



Pittsburgh  
Water & Sewer  
Authority

**COLLABORATION DAY  
CAPITAL IMPROVEMENT PROGRAM  
PLANT AND PUMPING STATION  
RELATED PROJECTS**

November 18, 2015  
8:30 – 9:45

# WTP Project Descriptions

Project Name	Description
Aspinwall Water Treatment Plant Systems Assessment	Perform a comprehensive condition assessment at the Aspinwall Water Treatment Plant to identify the condition of the buildings, site, process equipment, and support systems and to develop a prioritized capital improvements project list.
Aspinwall Water Treatment Plant Process Assessment	Determine required process improvements to meet upcoming regulations
Future Aspinwall Water Treatment Plant Upgrades	Placeholder for prioritized projects identified during the Aspinwall Water Treatment Plant Process and Systems Assessments.
Utility Water System Reconstruction for the Screen Room and Chemical Facilities	Replace the potable water system in the screen room and chemical facilities.
Clarifier No. 2 and No. 4 Expansion Joint and Wall Repairs	Repair vertical floor expansion joints in Clarifier No. 2 and No. 4 to address active leakage. This project will also repair the brick veneer wall that is collapsing at Clarifier No. 2 due to the leaks.
Sedimentation Basin Cleaning	Removal of sludge accumulation in either the east or west sedimentation basin. (20+ year cleaning recurrence cycle), and repair of existing liner as required.
West Intake Structure	Replace entire existing structure and appurtenances.

# Water Treatment Plant (WTP) Projects

Project Name	Pre 2016	2016	2017	2018	2019	2020	Post 2020	Total
Aspinwall Water Treatment Plant Systems Assessment	\$0.00	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.50
Aspinwall Water Treatment Plant Process Assessment	\$0.00	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.50
Future Aspinwall Water Treatment Plant Upgrades	\$0.00	\$1.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$51.00
Utility Water System Reconstruction for the Screen Room and Chemical Facilities	\$0.12	\$0.58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.70
Clarifier No. 2 and No. 4 Expansion Joint and Wall Repairs	\$0.00	\$0.92	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.92
Sedimentation Basin Cleaning	\$0.00	\$0.13	\$6.27	\$6.15	\$0.00	\$0.00	\$0.00	\$12.54
West Intake Structure	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.78	\$40.78
<b>Total</b>	<b>\$0.12</b>	<b>\$3.63</b>	<b>\$16.27</b>	<b>\$16.15</b>	<b>\$10.00</b>	<b>\$10.00</b>	<b>\$50.78</b>	<b>\$106.94</b>

# Clearwell Project Descriptions

Project Name	Description
Clearwell Demolition	Demolition and replacement or rehabilitation of the existing 108 year old clearwell (finished water structure).
Clearwell Replacement	
Highland Reservoir Pump Station and Rising Main	Construction of a new finished water pump station and transmission main to supply water to the Highland No.1 Service Area from Highland No. 2 Reservoir.
Aspinwall Pump Station Renovation and VFD Upgrade	Replacement of aged pump and valve equipment, electrical equipment, and auxiliary systems; installation of variable frequency drives; rehabilitation of the building architectural and energy management systems.
Bruecken Pump Station Renovation and VFD Upgrade	Installation of variable frequency drives and required improvements to the electrical system. Additional improvements may be required to address the aging facility and to address excessive water leakage observed in the basement.
Aspinwall Pump Station to Lanpher Reservoir Rising Main	Construction of a new, redundant rising main from Aspinwall Pump Station to Lanpher Reservoir.

# Clearwell

Project Name	Pre 2016	2016	2017	2018	2019	2020	Post 2020	Total
Clearwell Demolition	\$0.00	\$0.00	\$0.25	\$0.25	\$0.00	\$0.00	\$6.76	\$7.26
Clearwell Replacement	\$0.15	\$0.52	\$1.30	\$1.30	\$0.00	\$0.00	\$35.17	\$38.44
Highland Reservoir Pump Station and Rising Main	\$0.00	\$0.55	\$0.92	\$2.30	\$6.14	\$6.14	\$0.77	\$16.82
Aspinwall Pump Station Renovation and VFD Upgrade	\$0.00	\$0.88	\$1.46	\$3.62	\$9.66	\$9.66	\$1.21	\$26.48
Bruecken Pump Station Renovation and VFD Upgrade	\$0.00	\$0.48	\$0.66	\$1.64	\$4.39	\$4.39	\$0.55	\$12.10
Aspinwall Pump Station to Lanpher Reservoir Rising Main	\$0.25	\$1.52	\$4.31	\$21.30	\$6.08	\$0.00	\$0.00	\$33.46
<b>Total</b>	<b>\$0.40</b>	<b>\$3.95</b>	<b>\$8.90</b>	<b>\$30.41</b>	<b>\$26.27</b>	<b>\$20.18</b>	<b>\$44.46</b>	<b>\$134.58</b>

# Pumping & Storage Project Descriptions

Project Name	Description
Raw and Finished Water Pump Stations Condition Assessment	Perform a comprehensive condition assessment of the Ross Raw Water Pump Station, Aspinwall Pump Station, Bruecken Pump Station, Herron Hill Pump Station, Herron Hill Tank Pump Station, (New) Highland Pump Station, Howard Pump Station, Inline Pump Station at Pacific and Coral, Lincoln Pump Station, Mission Pump Station, and Saline Pump Station.
Future Raw and Finished Water Pump Stations Upgrades	Placeholder for prioritized projects identified during the Raw and Finished Water Pump Stations Condition Assessment Project.
Finished Water Storage Tank Comprehensive Inspections	Inspection of interior and exterior of the water storage tanks.
Future Finished Water Storage Tank Rehabilitation or Replacement	Placeholder for repairs and tank painting identified during the comprehensive tank inspections.
Squirrel Hill Tank Repainting	Repainting of the exterior of the Squirrel Hill Tank.
Highland No.1 Reservoir Cleaning, Liner Assessment, and Parapet Wall Repair	Nominal capital maintenance due to age to address water quality and water loss issues

# Pumping & Storage Projects

Project Name	Pre 2016	2016	2017	2018	2019	2020	Post 2020	Total
Raw and Finished Water Pump Stations Condition Assessment	\$0.00	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.50
Future Raw and Finished Water Pump Stations Upgrades	\$0.00	\$1.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$41.00
Finished Water Storage Tank Comprehensive Inspections	\$0.00	\$0.12	\$0.03	\$0.00	\$0.00	\$0.03	\$0.14	\$0.33
Future Finished Water Storage Tank Rehabilitation or Replacement	\$0.00	\$0.21	\$1.06	\$1.92	\$1.26	\$1.51	\$1.60	\$7.55
Squirrel Hill Tank Repainting	\$0.00	\$0.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.30
Highland No.1 Reservoir Cleaning, Liner Assessment, and Parapet Wall Repair	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15.90	\$15.90
<b>Total</b>	<b>\$0.00</b>	<b>\$2.13</b>	<b>\$9.09</b>	<b>\$9.92</b>	<b>\$9.26</b>	<b>\$9.55</b>	<b>\$25.64</b>	<b>\$65.59</b>

