



SUSQUEHANNA RIVER
BASIN COMMISSION

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November 13, 2025

SUBJECT: Deliverables
Grant No. CB-96343801 (PADEP ME# 4100071363)

TO: Kaylyn Gootman

FROM: Brianna Hutchison
Aquatic Biologist

The following document contains deliverables for the Comprehensive Analysis of Tidal and Non-Tidal Tributary Water Quality Habitat and Living Resource Status, Trends, and Linkages section of the grant listed in the subject line. These deliverables include:

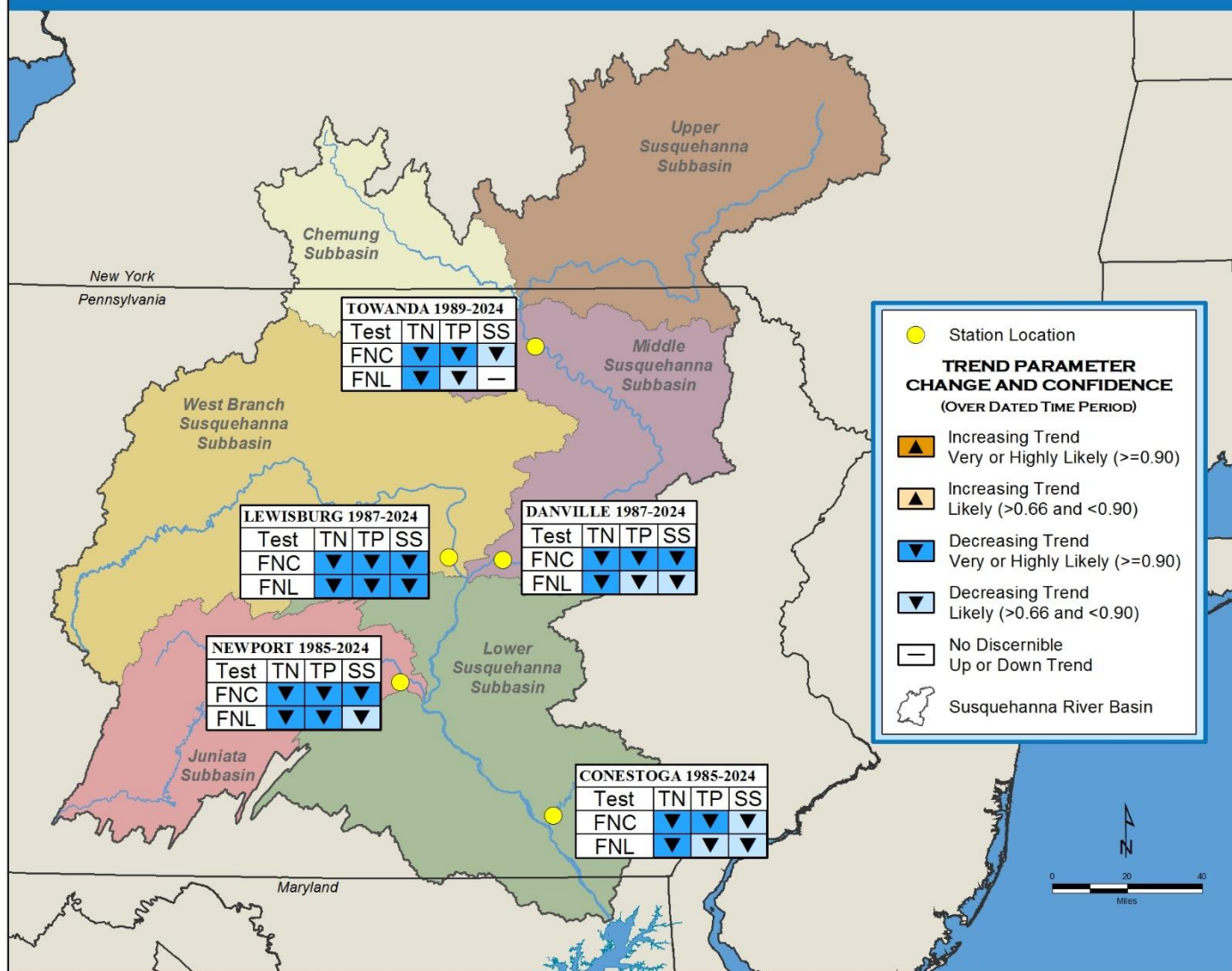
1. Long-term flow normalized trends for total nitrogen (TN), total phosphorus (TP), and suspended sediment (SS) from the beginning of the station's period of record through the end of Water Year 2024 (September 30, 2024) for the Towanda, Danville, Lewisburg, Newport, and Conestoga stations. No changes in long-term trends were observed for Danville, Lewisburg, Newport, and Conestoga with the addition of data from Water Year 2024. Trends in TN remained the same for Towanda, but differences were observed for TP and SS at this station. No trend for TP load was observed for Towanda in 2023; results from 2024 indicate TP load is decreasing. An increasing trend in sediment concentration was observed for Towanda through Water Year 2023. The addition of data from Water Year 2024 now indicates a decreasing trend in sediment concentration for Towanda.
2. Recent flow-normalized trends for the 26 stations with discharge records from 2005 (or beginning of period of record) through the end of Water Year 2024 for the following 13 parameters:
 - Total & dissolved nitrogen, nitrate-nitrite, ammonia, and phosphorus
 - Orthophosphate and particulate phosphorus
 - Total organic carbon
 - Total suspended solids
 - Suspended sediment
3. Summary statistics for the 13 parameters listed above, plus temperature, dissolved oxygen, pH, and specific conductance, for all 27 stations currently monitored by the Susquehanna River Basin Commission (SRBC).

4. Trends in discharge statistics for the Towanda, Danville, Lewisburg, Newport, and Conestoga stations from the beginning of the period of record through the end of Water Year 2024.

These deliverables will be uploaded to the SRBC website at <https://www.srbc.net/portals/water-quality-projects/sediment-nutrient-assessment/index.html>.

cc: Holly Waldman

LONG TERM (BEGINNING OF RECORD THROUGH WATER YEAR 2024) FLOW NORMALIZED TRENDS IN SELECT PARAMETERS



The Susquehanna River Basin Commission estimates annual trends in concentrations and loads of nutrients and sediment as part of the Chesapeake Bay Program's efforts to monitor progress towards pollutant reductions. The 2024 trends analyses were completed using the USGS Weighted Regression on Time, Discharge, and Season (WRTDS) model*. WRTDS removes variation attributed to differences in streamflow to produce trends in Flow Normalized Concentration (FNC) and Flow Normalized Load (FNL).

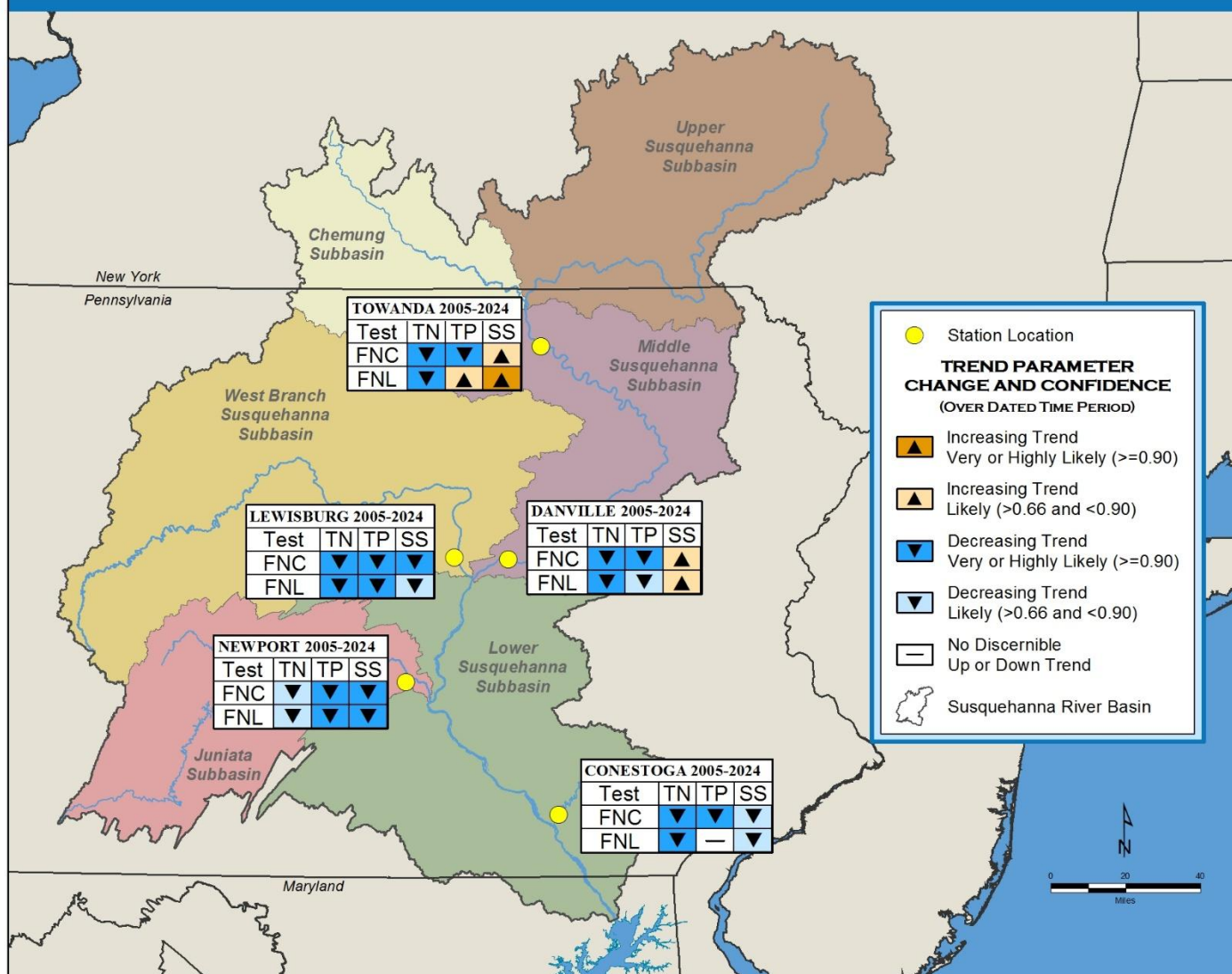
The map above depicts the direction of long-term trends in total nitrogen, total phosphorus, and suspended sediment, as well as the confidence level for the detected trend. The chart below lists the magnitude and direction of the trends in FNC (mg/L) and FNL (annual tons); the direction of trends is indicated on the map by up/down arrows. WRTDS estimates confidence in detected trends using likelihood factors, which are indicated on the map by colors corresponding to a particular confidence interval.

Site	Trend (Change**) Time Period	Flow Normalized Concentration Change (mg/L)			Flow Normalized Load Change (Annual Tons)		
		Total Nitrogen	Total Phosphorous	Suspended Sediment	Total Nitrogen	Total Phosphorous	Suspended Sediment
Towanda	1989-2024	-0.678	-0.044	-6.7	-8,004	-82	7,200
Danville	1987-2024	-0.890	-0.007	-23.6	-660,700	-101	-14,621
Lewisburg	1987-2024	-0.537	-0.037	-9.4	-5,227	-218	-141,900
Newport	1985-2024	-0.370	-0.068	-23.3	-2,154	-285	-232,400
Conestoga	1985-2024	-3.331	-0.359	-103.4	-2,375	-242	-177,600

*Hirsch, R.M., and L.A. DeCicco. 2015. User guide to Exploration and Graphics for RivEr Trends (EGRET) and dataRetrieval: R packages for hydrologic data (version 2.0, February 2015): U.S. Geological Survey Techniques and Methods 4-A10, 93 pp. <https://pubs.usgs.gov/publication/tm4A10>

**Change is the difference between the starting and ending years. DISCLAIMER: Use of Map for Any Purpose on "As Is" Basis. No Warranties Provided; SRBC (1199a) 08-14-2025

RECENT (2005 THROUGH WATER YEAR 2024) FLOW NORMALIZED TRENDS IN SELECT PARAMETERS



The Susquehanna River Basin Commission estimates annual trends in concentrations and loads of nutrients and sediment as part of the Chesapeake Bay Program's efforts to monitor progress towards pollutant reductions. The 2024 trends analyses were completed using the USGS Weighted Regression on Time, Discharge, and Season (WRTDS) model*. WRTDS removes variation attributed to differences in streamflow to produce trends in Flow Normalized Concentration (FNC) and Flow Normalized Load (FNL).

The map above depicts the direction of recent (2005 – 2024) trends in total nitrogen, total phosphorus, and suspended sediment, as well as the confidence level for the detected trend. The chart below lists the magnitude and direction of the trends in FNC (mg/L) and FNL (annual tons); the direction of trends is indicated on the map by up/down arrows. WRTDS estimates confidence in detected trends using likelihood factors, which are indicated on the map by colors corresponding to a particular confidence interval.

Site	Trend (Change**) Time Period	Flow Normalized Concentration Change (mg/L)			Flow Normalized Load Change (Annual Tons)		
		Total Nitrogen	Total Phosphorous	Suspended Sediment	Total Nitrogen	Total Phosphorous	Suspended Sediment
Towanda	2005-2024	-0.153	-0.030	4.6	-1,356	66	409,400
Danville	2005-2024	-0.235	-0.031	2.9	-2,280	-179	398,800
Lewisburg	2005-2024	-0.234	-0.021	-5.4	-1,235	-149	-59,900
Newport	2005-2024	-0.076	-0.030	-9.0	-332	-126	-102,100
Conestoga	2005-2024	-2.180	-0.060	-17.9	-1,221	-20	-15,900

*Hirsch, R.M., and L.A. DeCicco. 2015. User guide to Exploration and Graphics for RivEr Trends (EGRET) and dataRetrieval: R packages for hydrologic data (version 2.0, February 2015): U.S. Geological Survey Techniques and Methods 4-A10, 93 pp. <https://pubs.usgs.gov/publication/tm4A10>

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Individual Site Trends Statistics

FNC – Flow Normalized Concentration – mg/L

FNF – Flow Normalized Flux – 10⁶ kg/yr

FNC/FNF alpha level – 0.1

BMDL – Below Method Detection Limit; Percentage of BMDL values is too high for analysis

NS – Not significant, UP – Increasing trend, DWN – Decreasing trend

HL – Highly Likely ≥0.95 and ≤1.00

VL – Very Likely ≥0.90 and <0.95

L – Likely ≥0.66 and <0.90

ALAN – About as Likely as Not >0.33 and <0.66

01531500; Towanda 1989-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.678	0.99	HL	DWN	-8.004	0.99	HL	DWN
Nitrate-Nitrite	-0.341	0.99	HL	DWN	-3.664	0.99	HL	DWN
Ammonia	-0.041	0.99	HL	DWN	-0.587	0.99	HL	DWN
Dissolved Nitrogen	-0.529	0.99	HL	DWN	-6.209	0.99	HL	DWN
Nitrate-Nitrite	-0.344	0.99	HL	DWN	-3.682	0.99	HL	DWN
Ammonia	-0.038	0.99	HL	DWN	-0.496	0.99	HL	DWN
Total Phosphorus	-0.044	0.99	HL	DWN	-0.082	0.77	L	DWN
Particulate Phosphorus	-0.008	0.83	L	DWN	0.295	0.93	VL	UP
Dissolved Phosphorus	-0.034	0.99	HL	DWN	-0.318	0.99	HL	DWN
Orthophosphate	-0.007	0.97	HL	DWN	-0.036	0.95	HL	DWN
Total Organic Carbon	-0.695	0.99	HL	DWN	-6.5	0.95	HL	DWN
Total Suspended Solids	13.1	0.95	HL	UP	914.4	0.93	VL	UP
Suspended Sediment	-6.7	0.83	L	DWN	7.2	0.52	ALAN	NS

01531500; Towanda 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.153	0.99	HL	DWN	-1.356	0.99	HL	DWN
Nitrate-Nitrite	-0.063	0.95	HL	DWN	-1.078	0.99	HL	DWN
Ammonia	-0.028	0.97	HL	DWN	-0.260	0.99	HL	DWN
Dissolved Nitrogen	-0.159	0.99	HL	DWN	-1.844	0.99	HL	DWN
Nitrate-Nitrite	-0.058	0.93	VL	DWN	-1.033	0.99	HL	DWN
Ammonia	-0.026	0.97	HL	DWN	-0.238	0.99	HL	DWN
Total Phosphorus	-0.030	0.99	HL	DWN	0.066	0.70	L	UP
Particulate Phosphorus	0.002	0.74	L	UP	0.379	0.95	HL	UP
Dissolved Phosphorus	-0.029	0.99	HL	DWN	-0.247	0.99	HL	DWN
Orthophosphate	-0.026	0.99	HL	DWN	-0.241	0.99	HL	DWN
Total Organic Carbon	-0.366	0.99	HL	DWN	-1.8	0.83	L	DWN
Total Suspended Solids	9.9	0.89	L	UP	783.3	0.85	L	UP
Suspended Sediment	4.6	0.81	L	UP	409.4	0.95	HL	UP

01540500; Danville 1987-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.890	0.99	HL	DWN	-14.621	0.99	HL	DWN
Nitrate-Nitrite	-0.346	0.99	HL	DWN	-5.433	0.99	HL	DWN
Ammonia	-0.075	0.99	HL	DWN	-1.298	0.99	HL	DWN
Dissolved Nitrogen	-0.589	0.99	HL	DWN	-9.681	0.99	HL	DWN
Nitrate-Nitrite	-0.357	0.99	HL	DWN	-5.480	0.99	HL	DWN
Ammonia	-0.076	0.99	HL	DWN	-1.321	0.99	HL	DWN
Total Phosphorus	-0.007	0.99	HL	DWN	-0.101	0.81	L	DWN
Particulate Phosphorus	-0.062	0.99	HL	DWN	-0.577	0.95	HL	DWN
Dissolved Phosphorus	-0.040	0.99	HL	DWN	-0.243	0.79	L	DWN
Orthophosphate	-0.024	0.99	HL	DWN	-0.392	0.99	HL	DWN
Total Organic Carbon	-1.9	0.99	HL	DWN	-30.0	0.99	HL	DWN
Total Suspended Solids	5.2	0.72	L	UP	645.7	0.75	L	UP
Suspended Sediment	-23.6	0.99	HL	DWN	-660.7	0.79	L	DWN

01540500; Danville 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.235	0.99	HL	DWN	-2.280	0.99	HL	DWN
Nitrate-Nitrite	-0.128	0.99	HL	DWN	-2.000	0.99	HL	DWN
Ammonia	-0.029	0.99	HL	DWN	-0.389	0.99	HL	DWN
Dissolved Nitrogen	-0.221	0.99	HL	DWN	-2.820	0.99	HL	DWN
Nitrate-Nitrite	-0.129	0.99	HL	DWN	-2.006	0.99	HL	DWN
Ammonia	-0.029	0.99	HL	DWN	-0.385	0.99	HL	DWN
Total Phosphorus	-0.031	0.99	HL	DWN	-0.179	0.85	L	DWN
Particulate Phosphorus	-0.002	0.79	L	DWN	0.237	0.81	L	UP
Dissolved Phosphorus	-0.027	0.99	HL	DWN	-0.366	0.99	HL	DWN
Orthophosphate	-0.026	0.99	HL	DWN	-0.386	0.99	HL	DWN
Total Organic Carbon	-0.519	0.99	HL	DWN	-5.4	0.95	HL	DWN
Total Suspended Solids	5.7	0.72	L	UP	560.9	0.75	L	UP
Suspended Sediment	2.9	0.72	L	UP	398.8	0.77	L	UP

01553500; Lewisburg 1987-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.537	0.99	HL	DWN	-5.227	0.99	HL	DWN
Nitrate-Nitrite	-0.168	0.99	HL	DWN	-1.087	0.99	HL	DWN
Ammonia	-0.046	0.99	HL	DWN	-0.424	0.99	HL	DWN
Dissolved Nitrogen	-0.383	0.99	HL	DWN	-3.432	0.99	HL	DWN
Nitrate-Nitrite	-0.201	0.99	HL	DWN	-1.321	0.99	HL	DWN
Ammonia	-0.039	0.99	HL	DWN	-0.384	0.99	HL	DWN
Total Phosphorus	-0.037	0.99	HL	DWN	-0.218	0.99	HL	DWN
Particulate Phosphorus	-0.013	0.99	HL	DWN	0.018	0.54	ALAN	NS
Dissolved Phosphorus	-0.029	0.99	HL	DWN	-0.263	0.99	HL	DWN
Orthophosphate	-0.010	0.99	HL	DWN	-0.050	0.97	HL	DWN
Total Organic Carbon	-0.445	0.95	HL	DWN	-2.7	0.79	L	DWN
Total Suspended Solids	-6.6	0.79	L	DWN	-74.7	0.60	ALAN	NS
Suspended Sediment	-9.4	0.97	HL	DWN	-141.9	0.91	VL	DWN

01553500; Lewisburg 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.234	0.99	HL	DWN	-1.235	0.99	HL	DWN
Nitrate-Nitrite	-0.169	0.99	HL	DWN	-0.968	0.99	HL	DWN
Ammonia	-0.034	0.99	HL	DWN	-0.269	0.99	HL	DWN
Dissolved Nitrogen	-0.240	0.99	HL	DWN	-1.395	0.99	HL	DWN
Nitrate-Nitrite	-0.168	0.99	HL	DWN	-0.925	0.99	HL	DWN
Ammonia	-0.032	0.99	HL	DWN	-0.268	0.99	HL	DWN
Total Phosphorus	-0.021	0.99	HL	DWN	-0.149	0.97	HL	DWN
Particulate Phosphorus	-0.003	0.97	HL	DWN	0.013	0.60	ALAN	NS
Dissolved Phosphorus	-0.018	0.99	HL	DWN	-0.160	0.99	HL	DWN
Orthophosphate	-0.017	0.99	HL	DWN	-0.152	0.99	HL	DWN
Total Organic Carbon	-0.217	0.95	HL	DWN	-0.6	0.68	L	DWN
Total Suspended Solids	-1.9	0.60	ALAN	NS	19.7	0.54	ALAN	NS
Suspended Sediment	-5.4	0.99	HL	DWN	-59.9	0.83	L	DWN

01567000; Newport 1985-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.370	0.99	HL	DWN	-2.154	0.99	HL	DWN
Nitrate-Nitrite	0.013	0.60	ALAN	NS	-0.426	0.85	L	DWN
Ammonia	-0.039	0.99	HL	DWN	-0.191	0.99	HL	DWN
Dissolved Nitrogen	-0.130	0.87	L	DWN	-0.775	0.99	HL	DWN
Nitrate-Nitrite	0.074	0.74	L	UP	0.050	0.54	ALAN	NS
Ammonia	-0.031	0.99	HL	DWN	-0.170	0.99	HL	DWN
Total Phosphorus	-0.068	0.99	HL	DWN	-0.285	0.99	HL	DWN
Particulate Phosphorus	-0.024	0.97	HL	DWN	-0.170	0.95	HL	DWN
Dissolved Phosphorus	-0.043	0.99	HL	DWN	-0.138	0.99	HL	DWN
Orthophosphate	-0.033	0.97	HL	DWN	-0.089	0.93	VL	DWN
Total Organic Carbon	-2.0	0.93	VL	DWN	-10.7	0.95	HL	DWN
Total Suspended Solids	-12.6	0.91	VL	DWN	-92.5	0.79	L	DWN
Suspended Sediment	-23.3	0.97	HL	DWN	-232.4	0.85	L	DWN

01567000; Newport 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.076	0.89	L	DWN	-0.332	0.89	L	DWN
Nitrate-Nitrite	-0.030	0.74	L	DWN	-0.193	0.83	L	DWN
Ammonia	-0.021	0.99	HL	DWN	-0.078	0.99	HL	DWN
Dissolved Nitrogen	-0.067	0.85	L	DWN	-0.277	0.91	VL	DWN
Nitrate-Nitrite	-0.027	0.64	ALAN	NS	-0.188	0.75	L	DWN
Ammonia	-0.017	0.99	HL	DWN	-0.062	0.97	HL	DWN
Total Phosphorus	-0.030	0.99	HL	DWN	-0.126	0.99	HL	DWN
Particulate Phosphorus	-0.008	0.99	HL	DWN	-0.080	0.97	HL	DWN
Dissolved Phosphorus	-0.022	0.99	HL	DWN	-0.067	0.99	HL	DWN
Orthophosphate	-0.021	0.99	HL	DWN	-0.072	0.99	HL	DWN
Total Organic Carbon	-0.374	0.97	HL	DWN	-1.0	0.83	L	DWN
Total Suspended Solids	-6.1	0.89	L	DWN	-46.8	0.83	L	DWN
Suspended Sediment	-9.0	0.99	HL	DWN	-102.1	0.97	HL	DWN

01576754; Conestoga 1985-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-3.331	0.99	HL	DWN	-2.375	0.99	HL	DWN
Nitrate-Nitrite	-2.352	0.99	HL	DWN	-1.395	0.99	HL	DWN
Ammonia	-0.335	0.99	HL	DWN	-0.253	0.99	HL	DWN
Dissolved Nitrogen	-2.450	0.99	HL	DWN	-1.513	0.99	HL	DWN
Nitrate-Nitrite	-2.166	0.99	HL	DWN	-1.237	0.99	HL	DWN
Ammonia	-0.318	0.99	HL	DWN	-0.245	0.99	HL	DWN
Total Phosphorus	-0.359	0.97	HL	DWN	-0.242	0.89	L	DWN
Particulate Phosphorus	-0.129	0.95	HL	DWN	-0.119	0.79	L	DWN
Dissolved Phosphorus	-0.214	0.99	HL	DWN	-0.106	0.99	HL	DWN
Orthophosphate	-0.216	0.99	HL	DWN	-0.092	0.93	VL	DWN
Total Organic Carbon	-5.2	0.97	HL	DWN	-4.2	0.97	HL	DWN
Total Suspended Solids	-59.1	0.97	HL	DWN	-106.9	0.95	HL	DWN
Suspended Sediment	-103.4	0.89	L	DWN	-177.6	0.85	L	DWN

01576754; Conestoga 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-2.180	0.99	HL	DN	-1.221	0.99	HL	DN
Nitrate-Nitrite	-2.056	0.99	HL	DN	-1.169	0.99	HL	DN
Ammonia	-0.013	0.81	L	DN	0.007	0.66	ALAN	NS
Dissolved Nitrogen	-2.211	0.99	HL	DN	-1.290	0.99	HL	DN
Nitrate-Nitrite	-1.916	0.99	HL	DN	-1.116	0.99	HL	DN
Ammonia	-0.016	0.83	L	DN	0.004	0.68	L	UP
Total Phosphorus	-0.060	0.91	VL	DN	-0.020	0.64	ALAN	NS
Particulate Phosphorus	-0.006	0.58	ALAN	NS	0.014	0.62	ALAN	NS
Dissolved Phosphorus	-0.046	0.97	HL	DN	-0.019	0.91	VL	DN
Orthophosphate	-0.041	0.99	HL	DN	-0.017	0.93	VL	DN
Total Organic Carbon	-0.339	0.79	L	DN	-0.273	0.77	L	DN
Total Suspended Solids	-13.6	0.81	L	DN	-21.4	0.74	L	DN
Suspended Sediment	-17.9	0.87	L	DN	-15.9	0.74	L	DN

01502500; Unadilla 2006-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.117	0.99	HL	UP	0.074	0.93	VL	UP
Nitrate-Nitrite	0.107	0.99	HL	UP	0.066	0.95	HL	UP
Ammonia	-0.020	0.99	HL	DWN	-0.021	0.99	HL	DWN
Dissolved Nitrogen	0.121	0.97	HL	UP	0.079	0.95	HL	UP
Nitrate-Nitrite	0.147	0.99	HL	UP	0.107	0.99	HL	UP
Ammonia	-0.016	0.99	HL	DWN	-0.018	0.97	HL	DWN
Total Phosphorus	-0.033	0.99	HL	DWN	-0.037	0.99	HL	DWN
Particulate Phosphorus	-0.005	0.97	HL	DWN	-0.007	0.87	L	DWN
Dissolved Phosphorus	-0.023	0.99	HL	DWN	-0.025	0.99	HL	DWN
Orthophosphate	-0.026	0.99	HL	DWN	-0.025	0.99	HL	DWN
Total Organic Carbon	0.310	0.91	VL	UP	0.178	0.85	L	UP
Total Suspended Solids	-3.1	0.95	HL	DWN	-7.3	0.81	L	DWN
Suspended Sediment	1.5	0.68	L	UP	-3.1	0.64	ALAN	NS

01503000; Conklin 2006-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.117	0.99	HL	UP	0.074	0.93	VL	UP
Nitrate-Nitrite	-0.020	0.62	ALAN	NS	0.192	0.91	VL	DWN
Ammonia	-0.028	0.99	HL	DWN	-0.111	0.99	HL	DWN
Dissolved Nitrogen	-0.035	0.74	L	DWN	-0.202	0.85	L	DWN
Nitrate-Nitrite	0.001	0.50	ALAN	NS	-0.085	0.81	L	DWN
Ammonia	-0.027	0.99	HL	DWN	-0.107	0.99	HL	DWN
Total Phosphorus	-0.040	0.99	HL	DWN	-0.155	0.95	HL	DWN
Particulate Phosphorus	-0.004	0.89	L	DWN	0.020	0.60	ALAN	NS
Dissolved Phosphorus	-0.032	0.99	HL	DWN	-0.118	0.99	HL	DWN
Orthophosphate	-0.030	0.99	HL	DWN	-0.112	0.99	HL	DWN
Total Organic Carbon	0.090	0.75	L	UP	0.866	0.93	VL	UP
Total Suspended Solids	7.8	0.77	L	UP	206.4	0.77	L	UP
Suspended Sediment	14.7	0.87	L	UP	159.4	0.79	L	UP

01515000; Waverly 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.143	0.99	HL	DWN	-1.281	0.99	HL	DWN
Nitrate-Nitrite	-0.076	0.97	HL	DWN	-0.829	0.99	HL	DWN
Ammonia	-0.029	0.99	HL	DWN	-0.269	0.99	HL	DWN
Dissolved Nitrogen	-0.129	0.95	HL	DWN	-1.136	0.97	HL	DWN
Nitrate-Nitrite	-0.056	0.87	L	DWN	-0.664	0.99	HL	DWN
Ammonia	-0.030	0.99	HL	DWN	-0.250	0.99	HL	DWN
Total Phosphorus	-0.043	0.99	HL	DWN	-0.386	0.99	HL	DWN
Particulate Phosphorus	-0.026	0.99	HL	DWN	-0.174	0.89	L	DWN
Dissolved Phosphorus	-0.023	0.99	HL	DWN	-0.197	0.99	HL	DWN
Orthophosphate	-0.020	0.95	HL	DWN	-0.180	0.99	HL	DWN
Total Organic Carbon	-0.026	0.52	ALAN	NS	0.872	0.85	L	UP
Total Suspended Solids	4.6	0.87	L	UP	344.7	0.97	HL	UP
Suspended Sediment	22.8	0.95	HL	UP	560.7	0.89	L	UP

01529500; Cohocton 2006-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.123	0.83	L	UP	0.067	0.79	L	UP
Nitrate-Nitrite	0.136	0.85	L	UP	0.083	0.87	L	UP
Ammonia	-0.032	0.99	HL	DWN	-0.011	0.95	HL	DWN
Dissolved Nitrogen	0.118	0.87	L	UP	0.096	0.93	VL	UP
Nitrate-Nitrite	0.156	0.85	L	UP	0.091	0.91	VL	UP
Ammonia	-0.033	0.99	HL	DWN	-0.011	0.99	HL	DWN
Total Phosphorus	-0.037	0.99	HL	DWN	-0.013	0.89	L	DWN
Particulate Phosphorus	-0.004	0.89	L	DWN	0.001	0.52	ALAN	NS
Dissolved Phosphorus	-0.032	0.99	HL	DWN	-0.011	0.99	HL	DWN
Orthophosphate	-0.031	0.99	HL	DWN	-0.012	0.99	HL	DWN
Total Organic Carbon	0.374	0.85	L	UP	0.232	0.89	L	UP
Total Suspended Solids	-4.934	0.81	L	DWN	-2.6	0.56	ALAN	NS
Suspended Sediment	13.4	0.85	L	UP	35.9	0.87	L	UP

01531000; Chemung 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.010	0.56	ALAN	NS	-0.16	0.83	L	DWN
Nitrate-Nitrite	0.088	0.78	L	UP	0.08	0.62	ALAN	NS
Ammonia	-0.007	0.83	L	DWN	-0.04	0.93	VL	DWN
Dissolved Nitrogen	-0.080	0.87	L	DWN	-0.20	0.81	L	DWN
Nitrate-Nitrite	-0.004	0.52	ALAN	NS	0.01	0.52	ALAN	NS
Ammonia	-0.014	0.81	L	DWN	-0.05	0.95	HL	DWN
Total Phosphorus	-0.065	0.97	HL	DWN	-0.11	0.97	HL	DWN
Particulate Phosphorus	-0.017	0.97	HL	DWN	-0.01	0.70	L	DWN
Dissolved Phosphorus	-0.043	0.93	VL	DWN	-0.08	0.97	HL	DWN
Orthophosphate	-0.045	0.93	VL	DWN	-0.08	0.97	HL	DWN
Total Organic Carbon	0.214	0.85	L	UP	0.67	0.83	L	UP
Total Suspended Solids	0.56	0.52	ALAN	NS	95.2	0.72	L	UP
Suspended Sediment	9.4	0.79	L	UP	136.7	0.89	L	UP

01536500; Wilkes-Barre 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.132	0.99	HL	DWN	-0.931	0.91	VL	DWN
Nitrate-Nitrite	-0.072	0.99	HL	DWN	-1.099	0.99	HL	DWN
Ammonia	-0.019	0.99	HL	DWN	-0.270	0.99	HL	DWN
Dissolved Nitrogen	-0.109	0.99	HL	DWN	-1.249	0.99	HL	DWN
Nitrate-Nitrite	-0.181	0.99	HL	DWN	-2.508	0.99	HL	DWN
Ammonia	-0.016	0.99	HL	DWN	-0.246	0.99	HL	DWN
Total Phosphorus	-0.030	0.99	HL	DWN	-0.269	0.77	L	DWN
Particulate Phosphorus	-0.002	0.60	ALAN	NS	0.185	0.85	L	UP
Dissolved Phosphorus	-0.026	0.99	HL	DWN	-0.357	0.99	HL	DWN
Orthophosphate	-0.026	0.99	HL	DWN	-0.393	0.99	HL	DWN
Total Organic Carbon	-0.530	0.99	HL	DWN	-7.589	0.97	HL	DWN
Total Suspended Solids	7.5	0.85	L	UP	198.3	0.64	ALAN	NS
Suspended Sediment	16.0	0.91	VL	UP	436.3	0.75	L	UP

01542500; Karthaus 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.004	0.58	ALAN	NS	0.031	0.68	L	UP
Nitrate-Nitrite	-0.028	0.89	L	DWN	0.062	0.74	L	UP
Ammonia	-0.030	0.99	HL	DWN	-0.064	0.99	HL	DWN
Dissolved Nitrogen	-0.047	0.89	L	DWN	-0.030	0.62	ALAN	NS
Nitrate-Nitrite	-0.018	0.85	L	DWN	0.072	0.77	L	UP
Ammonia	-0.027	0.99	HL	DWN	-0.061	0.99	HL	DWN
Total Phosphorus	-0.018	0.99	HL	DWN	-0.037	0.99	HL	DWN
Particulate Phosphorus	-0.011	0.99	HL	DWN	-0.026	0.99	HL	DWN
Dissolved Phosphorus	-0.011	0.99	HL	DWN	-0.015	0.99	HL	DWN
Orthophosphate	-0.009	0.99	HL	DWN	-0.014	0.99	HL	DWN
Total Organic Carbon	0.029	0.52	ALAN	NS	-0.073	0.64	ALAN	NS
Total Suspended Solids	-1.883	0.81	L	DWN	-8.4	0.81	L	DWN
Suspended Sediment	8.3	0.75	L	UP	11.3	0.60	ALAN	NS

01549760; Jersey Shore 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.025	0.72	L	DWN	0.175	0.70	L	UP
Nitrate-Nitrite	-0.059	0.81	L	DWN	-0.065	0.58	ALAN	NS
Ammonia	-0.017	0.99	HL	DWN	-0.145	0.99	HL	DWN
Dissolved Nitrogen	-0.043	0.77	L	DWN	-0.017	0.56	ALAN	NS
Nitrate-Nitrite	-0.050	0.79	L	DWN	-0.030	0.54	ALAN	NS
Ammonia	-0.016	0.99	HL	DWN	-0.134	0.99	HL	DWN
Total Phosphorus	-0.023	0.99	HL	DWN	-0.136	0.99	HL	DWN
Particulate Phosphorus	-0.001	0.77	L	DWN	0.002	0.56	ALAN	NS
Dissolved Phosphorus	-0.023	0.99	HL	DWN	-0.135	0.99	HL	DWN
Orthophosphate	-0.019	0.99	HL	DWN	-0.109	0.99	HL	DWN
Total Organic Carbon	-0.011	0.64	ALAN	NS	-0.005	0.64	ALAN	NS
Total Suspended Solids	-1.081	0.74	L	DWN	-13.4	0.60	ALAN	NS
Suspended Sediment	1.2	0.58	ALAN	NS	32.5	0.68	L	UP

01555000; Penns Creek 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.063	0.87	L	UP	0.029	0.85	L	UP
Nitrate-Nitrite	0.075	0.89	L	UP	0.009	0.56	ALAN	NS
Ammonia	-0.012	0.97	HL	DWN	-0.006	0.93	VL	DWN
Dissolved Nitrogen	0.023	0.68	L	UP	0.003	0.58	ALAN	NS
Nitrate-Nitrite	0.065	0.85	L	UP	-0.010	0.58	ALAN	NS
Ammonia	-0.011	0.99	HL	DWN	-0.005	0.95	HL	DWN
Total Phosphorus	-0.028	0.99	HL	DWN	-0.011	0.95	HL	DWN
Particulate Phosphorus	0.001	0.52	ALAN	NS	0.001	0.54	ALAN	NS
Dissolved Phosphorus	-0.029	0.99	HL	DWN	-0.011	0.99	HL	DWN
Orthophosphate	-0.026	0.99	HL	DWN	-0.011	0.99	HL	DWN
Total Organic Carbon	-0.331	0.91	VL	DWN	-0.153	0.79	L	DWN
Total Suspended Solids	0.537	0.58	ALAN	NS	0.5	0.56	ALAN	NS
Suspended Sediment	3.5	0.66	ALAN	NS	-4.1	0.89	L	DWN

01556000; Frankstown 2011-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.313	0.97	HL	UP	0.031	0.68	L	UP
Nitrate-Nitrite	0.399	0.97	HL	UP	0.094	0.95	HL	UP
Ammonia	-0.021	0.99	HL	DWN	-0.011	0.99	HL	DWN
Dissolved Nitrogen	0.351	0.97	HL	UP	0.063	0.87	L	UP
Nitrate-Nitrite	0.321	0.87	L	UP	0.078	0.87	L	UP
Ammonia	-0.024	0.99	HL	DWN	-0.014	0.99	HL	DWN
Total Phosphorus	-0.039	0.97	HL	DWN	-0.017	0.99	HL	DWN
Particulate Phosphorus	-0.018	0.99	HL	DWN	-0.010	0.99	HL	DWN
Dissolved Phosphorus	-0.018	0.95	HL	DWN	-0.006	0.95	HL	DWN
Orthophosphate	-0.026	0.97	HL	DWN	-0.007	0.97	HL	DWN
Total Organic Carbon	-1.354	0.99	HL	DWN	-0.690	0.97	HL	DWN
Total Suspended Solids	-14.342	0.97	HL	DWN	-14.4	0.89	L	DWN
Suspended Sediment	--	--	--	--	--	--	--	--

01558000; Little Juniata 2011-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.047	0.70	L	UP	0.007	0.58	ALAN	NS
Nitrate-Nitrite	0.153	0.89	L	UP	0.035	0.89	L	UP
Ammonia	0.004	0.75	L	UP	0.001	0.64	ALAN	NS
Dissolved Nitrogen	0.118	0.83	L	UP	0.022	0.74	L	UP
Nitrate-Nitrite	0.151	0.91	VL	UP	0.038	0.89	L	UP
Ammonia	0.001	0.58	ALAN	NS	0.000	0.50	ALAN	NS
Total Phosphorus	-0.034	0.99	HL	DWN	-0.008	0.83	L	DWN
Particulate Phosphorus	-0.006	0.91	VL	DWN	0.000	0.52	ALAN	NS
Dissolved Phosphorus	-0.026	0.99	HL	DWN	-0.006	0.97	HL	DWN
Orthophosphate	-0.029	0.99	HL	DWN	-0.007	0.99	HL	DWN
Total Organic Carbon	-0.633	0.97	HL	DWN	-0.328	0.95	HL	DWN
Total Suspended Solids	-6.280	0.74	L	DWN	-2.8	0.52	ALAN	NS
Suspended Sediment	--	--	--	--	--	--	--	--

01562000; Raystown 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.106	0.77	L	UP	-0.062	0.70	L	DWN
Nitrate-Nitrite	0.147	0.75	L	UP	-0.062	0.70	L	DWN
Ammonia	-0.009	0.97	HL	DWN	-0.010	0.95	HL	DWN
Dissolved Nitrogen	0.079	0.74	L	UP	-0.077	0.83	L	DWN
Nitrate-Nitrite	0.152	0.75	L	UP	-0.077	0.83	L	DWN
Ammonia	-0.008	0.89	L	DWN	-0.010	0.97	HL	DWN
Total Phosphorus	0.003	0.70	L	UP	0.003	0.56	ALAN	NS
Particulate Phosphorus	0.004	0.89	L	UP	0.008	0.77	L	UP
Dissolved Phosphorus	0.000	0.50	ALAN	NS	-0.003	0.75	L	DWN
Orthophosphate	-0.001	0.75	L	DWN	-0.003	0.87	L	DWN
Total Organic Carbon	-0.413	0.93	VL	DWN	-0.482	0.83	L	DWN
Total Suspended Solids	-3.5	0.74	L	DWN	-29.0	0.89	L	DWN
Suspended Sediment	15.2	0.83	L	UP	10.7	0.52	ALAN	NS

01565000; Kishacoquillas 2013-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.053	0.58	ALAN	NS	-0.018	0.66	ALAN	NS
Nitrate-Nitrite	-0.050	0.62	ALAN	NS	-0.022	0.70	L	DWN
Ammonia	0.003	0.70	L	UP	0.000	0.62	ALAN	NS
Dissolved Nitrogen	-0.022	0.50	ALAN	NS	-0.011	0.64	ALAN	NS
Nitrate-Nitrite	-0.019	0.52	ALAN	NS	-0.019	0.64	ALAN	NS
Ammonia	-0.003	0.72	L	DWN	-0.001	0.77	L	DWN
Total Phosphorus	-0.020	0.99	HL	DWN	-0.002	0.85	L	DWN
Particulate Phosphorus	0.002	0.68	L	UP	0.002	0.75	L	UP
Dissolved Phosphorus	-0.021	0.99	HL	DWN	-0.003	0.99	HL	DWN
Orthophosphate	-0.025	0.99	HL	DWN	-0.004	0.99	HL	DWN
Total Organic Carbon	-0.362	0.93	VL	DWN	-0.132	0.93	VL	DWN
Total Suspended Solids	-3.7	0.83	L	DWN	-0.9	0.70	L	DWN
Suspended Sediment	14.7	0.85	L	UP	5.0	0.77	L	UP

01568000; Shermans 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	0.010	0.74	L	UP	0.002	0.54	ALAN	NS
Nitrate-Nitrite	-0.046	0.52	ALAN	NS	-0.004	0.54	ALAN	NS
Ammonia	-0.014	0.99	HL	DWN	-0.006	0.89	L	DWN
Dissolved Nitrogen	-0.036	0.56	ALAN	NS	-0.015	0.74	L	DWN
Nitrate-Nitrite	-0.029	0.56	ALAN	NS	0.002	0.64	ALAN	NS
Ammonia	-0.013	0.97	HL	DWN	-0.006	0.89	L	DWN
Total Phosphorus	0.006	0.85	L	UP	0.002	0.56	ALAN	NS
Particulate Phosphorus	0.001	0.52	ALAN	NS	0.001	0.54	ALAN	NS
Dissolved Phosphorus	0.005	0.89	L	UP	0.002	0.62	ALAN	NS
Orthophosphate	0.001	0.52	ALAN	NS	0.001	0.52	ALAN	NS
Total Organic Carbon	-0.046	0.68	L	DWN	-0.149	0.89	L	DWN
Total Suspended Solids	-2.1	0.83	L	DWN	-2.7	0.74	L	DWN
Suspended Sediment	2.3	0.74	L	UP	-5.3	0.91	VL	DWN

01570000; Conodoguinet 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.519	0.99	HL	DWN	-0.273	0.99	HL	DWN
Nitrate-Nitrite	-0.585	0.99	HL	DWN	-0.269	0.97	HL	DWN
Ammonia	-0.009	0.95	HL	DWN	-0.010	0.99	HL	DWN
Dissolved Nitrogen	0.498	0.97	HL	DWN	-0.280	NA	NA	NA
Nitrate-Nitrite	-0.291	0.74	L	DWN	-0.199	0.95	HL	DWN
Ammonia	-0.010	0.93	VL	DWN	-0.009	0.97	HL	DWN
Total Phosphorus	0.004	0.83	L	UP	-0.001	0.52	ALAN	NS
Particulate Phosphorus	0.003	0.83	L	UP	0.002	0.54	ALAN	NS
Dissolved Phosphorus	0.001	0.70	L	UP	-0.001	0.72	L	DWN
Orthophosphate	-0.004	0.99	HL	DWN	-0.004	0.99	HL	DWN
Total Organic Carbon	0.045	0.56	ALAN	NS	-0.135	0.70	L	DWN
Total Suspended Solids	2.6	0.83	L	UP	-0.2	0.60	ALAN	NS
Suspended Sediment	13.5	0.99	HL	UP	3.3	0.58	ALAN	NS

01571005; Paxton 2013-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.074	0.75	L	DN	-0.001	0.79	L	DN
Nitrate-Nitrite	-0.253	0.99	HL	DN	-0.005	0.99	HL	DN
Ammonia	0.008	0.95	HL	UP	0.000	0.89	L	UP
Dissolved Nitrogen	-0.173	0.99	HL	DN	-0.004	0.97	HL	DN
Nitrate-Nitrite	-0.249	0.99	HL	DN	-0.005	0.99	HL	DN
Ammonia	0.002	0.72	L	UP	0.000	0.72	L	UP
Total Phosphorus	0.022	0.99	HL	UP	0.001	0.95	HL	UP
Particulate Phosphorus	0.014	0.93	VL	UP	0.001	0.83	L	UP
Dissolved Phosphorus	0.008	0.99	HL	UP	0.000	0.97	HL	UP
Orthophosphate	-0.001	0.54	ALAN	NS	0.000	0.52	ALAN	NS
Total Organic Carbon	0.331	0.89	L	UP	0.004	0.62	ALAN	NS
Total Suspended Solids	14.2	0.85	L	UP	0.863	0.75	L	UP
Suspended Sediment	31.4	0.97	HL	UP	1.2	0.77	L	UP

01571500; Yellow Breeches 2011-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.209	0.99	HL	DWN	-0.072	0.99	HL	DWN
Nitrate-Nitrite	-0.241	0.99	HL	DWN	-0.064	0.99	HL	DWN
Ammonia	-0.005	0.83	L	DWN	-0.003	0.91	VL	DWN
Dissolved Nitrogen	-0.208	0.99	HL	DWN	-0.060	0.99	HL	DWN
Nitrate-Nitrite	-0.261	0.99	HL	DWN	-0.067	0.99	HL	DWN
Ammonia	-0.006	0.87	L	DWN	-0.004	0.95	HL	DWN
Total Phosphorus	0.016	0.99	HL	UP	0.004	0.68	L	UP
Particulate Phosphorus	0.003	0.62	ALAN	NS	0.000	0.52	ALAN	NS
Dissolved Phosphorus	0.013	0.99	HL	UP	0.003	0.87	L	UP
Orthophosphate	0.006	0.79	L	UP	0.001	0.58	ALAN	NS
Total Organic Carbon	0.638	0.99	HL	UP	0.104	0.72	L	UP
Total Suspended Solids	-9.729	0.81	L	DWN	-8.5	0.75	L	DWN
Suspended Sediment	--	--	--	--	--	--	--	--

01573560; Swatara 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-1.345	0.99	HL	DWN	-0.646	0.99	HL	DWN
Nitrate-Nitrite	-1.481	0.99	HL	DWN	-0.825	0.99	HL	DWN
Ammonia	-0.016	0.91	VL	DWN	-0.011	0.75	L	DWN
Dissolved Nitrogen	-1.383	0.99	HL	DWN	-0.701	0.99	HL	DWN
Nitrate-Nitrite	-1.447	0.99	HL	DWN	-0.775	0.99	HL	DWN
Ammonia	-0.013	0.81	L	DWN	-0.009	0.74	L	DWN
Total Phosphorus	0.009	0.85	L	UP	0.024	0.83	L	UP
Particulate Phosphorus	0.007	0.93	VL	UP	0.011	0.81	L	UP
Dissolved Phosphorus	0.003	0.74	L	UP	0.013	0.93	VL	UP
Orthophosphate	-0.002	0.66	ALAN	NS	0.008	0.75	L	UP
Total Organic Carbon	0.271	0.81	L	UP	-0.168	0.66	ALAN	NS
Total Suspended Solids	3.6	0.91	VL	UP	1.907	0.68	L	UP
Suspended Sediment	19.6	0.99	HL	UP	17.1	0.89	L	UP

01576787; Pequea 2005-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
Parameter/code		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-1.375	0.99	HL	DWN	-0.223	0.99	HL	DWN
Nitrate-Nitrite	-1.001	0.99	HL	DWN	-0.158	0.99	HL	DWN
Ammonia	0.007	0.70	L	UP	0.003	0.72	L	UP
Dissolved Nitrogen	-1.437	0.99	HL	DWN	-0.235	0.99	HL	DWN
Nitrate-Nitrite	-0.836	0.99	HL	DWN	-0.132	0.99	HL	DWN
Ammonia	0.008	0.74	L	UP	0.003	0.70	L	UP
Total Phosphorus	0.048	0.85	L	UP	0.026	0.89	L	UP
Particulate Phosphorus	0.012	0.75	L	UP	0.014	0.79	L	UP
Dissolved Phosphorus	0.035	0.93	VL	UP	0.011	0.95	HL	UP
Orthophosphate	0.028	0.87	L	UP	0.009	0.95	HL	UP
Total Organic Carbon	-0.323	0.68	L	DWN	-0.159	0.91	VL	DWN
Total Suspended Solids	-3.3	0.62	ALAN	NS	-2.5	0.66	ALAN	NS
Suspended Sediment	88.0	0.87	L	UP	29.5	0.87	L	UP

01578475; Octoraro 2007-2024	Flow Normalized Concentration (mg/L)				Flow Normalized Load (Millions kg/yr)			
	Change	Likelihood Test			Change	Likelihood Test		
Parameter/code		Value	Descriptor	Trend		Value	Descriptor	Trend
Total Nitrogen	-0.800	0.93	VL	DWN	-0.148	0.95	HL	DWN
Nitrate-Nitrite	-0.632	0.91	VL	DWN	-0.111	0.85	L	DWN
Ammonia	-0.033	0.95	HL	DWN	-0.014	0.87	L	DWN
Dissolved Nitrogen	-0.836	0.95	HL	DWN	-0.170	0.95	HL	DWN
Nitrate-Nitrite	-0.598	0.91	VL	DWN	-0.100	0.81	L	DWN
Ammonia	-0.032	0.95	HL	DWN	-0.014	0.89	L	DWN
Total Phosphorus	-0.023	0.77	L	DWN	0.001	0.54	ALAN	NS
Particulate Phosphorus	0.001	0.54	ALAN	NS	0.005	0.75	L	UP
Dissolved Phosphorus	-0.026	0.93	VL	DWN	-0.005	0.75	L	DWN
Orthophosphate	-0.025	0.97	HL	DWN	-0.004	0.75	L	DWN
Total Organic Carbon	-0.559	0.93	VL	DWN	-0.205	0.93	VL	DWN
Total Suspended Solids	-1.4	0.56	ALAN	NS	2.3	0.72	L	UP
Suspended Sediment	20.5	0.99	HL	UP	7.3	0.77	L	UP

Temperature, Dissolved Oxygen, Conductivity, and pH Summary Statistics of Samples Collected in Water Year 2024

Station	# Samples Collected	Temperature (°C)					Dissolved Oxygen (mg/L)					Conductivity (µmhos/cm)					pH (S.U.)				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Bald Eagle	22	1.4	26.7	8.0	10.3	7.12	8.70	14.17	11.59	11.42	1.55	86.0	401.7	247.0	259.5	72.34	7.20	8.21	7.89	7.82	0.26
Chemung	22	2.6	27.2	7.4	11.4	8.60	8.18	13.39	11.24	10.93	1.68	163.1	519.0	222.7	264.2	102.43	7.56	8.44	7.82	7.88	0.26
Cohocton	21	1.2	24.9	5.4	9.4	7.85	8.16	14.83	11.78	11.59	1.55	234.3	569.0	358.2	383.8	109.01	7.57	8.55	7.97	7.99	0.32
Conestoga	20	4.1	26.7	9.5	12.3	7.22	6.10	14.20	10.39	9.94	2.18	59.5	841.0	556.0	506.2	192.19	7.56	8.30	7.81	7.90	0.22
Conodoguinet	20	4.0	29.9	10.3	12.2	7.90	7.08	14.24	11.27	11.04	1.72	194.0	587.0	354.5	389.9	125.98	7.48	8.42	7.89	7.91	0.29
Frankstown Branch	18	0.4	23.8	7.8	10.0	6.96	7.98	14.28	11.41	11.17	1.94	124.0	733.2	325.0	359.0	158.44	7.20	8.49	7.82	7.84	0.33
Juniata	19	3.9	30.8	9.0	12.4	8.69	8.31	12.71	11.17	10.89	1.44	114.0	333.0	240.0	236.4	63.04	7.47	8.82	7.90	8.00	0.41
Kishacoquillas	18	2.6	22.4	7.6	9.4	5.53	10.28	12.94	11.53	11.62	0.87	152.0	387.0	248.0	260.7	66.38	7.30	8.65	8.04	8.05	0.45
Little Juniata	18	2.2	20.8	8.0	9.6	5.68	9.13	14.09	11.67	11.66	1.36	102.0	403.5	243.0	257.3	85.38	7.15	8.43	7.83	7.88	0.35
Mahantango	18	1.4	27.7	8.9	10.8	7.40	7.63	13.43	11.03	11.01	1.57	110.0	231.3	160.8	154.8	33.19	6.77	8.22	7.38	7.39	0.38
Octoraro	20	3.3	27.5	9.1	11.9	7.92	7.77	16.43	11.41	11.35	1.98	167.0	287.9	264.7	246.9	40.83	7.36	9.21	7.85	7.94	0.47
Paxton	20	1.3	26.0	9.6	12.1	7.33	7.04	15.45	11.47	11.53	2.19	149.0	826.0	413.0	462.7	202.26	7.52	9.08	7.85	7.96	0.37
Penns	20	1.1	28.4	7.6	10.5	7.90	9.33	14.44	11.83	11.90	1.34	73.0	240.0	186.0	175.7	42.39	7.41	8.92	7.93	8.11	0.53
Pequea	20	3.1	25.1	9.2	11.8	6.82	7.25	15.02	10.57	10.58	1.92	115.5	553.0	469.0	412.2	132.29	7.55	8.43	8.01	8.00	0.26
Raystown Branch	19	0.0	27.2	6.9	10.0	8.08	6.19	14.38	11.58	11.09	2.19	104.0	735.0	303.0	305.2	140.13	7.32	8.43	7.85	7.86	0.28
Sherman	20	1.8	28.1	9.3	11.2	7.82	7.35	14.20	11.38	11.19	1.66	90.0	311.4	167.0	169.9	55.90	7.14	8.62	7.72	7.76	0.44
Susq @ Conklin	21	1.1	29.9	5.3	11.1	8.63	8.09	13.60	10.78	10.69	1.87	52.6	260.0	141.5	156.4	51.72	7.24	8.43	7.65	7.69	0.27
Susq @ Danville	19	2.9	30.7	9.0	12.6	8.95	6.92	13.34	11.05	10.71	1.80	108.3	351.3	223.4	223.6	66.47	7.24	8.56	7.61	7.72	0.32
Susq @ Smithboro	21	2.1	27.0	6.7	11.5	8.43	7.35	13.38	10.81	10.65	1.89	23.8	740.9	159.1	199.8	144.99	7.33	8.29	7.72	7.76	0.23
Susq @ Towanda	21	1.2	27.2	7.3	11.2	8.13	7.89	13.51	11.38	10.75	1.77	111.0	370.0	184.0	202.0	61.12	7.27	8.18	7.89	7.83	0.24
Susq @ Wilkes-Barre	20	1.9	28.3	9.0	12.2	8.59	6.77	13.57	11.24	10.55	2.14	110.0	361.0	211.5	208.6	61.98	7.31	7.85	7.54	7.54	0.12
Swatara	18	3.3	28.2	9.2	11.7	7.94	7.98	14.67	11.11	10.98	1.70	124.0	442.0	264.0	257.1	88.99	7.20	8.69	7.70	7.72	0.36
Unadilla	21	0.8	28.5	5.5	9.7	8.23	8.24	13.38	11.35	11.01	1.73	79.5	734.0	222.0	244.3	129.51	7.43	8.51	7.85	7.85	0.24
WB Susq @ Jershey Shore	21	3.3	30.8	7.4	10.8	7.49	8.82	13.58	11.57	11.32	1.46	63.0	336.0	165.5	181.3	79.94	6.95	8.49	7.59	7.60	0.37
WB Susq @ Karthaus	22	1.1	26.4	7.4	10.0	7.16	8.73	13.89	11.41	11.20	1.58	142.0	631.0	251.2	294.6	125.24	6.33	7.98	7.39	7.32	0.36
WB Susq @ Lewisburg	19	2.6	30.7	9.6	12.6	8.52	7.46	13.48	11.61	11.19	1.60	99.0	291.0	177.2	173.9	54.38	7.06	8.97	7.51	7.68	0.48
Yellow Breeches	19	4.3	25.3	10.7	12.2	6.73	7.65	13.72	10.92	10.82	1.58	137.0	587.0	309.0	311.6	110.44	7.19	8.44	7.95	7.91	0.30

Various Total Nitrogen Species Summary Statistics of Samples Collected in Water Year 2024, in mg/L

Station	# Samples Collected	Total Nitrogen					Total Ammonia					Total Nitrate Plus Nitrite				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Bald Eagle	22	0.68	2.05	1.37	1.34	0.35	0.008	0.093	0.026	0.030	0.024	0.55	1.43	0.98	1.00	0.25
Chemung	22	0.54	1.77	1.14	1.16	0.31	0.007	0.088	0.027	0.035	0.021	0.31	1.20	0.63	0.61	0.21
Cohocton	21	0.94	2.37	1.48	1.54	0.34	0.003	0.072	0.014	0.020	0.018	0.51	1.96	1.03	1.06	0.30
Conestoga	20	3.16	7.71	5.20	5.17	1.14	0.008	0.493	0.072	0.109	0.121	2.30	7.63	4.05	4.35	1.40
Conodoguinet	20	2.21	4.82	3.49	3.56	0.63	0.008	0.098	0.030	0.037	0.028	1.70	4.09	3.08	3.04	0.62
Frankstown Branch	18	1.03	4.09	1.81	2.13	0.84	0.008	0.099	0.030	0.031	0.023	0.72	3.62	1.60	1.80	0.81
Juniata	19	1.20	2.55	1.55	1.63	0.39	0.008	0.079	0.021	0.028	0.022	0.88	1.57	1.17	1.19	0.21
Kishacoquillas	18	1.80	3.85	2.70	2.70	0.60	0.008	0.096	0.026	0.035	0.029	1.28	3.52	2.37	2.37	0.62
Little Juniata	18	0.91	2.71	1.67	1.67	0.52	0.008	0.071	0.010	0.023	0.020	0.55	2.45	1.26	1.38	0.55
Mahantango	18	1.84	6.80	3.88	3.93	1.34	0.008	0.068	0.017	0.026	0.023	1.47	5.08	3.14	3.36	1.02
Octoraro	20	3.71	7.49	4.97	5.39	1.16	0.008	0.218	0.058	0.084	0.075	2.82	7.08	4.24	4.65	1.33
Paxton	20	0.43	2.40	1.39	1.39	0.50	0.008	0.106	0.018	0.029	0.028	0.36	2.10	0.73	0.96	0.50
Penns	20	0.75	4.10	1.40	1.59	0.72	0.008	0.194	0.016	0.038	0.048	0.66	2.39	1.03	1.12	0.40
Pequea	20	3.31	8.54	6.06	6.03	1.22	0.008	0.484	0.066	0.113	0.127	0.96	8.58	5.23	5.15	2.01
Raystown Branch	19	1.23	2.84	2.28	2.19	0.53	0.008	0.080	0.022	0.028	0.021	0.86	2.44	1.74	1.72	0.47
Sherman	20	0.99	4.61	2.02	2.17	0.82	0.008	0.151	0.031	0.046	0.042	0.82	2.60	1.52	1.54	0.50
Susq @ Conklin	21	0.45	1.34	0.79	0.81	0.22	0.003	0.061	0.020	0.022	0.016	0.12	0.81	0.36	0.38	0.15
Susq @ Danville	19	0.28	1.18	0.73	0.79	0.25	0.008	0.050	0.019	0.022	0.013	0.09	0.87	0.42	0.46	0.19
Susq @ Smithboro	21	0.59	1.31	0.92	0.92	0.20	0.003	0.076	0.018	0.025	0.019	0.28	1.01	0.40	0.46	0.17
Susq @ Towanda	21	0.48	1.17	0.86	0.81	0.21	0.008	0.077	0.018	0.023	0.017	0.30	0.90	0.40	0.45	0.14
Susq @ Wilkes-Barre	20	0.33	1.12	0.73	0.75	0.22	0.008	0.084	0.023	0.028	0.019	0.13	0.82	0.39	0.42	0.17
Swatara	18	2.27	4.36	2.64	2.97	0.64	0.008	0.220	0.036	0.060	0.056	1.04	3.79	2.28	2.35	0.72
Unadilla	21	0.59	1.60	1.10	1.06	0.25	0.006	0.074	0.019	0.024	0.018	0.25	1.29	0.60	0.64	0.25
WB Susq @ Jershey Shore	21	0.24	1.14	0.56	0.64	0.23	0.007	0.086	0.009	0.018	0.019	0.21	0.70	0.41	0.41	0.13
WB Susq @ Karthaus	22	0.23	1.12	0.60	0.59	0.23	0.007	0.078	0.012	0.023	0.019	0.07	0.59	0.37	0.36	0.15
WB Susq @ Lewisburg	19	0.45	1.11	0.70	0.73	0.16	0.008	0.038	0.010	0.017	0.012	0.33	0.90	0.54	0.53	0.14
Yellow Breeches	19	1.46	2.57	1.93	1.97	0.27	0.008	0.095	0.015	0.031	0.029	0.80	2.21	1.60	1.55	0.40

Various Dissolved Nitrogen Species Summary Statistics of Samples Collected in Water Year 2024, in mg/L

Station	# Samples Collected	Dissolved Nitrogen					Dissolved Ammonia					Dissolved Nitrate Plus Nitrite				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Bald Eagle	22	0.62	1.79	1.18	1.25	0.31	0.008	0.101	0.021	0.029	0.024	0.55	1.42	0.98	1.00	0.24
Chemung	22	0.60	1.89	0.96	1.02	0.30	0.003	0.073	0.024	0.029	0.019	0.31	1.21	0.64	0.63	0.21
Cohocton	21	1.00	2.57	1.35	1.49	0.39	0.003	0.080	0.016	0.020	0.019	0.51	1.83	1.04	1.06	0.28
Conestoga	20	2.90	7.83	4.67	4.75	1.24	0.008	0.454	0.069	0.101	0.112	2.29	7.61	4.05	4.35	1.40
Conodoguinet	20	2.05	4.94	3.36	3.42	0.70	0.008	0.088	0.032	0.035	0.026	1.70	4.10	3.11	3.08	0.63
Frankstown Branch	18	0.87	4.12	1.65	2.03	0.90	0.008	0.096	0.027	0.028	0.022	0.72	3.64	1.53	1.80	0.82
Juniata	19	1.12	2.24	1.52	1.50	0.27	0.008	0.074	0.019	0.025	0.019	0.88	1.56	1.17	1.18	0.20
Kishacoquillas	18	1.58	3.85	2.52	2.61	0.68	0.008	0.135	0.024	0.034	0.033	1.28	3.52	2.36	2.36	0.62
Little Juniata	18	0.64	2.72	1.49	1.58	0.59	0.008	0.067	0.016	0.021	0.017	0.55	2.43	1.26	1.38	0.55
Mahantango	18	1.85	6.74	3.74	3.82	1.23	0.008	0.082	0.020	0.030	0.026	1.50	5.05	3.11	3.35	1.01
Octoraro	20	3.28	7.31	4.83	5.09	1.15	0.008	0.210	0.058	0.082	0.074	2.81	6.98	4.23	4.64	1.32
Paxton	20	0.44	2.30	1.03	1.22	0.52	0.008	0.073	0.019	0.027	0.021	0.36	2.13	0.73	0.95	0.50
Penns	20	0.76	3.34	1.29	1.38	0.55	0.008	0.175	0.015	0.036	0.044	0.07	2.39	1.02	1.08	0.46
Pequea	20	1.74	9.02	5.90	5.59	1.79	0.008	0.472	0.056	0.107	0.119	0.92	8.61	5.19	5.14	2.00
Raystown Branch	19	1.19	2.67	2.14	2.02	0.50	0.008	0.053	0.022	0.024	0.015	0.86	2.43	1.74	1.72	0.47
Sherman	20	0.99	3.21	1.87	1.89	0.56	0.008	0.141	0.031	0.045	0.041	0.82	2.64	1.52	1.55	0.53
Susq @ Conklin	21	0.43	1.11	0.70	0.70	0.17	0.003	0.059	0.016	0.021	0.015	0.13	0.82	0.37	0.39	0.15
Susq @ Danville	19	0.26	0.99	0.66	0.67	0.19	0.008	0.050	0.020	0.021	0.013	0.09	0.87	0.41	0.45	0.19
Susq @ Smithboro	21	0.59	1.31	0.77	0.82	0.17	0.003	0.074	0.018	0.021	0.018	0.27	1.02	0.41	0.47	0.17
Susq @ Towanda	21	0.45	0.98	0.67	0.69	0.16	0.008	0.068	0.020	0.023	0.015	0.30	0.89	0.40	0.45	0.14
Susq @ Wilkes-Barre	20	0.30	0.97	0.62	0.64	0.17	0.008	0.076	0.025	0.027	0.017	0.12	0.83	0.39	0.42	0.17
Swatara	18	1.89	4.25	2.62	2.77	0.71	0.008	0.206	0.042	0.055	0.051	1.03	3.79	2.26	2.33	0.72
Unadilla	21	0.57	1.59	0.91	0.96	0.25	0.003	0.071	0.016	0.022	0.018	0.26	1.31	0.63	0.66	0.26
WB Susq @ Jershey Shore	21	0.25	0.97	0.56	0.56	0.18	0.007	0.095	0.009	0.018	0.020	0.21	0.69	0.40	0.41	0.12
WB Susq @ Karthaus	22	0.14	0.81	0.53	0.49	0.19	0.007	0.074	0.010	0.020	0.017	0.07	0.58	0.37	0.36	0.15
WB Susq @ Lewisburg	19	0.44	1.07	0.64	0.67	0.15	0.008	0.041	0.009	0.017	0.011	0.33	0.90	0.53	0.52	0.14
Yellow Breeches	19	1.22	2.52	1.86	1.86	0.35	0.008	0.076	0.014	0.028	0.024	0.79	2.25	1.60	1.54	0.39

Various Phosphorus Species Summary Statistics of Samples Collected in Water Year 2024, in mg/L

Station	# Samples Collected	Total Phosphorus					Dissolved Phosphorus					Total Orthophosphate					Dissolved Orthophosphate				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Bald Eagle	22	0.021	0.173	0.034	0.044	0.032	0.009	0.041	0.019	0.019	0.008	0.005	0.030	0.010	0.011	0.006	0.005	0.031	0.010	0.011	0.006
Chemung	22	0.010	0.344	0.053	0.082	0.093	0.005	0.192	0.015	0.026	0.040	0.005	0.073	0.008	0.015	0.018	0.005	0.055	0.008	0.011	0.011
Cohocton	21	0.008	0.107	0.033	0.040	0.028	0.004	0.095	0.011	0.016	0.020	0.005	0.043	0.007	0.010	0.010	0.005	0.043	0.005	0.009	0.009
Conestoga	20	0.056	1.357	0.187	0.329	0.341	0.042	0.299	0.151	0.144	0.068	0.033	0.251	0.136	0.126	0.062	0.032	0.245	0.131	0.126	0.061
Conodoguinet	20	0.012	0.213	0.052	0.074	0.067	0.008	0.088	0.025	0.031	0.020	0.005	0.051	0.012	0.019	0.014	0.005	0.045	0.011	0.017	0.013
Frankstown Branch	18	0.022	0.303	0.085	0.101	0.077	0.012	0.181	0.038	0.053	0.042	0.011	0.175	0.031	0.045	0.041	0.009	0.177	0.028	0.044	0.042
Juniata	19	0.013	0.284	0.040	0.064	0.068	0.008	0.066	0.017	0.025	0.017	0.005	0.049	0.012	0.016	0.013	0.005	0.048	0.010	0.015	0.012
Kishacoquillas	18	0.018	0.480	0.038	0.100	0.125	0.013	0.095	0.029	0.038	0.025	0.010	0.078	0.021	0.029	0.022	0.009	0.076	0.020	0.028	0.021
Little Juniata	18	0.010	0.386	0.035	0.074	0.092	0.006	0.130	0.020	0.030	0.028	0.005	0.108	0.013	0.021	0.024	0.005	0.111	0.012	0.020	0.025
Mahantango	18	0.025	0.534	0.061	0.104	0.128	0.015	0.079	0.041	0.044	0.021	0.008	0.065	0.030	0.032	0.017	0.007	0.058	0.028	0.030	0.016
Octoraro	20	0.012	1.560	0.156	0.261	0.359	0.008	0.275	0.081	0.107	0.087	0.005	0.257	0.086	0.094	0.084	0.005	0.251	0.061	0.088	0.081
Paxton	20	0.007	0.316	0.045	0.077	0.087	0.005	0.122	0.025	0.032	0.029	0.005	0.058	0.015	0.020	0.016	0.005	0.057	0.014	0.019	0.015
Penns	20	0.008	0.433	0.038	0.102	0.127	0.004	0.199	0.022	0.044	0.056	0.005	0.177	0.013	0.032	0.045	0.005	0.178	0.012	0.032	0.046
Pequea	20	0.028	2.662	0.221	0.578	0.733	0.017	0.939	0.190	0.257	0.270	0.011	0.868	0.172	0.236	0.251	0.011	0.839	0.168	0.232	0.245
Raystown Branch	19	0.009	0.321	0.024	0.059	0.085	0.005	0.033	0.013	0.015	0.009	0.005	0.023	0.006	0.009	0.006	0.005	0.019	0.005	0.007	0.004
Sherman	20	0.013	0.559	0.043	0.139	0.171	0.008	0.196	0.032	0.065	0.058	0.005	0.175	0.020	0.048	0.051	0.005	0.170	0.019	0.047	0.050
Susq @ Conklin	21	0.008	0.350	0.035	0.060	0.081	0.004	0.060	0.009	0.014	0.013	0.005	0.024	0.007	0.009	0.006	0.005	0.017	0.005	0.008	0.004
Susq @ Danville	19	0.016	0.305	0.045	0.070	0.072	0.006	0.030	0.012	0.014	0.007	0.005	0.024	0.007	0.009	0.005	0.005	0.015	0.005	0.006	0.003
Susq @ Smithboro	21	0.011	0.251	0.052	0.059	0.060	0.004	0.051	0.012	0.016	0.011	0.005	0.024	0.008	0.010	0.006	0.005	0.018	0.008	0.009	0.004
Susq @ Towanda	21	0.010	0.242	0.061	0.078	0.072	0.007	0.046	0.015	0.018	0.010	0.005	0.037	0.008	0.011	0.008	0.005	0.018	0.006	0.008	0.004
Susq @ Wilkes-Barre	20	0.123	0.829	0.388	0.421	0.168	0.007	0.117	0.016	0.021	0.024	0.005	0.028	0.007	0.010	0.006	0.005	0.022	0.006	0.008	0.004
Swatara	18	0.031	0.496	0.067	0.129	0.139	0.015	0.311	0.045	0.062	0.068	0.006	0.232	0.035	0.048	0.053	0.015	0.311	0.045	0.062	0.068
Unadilla	21	0.007	0.242	0.036	0.050	0.053	0.004	0.030	0.012	0.013	0.007	0.005	0.034	0.009	0.011	0.008	0.005	0.020	0.007	0.009	0.005
WB Susq @ Jershey Shore	21	0.006	0.098	0.024	0.030	0.025	0.004	0.018	0.006	0.008	0.004	0.005	0.011	0.005	0.005	0.001	0.005	0.007	0.005	0.005	0.000
WB Susq @ Karthaus	22	0.004	0.059	0.018	0.023	0.017	0.004	0.019	0.005	0.006	0.004	0.005	0.006	0.005	0.005	0.000	0.005	0.005	0.005	0.005	0.000
WB Susq @ Lewisburg	19	0.008	0.149	0.021	0.032	0.033	0.004	0.018	0.007	0.008	0.003	0.005	0.007	0.005	0.005	0.001	0.005	0.006	0.005	0.005	0.000
Yellow Breeches	19	0.026	0.442	0.059	0.107	0.107	0.018	0.129	0.038	0.051	0.032	0.009	0.085	0.027	0.035	0.023	0.008	0.082	0.026	0.034	0.023

Total Dissolved Solids, Total Suspended Solids, and Total Organic Carbon Summary Statistics of Samples Collected in Water Year 2024, in mg/L

Station	# Samples Collected	Total Dissolved Solids					Total Suspended Solids					Total Organic Carbon				
		Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD	Min	Max	Med	Mn	SD
Bald Eagle	22	60	258	145	155	46.19	8	92	20	23	15.84	1.21	3.86	1.97	2.14	0.65
Chemung	22	-	-	-	-	-	1	242	32	49	61.39	2.30	8.00	3.60	4.11	1.61
Cohocton	21	-	-	-	-	-	1	42	11	14	12.75	2.30	7.90	4.00	4.49	1.45
Conestoga	20	172	492	334	326.9	91.6641	8	450	20	94	136.80	1.52	5.88	3.57	3.56	1.28
Conodoguinet	20	126	356	208	225	62.54	8	152	20	41	41.02	1.44	5.41	3.28	3.36	1.19
Frankstown Branch	18	86	356	178	206	82.17	8	207	20	36	46.66	1.34	6.30	1.83	2.53	1.42
Juniata	19	88	204	140	142	32.18	8	197	20	39	49.88	1.60	5.24	2.81	2.91	0.95
Kishacoquillas	18	98	232	150	161	41.91	8	278	20	46	66.61	1.04	5.09	1.78	2.35	1.50
Little Juniata	18	76	238	132	153	52.56	8	328	20	43	73.21	1.00	6.38	1.60	2.30	1.55
Mahantango	18	80	142	100	107	18.76	8	352	20	54	87.06	1.35	6.37	2.39	2.86	1.40
Octoraro	20	124	204	162	159	20.12	8	1040	20	93	229.91	1.94	8.98	3.07	3.88	2.14
Paxton	20	94	470	237	270	118.05	8	301	20	52	74.87	1.61	6.16	2.75	3.42	1.54
Penns	20	46	148	110	107	30.57	8	181	20	45	49.18	1.11	9.06	2.74	3.24	2.05
Pequea	20	98	372	278	258	71.39	8	1340	20	201	368.09	1.06	12.29	3.41	4.06	2.94
Raystown Branch	19	80	252	182	176	60.67	8	305	20	50	75.68	1.61	5.63	2.13	2.62	1.19
Sherman	20	70	202	107	110	33.94	8	303	20	49	68.67	1.13	9.38	2.69	3.81	2.33
Susq @ Conklin	21	-	-	-	-	-	1	245	30	44	58.03	1.90	5.60	2.80	3.30	1.17
Susq @ Danville	19	84	210	124	131	38.32	8	266	24	57	68.48	1.66	4.55	2.62	2.86	0.85
Susq @ Smithboro	21	-	-	-	-	-	1	223	28	44	53.67	1.90	6.60	3.10	3.48	1.35
Susq @ Towanda	21	86	198	118	127	29.85	8	265	31	65	73.03	1.88	5.88	3.01	3.34	1.00
Susq @ Wilkes-Barre	20	80	202	120	127	35.44	8	185	28	56	52.61	1.77	5.38	3.02	3.10	0.93
Swatara	18	100	282	150	153	45.10	8	262	20	46	61.00	0.16	9.57	2.52	3.27	2.14
Unadilla	21	-	-	-	-	-	2	124	13	27	32.45	0.50	6.00	3.00	3.17	1.23
WB Susq @ Jershey Shore	21	58	230	100	114	51.12	8	86	20	25	17.46	0.91	3.67	1.73	2.01	0.82
WB Susq @ Karthaus	22	90	476	164	202	98.92	8	49	20	23	8.46	0.95	4.61	1.92	2.21	1.03
WB Susq @ Lewisburg	19	66	216	106	111	43.03	8	131	20	27	27.04	1.01	3.67	1.84	1.97	0.70
Yellow Breeches	19	100	258	184	182	49.57	8	263	20	48	63.15	0.95	7.36	2.80	3.33	1.95

2024 Mean Daily Discharge Trends Chart¹

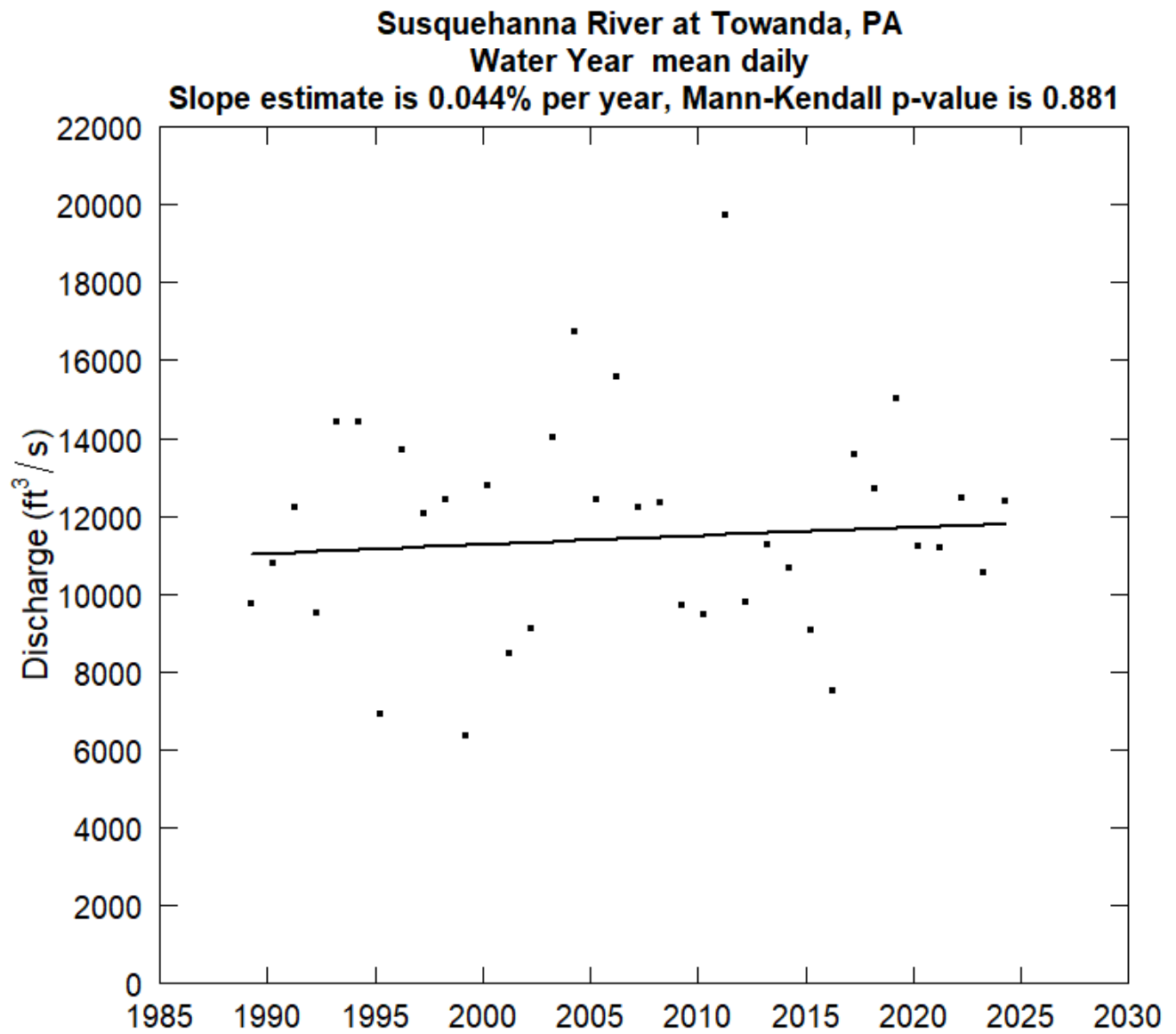
SNAP Site	Start Year	Slope Estimate (%)	Trend Test (Alpha 0.05)	p-value	Reject H₀?
Towanda	1989	0.05	Mann-Kendall	0.881	No
Danville	1987	0.64	Mann-Kendall	0.105	No
Lewisburg	1987	0.27	Mann-Kendall	0.904	No
Newport	1985	0.32	Mann-Kendall	0.699	No
Conestoga	1985	0.48	Mann-Kendall	0.646	No

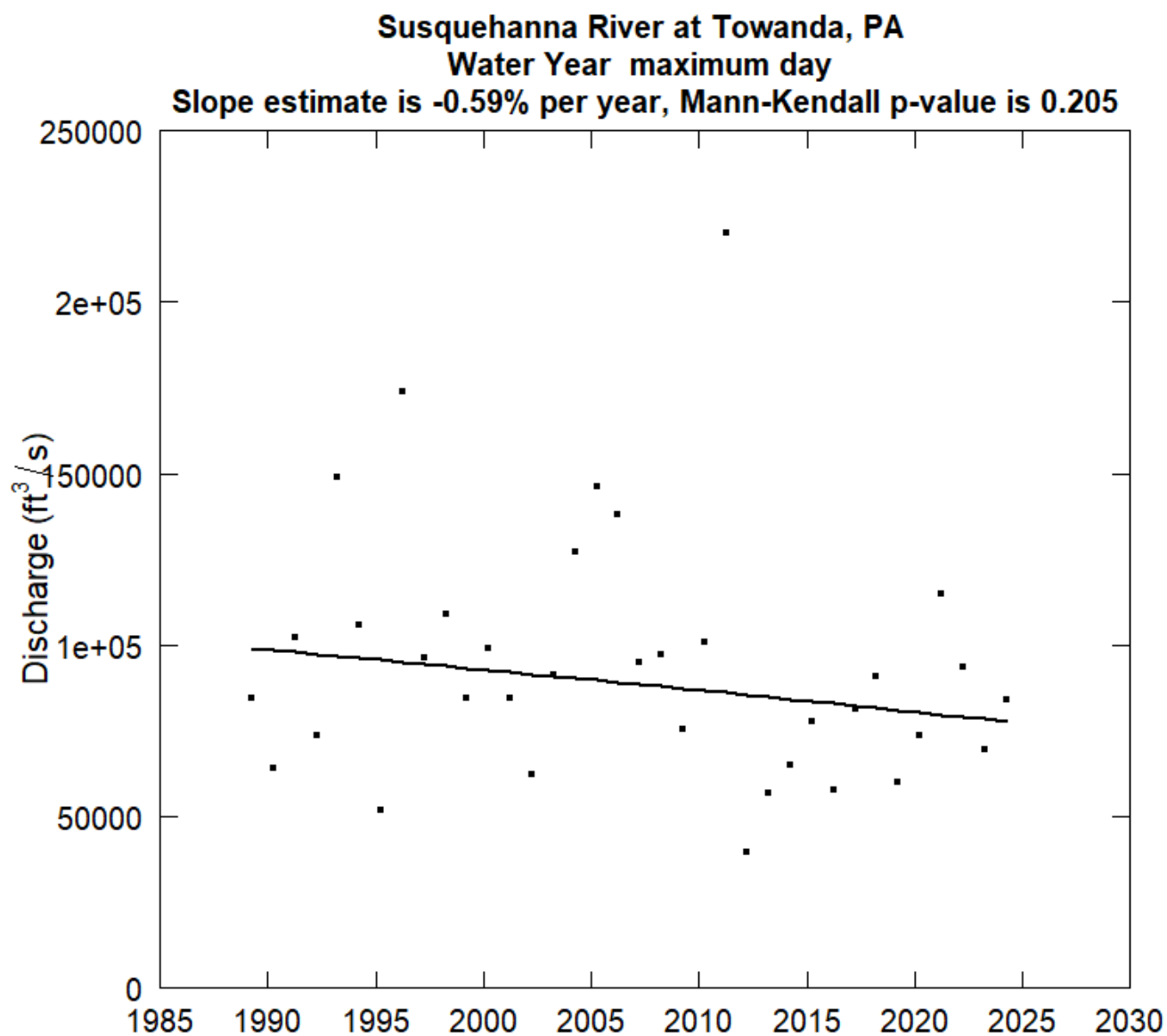
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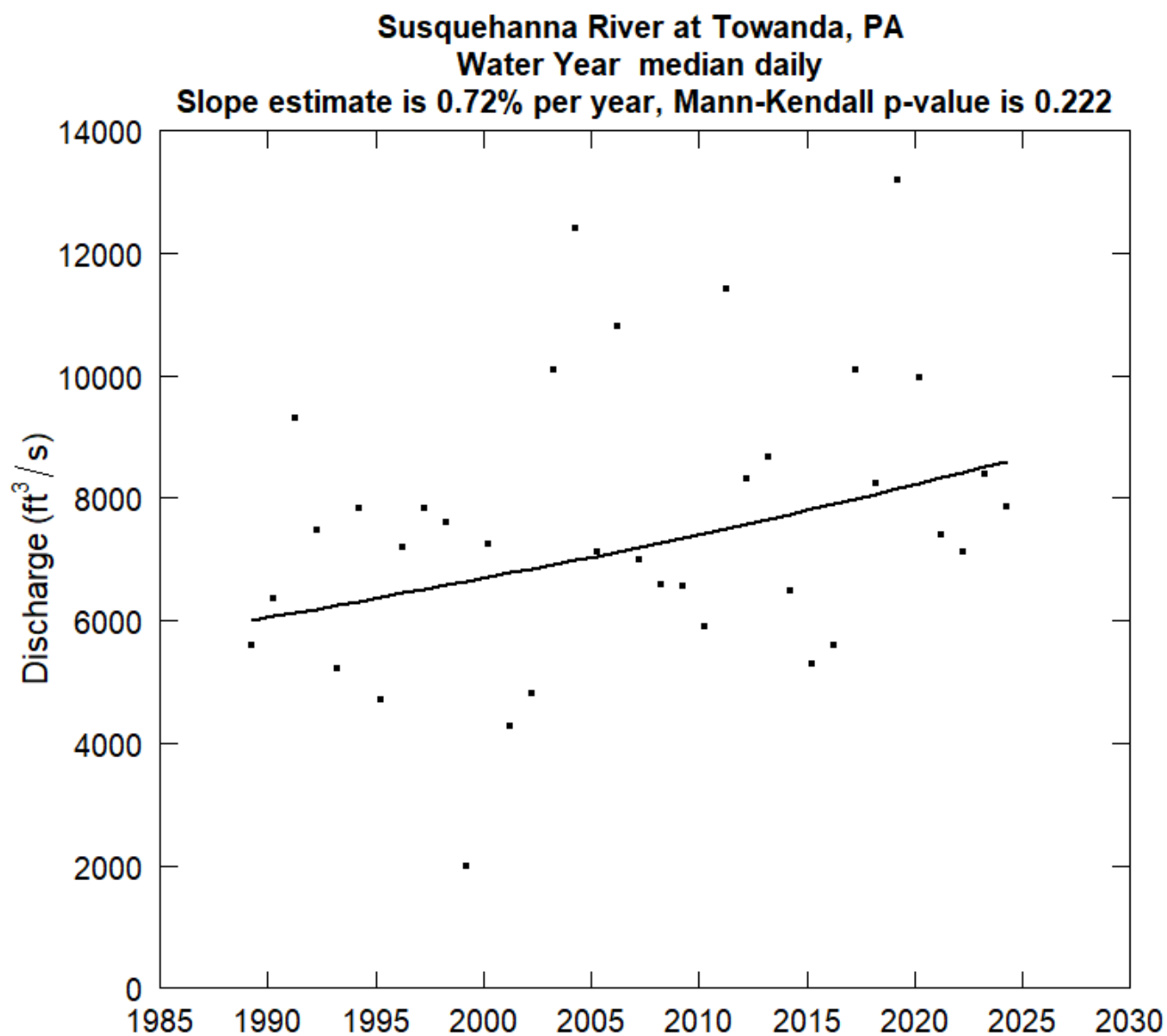
- (i) The above chart includes trend results for the mean daily flow statistic at each Long Term Monitoring Site from Start Year through Water Year 2024. For trend results on an expanded set of flow statistics, see plots below.
- (ii) H₀ refers to the Null Hypothesis. In the Mann-Kendall Test, the Null Hypothesis is that there is no trend in the dataset. The Alternative Hypothesis (H_a) is that there is a monotonic trend in the data.
- (iii) p-values less than the user defined level of significance (i.e. α) of 0.05, suggest that the flow dataset provides enough evidence to reject the Null Hypothesis.
- (iv) For more information and specifics on methods or plots, please reference the source listed below.

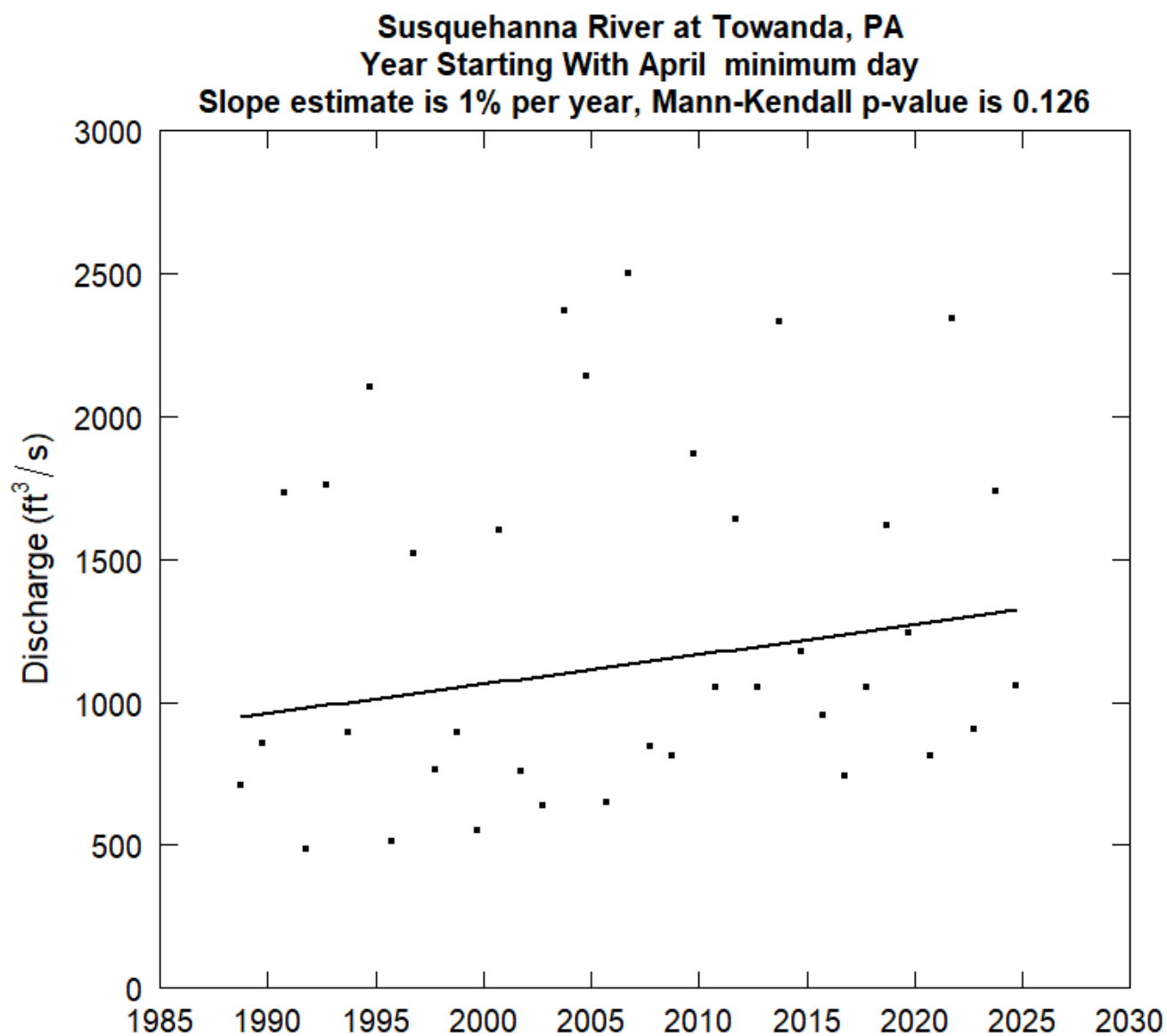
¹ Source: Hirsch, R.M. and De Cicco, L.A. 2019. Daily Streamflow Trend Analysis, 2018-05-29, http://usgs-r.github.io/EGRET/articles/streamflow_trend.html.

Discharge Trend Plots

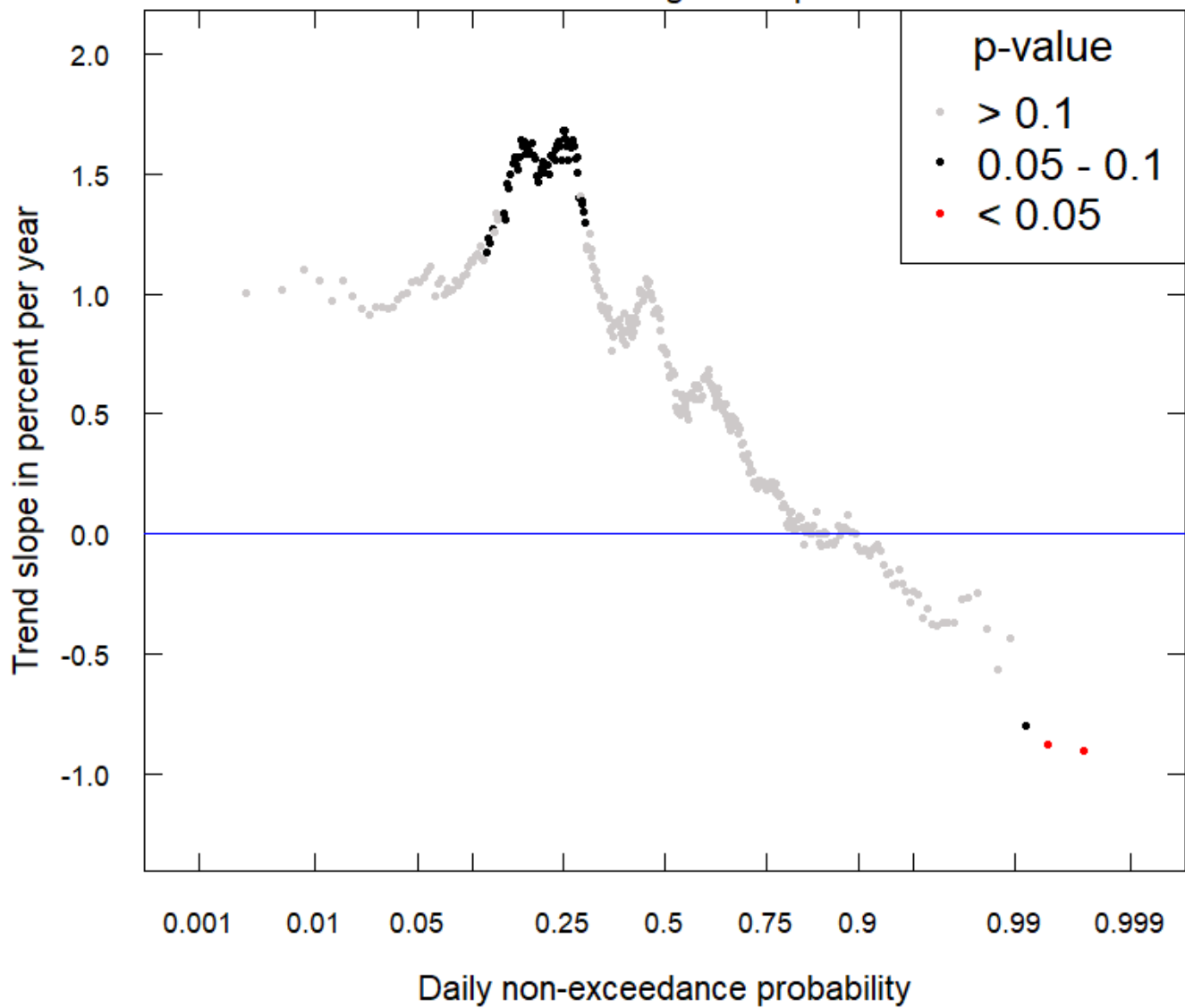


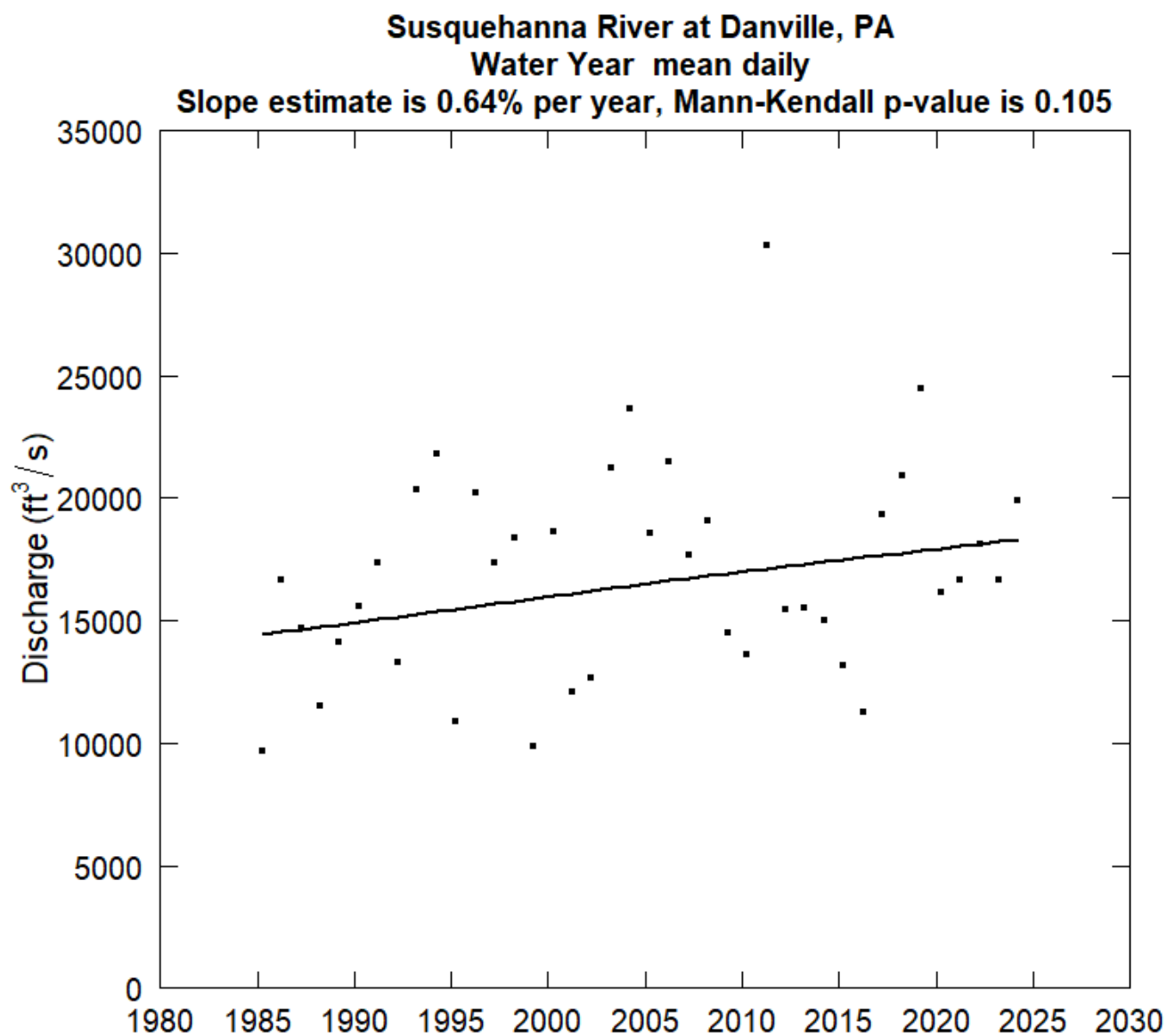


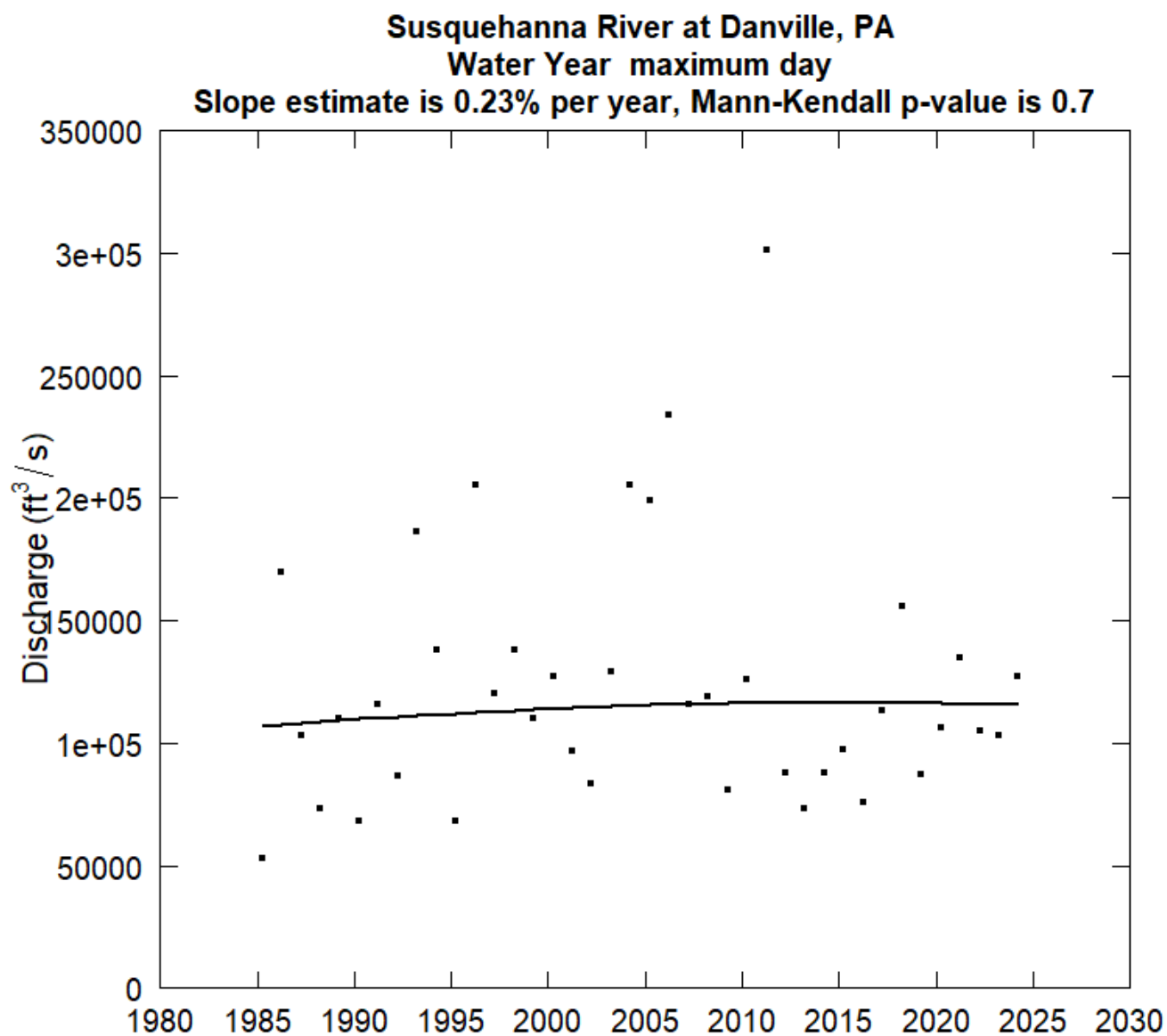


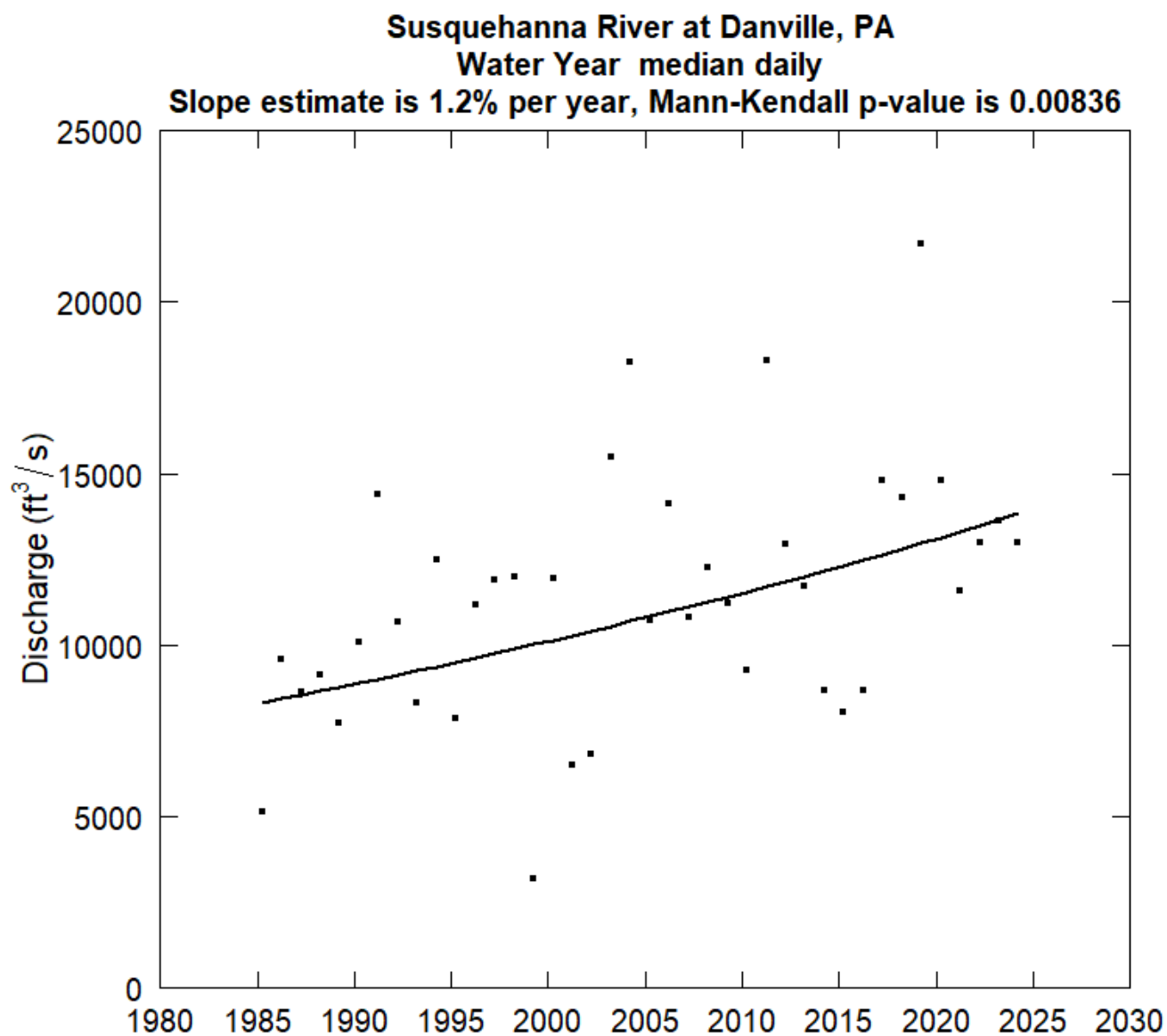


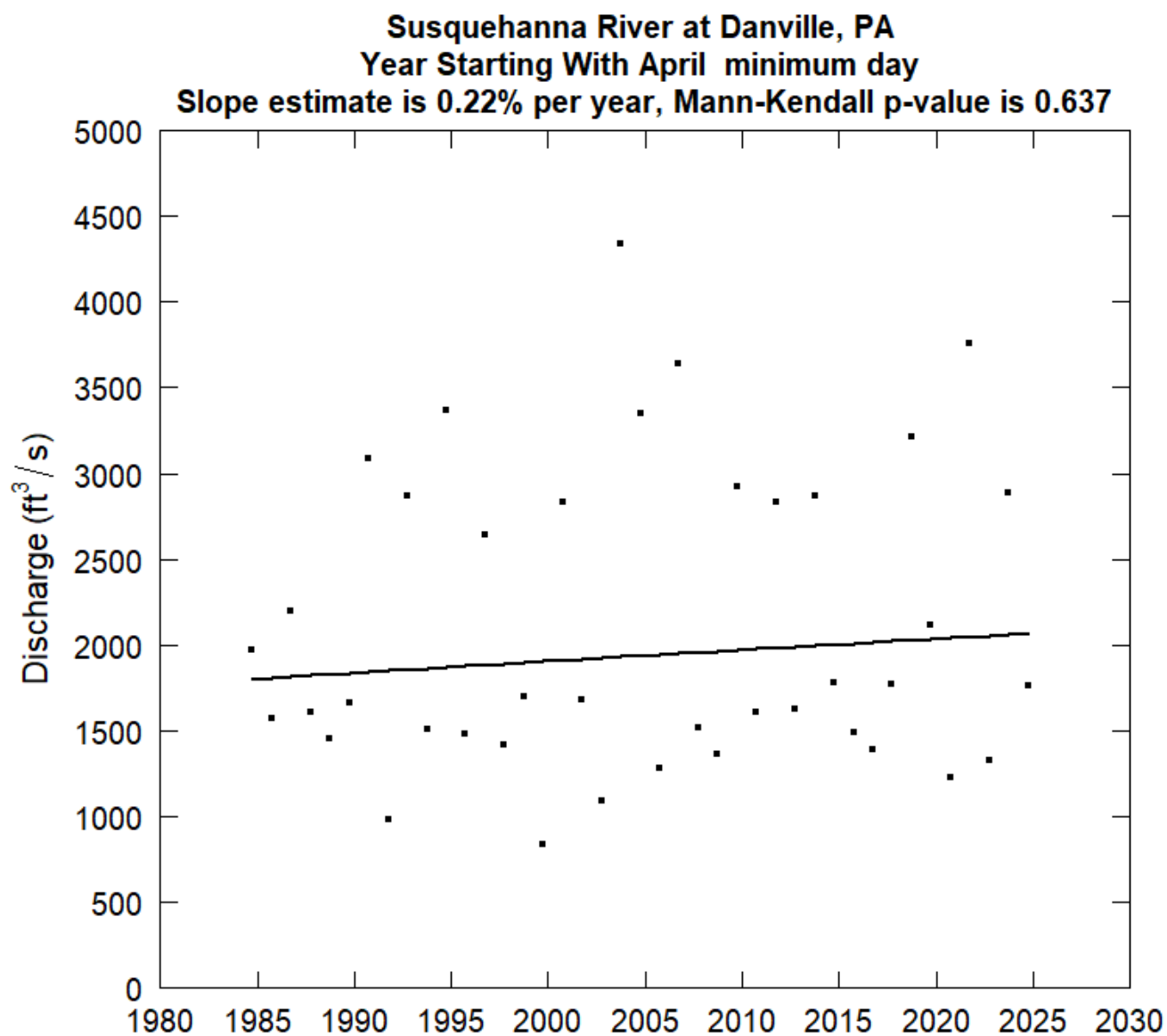
Susquehanna River at Towanda, PA
1988-04-01 through 2025-03-31
Year Starting With April



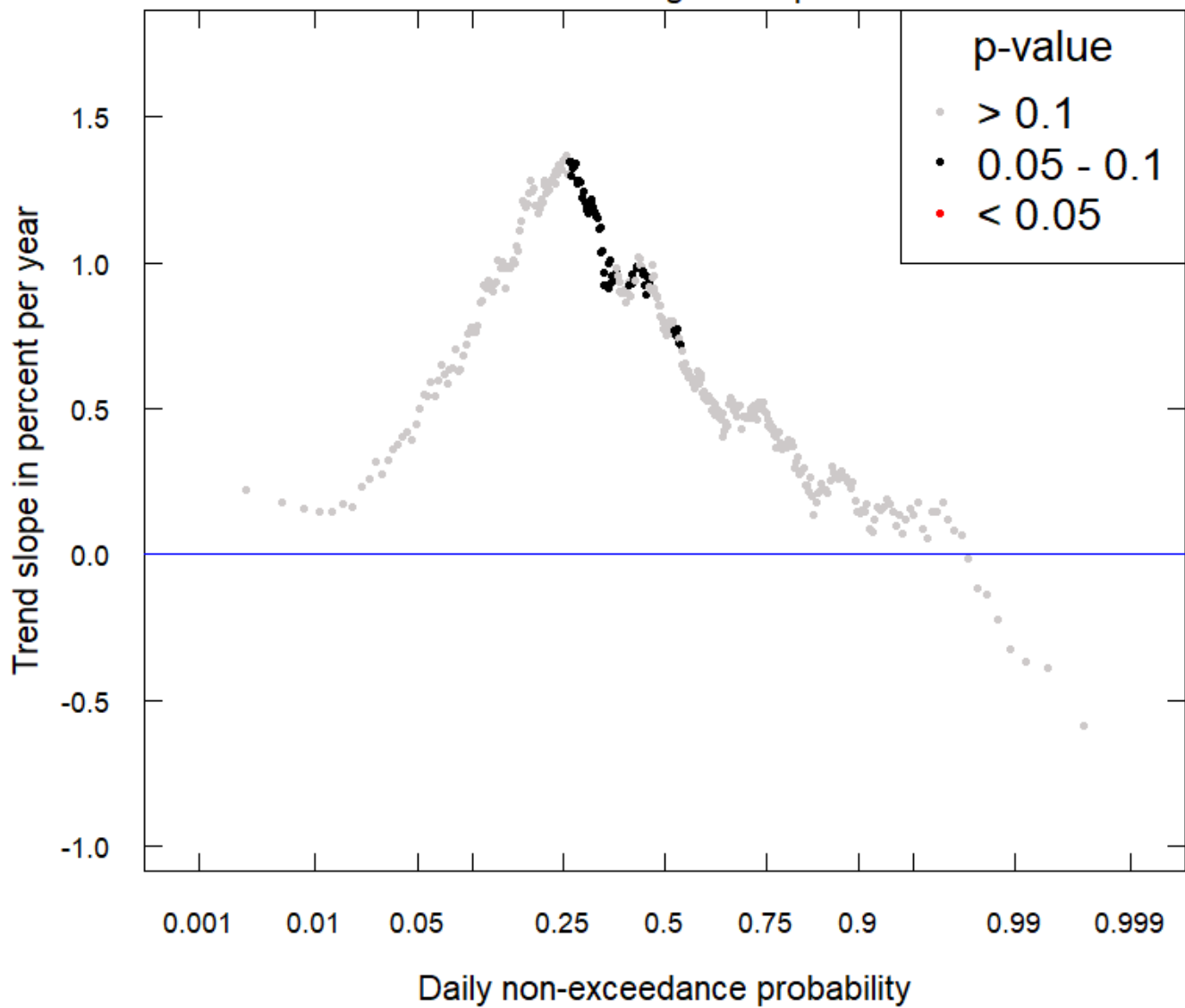


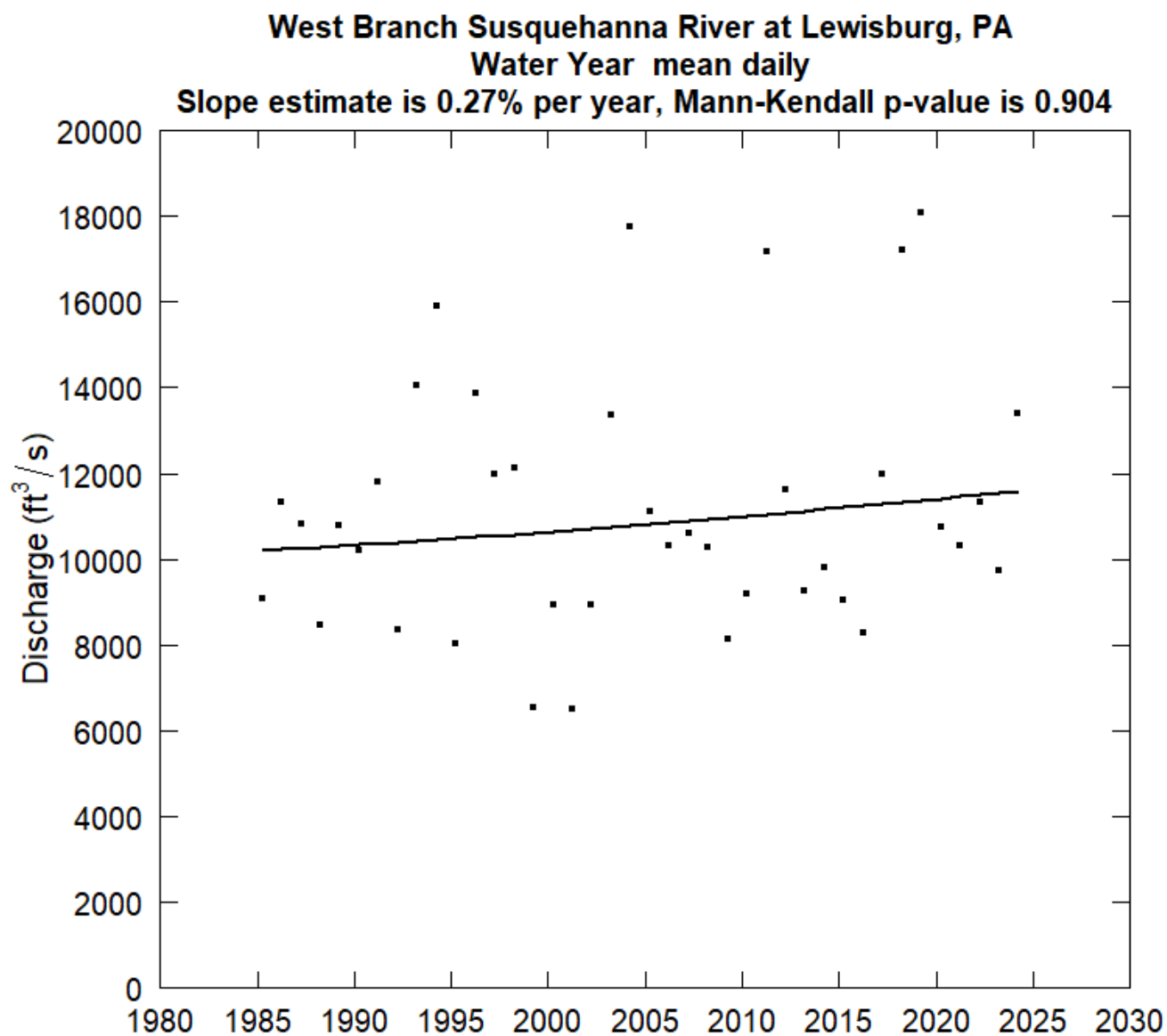


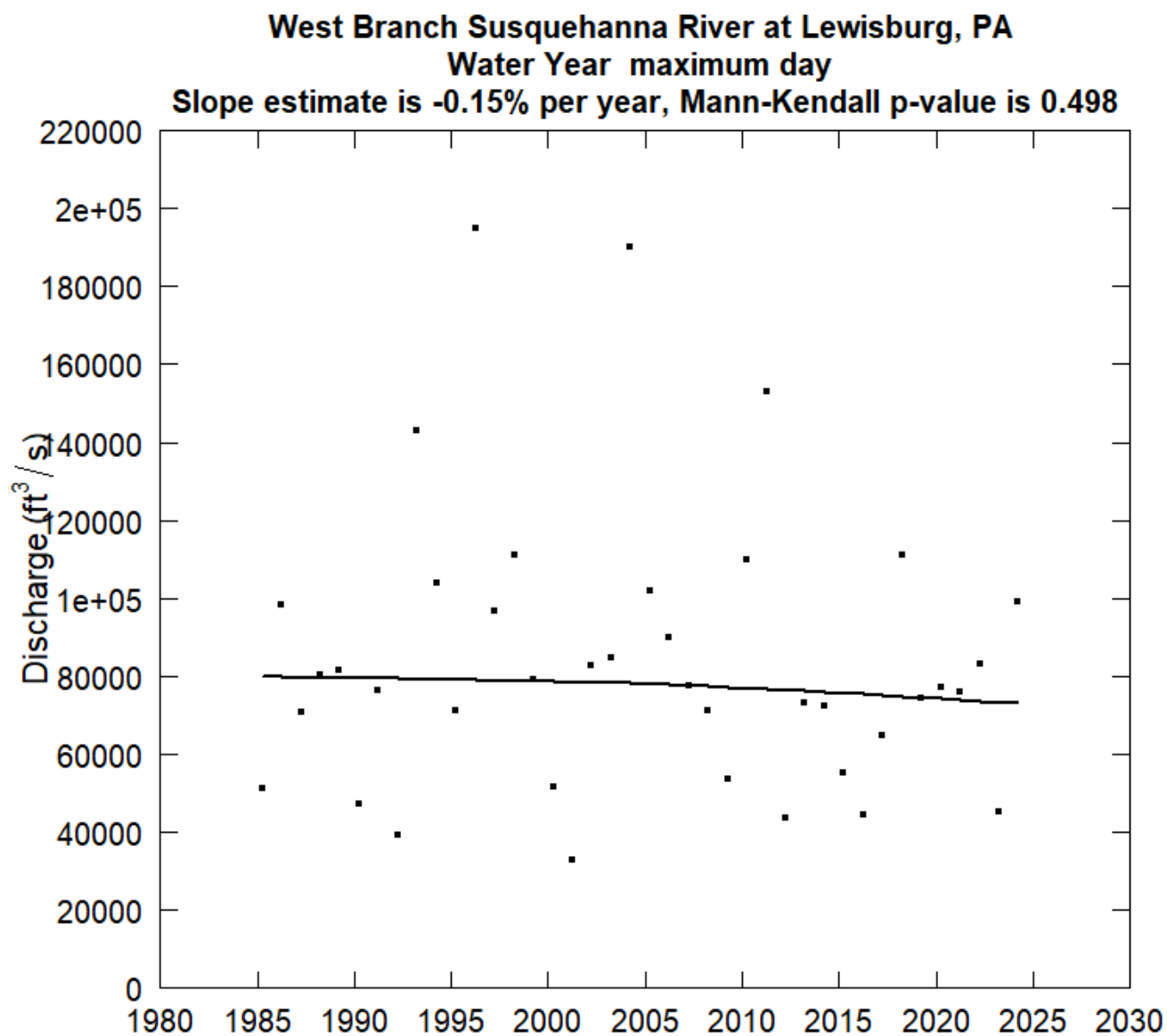


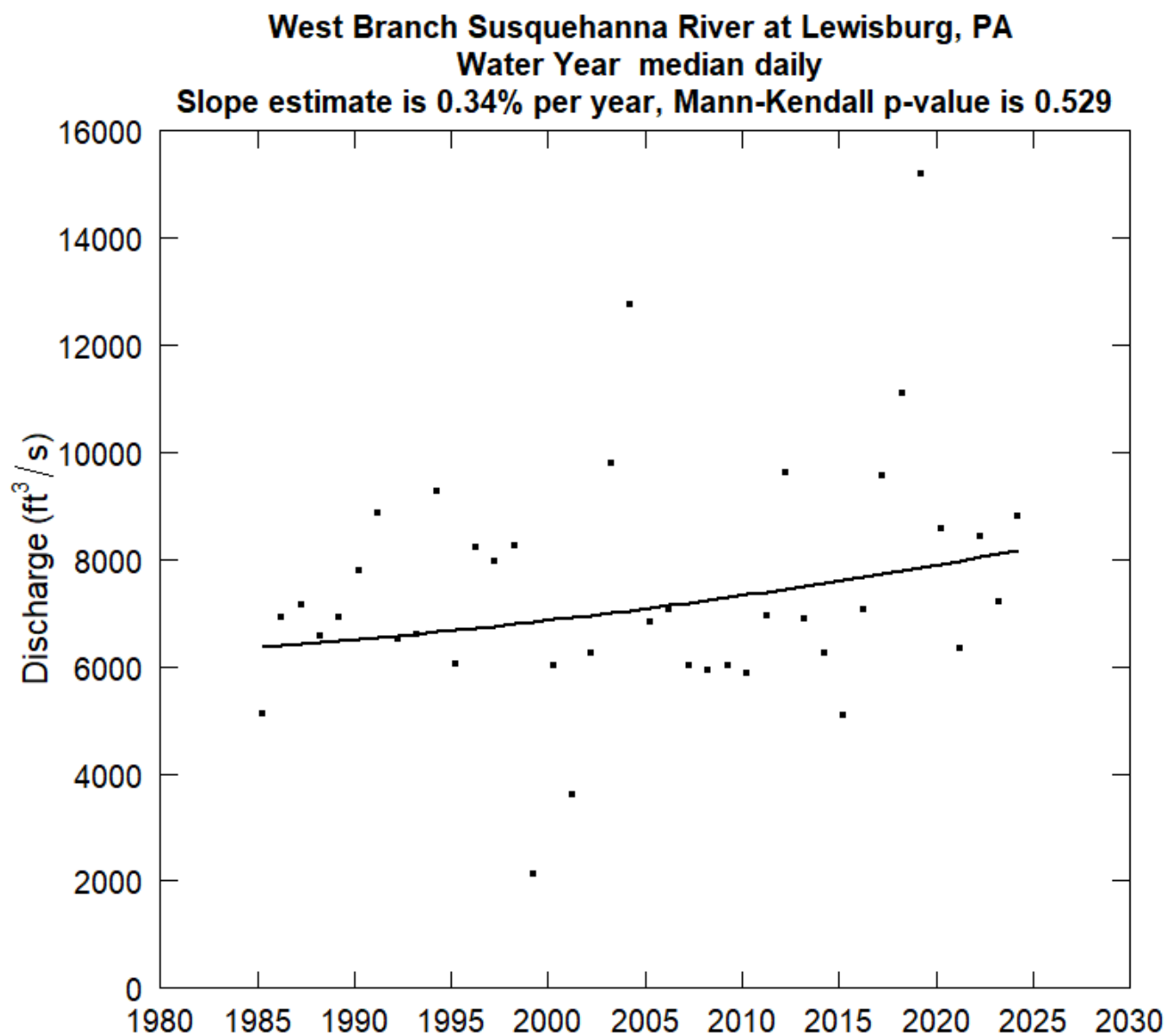


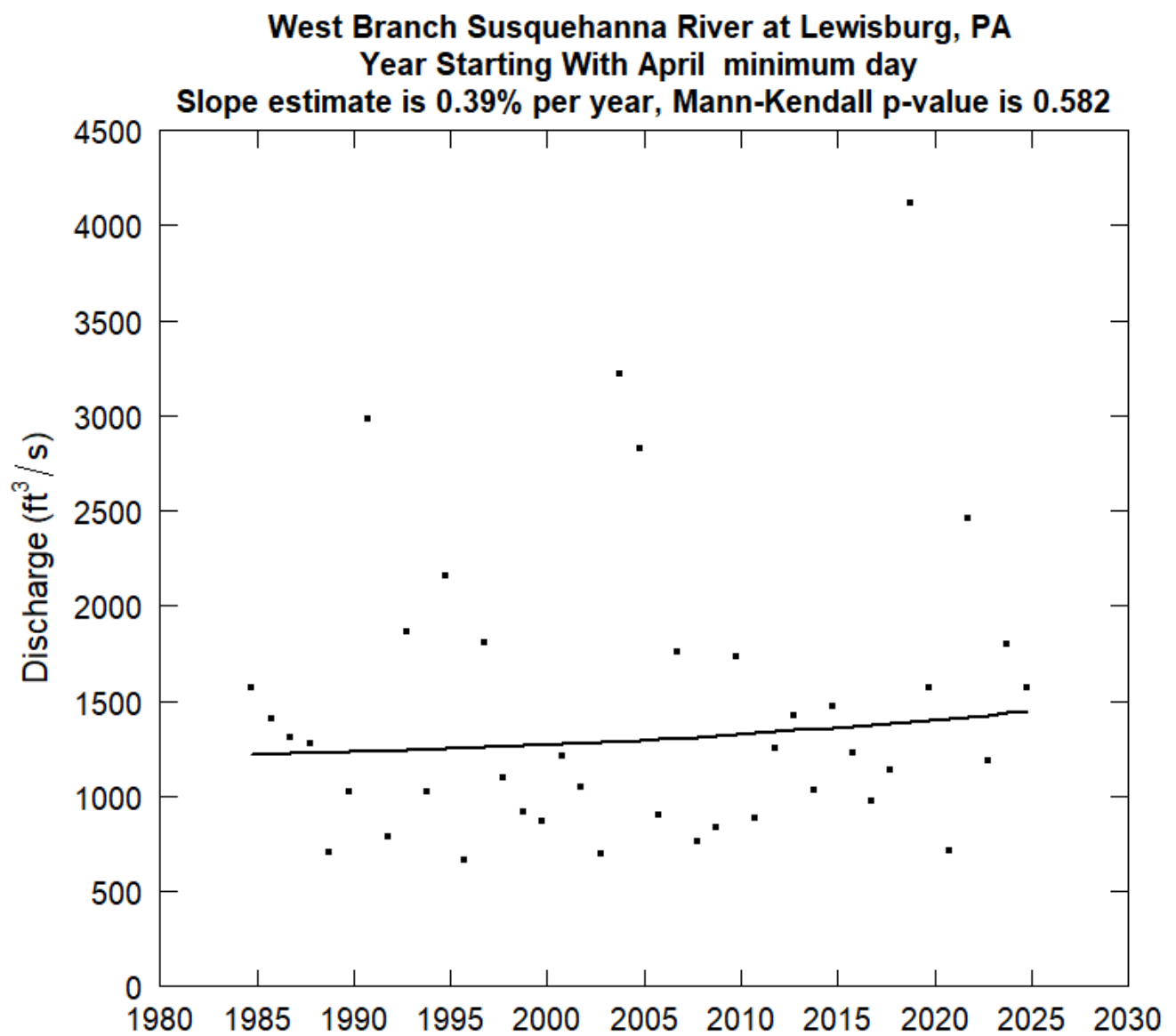
Susquehanna River at Danville, PA
1984-04-01 through 2025-03-31
Year Starting With April



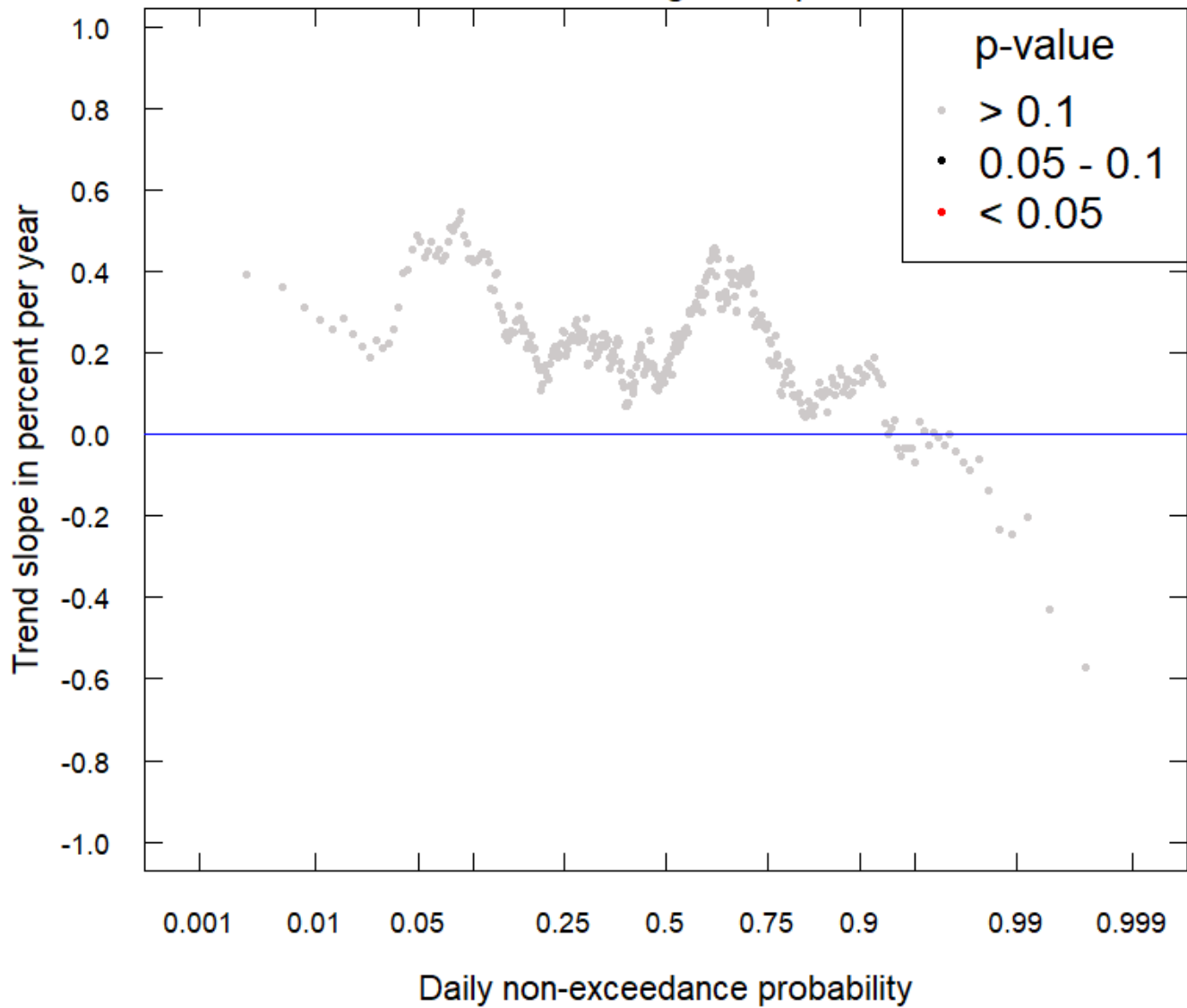


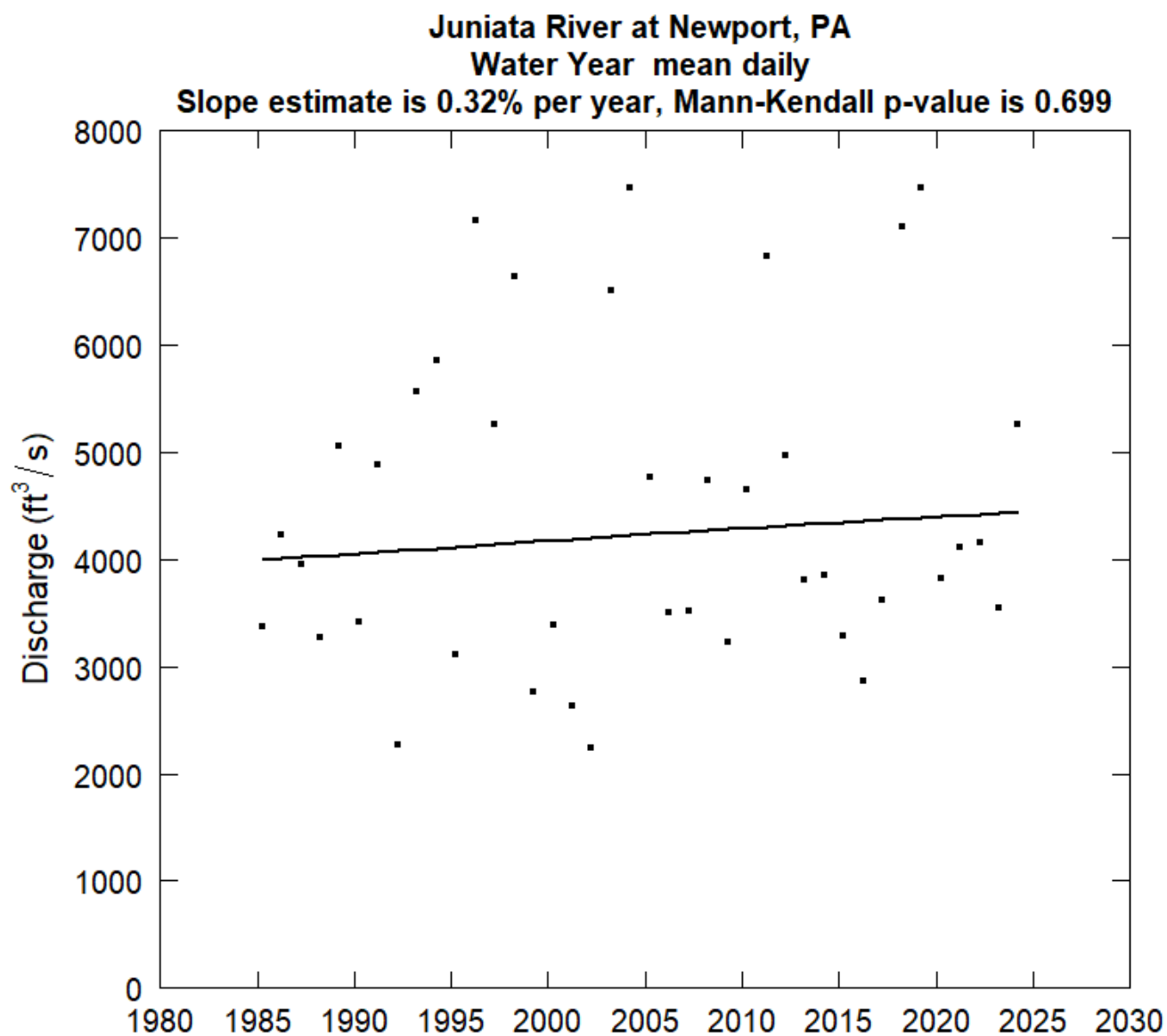


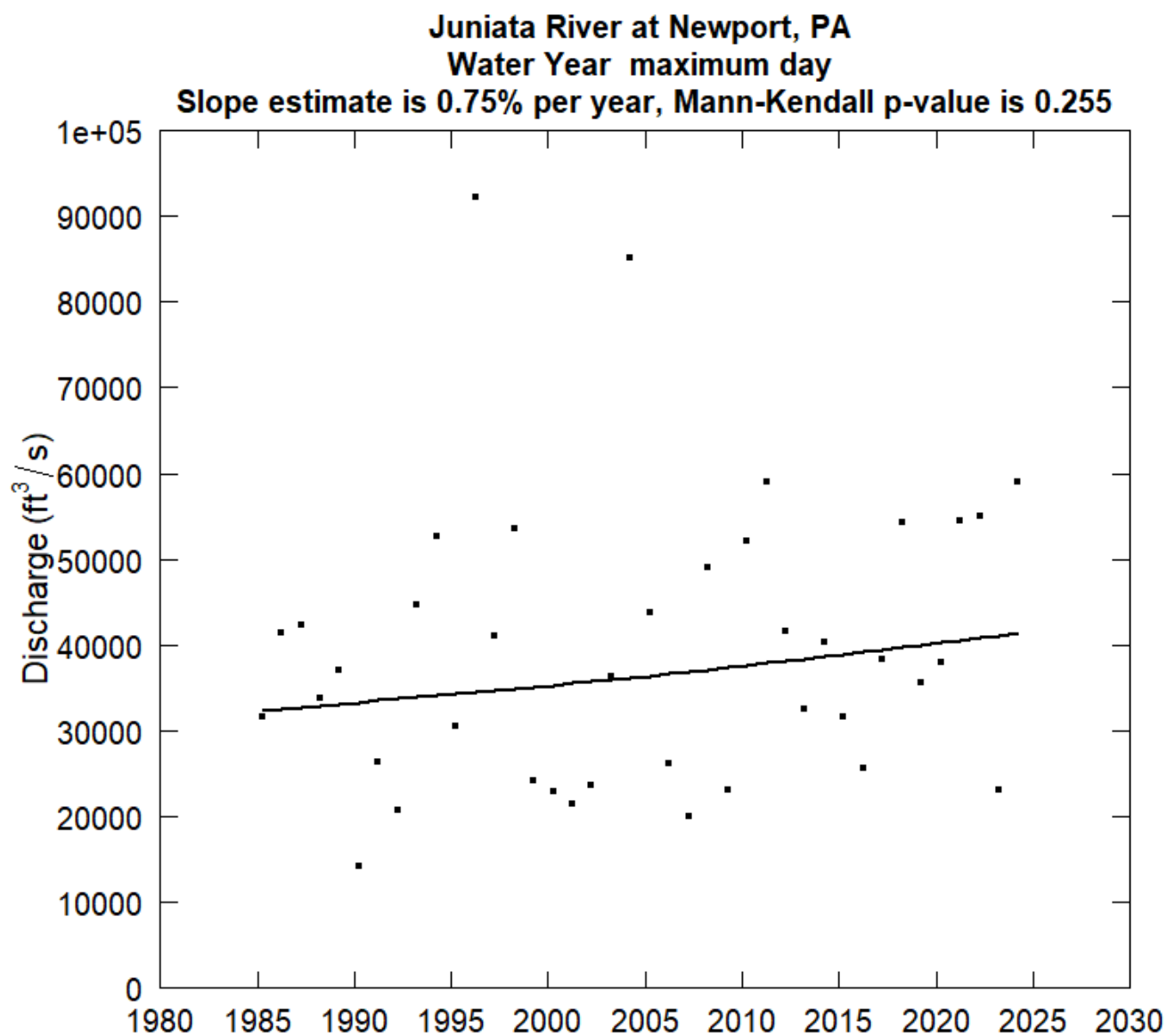


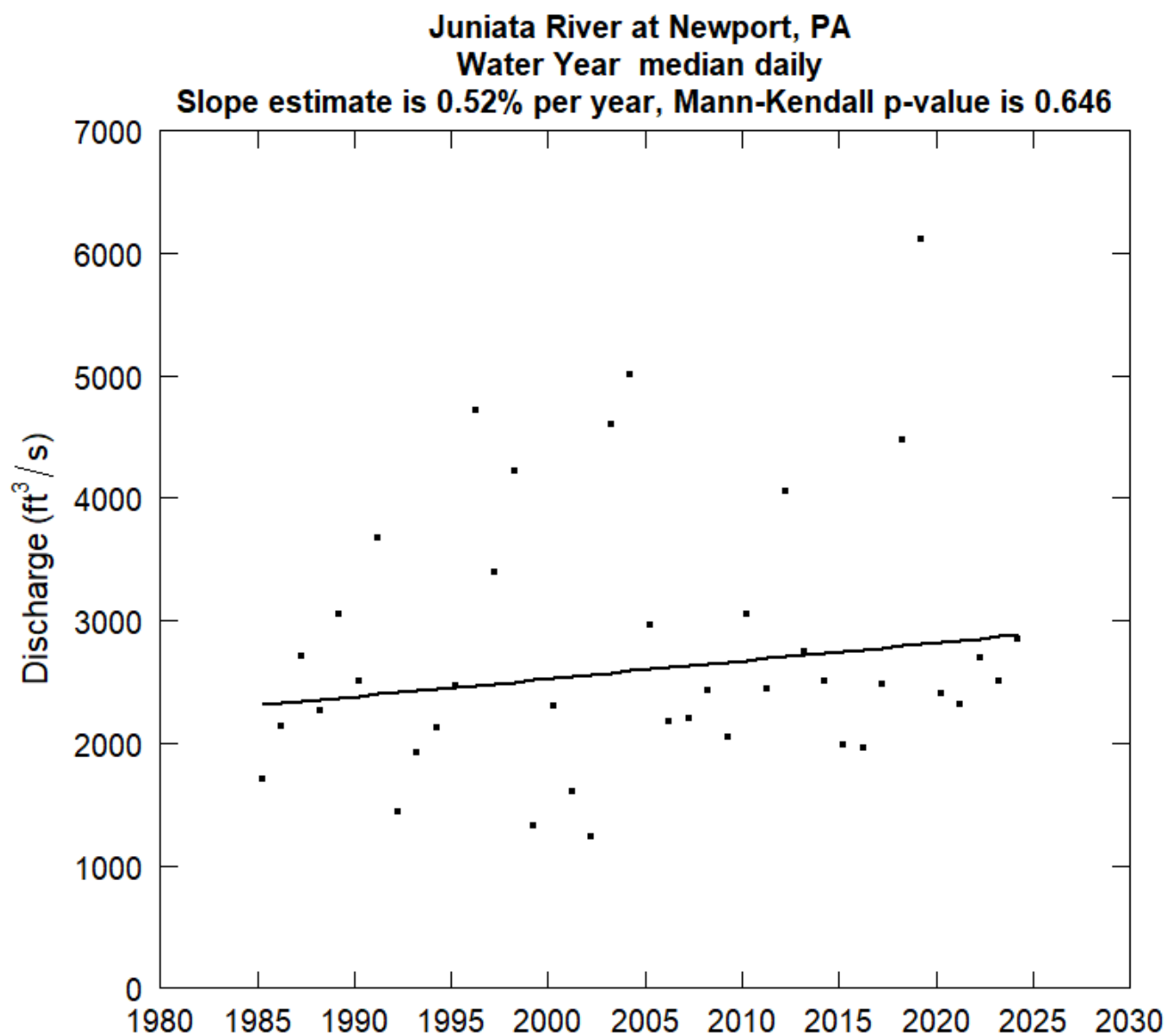


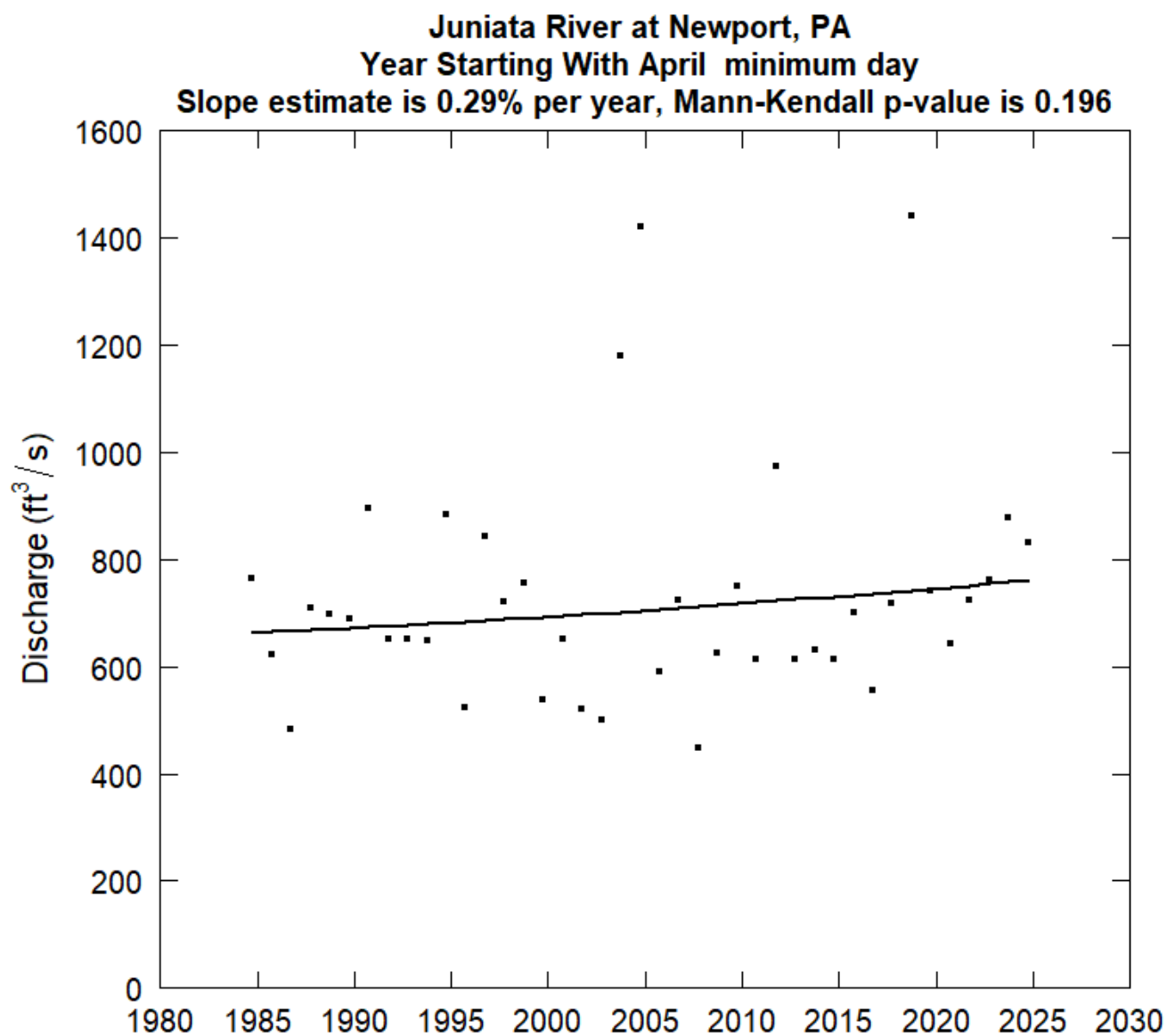
West Branch Susquehanna River at Lewisburg, PA
1984-04-01 through 2025-03-31
Year Starting With April



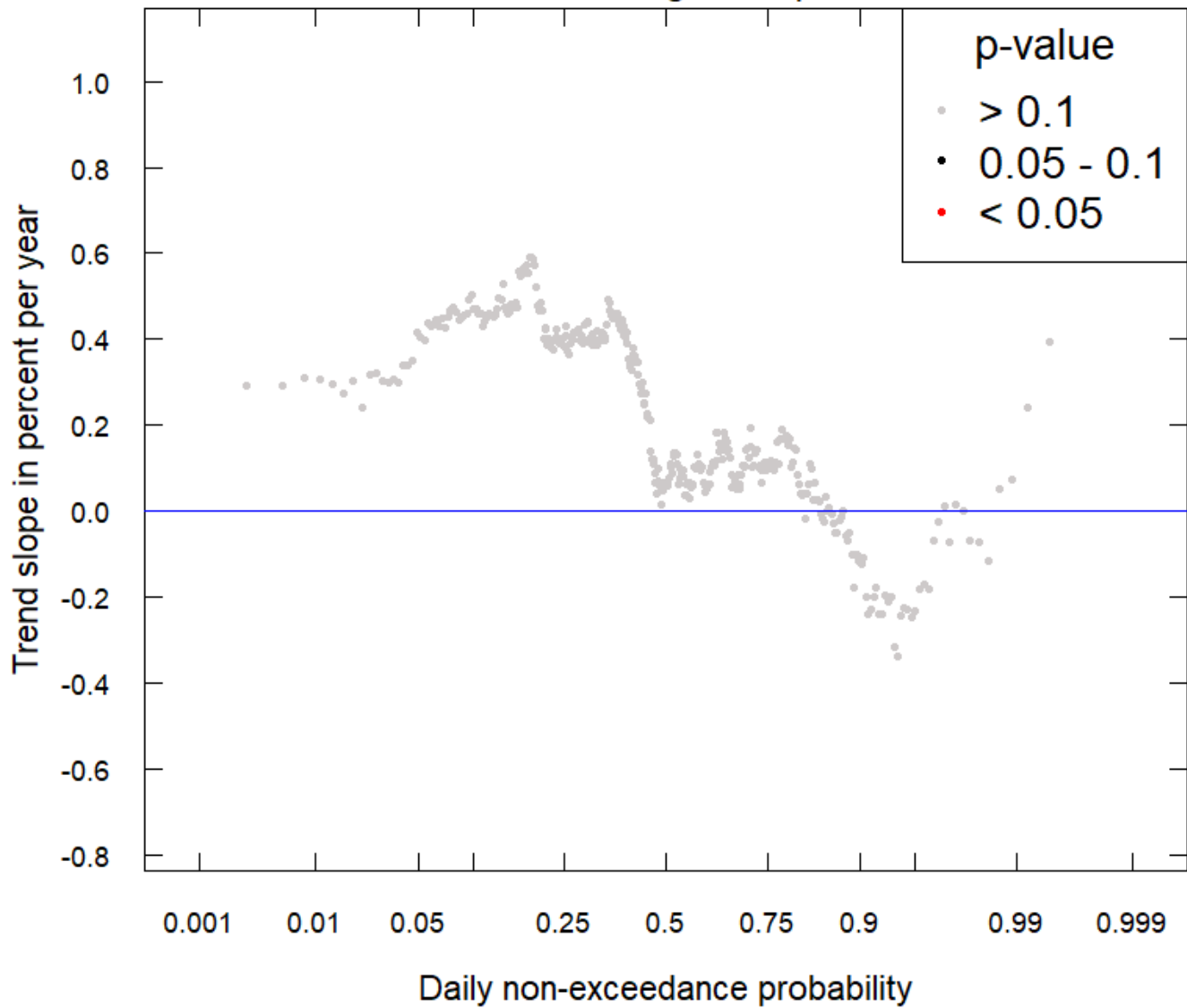


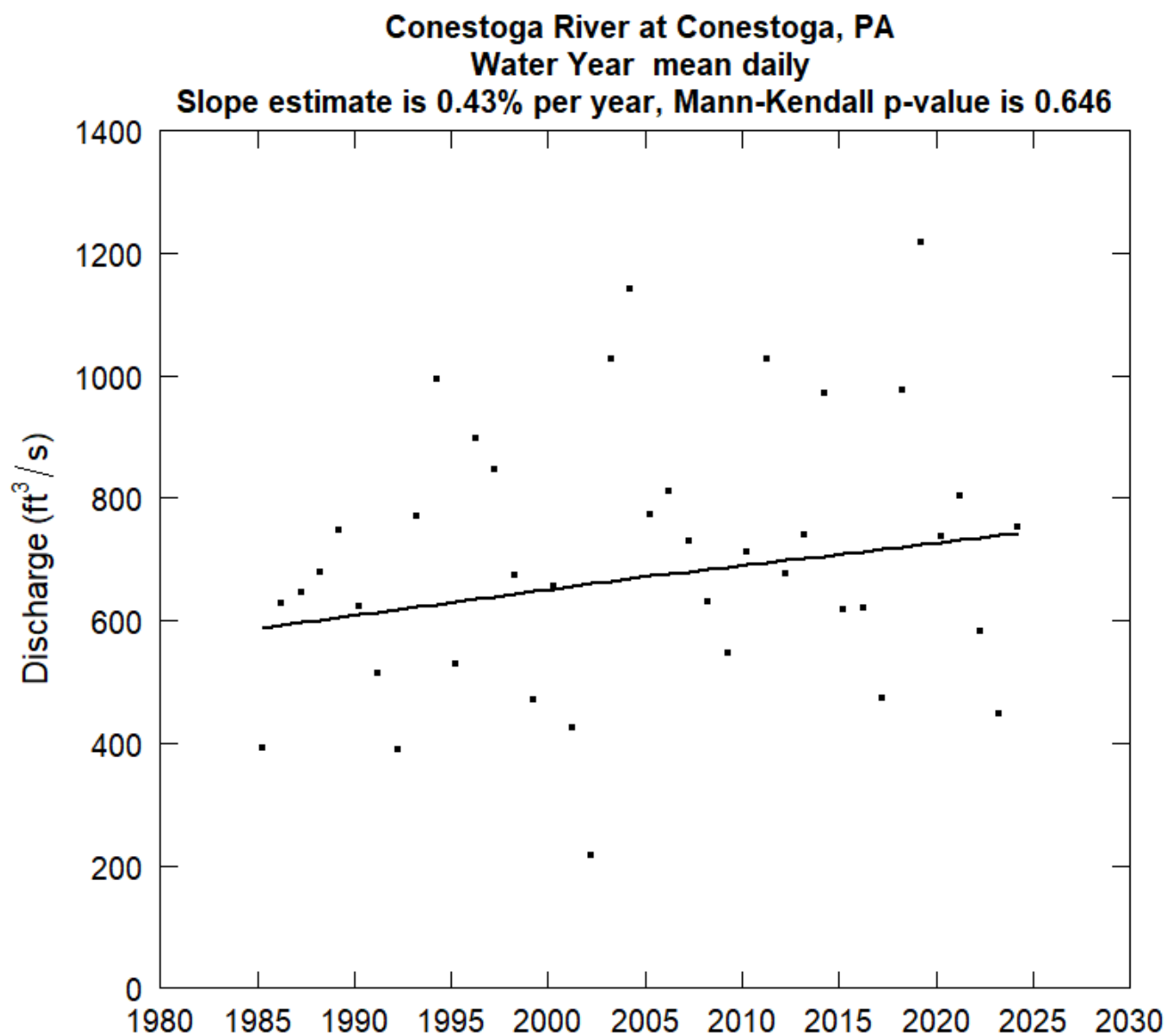


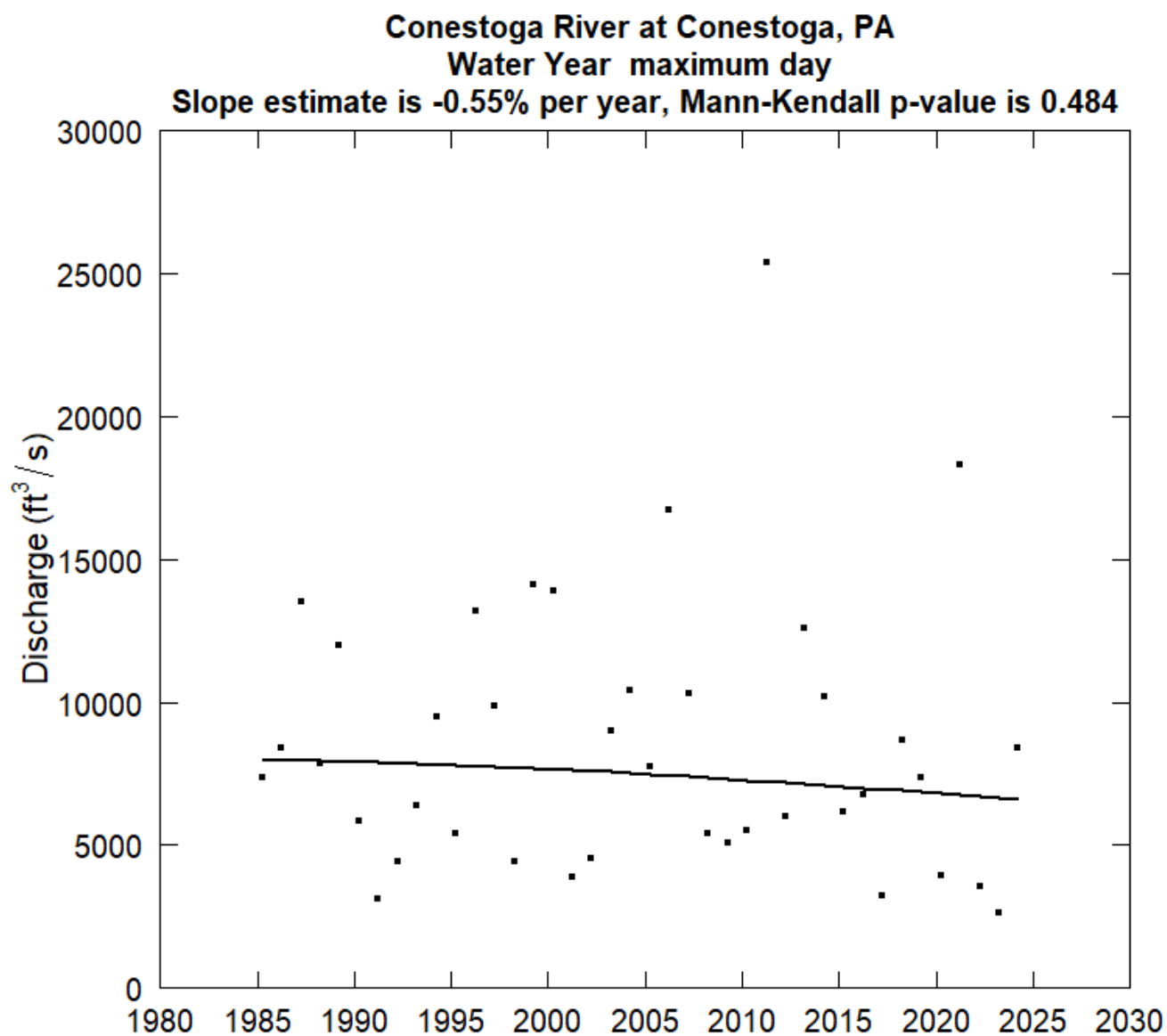


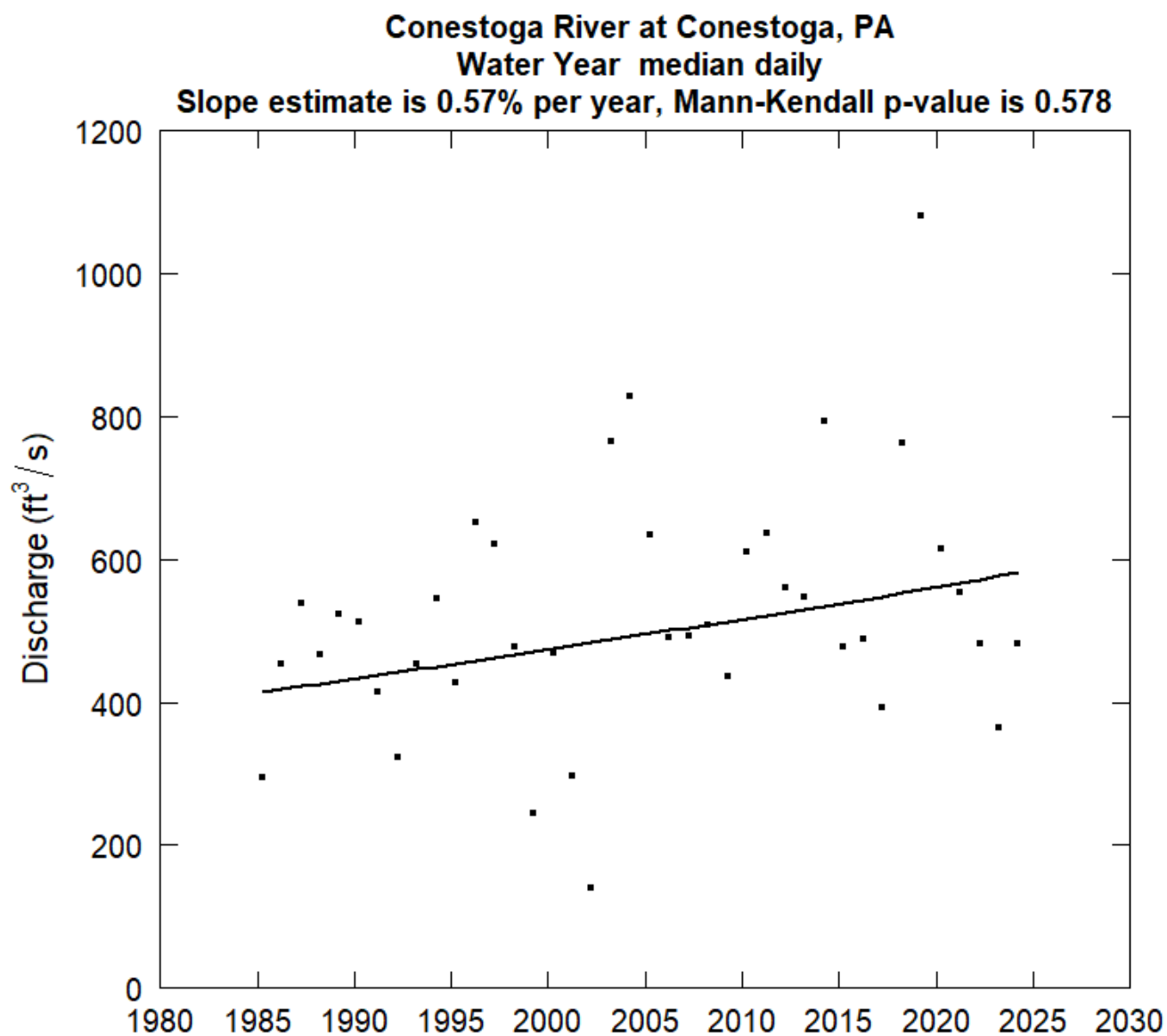


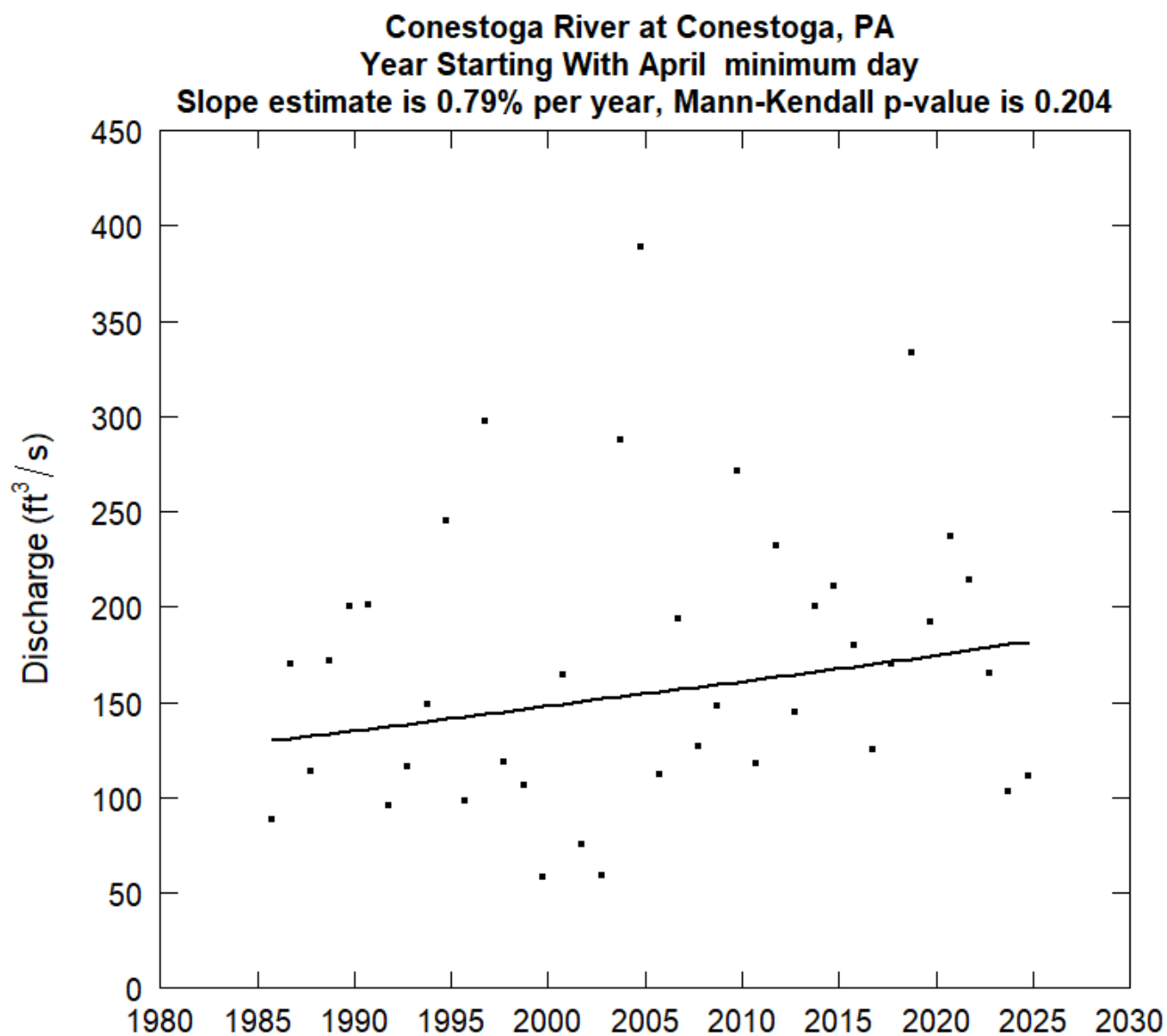
Juniata River at Newport, PA
1984-04-01 through 2025-03-31
Year Starting With April











Conestoga River at Conestoga, PA
1984-10-01 through 2025-03-31
Year Starting With April

