

## **EXAMPLE**

### **CONTINGENCY PLAN FOR WELL X Sustainable Water Authority Williams Township, Penn County, Pennsylvania Date Submitted: October 1, 2023**

#### **I. Purpose**

The purpose of this Contingency Plan (Plan) is to describe normal and emergency operations for Well X of the Sustainable Water Authority (Authority) system. The Plan has been developed to explain how the Authority will operate and the conditions necessitating operation of Well X under GP-02 during the emergency/back-up conditions identified herein. Well X is not used by the Authority on a consistent basis and does not have an existing Susquehanna River Basin Commission (Commission) withdrawal approval.

#### **II. General Description of Project Facilities**

The Authority owns and operates a water distribution system and wastewater treatment plant located in Williams Township, Penn County, Pennsylvania. The water system consists of two primary wells (Well A and Well B) and one back-up well (Well X) that is only maintained and used for maintenance or emergency events, and is periodically minimally operated to collect required water quality samples and to confirm, exercise, and maintain equipment in an operable condition.

The production wells pump directly into the distribution system and two 0.500 million gallon water standpipes are used for storage (total capacity 1.0 million gallons). An existing supervisory control and data acquisition (SCADA) system controls the pumping operation in all of the wells. Each well is equipped with a submersible pump and an individual flow meter.

The location of Well X is depicted on the map provided as Attachment 1, and a current system map is included as Attachment 2.

#### **III. Typical System Operations**

Under normal system operating conditions, Wells A and B meet the typical system demand of 0.250 million gallons per day (mgd) on a 30-day average. The purpose of Well X is to serve as an emergency/back-up well in the event one of the primary wells must be taken offline or has an unplanned failure. Well X will require routine equipment testing and pumping to confirm function of the well pump, to maintain development of the borehole, and to collect water quality samples to maintain compliance with the safe drinking water permit. Operation of Well X for routine maintenance will be less than 0.020 mgd (peak day), approximately one (1) day per month.

#### **IV. Emergency Operations**

The following sections detail the general criteria that will trigger the operation of Well X at the emergency/back-up withdrawal of 0.216 mgd (30-day average) and a maximum instantaneous withdrawal rate (MIWR) of 150 gallons per minute (gpm).

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### **1. Conditions for Operation of Well X Under GP-02**

- a. **Maintenance Activities** – Water quality sampling will be conducted to satisfy the requirements for maintaining the safe drinking water permit for Well X and to confirm that the equipment remains operable and in good condition. Well X will be operated at no more than 0.020 mgd (peak day) for sampling and equipment checks, which are expected to occur once per month. Daily withdrawals from Well X will be reported to the Commission at the end of the emergency or backup use. The maintenance activities described in this section do not require notification to the Commission. Withdrawals made during sample collection or exercising of the well appurtenances will be recorded and maintained but not reported to the Commission unless requested by the Commission.
  - b. **Emergency/Back-up Operation** – Emergency/back-up operations will be implemented in the event that any of the following conditions exist:
    - 1) When the Well A pump, the Well B pump, or the elevated water tower is planned to be out-of-service for greater than 24 hours, either for routine maintenance or for unplanned equipment failure and replacement;
    - 2) The water level in the elevated water tower drops below the fire reserve level due to normal usage or a fire demand with either the Well A pump or the Well B pump out of service; or
    - 3) To offset lost capacity due to drought, equipment failure, or equipment maintenance, but will not be used to increase capacity above the approved sources or exceed the total system limit.
2. **Duration and Extent Acceptable for Emergency/Backup Operations** – Well X will be operated for no longer than 60 consecutive days, or until the reasons for operating Well X are resolved, whichever is less.

### **V. Operational Monitoring**

During the emergency/back-up conditions, the Authority will measure and record a daily depth to groundwater in Well X below the top of casing using an electronic water sensing probe. The groundwater level and status of well pump (on or off) will be collected each day at 8:00 a.m., and will be recorded manually by the operator on the daily log sheet. Additionally, a flow meter is maintained on the discharge line in the Well X well house, between the well and the water storage tanks. Flow totals will be recorded daily at approximately 8:00 a.m. during the emergency/back-up conditions. Within 2 days of completion of the emergency or maintenance activity withdrawal, the daily water level and withdrawal data will be filed along with the required “Notice of End of Operations.” The Well X meter specifications are provided in the table below. Photographs of the Well X meter and the most recent certification of meter accuracy are provided in Attachments 3 and 4, respectively.

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<b>Location ID</b>	<b>Well X</b>
<b>Make</b>	<i>Sensus</i>
<b>Model</b>	<i>W-350</i>
<b>Size (inches)</b>	<i>3</i>
<b>Serial Number</b>	<i>77777</i>
<b>Flow Range (gpm)</b>	<i>5-350</i>
<b>Accuracy (%)</b>	<i>100.20%</i>
<b>Date Last Calibrated</b>	<i>2/2/23</i>
<b>Upstream Manufacturer's Straight Pipe Requirements</b>	<i>5x diameter (15")</i>
<b>Downstream Manufacturer's Straight Pipe Requirements</b>	<i>3x diameter (9")</i>
<b>Display Type</b>	<i>Analog</i>
<b>Display Capabilities</b>	<i>Totalizer</i>
<b>Digits Displayed</b>	<i>9</i>

**VI. Potential Adverse Impacts**

Due to its proximity to Wells A and B, and its proposed lower withdrawal rate (0.216 mgd versus 0.250 mgd), if Well X is used in place of Well A or Well B, no adverse impacts are expected. Well X is not located within 500 feet of an exceptional quality waterway.

**VII. Notification Procedures**

The Authority and/or operator of the water treatment plant will be responsible for notifications to the Commission for operation of Well X as an emergency or back-up source per the conditions detailed above. The Commission will be notified within 48 hours (2 days) of initiating emergency/back-up operations. The Authority and/or operator of the water treatment plant will notify the Commission via telephone (or other appropriate method) of the planned emergency/back-up operation implementation schedule and anticipated duration. The Authority will inform the following individual upon activating the emergency/back-up source:

Manager, Compliance & Enforcement  
Susquehanna River Basin Commission  
4423 North Front Street  
Harrisburg, PA 17110-1788  
Telephone: (717) 238-0423  
E-mail: [compliance@srbc.net](mailto:compliance@srbc.net)

Within 48 hours of completing the emergency/back-up activities, the Authority will send an e-mail regarding a "Notice of End of Operations" to the Commission and will provide the required operations data. Contact information for the Commission (telephone and address) will be included in the Operating Manual for the water treatment plant, along with notification instructions. Example notice language is included below:

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Attn: Manager, Compliance & Enforcement

On [DATE], the Authority notified the Commission that it was initiating operation of Well X as the emergency/back-up source per the conditions of its approved GP-02 and Contingency Plan. The emergency conditions ended on [DATE] and the Authority has ceased operating conditions authorized under the GP-02 for Well X. Daily withdrawal and water level data collected during the emergency situation have been tabulated and are attached to this e-mail. The Authority understands that any future emergency use of Well X must be reported within 48 hours.

Attachments: Attachment 1: Well X Location Map  
Attachment 2: Water System Map – Sources and Storage  
Attachment 3: Well X Photographs  
Attachment 4: Well X Meter Accuracy Certification

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**Attachment 1: Well X Location Map**

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**Attachment 2: Water System Map – Sources and Storage**

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**EXAMPLE**

**Attachment 3: Well X Photographs**



**Well X: Meter face**



**Well X: Meter installation showing straight pipe upstream and downstream**

**EXAMPLE**

**Attachment 4: Well X Meter Accuracy Certification**

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