.23	347.92		347.95	0.000516	2.29	508.47	264.13	0.20
USACE	2585	25YR	788.00	343.23	348.26		348.30	0.000597	2.59	598.97	268.26	0.21
USACE	2585	50YR	969.00	343.23	348.62		348.65	0.000575	2.68	694.36	273.47	0.21
USACE	2585	100YR	1194.00	343.23	349.01		349.05	0.000563	2.79	802.46	279.74	0.21
USACE	2585	100YRPLUS	1562.00	343.23	349.53		349.58	0.000573	2.99	951.45	287.20	0.22
USACE	2585	200YR	1406.00	343.23	349.32		349.37	0.000565	2.90	892.30	284.58	0.22
USACE	2585	500YR	1758.00	343.23	349.80		349.85	0.000569	3.07	1029.31	291.69	0.22
USACE	2585	SEPT2011	571.00	343.23	347.92		347.95	0.000516	2.29	508.47	264.13	0.20
USACE	2496	2YR	268.00	342.43	345.58	344.82	345.80	0.003299	4.39	101.53	147.69	0.47
USACE	2496	5YR	441.00	342.43	347.54	345.69	347.57	0.000335	2.00	368.45	261.34	0.16
USACE	2496	10YR	571.00	342.43	347.87	345.89	347.91	0.000393	2.27	413.69	266.96	0.18
USACE	2496	25YR	788.00	342.43	348.18	346.17	348.25	0.000549	2.79	456.52	272.12	0.21
USACE	2496	50YR	969.00	342.43	348.52	346.37	348.60	0.000613	3.07	502.67	276.70	0.23
USACE	2496	100YR	1194.00	342.43	348.90	346.59	348.99	0.000684	3.38	553.66	281.06	0.24
USACE	2496	100YRPLUS	1562.00	342.43	349.40	346.91	349.51	0.000810	3.88	621.16	286.28	0.27
USACE	2496	200YR	1406.00	342.43	349.20	346.79	349.31	0.000754	3.67	594.75	284.27	0.26
USACE	2496	500YR	1758.00	342.43	349.65	346.99	349.78	0.000861	4.10	655.85	288.88	0.28
USACE	2496	SEPT2011	571.00	342.43	347.87	345.89	347.91	0.000393	2.27	413.69	266.96	0.18
USACE	2452	2YR	268.00	341.40	345.32	343.98	345.64	0.002832	4.67	60.80	29.93	0.44
USACE	2452	5YR	441.00	341.40	347.45	344.73	347.53	0.000608	2.98	261.75	231.87	0.22
USACE	2452	10YR	571.00	341.40	347.76	345.22	347.87	0.000719	3.36	299.13	241.82	0.24
USACE	2452	25YR	788.00	341.40	348.03	345.97	348.18	0.001043	4.17	330.43	249.42	0.30
USACE	2452	50YR	969.00	341.40	348.35	346.95	348.53	0.001162	4.55	368.27	258.99	0.31
USACE	2452	100YR	1194.00	341.40	348.70	347.21	348.91	0.001294	4.98	409.94	268.16	0.34
USACE	2452	100YRPLUS	1562.00	341.40	349.15	347.57	349.42	0.001541	5.67	463.46	276.57	0.37
USACE	2452	200YR	1406.00	341.40	348.98	347.43	349.22	0.001430	5.37	442.85	273.71	0.35
USACE	2452	500YR	1758.00	341.40	349.39	347.74	349.69	0.001636	5.97	491.42	280.36	0.38
USACE	2452	SEPT2011	571.00	341.40	347.76	345.22	347.87	0.000719	3.36	299.13	241.82	0.24
USACE	2428 Eby Chiques Road		Culvert									
USACE	2400	2YR	268.00	340.74	344.22	343.48	344.79	0.006091	6.20	45.28	59.79	0.63
USACE	2400	5YR	441.00	340.74	344.58	344.54	345.27	0.007557	7.46	92.60	96.92	0.71
USACE	2400	10YR	571.00	340.74	345.01	345.01	345.62	0.006558	7.51	129.80	160.85	0.68
USACE	2400	25YR	788.00	340.74	345.33	345.33	346.05	0.007457	8.45	159.79	181.45	0.73
USACE	2400	50YR	969.00	340.74	345.57	345.57	346.36	0.007995	9.08	181.87	194.18	0.76
USACE	2400	100YR	1194.00	340.74	345.82	345.82	346.71	0.008723	9.84	204.96	207.21	0.81
USACE	2400	100YRPLUS	1562.00	340.74	346.18	346.18	347.23	0.009640	10.88	238.75	220.28	0.86
USACE	2400	200YR	1406.00	340.74	346.04	346.04	347.02	0.009205	10.43	225.60	215.53	0.83
USACE	2400	500YR	1758.00	340.74	346.35	346.35	347.49	0.010140	11.41	254.36	225.80	0.88
USACE	2400	SEPT2011	571.00	340.74	345.01	345.01	345.62	0.006558	7.51	129.80	160.85	0.68
USACE	2349	2YR	268.00	340.72	344.12	343.42	344.40	0.003905	4.91	108.91	174.24	0.50
USACE	2349	5YR	441.00	340.72	344.58		344.79	0.003229	4.92	194.79	197.97	0.47
USACE	2349	10YR	571.00	340.72	344.82		345.02	0.003216	5.13	242.21	209.02	0.47
USACE	2349	25YR	788.00	340.72	345.17		345.36	0.003043	5.31	318.95	224.26	0.47
USACE	2349	50YR	969.00	340.72	345.43		345.61	0.002927	5.43	377.00	231.80	0.46

HEC-RAS Plan: Existing River: SilverSpRnTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	2349	100YR	1194.00	340.72	345.67		345.87	0.002973	5.68	435.69	238.32	0.47
USACE	2349	100YRPLUS	1562.00	340.72	346.04		346.26	0.002976	5.99	525.00	245.31	0.48
USACE	2349	200YR	1406.00	340.72	345.89		346.10	0.002995	5.88	487.01	242.32	0.48
USACE	2349	500YR	1758.00	340.72	346.22		346.44	0.002998	6.16	568.55	249.18	0.48
USACE	2349	SEPT2011	571.00	340.72	344.82		345.02	0.003186	5.11	243.16	209.25	0.47
USACE	2247	2YR	268.00	340.70	344.00		344.10	0.001629	3.25	171.93	211.66	0.33
USACE	2247	5YR	441.00	340.70	344.45		344.54	0.001476	3.40	271.64	227.47	0.32
USACE	2247	10YR	571.00	340.70	344.66		344.76	0.001606	3.69	321.10	235.48	0.34
USACE	2247	25YR	788.00	340.70	345.01		345.12	0.001649	3.97	404.45	247.61	0.35
USACE	2247	50YR	969.00	340.70	345.26		345.37	0.001655	4.15	467.77	253.27	0.35
USACE	2247	100YR	1194.00	340.70	345.50		345.62	0.001771	4.45	528.24	257.65	0.37
USACE	2247	100YRPLUS	1562.00	340.70	345.85		346.00	0.001901	4.85	621.36	265.64	0.39
USACE	2247	200YR	1406.00	340.70	345.70		345.84	0.001866	4.70	581.12	262.02	0.38
USACE	2247	500YR	1758.00	340.70	346.02		346.18	0.001966	5.04	666.91	269.86	0.40
USACE	2247	SEPT2011	571.00	340.70	344.67		344.77	0.001586	3.67	322.64	235.75	0.34
USACE	2091	2YR	268.00	340.19	343.93		343.96	0.000449	1.91	258.88	200.34	0.18
USACE	2091	5YR	441.00	340.19	344.34		344.39	0.000622	2.41	346.14	221.89	0.21
USACE	2091	10YR	571.00	340.19	344.52		344.59	0.000786	2.80	387.58	229.23	0.24
USACE	2091	25YR	788.00	340.19	344.83		344.92	0.000977	3.28	462.13	247.55	0.27
USACE	2091	50YR	969.00	340.19	345.07		345.17	0.001069	3.55	522.22	255.38	0.29
USACE	2091	100YR	1194.00	340.19	345.28		345.39	0.001251	3.95	576.01	262.91	0.32
USACE	2091	100YRPLUS	1562.00	340.19	345.60		345.74	0.001490	4.50	662.62	278.44	0.35
USACE	2091	200YR	1406.00	340.19	345.46		345.59	0.001410	4.30	623.91	271.42	0.34
USACE	2091	500YR	1758.00	340.19	345.75		345.91	0.001599	4.75	705.93	285.63	0.36
USACE	2091	SEPT2011	571.00	340.19	344.53		344.59	0.000777	2.79	389.49	229.52	0.24
USACE	1944	2YR	268.00	340.10	343.88		343.90	0.000347	1.69	308.47	237.69	0.16
USACE	1944	5YR	441.00	340.10	344.27		344.31	0.000463	2.09	407.17	256.44	0.19
USACE	1944	10YR	571.00	340.10	344.44		344.49	0.000595	2.44	450.14	262.02	0.21
USACE	1944	25YR	788.00	340.10	344.73		344.79	0.000736	2.84	528.99	274.38	0.24
USACE	1944	50YR	969.00	340.10	344.96		345.03	0.000813	3.08	592.78	283.47	0.25
USACE	1944	100YR	1194.00	340.10	345.15		345.23	0.000971	3.46	646.43	290.73	0.28
USACE	1944	100YRPLUS	1562.00	340.10	345.44		345.55	0.001164	3.94	734.60	304.81	0.31
USACE	1944	200YR	1406.00	340.10	345.31		345.41	0.001105	3.77	694.24	300.64	0.30
USACE	1944	500YR	1758.00	340.10	345.59		345.70	0.001254	4.17	778.55	315.92	0.32
USACE	1944	SEPT2011	571.00	340.10	344.45		344.49	0.000586	2.42	452.63	262.54	0.21
USACE	1838	2YR	268.00	340.06	343.84		343.87	0.000266	1.49	308.59	223.47	0.14
USACE	1838	5YR	441.00	340.06	344.22		344.26	0.000396	1.95	396.83	242.22	0.17
USACE	1838	10YR	571.00	340.06	344.37		344.42	0.000535	2.32	432.91	247.54	0.20
USACE	1838	25YR	788.00	340.06	344.64		344.71	0.000702	2.77	501.76	259.56	0.23
USACE	1838	50YR	969.00	340.06	344.86		344.94	0.000806	3.07	558.11	267.98	0.25
USACE	1838	100YR	1194.00	340.06	345.01		345.12	0.001011	3.51	601.12	275.75	0.28
USACE	1838	100YRPLUS	1562.00	340.06	345.27		345.41	0.001289	4.10	672.75	286.34	0.32
USACE	1838	200YR	1406.00	340.06	345.15		345.28	0.001196	3.89	638.81	281.21	0.31
USACE	1838	500YR	1758.00	340.06	345.39		345.55	0.001434	4.40	708.36	303.94	0.34
USACE	1838	SEPT2011	571.00	340.06	344.38		344.43	0.000527	2.31	435.51	247.96	0.20
USACE	1792	2YR	268.00	339.78	343.84	341.29	343.85	0.000187	1.32	358.01	225.39	0.12
USACE	1792	5YR	441.00	339.78	344.21	341.77	344.24	0.000306	1.79	450.28	260.14	0.15
USACE	1792	10YR	571.00	339.78	344.35	342.09	344.40	0.000425	2.16	488.23	273.26	0.18
USACE	1792	25YR	788.00	339.78	344.62	342.57	344.68	0.000567	2.59	562.73	286.04	0.21
USACE	1792	50YR	969.00	339.78	344.83	342.99	344.90	0.000658	2.88	623.80	296.05	0.23
USACE	1792	100YR	1194.00	339.78	344.98	343.25	345.07	0.000833	3.31	669.20	302.38	0.26
USACE	1792	100YRPLUS	1562.00	339.78	345.23	343.98	345.35	0.001071	3.87	744.68	310.52	0.30
USACE	1792	200YR	1406.00	339.78	345.11	343.54	345.22	0.000992	3.67	708.53	306.84	0.28
USACE	1792	500YR	1758.00	339.78	345.34	343.83	345.48	0.001192	4.14	780.92	313.62	0.31
USACE	1792	SEPT2011	571.00	339.78	344.37	342.09	344.41	0.000419	2.15	491.18	273.97	0.18
USACE	1763 Private Drive		Culvert									
USACE	1729	2YR	268.00	338.94	342.50		342.57	0.000770	2.47	172.19	134.15	0.23
USACE	1729	5YR	441.00	338.94	343.03		343.13	0.000914	2.97	266.40	208.40	0.26
USACE	1729	10YR	571.00	338.94	343.31		343.42	0.001018	3.27	326.30	229.61	0.28
USACE	1729	25YR	788.00	338.94	343.67		343.79	0.001176	3.72	413.99	252.24	0.30
USACE	1729	50YR	969.00	338.94	343.93		344.06	0.001266	4.00	480.20	265.78	0.32
USACE	1729	100YR	1194.00	338.94	344.17		344.32	0.001420	4.37	546.80	280.67	0.34
USACE	1729	100YRPLUS	1562.00	338.94	344.55		344.72	0.001532	4.77	657.01	297.75	0.36
USACE	1729	200YR	1406.00	338.94	344.41		344.57	0.001469	4.59	615.52	292.36	0.35
USACE	1729	500YR	1758.00	338.94	344.74		344.91	0.001567	4.93	712.63	303.97	0.36
USACE	1729	SEPT2011	571.00	338.94	343.33		343.43	0.000999	3.25	330.56	232.80	0.28
USACE	1683	2YR	304.00	338.88	342.45		342.53	0.000818	2.51	191.32	164.07	0.24
USACE	1683	5YR	509.00	338.88	342.98		343.08	0.001007	3.06	289.24	212.48	0.27
USACE	1683	10YR	668.00	338.88	343.24		343.36	0.001174	3.46	350.71	249.14	0.30
USACE	1683	25YR	930.00	338.88	343.59		343.73	0.001404	3.98	444.80	296.22	0.33
USACE	1683	50YR	1143.00	338.88	343.82		343.99	0.001645	4.46	513.93	312.88	0.36
USACE	1683	100YR	1396.00	338.88	344.07		344.25	0.001698	4.69	593.82	319.16	0.37
USACE	1683	100YRPLUS	1826.00	338.88	344.44		344.64	0.001797	5.06	717.77	338.58	0.39
USACE	1683	200YR	1657.00	338.88	344.30		344.49	0.001760	4.92	670.46	331.07	0.38
USACE	1683	500YR	2052.00	338.88	344.63		344.83	0.001844	5.24	779.99	350.40	0.39
USACE	1683	SEPT2011	678.00	338.88	343.26		343.38	0.001183	3.48	354.54	251.03	0.30

HEC-RAS Plan: Existing River: SilverSpRnTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1585	2YR	304.00	338.75	342.25	340.87	342.41	0.001705	3.48	136.37	151.99	0.34
USACE	1585	5YR	509.00	338.75	342.71	341.57	342.92	0.002254	4.37	221.08	228.97	0.40
USACE	1585	10YR	668.00	338.75	342.98	342.38	343.19	0.002271	4.61	286.63	253.77	0.41
USACE	1585	25YR	930.00	338.75	343.33	342.91	343.55	0.002328	4.94	380.05	285.41	0.42
USACE	1585	50YR	1143.00	338.75	343.57	343.07	343.79	0.002370	5.17	448.55	304.84	0.43
USACE	1585	100YR	1396.00	338.75	343.82	343.24	344.04	0.002390	5.38	524.51	318.35	0.43
USACE	1585	100YRPLUS	1826.00	338.75	344.20	343.51	344.43	0.002406	5.68	644.79	342.13	0.44
USACE	1585	200YR	1657.00	338.75	344.05	343.41	344.28	0.002413	5.58	598.26	335.41	0.44
USACE	1585	500YR	2052.00	338.75	344.38	343.63	344.62	0.002402	5.81	705.10	353.38	0.44
USACE	1585	SEPT2011	678.00	338.75	343.00	342.38	343.21	0.002271	4.62	290.67	256.52	0.41
USACE	1449	2YR	304.00	338.75	341.96		342.14	0.002223	3.83	136.96	175.25	0.39
USACE	1449	5YR	509.00	338.75	342.40		342.60	0.002469	4.42	219.25	220.09	0.42
USACE	1449	10YR	668.00	338.75	342.66		342.86	0.002608	4.76	281.53	281.26	0.44
USACE	1449	25YR	930.00	338.75	343.01		343.21	0.002567	5.02	390.39	326.16	0.44
USACE	1449	50YR	1143.00	338.75	343.25		343.45	0.002491	5.14	472.23	342.76	0.44
USACE	1449	100YR	1396.00	338.75	343.52		343.71	0.002397	5.25	564.98	358.74	0.43
USACE	1449	100YRPLUS	1826.00	338.75	343.92		344.10	0.002234	5.36	710.92	373.54	0.42
USACE	1449	200YR	1657.00	338.75	343.77		343.95	0.002290	5.31	655.08	367.25	0.43
USACE	1449	500YR	2052.00	338.75	344.11		344.29	0.002170	5.41	783.09	381.02	0.42
USACE	1449	SEPT2011	678.00	338.75	342.67		342.88	0.002616	4.78	285.73	286.16	0.44
USACE	1264	2YR	304.00	338.57	341.67		341.77	0.001644	3.09	190.03	231.99	0.33
USACE	1264	5YR	509.00	338.57	342.10		342.20	0.001664	3.42	293.95	251.30	0.34
USACE	1264	10YR	668.00	338.57	342.33		342.44	0.001785	3.71	353.07	260.34	0.35
USACE	1264	25YR	930.00	338.57	342.66		342.78	0.001901	4.07	440.83	271.15	0.37
USACE	1264	50YR	1143.00	338.57	342.89		343.02	0.001958	4.30	504.73	275.83	0.38
USACE	1264	100YR	1396.00	338.57	343.15		343.29	0.002002	4.53	575.58	280.81	0.39
USACE	1264	100YRPLUS	1826.00	338.57	343.54		343.70	0.002034	4.85	687.22	286.99	0.40
USACE	1264	200YR	1657.00	338.57	343.39		343.54	0.002026	4.73	644.51	285.03	0.39
USACE	1264	500YR	2052.00	338.57	343.73		343.90	0.002045	4.99	741.67	289.39	0.40
USACE	1264	SEPT2011	678.00	338.57	342.35		342.45	0.001791	3.73	356.66	260.89	0.35
USACE	1061	2YR	304.00	337.89	340.93	340.16	341.24	0.004270	4.77	99.51	174.04	0.52
USACE	1061	5YR	509.00	337.89	341.31	341.25	341.64	0.004724	5.49	174.21	209.82	0.56
USACE	1061	10YR	668.00	337.89	341.56	341.42	341.87	0.004535	5.67	227.25	216.18	0.55
USACE	1061	25YR	930.00	337.89	341.90		342.21	0.004321	5.92	303.39	224.75	0.55
USACE	1061	50YR	1143.00	337.89	342.15		342.45	0.004199	6.09	358.24	228.66	0.55
USACE	1061	100YR	1396.00	337.89	342.41		342.71	0.004073	6.27	418.94	232.78	0.55
USACE	1061	100YRPLUS	1826.00	337.89	342.81		343.13	0.003913	6.54	514.34	239.67	0.54
USACE	1061	200YR	1657.00	337.89	342.66		342.97	0.003978	6.44	477.53	237.10	0.54
USACE	1061	500YR	2052.00	337.89	343.00		343.32	0.003879	6.69	559.93	246.79	0.54
USACE	1061	SEPT2011	678.00	337.89	341.57	341.44	341.89	0.004526	5.68	230.38	216.60	0.55
USACE	801	2YR	304.00	337.81	340.38		340.44	0.001982	2.97	205.75	245.12	0.35
USACE	801	5YR	509.00	337.81	340.81		340.87	0.001715	3.10	320.84	288.64	0.33
USACE	801	10YR	668.00	337.81	341.08		341.13	0.001632	3.22	400.56	313.99	0.33
USACE	801	25YR	930.00	337.81	341.44		341.50	0.001569	3.41	518.06	336.93	0.33
USACE	801	50YR	1143.00	337.81	341.69		341.76	0.001546	3.55	603.54	347.58	0.33
USACE	801	100YR	1396.00	337.81	341.97		342.04	0.001498	3.68	702.55	357.87	0.33
USACE	801	100YRPLUS	1826.00	337.81	342.38		342.47	0.001481	3.92	857.12	386.10	0.33
USACE	801	200YR	1657.00	337.81	342.22		342.31	0.001482	3.82	796.86	371.67	0.33
USACE	801	500YR	2052.00	337.81	342.58		342.67	0.001483	4.04	933.00	399.36	0.34
USACE	801	SEPT2011	678.00	337.81	341.09		341.15	0.001638	3.24	404.58	315.49	0.33
USACE	591	2YR	304.00	337.26	340.14		340.17	0.000835	2.10	273.64	244.32	0.23
USACE	591	5YR	509.00	337.26	340.56		340.60	0.000932	2.46	381.95	269.95	0.25
USACE	591	10YR	668.00	337.26	340.82		340.86	0.001004	2.69	454.03	291.12	0.26
USACE	591	25YR	930.00	337.26	341.17		341.22	0.001097	3.01	558.50	308.28	0.28
USACE	591	50YR	1143.00	337.26	341.41		341.47	0.001166	3.24	634.13	320.64	0.29
USACE	591	100YR	1396.00	337.26	341.69		341.76	0.001205	3.45	725.46	338.36	0.30
USACE	591	100YRPLUS	1826.00	337.26	342.10		342.18	0.001260	3.76	872.64	367.72	0.31
USACE	591	200YR	1657.00	337.26	341.94		342.02	0.001251	3.66	815.12	361.28	0.31
USACE	591	500YR	2052.00	337.26	342.29		342.37	0.001290	3.91	942.80	378.09	0.32
USACE	591	SEPT2011	678.00	337.26	340.83		340.88	0.001015	2.71	457.13	291.79	0.26
USACE	418	2YR	304.00	336.67	340.08		340.09	0.000264	1.36	401.92	264.89	0.13
USACE	418	5YR	509.00	336.67	340.48		340.50	0.000381	1.77	511.65	286.17	0.17
USACE	418	10YR	668.00	336.67	340.72		340.75	0.000459	2.03	582.76	299.23	0.18
USACE	418	25YR	930.00	336.67	341.05		341.08	0.000575	2.40	683.54	316.22	0.21
USACE	418	50YR	1143.00	336.67	341.28		341.32	0.000656	2.66	756.35	325.66	0.22
USACE	418	100YR	1396.00	336.67	341.54		341.59	0.000725	2.91	845.12	341.04	0.24
USACE	418	100YRPLUS	1826.00	336.67	341.94		342.00	0.000818	3.26	984.46	359.59	0.26
USACE	418	200YR	1657.00	336.67	341.79		341.84	0.000789	3.14	929.74	353.45	0.25
USACE	418	500YR	2052.00	336.67	342.12		342.19	0.000864	3.43	1050.03	365.97	0.26
USACE	418	SEPT2011	678.00	336.67	340.73		340.75	0.000467	2.05	585.49	299.64	0.18
USACE	278	2YR	304.00	335.80	340.05	338.58	340.06	0.000198	1.32	432.63	349.11	0.12
USACE	278	5YR	509.00	335.80	340.43	338.83	340.45	0.000315	1.77	527.27	379.77	0.15
USACE	278	10YR	668.00	335.80	340.66	338.98	340.69	0.000397	2.06	585.75	389.66	0.17
USACE	278	25YR	930.00	335.80	340.97	339.18	341.00	0.000528	2.48	664.47	400.62	0.20
USACE	278	50YR	1143.00	335.80	341.18	339.32	341.23	0.000629	2.79	718.95	412.01	0.22
USACE	278	100YR	1396.00	335.80	341.43	339.47	341.49	0.000724	3.10	784.60	428.28	0.24

HEC-RAS Plan: Existing River: SilverSpRnTrib Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	278	100YRPLUS	1826.00	335.80	341.80	339.69	341.88	0.000869	3.55	883.55	455.94	0.27
USACE	278	200YR	1657.00	335.80	341.65	339.61	341.73	0.000818	3.39	844.87	444.50	0.26
USACE	278	500YR	2052.00	335.80	341.96	339.82	342.06	0.000945	3.78	928.75	469.19	0.28
USACE	278	SEPT2011	678.00	335.80	340.67	338.98	340.69	0.000405	2.08	587.76	389.89	0.17
USACE	207	2YR	304.00	335.00	340.02	338.08	340.04	0.000287	1.69	358.01	419.22	0.14
USACE	207	5YR	509.00	335.00	340.38	339.00	340.42	0.000490	2.33	436.57	474.42	0.19
USACE	207	10YR	668.00	335.00	340.59	339.42	340.64	0.000637	2.74	485.66	493.68	0.22
USACE	207	25YR	930.00	335.00	340.87	339.42	340.95	0.000875	3.34	551.66	507.24	0.26
USACE	207	50YR	1143.00	335.00	341.06	339.55	341.16	0.001068	3.78	596.98	519.18	0.29
USACE	207	100YR	1396.00	335.00	341.29	339.74	341.41	0.001246	4.20	653.60	535.84	0.31
USACE	207	100YRPLUS	1826.00	335.00	341.63	340.02	341.78	0.001513	4.82	739.14	550.55	0.35
USACE	207	200YR	1657.00	335.00	341.50	339.92	341.63	0.001419	4.59	705.43	544.95	0.34
USACE	207	500YR	2052.00	335.00	341.78	340.13	341.95	0.001656	5.12	777.60	557.45	0.37
USACE	207	SEPT2011	678.00	335.00	340.60	339.42	340.65	0.000651	2.77	487.14	493.97	0.22
USACE	181 Quarry Road		Bridge									
USACE	151	2YR	304.00	334.21	337.23	337.23	337.57	0.005587	5.40	107.11	188.40	0.59
USACE	151	5YR	509.00	334.21	337.55	337.55	337.90	0.006170	6.14	175.00	287.07	0.64
USACE	151	10YR	668.00	334.21	337.73	337.73	338.10	0.006627	6.63	216.40	313.47	0.67
USACE	151	25YR	930.00	334.21	337.94	337.94	338.36	0.007602	7.42	265.61	339.92	0.72
USACE	151	50YR	1143.00	334.21	338.08	338.08	338.54	0.008424	8.02	297.85	354.96	0.77
USACE	151	100YR	1396.00	334.21	338.22	338.22	338.74	0.009320	8.66	331.49	388.91	0.81
USACE	151	100YRPLUS	1826.00	334.21	338.43	338.43	339.04	0.010464	9.55	383.96	411.27	0.87
USACE	151	200YR	1657.00	334.21	338.35	338.35	338.93	0.010003	9.21	364.65	400.15	0.85
USACE	151	500YR	2052.00	334.21	338.52	338.52	339.19	0.011454	10.14	403.97	418.95	0.91
USACE	151	SEPT2011	678.00	334.21	337.74	337.74	338.11	0.006668	6.66	218.51	314.47	0.67
USACE	95	2YR	304.00	334.18	336.51	336.51	336.85	0.007752	5.36	103.72	226.51	0.68
USACE	95	5YR	509.00	334.18	336.82	336.82	337.14	0.007688	5.88	170.31	296.02	0.69
USACE	95	10YR	668.00	334.18	336.99	336.97	337.32	0.007789	6.21	209.79	383.28	0.70
USACE	95	25YR	930.00	334.18	337.23	337.15	337.57	0.007894	6.66	265.08	431.71	0.72
USACE	95	50YR	1143.00	334.18	337.39	337.28	337.76	0.008208	7.06	301.46	456.74	0.74
USACE	95	100YR	1396.00	334.18	337.56	337.42	337.97	0.008541	7.49	340.23	462.23	0.76
USACE	95	100YRPLUS	1826.00	334.18	337.80	337.63	338.28	0.009273	8.21	395.10	477.95	0.80
USACE	95	200YR	1657.00	334.18	337.72	337.55	338.17	0.008834	7.88	376.75	469.63	0.78
USACE	95	500YR	2052.00	334.18	337.90	337.74	338.43	0.009874	8.64	417.56	502.17	0.83
USACE	95	SEPT2011	678.00	334.18	337.00	336.97	337.33	0.007787	6.23	212.16	391.44	0.70
USACE	26	2YR	304.00	333.60	335.97	335.88	336.30	0.006921	4.97	102.00	423.84	0.64
USACE	26	5YR	509.00	333.60	336.28	336.27	336.59	0.006925	5.49	170.83	429.65	0.65
USACE	26	10YR	668.00	333.60	336.47	336.41	336.78	0.006924	5.80	217.28	472.58	0.66
USACE	26	25YR	930.00	333.60	336.71	336.64	337.03	0.006922	6.19	288.93	518.14	0.67
USACE	26	50YR	1143.00	333.60	336.87	336.78	337.20	0.006926	6.44	341.11	528.86	0.68
USACE	26	100YR	1396.00	333.60	337.05	336.91	337.39	0.006931	6.71	399.56	564.21	0.69
USACE	26	100YRPLUS	1826.00	333.60	337.30	337.13	337.67	0.006932	7.09	504.24	633.37	0.70
USACE	26	200YR	1657.00	333.60	337.21	336.98	337.57	0.006930	6.96	466.68	626.38	0.69
USACE	26	500YR	2052.00	333.60	337.42	337.26	337.79	0.006926	7.25	552.39	641.50	0.70
USACE	26	SEPT2011	678.00	333.60	336.48	336.42	336.79	0.006924	5.82	220.10	477.78	0.66

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	10641	2YR	176.00	456.68	459.93		460.02	0.003379	2.97	139.44	215.50	0.34
USACE	10641	5YR	313.00	456.68	460.42		460.50	0.003054	3.21	254.48	263.43	0.33
USACE	10641	10YR	425.00	456.68	460.72		460.80	0.002993	3.40	339.80	294.53	0.34
USACE	10641	25YR	611.00	456.68	461.13		461.21	0.002784	3.56	465.05	310.48	0.33
USACE	10641	50YR	758.00	456.68	461.40		461.48	0.002809	3.75	548.45	324.74	0.34
USACE	10641	100YR	916.00	456.68	461.66		461.74	0.002830	3.93	636.49	345.84	0.34
USACE	10641	100YRPLUS	1198.00	456.68	462.06		462.15	0.002830	4.18	777.93	368.90	0.35
USACE	10641	200YR	1077.00	456.68	461.89		461.98	0.002771	4.03	717.45	353.95	0.34
USACE	10641	500YR	1303.00	456.68	462.19		462.28	0.002796	4.24	827.49	371.06	0.35
USACE	10641	SEPT2011	520.00	456.68	460.94		461.02	0.002863	3.48	406.39	303.56	0.33
USACE	10443	2YR	176.00	456.16	459.45		459.51	0.001973	2.46	164.49	208.35	0.27
USACE	10443	5YR	313.00	456.16	459.93		460.00	0.002163	2.88	275.53	249.17	0.29
USACE	10443	10YR	425.00	456.16	460.21		460.29	0.002300	3.15	349.40	262.85	0.30
USACE	10443	25YR	611.00	456.16	460.62		460.71	0.002384	3.46	460.39	282.43	0.31
USACE	10443	50YR	758.00	456.16	460.87		460.96	0.002495	3.69	530.47	286.66	0.32
USACE	10443	100YR	916.00	456.16	461.11		461.21	0.002600	3.92	601.61	294.80	0.33
USACE	10443	100YRPLUS	1198.00	456.16	461.50		461.60	0.002722	4.24	715.20	300.43	0.35
USACE	10443	200YR	1077.00	456.16	461.34		461.44	0.002669	4.10	668.50	298.27	0.34
USACE	10443	500YR	1303.00	456.16	461.63		461.73	0.002762	4.35	754.34	302.23	0.35
USACE	10443	SEPT2011	520.00	456.16	460.45		460.52	0.002257	3.26	411.39	268.06	0.30
USACE	10228	2YR	176.00	456.07	458.81	458.34	458.91	0.004226	3.16	134.05	177.16	0.38
USACE	10228	5YR	313.00	456.07	459.26	458.76	459.36	0.004222	3.58	225.15	215.75	0.39
USACE	10228	10YR	425.00	456.07	459.53	459.00	459.63	0.004234	3.82	284.22	234.41	0.40
USACE	10228	25YR	611.00	456.07	459.89	459.24	460.00	0.004568	4.30	375.43	258.39	0.42
USACE	10228	50YR	758.00	456.07	460.12	459.37	460.24	0.004641	4.53	434.81	261.69	0.43
USACE	10228	100YR	916.00	456.07	460.34	459.51	460.47	0.004736	4.77	493.06	279.03	0.44
USACE	10228	100YRPLUS	1198.00	456.07	460.68	459.80	460.83	0.004870	5.14	586.19	293.76	0.45
USACE	10228	200YR	1077.00	456.07	460.54	459.72	460.68	0.004843	5.00	547.13	290.31	0.45
USACE	10228	500YR	1303.00	456.07	460.81	459.87	460.95	0.004880	5.25	619.23	296.50	0.45
USACE	10228	SEPT2011	520.00	456.07	459.74	459.11	459.85	0.004481	4.12	336.41	255.95	0.41
USACE	10009	2YR	176.00	455.36	458.03		458.08	0.003319	2.28	169.96	233.12	0.28
USACE	10009	5YR	313.00	455.36	458.38		458.43	0.004137	2.82	258.22	272.94	0.32
USACE	10009	10YR	425.00	455.36	458.57		458.64	0.004727	3.17	313.70	288.53	0.35
USACE	10009	25YR	611.00	455.36	458.86		458.93	0.005176	3.56	398.42	305.65	0.37
USACE	10009	50YR	758.00	455.36	459.06		459.14	0.005285	3.76	460.20	315.75	0.38
USACE	10009	100YR	916.00	455.36	459.27		459.36	0.005354	3.96	528.62	327.62	0.38
USACE	10009	100YRPLUS	1198.00	455.36	459.61		459.71	0.005231	4.18	642.84	340.45	0.39
USACE	10009	200YR	1077.00	455.36	459.46		459.56	0.005290	4.09	592.95	332.63	0.39
USACE	10009	500YR	1303.00	455.36	459.73		459.83	0.005278	4.29	682.93	349.35	0.39
USACE	10009	SEPT2011	520.00	455.36	458.72		458.79	0.005023	3.39	356.42	295.64	0.36
USACE	9698	2YR	176.00	455.29	456.87		456.92	0.005646	2.88	118.10	185.62	0.51
USACE	9698	5YR	313.00	455.29	457.33		457.37	0.003698	3.01	225.96	268.86	0.44
USACE	9698	10YR	425.00	455.29	457.58		457.62	0.003071	3.05	295.96	285.15	0.41
USACE	9698	25YR	611.00	455.29	457.93		457.98	0.002565	3.16	398.78	299.72	0.39
USACE	9698	50YR	758.00	455.29	458.18		458.23	0.002336	3.25	474.39	310.26	0.38
USACE	9698	100YR	916.00	455.29	458.42		458.47	0.002200	3.38	550.14	323.00	0.37
USACE	9698	100YRPLUS	1198.00	455.29	458.78		458.85	0.002167	3.66	672.02	352.94	0.38
USACE	9698	200YR	1077.00	455.29	458.63		458.69	0.002136	3.51	621.31	335.29	0.37
USACE	9698	500YR	1303.00	455.29	458.91		458.98	0.002097	3.71	718.37	357.95	0.38
USACE	9698	SEPT2011	520.00	455.29	457.77		457.82	0.002711	3.08	351.44	291.31	0.39
USACE	9395	2YR	186.00	452.21	455.45		455.59	0.003545	3.31	98.65	122.36	0.36
USACE	9395	5YR	352.00	452.21	455.97		456.14	0.004343	4.14	175.34	166.75	0.41
USACE	9395	10YR	494.00	452.21	456.28		456.47	0.004588	4.53	229.40	179.67	0.43
USACE	9395	25YR	730.00	452.21	456.69		456.89	0.004855	5.03	308.87	204.16	0.45
USACE	9395	50YR	917.00	452.21	456.97		457.19	0.004982	5.34	368.88	228.60	0.46
USACE	9395	100YR	1118.00	452.21	457.24		457.46	0.004966	5.56	433.45	253.16	0.47
USACE	9395	100YRPLUS	1462.00	452.21	457.64		457.86	0.004800	5.79	539.06	281.39	0.47
USACE	9395	200YR	1324.00	452.21	457.48		457.71	0.004874	5.71	497.08	271.48	0.47
USACE	9395	500YR	1611.00	452.21	457.80		458.02	0.004685	5.84	584.97	291.50	0.46
USACE	9395	SEPT2011	620.00	452.21	456.51		456.71	0.004785	4.83	272.69	193.42	0.44
USACE	9172	2YR	186.00	451.95	454.61		454.75	0.003962	3.60	118.08	181.89	0.45
USACE	9172	5YR	352.00	451.95	455.09		455.23	0.003816	4.08	211.00	208.35	0.46
USACE	9172	10YR	494.00	451.95	455.41		455.54	0.003650	4.34	280.11	224.89	0.46
USACE	9172	25YR	730.00	451.95	455.83		455.97	0.003459	4.64	379.06	240.76	0.46
USACE	9172	50YR	917.00	451.95	456.11		456.26	0.003410	4.88	448.95	253.28	0.46
USACE	9172	100YR	1118.00	451.95	456.38		456.54	0.003389	5.12	518.95	268.58	0.47
USACE	9172	100YRPLUS	1462.00	451.95	456.81		456.98	0.003214	5.36	638.68	289.45	0.46
USACE	9172	200YR	1324.00	451.95	456.65		456.81	0.003239	5.24	593.46	280.77	0.46
USACE	9172	500YR	1611.00	451.95	456.98		457.15	0.003216	5.50	687.81	302.70	0.47
USACE	9172	SEPT2011	620.00	451.95	455.64		455.78	0.003534	4.51	334.71	234.57	0.46
USACE	8948	2YR	186.00	451.32	453.92	453.50	454.01	0.002743	3.17	107.74	194.75	0.40
USACE	8948	5YR	352.00	451.32	454.40	453.88	454.50	0.002745	3.66	170.47	211.45	0.41
USACE	8948	10YR	494.00	451.32	454.64	454.07	454.77	0.003280	4.25	204.07	220.05	0.46
USACE	8948	25YR	730.00	451.32	455.00	454.33	455.17	0.003720	4.92	256.53	229.65	0.49
USACE	8948	50YR	917.00	451.32	455.24	454.49	455.44	0.003995	5.36	292.88	235.25	0.52
USACE	8948	100YR	1118.00	451.32	455.47	454.67	455.70	0.004180	5.73	329.19	238.82	0.54
USACE	8948	100YRPLUS	1462.00	451.32	455.83	454.93	456.12	0.004615	6.43	390.54	257.49	0.57

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8948	200YR	1324.00	451.32	455.69	454.85	455.96	0.004516	6.21	366.56	252.95	0.56
USACE	8948	500YR	1611.00	451.32	455.97	455.04	456.28	0.004695	6.64	415.92	261.83	0.58
USACE	8948	SEPT2011	620.00	451.32	454.84	454.22	454.99	0.003578	4.65	232.18	225.57	0.48
USACE	8808	2YR	186.00	450.65	453.29		453.48	0.005281	4.43	71.92	103.13	0.58
USACE	8808	5YR	352.00	450.65	453.70		453.95	0.005980	5.41	124.29	156.52	0.64
USACE	8808	10YR	494.00	450.65	454.01		454.22	0.004817	5.30	176.24	171.39	0.59
USACE	8808	25YR	730.00	450.65	454.41		454.62	0.004286	5.51	245.87	188.91	0.57
USACE	8808	50YR	917.00	450.65	454.68		454.89	0.003940	5.60	298.72	198.46	0.55
USACE	8808	100YR	1118.00	450.65	454.93		455.15	0.003757	5.75	349.34	205.34	0.55
USACE	8808	100YRPLUS	1462.00	450.65	455.32		455.55	0.003440	5.92	431.18	210.10	0.53
USACE	8808	200YR	1324.00	450.65	455.17		455.40	0.003541	5.85	399.74	208.69	0.54
USACE	8808	500YR	1611.00	450.65	455.48		455.71	0.003356	6.00	463.60	211.55	0.53
USACE	8808	SEPT2011	620.00	450.65	454.32		454.49	0.003635	4.97	229.23	182.17	0.52
USACE	8699	2YR	186.00	449.61	453.00		453.12	0.002078	3.38	106.81	178.36	0.37
USACE	8699	5YR	352.00	449.61	453.52		453.60	0.001549	3.30	202.43	192.45	0.33
USACE	8699	10YR	494.00	449.61	453.84		453.92	0.001442	3.40	265.40	200.26	0.33
USACE	8699	25YR	730.00	449.61	454.23		454.32	0.001478	3.71	345.30	208.51	0.34
USACE	8699	50YR	917.00	449.61	454.50		454.61	0.001488	3.90	403.37	215.65	0.34
USACE	8699	100YR	1118.00	449.61	454.75		454.87	0.001532	4.11	457.39	221.16	0.35
USACE	8699	100YRPLUS	1462.00	449.61	455.15		455.28	0.001557	4.40	546.74	230.84	0.36
USACE	8699	200YR	1324.00	449.61	455.00		455.12	0.001546	4.29	512.20	227.35	0.35
USACE	8699	500YR	1611.00	449.61	455.30		455.44	0.001569	4.51	582.71	234.08	0.36
USACE	8699	SEPT2011	620.00	449.61	454.18		454.25	0.001167	3.26	334.60	207.15	0.30
USACE	8663	2YR	186.00	448.78	453.00	451.38	453.05	0.000640	2.27	159.26	230.50	0.22
USACE	8663	5YR	352.00	448.78	453.51	452.81	453.55	0.000583	2.38	288.32	245.96	0.21
USACE	8663	10YR	494.00	448.78	453.83	453.02	453.88	0.000622	2.60	361.40	283.58	0.22
USACE	8663	25YR	730.00	448.78	454.22	453.24	454.28	0.000705	2.93	459.57	332.00	0.24
USACE	8663	50YR	917.00	448.78	454.49	453.35	454.56	0.000760	3.17	538.33	375.65	0.25
USACE	8663	100YR	1118.00	448.78	454.74	453.46	454.82	0.000777	3.31	613.29	404.57	0.26
USACE	8663	100YRPLUS	1462.00	448.78	455.14	453.63	455.22	0.000781	3.49	733.12	417.26	0.26
USACE	8663	200YR	1324.00	448.78	454.99	453.59	455.07	0.000777	3.42	687.43	414.58	0.26
USACE	8663	500YR	1611.00	448.78	455.30	453.74	455.38	0.000785	3.57	780.01	420.28	0.27
USACE	8663	SEPT2011	620.00	448.78	454.17	453.15	454.22	0.000549	2.57	446.33	327.28	0.21
USACE	8632 Airy Hill Road		Bridge									
USACE	8603	2YR	186.00	447.41	453.01	450.34	453.02	0.000086	0.91	380.93	375.87	0.07
USACE	8603	5YR	352.00	447.41	453.52	452.17	453.52	0.000101	1.05	549.06	452.93	0.08
USACE	8603	10YR	494.00	447.41	453.84	452.33	453.85	0.000106	1.12	661.06	469.43	0.08
USACE	8603	25YR	730.00	447.41	454.23	452.53	454.25	0.000121	1.26	799.40	485.56	0.09
USACE	8603	50YR	917.00	447.41	454.51	452.66	454.53	0.000130	1.34	894.97	494.39	0.10
USACE	8603	100YR	1118.00	447.41	454.76	452.78	454.78	0.000140	1.43	983.72	502.90	0.10
USACE	8603	100YRPLUS	1462.00	447.41	455.15	452.94	455.19	0.000152	1.55	1127.14	521.21	0.11
USACE	8603	200YR	1324.00	447.41	455.00	452.88	455.03	0.000147	1.51	1072.18	515.39	0.10
USACE	8603	500YR	1611.00	447.41	455.31	453.00	455.34	0.000157	1.60	1184.47	531.29	0.11
USACE	8603	SEPT2011	620.00	447.41	454.18	452.45	454.20	0.000094	1.10	781.47	484.27	0.08
USACE	8567	2YR	186.00	447.40	453.01	450.41	453.02	0.000102	0.96	379.51	408.10	0.08
USACE	8567	5YR	352.00	447.40	453.51	452.09	453.52	0.000126	1.15	527.15	509.29	0.09
USACE	8567	10YR	494.00	447.40	453.83	452.26	453.84	0.000141	1.27	623.74	555.50	0.10
USACE	8567	25YR	730.00	447.40	454.22	452.45	454.24	0.000169	1.45	746.18	595.57	0.11
USACE	8567	50YR	917.00	447.40	454.49	452.57	454.52	0.000185	1.57	831.54	611.30	0.11
USACE	8567	100YR	1118.00	447.40	454.74	452.70	454.77	0.000203	1.68	912.54	630.19	0.12
USACE	8567	100YRPLUS	1462.00	447.40	455.13	452.90	455.18	0.000223	1.84	1044.09	645.15	0.13
USACE	8567	200YR	1324.00	447.40	454.98	452.82	455.02	0.000215	1.78	993.68	639.51	0.12
USACE	8567	500YR	1611.00	447.40	455.29	453.00	455.33	0.000231	1.90	1096.77	650.63	0.13
USACE	8567	SEPT2011	620.00	447.40	454.17	452.37	454.19	0.000131	1.27	731.00	592.53	0.09
USACE	8525	2YR	379.00	447.40	452.99	451.83	453.01	0.000229	1.34	439.45	282.03	0.12
USACE	8525	5YR	711.00	447.40	453.47	452.08	453.51	0.000354	1.79	583.58	310.74	0.15
USACE	8525	10YR	999.00	447.40	453.78	452.25	453.83	0.000441	2.09	680.63	326.46	0.17
USACE	8525	25YR	1471.00	447.40	454.15	452.49	454.22	0.000581	2.52	801.74	351.23	0.19
USACE	8525	50YR	1841.00	447.40	454.40	452.67	454.50	0.000670	2.79	887.33	370.17	0.21
USACE	8525	100YR	2236.00	447.40	454.63	452.83	454.75	0.000764	3.06	967.96	392.86	0.23
USACE	8525	100YRPLUS	2924.00	447.40	455.00	453.22	455.14	0.000896	3.46	1099.17	422.37	0.25
USACE	8525	200YR	2642.00	447.40	454.86	453.01	454.99	0.000839	3.30	1049.48	414.55	0.24
USACE	8525	500YR	3205.00	447.40	455.14	453.33	455.30	0.000937	3.59	1152.00	428.90	0.25
USACE	8525	SEPT2011	1402.00	447.40	454.10	452.46	454.17	0.000561	2.46	785.59	348.30	0.19
USACE	8472	2YR	379.00	447.39	452.98	451.67	453.00	0.000182	1.25	425.90	359.01	0.11
USACE	8472	5YR	711.00	447.39	453.46	451.98	453.49	0.000297	1.73	556.92	391.53	0.14
USACE	8472	10YR	999.00	447.39	453.76	452.19	453.81	0.000387	2.06	644.41	412.86	0.16
USACE	8472	25YR	1471.00	447.39	454.12	452.52	454.19	0.000539	2.54	753.65	433.99	0.20
USACE	8472	50YR	1841.00	447.39	454.37	452.73	454.46	0.000641	2.86	831.09	448.79	0.21
USACE	8472	100YR	2236.00	447.39	454.59	452.89	454.71	0.000746	3.17	903.54	460.26	0.23
USACE	8472	100YRPLUS	2924.00	447.39	454.94	453.17	455.10	0.000904	3.63	1019.19	474.47	0.26
USACE	8472	200YR	2642.00	447.39	454.81	453.07	454.95	0.000837	3.44	975.72	469.66	0.25
USACE	8472	500YR	3205.00	447.39	455.09	453.30	455.25	0.000957	3.79	1065.79	480.46	0.27
USACE	8472	SEPT2011	1402.00	447.39	454.07	452.49	454.14	0.000517	2.48	739.17	430.98	0.19
USACE	8394	2YR	379.00	447.38	452.97	451.30	452.99	0.000181	1.15	415.10	309.52	0.11

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	8394	5YR	711.00	447.38	453.44	452.04	453.47	0.000293	1.60	558.84	374.48	0.14
USACE	8394	10YR	999.00	447.38	453.74	452.06	453.78	0.000379	1.91	654.55	389.89	0.17
USACE	8394	25YR	1471.00	447.38	454.09	452.45	454.16	0.000526	2.38	772.00	405.87	0.20
USACE	8394	50YR	1841.00	447.38	454.34	452.68	454.42	0.000622	2.68	854.91	412.35	0.22
USACE	8394	100YR	2236.00	447.38	454.56	452.88	454.67	0.000724	2.98	931.68	419.27	0.24
USACE	8394	100YRPLUS	2924.00	447.38	454.91	453.16	455.05	0.000876	3.43	1054.60	428.12	0.26
USACE	8394	200YR	2642.00	447.38	454.78	453.05	454.90	0.000810	3.24	1008.49	425.17	0.25
USACE	8394	500YR	3205.00	447.38	455.04	453.27	455.20	0.000925	3.58	1104.41	432.17	0.27
USACE	8394	SEPT2011	1402.00	447.38	454.05	452.40	454.11	0.000505	2.32	756.45	404.55	0.19
USACE	8374 Locust Grove Roa		Bridge									
USACE	8335	2YR	379.00	446.92	451.12		451.38	0.003792	4.72	143.43	189.19	0.48
USACE	8335	5YR	711.00	446.92	451.66		451.92	0.003891	5.34	259.45	241.20	0.50
USACE	8335	10YR	999.00	446.92	452.01		452.27	0.003792	5.62	350.19	263.50	0.50
USACE	8335	25YR	1471.00	446.92	452.50		452.75	0.003589	5.92	483.86	284.28	0.50
USACE	8335	50YR	1841.00	446.92	452.84		453.09	0.003465	6.12	580.88	297.98	0.50
USACE	8335	100YR	2236.00	446.92	453.17		453.43	0.003334	6.28	682.51	316.86	0.49
USACE	8335	100YRPLUS	2924.00	446.92	453.68		453.94	0.003110	6.47	848.47	334.05	0.49
USACE	8335	200YR	2642.00	446.92	453.47		453.74	0.003204	6.40	781.53	329.79	0.49
USACE	8335	500YR	3205.00	446.92	453.87		454.14	0.003070	6.57	913.56	348.32	0.49
USACE	8335	SEPT2011	1402.00	446.92	452.44		452.69	0.003621	5.89	465.00	281.72	0.50
USACE	8282	2YR	379.00	446.92	451.02		451.13	0.002873	3.81	203.14	220.30	0.41
USACE	8282	5YR	711.00	446.92	451.56		451.67	0.002846	4.28	326.05	245.56	0.42
USACE	8282	10YR	999.00	446.92	451.90		452.03	0.002916	4.63	412.55	258.38	0.43
USACE	8282	25YR	1471.00	446.92	452.38		452.53	0.002977	5.09	543.62	289.34	0.45
USACE	8282	50YR	1841.00	446.92	452.71		452.88	0.002927	5.32	643.23	305.14	0.45
USACE	8282	100YR	2236.00	446.92	453.05		453.22	0.002869	5.53	748.21	325.13	0.45
USACE	8282	100YRPLUS	2924.00	446.92	453.56		453.75	0.002719	5.77	919.16	339.44	0.44
USACE	8282	200YR	2642.00	446.92	453.36		453.54	0.002788	5.69	850.32	334.97	0.45
USACE	8282	500YR	3205.00	446.92	453.75		453.95	0.002674	5.86	984.69	345.81	0.44
USACE	8282	SEPT2011	1402.00	446.92	452.31		452.46	0.002961	5.02	524.95	282.01	0.44
USACE	8018	2YR	379.00	446.92	450.08	449.74	450.20	0.004446	4.10	168.85	186.33	0.51
USACE	8018	5YR	711.00	446.92	450.54		450.71	0.004837	4.91	260.32	211.18	0.55
USACE	8018	10YR	999.00	446.92	450.91		451.09	0.004468	5.17	341.80	227.66	0.54
USACE	8018	25YR	1471.00	446.92	451.44		451.64	0.003959	5.45	467.22	246.09	0.52
USACE	8018	50YR	1841.00	446.92	451.81		452.02	0.003684	5.63	560.42	258.57	0.51
USACE	8018	100YR	2236.00	446.92	452.17		452.39	0.003483	5.81	656.44	274.86	0.50
USACE	8018	100YRPLUS	2924.00	446.92	452.73		452.97	0.003233	6.10	818.10	301.60	0.50
USACE	8018	200YR	2642.00	446.92	452.51		452.74	0.003317	5.98	752.39	289.12	0.50
USACE	8018	500YR	3205.00	446.92	452.94		453.19	0.003147	6.19	881.32	306.96	0.49
USACE	8018	SEPT2011	1402.00	446.92	451.37		451.56	0.004015	5.41	449.48	242.92	0.52
USACE	7686	2YR	379.00	446.02	448.59		448.71	0.004705	3.92	160.06	148.90	0.51
USACE	7686	5YR	711.00	446.02	449.33		449.45	0.003154	4.03	278.94	176.08	0.44
USACE	7686	10YR	999.00	446.02	449.81		449.95	0.002804	4.27	368.21	193.61	0.43
USACE	7686	25YR	1471.00	446.02	450.44		450.60	0.002594	4.65	496.98	212.75	0.43
USACE	7686	50YR	1841.00	446.02	450.85		451.03	0.002542	4.94	586.75	225.96	0.43
USACE	7686	100YR	2236.00	446.02	451.24		451.43	0.002511	5.22	675.72	234.76	0.44
USACE	7686	100YRPLUS	2924.00	446.02	451.83		452.05	0.002494	5.65	818.00	247.74	0.44
USACE	7686	200YR	2642.00	446.02	451.60		451.81	0.002485	5.47	762.56	242.81	0.44
USACE	7686	500YR	3205.00	446.02	452.05		452.28	0.002495	5.81	872.83	252.85	0.45
USACE	7686	SEPT2011	1402.00	446.02	450.36		450.51	0.002606	4.60	479.79	210.42	0.43
USACE	7398	2YR	379.00	444.82	447.90		447.95	0.001600	2.66	229.39	158.25	0.31
USACE	7398	5YR	711.00	444.82	448.86		448.91	0.001155	2.84	394.25	187.01	0.28
USACE	7398	10YR	999.00	444.82	449.34		449.41	0.001234	3.22	488.77	200.87	0.29
USACE	7398	25YR	1471.00	444.82	449.95		450.05	0.001383	3.77	616.16	218.10	0.32
USACE	7398	50YR	1841.00	444.82	450.34		450.46	0.001486	4.14	702.84	225.99	0.33
USACE	7398	100YR	2236.00	444.82	450.71		450.85	0.001576	4.48	787.44	232.25	0.35
USACE	7398	100YRPLUS	2924.00	444.82	451.28		451.45	0.001704	4.99	923.10	248.52	0.37
USACE	7398	200YR	2642.00	444.82	451.06		451.22	0.001641	4.78	870.82	242.91	0.36
USACE	7398	500YR	3205.00	444.82	451.48		451.67	0.001756	5.19	975.58	255.64	0.38
USACE	7398	SEPT2011	1402.00	444.82	449.87		449.97	0.001357	3.69	599.62	215.80	0.31
USACE	7115	2YR	379.00	444.18	447.61		447.65	0.000784	2.17	277.02	150.44	0.23
USACE	7115	5YR	711.00	444.18	448.63		448.67	0.000672	2.46	442.98	175.81	0.22
USACE	7115	10YR	999.00	444.18	449.08		449.14	0.000809	2.91	527.17	203.54	0.25
USACE	7115	25YR	1471.00	444.18	449.63		449.73	0.001014	3.53	647.69	232.41	0.28
USACE	7115	50YR	1841.00	444.18	449.99		450.10	0.001150	3.95	732.02	241.51	0.30
USACE	7115	100YR	2236.00	444.18	450.33		450.46	0.001275	4.33	815.00	249.69	0.32
USACE	7115	100YRPLUS	2924.00	444.18	450.85		451.02	0.001455	4.91	948.86	264.78	0.35
USACE	7115	200YR	2642.00	444.18	450.66		450.81	0.001372	4.67	898.69	258.61	0.34
USACE	7115	500YR	3205.00	444.18	451.04		451.22	0.001521	5.13	1000.08	270.70	0.36
USACE	7115	SEPT2011	1402.00	444.18	449.57		449.66	0.000978	3.44	632.42	224.19	0.28
USACE	6882	2YR	379.00	443.23	447.51		447.53	0.000350	1.77	355.00	160.99	0.16
USACE	6882	5YR	711.00	443.23	448.53		448.56	0.000373	2.14	543.90	208.51	0.17
USACE	6882	10YR	999.00	443.23	448.95		449.00	0.000486	2.59	637.18	228.46	0.20
USACE	6882	25YR	1471.00	443.23	449.47		449.54	0.000663	3.22	758.86	242.13	0.24
USACE	6882	50YR	1841.00	443.23	449.79		449.89	0.000795	3.65	839.21	250.60	0.26
USACE	6882	100YR	2236.00	443.23	450.10		450.22	0.000924	4.07	918.06	259.46	0.28

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6882	100YRPLUS	2924.00	443.23	450.58		450.73	0.001118	4.70	1045.32	272.15	0.32
USACE	6882	200YR	2642.00	443.23	450.41		450.54	0.001031	4.44	998.73	268.28	0.30
USACE	6882	500YR	3205.00	443.23	450.76		450.92	0.001191	4.93	1093.33	276.50	0.33
USACE	6882	SEPT2011	1402.00	443.23	449.41		449.48	0.000634	3.12	744.39	240.47	0.23
USACE	6805	2YR	379.00	441.60	446.85	445.40	447.33	0.003550	5.66	69.64	115.64	0.49
USACE	6805	5YR	711.00	441.60	448.46	446.70	448.52	0.000578	2.84	443.31	185.68	0.21
USACE	6805	10YR	999.00	441.60	448.86	447.65	448.94	0.000756	3.40	519.98	199.43	0.24
USACE	6805	25YR	1471.00	441.60	449.33	447.66	449.46	0.001049	4.21	619.74	220.14	0.29
USACE	6805	50YR	1841.00	441.60	449.63	447.76	449.79	0.001272	4.77	686.14	231.85	0.32
USACE	6805	100YR	2236.00	441.60	449.91	448.02	450.10	0.001488	5.30	752.19	242.44	0.35
USACE	6805	100YRPLUS	2924.00	441.60	450.34	448.44	450.59	0.001818	6.09	860.96	260.68	0.39
USACE	6805	200YR	2642.00	441.60	450.19	448.28	450.42	0.001666	5.75	822.10	254.85	0.37
USACE	6805	500YR	3205.00	441.60	450.50	448.59	450.77	0.001942	6.38	902.60	267.52	0.40
USACE	6805	SEPT2011	1402.00	441.60	449.28	447.66	449.40	0.000997	4.08	608.19	216.73	0.28
USACE	6779 Private Drive		Culvert									
USACE	6752	2YR	379.00	440.56	445.03	444.64	445.92	0.009850	7.64	51.35	38.98	0.78
USACE	6752	5YR	711.00	440.56	446.19	446.19	446.89	0.006483	7.71	156.84	121.44	0.67
USACE	6752	10YR	999.00	440.56	446.67	446.67	447.38	0.006547	8.33	221.10	149.19	0.68
USACE	6752	25YR	1471.00	440.56	447.16	447.16	447.95	0.007182	9.33	298.23	164.20	0.73
USACE	6752	50YR	1841.00	440.56	447.45	447.45	448.32	0.007802	10.09	346.88	171.98	0.77
USACE	6752	100YR	2236.00	440.56	447.73	447.73	448.67	0.008276	10.75	395.96	179.28	0.79
USACE	6752	100YRPLUS	2924.00	440.56	448.15	448.15	449.20	0.008878	11.68	475.30	204.20	0.83
USACE	6752	200YR	2642.00	440.56	448.00	448.00	448.99	0.008478	11.22	446.41	189.59	0.81
USACE	6752	500YR	3205.00	440.56	448.30	448.30	449.39	0.009185	12.07	506.19	217.39	0.85
USACE	6752	SEPT2011	1402.00	440.56	447.10	447.10	447.87	0.007000	9.15	289.53	162.79	0.72
USACE	6698	2YR	379.00	440.55	444.83	444.40	445.33	0.005623	6.10	93.21	103.67	0.59
USACE	6698	5YR	711.00	440.55	445.45	445.43	446.05	0.006710	7.47	170.42	139.76	0.67
USACE	6698	10YR	999.00	440.55	445.86	445.82	446.47	0.006652	7.96	232.67	154.02	0.68
USACE	6698	25YR	1471.00	440.55	446.43		447.02	0.006245	8.38	324.06	171.29	0.67
USACE	6698	50YR	1841.00	440.55	446.82		447.42	0.006223	8.80	395.31	200.74	0.68
USACE	6698	100YR	2236.00	440.55	447.19		447.78	0.005904	8.97	472.07	215.86	0.67
USACE	6698	100YRPLUS	2924.00	440.55	447.73		448.33	0.005529	9.23	594.15	228.86	0.66
USACE	6698	200YR	2642.00	440.55	447.52		448.11	0.005635	9.11	546.56	224.86	0.66
USACE	6698	500YR	3205.00	440.55	447.93		448.53	0.005420	9.34	640.34	232.36	0.65
USACE	6698	SEPT2011	1402.00	440.55	446.36		446.95	0.006304	8.33	310.99	168.89	0.67
USACE	6525	2YR	379.00	440.54	444.28		444.47	0.003536	4.47	153.30	143.18	0.47
USACE	6525	5YR	711.00	440.54	444.88		445.09	0.003606	5.13	249.48	173.60	0.49
USACE	6525	10YR	999.00	440.54	445.30		445.53	0.003545	5.48	324.59	187.91	0.49
USACE	6525	25YR	1471.00	440.54	445.91		446.15	0.003284	5.82	442.95	201.78	0.49
USACE	6525	50YR	1841.00	440.54	446.29		446.56	0.003246	6.11	523.35	212.70	0.49
USACE	6525	100YR	2236.00	440.54	446.65		446.94	0.003282	6.45	601.68	226.18	0.50
USACE	6525	100YRPLUS	2924.00	440.54	447.18		447.51	0.003379	6.97	725.28	243.11	0.51
USACE	6525	200YR	2642.00	440.54	446.97		447.29	0.003339	6.77	676.69	238.18	0.51
USACE	6525	500YR	3205.00	440.54	447.37		447.72	0.003402	7.15	773.48	248.35	0.52
USACE	6525	SEPT2011	1402.00	440.54	445.83		446.06	0.003304	5.77	427.01	200.28	0.49
USACE	6225	2YR	379.00	440.08	443.15		443.33	0.004349	4.72	144.02	140.52	0.52
USACE	6225	5YR	711.00	440.08	444.00		444.15	0.002896	4.67	294.31	197.87	0.45
USACE	6225	10YR	999.00	440.08	444.52		444.66	0.002484	4.75	401.34	216.58	0.42
USACE	6225	25YR	1471.00	440.08	445.22		445.37	0.002184	4.97	563.04	242.32	0.41
USACE	6225	50YR	1841.00	440.08	445.62		445.78	0.002158	5.23	663.29	253.27	0.41
USACE	6225	100YR	2236.00	440.08	445.96		446.15	0.002236	5.56	751.76	261.87	0.42
USACE	6225	100YRPLUS	2924.00	440.08	446.46		446.67	0.002392	6.10	882.78	270.56	0.44
USACE	6225	200YR	2642.00	440.08	446.27		446.47	0.002313	5.87	833.17	267.39	0.43
USACE	6225	500YR	3205.00	440.08	446.64		446.88	0.002434	6.28	933.78	273.39	0.45
USACE	6225	SEPT2011	1402.00	440.08	445.13		445.28	0.002205	4.93	542.13	239.62	0.41
USACE	5889	2YR	379.00	437.99	441.47		441.84	0.004641	5.36	107.73	89.70	0.53
USACE	5889	5YR	711.00	437.99	442.19	441.80	442.77	0.006290	7.17	181.53	116.50	0.64
USACE	5889	10YR	999.00	437.99	442.64	442.38	443.34	0.007105	8.20	236.63	128.45	0.70
USACE	5889	25YR	1471.00	437.99	443.23	443.05	444.08	0.007956	9.46	327.96	197.84	0.75
USACE	5889	50YR	1841.00	437.99	443.62	443.59	444.50	0.008097	10.04	411.13	236.03	0.77
USACE	5889	100YR	2236.00	437.99	444.00	443.90	444.86	0.007737	10.29	505.79	254.02	0.76
USACE	5889	100YRPLUS	2924.00	437.99	444.67		445.42	0.006627	10.25	683.08	278.58	0.72
USACE	5889	200YR	2642.00	437.99	444.37	444.18	445.20	0.007324	10.44	601.49	269.10	0.75
USACE	5889	500YR	3205.00	437.99	444.89		445.63	0.006409	10.32	745.60	284.09	0.71
USACE	5889	SEPT2011	1402.00	437.99	443.16	442.94	443.99	0.007866	9.31	313.23	191.14	0.75
USACE	5658	2YR	379.00	437.98	440.89		441.00	0.002460	3.38	209.82	162.63	0.38
USACE	5658	5YR	711.00	437.98	441.55		441.70	0.002852	4.25	325.63	191.73	0.42
USACE	5658	10YR	999.00	437.98	441.98		442.16	0.003036	4.77	412.82	210.56	0.44
USACE	5658	25YR	1471.00	437.98	442.57		442.79	0.003194	5.42	547.23	243.30	0.47
USACE	5658	50YR	1841.00	437.98	442.96		443.19	0.003214	5.76	642.92	254.83	0.47
USACE	5658	100YR	2236.00	437.98	443.33		443.58	0.003246	6.09	739.05	267.74	0.48
USACE	5658	100YRPLUS	2924.00	437.98	444.09		444.33	0.002761	6.18	952.17	292.62	0.46
USACE	5658	200YR	2642.00	437.98	443.70		443.96	0.003176	6.33	841.46	280.53	0.48
USACE	5658	500YR	3205.00	437.98	444.30		444.55	0.002780	6.36	1014.54	298.61	0.46
USACE	5658	SEPT2011	1402.00	437.98	442.50		442.71	0.003189	5.34	528.53	240.70	0.46

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5438	2YR	379.00	437.18	440.17		440.29	0.004346	4.02	182.33	165.77	0.48
USACE	5438	5YR	711.00	437.18	440.79		440.94	0.004250	4.70	290.50	184.06	0.50
USACE	5438	10YR	999.00	437.18	441.20		441.37	0.004286	5.17	367.58	194.05	0.51
USACE	5438	25YR	1471.00	437.18	441.76		441.97	0.004402	5.83	480.50	212.83	0.53
USACE	5438	50YR	1841.00	437.18	442.12		442.36	0.004500	6.26	558.81	223.51	0.54
USACE	5438	100YR	2236.00	437.18	442.47		442.74	0.004539	6.64	640.43	235.48	0.55
USACE	5438	100YRPLUS	2924.00	437.18	443.45		443.68	0.003123	6.29	885.93	265.68	0.47
USACE	5438	200YR	2642.00	437.18	442.89		443.17	0.004181	6.77	742.55	248.56	0.54
USACE	5438	500YR	3205.00	437.18	443.65		443.90	0.003171	6.49	940.16	271.24	0.48
USACE	5438	SEPT2011	1402.00	437.18	441.68		441.89	0.004383	5.74	465.05	210.43	0.53
USACE	5265	2YR	379.00	436.36	439.60		439.68	0.002815	3.38	222.34	178.90	0.39
USACE	5265	5YR	711.00	436.36	440.17		440.29	0.003281	4.22	330.23	200.24	0.44
USACE	5265	10YR	999.00	436.36	440.56		440.69	0.003493	4.74	409.36	211.79	0.46
USACE	5265	25YR	1471.00	436.36	441.08		441.26	0.003746	5.42	526.11	232.32	0.49
USACE	5265	50YR	1841.00	436.36	441.43		441.62	0.003854	5.82	607.39	240.20	0.50
USACE	5265	100YR	2236.00	436.36	441.77		441.99	0.003946	6.21	691.56	252.31	0.52
USACE	5265	100YRPLUS	2924.00	436.36	443.06		443.22	0.002106	5.37	1043.40	292.15	0.39
USACE	5265	200YR	2642.00	436.36	442.30		442.51	0.003277	6.10	829.09	267.17	0.48
USACE	5265	500YR	3205.00	436.36	443.25		443.42	0.002184	5.59	1099.75	298.24	0.40
USACE	5265	SEPT2011	1402.00	436.36	441.01		441.18	0.003734	5.34	509.65	230.67	0.49
USACE	5015	2YR	379.00	435.85	438.64		438.78	0.004793	4.33	185.31	205.36	0.51
USACE	5015	5YR	711.00	435.85	439.24		439.38	0.004106	4.69	318.11	237.39	0.49
USACE	5015	10YR	999.00	435.85	439.62		439.78	0.003989	5.04	413.48	257.50	0.49
USACE	5015	25YR	1471.00	435.85	440.15		440.32	0.003827	5.46	556.48	285.39	0.50
USACE	5015	50YR	1841.00	435.85	440.50		440.69	0.003740	5.73	660.11	309.88	0.50
USACE	5015	100YR	2236.00	435.85	440.90		441.09	0.003346	5.77	790.08	332.40	0.48
USACE	5015	100YRPLUS	2924.00	435.85	442.79		442.87	0.000922	3.82	1545.43	483.70	0.27
USACE	5015	200YR	2642.00	435.85	441.76		441.89	0.001859	4.83	1096.59	384.00	0.37
USACE	5015	500YR	3205.00	435.85	442.98		443.06	0.000957	3.97	1635.72	496.29	0.27
USACE	5015	SEPT2011	1402.00	435.85	440.08		440.25	0.003818	5.39	536.86	279.16	0.50
USACE	4845	2YR	379.00	434.90	438.12		438.24	0.002210	3.47	232.51	228.04	0.36
USACE	4845	5YR	711.00	434.90	438.65		438.80	0.002844	4.41	361.67	261.80	0.42
USACE	4845	10YR	999.00	434.90	439.01		439.19	0.003037	4.88	460.47	277.20	0.45
USACE	4845	25YR	1471.00	434.90	439.53		439.73	0.003204	5.47	612.71	317.12	0.47
USACE	4845	50YR	1841.00	434.90	439.90		440.10	0.003131	5.71	735.66	359.44	0.47
USACE	4845	100YR	2236.00	434.90	440.40		440.58	0.002654	5.63	929.08	401.97	0.44
USACE	4845	100YRPLUS	2924.00	434.90	442.68		442.74	0.000579	3.37	2059.44	577.27	0.22
USACE	4845	200YR	2642.00	434.90	441.52		441.62	0.001236	4.39	1434.30	503.33	0.31
USACE	4845	500YR	3205.00	434.90	442.86		442.92	0.000612	3.52	2163.67	591.00	0.23
USACE	4845	SEPT2011	1402.00	434.90	439.46		439.65	0.003220	5.42	589.82	312.98	0.47
USACE	4693	2YR	394.00	434.52	437.72		437.81	0.003689	3.81	251.78	302.78	0.44
USACE	4693	5YR	735.00	434.52	438.24		438.32	0.003254	4.10	419.91	338.28	0.43
USACE	4693	10YR	1039.00	434.52	438.62		438.71	0.002935	4.24	554.06	356.18	0.42
USACE	4693	25YR	1550.00	434.52	439.16		439.26	0.002651	4.46	751.90	374.86	0.41
USACE	4693	50YR	1955.00	434.52	439.55		439.65	0.002455	4.59	900.67	386.69	0.40
USACE	4693	100YR	2388.00	434.52	440.13		440.22	0.001852	4.35	1128.31	402.43	0.35
USACE	4693	100YRPLUS	3123.00	434.52	442.62		442.66	0.000403	2.69	2269.50	523.16	0.18
USACE	4693	200YR	2839.00	434.52	441.41		441.46	0.000810	3.37	1667.16	449.79	0.24
USACE	4693	500YR	3470.00	434.52	442.80		442.84	0.000443	2.87	2359.93	526.75	0.19
USACE	4693	SEPT2011	1471.00	434.52	439.09		439.18	0.002684	4.43	723.27	372.91	0.41
USACE	4400	2YR	394.00	433.26	436.76		436.87	0.002908	3.93	239.44	236.47	0.41
USACE	4400	5YR	735.00	433.26	437.38		437.49	0.002638	4.27	395.25	259.50	0.41
USACE	4400	10YR	1039.00	433.26	437.80		437.92	0.002621	4.60	506.58	273.90	0.41
USACE	4400	25YR	1550.00	433.26	438.36		438.50	0.002669	5.07	664.73	290.70	0.43
USACE	4400	50YR	1955.00	433.26	438.78		438.93	0.002603	5.33	790.51	307.62	0.43
USACE	4400	100YR	2388.00	433.26	439.60		439.71	0.001695	4.77	1052.53	333.70	0.35
USACE	4400	100YRPLUS	3123.00	433.26	442.51		442.55	0.000366	2.92	2202.94	474.65	0.18
USACE	4400	200YR	2839.00	433.26	441.18		441.25	0.000693	3.59	1628.04	397.51	0.24
USACE	4400	500YR	3470.00	433.26	442.67		442.71	0.000413	3.14	2278.90	484.89	0.19
USACE	4400	SEPT2011	1471.00	433.26	438.28		438.41	0.002663	5.01	641.93	288.79	0.42
USACE	4230	2YR	394.00	432.80	436.44		436.51	0.001524	3.01	270.14	199.85	0.30
USACE	4230	5YR	735.00	432.80	436.98		437.09	0.002107	3.94	383.75	218.18	0.37
USACE	4230	10YR	1039.00	432.80	437.33		437.48	0.002554	4.62	462.15	230.75	0.41
USACE	4230	25YR	1550.00	432.80	437.79		438.00	0.003169	5.54	575.90	253.16	0.46
USACE	4230	50YR	1955.00	432.80	438.22		438.44	0.003155	5.88	686.88	272.87	0.47
USACE	4230	100YR	2388.00	432.80	439.29		439.43	0.001641	4.84	1013.89	335.29	0.35
USACE	4230	100YRPLUS	3123.00	432.80	442.45		442.49	0.000308	2.79	2307.40	482.23	0.16
USACE	4230	200YR	2839.00	432.80	441.07		441.14	0.000593	3.47	1688.13	419.51	0.22
USACE	4230	500YR	3470.00	432.80	442.60		442.65	0.000351	3.01	2380.77	489.90	0.17
USACE	4230	SEPT2011	1471.00	432.80	437.73		437.92	0.003102	5.43	558.63	251.20	0.46
USACE	4082	2YR	394.00	432.00	436.18	435.63	436.26	0.001836	3.37	282.25	265.98	0.33
USACE	4082	5YR	735.00	432.00	436.65	436.03	436.76	0.002357	4.18	412.52	282.72	0.38
USACE	4082	10YR	1039.00	432.00	436.93	436.36	437.07	0.002884	4.85	493.22	292.22	0.43
USACE	4082	25YR	1550.00	432.00	437.31	436.58	437.49	0.003594	5.74	605.37	305.54	0.48
USACE	4082	50YR	1955.00	432.00	437.81	436.79	437.97	0.002894	5.54	766.67	334.05	0.44
USACE	4082	100YR	2388.00	432.00	439.15	436.98	439.22	0.000988	3.80	1260.78	410.78	0.27
USACE	4082	100YRPLUS	3123.00	432.00	442.43	437.27	442.46	0.000162	2.04	2854.70	573.52	0.12

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4082	200YR	2839.00	432.00	441.03	437.16	441.07	0.000309	2.53	2110.49	490.91	0.16
USACE	4082	500YR	3470.00	432.00	442.58	437.39	442.61	0.000183	2.19	2939.94	577.89	0.12
USACE	4082	SEPT2011	1471.00	432.00	437.25	436.55	437.42	0.003537	5.64	586.88	303.11	0.48
USACE	4025	2YR	394.00	430.79	436.11	434.43	436.18	0.000863	2.73	298.85	282.46	0.24
USACE	4025	5YR	735.00	430.79	436.56	435.69	436.65	0.001300	3.58	430.99	317.38	0.29
USACE	4025	10YR	1039.00	430.79	436.81	436.10	436.94	0.001672	4.21	513.32	330.93	0.34
USACE	4025	25YR	1550.00	430.79	437.15	436.42	437.32	0.002181	5.03	633.72	378.02	0.39
USACE	4025	50YR	1955.00	430.79	437.70	436.66	437.83	0.001562	4.55	854.82	416.17	0.33
USACE	4025	100YR	2388.00	430.79	439.12	436.84	439.17	0.000455	2.85	1479.84	468.52	0.19
USACE	4025	100YRPLUS	3123.00	430.79	442.43	437.14	442.45	0.000078	1.52	3257.59	612.70	0.08
USACE	4025	200YR	2839.00	430.79	441.02	437.02	441.05	0.000146	1.88	2449.52	544.86	0.11
USACE	4025	500YR	3470.00	430.79	442.57	437.25	442.60	0.000090	1.64	3348.51	621.65	0.09
USACE	4025	SEPT2011	1471.00	430.79	437.09	436.39	437.26	0.002150	4.96	611.54	371.03	0.39
USACE	3996 Gish Road		Culvert									
USACE	3967	2YR	394.00	430.03	434.92		435.12	0.001619	3.81	190.25	178.01	0.32
USACE	3967	5YR	735.00	430.03	435.64		435.94	0.002439	5.15	347.13	265.58	0.40
USACE	3967	10YR	1039.00	430.03	436.13		436.45	0.002627	5.68	487.44	299.60	0.42
USACE	3967	25YR	1550.00	430.03	436.87		437.18	0.002576	6.10	737.95	370.35	0.42
USACE	3967	50YR	1955.00	430.03	437.56		437.79	0.001931	5.65	999.26	389.31	0.37
USACE	3967	100YR	2388.00	430.03	439.02		439.11	0.000814	4.15	1619.28	452.79	0.25
USACE	3967	100YRPLUS	3123.00	430.03	442.37		442.39	0.000147	2.20	3447.57	637.07	0.11
USACE	3967	200YR	2839.00	430.03	441.00		441.04	0.000274	2.77	2628.19	556.10	0.15
USACE	3967	500YR	3470.00	430.03	442.54		442.56	0.000166	2.36	3555.27	647.29	0.12
USACE	3967	SEPT2011	1471.00	430.03	436.77		437.08	0.002560	6.02	699.90	362.52	0.42
USACE	3917	2YR	394.00	430.02	434.83		435.02	0.002690	4.28	247.02	238.22	0.38
USACE	3917	5YR	735.00	430.02	435.57		435.76	0.002760	4.87	446.00	302.68	0.40
USACE	3917	10YR	1039.00	430.02	436.08		436.25	0.002691	5.15	602.34	318.92	0.40
USACE	3917	25YR	1550.00	430.02	436.83		436.99	0.002399	5.33	850.88	340.90	0.39
USACE	3917	50YR	1955.00	430.02	437.52		437.65	0.001906	5.12	1090.86	355.20	0.35
USACE	3917	100YR	2388.00	430.02	438.99		439.06	0.000856	3.92	1636.93	388.00	0.24
USACE	3917	100YRPLUS	3123.00	430.02	442.36		442.38	0.000153	2.10	3219.01	522.61	0.11
USACE	3917	200YR	2839.00	430.02	440.99		441.02	0.000300	2.70	2524.11	490.10	0.15
USACE	3917	500YR	3470.00	430.02	442.53		442.55	0.000172	2.24	3306.67	526.66	0.12
USACE	3917	SEPT2011	1471.00	430.02	436.72		436.88	0.002429	5.30	814.97	337.91	0.39
USACE	3724	2YR	394.00	430.01	434.39		434.50	0.002451	3.48	255.29	209.69	0.31
USACE	3724	5YR	735.00	430.01	435.11		435.23	0.002541	3.98	414.00	230.37	0.33
USACE	3724	10YR	1039.00	430.01	435.61		435.73	0.002530	4.26	532.51	239.87	0.33
USACE	3724	25YR	1550.00	430.01	436.39		436.52	0.002397	4.56	729.79	265.81	0.33
USACE	3724	50YR	1955.00	430.01	437.18		437.29	0.001748	4.24	943.85	272.26	0.29
USACE	3724	100YR	2388.00	430.01	438.84		438.90	0.000772	3.27	1408.82	289.53	0.20
USACE	3724	100YRPLUS	3123.00	430.01	442.32		442.35	0.000238	2.30	2527.48	356.07	0.12
USACE	3724	200YR	2839.00	430.01	440.92		440.96	0.000362	2.60	2047.94	329.83	0.14
USACE	3724	500YR	3470.00	430.01	442.48		442.51	0.000276	2.50	2584.51	358.72	0.13
USACE	3724	SEPT2011	1471.00	430.01	436.28		436.40	0.002443	4.54	699.99	264.58	0.34
USACE	3478	2YR	394.00	430.01	433.86		433.92	0.002232	2.96	286.51	214.36	0.30
USACE	3478	5YR	735.00	430.01	434.55		434.63	0.002287	3.43	442.15	228.33	0.31
USACE	3478	10YR	1039.00	430.01	435.05		435.14	0.002349	3.77	556.68	238.58	0.32
USACE	3478	25YR	1550.00	430.01	435.87		435.96	0.002117	4.02	760.77	257.96	0.31
USACE	3478	50YR	1955.00	430.01	436.82		436.90	0.001429	3.70	1018.94	281.52	0.26
USACE	3478	100YR	2388.00	430.01	438.69		438.73	0.000589	2.84	1579.63	323.43	0.18
USACE	3478	100YRPLUS	3123.00	430.01	442.27		442.29	0.000173	1.97	2901.00	406.60	0.10
USACE	3478	200YR	2839.00	430.01	440.85		440.88	0.000275	2.28	2338.80	384.13	0.13
USACE	3478	500YR	3470.00	430.01	442.43		442.45	0.000200	2.14	2963.31	408.66	0.11
USACE	3478	SEPT2011	1471.00	430.01	435.75		435.84	0.002159	4.00	729.53	255.12	0.31
USACE	3106	2YR	394.00	429.07	432.54		432.80	0.004348	4.93	164.42	158.34	0.51
USACE	3106	5YR	735.00	429.07	433.21		433.49	0.004416	5.69	274.38	167.74	0.53
USACE	3106	10YR	1039.00	429.07	433.72		434.00	0.004185	6.05	360.53	170.65	0.52
USACE	3106	25YR	1550.00	429.07	434.91		435.12	0.002506	5.54	567.39	176.54	0.42
USACE	3106	50YR	1955.00	429.07	436.23		436.38	0.001399	4.80	805.78	183.69	0.33
USACE	3106	100YR	2388.00	429.07	438.43		438.51	0.000603	3.81	1238.08	211.25	0.23
USACE	3106	100YRPLUS	3123.00	429.07	442.17		442.22	0.000225	2.95	2248.47	346.94	0.15
USACE	3106	200YR	2839.00	429.07	440.71		440.77	0.000319	3.23	1793.97	279.44	0.17
USACE	3106	500YR	3470.00	429.07	442.31		442.37	0.000265	3.22	2295.79	350.00	0.16
USACE	3106	SEPT2011	1471.00	429.07	434.76		434.97	0.002591	5.53	541.52	175.87	0.43
USACE	2862	2YR	394.00	428.37	431.90		432.02	0.002484	3.73	223.10	181.45	0.38
USACE	2862	5YR	735.00	428.37	432.57		432.70	0.002526	4.31	350.91	200.34	0.40
USACE	2862	10YR	1039.00	428.37	433.17		433.29	0.002185	4.44	473.23	211.12	0.38
USACE	2862	25YR	1550.00	428.37	434.65		434.73	0.001073	3.80	805.98	239.08	0.28
USACE	2862	50YR	1955.00	428.37	436.10		436.16	0.000590	3.28	1171.79	264.51	0.22
USACE	2862	100YR	2388.00	428.37	438.38		438.42	0.000254	2.59	1826.41	313.20	0.15
USACE	2862	100YRPLUS	3123.00	428.37	442.16		442.18	0.000096	1.99	3138.18	379.77	0.10
USACE	2862	200YR	2839.00	428.37	440.69		440.72	0.000135	2.18	2596.52	355.74	0.11
USACE	2862	500YR	3470.00	428.37	442.30		442.32	0.000113	2.18	3189.16	381.95	0.11
USACE	2862	SEPT2011	1471.00	428.37	434.49		434.58	0.001105	3.79	768.59	236.37	0.28
USACE	2598	2YR	384.00	428.36	431.42	430.73	431.47	0.001659	2.73	284.18	231.06	0.31

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	2598	5YR	708.00	428.36	432.13	431.09	432.19	0.001463	3.03	463.95	272.53	0.30
USACE	2598	10YR	1001.00	428.36	432.83	431.30	432.89	0.001063	2.96	673.80	315.57	0.26
USACE	2598	25YR	1513.00	428.36	434.51	431.66	434.55	0.000459	2.47	1236.86	395.47	0.18
USACE	2598	50YR	1932.00	428.36	436.04	431.88	436.06	0.000248	2.14	1872.18	433.34	0.14
USACE	2598	100YR	2383.00	428.36	438.35	432.08	438.37	0.000111	1.72	2941.18	486.48	0.10
USACE	2598	100YRPLUS	3116.00	428.36	442.15	432.41	442.16	0.000042	1.32	4849.18	559.21	0.06
USACE	2598	200YR	2855.00	428.36	440.68	432.30	440.69	0.000059	1.45	4097.43	529.51	0.07
USACE	2598	500YR	3521.00	428.36	442.29	432.56	442.30	0.000051	1.47	4917.03	561.11	0.07
USACE	2598	SEPT2011	1467.00	428.36	434.34	431.58	434.38	0.000487	2.49	1175.15	348.57	0.19
USACE	2334	2YR	384.00	428.35	431.04	430.14	431.08	0.001353	2.40	391.25	336.33	0.28
USACE	2334	5YR	708.00	428.35	431.82	430.46	431.86	0.001097	2.62	655.58	343.97	0.26
USACE	2334	10YR	1001.00	428.35	432.62	430.71	432.65	0.000765	2.55	933.74	353.19	0.23
USACE	2334	25YR	1513.00	428.35	434.42	431.08	434.44	0.000349	2.21	1589.89	376.74	0.16
USACE	2334	50YR	1932.00	428.35	435.98	431.28	436.00	0.000210	2.02	2183.29	413.86	0.13
USACE	2334	100YR	2383.00	428.35	438.33	431.61	438.34	0.000106	1.73	3092.49	451.12	0.10
USACE	2334	100YRPLUS	3116.00	428.35	442.14	431.75	442.15	0.000052	1.50	4625.36	511.41	0.07
USACE	2334	200YR	2855.00	428.35	440.66	431.66	440.67	0.000067	1.58	4021.12	489.48	0.08
USACE	2334	500YR	3521.00	428.35	442.27	431.89	442.28	0.000064	1.68	4678.48	513.37	0.08
USACE	2334	SEPT2011	1467.00	428.35	434.24	431.05	434.27	0.000373	2.24	1525.31	374.50	0.17
USACE	1975	2YR	384.00	428.30	430.52	429.63	430.55	0.001619	1.92	370.82	276.36	0.24
USACE	1975	5YR	708.00	428.30	431.43	429.92	431.46	0.001121	2.04	614.43	293.21	0.21
USACE	1975	10YR	1001.00	428.30	432.35	430.11	432.38	0.000733	1.98	869.78	311.04	0.18
USACE	1975	25YR	1513.00	428.30	434.29	430.39	434.32	0.000347	1.79	1416.80	358.54	0.13
USACE	1975	50YR	1932.00	428.30	435.90	430.58	435.92	0.000227	1.70	1884.14	397.64	0.11
USACE	1975	100YR	2383.00	428.30	438.28	430.78	438.30	0.000122	1.50	2600.17	482.99	0.08
USACE	1975	100YRPLUS	3116.00	428.30	442.12	431.06	442.13	0.000061	1.32	3799.35	549.05	0.06
USACE	1975	200YR	2855.00	428.30	440.63	430.96	440.65	0.000078	1.39	3328.97	533.91	0.07
USACE	1975	500YR	3521.00	428.30	442.24	431.20	442.26	0.000075	1.48	3838.83	549.75	0.07
USACE	1975	SEPT2011	1467.00	428.30	434.11	430.37	434.14	0.000367	1.80	1365.33	354.01	0.13
USACE	1780	2YR	384.00	427.21	430.08	429.07	430.16	0.002419	2.67	195.16	208.34	0.30
USACE	1780	5YR	708.00	427.21	431.07	429.57	431.17	0.001890	2.96	331.82	264.51	0.28
USACE	1780	10YR	1001.00	427.21	432.10	429.92	432.19	0.001281	2.89	473.48	315.87	0.24
USACE	1780	25YR	1513.00	427.21	434.14	430.43	434.22	0.000663	2.67	755.46	386.38	0.18
USACE	1780	50YR	1932.00	427.21	435.78	430.75	435.85	0.000462	2.59	981.89	457.74	0.16
USACE	1780	100YR	2383.00	427.21	438.20	431.06	438.26	0.000270	2.35	1315.69	496.69	0.13
USACE	1780	100YRPLUS	3116.00	427.21	442.06	431.51	442.11	0.000151	2.16	1847.86	574.30	0.10
USACE	1780	200YR	2855.00	427.21	440.57	431.34	440.62	0.000187	2.24	1641.98	523.61	0.11
USACE	1780	500YR	3521.00	427.21	442.17	431.73	442.23	0.000188	2.42	1862.87	576.15	0.11
USACE	1780	SEPT2011	1467.00	427.21	433.96	430.39	434.03	0.000697	2.69	729.84	378.75	0.19
USACE	1695	2YR	384.00	426.00	428.82	428.82	429.51	0.022107	6.99	70.23	158.98	0.86
USACE	1695	5YR	708.00	426.00	430.14	429.55	430.71	0.010463	6.71	147.09	194.79	0.64
USACE	1695	10YR	1001.00	426.00	431.34	430.06	431.85	0.006567	6.51	216.62	261.56	0.54
USACE	1695	25YR	1513.00	426.00	433.55	430.85	434.00	0.003514	6.20	344.71	356.14	0.42
USACE	1695	50YR	1932.00	426.00	435.24	431.41	435.67	0.002587	6.17	442.12	408.65	0.37
USACE	1695	100YR	2383.00	426.00	437.76	431.97	438.12	0.001565	5.71	588.22	460.84	0.30
USACE	1695	100YRPLUS	3116.00	426.00	441.68	432.80	442.00	0.000923	5.37	815.51	513.44	0.25
USACE	1695	200YR	2855.00	426.00	440.16	432.51	440.50	0.001125	5.52	727.55	496.96	0.27
USACE	1695	500YR	3521.00	426.00	441.68	433.22	442.09	0.001177	6.07	815.72	513.49	0.28
USACE	1695	SEPT2011	1467.00	426.00	433.36	430.78	433.81	0.003670	6.21	333.47	348.46	0.43
USACE	1649 Abandoned Railro		Culvert									
USACE	1601	2YR	384.00	423.95	428.87	426.49	429.04	0.002671	3.39	113.53	171.61	0.31
USACE	1601	5YR	708.00	423.95	429.57	427.56	429.99	0.004989	5.21	137.41	259.00	0.44
USACE	1601	10YR	1001.00	423.95	429.80	428.36	430.55	0.008312	6.97	145.57	269.48	0.58
USACE	1601	25YR	1513.00	423.95	430.19	429.47	431.63	0.014320	9.66	159.07	284.77	0.77
USACE	1601	50YR	1932.00	423.95	430.33	430.21	432.55	0.021295	12.00	163.72	288.48	0.94
USACE	1601	100YR	2383.00	423.95	430.92	430.92	433.59	0.022285	13.20	183.93	320.51	0.98
USACE	1601	100YRPLUS	3116.00	423.95	431.98	431.98	435.16	0.021084	14.41	220.74	351.72	0.98
USACE	1601	200YR	2855.00	423.95	431.61	431.61	434.62	0.021566	14.02	207.74	342.69	0.98
USACE	1601	500YR	3521.00	423.95	432.52	432.52	435.97	0.020662	15.02	239.39	363.11	0.98
USACE	1601	SEPT2011	1467.00	423.95	430.17	429.38	431.54	0.013691	9.42	158.24	284.10	0.75
USACE	1547	2YR	384.00	423.94	428.56	427.01	428.85	0.003264	4.37	99.35	180.02	0.43
USACE	1547	5YR	708.00	423.94	429.05	428.28	429.64	0.005956	6.48	158.08	282.93	0.59
USACE	1547	10YR	1001.00	423.94	429.40	429.40	430.12	0.007130	7.53	211.81	294.03	0.66
USACE	1547	25YR	1513.00	423.94	429.91	429.91	430.76	0.008084	8.69	291.78	309.04	0.72
USACE	1547	50YR	1932.00	423.94	430.25	430.25	431.20	0.008778	9.49	343.79	316.83	0.76
USACE	1547	100YR	2383.00	423.94	430.56	430.56	431.63	0.009439	10.26	392.32	326.03	0.79
USACE	1547	100YRPLUS	3116.00	423.94	431.00	431.00	432.24	0.010456	11.39	459.37	334.74	0.85
USACE	1547	200YR	2855.00	423.94	430.85	430.85	432.03	0.010069	10.98	437.35	331.94	0.83
USACE	1547	500YR	3521.00	423.94	431.22	431.22	432.56	0.010870	11.91	493.90	340.82	0.87
USACE	1547	SEPT2011	1467.00	423.94	429.88	429.88	430.71	0.007971	8.58	285.99	308.13	0.71
USACE	1395	2YR	384.00	423.93	428.18		428.32	0.003202	3.98	212.20	233.90	0.40
USACE	1395	5YR	708.00	423.93	428.77		428.89	0.002885	4.25	365.83	273.36	0.39
USACE	1395	10YR	1001.00	423.93	429.17		429.29	0.002758	4.45	475.67	282.70	0.39
USACE	1395	25YR	1513.00	423.93	429.73		429.86	0.002727	4.82	636.74	297.02	0.40
USACE	1395	50YR	1932.00	423.93	430.10		430.25	0.002740	5.10	750.76	305.09	0.40
USACE	1395	100YR	2383.00	423.93	430.47		430.63	0.002781	5.38	862.67	314.46	0.41

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	1395	100YRPLUS	3116.00	423.93	430.98		431.17	0.002846	5.79	1026.78	326.54	0.42
USACE	1395	200YR	2855.00	423.93	430.80		430.98	0.002820	5.65	970.55	322.43	0.42
USACE	1395	500YR	3521.00	423.93	431.23		431.43	0.002884	5.99	1110.25	331.96	0.43
USACE	1395	SEPT2011	1467.00	423.93	429.68		429.82	0.002714	4.78	624.39	296.08	0.40
USACE	1219	2YR	384.00	423.92	427.84		427.90	0.001652	2.97	279.23	242.55	0.31
USACE	1219	5YR	708.00	423.92	428.41		428.48	0.001846	3.53	426.33	275.25	0.33
USACE	1219	10YR	1001.00	423.92	428.79		428.88	0.001927	3.86	534.78	285.47	0.35
USACE	1219	25YR	1513.00	423.92	429.32		429.44	0.002099	4.39	690.61	299.61	0.37
USACE	1219	50YR	1932.00	423.92	429.69		429.82	0.002211	4.75	800.95	307.28	0.38
USACE	1219	100YR	2383.00	423.92	430.03		430.18	0.002323	5.10	908.26	314.79	0.40
USACE	1219	100YRPLUS	3116.00	423.92	430.52		430.70	0.002490	5.61	1064.70	327.07	0.42
USACE	1219	200YR	2855.00	423.92	430.36		430.52	0.002432	5.44	1011.21	322.92	0.41
USACE	1219	500YR	3521.00	423.92	430.76		430.95	0.002573	5.87	1144.24	332.90	0.43
USACE	1219	SEPT2011	1467.00	423.92	429.29		429.40	0.002071	4.34	679.42	298.83	0.37
USACE	1018	2YR	384.00	423.91	427.57		427.60	0.001321	2.31	328.62	265.10	0.27
USACE	1018	5YR	708.00	423.91	428.09		428.14	0.001527	2.85	470.05	276.35	0.30
USACE	1018	10YR	1001.00	423.91	428.45		428.51	0.001710	3.26	570.49	287.10	0.32
USACE	1018	25YR	1513.00	423.91	428.93		429.02	0.002011	3.87	715.88	314.89	0.35
USACE	1018	50YR	1932.00	423.91	429.26		429.37	0.002159	4.25	823.59	323.50	0.37
USACE	1018	100YR	2383.00	423.91	429.58		429.71	0.002337	4.65	926.70	337.80	0.39
USACE	1018	100YRPLUS	3116.00	423.91	430.03		430.19	0.002544	5.18	1081.44	350.31	0.42
USACE	1018	200YR	2855.00	423.91	429.87		430.02	0.002475	5.00	1028.61	346.39	0.41
USACE	1018	500YR	3521.00	423.91	430.25		430.43	0.002638	5.44	1160.28	355.49	0.43
USACE	1018	SEPT2011	1467.00	423.91	428.90		428.98	0.001966	3.81	706.58	313.87	0.35
USACE	813	2YR	384.00	423.95	427.47		427.48	0.000303	1.21	568.89	332.04	0.13
USACE	813	5YR	708.00	423.95	427.95		427.97	0.000469	1.69	729.92	337.13	0.17
USACE	813	10YR	1001.00	423.95	428.27		428.30	0.000602	2.04	840.08	340.63	0.19
USACE	813	25YR	1513.00	423.95	428.70		428.74	0.000830	2.59	987.25	346.81	0.23
USACE	813	50YR	1932.00	423.95	429.00		429.06	0.000983	2.97	1093.17	351.32	0.26
USACE	813	100YR	2383.00	423.95	429.28		429.36	0.001140	3.34	1192.31	355.32	0.28
USACE	813	100YRPLUS	3116.00	423.95	429.69		429.79	0.001369	3.88	1337.68	367.83	0.31
USACE	813	200YR	2855.00	423.95	429.55		429.64	0.001291	3.69	1287.94	364.23	0.30
USACE	813	500YR	3521.00	423.95	429.89		430.00	0.001481	4.14	1412.13	372.93	0.32
USACE	813	SEPT2011	1467.00	423.95	428.68		428.72	0.000800	2.54	979.53	346.51	0.23
USACE	611	2YR	385.00	424.01	427.40	426.44	427.41	0.000344	1.38	541.76	352.44	0.14
USACE	611	5YR	709.00	424.01	427.85	426.44	427.87	0.000546	1.91	701.57	366.68	0.19
USACE	611	10YR	1002.00	424.01	428.14	426.57	428.17	0.000710	2.31	811.25	375.31	0.21
USACE	611	25YR	1513.00	424.01	428.52	426.90	428.57	0.000994	2.92	954.27	384.85	0.26
USACE	611	50YR	1932.00	424.01	428.79	427.08	428.86	0.001187	3.33	1058.38	390.60	0.28
USACE	611	100YR	2383.00	424.01	429.03	427.25	429.12	0.001385	3.73	1154.53	394.80	0.31
USACE	611	100YRPLUS	3116.00	424.01	429.38	427.50	429.50	0.001682	4.33	1294.19	405.21	0.35
USACE	611	200YR	2856.00	424.01	429.26	427.42	429.37	0.001583	4.13	1246.56	402.61	0.33
USACE	611	500YR	3523.00	424.01	429.55	427.63	429.69	0.001830	4.62	1365.08	409.02	0.36
USACE	611	SEPT2011	1467.00	424.01	428.50	426.88	428.55	0.000951	2.85	948.59	384.41	0.25
USACE	529	2YR	385.00	424.01	427.32	426.44	427.36	0.001079	2.34	317.87	253.94	0.25
USACE	529	5YR	709.00	424.01	427.67	426.65	427.77	0.002233	3.66	428.60	381.67	0.37
USACE	529	10YR	1002.00	424.01	427.93	426.90	428.04	0.002718	4.26	530.87	407.77	0.41
USACE	529	25YR	1513.00	424.01	428.25	427.35	428.40	0.003389	5.05	663.86	425.37	0.47
USACE	529	50YR	1932.00	424.01	428.49	427.41	428.66	0.003709	5.51	766.52	437.07	0.49
USACE	529	100YR	2383.00	424.01	428.70	428.02	428.90	0.004072	5.98	859.55	445.26	0.52
USACE	529	100YRPLUS	3116.00	424.01	429.00	428.25	429.24	0.004555	6.63	995.85	456.37	0.56
USACE	529	200YR	2856.00	424.01	428.90	428.18	429.12	0.004392	6.41	949.46	452.60	0.54
USACE	529	500YR	3523.00	424.01	429.15	428.37	429.41	0.004813	6.97	1064.56	462.94	0.58
USACE	529	SEPT2011	1467.00	424.01	428.25	427.32	428.39	0.003181	4.90	664.29	425.42	0.45
USACE	501 Newport Road		Bridge									
USACE	468	2YR	385.00	421.99	426.15	424.81	426.29	0.002017	3.52	213.08	274.23	0.34
USACE	468	5YR	709.00	421.99	426.55	426.23	426.71	0.002564	4.28	334.55	341.62	0.39
USACE	468	10YR	1002.00	421.99	426.77	426.50	426.96	0.003019	4.82	410.23	360.89	0.43
USACE	468	25YR	1513.00	421.99	427.10	426.76	427.32	0.003541	5.51	535.60	424.59	0.47
USACE	468	50YR	1932.00	421.99	427.34	426.97	427.57	0.003650	5.79	628.51	441.09	0.48
USACE	468	100YR	2383.00	421.99	427.56	427.10	427.81	0.003689	6.02	721.06	447.98	0.48
USACE	468	100YRPLUS	3116.00	421.99	427.90	427.35	428.17	0.003718	6.32	859.96	463.76	0.49
USACE	468	200YR	2856.00	421.99	427.78	427.28	428.05	0.003746	6.24	810.88	458.60	0.49
USACE	468	500YR	3523.00	421.99	428.07	427.45	428.35	0.003703	6.44	930.51	474.16	0.49
USACE	468	SEPT2011	1467.00	421.99	427.08	426.74	427.29	0.003511	5.46	524.89	418.79	0.46
USACE	408	2YR	385.00	421.98	425.99	425.78	426.13	0.003694	3.94	213.67	361.88	0.44
USACE	408	5YR	709.00	421.98	426.39	426.06	426.51	0.003530	4.26	361.18	453.86	0.45
USACE	408	10YR	1002.00	421.98	426.59	426.32	426.73	0.003903	4.68	438.25	461.08	0.47
USACE	408	25YR	1513.00	421.98	426.90	426.53	427.06	0.004085	5.11	560.35	472.96	0.49
USACE	408	50YR	1932.00	421.98	427.12	426.66	427.30	0.004170	5.39	647.93	480.39	0.50
USACE	408	100YR	2383.00	421.98	427.35	426.78	427.55	0.004180	5.62	736.75	487.43	0.51
USACE	408	100YRPLUS	3116.00	421.98	427.68	426.99	427.91	0.004275	6.01	867.87	506.43	0.52
USACE	408	200YR	2856.00	421.98	427.56	426.91	427.79	0.004199	5.85	822.22	494.19	0.52
USACE	408	500YR	3523.00	421.98	427.84	427.08	428.10	0.004273	6.17	935.92	511.20	0.53
USACE	408	SEPT2011	1467.00	421.98	426.88	426.50	427.03	0.004070	5.08	550.30	471.98	0.49

HEC-RAS Plan: Existing River: WhiteOakRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	305	2YR	385.00	421.97	425.31	425.31	425.60	0.007092	5.18	163.88	342.23	0.61
USACE	305	5YR	709.00	421.97	425.67	425.67	425.97	0.007790	6.00	299.65	545.61	0.66
USACE	305	10YR	1002.00	421.97	425.99	425.86	426.22	0.006155	5.76	446.69	611.11	0.60
USACE	305	25YR	1513.00	421.97	426.42	426.09	426.60	0.004825	5.59	660.06	683.04	0.54
USACE	305	50YR	1932.00	421.97	426.68	426.28	426.86	0.004485	5.67	789.92	699.17	0.53
USACE	305	100YR	2383.00	421.97	426.92	426.42	427.11	0.004311	5.80	911.41	718.97	0.52
USACE	305	100YRPLUS	3116.00	421.97	427.26	426.60	427.47	0.004219	6.07	1081.30	743.32	0.52
USACE	305	200YR	2856.00	421.97	427.15	426.54	427.35	0.004242	5.98	1023.68	739.59	0.52
USACE	305	500YR	3523.00	421.97	427.43	426.70	427.65	0.004197	6.22	1166.81	748.67	0.53
USACE	305	SEPT2011	1467.00	421.97	426.39	426.08	426.57	0.004877	5.59	644.62	681.18	0.54
USACE	207	2YR	385.00	421.78	425.08	424.64	425.13	0.001716	2.73	348.53	440.79	0.30
USACE	207	5YR	709.00	421.78	425.52	424.91	425.57	0.001798	3.11	543.54	603.76	0.32
USACE	207	10YR	1002.00	421.78	425.80	425.09	425.86	0.001907	3.40	680.25	750.57	0.33
USACE	207	25YR	1513.00	421.78	426.20	425.31	426.27	0.002024	3.80	886.47	946.58	0.35
USACE	207	50YR	1932.00	421.78	426.45	425.44	426.53	0.002176	4.11	1012.82	1027.60	0.37
USACE	207	100YR	2383.00	421.78	426.68	425.62	426.78	0.002306	4.40	1133.43	1084.28	0.38
USACE	207	100YRPLUS	3116.00	421.78	427.00	425.82	427.12	0.002508	4.83	1302.04	1230.95	0.40
USACE	207	200YR	2856.00	421.78	426.89	425.75	427.00	0.002442	4.68	1244.58	1167.03	0.40
USACE	207	500YR	3523.00	421.78	427.17	425.90	427.30	0.002600	5.04	1387.65	1292.90	0.41
USACE	207	SEPT2011	1467.00	421.78	426.17	425.29	426.24	0.002003	3.76	871.88	909.01	0.35
USACE	88	2YR	385.00	421.14	424.56	424.42	424.77	0.005733	4.38	160.81	384.57	0.55
USACE	88	5YR	709.00	421.14	424.98	424.78	425.20	0.005740	4.98	290.64	516.23	0.56
USACE	88	10YR	1002.00	421.14	425.25	425.02	425.48	0.005731	5.34	396.21	665.37	0.57
USACE	88	25YR	1513.00	421.14	425.65	425.18	425.88	0.005730	5.85	575.81	797.55	0.59
USACE	88	50YR	1932.00	421.14	425.88	425.55	426.12	0.005731	6.14	690.78	944.61	0.59
USACE	88	100YR	2383.00	421.14	426.10	425.74	426.35	0.005731	6.41	805.10	997.43	0.60
USACE	88	100YRPLUS	3116.00	421.14	426.40	425.94	426.67	0.005733	6.77	966.04	1064.43	0.61
USACE	88	200YR	2856.00	421.14	426.30	425.89	426.56	0.005735	6.65	910.89	1020.44	0.61
USACE	88	500YR	3523.00	421.14	426.56	426.07	426.84	0.005731	6.95	1048.44	1107.24	0.61
USACE	88	SEPT2011	1467.00	421.14	425.62	425.18	425.85	0.005737	5.82	562.72	793.64	0.59

HEC-RAS Plan: Existing River: BehmRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	7834	100YR	838.00	449.17	453.22	453.15	453.81	0.015381	8.49	178.98	141.80	0.79
USACE	7834	100YRPLUS	1096.00	449.17	453.57	453.35	454.25	0.015979	9.21	212.38	146.17	0.82
USACE	7834	200YR	1039.00	449.17	453.50	453.29	454.16	0.015754	9.04	205.80	145.38	0.81
USACE	7834	500YR	1323.00	449.17	453.83	453.60	454.59	0.016758	9.84	237.33	149.27	0.85
USACE	7834	SEPT2011	502.00	449.17	452.63	452.38	453.11	0.014617	7.33	123.96	124.38	0.75
USACE	7708	2YR	98.00	448.05	450.38		450.51	0.004768	3.09	44.03	63.30	0.40
USACE	7708	5YR	219.00	448.05	450.91	450.53	451.09	0.005743	4.00	81.74	79.14	0.45
USACE	7708	10YR	330.00	448.05	451.32	450.84	451.50	0.005282	4.25	116.10	90.79	0.45
USACE	7708	25YR	488.00	448.05	451.76		451.96	0.005123	4.62	160.17	110.57	0.45
USACE	7708	50YR	662.00	448.05	452.11		452.33	0.005088	4.93	201.32	121.68	0.46
USACE	7708	100YR	838.00	448.05	452.43		452.67	0.004992	5.17	240.88	131.25	0.46
USACE	7708	100YRPLUS	1096.00	448.05	452.81		453.07	0.004935	5.47	293.40	142.15	0.46
USACE	7708	200YR	1039.00	448.05	452.73		452.99	0.005001	5.43	281.53	140.53	0.47
USACE	7708	500YR	1323.00	448.05	453.08		453.38	0.004976	5.72	332.99	147.35	0.47
USACE	7708	SEPT2011	502.00	448.05	451.80		452.00	0.005088	4.64	164.13	111.98	0.45
USACE	7541	2YR	98.00	446.76	448.55	448.55	449.06	0.018447	6.10	22.66	29.23	0.85
USACE	7541	5YR	219.00	446.76	449.30	449.30	449.71	0.012448	6.46	68.38	73.72	0.74
USACE	7541	10YR	330.00	446.76	449.57	449.57	450.08	0.014759	7.56	88.76	76.65	0.82
USACE	7541	25YR	488.00	446.76	449.91	449.91	450.51	0.016359	8.63	115.55	83.20	0.88
USACE	7541	50YR	662.00	446.76	450.24	450.24	450.89	0.016283	9.25	145.28	95.73	0.90
USACE	7541	100YR	838.00	446.76	450.48	450.48	451.20	0.017174	9.96	169.74	105.22	0.93
USACE	7541	100YRPLUS	1096.00	446.76	450.79	450.79	451.59	0.017896	10.75	203.78	114.37	0.97
USACE	7541	200YR	1039.00	446.76	450.75	450.75	451.51	0.017349	10.50	198.22	113.18	0.95
USACE	7541	500YR	1323.00	446.76	451.06	451.06	451.89	0.017570	11.14	235.69	123.77	0.97
USACE	7541	SEPT2011	502.00	446.76	449.93	449.93	450.54	0.016556	8.73	117.47	84.28	0.89
USACE	7307	2YR	98.00	444.56	446.75		446.88	0.002986	3.28	52.48	110.28	0.42
USACE	7307	5YR	219.00	444.56	447.15		447.30	0.003503	4.04	103.71	136.83	0.47
USACE	7307	10YR	330.00	444.56	447.45		447.59	0.003221	4.20	146.56	152.53	0.46
USACE	7307	25YR	488.00	444.56	447.68		447.85	0.003875	4.86	181.19	154.89	0.51
USACE	7307	50YR	662.00	444.56	447.95		448.14	0.003832	5.14	224.25	158.66	0.51
USACE	7307	100YR	838.00	444.56	448.17		448.39	0.003978	5.49	260.31	164.40	0.53
USACE	7307	100YRPLUS	1096.00	444.56	448.47		448.72	0.004025	5.85	309.71	168.16	0.54
USACE	7307	200YR	1039.00	444.56	448.41		448.65	0.004016	5.77	299.22	167.31	0.54
USACE	7307	500YR	1323.00	444.56	448.71		448.98	0.004054	6.12	349.81	171.99	0.55
USACE	7307	SEPT2011	502.00	444.56	447.70		447.87	0.003902	4.90	184.33	155.09	0.51
USACE	7056	2YR	98.00	442.76	444.74	444.74	445.38	0.016854	6.97	19.08	16.94	0.93
USACE	7056	5YR	219.00	442.76	445.92	445.92	446.21	0.005977	5.85	101.59	157.56	0.60
USACE	7056	10YR	330.00	442.76	446.14	446.14	446.47	0.007210	6.74	138.64	179.75	0.67
USACE	7056	25YR	488.00	442.76	446.55		446.77	0.005373	6.31	216.30	199.50	0.59
USACE	7056	50YR	662.00	442.76	446.86		447.08	0.005361	6.66	279.65	212.95	0.60
USACE	7056	100YR	838.00	442.76	447.11		447.33	0.005177	6.83	334.39	216.89	0.59
USACE	7056	100YRPLUS	1096.00	442.76	447.43		447.65	0.005114	7.13	403.22	220.76	0.60
USACE	7056	200YR	1039.00	442.76	447.36		447.58	0.005117	7.06	388.91	219.99	0.59
USACE	7056	500YR	1323.00	442.76	447.67		447.90	0.005117	7.39	457.54	224.05	0.60
USACE	7056	SEPT2011	502.00	442.76	446.58		446.80	0.005287	6.30	222.65	201.29	0.59
USACE	6888	2YR	98.00	441.00	444.42		444.46	0.001500	1.88	100.63	150.16	0.22
USACE	6888	5YR	219.00	441.00	445.64		445.65	0.000442	1.36	348.82	246.67	0.13
USACE	6888	10YR	330.00	441.00	446.08		446.10	0.000485	1.54	463.35	277.91	0.14
USACE	6888	25YR	488.00	441.00	446.49		446.51	0.000567	1.78	581.15	296.36	0.15
USACE	6888	50YR	662.00	441.00	446.75		446.78	0.000715	2.08	659.80	301.28	0.17
USACE	6888	100YR	838.00	441.00	446.97		447.00	0.000862	2.35	725.25	304.74	0.19
USACE	6888	100YRPLUS	1096.00	441.00	447.24		447.28	0.001071	2.72	808.20	311.33	0.21
USACE	6888	200YR	1039.00	441.00	447.18		447.22	0.001026	2.64	790.82	309.94	0.21
USACE	6888	500YR	1323.00	441.00	447.45		447.50	0.001240	3.00	875.23	318.74	0.23
USACE	6888	SEPT2011	502.00	441.00	446.52		446.54	0.000576	1.80	589.38	296.91	0.15
USACE	6821	2YR	98.00	440.28	444.36	442.07	444.40	0.000657	1.59	65.24	138.42	0.17
USACE	6821	5YR	219.00	440.28	445.51	442.94	445.59	0.000903	2.36	103.32	235.98	0.21
USACE	6821	10YR	330.00	440.28	446.06	443.53	446.08	0.000249	1.36	453.87	296.54	0.11
USACE	6821	25YR	488.00	440.28	446.46	444.19	446.48	0.000317	1.62	551.41	324.90	0.13
USACE	6821	50YR	662.00	440.28	446.71	444.76	446.74	0.000429	1.95	612.80	334.43	0.15
USACE	6821	100YR	838.00	440.28	446.92	445.22	446.96	0.000545	2.26	662.62	340.97	0.17
USACE	6821	100YRPLUS	1096.00	440.28	447.17	445.55	447.23	0.000711	2.66	724.16	347.60	0.20
USACE	6821	200YR	1039.00	440.28	447.12	445.55	447.17	0.000675	2.58	711.45	346.23	0.19
USACE	6821	500YR	1323.00	440.28	447.37	445.55	447.44	0.000849	2.98	772.51	355.80	0.22
USACE	6821	SEPT2011	502.00	440.28	446.49	444.24	446.51	0.000325	1.65	557.98	326.05	0.13
USACE	6795 Mountain Road		Bridge									
USACE	6763	2YR	98.00	440.60	444.16	442.54	444.24	0.001391	2.29	49.79	142.97	0.25
USACE	6763	5YR	219.00	440.60	444.43	443.38	444.73	0.004817	4.54	63.91	200.00	0.47
USACE	6763	10YR	330.00	440.60	444.69	443.98	444.90	0.004083	4.43	182.97	258.28	0.44
USACE	6763	25YR	488.00	440.60	444.96	444.61	445.19	0.004707	5.02	245.93	271.27	0.48
USACE	6763	50YR	662.00	440.60	445.16	444.61	445.43	0.005646	5.71	293.14	287.22	0.53
USACE	6763	100YR	838.00	440.60	445.37	445.12	445.66	0.006092	6.16	341.33	306.67	0.55
USACE	6763	100YRPLUS	1096.00	440.60	445.64	445.32	445.96	0.006585	6.70	403.78	318.16	0.58
USACE	6763	200YR	1039.00	440.60	445.61	445.28	445.91	0.006174	6.46	397.68	317.49	0.56
USACE	6763	500YR	1323.00	440.60	445.84	445.48	446.19	0.007020	7.14	450.86	325.52	0.60
USACE	6763	SEPT2011	502.00	440.60	444.97	444.61	445.20	0.004880	5.12	248.08	271.75	0.49

HEC-RAS Plan: Existing River: BehmRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	6716	2YR	98.00	440.60	444.16	442.84	444.17	0.000444	1.23	188.25	229.59	0.14
USACE	6716	5YR	219.00	440.60	444.48	443.65	444.51	0.001034	2.03	254.19	264.04	0.22
USACE	6716	10YR	330.00	440.60	444.66	443.88	444.70	0.001596	2.64	294.61	279.42	0.27
USACE	6716	25YR	488.00	440.60	444.90	444.09	444.96	0.002135	3.21	350.59	291.76	0.32
USACE	6716	50YR	662.00	440.60	445.07	444.27	445.16	0.002868	3.86	390.19	298.38	0.37
USACE	6716	100YR	838.00	440.60	445.25	444.41	445.36	0.003374	4.33	432.55	312.47	0.41
USACE	6716	100YRPLUS	1096.00	440.60	445.49	444.66	445.63	0.003992	4.92	488.02	320.37	0.45
USACE	6716	200YR	1039.00	440.60	445.48	444.82	445.61	0.003655	4.70	485.08	320.02	0.43
USACE	6716	500YR	1323.00	440.60	445.67	444.82	445.84	0.004519	5.40	529.46	325.00	0.48
USACE	6716	SEPT2011	502.00	440.60	444.90	444.11	444.97	0.002234	3.29	351.91	291.91	0.32
USACE	6669	2YR	98.00	440.49	444.15	442.08	444.16	0.000155	0.90	278.10	234.58	0.09
USACE	6669	5YR	219.00	440.49	444.46	442.99	444.47	0.000412	1.56	353.19	256.82	0.14
USACE	6669	10YR	330.00	440.49	444.62	443.56	444.64	0.000702	2.09	396.18	266.83	0.19
USACE	6669	25YR	488.00	440.49	444.85	443.88	444.88	0.001037	2.64	456.71	270.57	0.23
USACE	6669	50YR	662.00	440.49	444.99	443.95	445.05	0.001513	3.27	496.90	275.89	0.28
USACE	6669	100YR	838.00	440.49	445.16	444.10	445.23	0.001893	3.75	542.76	279.71	0.32
USACE	6669	100YRPLUS	1096.00	440.49	445.37	444.30	445.47	0.002387	4.36	603.71	282.31	0.36
USACE	6669	200YR	1039.00	440.49	445.37	444.26	445.46	0.002147	4.13	603.48	282.30	0.34
USACE	6669	500YR	1323.00	440.49	445.53	444.45	445.65	0.002824	4.85	648.83	288.01	0.39
USACE	6669	SEPT2011	502.00	440.49	444.85	443.88	444.89	0.001093	2.71	457.49	270.62	0.24
USACE	6647 Private Drive		Culvert									
USACE	6622	2YR	98.00	439.36	441.82		441.85	0.001037	1.77	89.86	56.52	0.20
USACE	6622	5YR	219.00	439.36	442.48		442.56	0.001949	2.85	138.46	124.98	0.29
USACE	6622	10YR	330.00	439.36	442.90		443.02	0.002546	3.56	204.77	177.01	0.34
USACE	6622	25YR	488.00	439.36	443.28		443.42	0.002882	4.06	278.59	205.39	0.37
USACE	6622	50YR	662.00	439.36	443.68		443.82	0.002801	4.28	362.22	215.77	0.37
USACE	6622	100YR	838.00	439.36	444.18		444.30	0.002196	4.08	473.29	223.05	0.33
USACE	6622	100YRPLUS	1096.00	439.36	444.83		444.93	0.001747	3.97	623.46	237.40	0.30
USACE	6622	200YR	1039.00	439.36	444.70		444.80	0.001818	3.98	592.10	234.90	0.31
USACE	6622	500YR	1323.00	439.36	445.30		445.40	0.001571	3.98	736.72	249.39	0.29
USACE	6622	SEPT2011	502.00	439.36	443.31		443.46	0.002888	4.09	285.25	206.67	0.37
USACE	6391	2YR	98.00	439.61	441.35	440.85	441.42	0.004278	2.72	88.97	160.34	0.37
USACE	6391	5YR	219.00	439.61	441.65	441.40	441.77	0.007535	4.03	139.78	173.78	0.51
USACE	6391	10YR	330.00	439.61	441.92	441.62	442.06	0.008228	4.59	189.12	194.44	0.54
USACE	6391	25YR	488.00	439.61	442.25	441.80	442.40	0.007923	4.95	256.50	206.24	0.54
USACE	6391	50YR	662.00	439.61	442.95	442.04	443.04	0.003944	4.10	409.46	237.49	0.40
USACE	6391	100YR	838.00	439.61	443.72	442.19	443.78	0.002113	3.46	607.46	270.44	0.30
USACE	6391	100YRPLUS	1096.00	439.61	444.50	442.42	444.55	0.001459	3.23	827.37	317.94	0.26
USACE	6391	200YR	1039.00	439.61	444.35	442.37	444.40	0.001545	3.25	783.90	290.90	0.27
USACE	6391	500YR	1323.00	439.61	445.00	442.56	445.05	0.001284	3.24	974.87	378.82	0.25
USACE	6391	SEPT2011	502.00	439.61	442.24	441.82	442.40	0.008549	5.13	254.68	205.91	0.57
USACE	6240	2YR	98.00	438.72	439.93	439.91	440.14	0.024636	4.34	43.07	99.83	0.80
USACE	6240	5YR	219.00	438.72	440.59	440.29	440.67	0.007363	3.41	152.74	192.64	0.48
USACE	6240	10YR	330.00	438.72	440.94	440.47	441.02	0.006058	3.54	223.21	214.83	0.45
USACE	6240	25YR	488.00	438.72	441.79	440.65	441.83	0.002175	2.71	422.44	250.49	0.29
USACE	6240	50YR	662.00	438.72	442.74	440.80	442.76	0.001025	2.27	670.52	277.07	0.21
USACE	6240	100YR	838.00	438.72	443.59	440.97	443.61	0.000651	2.07	922.46	335.66	0.17
USACE	6240	100YRPLUS	1096.00	438.72	444.40	441.18	444.42	0.000541	2.11	1176.03	402.60	0.16
USACE	6240	200YR	1039.00	438.72	444.24	441.16	444.26	0.000553	2.09	1126.92	393.03	0.16
USACE	6240	500YR	1323.00	438.72	444.91	441.35	444.93	0.000526	2.21	1340.43	427.59	0.16
USACE	6240	SEPT2011	502.00	438.72	441.46	440.67	441.53	0.004224	3.48	343.26	239.74	0.39
USACE	5898	2YR	98.00	436.19	439.06	437.58	439.10	0.001191	2.03	122.36	144.50	0.21
USACE	5898	5YR	219.00	436.19	439.70	438.48	439.76	0.001669	2.76	236.11	222.74	0.26
USACE	5898	10YR	330.00	436.19	440.36	439.07	440.39	0.001083	2.50	394.94	264.45	0.22
USACE	5898	25YR	488.00	436.19	441.59	439.37	441.61	0.000393	1.79	746.59	302.15	0.14
USACE	5898	50YR	662.00	436.19	442.63	439.65	442.64	0.000246	1.60	1074.91	328.87	0.11
USACE	5898	100YR	838.00	436.19	443.52	439.65	443.53	0.000187	1.52	1372.75	363.36	0.10
USACE	5898	100YRPLUS	1096.00	436.19	444.33	439.65	444.34	0.000178	1.59	1654.42	414.40	0.10
USACE	5898	200YR	1039.00	436.19	444.17	439.65	444.18	0.000178	1.57	1600.55	400.95	0.10
USACE	5898	500YR	1323.00	436.19	444.84	440.23	444.85	0.000187	1.70	1833.54	437.43	0.10
USACE	5898	SEPT2011	502.00	436.19	441.05	439.40	441.07	0.000843	2.45	585.71	288.06	0.20
USACE	5677	2YR	157.00	436.14	438.13	437.73	438.35	0.010357	4.29	64.90	173.52	0.58
USACE	5677	5YR	322.00	436.14	439.23	438.54	439.30	0.002628	3.01	250.72	288.56	0.32
USACE	5677	10YR	469.00	436.14	440.09	438.76	440.13	0.001365	2.60	404.65	315.72	0.24
USACE	5677	25YR	687.00	436.14	441.47	439.00	441.50	0.000663	2.24	651.33	345.62	0.18
USACE	5677	50YR	847.00	436.14	442.54	439.16	442.57	0.000440	2.08	844.07	362.80	0.15
USACE	5677	100YR	1065.00	436.14	443.44	439.35	443.47	0.000396	2.16	1004.61	413.62	0.14
USACE	5677	100YRPLUS	1393.00	436.14	444.24	439.60	444.28	0.000439	2.44	1148.60	442.14	0.15
USACE	5677	200YR	1322.00	436.14	444.09	439.54	444.12	0.000427	2.38	1121.33	436.94	0.15
USACE	5677	500YR	1679.00	436.14	444.74	439.79	444.78	0.000499	2.71	1237.94	459.72	0.17
USACE	5677	SEPT2011	594.00	436.14	440.86	438.91	440.89	0.000884	2.37	542.35	334.43	0.20
USACE	5522	2YR	157.00	433.80	437.64	436.32	437.72	0.001941	2.63	100.03	278.85	0.26
USACE	5522	5YR	322.00	433.80	438.87	437.15	438.97	0.001810	3.18	172.68	506.69	0.27
USACE	5522	10YR	469.00	433.80	439.77	437.56	439.89	0.001725	3.52	225.75	519.98	0.27
USACE	5522	25YR	687.00	433.80	441.21	438.04	441.33	0.001380	3.71	310.64	534.46	0.25

HEC-RAS Plan: Existing River: BehmRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	5522	50YR	847.00	433.80	442.31	438.34	442.44	0.001150	3.75	375.92	557.83	0.24
USACE	5522	100YR	1065.00	433.80	443.43	438.72	443.43	0.000074	1.05	2453.38	644.05	0.06
USACE	5522	100YRPLUS	1393.00	433.80	444.23	439.21	444.24	0.000082	1.16	2843.30	682.64	0.07
USACE	5522	200YR	1322.00	433.80	444.08	439.12	444.09	0.000080	1.13	2767.62	674.70	0.06
USACE	5522	500YR	1679.00	433.80	444.73	439.62	444.74	0.000092	1.27	3095.30	700.12	0.07
USACE	5522	SEPT2011	594.00	433.80	440.57	437.84	440.70	0.001539	3.66	273.28	528.12	0.26
USACE	5484 Abandoned Railro		Culvert									
USACE	5446	2YR	157.00	433.80	437.21	436.45	437.62	0.010576	5.26	37.29	366.58	0.57
USACE	5446	5YR	322.00	433.80	437.87	437.77	438.68	0.017023	7.76	62.23	445.01	0.75
USACE	5446	10YR	469.00	433.80	438.40	438.40	439.36	0.018134	8.85	91.90	472.46	0.80
USACE	5446	25YR	687.00	433.80	439.14	439.14	440.04	0.015449	9.19	149.43	490.16	0.76
USACE	5446	50YR	847.00	433.80	439.46	439.46	440.42	0.016161	9.83	177.14	495.50	0.78
USACE	5446	100YR	1065.00	433.80	439.81	439.81	440.88	0.017633	10.74	208.79	501.59	0.83
USACE	5446	100YRPLUS	1393.00	433.80	440.33	440.33	441.49	0.018044	11.58	261.85	513.18	0.85
USACE	5446	200YR	1322.00	433.80	440.23	440.23	441.37	0.017898	11.40	251.27	511.23	0.84
USACE	5446	500YR	1679.00	433.80	440.71	440.71	441.93	0.018359	12.19	303.56	519.45	0.87
USACE	5446	SEPT2011	594.00	433.80	438.93	438.93	439.78	0.015038	8.78	131.82	486.60	0.74
USACE	5365	2YR	157.00	433.80	436.44	435.89	436.78	0.009429	4.96	46.66	114.88	0.58
USACE	5365	5YR	322.00	433.80	436.98	436.95	437.41	0.011373	6.28	92.12	408.83	0.66
USACE	5365	10YR	469.00	433.80	437.55	437.32	437.84	0.007532	5.78	159.11	530.97	0.55
USACE	5365	25YR	687.00	433.80	438.22	437.63	438.43	0.005007	5.32	273.19	629.70	0.46
USACE	5365	50YR	847.00	433.80	438.56	437.84	438.75	0.004499	5.32	344.10	657.51	0.45
USACE	5365	100YR	1065.00	433.80	438.93	438.04	439.11	0.004140	5.38	423.98	665.20	0.43
USACE	5365	100YRPLUS	1393.00	433.80	439.45	438.31	439.62	0.003650	5.41	542.38	676.40	0.41
USACE	5365	200YR	1322.00	433.80	439.36	438.28	439.52	0.003670	5.36	520.62	674.12	0.41
USACE	5365	500YR	1679.00	433.80	439.87	438.60	440.04	0.003329	5.44	643.19	686.52	0.40
USACE	5365	SEPT2011	594.00	433.80	437.89	437.50	438.14	0.006435	5.69	211.02	582.51	0.52
USACE	5081	2YR	157.00	433.80	436.41	435.48	436.42	0.000318	1.15	305.00	356.16	0.13
USACE	5081	5YR	322.00	433.80	436.96	435.71	436.97	0.000371	1.43	484.91	395.41	0.15
USACE	5081	10YR	469.00	433.80	437.51	435.80	437.52	0.000304	1.45	672.82	412.44	0.14
USACE	5081	25YR	687.00	433.80	438.16	436.06	438.17	0.000264	1.52	910.14	429.26	0.13
USACE	5081	50YR	847.00	433.80	438.48	436.16	438.49	0.000274	1.63	1031.91	435.87	0.14
USACE	5081	100YR	1065.00	433.80	438.82	436.28	438.84	0.000305	1.81	1163.66	447.57	0.15
USACE	5081	100YRPLUS	1393.00	433.80	439.33	436.47	439.35	0.000332	2.02	1365.41	469.72	0.16
USACE	5081	200YR	1322.00	433.80	439.24	436.44	439.26	0.000320	1.96	1329.29	466.55	0.15
USACE	5081	500YR	1679.00	433.80	439.75	436.62	439.77	0.000335	2.14	1541.37	480.39	0.16
USACE	5081	SEPT2011	594.00	433.80	437.82	435.98	437.83	0.000309	1.55	785.25	421.93	0.14
USACE	4735	2YR	206.00	433.11	436.16	435.57	436.20	0.001444	2.64	186.44	259.02	0.29
USACE	4735	5YR	341.00	433.11	436.73	435.77	436.77	0.001124	2.66	293.66	305.30	0.26
USACE	4735	10YR	515.00	433.11	437.31	436.00	437.34	0.000968	2.76	417.09	342.07	0.25
USACE	4735	25YR	797.00	433.11	437.97	436.27	438.01	0.000910	2.98	572.03	362.77	0.25
USACE	4735	50YR	964.00	433.11	438.29	436.40	438.33	0.000926	3.14	650.77	384.79	0.25
USACE	4735	100YR	1182.00	433.11	438.61	436.54	438.66	0.001009	3.43	737.39	398.23	0.27
USACE	4735	100YRPLUS	1546.00	433.11	439.09	436.82	439.15	0.001126	3.85	872.91	454.25	0.29
USACE	4735	200YR	1480.00	433.11	439.01	436.78	439.07	0.001097	3.76	848.68	445.11	0.28
USACE	4735	500YR	1908.00	433.11	439.50	437.05	439.57	0.001194	4.15	999.77	475.33	0.30
USACE	4735	SEPT2011	638.00	433.11	437.62	436.15	437.66	0.000923	2.84	489.64	351.85	0.25
USACE	4474	2YR	206.00	432.14	435.40	434.55	435.61	0.003603	4.67	78.65	56.62	0.47
USACE	4474	5YR	341.00	432.14	435.92	435.16	436.22	0.004538	5.82	113.41	74.10	0.54
USACE	4474	10YR	515.00	432.14	436.43	435.84	436.81	0.005311	6.89	156.36	99.01	0.60
USACE	4474	25YR	797.00	432.14	436.90	436.28	437.44	0.007185	8.61	210.43	136.69	0.71
USACE	4474	50YR	964.00	432.14	437.13	436.50	437.74	0.007908	9.34	245.27	160.68	0.75
USACE	4474	100YR	1182.00	432.14	437.39	437.30	438.02	0.008287	9.90	287.07	166.77	0.78
USACE	4474	100YRPLUS	1546.00	432.14	437.74	437.65	438.44	0.008973	10.78	349.33	179.95	0.82
USACE	4474	200YR	1480.00	432.14	437.68	437.60	438.37	0.008933	10.67	337.65	178.18	0.81
USACE	4474	500YR	1908.00	432.14	438.09	437.81	438.82	0.009217	11.39	414.66	235.16	0.84
USACE	4474	SEPT2011	638.00	432.14	436.66	436.06	437.11	0.006110	7.67	181.51	116.65	0.65
USACE	4303	2YR	206.00	431.91	434.24	434.24	434.59	0.011237	6.41	68.25	87.30	0.78
USACE	4303	5YR	341.00	431.91	434.55	434.55	434.97	0.012901	7.53	97.75	99.12	0.85
USACE	4303	10YR	515.00	431.91	434.85	434.85	435.36	0.014876	8.74	129.27	122.15	0.94
USACE	4303	25YR	797.00	431.91	435.39	435.24	435.85	0.012062	8.88	201.88	147.07	0.87
USACE	4303	50YR	964.00	431.91	435.68	435.44	436.11	0.010775	8.89	247.69	167.49	0.83
USACE	4303	100YR	1182.00	431.91	435.97	435.65	436.40	0.010058	9.05	298.14	180.78	0.82
USACE	4303	100YRPLUS	1546.00	431.91	436.41	435.92	436.83	0.008899	9.16	381.13	195.20	0.78
USACE	4303	200YR	1480.00	431.91	436.34	435.92	436.75	0.008988	9.10	367.01	191.60	0.78
USACE	4303	500YR	1908.00	431.91	436.78	436.23	437.20	0.008595	9.51	455.64	214.32	0.78
USACE	4303	SEPT2011	638.00	431.91	435.08	435.08	435.59	0.014064	8.98	159.22	133.10	0.92
USACE	4085	2YR	206.00	430.61	433.74		433.78	0.001150	2.51	175.44	190.76	0.27
USACE	4085	5YR	341.00	430.61	434.11		434.16	0.001201	2.80	248.30	201.43	0.28
USACE	4085	10YR	515.00	430.61	434.55		434.60	0.001122	2.96	337.77	211.86	0.28
USACE	4085	25YR	797.00	430.61	435.09		435.15	0.001112	3.24	457.87	228.80	0.28
USACE	4085	50YR	964.00	430.61	435.39		435.45	0.001077	3.35	527.38	237.42	0.28
USACE	4085	100YR	1182.00	430.61	435.65		435.72	0.001177	3.63	588.51	244.93	0.30
USACE	4085	100YRPLUS	1546.00	430.61	436.05		436.14	0.001284	4.01	692.25	265.45	0.32
USACE	4085	200YR	1480.00	430.61	435.98		436.07	0.001267	3.95	674.20	262.40	0.31
USACE	4085	500YR	1908.00	430.61	436.39		436.50	0.001372	4.34	784.19	276.89	0.33

HEC-RAS Plan: Existing River: BehmRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	4085	SEPT2011	638.00	430.61	434.76		434.82	0.001194	3.17	383.13	217.91	0.29
USACE	3847	2YR	206.00	430.40	433.23		433.37	0.003200	4.00	110.70	165.64	0.45
USACE	3847	5YR	341.00	430.40	433.71		433.81	0.002142	3.69	195.44	180.57	0.38
USACE	3847	10YR	515.00	430.40	434.23		434.30	0.001598	3.54	290.05	188.75	0.34
USACE	3847	25YR	797.00	430.40	434.78		434.87	0.001503	3.80	396.96	194.80	0.33
USACE	3847	50YR	964.00	430.40	435.09		435.18	0.001436	3.90	457.75	198.58	0.33
USACE	3847	100YR	1182.00	430.40	435.30		435.41	0.001671	4.34	499.73	202.44	0.36
USACE	3847	100YRPLUS	1546.00	430.40	435.65		435.80	0.001962	4.94	572.02	212.03	0.39
USACE	3847	200YR	1480.00	430.40	435.59		435.73	0.001909	4.83	559.68	210.20	0.39
USACE	3847	500YR	1908.00	430.40	435.93		436.11	0.002294	5.55	632.99	223.54	0.43
USACE	3847	SEPT2011	638.00	430.40	434.41		434.50	0.001754	3.84	324.86	190.77	0.35
USACE	3642	2YR	206.00	430.19	433.03		433.06	0.000763	2.02	226.13	241.19	0.22
USACE	3642	5YR	341.00	430.19	433.57		433.59	0.000553	1.95	362.66	266.28	0.19
USACE	3642	10YR	515.00	430.19	434.10		434.12	0.000473	2.00	512.78	295.24	0.18
USACE	3642	25YR	797.00	430.19	434.66		434.69	0.000501	2.27	685.60	327.00	0.19
USACE	3642	50YR	964.00	430.19	434.97		435.00	0.000502	2.38	790.65	345.92	0.20
USACE	3642	100YR	1182.00	430.19	435.16		435.20	0.000599	2.67	856.97	353.72	0.22
USACE	3642	100YRPLUS	1546.00	430.19	435.49		435.53	0.000740	3.10	974.91	381.61	0.24
USACE	3642	200YR	1480.00	430.19	435.43		435.48	0.000706	3.01	955.13	378.57	0.24
USACE	3642	500YR	1908.00	430.19	435.75		435.81	0.000832	3.40	1076.41	392.44	0.26
USACE	3642	SEPT2011	638.00	430.19	434.27		434.30	0.000552	2.23	561.98	299.45	0.20
USACE	3421	2YR	206.00	429.76	432.87		432.90	0.000708	2.03	226.94	232.10	0.22
USACE	3421	5YR	341.00	429.76	433.46		433.48	0.000485	1.91	365.46	244.28	0.18
USACE	3421	10YR	515.00	429.76	434.00		434.03	0.000452	2.04	507.93	276.99	0.18
USACE	3421	25YR	797.00	429.76	434.55		434.58	0.000504	2.35	669.69	307.20	0.20
USACE	3421	50YR	964.00	429.76	434.86		434.90	0.000510	2.48	770.76	329.64	0.20
USACE	3421	100YR	1182.00	429.76	435.03		435.07	0.000626	2.81	825.79	334.50	0.22
USACE	3421	100YRPLUS	1546.00	429.76	435.31		435.37	0.000814	3.33	923.40	357.73	0.26
USACE	3421	200YR	1480.00	429.76	435.27		435.32	0.000771	3.22	908.03	352.12	0.25
USACE	3421	500YR	1908.00	429.76	435.55		435.62	0.000974	3.75	1008.62	370.67	0.28
USACE	3421	SEPT2011	638.00	429.76	434.15		434.18	0.000576	2.36	548.18	291.42	0.21
USACE	3374	2YR	206.00	429.46	432.17	432.17	432.67	0.008528	6.40	48.54	112.05	0.73
USACE	3374	5YR	341.00	429.46	432.61	432.61	433.23	0.009526	7.57	71.23	174.30	0.79
USACE	3374	10YR	515.00	429.46	433.11	433.11	433.78	0.009043	8.23	103.21	243.72	0.79
USACE	3374	25YR	797.00	429.46	434.38	433.52	434.51	0.001743	4.48	361.70	318.58	0.37
USACE	3374	50YR	964.00	429.46	434.70	433.71	434.83	0.001648	4.55	423.08	333.72	0.36
USACE	3374	100YR	1182.00	429.46	434.99	433.89	435.04	0.000755	3.20	798.94	359.15	0.25
USACE	3374	100YRPLUS	1546.00	429.46	435.27	434.14	435.33	0.000908	3.64	899.76	366.99	0.27
USACE	3374	200YR	1480.00	429.46	435.22	434.09	435.28	0.000876	3.55	884.49	365.80	0.27
USACE	3374	500YR	1908.00	429.46	435.49	434.35	435.57	0.001080	4.07	983.01	377.72	0.30
USACE	3374	SEPT2011	638.00	429.46	433.93	433.32	434.09	0.002320	4.82	276.48	299.38	0.42
USACE	3341 Newport Road		Culvert									
USACE	3304	2YR	206.00	429.28	432.12	431.40	432.32	0.003375	3.99	78.09	185.32	0.46
USACE	3304	5YR	341.00	429.28	432.41	432.24	432.72	0.004950	5.22	120.40	294.47	0.57
USACE	3304	10YR	515.00	429.28	432.73	432.60	432.87	0.002790	4.23	274.76	306.30	0.43
USACE	3304	25YR	797.00	429.28	433.11	432.72	433.23	0.002592	4.42	392.13	319.57	0.43
USACE	3304	50YR	964.00	429.28	433.30	432.81	433.43	0.002505	4.51	455.10	326.95	0.42
USACE	3304	100YR	1182.00	429.28	433.53	432.93	433.66	0.002472	4.67	530.26	338.55	0.42
USACE	3304	100YRPLUS	1546.00	429.28	433.88	433.11	434.01	0.002363	4.84	650.26	352.56	0.42
USACE	3304	200YR	1480.00	429.28	433.82	433.08	433.95	0.002386	4.81	629.04	350.72	0.42
USACE	3304	500YR	1908.00	429.28	434.19	433.26	434.33	0.002292	5.00	762.98	367.97	0.42
USACE	3304	SEPT2011	638.00	429.28	432.90	432.61	433.03	0.002700	4.32	327.97	312.67	0.43
USACE	3223	2YR	206.00	429.28	431.97		432.02	0.002247	3.07	164.14	264.03	0.37
USACE	3223	5YR	341.00	429.28	432.29		432.35	0.001967	3.15	261.59	320.19	0.35
USACE	3223	10YR	515.00	429.28	432.59		432.64	0.001813	3.26	361.21	343.22	0.34
USACE	3223	25YR	797.00	429.28	432.97		433.03	0.001700	3.44	493.34	355.93	0.34
USACE	3223	50YR	964.00	429.28	433.17		433.23	0.001670	3.55	563.88	364.97	0.34
USACE	3223	100YR	1182.00	429.28	433.40		433.46	0.001632	3.66	648.13	370.15	0.34
USACE	3223	100YRPLUS	1546.00	429.28	433.75		433.82	0.001610	3.87	781.61	389.07	0.34
USACE	3223	200YR	1480.00	429.28	433.69		433.76	0.001626	3.85	757.64	387.67	0.34
USACE	3223	500YR	1908.00	429.28	434.06		434.14	0.001581	4.03	907.22	406.45	0.34
USACE	3223	SEPT2011	638.00	429.28	432.77		432.82	0.001740	3.33	421.66	347.15	0.34
USACE	2980	2YR	206.00	428.85	431.47		431.52	0.001886	2.72	180.77	251.73	0.32
USACE	2980	5YR	341.00	428.85	431.81		431.86	0.002051	3.11	270.03	289.63	0.34
USACE	2980	10YR	515.00	428.85	432.11		432.16	0.002161	3.44	361.93	313.81	0.36
USACE	2980	25YR	797.00	428.85	432.49		432.56	0.002208	3.78	485.43	328.62	0.37
USACE	2980	50YR	964.00	428.85	432.69		432.76	0.002233	3.96	551.23	337.52	0.38
USACE	2980	100YR	1182.00	428.85	432.92		433.00	0.002268	4.17	630.25	347.37	0.38
USACE	2980	100YRPLUS	1546.00	428.85	433.27		433.36	0.002286	4.44	752.73	357.87	0.39
USACE	2980	200YR	1480.00	428.85	433.21		433.29	0.002282	4.39	731.11	355.78	0.39
USACE	2980	500YR	1908.00	428.85	433.59		433.68	0.002307	4.69	868.11	371.14	0.40
USACE	2980	SEPT2011	638.00	428.85	432.29		432.35	0.002178	3.60	418.44	320.36	0.36
USACE	2669	2YR	206.00	428.49	430.99		431.02	0.001435	2.03	223.99	290.40	0.27
USACE	2669	5YR	341.00	428.49	431.25		431.28	0.001739	2.44	300.67	311.70	0.30
USACE	2669	10YR	515.00	428.49	431.51		431.55	0.001875	2.75	385.03	318.59	0.32

HEC-RAS Plan: Existing River: BehmRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	2669	25YR	797.00	428.49	431.86		431.91	0.002056	3.16	495.65	324.84	0.34
USACE	2669	50YR	964.00	428.49	432.03		432.09	0.002151	3.37	552.20	328.52	0.35
USACE	2669	100YR	1182.00	428.49	432.25		432.32	0.002220	3.60	623.72	333.95	0.36
USACE	2669	100YRPLUS	1546.00	428.49	432.58		432.66	0.002290	3.92	736.57	343.63	0.38
USACE	2669	200YR	1480.00	428.49	432.52		432.60	0.002284	3.87	716.38	342.08	0.37
USACE	2669	500YR	1908.00	428.49	432.89		432.98	0.002311	4.17	843.88	352.57	0.38
USACE	2669	SEPT2011	638.00	428.49	431.67		431.72	0.001959	2.94	436.13	321.53	0.33
USACE	2390	2YR	206.00	428.10	430.21	430.12	430.32	0.005835	4.09	134.47	279.54	0.54
USACE	2390	5YR	341.00	428.10	430.52	430.28	430.60	0.004282	3.90	228.26	322.51	0.48
USACE	2390	10YR	515.00	428.10	430.81	430.45	430.88	0.003734	3.96	325.40	355.04	0.45
USACE	2390	25YR	797.00	428.10	431.17	430.62	431.24	0.003217	4.05	460.93	385.90	0.43
USACE	2390	50YR	964.00	428.10	431.37	430.73	431.44	0.002985	4.08	533.07	391.66	0.42
USACE	2390	100YR	1182.00	428.10	431.60	430.82	431.67	0.002776	4.14	620.82	400.45	0.41
USACE	2390	100YRPLUS	1546.00	428.10	431.95	430.98	432.03	0.002531	4.25	757.59	412.64	0.40
USACE	2390	200YR	1480.00	428.10	431.89	430.94	431.97	0.002576	4.24	732.96	410.37	0.40
USACE	2390	500YR	1908.00	428.10	432.28	431.12	432.37	0.002361	4.36	885.90	425.57	0.39
USACE	2390	SEPT2011	638.00	428.10	430.98	430.52	431.05	0.003434	3.99	388.78	368.43	0.44
USACE	2125	2YR	206.00	428.07	429.76		429.77	0.001036	1.53	259.60	289.28	0.22
USACE	2125	5YR	341.00	428.07	429.98		430.00	0.001420	1.98	326.13	299.12	0.27
USACE	2125	10YR	515.00	428.07	430.24		430.27	0.001660	2.34	402.55	314.50	0.30
USACE	2125	25YR	797.00	428.07	430.61		430.66	0.001755	2.71	527.49	336.96	0.31
USACE	2125	50YR	964.00	428.07	430.83		430.87	0.001726	2.85	600.81	348.30	0.32
USACE	2125	100YR	1182.00	428.07	431.08		431.13	0.001702	3.02	689.48	357.29	0.32
USACE	2125	100YRPLUS	1546.00	428.07	431.47		431.53	0.001645	3.23	830.08	369.55	0.32
USACE	2125	200YR	1480.00	428.07	431.40		431.45	0.001664	3.20	803.95	367.62	0.32
USACE	2125	500YR	1908.00	428.07	431.81		431.88	0.001613	3.43	963.54	393.09	0.32
USACE	2125	SEPT2011	638.00	428.07	430.41		430.45	0.001728	2.53	459.11	332.42	0.31
USACE	1888	2YR	206.00	427.18	428.96	428.96	429.17	0.010980	5.37	104.70	281.03	0.74
USACE	1888	5YR	341.00	427.18	429.27	429.16	429.38	0.006184	4.53	200.97	317.55	0.57
USACE	1888	10YR	515.00	427.18	429.62	429.29	429.69	0.003825	3.98	313.36	328.25	0.46
USACE	1888	25YR	797.00	427.18	430.09	429.45	430.15	0.002642	3.74	469.25	336.82	0.40
USACE	1888	50YR	964.00	427.18	430.34	429.54	430.40	0.002314	3.71	553.68	342.76	0.38
USACE	1888	100YR	1182.00	427.18	430.61	429.63	430.68	0.002110	3.76	649.95	347.78	0.37
USACE	1888	100YRPLUS	1546.00	427.18	431.03	429.78	431.10	0.001905	3.87	796.78	353.34	0.35
USACE	1888	200YR	1480.00	427.18	430.95	429.76	431.02	0.001954	3.86	768.70	352.21	0.36
USACE	1888	500YR	1908.00	427.18	431.40	429.91	431.48	0.001808	4.01	926.83	409.45	0.35
USACE	1888	SEPT2011	638.00	427.18	429.84	429.37	429.90	0.003083	3.80	386.78	332.19	0.42
USACE	1701	2YR	206.00	426.95	428.58	427.60	428.59	0.000954	1.50	285.61	282.52	0.22
USACE	1701	5YR	341.00	426.95	428.94	427.77	428.95	0.001060	1.83	387.27	286.89	0.24
USACE	1701	10YR	515.00	426.95	429.29	427.94	429.31	0.001186	2.17	488.80	290.42	0.26
USACE	1701	25YR	797.00	426.95	429.78	428.17	429.81	0.001284	2.57	632.43	297.66	0.28
USACE	1701	50YR	964.00	426.95	430.04	428.29	430.07	0.001311	2.76	709.96	300.57	0.28
USACE	1701	100YR	1182.00	426.95	430.31	428.42	430.35	0.001389	3.02	793.98	303.15	0.30
USACE	1701	100YRPLUS	1546.00	426.95	430.73	428.64	430.78	0.001489	3.39	921.58	315.41	0.31
USACE	1701	200YR	1480.00	426.95	430.65	428.61	430.70	0.001489	3.34	896.26	311.40	0.31
USACE	1701	500YR	1908.00	426.95	431.09	428.80	431.15	0.001590	3.73	1033.35	327.73	0.33
USACE	1701	SEPT2011	638.00	426.95	429.53	428.05	429.55	0.001207	2.34	558.52	293.50	0.26
USACE	1268	2YR	191.00	425.44	427.67	427.53	427.77	0.006002	3.54	160.62	357.20	0.45
USACE	1268	5YR	331.00	425.44	427.99	427.73	428.08	0.005561	3.77	254.67	364.19	0.44
USACE	1268	10YR	501.00	425.44	428.28	427.89	428.37	0.005504	4.08	342.54	370.26	0.45
USACE	1268	25YR	796.00	425.44	428.70	428.11	428.80	0.005589	4.54	469.22	385.56	0.47
USACE	1268	50YR	993.00	425.44	428.93	428.23	429.04	0.005655	4.80	541.87	392.94	0.47
USACE	1268	100YR	1209.00	425.44	429.17	428.35	429.28	0.005609	5.02	617.84	398.53	0.48
USACE	1268	100YRPLUS	1581.00	425.44	429.53	428.53	429.66	0.005627	5.38	732.94	403.91	0.49
USACE	1268	200YR	1500.00	425.44	429.45	428.49	429.58	0.005639	5.31	708.25	402.82	0.49
USACE	1268	500YR	1937.00	425.44	429.85	428.71	429.99	0.005584	5.66	835.95	409.96	0.49
USACE	1268	SEPT2011	641.00	425.44	428.49	428.00	428.59	0.005482	4.29	407.11	378.00	0.46
USACE	1059	2YR	191.00	424.98	426.83	426.43	426.85	0.003234	2.31	234.39	438.94	0.32
USACE	1059	5YR	331.00	424.98	427.10	426.59	427.13	0.003725	2.75	330.13	474.12	0.35
USACE	1059	10YR	501.00	424.98	427.38	426.73	427.42	0.003851	3.07	432.96	490.78	0.37
USACE	1059	25YR	796.00	424.98	427.80	426.91	427.85	0.003755	3.41	601.16	525.28	0.37
USACE	1059	50YR	993.00	424.98	428.06	427.01	428.11	0.003522	3.52	709.34	540.32	0.37
USACE	1059	100YR	1209.00	424.98	428.32	427.14	428.37	0.003424	3.68	820.34	551.40	0.37
USACE	1059	100YRPLUS	1581.00	424.98	428.71	427.29	428.77	0.003266	3.89	988.84	590.77	0.37
USACE	1059	200YR	1500.00	424.98	428.63	427.25	428.68	0.003300	3.85	953.17	575.29	0.37
USACE	1059	500YR	1937.00	424.98	429.05	427.43	429.11	0.003160	4.07	1139.05	638.65	0.37
USACE	1059	SEPT2011	641.00	424.98	427.59	426.83	427.63	0.003866	3.27	516.03	520.51	0.37
USACE	814	2YR	191.00	424.22	425.79	425.49	425.84	0.005034	2.78	139.63	639.38	0.46
USACE	814	5YR	331.00	424.22	426.14	425.66	426.19	0.003721	2.86	224.16	664.35	0.42
USACE	814	10YR	501.00	424.22	426.48	425.81	426.54	0.003156	3.04	315.34	699.03	0.40
USACE	814	25YR	796.00	424.22	426.97	426.02	427.05	0.002703	3.30	451.99	710.14	0.38
USACE	814	50YR	993.00	424.22	427.26	426.16	427.35	0.002650	3.53	539.66	752.57	0.39
USACE	814	100YR	1209.00	424.22	427.54	426.30	427.63	0.002536	3.70	631.40	763.58	0.39
USACE	814	100YRPLUS	1581.00	424.22	427.96	426.48	428.07	0.002367	3.92	774.60	772.21	0.38
USACE	814	200YR	1500.00	424.22	427.87	426.46	427.98	0.002399	3.87	744.40	768.46	0.38
USACE	814	500YR	1937.00	424.22	428.33	426.69	428.45	0.002269	4.12	899.21	794.99	0.38
USACE	814	SEPT2011	641.00	424.22	426.73	425.92	426.80	0.002875	3.16	383.84	705.91	0.39

HEC-RAS Plan: Existing River: BehmRun Reach: USACE (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
USACE	532	2YR	191.00	423.19	425.27	424.58	425.29	0.001001	1.48	207.54	416.47	0.19
USACE	532	5YR	331.00	423.19	425.64	424.76	425.67	0.001078	1.73	288.39	458.30	0.20
USACE	532	10YR	501.00	423.19	426.01	424.94	426.04	0.001122	1.95	372.40	479.82	0.21
USACE	532	25YR	796.00	423.19	426.51	425.14	426.56	0.001176	2.25	497.05	504.35	0.22
USACE	532	50YR	993.00	423.19	426.80	425.25	426.85	0.001201	2.41	572.73	523.53	0.23
USACE	532	100YR	1209.00	423.19	427.09	425.38	427.15	0.001211	2.56	651.72	548.66	0.23
USACE	532	100YRPLUS	1581.00	423.19	427.53	425.57	427.60	0.001208	2.75	776.46	574.40	0.24
USACE	532	200YR	1500.00	423.19	427.44	425.53	427.50	0.001210	2.71	750.45	572.23	0.24
USACE	532	500YR	1937.00	423.19	427.91	425.75	427.99	0.001200	2.91	884.55	582.63	0.24
USACE	532	SEPT2011	641.00	423.19	426.27	425.04	426.30	0.001144	2.10	435.18	497.61	0.22
USACE	320	2YR	191.00	422.17	424.95	424.47	425.00	0.001956	3.04	161.43	429.08	0.33
USACE	320	5YR	331.00	422.17	425.33	424.75	425.38	0.001794	3.19	239.23	432.11	0.33
USACE	320	10YR	501.00	422.17	425.69	424.99	425.75	0.001748	3.40	313.95	434.65	0.33
USACE	320	25YR	796.00	422.17	426.18	425.21	426.25	0.001794	3.77	415.76	437.99	0.34
USACE	320	50YR	993.00	422.17	426.46	425.32	426.54	0.001837	4.00	473.32	439.82	0.35
USACE	320	100YR	1209.00	422.17	426.73	425.45	426.83	0.001878	4.22	530.94	441.80	0.36
USACE	320	100YRPLUS	1581.00	422.17	427.16	425.64	427.28	0.001940	4.57	620.49	445.16	0.37
USACE	320	200YR	1500.00	422.17	427.07	425.60	427.18	0.001928	4.50	601.79	444.44	0.37
USACE	320	500YR	1937.00	422.17	427.53	425.81	427.67	0.001988	4.86	698.45	448.57	0.38
USACE	320	SEPT2011	641.00	422.17	425.95	425.10	426.01	0.001740	3.56	366.82	436.42	0.33
USACE	64	2YR	191.00	421.51	424.20	423.94	424.31	0.003905	3.93	100.64	266.09	0.46
USACE	64	5YR	331.00	421.51	424.59	424.17	424.72	0.003906	4.38	152.68	368.55	0.47
USACE	64	10YR	501.00	421.51	424.96	424.43	425.10	0.003907	4.77	214.37	418.18	0.48
USACE	64	25YR	796.00	421.51	425.43	424.75	425.60	0.003906	5.25	311.65	444.94	0.49
USACE	64	50YR	993.00	421.51	425.69	424.92	425.87	0.003900	5.50	365.84	446.36	0.50
USACE	64	100YR	1209.00	421.51	425.95	425.17	426.15	0.003900	5.75	420.05	447.79	0.51
USACE	64	100YRPLUS	1581.00	421.51	426.35	425.40	426.58	0.003902	6.13	504.57	449.66	0.51
USACE	64	200YR	1500.00	421.51	426.27	425.36	426.49	0.003903	6.05	486.90	449.28	0.51
USACE	64	500YR	1937.00	421.51	426.70	425.61	426.96	0.003901	6.44	578.24	451.21	0.52
USACE	64	SEPT2011	641.00	421.51	425.21	424.58	425.36	0.003901	5.02	265.00	443.66	0.49

APPENDIX I



Flood Mapping for Manheim Borough


116618
116153
115618
115220
114718
114230
113836
113373
112946
112411
111765
111366
110853
110423
109993
109541
107950
107182
106584
106103
105669
103844
103426
103198
102751
102289
101779
101294
100844
100499
100106
99253.1
98724.4
98285.8
9461
8963
8536
7912
6926
6512
6457
6022
5457
5004
4444
3947
3520
3085
2600
2146
1745
1395
825
412
2984
2369
1919
Rife Run
Doe Run
Chiques Creek
HEC-RAS XS
2-year Floodplain
Manheim Boundary
SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA
Existing-Conditions
2-year Floodplain
0
600
1,200
2,400
Feet
1 inch = 1,200 feet

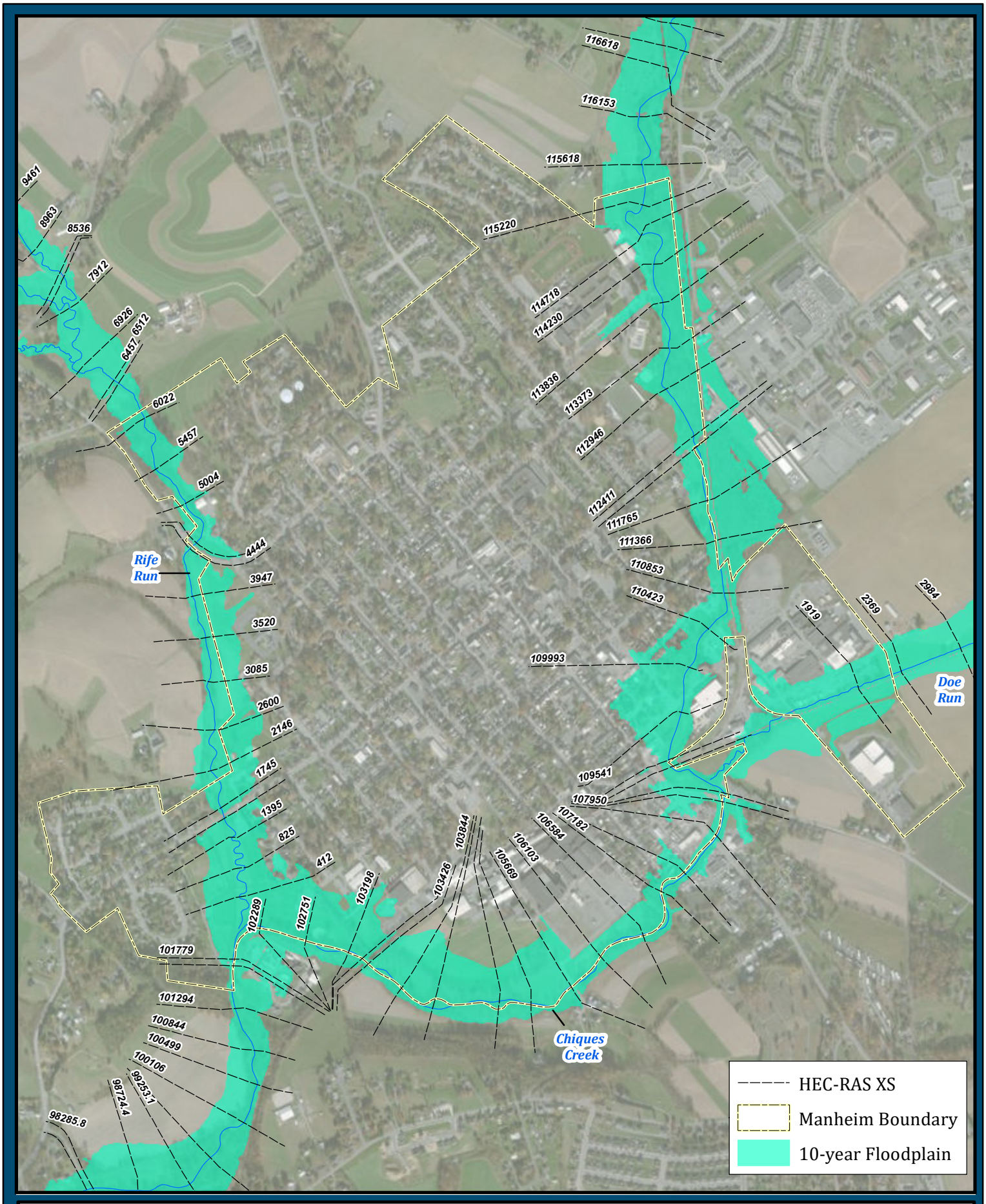


SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA

Existing-Conditions
5-year Floodplain

0 600 1,200 2,400 Feet

1 inch = 1,200 feet

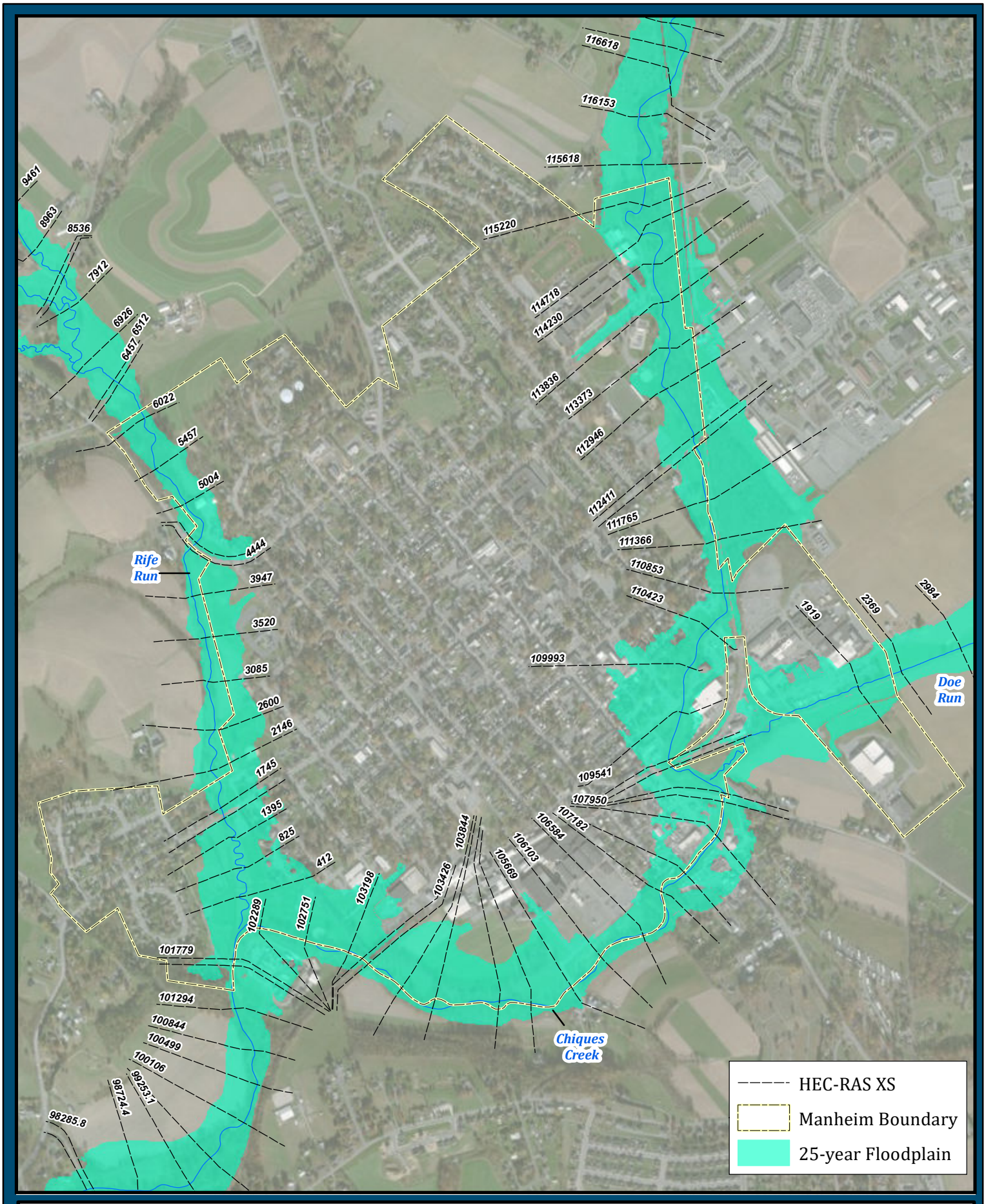


SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA

Existing-Conditions
10-year Floodplain

0 600 1,200 2,400 Feet

1 inch = 1,200 feet

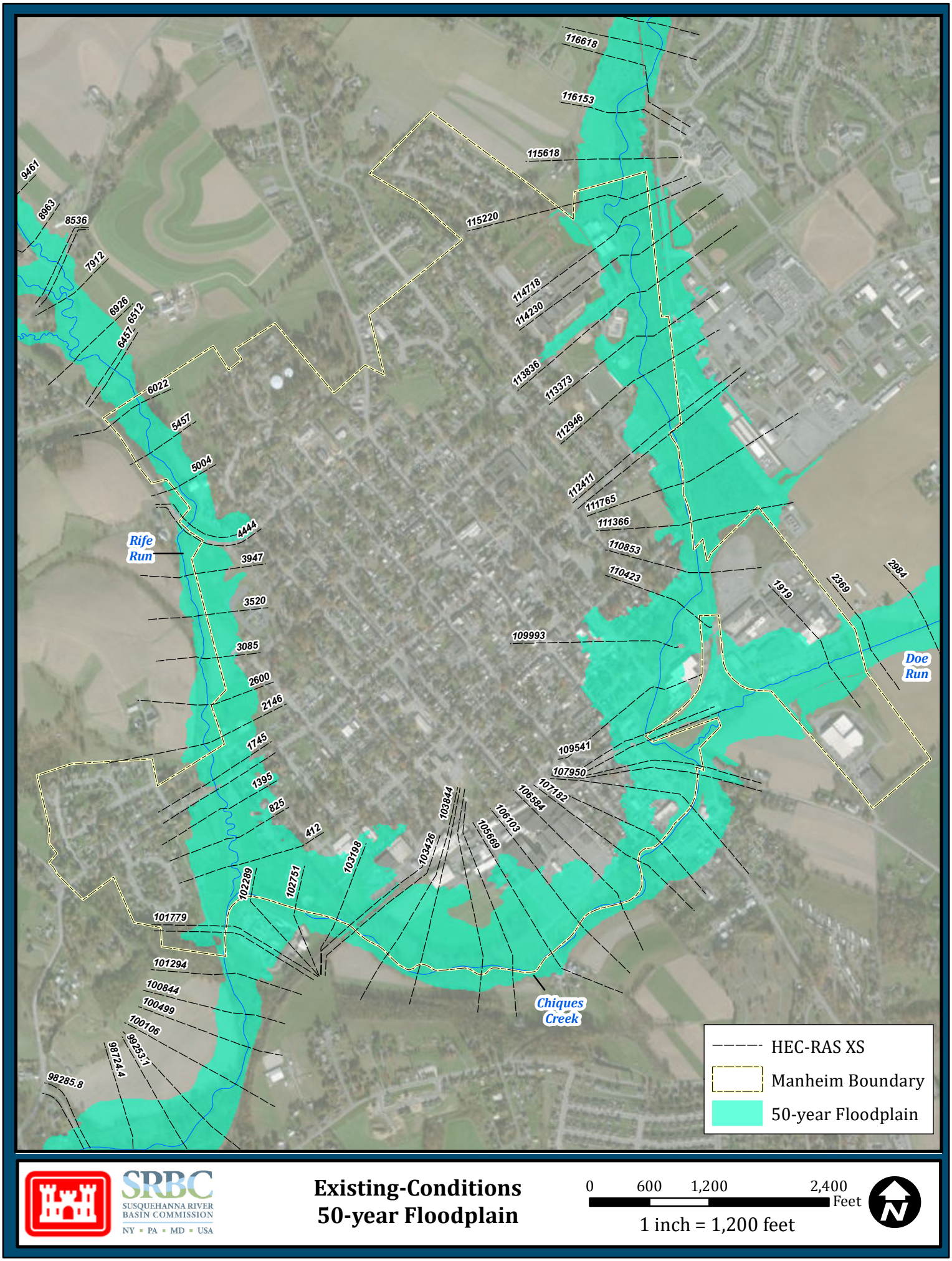


SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA

Existing-Conditions 25-year Floodplain

0 600 1,200 2,400 Feet

1 inch = 1,200 feet

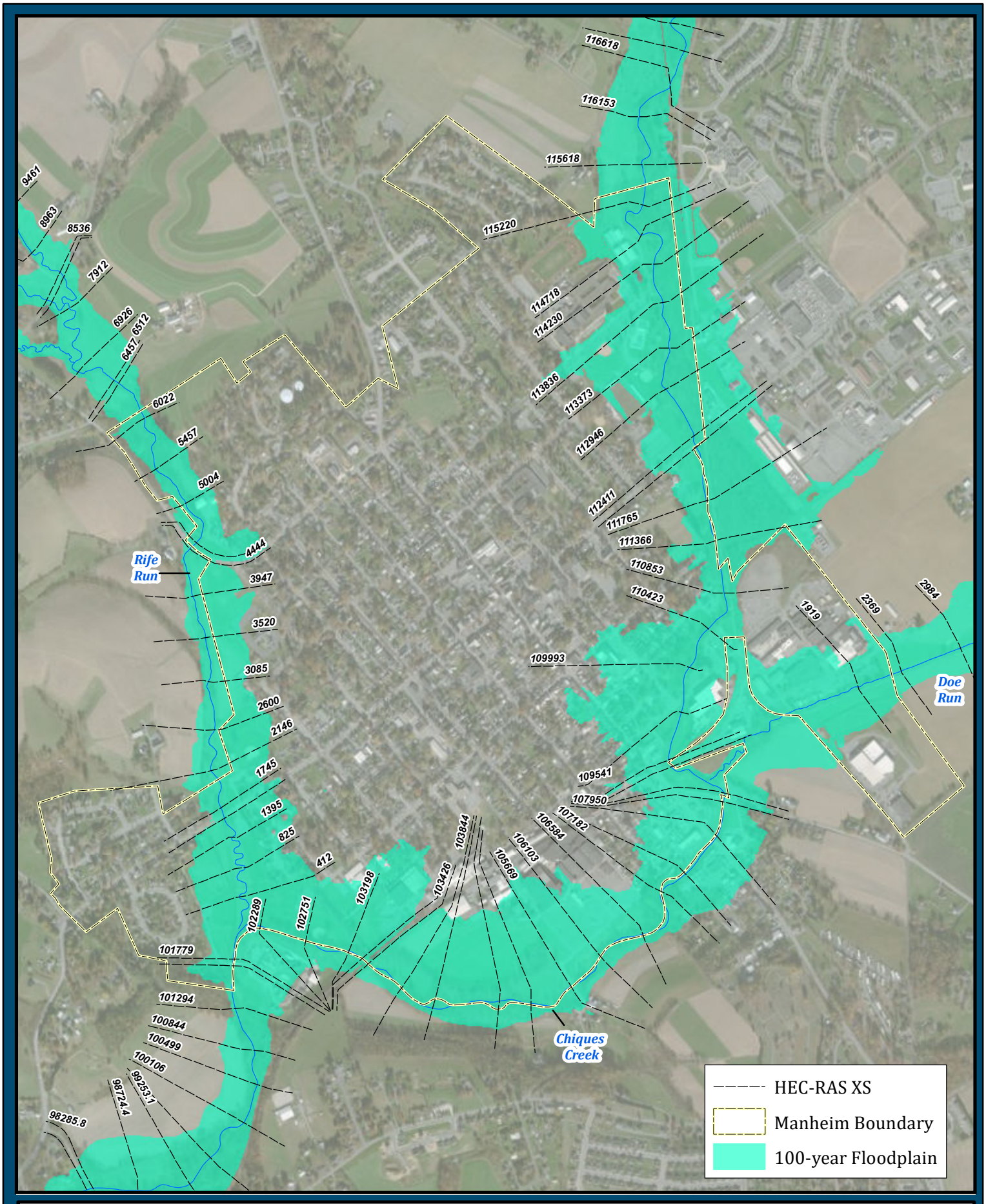


SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA

Existing-Conditions
50-year Floodplain

0 600 1,200 2,400 Feet

1 inch = 1,200 feet

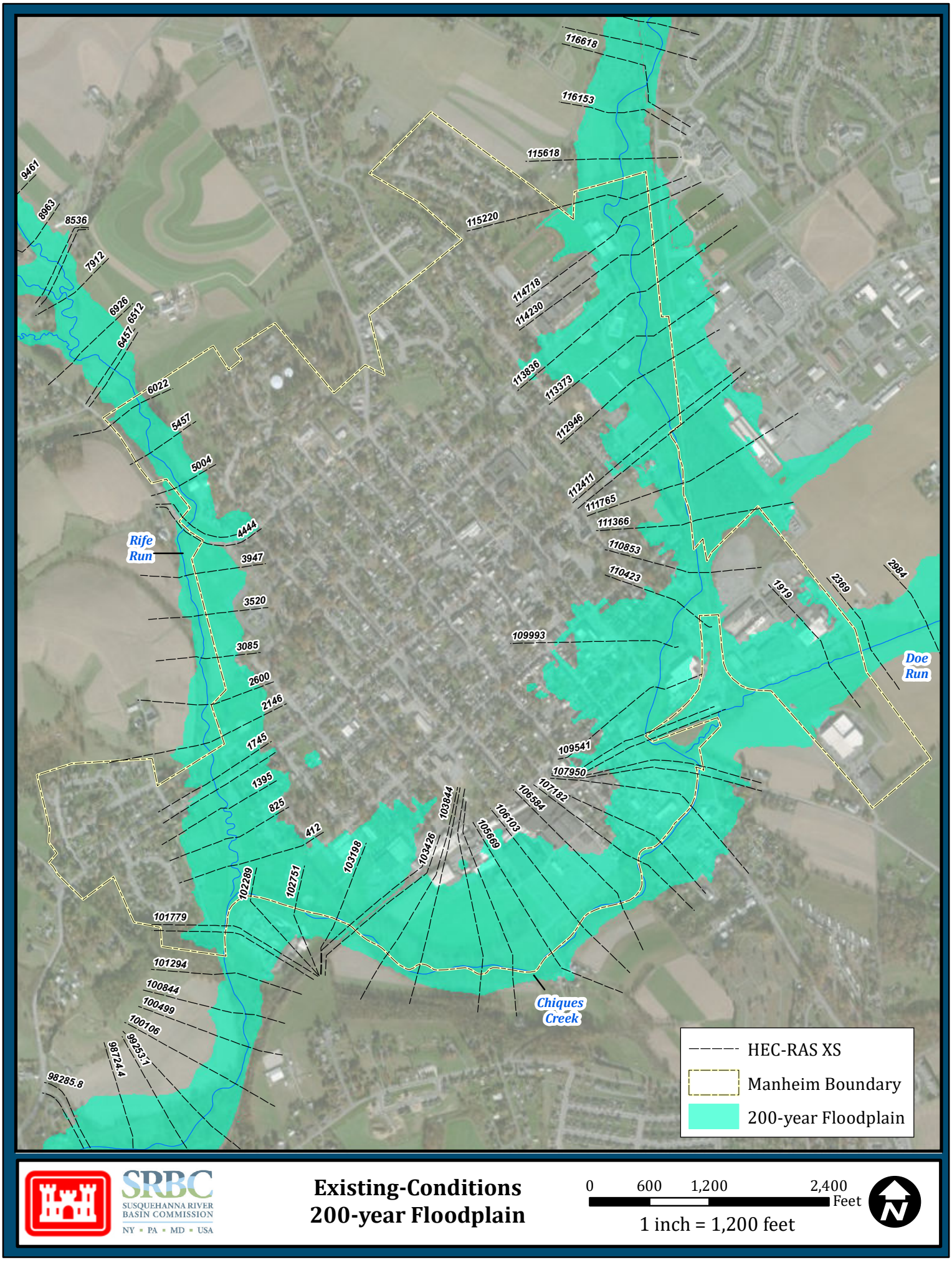


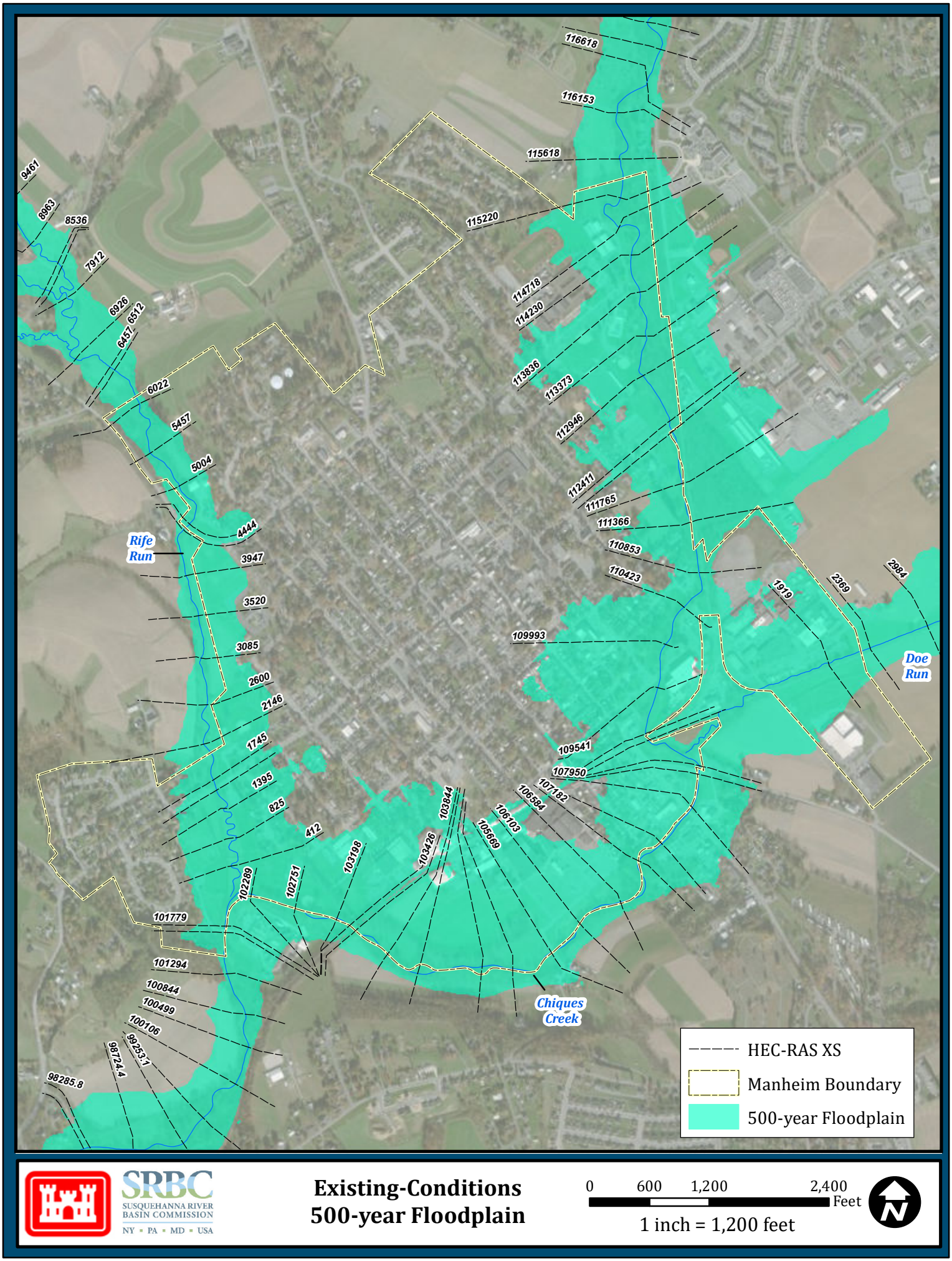
SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA

Existing-Conditions
100-year Floodplain

0 600 1,200 2,400 Feet

1 inch = 1,200 feet


116618
116153
115618
115220
114718
114230
113836
113373
112946
112411
111765
111366
110853
110423
109993
109541
107950
107182
106584
106103
105669
103844
103426
103198
102751
102289
101779
101294
100844
100499
100106
99253.1
98724.4
98285.8
9461
8963
8536
7912
6926
6512
6457
6022
5457
5004
4444
3947
3520
3085
2600
2146
1745
1395
825
412
2984
2369
1919
Rife Run
Doe Run
Chiques Creek
HEC-RAS XS
Manheim Boundary
200-year Floodplain
SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA
Existing-Conditions
200-year Floodplain
0
600
1,200
2,400
Feet
1 inch = 1,200 feet

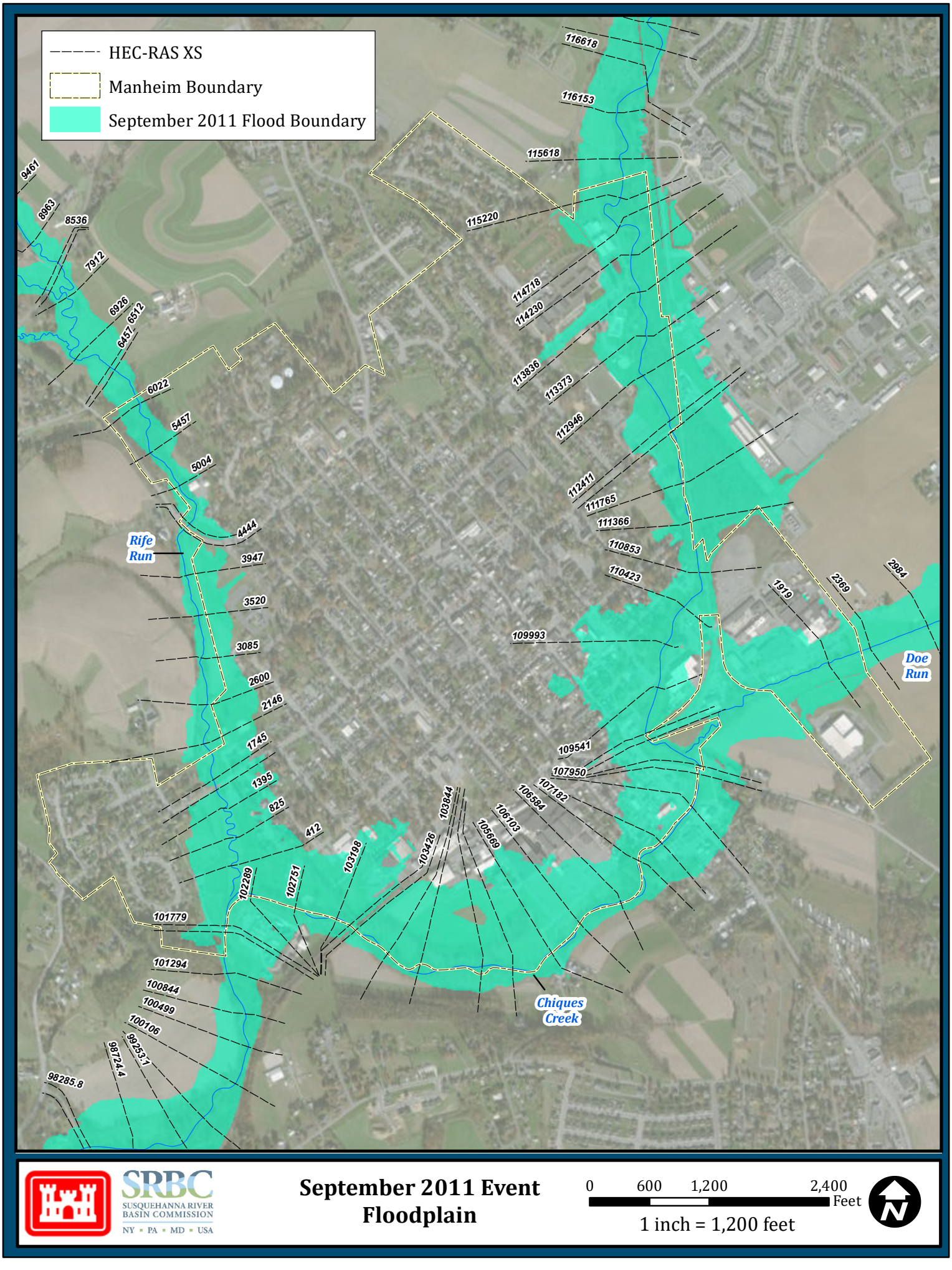


SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA

Existing-Conditions
500-year Floodplain

0 600 1,200 2,400 Feet

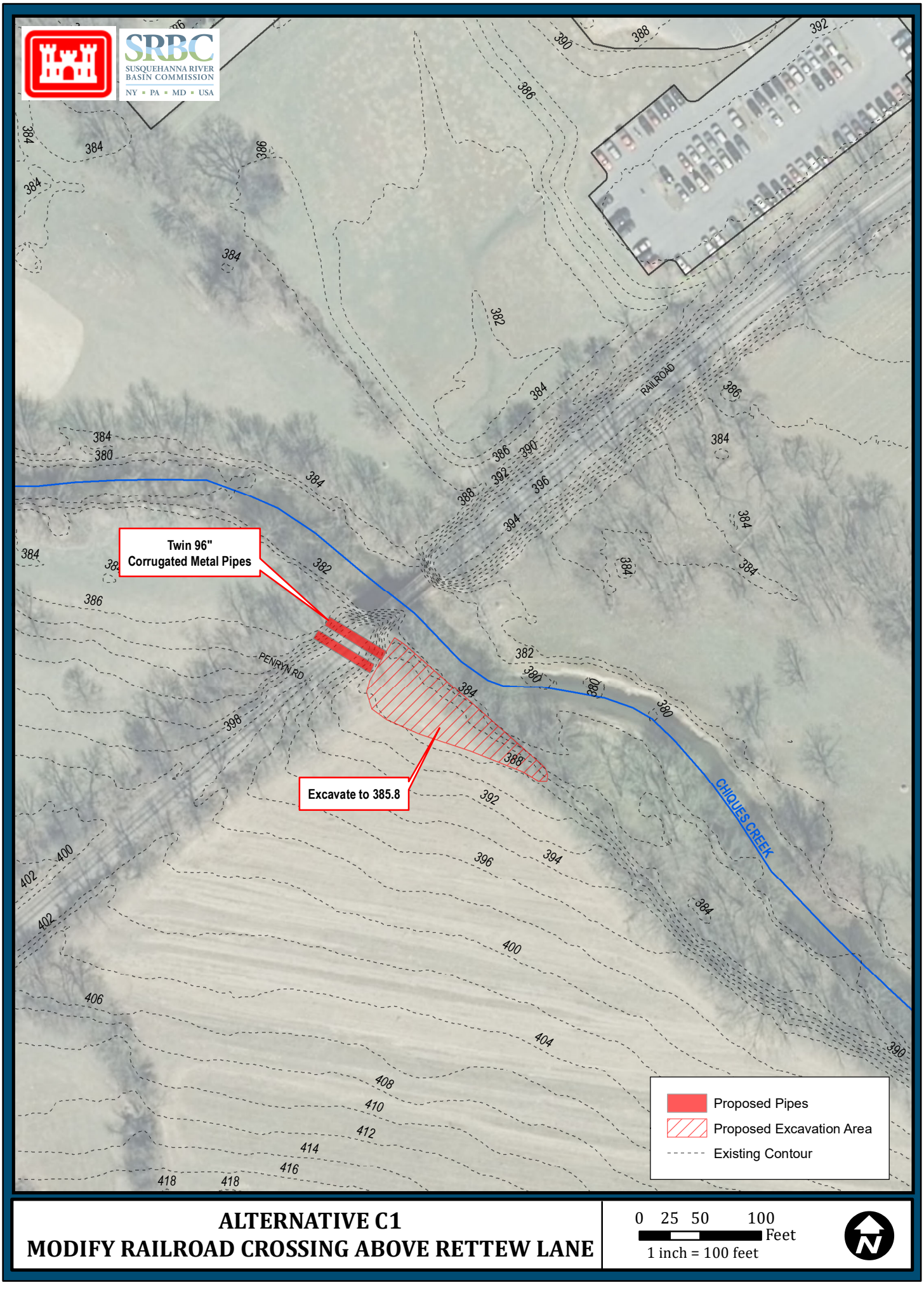
1 inch = 1,200 feet


HEC-RAS XS
Manheim Boundary
September 2011 Flood Boundary
116618
116153
115618
115220
114718
114230
113836
113373
112946
112411
111765
111366
110853
110423
109993
109541
107950
107182
106584
106103
105669
103844
103426
103198
102751
102289
101779
101294
100844
100499
100106
99253.1
98724.4
98285.8
9461
8963
8536
7912
6926
6512
6457
6022
5457
5004
4444
3947
3520
3085
2600
2146
1745
1395
825
412
2984
2369
1919
Rife Run
Doe Run
Chiques Creek
SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA
September 2011 Event Floodplain
0
600
1,200
2,400
Feet
1 inch = 1,200 feet

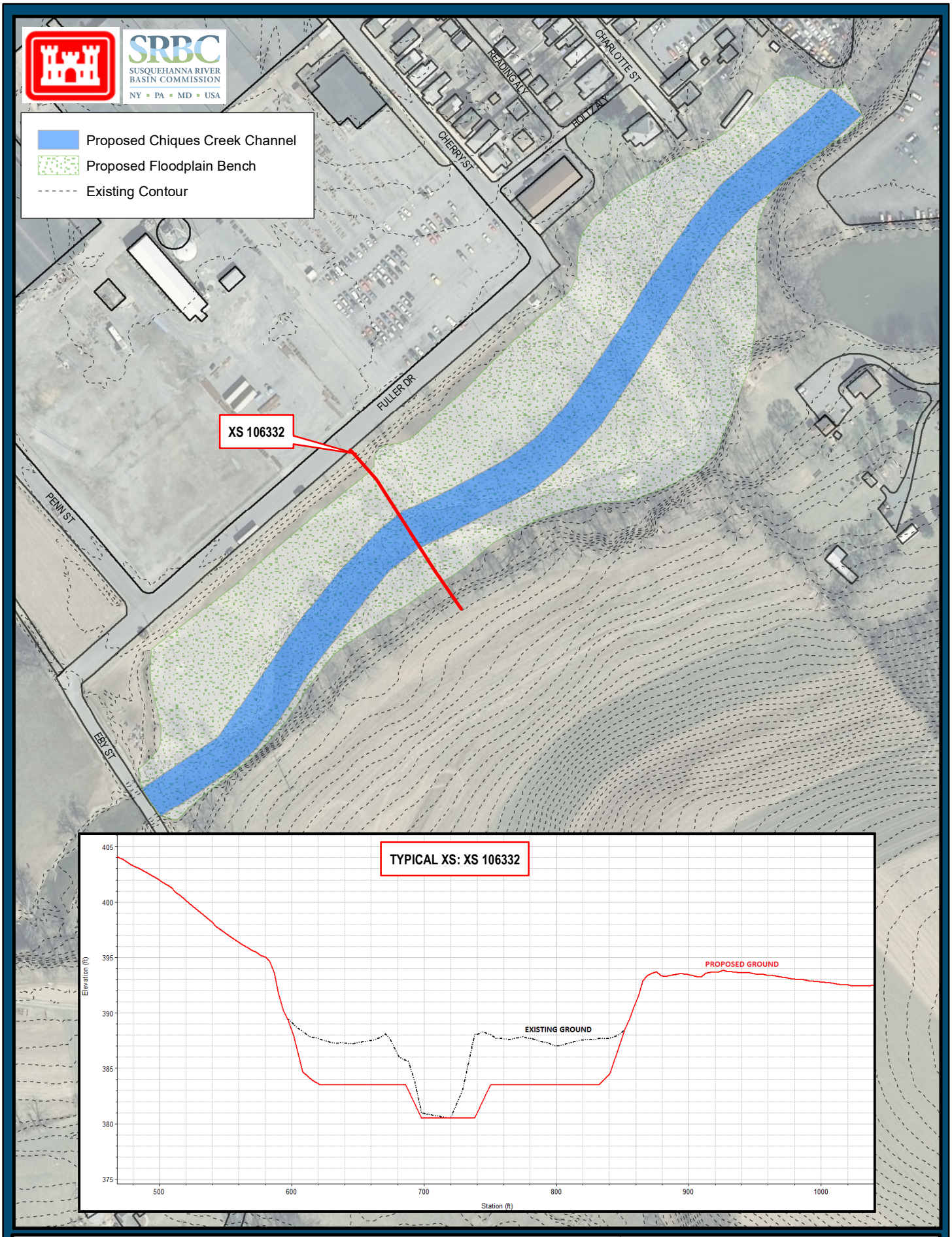
APPENDIX J



Mapping of Alternatives

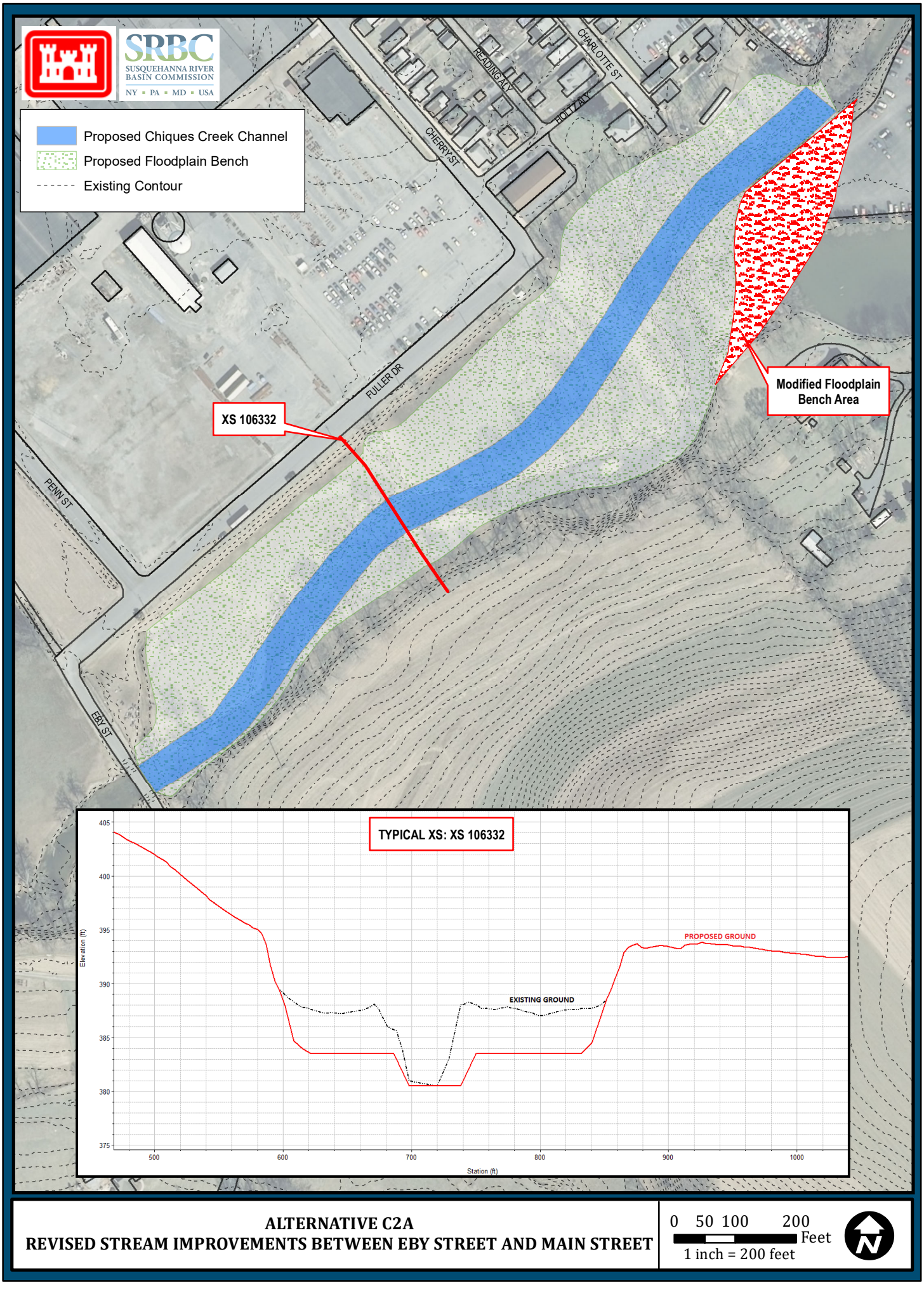


ALTERNATIVE C1
MODIFY RAILROAD CROSSING ABOVE RETTEW LANE



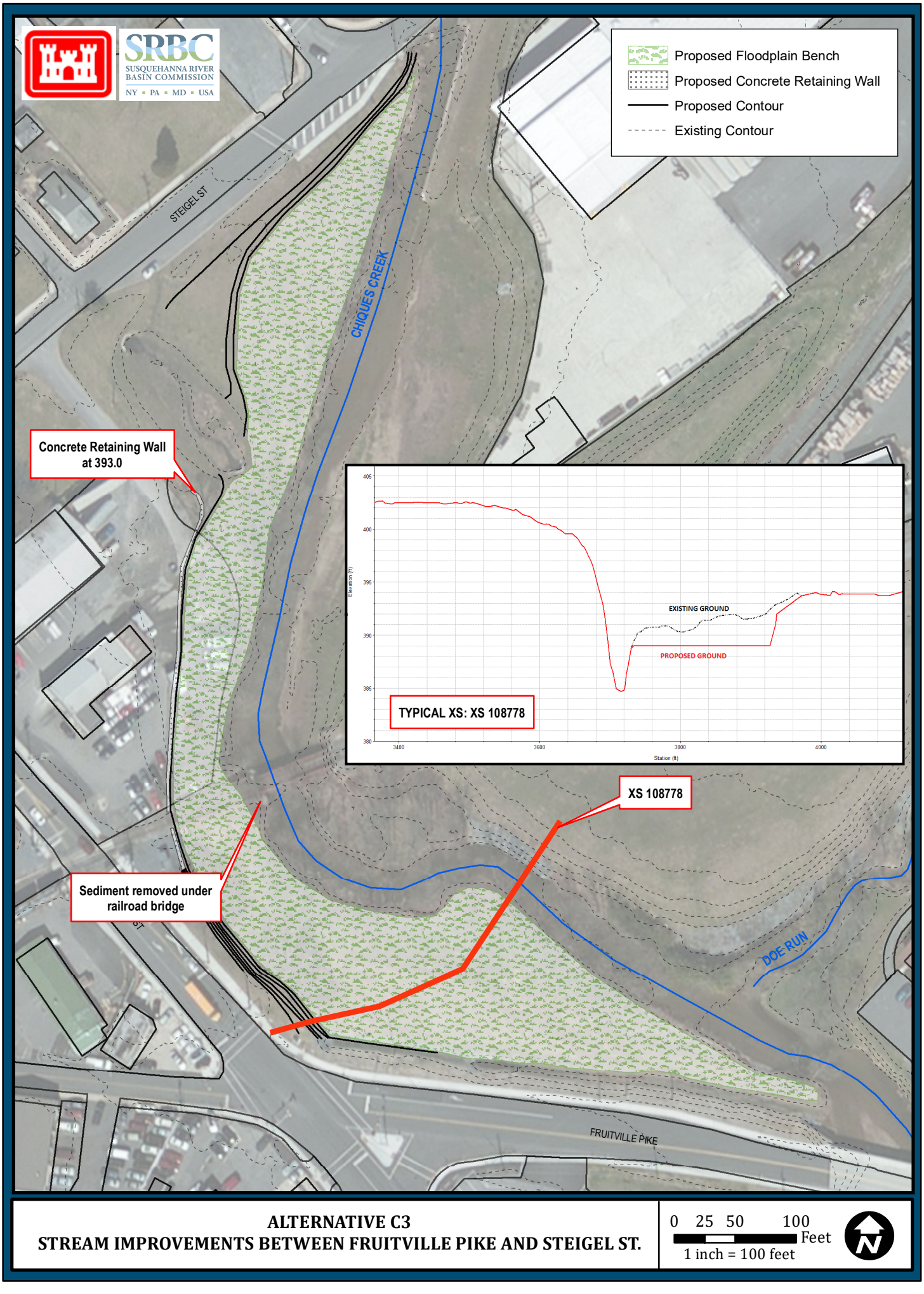
ALTERNATIVE C2
STREAM IMPROVEMENTS BETWEEN EBY STREET AND MAIN STREET

0 50 100 200 Feet
1 inch = 200 feet



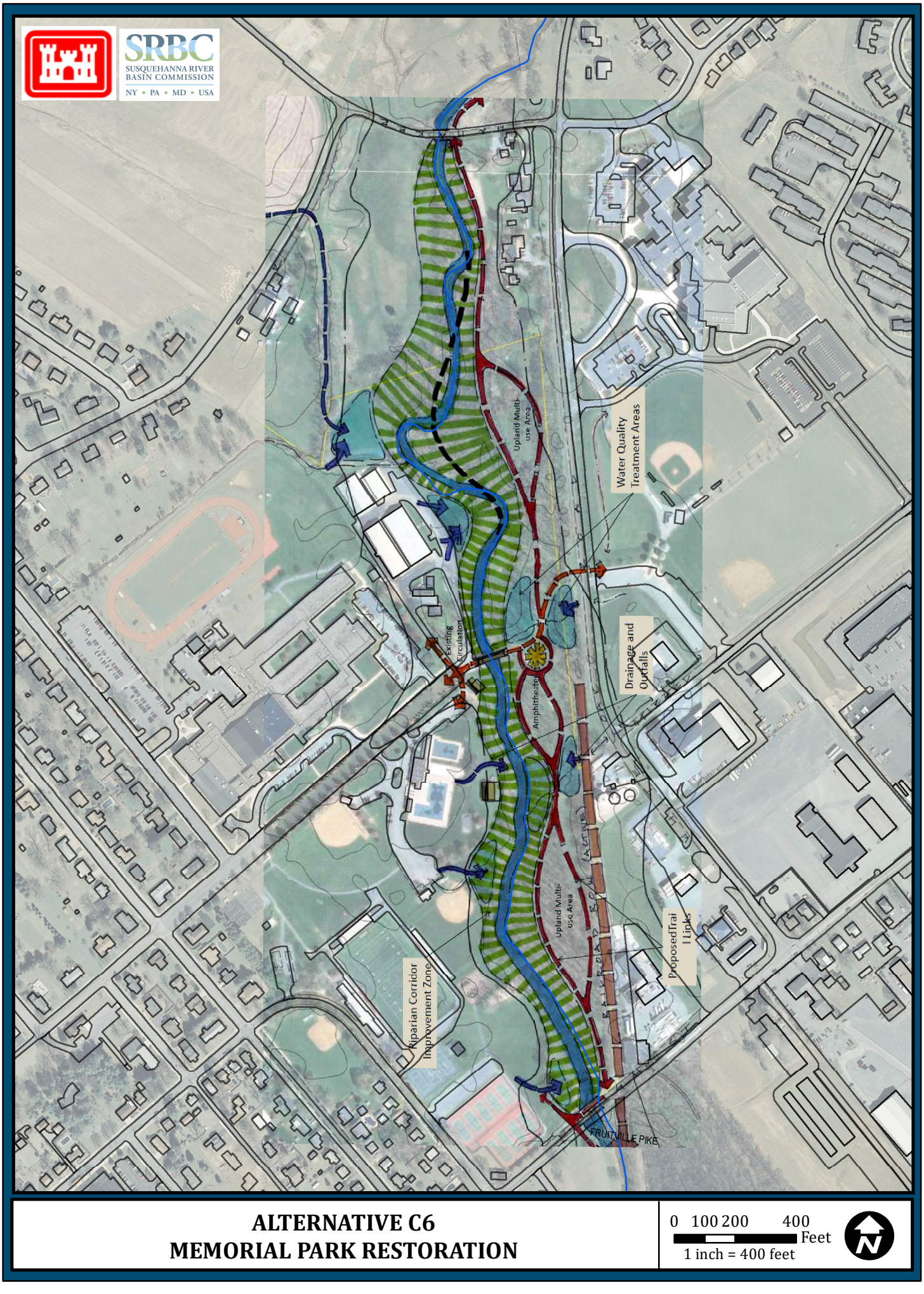
ALTERNATIVE C2A
REVISED STREAM IMPROVEMENTS BETWEEN EBY STREET AND MAIN STREET

0 50 100 200 Feet
1 inch = 200 feet

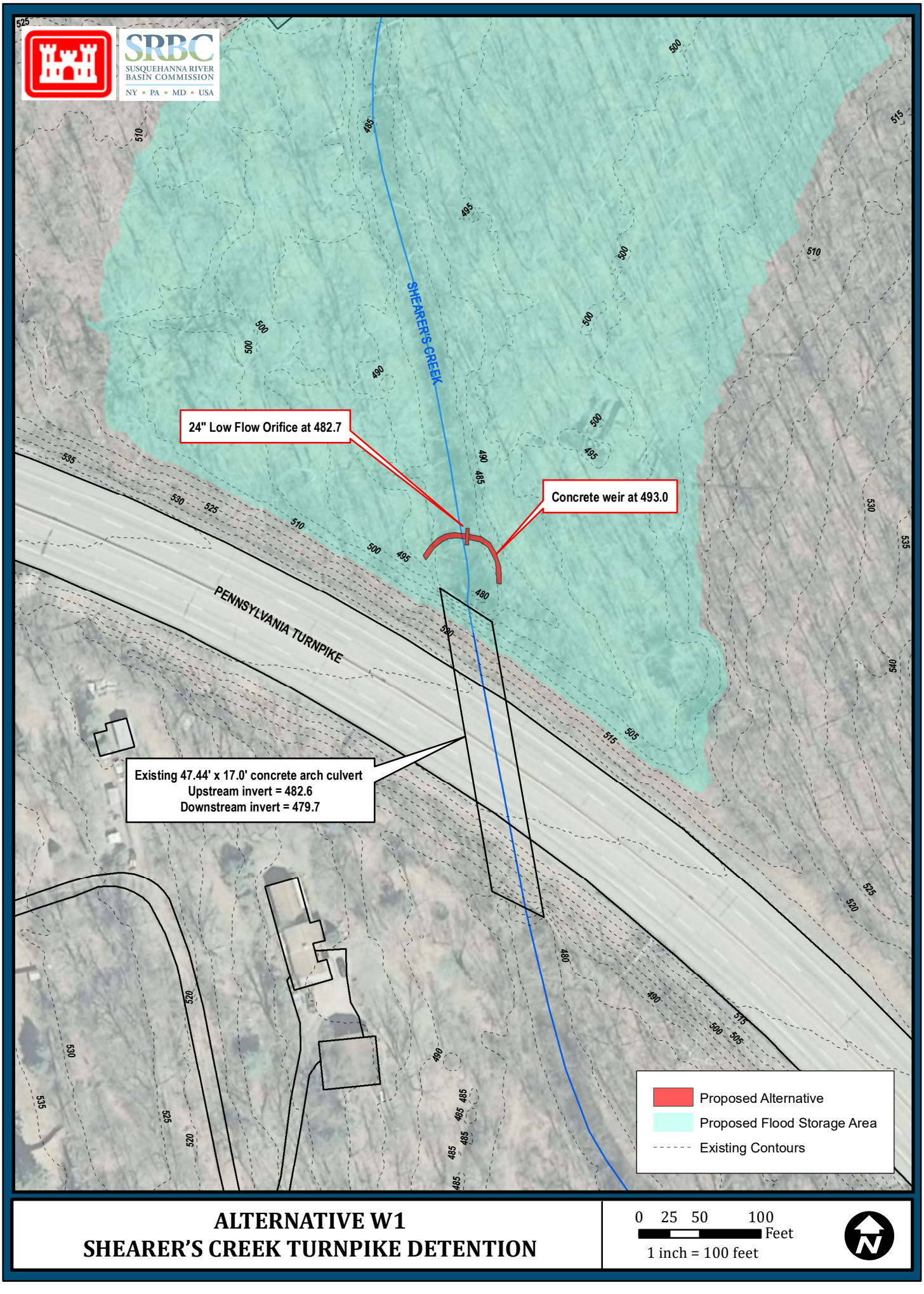


ALTERNATIVE C3
STREAM IMPROVEMENTS BETWEEN FRUITVILLE PIKE AND STEIGEL ST.

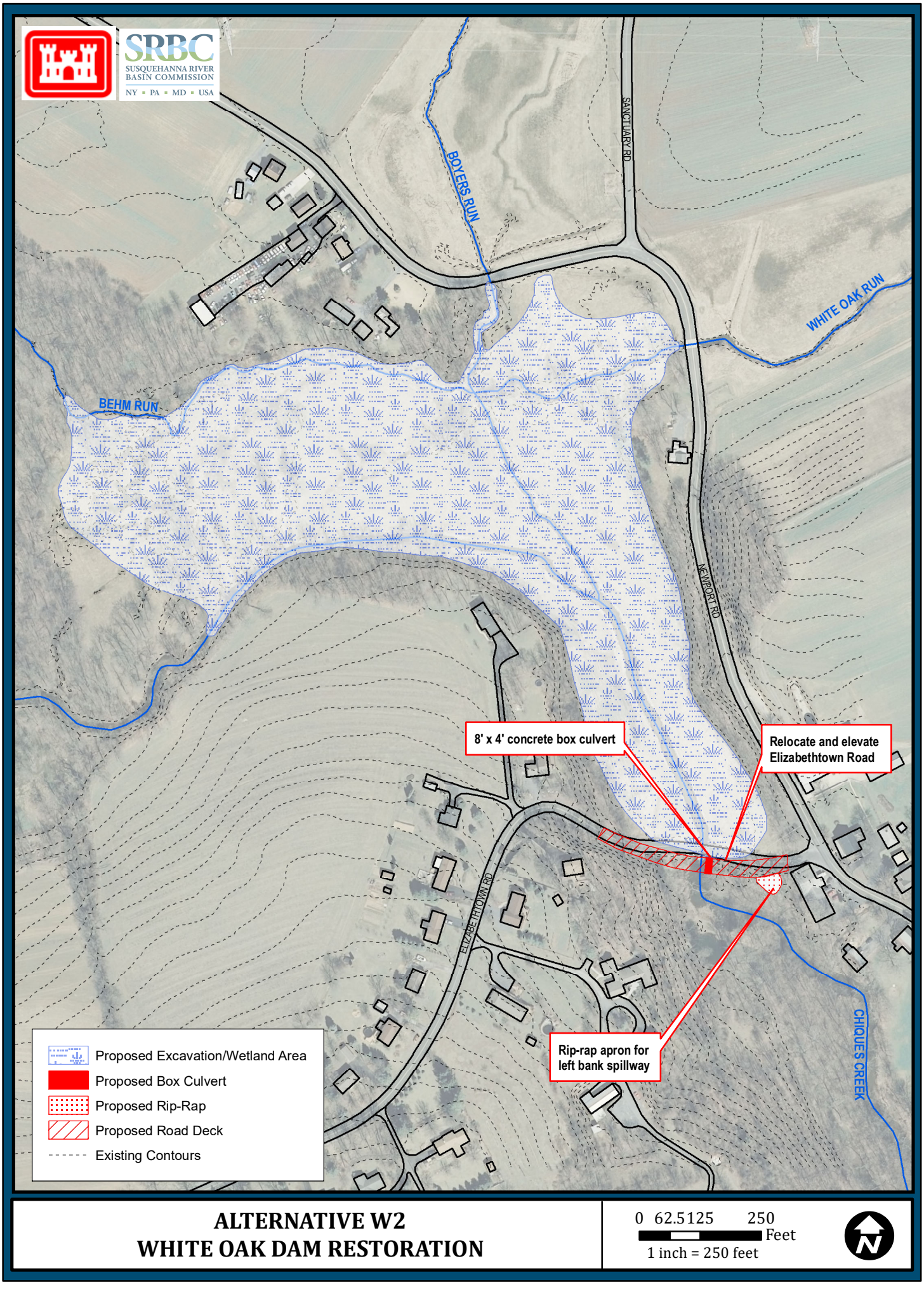
0 25 50 100 Feet
1 inch = 100 feet

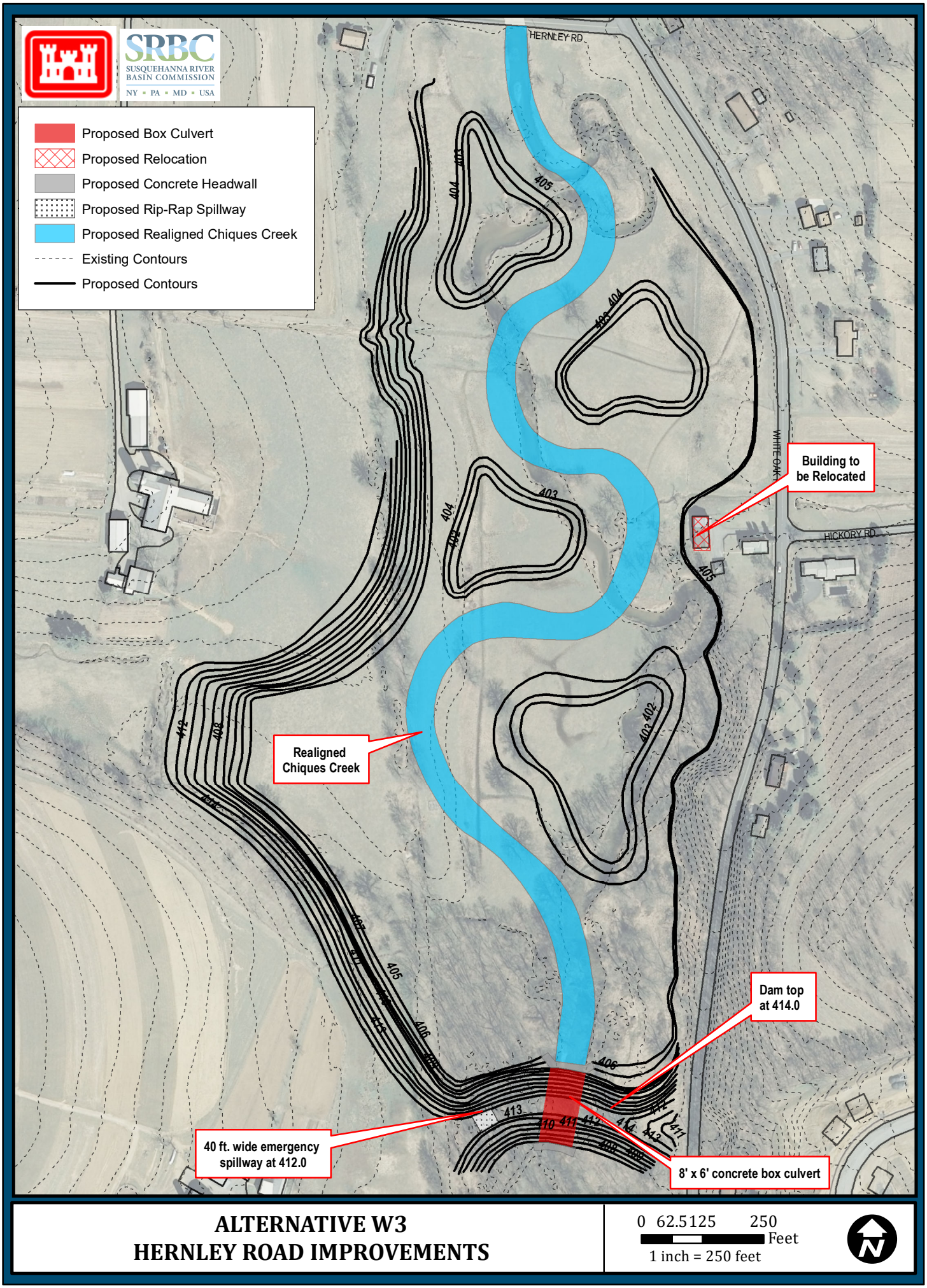


ALTERNATIVE C6
MEMORIAL PARK RESTORATION



ALTERNATIVE W1
SHEARER'S CREEK TURNPIKE DETENTION

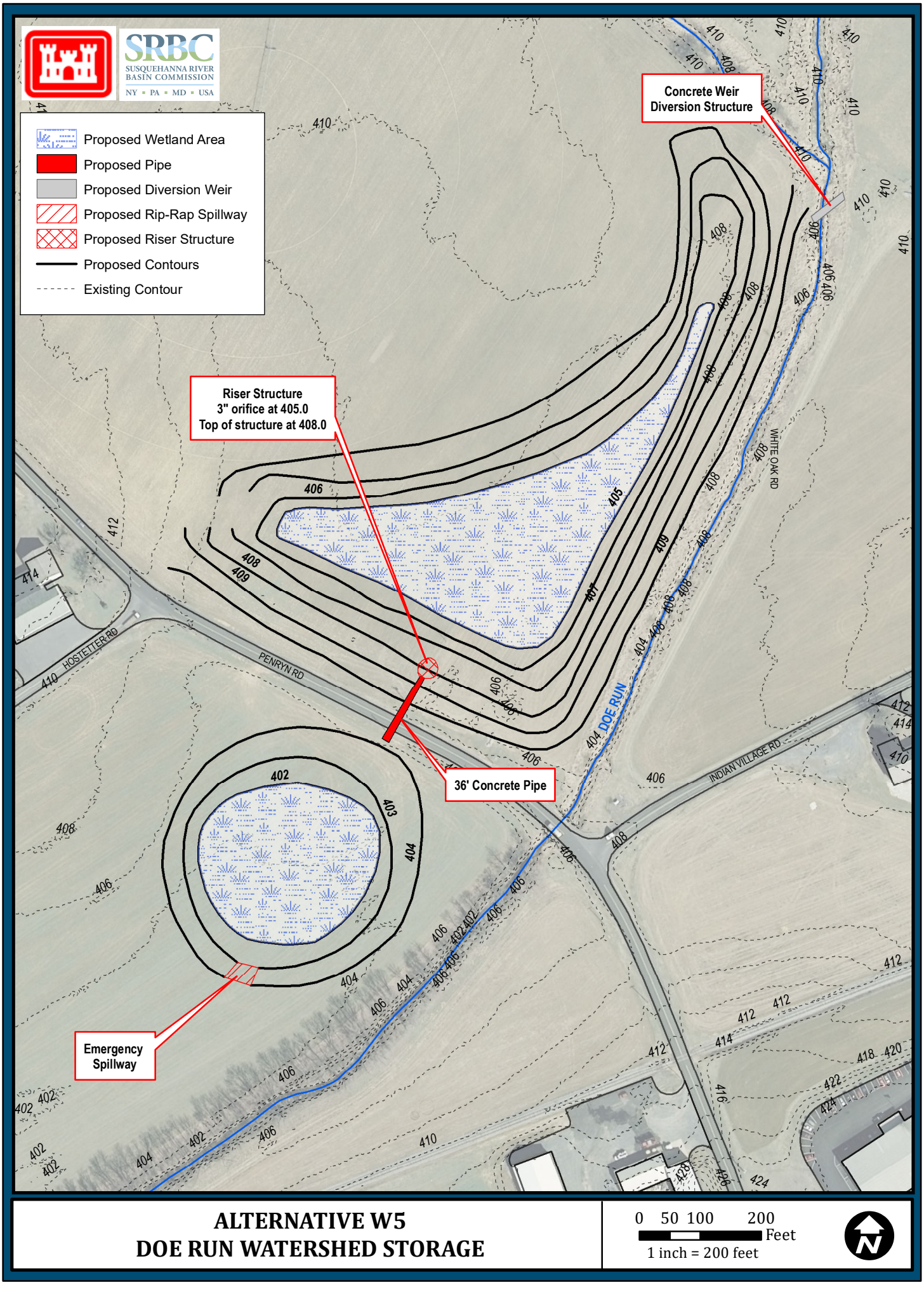

SRBC
SUSQUEHANNA RIVER BASIN COMMISSION
NY ▪ PA ▪ MD ▪ USA
BOYERS RUN
SANCTUARY RD
WHITE OAK RUN
BEHM RUN
NEWPORT RD
8' x 4' concrete box culvert
Relocate and elevate Elizabethtown Road
ELIZABETHTOWN RD
Rip-rap apron for left bank spillway
CHIQUES CREEK
Proposed Excavation/Wetland Area
Proposed Box Culvert
Proposed Rip-Rap
Proposed Road Deck
Existing Contours
ALTERNATIVE W2
WHITE OAK DAM RESTORATION
0 62.5125 250
Feet
1 inch = 250 feet
N



ALTERNATIVE W3
HERNLEY ROAD IMPROVEMENTS

0 62.5125 250 Feet

1 inch = 250 feet



ALTERNATIVE W5
DOE RUN WATERSHED STORAGE

0 50 100 200 Feet

1 inch = 200 feet

APPENDIX K



Alternatives Modeling Output Data

CHANNEL ALTERNATIVES HEC-RAS RESULTS

ALTERNATIVE C1

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

ALTERNATIVE C1 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.6	397.9	399.2	400.1	400.9	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	400.9	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.8	399.8	400.6	398.1
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.4	398.5	400.0	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	396.9	398.1	399.7	396.6
At Hondru Ford	107775	390.9	392.5	393.6	394.5	395.5	396.5	397.9	399.5	396.2
At South Cherry Street	107182	390.0	391.2	391.9	393.4	394.6	395.8	397.2	399.1	395.4
At South Penn Street	105859	388.4	389.4	390.4	392.2	393.6	395.1	396.8	399.0	394.4
At Fenner Precision	104213	387.1	388.6	389.8	391.7	393.1	394.6	396.3	398.6	393.8
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0
At Tait Towers	109610	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0
At AD Autos	109141	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0
Downstream of Doe Run	108540	0.0	0.0	0.0	0.0	0.0	-0.1	-0.3	-0.4	-0.1
At Dollar General	108094	0.0	0.0	0.0	0.0	0.0	-0.1	-0.4	-0.4	-0.1
At Hondru Ford	107775	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.3	-0.4	-0.1
At South Cherry Street	107182	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.4	-0.5	-0.2
At South Penn Street	105859	0.0	0.0	-0.1	-0.1	-0.2	-0.3	-0.5	-0.5	-0.3
At Fenner Precision	104213	0.0	0.0	-0.1	-0.1	-0.3	-0.4	-0.6	-0.6	-0.3
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C2

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

ALTERNATIVE C2 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.6	395.1	396.2	397.5	399.0	400.1	401.0	398.1
At Tait Towers	109610	392.2	393.3	394.1	395.8	397.3	398.9	400.0	400.9	397.9
At AD Autos	109141	391.8	393.0	393.7	395.3	397.0	398.7	399.8	400.6	397.7
Downstream of Doe Run	108540	390.2	391.5	392.7	394.6	395.9	396.9	398.3	400.1	396.7
At Dollar General	108094	389.6	390.8	391.8	393.7	395.2	396.3	397.8	399.8	396.0
At Hondru Ford	107775	389.1	390.2	391.1	392.8	394.1	395.7	397.5	399.7	395.0
At South Cherry Street	107182	388.6	389.7	390.7	392.6	394.0	395.6	397.4	399.6	394.9
At South Penn Street	105859	388.5	389.5	390.5	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	0.0	-0.1	-0.3	-0.4	-0.4	-0.2	0.1	-0.1	-0.4
At Tait Towers	109610	-0.2	-0.4	-0.8	-0.6	-0.4	-0.2	0.1	-0.1	-0.4
At AD Autos	109141	-0.2	-0.5	-1.0	-0.8	-0.5	-0.2	0.1	-0.2	-0.5
Downstream of Doe Run	108540	-1.2	-1.5	-1.6	-0.9	-0.6	-0.6	-0.5	-0.3	-0.6
At Dollar General	108094	-1.5	-1.9	-2.1	-1.4	-0.8	-0.7	-0.6	-0.3	-0.7
At Hondru Ford	107775	-1.8	-2.3	-2.5	-1.8	-1.4	-1.0	-0.6	-0.3	-1.3
At South Cherry Street	107182	-1.4	-1.5	-1.2	-0.9	-0.7	-0.4	-0.2	-0.1	-0.6
At South Penn Street	105859	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C2A

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

ALTERNATIVE C2A WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.6	395.1	396.2	397.5	399.0	400.1	401.0	398.1
At Tait Towers	109610	392.2	393.3	394.0	395.7	397.3	398.8	400.0	400.9	397.9
At AD Autos	109141	391.8	393.0	393.6	395.2	396.9	398.6	399.8	400.6	397.7
Downstream of Doe Run	108540	390.1	391.5	392.6	394.5	395.8	396.9	398.3	400.1	396.6
At Dollar General	108094	389.5	390.7	391.7	393.5	395.2	396.3	397.8	399.8	395.9
At Hondru Ford	107775	389.0	390.0	390.9	392.6	393.9	395.5	397.5	399.6	394.8
At South Cherry Street	107182	388.6	389.7	390.7	392.6	394.0	395.6	397.4	399.6	394.9
At South Penn Street	105859	388.5	389.5	390.5	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

ADDITIOANL REDUCTION IN WSE WITH ALTERNATIVE C2A OVER C2

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Tait Towers	109610	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
At AD Autos	109141	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
Downstream of Doe Run	108540	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.1
At Dollar General	108094	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	-0.1
At Hondru Ford	107775	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	-0.2
At South Cherry Street	107182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Penn Street	105859	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C3

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

ALTERNATIVE C3 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.5	394.6	395.3	396.5	397.7	399.1	400.1	401.2	398.3
At Tait Towers	109610	391.8	393.5	394.7	396.2	397.5	399.0	400.0	401.1	398.2
At AD Autos	109141	391.6	393.2	394.5	395.9	397.2	398.7	399.7	400.7	398.0
Downstream of Doe Run	108540	391.3	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	0.0	0.1	-0.1
At Tait Towers	109610	-0.5	-0.2	-0.1	-0.1	-0.1	-0.1	0.1	0.1	-0.1
At AD Autos	109141	-0.5	-0.2	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2
Downstream of Doe Run	108540	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Dollar General	108094	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Hondru Ford	107775	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Cherry Street	107182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Penn Street	105859	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C4

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

ALTERNATIVE C4 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.6	394.6	395.3	396.6	397.8	399.2	400.0	401.1	398.4
At Tait Towers	109610	392.4	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Tait Towers	109610	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At AD Autos	109141	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of Doe Run	108540	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Dollar General	108094	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Hondru Ford	107775	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Cherry Street	107182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Penn Street	105859	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C5

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

ALTERNATIVE C5 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Tait Towers	109610	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At AD Autos	109141	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of Doe Run	108540	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Dollar General	108094	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Hondru Ford	107775	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Cherry Street	107182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Penn Street	105859	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C6

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.2	400.2	400.6	402.2	403.4	404.5	405.4	406.7	403.6
At Manheim Veterans Park	112748	397.2	398.6	399.4	401.2	402.5	403.6	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.7	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.6	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	401.5	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	401.2	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.9	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.8	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	400.5	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	400.3	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	400.0	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	396.0	392.1

ALTERNATIVE C6 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	-0.4	-0.3	-0.6	-0.5	-0.4	-0.4	-0.3	-0.3	-0.4
At Manheim Veterans Park	112748	-0.3	-0.2	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Tait Towers	109610	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At AD Autos	109141	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of Doe Run	108540	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Dollar General	108094	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Hondru Ford	107775	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Cherry Street	107182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Penn Street	105859	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C7

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.2	400.2	400.6	402.2	403.4	404.5	405.4	406.7	403.6
At Manheim Veterans Park	112748	397.2	398.6	399.4	401.2	402.5	403.6	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.7	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.6	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	401.5	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	401.2	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.9	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.8	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	400.5	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	400.3	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	400.0	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	396.0	392.1

ALTERNATIVE C7 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.1	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.1	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	400.8	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	400.3	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.1	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.0	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	399.6	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Tait Towers	109610	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At AD Autos	109141	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of Doe Run	108540	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Dollar General	108094	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Hondru Ford	107775	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Cherry Street	107182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At South Penn Street	105859	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C2C3

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.2	400.2	400.6	402.2	403.4	404.5	405.4	406.7	403.6
At Manheim Veterans Park	112748	397.2	398.6	399.4	401.2	402.5	403.6	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.7	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.6	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	401.5	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	401.2	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.9	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.8	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	400.5	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	400.3	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	400.0	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	396.0	392.1

ALTERNATIVE C2C3 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.6	400.5	401.2	402.7	403.9	404.9	405.7	407.0	404.0
At Manheim Veterans Park	112748	397.5	398.8	399.6	401.3	402.6	403.7	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.4	394.5	395.1	396.1	397.3	398.8	400.1	401.1	397.9
At Tait Towers	109610	391.3	392.6	393.6	395.5	397.1	398.7	400.1	401.0	397.8
At AD Autos	109141	390.9	392.1	393.1	395.0	396.7	398.3	399.7	400.6	397.5
Downstream of Doe Run	108540	390.1	391.5	392.6	394.5	395.9	396.9	398.3	400.1	396.7
At Dollar General	108094	389.6	390.8	391.8	393.7	395.2	396.3	397.8	399.8	396.0
At Hondru Ford	107775	389.1	390.2	391.1	392.8	394.1	395.7	397.5	399.7	395.0
At South Cherry Street	107182	388.6	389.7	390.7	392.6	394.0	395.6	397.4	399.6	394.9
At South Penn Street	105859	388.5	389.5	390.5	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Manheim Veterans Park	112748	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	-0.3	-0.1	-0.3	-0.6	-0.5	-0.4	0.1	-0.1	-0.5
At Tait Towers	109610	-1.0	-1.1	-1.3	-0.8	-0.6	-0.4	0.1	-0.1	-0.5
At AD Autos	109141	-1.2	-1.4	-1.5	-1.0	-0.8	-0.5	0.0	-0.2	-0.7
Downstream of Doe Run	108540	-1.2	-1.5	-1.6	-0.9	-0.6	-0.6	-0.5	-0.3	-0.6
At Dollar General	108094	-1.5	-1.9	-2.1	-1.4	-0.8	-0.7	-0.6	-0.3	-0.7
At Hondru Ford	107775	-1.8	-2.3	-2.5	-1.8	-1.4	-1.0	-0.6	-0.3	-1.3
At South Cherry Street	107182	-1.4	-1.5	-1.2	-0.9	-0.7	-0.4	-0.2	-0.1	-0.6
At South Penn Street	105859	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ALTERNATIVE C2C3C6

EXISTING-CONDITIONS WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.2	400.2	400.6	402.2	403.4	404.5	405.4	406.7	403.6
At Manheim Veterans Park	112748	397.2	398.6	399.4	401.2	402.5	403.6	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.7	394.7	395.4	396.7	397.9	399.2	400.1	401.7	398.4
At Tait Towers	109610	392.3	393.7	394.9	396.4	397.7	399.1	400.0	401.6	398.3
At AD Autos	109141	392.1	393.4	394.6	396.1	397.4	398.9	399.7	401.5	398.2
Downstream of Doe Run	108540	391.4	393.0	394.3	395.5	396.4	397.5	398.8	401.2	397.2
At Dollar General	108094	391.1	392.7	393.9	395.1	396.0	397.0	398.4	400.9	396.7
At Hondru Ford	107775	390.9	392.5	393.6	394.6	395.6	396.7	398.2	400.8	396.3
At South Cherry Street	107182	390.0	391.2	392.0	393.5	394.7	396.0	397.6	400.5	395.5
At South Penn Street	105859	388.4	389.4	390.4	392.3	393.8	395.4	397.3	400.3	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	400.0	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	396.0	392.1

ALTERNATIVE C2C3C6 WSE (FEET NAVD88)

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	399.2	400.2	400.6	402.2	403.4	404.5	405.4	406.7	403.6
At Manheim Veterans Park	112748	397.2	398.6	399.4	401.2	402.5	403.6	404.5	405.8	402.7
Downstream of South Oak Street	110423	393.4	394.5	395.1	396.1	397.3	398.8	400.1	401.1	397.9
At Tait Towers	109610	391.3	392.6	393.6	395.5	397.1	398.7	400.1	401.0	397.8
At AD Autos	109141	390.9	392.1	393.1	395.0	396.7	398.3	399.7	400.6	397.5
Downstream of Doe Run	108540	390.1	391.5	392.6	394.5	395.9	396.9	398.3	400.1	396.7
At Dollar General	108094	389.6	390.8	391.8	393.7	395.2	396.3	397.8	399.8	396.0
At Hondru Ford	107775	389.1	390.2	391.1	392.8	394.1	395.7	397.5	399.7	395.0
At South Cherry Street	107182	388.6	389.7	390.7	392.6	394.0	395.6	397.4	399.6	394.9
At South Penn Street	105859	388.5	389.5	390.5	392.3	393.8	395.4	397.3	399.5	394.7
At Fenner Precision	104213	387.1	388.6	389.9	391.8	393.3	395.0	396.9	399.2	394.2
Upstream of Wastewater Treatment Plant	102751	386.1	387.8	389.0	390.6	391.8	393.0	394.2	395.6	392.1

REDUCTION IN WSE WITH ALTERNATIVE

Location	HEC-RAS XS	2YR	5YR	10YR	25YR	50YR	100YR	200YR	500YR	LEE
At Manheim Farm Show	114230	-0.4	-0.3	-0.6	-0.5	-0.4	-0.4	-0.3	-0.3	-0.4
At Manheim Veterans Park	112748	-0.3	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0
Downstream of South Oak Street	110423	-0.3	-0.1	-0.3	-0.6	-0.5	-0.4	0.1	-0.1	-0.5
At Tait Towers	109610	-1.0	-1.1	-1.3	-0.8	-0.6	-0.4	0.1	-0.1	-0.5
At AD Autos	109141	-1.2	-1.4	-1.5	-1.0	-0.8	-0.5	0.0	-0.2	-0.7
Downstream of Doe Run	108540	-1.2	-1.5	-1.6	-0.9	-0.6	-0.6	-0.5	-0.3	-0.6
At Dollar General	108094	-1.5	-1.9	-2.1	-1.4	-0.8	-0.7	-0.6	-0.3	-0.7
At Hondru Ford	107775	-1.8	-2.3	-2.5	-1.8	-1.4	-1.0	-0.6	-0.3	-1.3
At South Cherry Street	107182	-1.4	-1.5	-1.2	-0.9	-0.7	-0.4	-0.2	-0.1	-0.6
At South Penn Street	105859	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
At Fenner Precision	104213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upstream of Wastewater Treatment Plant	102751	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

WATERSHED ALTERNATIVES HEC-HMS RESULTS

ALTERNATIVE W1										
		Q10			Q100			Sept 2011 (Lee)		
Location	HEC-HMS Flow Point	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change
At Hamaker Road	CHC22.01	2353	2350	-0.1	6619	6532	-1.3	5355	5346	-0.2
Upstream of confluence with Doe Run	CHC20.57	2365	2322	-1.8	6679	6593	-1.3	5193	5183	-0.2
Downstream of confluence with Doe Run	CHC20.55	2889	2889	0.0	7575	7475	-1.3	7292	7315	0.3
Upstream of confluence with Rife Run	CHC19.35	2738	2738	0.0	7580	7491	-1.2	6973	6995	0.3
Downstream of confluence with Rife Run	CHC19.32	4469	4469	0.0	10152	10151	0.0	8277	8299	0.3

ALTERNATIVE W2										
		Q10			Q100			Sept 2011 (Lee)		
Location	HEC-HMS Flow Point	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change
At Hamaker Road	CHC22.01	2353	1962	-16.6	6619	6289	-5.0	5355	5008	-6.5
Upstream of confluence with Doe Run	CHC20.57	2365	1928	-18.5	6679	6162	-7.7	5193	4878	-6.1
Downstream of confluence with Doe Run	CHC20.55	2889	2859	-1.0	7575	6917	-8.7	7292	7247	-0.6
Upstream of confluence with Rife Run	CHC19.35	2738	2693	-1.6	7580	6820	-10.0	6973	6946	-0.4
Downstream of confluence with Rife Run	CHC19.32	4469	4462	-0.2	10152	9918	-2.3	8277	8259	-0.2

ALTERNATIVE W3										
		Q10			Q100			Sept 2011 (Lee)		
Location	HEC-HMS Flow Point	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change
At Hamaker Road	CHC22.01	2353	2303	-2.1	6619	6626	0.1	5355	5274	-1.5
Upstream of confluence with Doe Run	CHC20.57	2365	2269	-4.1	6679	6645	-0.5	5193	5168	-0.5
Downstream of confluence with Doe Run	CHC20.55	2889	2537	-12.2	7575	7551	-0.3	7292	7337	0.6
Upstream of confluence with Rife Run	CHC19.35	2738	2504	-8.5	7580	7519	-0.8	6973	7043	1.0
Downstream of confluence with Rife Run	CHC19.32	4469	4196	-6.1	10152	9247	-8.9	8277	8337	0.7

ALTERNATIVE W4										
		Q10			Q100			Sept 2011 (Lee)		
Location	HEC-HMS Flow Point	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change
At Hamaker Road	CHC22.01	2353	1736	-26.2	6619	6254	-5.5	5355	4952	-7.5
Upstream of confluence with Doe Run	CHC20.57	2365	1651	-30.2	6679	6103	-8.6	5193	4910	-5.4
Downstream of confluence with Doe Run	CHC20.55	2889	2477	-14.3	7575	6866	-9.4	7292	7269	-0.3
Upstream of confluence with Rife Run	CHC19.35	2738	2358	-13.9	7580	6750	-10.9	6973	6974	0.0
Downstream of confluence with Rife Run	CHC19.32	4469	4195	-6.1	10152	9207	-9.3	8277	8280	0.0

ALTERNATIVE W5										
		Q10			Q100			Sept 2011 (Lee)		
Location	HEC-HMS Flow Point	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change	Existing (cfs)	Alternative (cfs)	% Change
At Hamaker Road	CHC22.01	2353	2353	0.0	6619	6619	0.0	5355	5355	0.0
Upstream of confluence with Doe Run	CHC20.57	2365	2365	0.0	6679	6679	0.0	5193	5193	0.0
Downstream of confluence with Doe Run	CHC20.55	2889	2932	1.5	7575	7558	-0.2	7292	7362	1.0
Upstream of confluence with Rife Run	CHC19.35	2738	2728	-0.4	7580	7561	-0.3	6973	7030	0.8
Downstream of confluence with Rife Run	CHC19.32	4469	4429	-0.9	10152	10359	2.0	8277	8344	0.8

ATTACHMENT

