



ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES

ACEC / PA Water Environment Energy Committee Fall Conference Resiliency Panel

Pittsburgh Water and Sewer Authority

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Director of Engineering and Construction

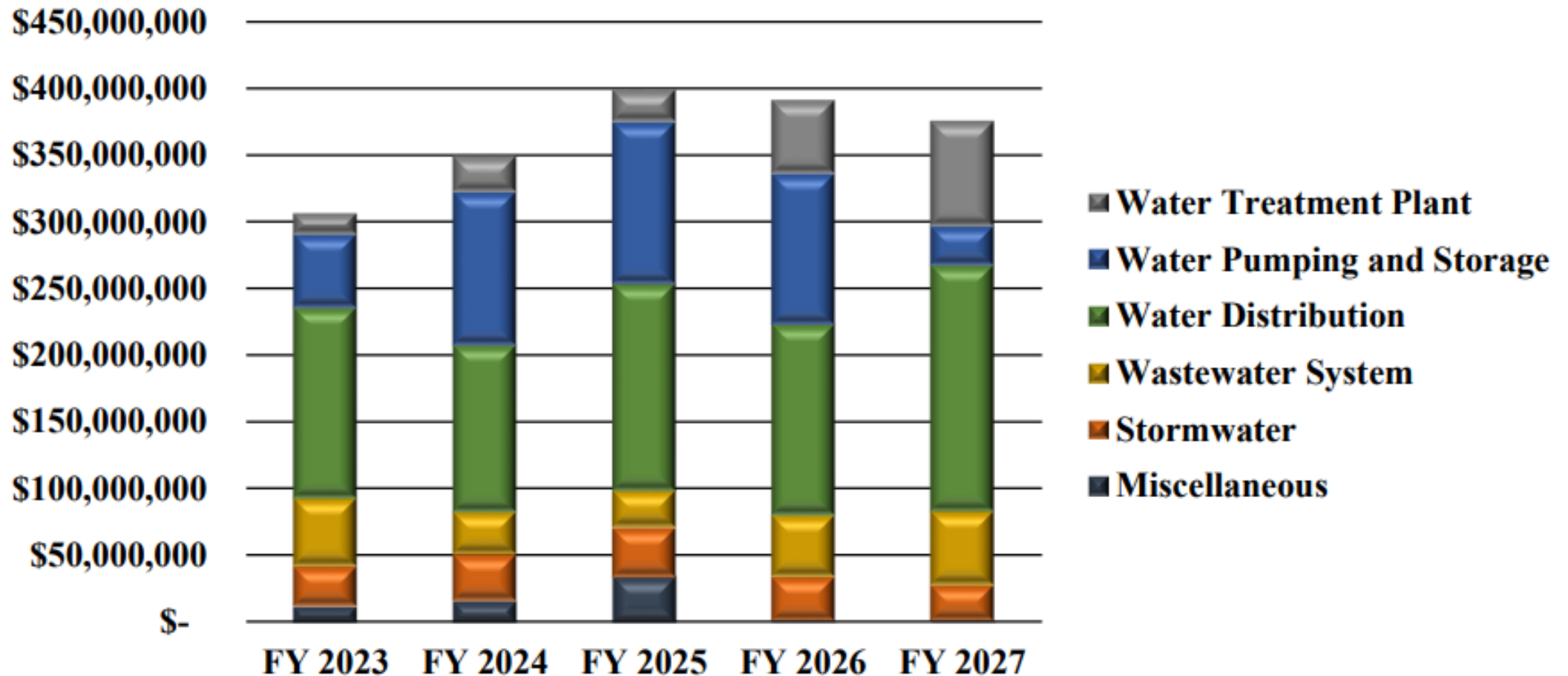
September 12, 2023

Organization Overview

(Facts about
PWSA)

- **Total Employees:** More than 400
- **Total Customers:** 116,365
 - **Water & Sewer:** 80,524
 - **Sewer Only:** 30,197
 - **Stormwater Only:** 5,644
- **Population Served:** Approx. 500,000
- **Water Infrastructure:**
 - **Treatment:**
 - **Aspinwall Treatment Plant:** 100 MGD
 - **Microfiltration Plant:** 26 MGD
 - **Distribution System:**
 - **Raw water pump station:** 1
 - **Finished water pump stations:** 10
 - **In-ground reservoirs:** 4
 - **Storage tanks:** 10
 - **Total Miles of Water Lines:** 964
 - Valves: 19,000
 - Fire Hydrants: 7,506
- **Sewer Infrastructure:**
 - **Total Miles of Sewer Lines:** 1,223 (sanitary, storm, and combined)
 - Also convey sewage for portions of 24 neighboring communities
 - **Manholes:** 29,502
 - **Catch Basins:** 24,463
 - **Waterwater Pump Stations:** 4

PWSA Proposed 5-Year Capital Improvement Program Investment



Successful Programs Addressing Lead in Drinking Water



• Maintaining Lead Levels in Compliance with LCR

- Orthophosphate addition: Began April 1, 2019
- Came into full compliance with LCR in July 2020
- 1st Round of 2023 Testing (2023a):
 - 1st Liter 3.35 ppb and 5th liter 2.6 ppb
- 6th consecutive compliant round of LCR monitoring
- Optimized, complying with state/federal action level of 15 ppb
- Demonstrates effectiveness of orthophosphate as inhibitor
- Requested Designation of Optimal Water Quality Parameters
 - Submitted July 2023; semi-annual to annual monitoring

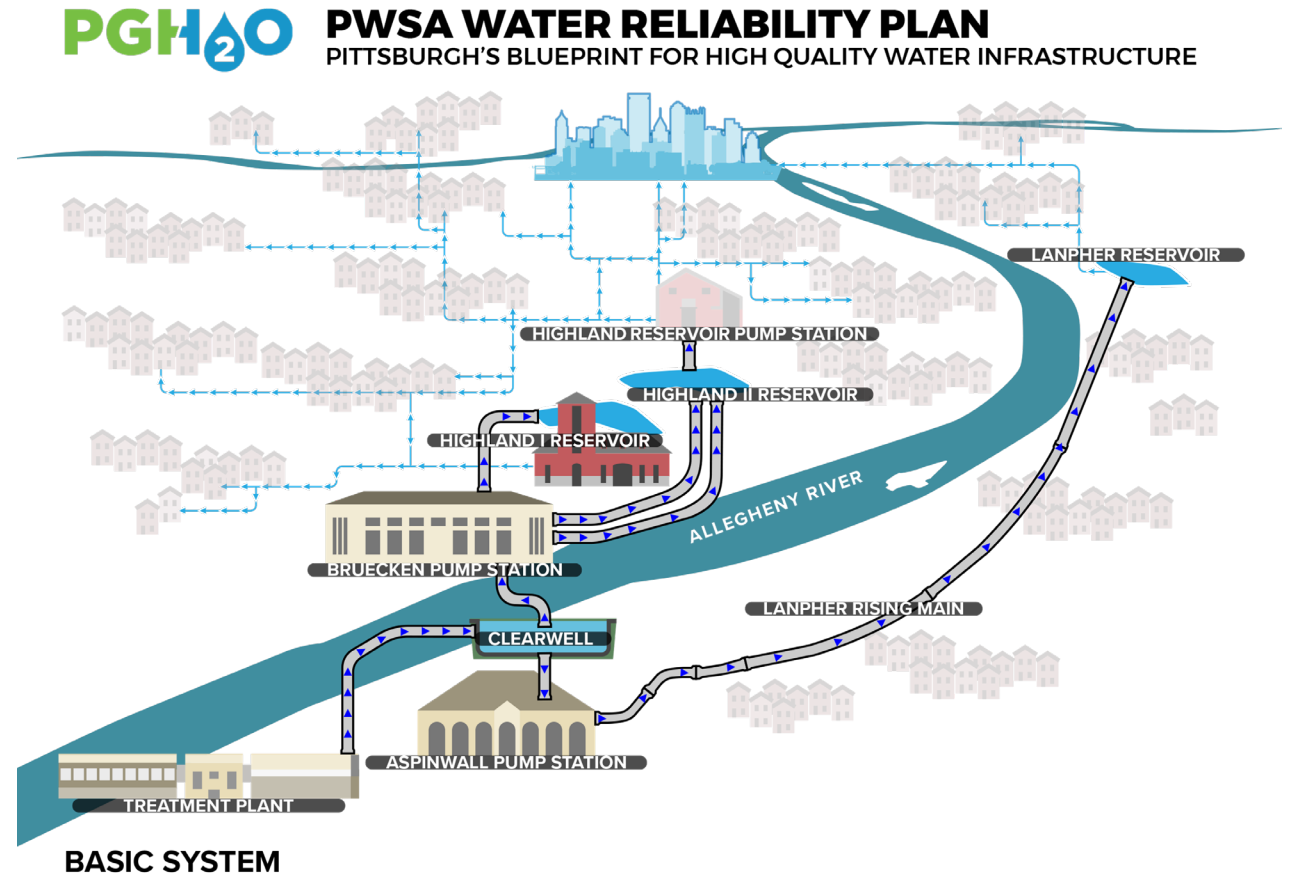
• Lead Service Line Replacements (LSLR)

- LSLRs completed as of Sept. 7, 2023:
 - Over 10,382 public lead service lines
 - Over 7,263 private lead service lines
- Working towards 2026 Goal of removing all LSLs
- Majority of LSLRs completed through the Small Water Main Replacement Program
 - Continue with Neighborhood LSLR Contracts
- Currently, approx. 6,300 public and 8,200 private remaining



Water Reliability Plan (WRP)

- Series of once-in-a-generation projects
- Pittsburgh's blueprint for high quality water
- Strengthen and add redundancy to water system
- Culminates with complete replacement of Finished Water Clearwell
- Renews or replaces the pumping, transmission and storage infrastructure that supplies water to the 3 water supply supersystems
- Required by State through Consent Order
- Investment of \$470 million over next six years



PWSA On-Call Professional Engineering Consultant Services Update

- Current Master Services Agreements (MSAs) expire Sept. 2024.
- 2024 On-Call Engineering Services Contract Solicitations:
 - Planned advertisement: Late 1st Quarter to early 2nd Quarter 2024
 - Mandatory pre-proposal Conference to be held in Nov. 2023:
 - Review revised slate of Service Categories to be requested, likely to include:
 - Water Program - Linear Construction
 - Water Program - Vertical Construction
 - Wastewater Program
 - Stormwater and Green Infrastructure Program
 - Construction Inspection and Construction Management (CM/CI) - Linear
 - Construction Inspection and Construction Management (CM/CI) - Vertical Construction
 - Diverse Sub-consultants to be invited for networking and team building
 - Receive questions
 - Consulting services likely to include planning, public engagement, engineering, design, survey, geotechnical and construction management and construction inspection services for new construction, maintenance, and repair projects, on an as-needed basis

Upcoming Open RFPs: Design Engineering: Water Capital Projects

Project Name	Category	Proposed Date*	Est. Contract Budget**
2025 Small Diameter Water Main Replacement	Water Distribution System	Q2 - 2024	\$3,100,000
Garfield Tank Improvements	Water Pumping & Storage	Q1 - 2024	\$1,700,000
Chemical Feed Modernization Project/Rapid Mix and Clarifier Improvements	Water Treatment Plant	Q4 - 2023	\$5,500,000
Phase 2 Sedimentation Basin Rehabilitation Project	Water Treatment Plant	Q1 - 2024	\$1,600,000
Aspinwall Water Treatment Plant Raw Water Intakes	Water Treatment Plant	Q2 - 2024	\$7,500,000
Clearwell Improvements	Water Treatment Plant	TBD	\$7,400,000
Aspinwall Water Treatment Plant Electrical and Backup Power Improvements	Water Treatment Plant	TBD	TBD

* Proposed Date reflects the projected date of RFP release, which is subject to change dependent upon receipt of Permits and/or funding mechanism ultimately achieved (e.g., PennVEST Funding).

** Engineering Services Cost Only – Does not includes costs for Construction Management/Inspection or Construction.

Upcoming Open RFPs: CM/CI Services

Water and Stormwater Capital Projects

Project Name	Category	Proposed Date*	Est. Contract Budget**
2023B Neighborhood LSLR	Water Distribution System: CM/CI	Q3 - 2023	\$1,600,000
2024A Neighborhood LSLR	Water Distribution System: CM/CI	Q1 - 2024	\$3,800,000
2024B Neighborhood LSLR	Water Distribution System: CM/CI	Q3 - 2024	\$4,000,000
2023 Small Diameter Water Main Replacement	Water Distribution System: CM/CI	Q2 - 2024	\$8,500,000
Lanpher Reservoir Improvements	Water Distribution System: CM/CI	Q3 - 2023	\$1,000,000
2019 Chlorine Booster Station Improvements	Water Pumping & Storage: CM/CI	Q2 - 2024	\$2,200,000
Lanpher Reservoir Improvements	Water Distribution System: CM/CI	Q3 - 2023	\$1,000,000
Bruecken Pump Station Improvements	Water Pumping & Storage: CM/CI	Q2 - 2024	\$11,000,000
Clearwell Emergency Response Project	Water Treatment Plant: CM/CI	Q2 - 2024	\$2,700,000
Catch Basin Replacement	Stormwater: CM/CI	TBD	TBD
Four Mile Run Green Stormwater Infrastructure	Stormwater: CM/CI	TBD	TBD

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** Construction Management/Inspection Costs Only – Does not includes costs for Planning, Design or Construction.



Thank you

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