

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In The Matter Of:

Pittsburgh Water and Sewer Authority	:	Violations of the Pennsylvania Safe
Penn Liberty Plaza 1	:	Drinking Water Act and the Rules and
1200 Penn Avenue	:	Regulations Promulgated Pursuant Thereto
Pittsburgh, PA 15222	:	

CONSENT ORDER AND AGREEMENT

This Consent Order and Agreement is entered into this 6th day of SEPTEMBER 2019, by and between the Commonwealth of Pennsylvania, Department of Environmental Protection (“Department”) and the Pittsburgh Water and Sewer Authority (“PWSA”).

The Department has found and determined the following:

A. The Department is the agency with the duty and authority to administer and enforce the Pennsylvania Safe Drinking Water Act, Act of May 1, 1984, P.L. 206, *as amended*, 35 P.S. §§ 721.1-721.17 (“Safe Drinking Water Act”); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, *as amended*, 71 P.S. § 510-17 (“Administrative Code”); and the rules and regulations promulgated thereunder (“Regulations”).

B. PWSA is a municipal authority with a business address of Penn Liberty Plaza 1, 1200 Penn Avenue, Pittsburgh, Pennsylvania 15222. PWSA is a “person,” a “supplier of water” and a “public water supplier,” as those terms are defined in Section 3 of the Safe Drinking Water Act, 35 P.S. § 721.3, and Section 1 of the Regulations, 25 Pa. Code § 109.1.

C. PWSA leases, operates and is the permittee of a “public water system” and, more specifically, a “community water system,” as those terms are defined in Section 3 of the Safe Drinking Water Act, 35 P. S. § 721.3, and Section 1 of the Regulations, 25 Pa. Code § 109.1.

PWSA's public water system consists of water sources, a clearwell and other storage facilities, treatment facilities and a distribution system (collectively, the "System"). PWSA provides drinking water through the System to approximately 520,000 people in the Pittsburgh, Pennsylvania area, including approximately 250,000 residential customers. PWSA operates the System pursuant to multiple public water supply permits issued by the Department and has been assigned Public Water System Identification Number 5020038. The City of Pittsburgh owns the System and leases it to PWSA.

D. Section 4(3) of the Regulations, 25 Pa. Code § 109.4(3), requires public water suppliers to provide and effectively operate and maintain public water system facilities. Section 4(4) of the Regulations, 25 Pa. Code § 109.4(4), requires public water suppliers to take whatever investigative or corrective action is necessary to assure that safe and potable water is continuously supplied to the users of the public water system.

E. PWSA uses a clearwell constructed in approximately 1908 for storage of filtered water prior to the introduction of the water into PWSA's distribution system. In 1998, PWSA contracted Marion Hill Associates to conduct an inspection of the clearwell. The 1998 clearwell inspection found that the structural stability of the clearwell was good overall, but identified several areas of concern including, but not limited to: excessive amounts of sediment that prohibited inspection of the bottom of the tank; debris; infiltrating tree roots; signs of erosion, deterioration and cracks in the concrete walls; leaks in the clearwell equalization chamber; and considerable amounts of rust on the gates for the clearwell and gatehouse, which could make them unmovable. The consultant concluded that the clearwell did not meet current design standards for public water supply finished water storage.

F. PWSA subsequently hired consultants HDR Engineering, Inc. and Malcom Pirnie, Inc. to provide separate but concurrent evaluations and recommendations regarding the clearwell. In November 2008, HDR Engineering, Inc. provided a report to PWSA titled “Pittsburgh Water Treatment Plant Clearwell Improvements, Phase 1- Study”. The purpose of the report was to identify available alternatives to address “PWSA’s desires to have a clearwell system with the operational flexibility of being able to remove approximately one half of the clearwell from service for cleaning and maintenance while the other half remains in service; and to have the ability to bypass the clearwell and send filtered water directly to the Bruecken Pump Station in emergency situations.” In December 2008, Malcom Pirnie, Inc. provided a report to PWSA titled “Clearwell Improvements Phase 1-Study”, which also addressed PWSA’s expressed need for operational flexibility with the clearwell. Both reports identified viable alternative options and provided cost estimates to PWSA to address the condition of the clearwell as well as the desired operational flexibility.

G. In March 2017, consultant Mott McDonald submitted another report to PWSA entitled “Alternative Evaluation-Clearwell Redundancy Project”, which identified additional viable options to remedy the inflexibility of the clearwell with cost estimates.

H. During a three-day inspection in late April 2017, the Department discovered that two access hatches on the clearwell were open and several other hatches were in disrepair, creating possible pathways of surface contamination. The Department required PWSA to take immediate action to secure the manholes on the clearwell with temporary covers. On May 1, 2017, the Department issued a Field Order citing PWSA for failing to effectively operate and maintain its public water facilities and failing to take investigative and corrective action necessary to ensure that safe and potable water is continuously supplied to the users of its system

by, among other things, not adequately responding to the 1998 Marion Hill Associates clearwell inspection report, in violation of 25 Pa. Code §§ 109.4(3) and 109.4(4). In the Field Order, the Department directed PWSA to increase its free chlorine residual, install additional protective and monitoring equipment on the clearwell, and conduct additional monitoring and testing of the clearwell.

I. The violations described in Paragraph H, above, constitute a public nuisance under Section 12 of the Safe Drinking Water Act, 35 P.S. § 721.12, and subject PWSA to a claim for civil penalties under Section 13(g) of the Safe Drinking Water Act, 35 P.S. § 721.13(g).

J. On October 25, 2017, the Department issued an Administrative Order to PWSA directing the Authority to undertake a number of actions including, among other things: to provide to the Department a detailed schedule for the completion of certain longer-term capital improvement projects identified by PWSA to the Department. Two of the identified capital improvement projects were the “Clearwell Emergency Response Project” and the “Washout Disconnection Program”.

K. Pursuant to Section 109.608 of the Regulations, 25 Pa. Code § 109.608, a public water system may not be designed or constructed in a manner which creates a cross-connection. A “cross-connection” is defined in 25 Pa. Code § 109.1 as “[a]n arrangement allowing either a direct or indirect connection through which backflow, including backsiphonage, can occur between the drinking water in a public water system and a system containing a source or potential source of contamination, or allowing treated water to be removed from any public water system, used for any purpose or routed through any device or pipes outside the public water system, and returned to the public water system. The term does not include connections to devices totally within the control of one or more public water systems and connections between

water mains.” A “washout”, as referred to in PWSA’s planned “Washout Disconnection Program”, is a connection between the public water system distribution components and the storm or sanitary sewerage systems utilized for flushing these lines and may indicate the presence of a cross-connection within the public water system. Cross-connections pose a potential threat to public health.

After full and complete negotiation of all matters set forth in this Consent Order and Agreement and upon mutual exchange of covenants contained herein, the parties desiring to avoid litigation and intending to be legally bound, it is hereby ORDERED by the Department and AGREED to by PWSA as follows:

1. Authority. This Consent Order and Agreement is an Order of the Department authorized and issued pursuant to Section 5 of the Safe Drinking Water Act, 35 P.S. § 721.5; and Section 1917-A of the Administrative Code, 71 P.S. § 510-17.

2. Findings.

a. PWSA agrees that the findings in Paragraphs A through K are true and correct and, in any matter or proceeding involving PWSA and the Department, PWSA shall not challenge the accuracy or validity of these findings.

b. The parties do not authorize any other persons to use the findings in this Consent Order and Agreement in any matter or proceeding.

3. Corrective Action. PWSA shall complete the following actions in accordance with the following schedule:

Clearwell and Related Projects

a. On or before January 1, 2023, PWSA shall submit to the Department a complete and technically sufficient application for a construction permit for a bypass system that

will enable PWSA to remove the clearwell from service and replace it. In the event the Department makes a written request to PWSA to supplement or modify the application, PWSA shall supplement or modify its application as requested by the Department within the time requested.

b. Within two (2) years of the Department's issuance of a construction permit authorizing construction of a clearwell bypass system, PWSA shall complete construction of the bypass system in accordance with the terms and conditions of the permit and shall submit to the Department an original, signed "Certificate of Construction/Modification Completion" form (certification of construction) that meets the requirements of 25 Pa. Code § 109.504(a). In the event the Department notifies PWSA in writing of any deficiencies in PWSA's construction of the bypass system, PWSA shall correct the deficiencies as requested by the Department within the time requested and submit a new certification of construction.

c. To facilitate the clearwell bypass system, PWSA shall rehabilitate or replace Rising Main #3 to PWSA's Highland 2 Reservoir as follows:

(i) On or before September 1, 2020, PWSA shall submit to the Department a complete and technically sufficient application for a construction permit to rehabilitate Rising Main #3;

OR

(ii) On or before March 1, 2021, PWSA shall submit to the Department a complete and technically sufficient application for a construction permit to replace Rising Main #3.

In the event the Department makes a written request to PWSA to supplement or modify an application submitted pursuant to Paragraph 3.c.(i) or 3.c.(ii), above, PWSA shall supplement or modify its application as requested by the Department within the time requested.

d. Within one (1) year of the Department's issuance of a construction permit authorizing the rehabilitation or replacement of Rising Main #3, PWSA shall complete the authorized work in accordance with the terms and conditions of the permit and shall submit to the Department an original, signed "Certificate of Construction/Modification Completion" form (certification of construction) that meets the requirements of 25 Pa. Code § 109.504(a). In the event the Department notifies PWSA in writing of any deficiencies in PWSA's rehabilitation or replacement of Rising Main #3, PWSA shall correct the deficiencies as requested by the Department within the time requested and submit a new certification of construction.

e. On or before June 1, 2021, PWSA shall submit to the Department a complete and technically sufficient application for a construction permit to rehabilitate or replace Rising Main #4 to PWSA's Highland 2 Reservoir to facilitate the clearwell bypass system. In the event the Department makes a written request to PWSA to supplement or modify the application, PWSA shall supplement or modify its application as requested by the Department within the time requested.

f. Within two (2) years of the Department's issuance of a construction permit authorizing the rehabilitation or replacement of Rising Main #4, PWSA shall complete the authorized work in accordance with the terms and conditions of the permit and shall submit to the Department an original, signed "Certificate of Construction/Modification Completion" form (certification of construction) that meets the requirements of 25 Pa. Code § 109.504(a). In the event the Department notifies PWSA in writing of any deficiencies in PWSA's rehabilitation

or replacement of Rising Main #4, PWSA shall correct the deficiencies as requested by the Department within the time requested and submit a new certification of construction.

g. On or before December 30, 2020, PWSA shall submit to the Department a complete and technically sufficient application for a construction permit for a new redundant rising main from the Aspinwall Pump Station to the Lanpher Reservoir to facilitate the clearwell bypass system. In the event the Department makes a written request to PWSA to supplement or modify the application, PWSA shall supplement or modify its application as requested by the Department within the time requested.

h. Within two (2) years of the Department's issuance of a construction permit authorizing the construction of a new redundant rising main from the Aspinwall Pump Station to the Lanpher Reservoir, PWSA shall complete construction of the rising main in accordance with the terms and conditions of the permit and shall submit to the Department an original, signed "Certificate of Construction/Modification Completion" form (certification of construction) that meets the requirements of 25 Pa. Code § 109.504(a). In the event the Department notifies PWSA in writing of any deficiencies in PWSA's construction of the redundant rising main, PWSA shall correct the deficiencies as requested by the Department within the time requested and submit a new certification of construction.

i. On or before June 30, 2020, PWSA shall submit to the Department a complete and technically sufficient application for a construction permit to replace the cover and liner of the Highland 2 Reservoir to facilitate the clearwell bypass system. In the event the Department makes a written request to PWSA to supplement or modify the application, PWSA shall supplement or modify its application as requested by the Department within the time requested.

j. Within eighteen (18) months of the Department's issuance of a construction permit authorizing the replacement of the cover and liner of the Highland 2 Reservoir, PWSA shall replace the cover and liner in accordance with the terms and conditions of the permit and shall submit to the Department an original, signed "Certificate of Construction/Modification Completion" form (certification of construction) that meets the requirements of 25 Pa. Code § 109.504(a). In the event the Department notifies PWSA in writing of any deficiencies in PWSA's replacement of the cover and/or liner, PWSA shall correct the deficiencies as requested by the Department within the time requested and submit a new certification of construction.

k. On or before January 1, 2021, to facilitate the clearwell bypass system, PWSA shall submit to the Department:

(i) A complete and technically sufficient application for a combined pump station to replace the existing Aspinwall and Breucken pump stations;

OR

(ii) Complete and technically sufficient applications for rehabilitation of the existing Aspinwall and Breucken pump stations.

In the event the Department makes a written request to PWSA to supplement or modify the application(s), PWSA shall supplement or modify its application(s) as requested by the Department within the time requested.

l. Within two (2) years of the Department's issuance of a construction permit authorizing PWSA to conduct a project under either Paragraph 3.k.(i) or 3.k.(ii), above, PWSA shall complete the authorized work in accordance with the terms and conditions of the permit and shall submit to the Department an original, signed "Certificate of