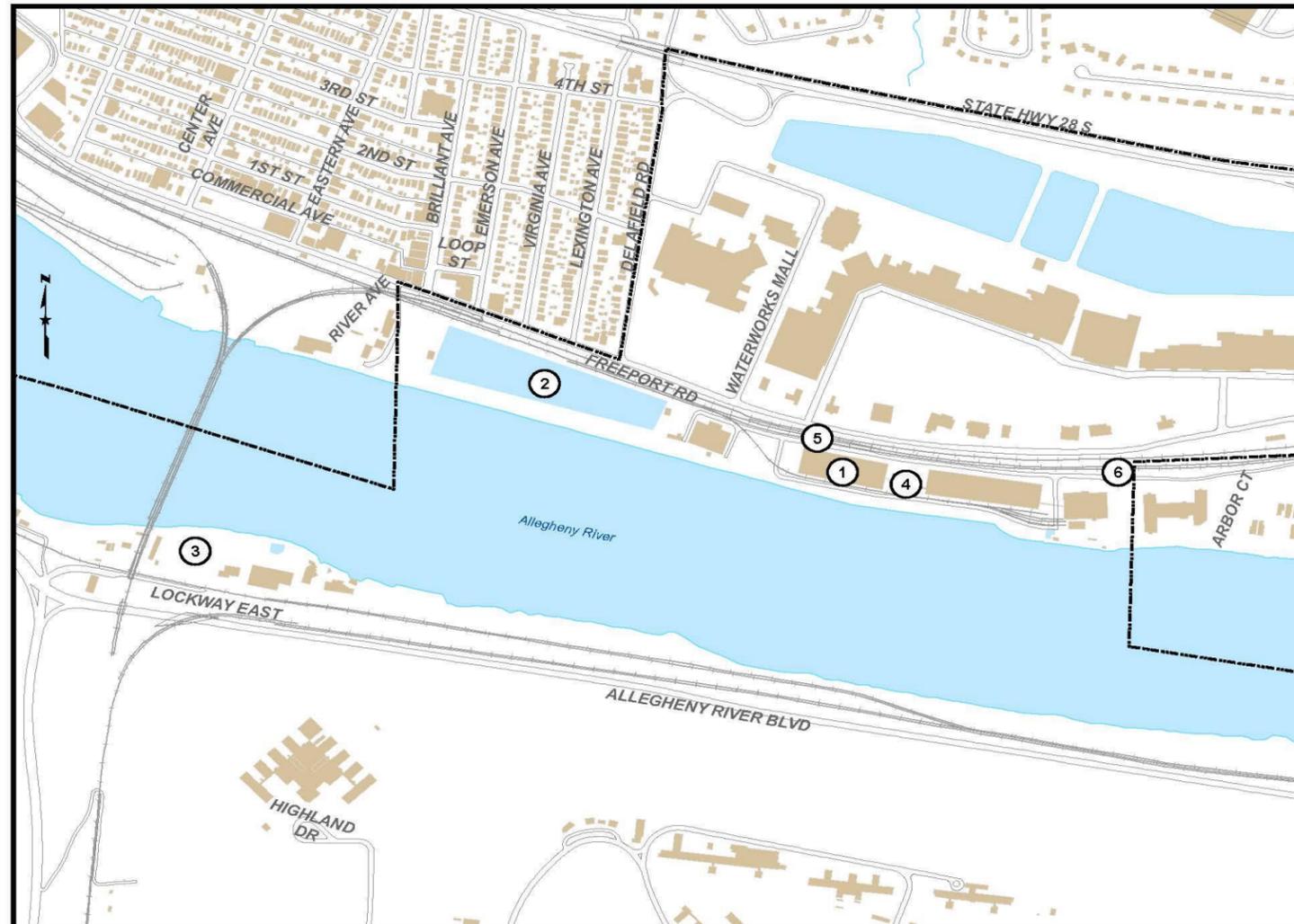


Water Treatment Plant

Project	Project Description	Public Benefit	2014 - 2018 Anticipated Budget
WTP – Filter Rehabilitation	Rehabilitate the existing 18 rapid sand filters at Aspinwall WTP.	Public Health	\$28,000,000
Emergency Plan for WTP Clearwell	Project involves work at the Aspinwall Pump Station and Bruecken Pump Station. Project study to begin in 2014, design engineering to be done in 2015, with construction in 2017.	Production Reliability	\$1,050,000
Bruecken Pump Station Valve Vault Upgrade	Project proposes to replace 14 of the valves in kind and provide each valve with a new motor actuator along with structural repairs and electrical upgrades to the valve vault.	Production Reliability	\$5,400,000
Scada System Upgrades/Extensions	The SCADA System upgrade involves the replacement of all RTUs within the system including the telemetry.	Production Reliability	\$4,000,000
Security Camera System Extensions	Security Camera System Extensions	Safety & Security	\$375,000
WTP – Access Tunnel Rehabilitation General Cleaning	Removing debris and other obstructions, general cleaning, and restoring functionality of the existing drainage system(s).	Production Reliability	\$361,000
TOTALS			\$39,186,000



WATER TREATMENT PLANT

PROJECT NAME

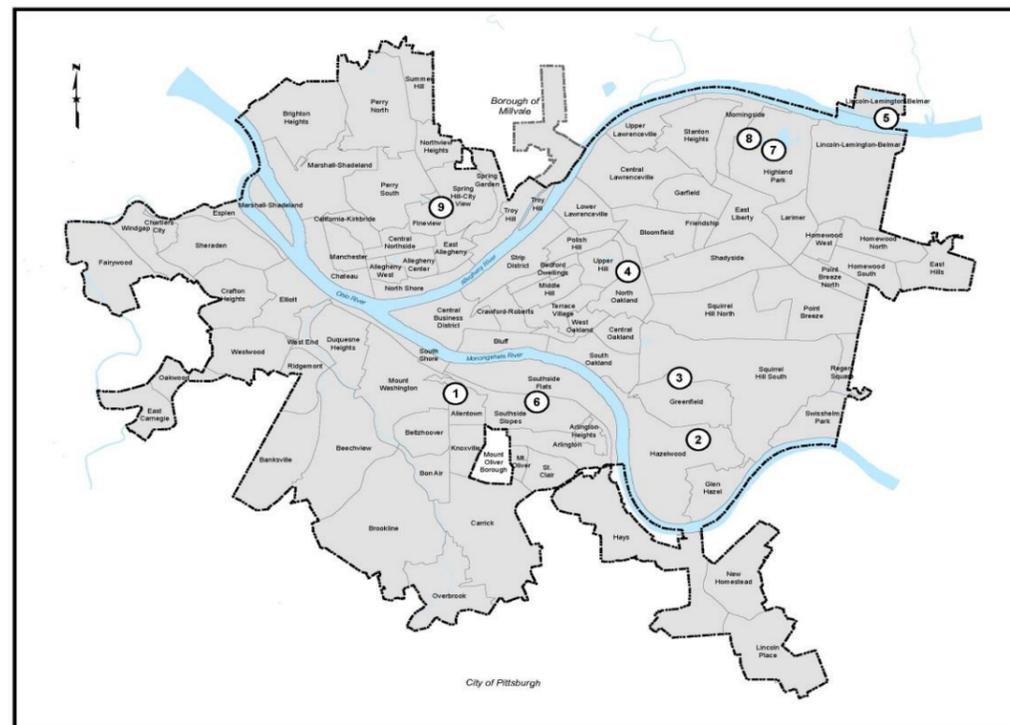
MAP LOCATION

- WTP - Filter Rehabilitation
- Emergency Plan for WTP Clearwell
- Bruecken Pump Station Valve Vault Upgrade
- Scada System Upgrades / Extensions
- Security Camera System Extensions
- WTP - Access Tunnel Rehabilitation / Cleaning

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Pumping and Storage

Project	Project Description	Public Benefit	2014 - 2018 Anticipated Budget
2 PAX Systems for THM Removal Allentown Tank No. 1 & Squire Hill Tank	Install new aeration system for THM control.	Public Health	\$757,500
Storage – Allentown Tank #1 – Paint	Replace the interior & exterior coatings of the tank and associated work.	Preserve Public Asset	\$600,000
Storage – Allentown Tank #2 – Paint	Replace the interior & exterior coatings of the tank and associated work.	Preserve Public Asset	\$600,000
Emergency Power Interconnects for Pump Stations (includes transformers) at the Saline PS, Herron Hill PS & Ross PS	Engineering & installation of Emergency Mobile Power Interconnect Points (Docking Stations) for Saline, Herron Hill, and Ross Pump Stations.	System Reliability	\$1,275,000
Pumping – Mission Pump Station – Rehabilitate Building Interior	Building rehabilitation	Preserve Public Asset	\$791,000
Water Distribution – Highland 2 to Highland 1 Pump Station – Pipelines	The construction of a 32-mgd capacity transfer pumping station with a diesel powered generator adjacent to the existing New Highland Pump Station along with a connection to the Highland 1 distribution system.	System Reliability	\$4,780,000
Pumping – Highland Pump Station – Replace MCC	The electrical switchgear and motor control center in this station will be replaced with new equipment.	System Reliability & Safety	\$123,000
Switchgear for Saline Pump Station	Replacement of Saline Pump Station Switchgear due to age.	System Reliability & Safety	\$1,500,000
Pumping Storage Flow Monitoring	Install flow metering systems as needed to determine real flow in and real flow out at various pending and storage sites	System Reliability & Safety	\$300,000
Pumping – Highland Pump Station – Replace HVAC	Replacement/repair of the existing heating and ventilation systems at the Highland Pump Station and Chlorine room.	System Reliability & Safety	\$105,000
Electrical System Upgrade	Replacement of aged electrical equipment at Aspinwall, New Highland, Herron Hill, Bruecken & Mission Pump Stations.	System Reliability & Safety	\$1,100,000
Pumping – Howard Pump Station – Replace HVAC	Replacement/repair of the existing heating and ventilation systems at the Howard Pump Station.	System Reliability & Safety	\$502,000
	TOTALS		\$12,433,500



PUMPING AND STORAGE

PROJECT NAME

- 2 PAX Systems for THM Removal:
 - Allentown Tank No. 1
 - Squirrel Hill Tank
- Allentown Tank #1 - Paint
- Allentown Tank #2 - Paint
- Emergency Power Interconnects for:
 - Saline Pump Station
 - Herron Hill Pump Station
 - Ross Pump Station
- Mission Pump Station Rehab Building Interior
- Highland 2 to Highland 1 Pump Station - Pipelines
- Highland Pump Station - Replace MCC
- Switchgear for Saline Pump Station
- Pump Storage Flow Monitoring
- Highland Pump Station - Replace HVAC
- Electrical System Upgrade
- Howard Pump Station - Replace HVAC

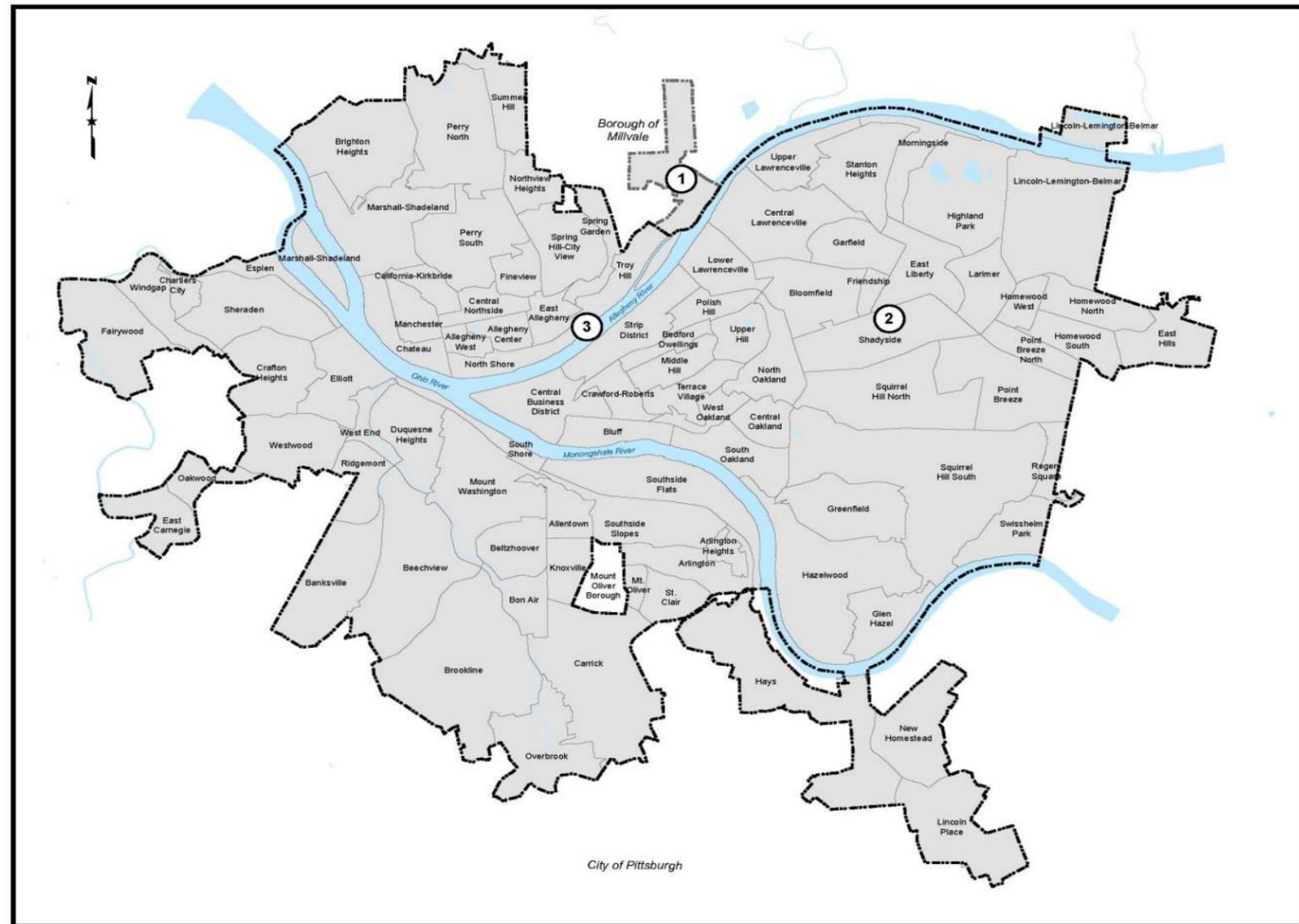
MAP LOCATION

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- 4
- 5
- 3
- Various Locations
- 8
- Various Locations
- 9

Anticipated Water Distribution System

Project	Project Description	Public Benefit	2014 - 2018 Anticipated Budget
Pipe Segment Replacements	560 ft of 6" diameter pipe at 52nd btwn Keystone & Duncan	System Reliability/Preserve Public Asset	\$330,000
Pipe Segment Replacements	1000 ft of 6" diameter pipe at Holmes St. Btwn Keystone and McCandless	System Reliability/Preserve Public Asset	\$580,000
Pipe Segment Replacements	760 ft of 6" diameter pipe at Keystone St btw McCandless and 54th	System Reliability/Preserve Public Asset	\$450,000
Pipe Segment Replacements	440 ft of 6" diameter pipe at 53rd btw Natrona and Holmes	System Reliability/Preserve Public Asset	\$250,000
Pipe Segment Replacements	150 ft of 6" diameter pipe at 5th btw Keystone and Kent	System Reliability/Preserve Public Asset	\$90,000
Pipe Segment Replacements	670 ft of 4" diameter pipe at East side Sheridan Ave btwn Bellman and Callery	System Reliability/Preserve Public Asset	\$390,000
Pipe Segment Replacements	1100 ft of 4&6" diameter pipe at West side Sheridan Ave btwn Bellman and Wellesley	System Reliability/Preserve Public Asset	\$650,000
Pipe Segment Replacements	750 ft of 6" diameter pipe at Jackson St btwn Heberton and Farragut	System Reliability/Preserve Public Asset	\$440,000
Pipe Segment Replacements	340 ft of 6" diameter pipe at Collins Ave btwn Jackson & Bellman	System Reliability/Preserve Public Asset	\$200,000
Pipe Segment Replacements	270 ft of 6" diameter pipe at North side Jackson St btwn Sheridan and Farragu	System Reliability/Preserve Public Asset	\$160,000
Pipe Segment Replacements	580 ft of 6" diameter pipe at Fingal St btwn Greenleaf & Rutledge	System Reliability/Preserve Public Asset	\$340,000
Pipe Segment Replacements	480 ft of 6" diameter pipe at Rutledge btwn Fingal & Republic	System Reliability/Preserve Public Asset	\$280,000
Pipe Segment Replacements	240 ft of 6" diameter pipe at Greenleaf btwn Fingal & Republic	System Reliability/Preserve Public Asset	\$140,000
Pipe Segment Replacements	1210 ft of 4&6" diameter pipe at Republic btwn Rutledge & Alley	System Reliability/Preserve Public Asset	\$700,000
Pipe Segment Replacements	1390 ft of 6" diameter pipe at Seward St btwn Rutledge & Republic	System Reliability/Preserve Public Asset	\$800,000
Pipe Segment Replacements	1650 ft of 36" diameter pipe at Smallman St btwn 21st & 16th	System Reliability/Preserve Public Asset	\$1,030,000
Pipe Segment Replacements	1080 ft of 6" diameter pipe at Manton Way btwn Arlington and Amanda	System Reliability/Preserve Public Asset	\$640,000
Pipe Segment Replacements	970 ft of 6" diameter pipe at Industry St btwn Arlington and Amanda	System Reliability/Preserve Public Asset	\$570,000
Pipe Segment Replacements	450 ft of 6" diameter pipe at Loyal Way btwn Arlington and Amanda	System Reliability/Preserve Public Asset	\$250,000
Pipe Segment Replacements	800 ft of 6" diameter pipe at Freland St btwn Knox & Mt. Oliver	System Reliability/Preserve Public Asset	\$460,000
Pipe Segment Replacements	1260 ft of 6" diameter pipe at Loyal Way btwn Arlington and Amanda	System Reliability/Preserve Public Asset	\$740,000
Pipe Segment Replacements	1300 ft of 6" diameter pipe at North side McPherson Blvd btwn Fifth & Dallas	System Reliability/Preserve Public Asset	\$760,000
Pipe Segment Replacements	600 ft of 6" diameter pipe at South side McPherson Blvd btwn Fifth & Dallas	System Reliability/Preserve Public Asset	\$350,000
Pipe Segment Replacements	600 ft of 6" diameter pipe at Gordon St & Lynn Way	System Reliability/Preserve Public Asset	\$350,000
Pipe Segment Replacements	250 ft of 6" diameter pipe at Dallas Ave btwn McPherson & Simonton	System Reliability/Preserve Public Asset	\$147,000

Pipe Segment Replacements	330 ft of 6" diameter pipe at Roycrest Pl btwn Osage & Homewood	System Reliability/Preserve Public Asset	\$190,000
Pipe Segment Replacements	1120 ft of 6" diameter pipe at Lexington St btwn Penn & Reynolds	System Reliability/Preserve Public Asset	\$660,000
Pipe Segment Replacements	560 ft of 6" diameter pipe at Richland St btwn Kensington & Rockshale	System Reliability/Preserve Public Asset	\$330,000
Pipe Segment Replacements	1160 ft of 6" diameter pipe at Abbott St, Peebles St & Edgerton St	System Reliability/Preserve Public Asset	\$680,000
Pipe Segment Replacements	350 ft of 6" diameter pipe at Richland Lane btwn Tuscarora & Penn	System Reliability/Preserve Public Asset	\$200,000
Pipe Segment Replacements	320 ft of 6" diameter pipe at Brashear St btwn Braddock & East End	System Reliability/Preserve Public Asset	\$190,000
Pipe Segment Replacements	700 ft of 6" diameter pipe at Lyndhurst Dr	System Reliability/Preserve Public Asset	\$400,000
Pipe Segment Replacements	370 ft of 6" diameter pipe at Beechwood Blvd btwn Beechwood Ct & Beechmont	System Reliability/Preserve Public Asset	\$210,000
Pipe Segment Replacements	540 ft of 6" diameter pipe at Hastings St btwn Beechwood Blvd & Fenimore	System Reliability/Preserve Public Asset	\$310,000
Pipe Segment Replacements	690 ft of 6" diameter pipe at Beechwood Blvd btwn Hastings & Wilkins	System Reliability/Preserve Public Asset	\$400,000
Pipe Segment Replacements	600 ft of 6" diameter pipe at East side Shady Ave btwn Northumberland and Solway	System Reliability/Preserve Public Asset	\$350,000
Pipe Segment Replacements	320 ft of 6" diameter pipe at West side Shady Ave btwn Northumberland and Solway	System Reliability/Preserve Public Asset	\$190,000
Pipe Segment Replacements	700 ft of 6" diameter pipe at Negley Ave btwn Wilkins & Woodmont	System Reliability/Preserve Public Asset	\$410,000
Pipe Segment Replacements	210 ft of 6" diameter pipe at Solway btwn Negley & Arco	System Reliability/Preserve Public Asset	\$120,000
Pipe Segment Replacements	1140 ft of 6" diameter pipe at Kentucky Ave btwn Negley & Maryland	System Reliability/Preserve Public Asset	\$670,000
Pipe Segment Replacements	840 ft of 6" diameter pipe at College St btwn Kentucky & Elwood	System Reliability/Preserve Public Asset	\$490,000
Pipe Segment Replacements	540 ft of 6" diameter pipe at Howe St btwn Maryland & College	System Reliability/Preserve Public Asset	\$309,000
Valve and Hydrant Contract	Replace and/or construct various water valves and fire hydrants located in the PWSA service area.	System Reliability/Preserve Public Asset	\$5,200,000
Millvale Water System Improvements	Improve low operating pressure problems in the Millvale distribution system.	System Reliability/Preserve Public Asset	\$721,000
Water Line Replacement &/or Relay Contract – Various Locations	Repair of water main(s) breaks, leaks and all other general waterline work at various locations within the PWSA system(s)	System Reliability/Preserve Public Asset	\$5,175,000
Water Meter Replacement Program for Unaccountable water service	Install meters and/or meter vaults (as needed) at various locations at various City owned facilities and other locations. Currently there are 86 known city properties and 17 wholesale customers.	System Efficiency Improvement	\$600,000
Ellsworth Avenue Waterline Contract	Replacement of approximately 2500 lf of existing 6" waterline with a new 12" waterline. Project is directly related to water demand improvements to accommodate residential needs.	System Reliability/Preserve Public Asset	\$1,375,000
River Avenue Waterline Relay	Replacement of approximately 4000 LF of existing 8" waterline with a new 12" and 16" waterlines for water demand improvements.	System Reliability/Preserve Public Asset	\$1,910,000
Joint Municipal Projects Cost Share – Water	Joint venturing projects at various locations as needed.	System Reliability/Preserve Public Asset	\$6,000,000
	TOTALS		\$38,187,000



WATER DISTRIBUTION SYSTEM

PROJECT NAME

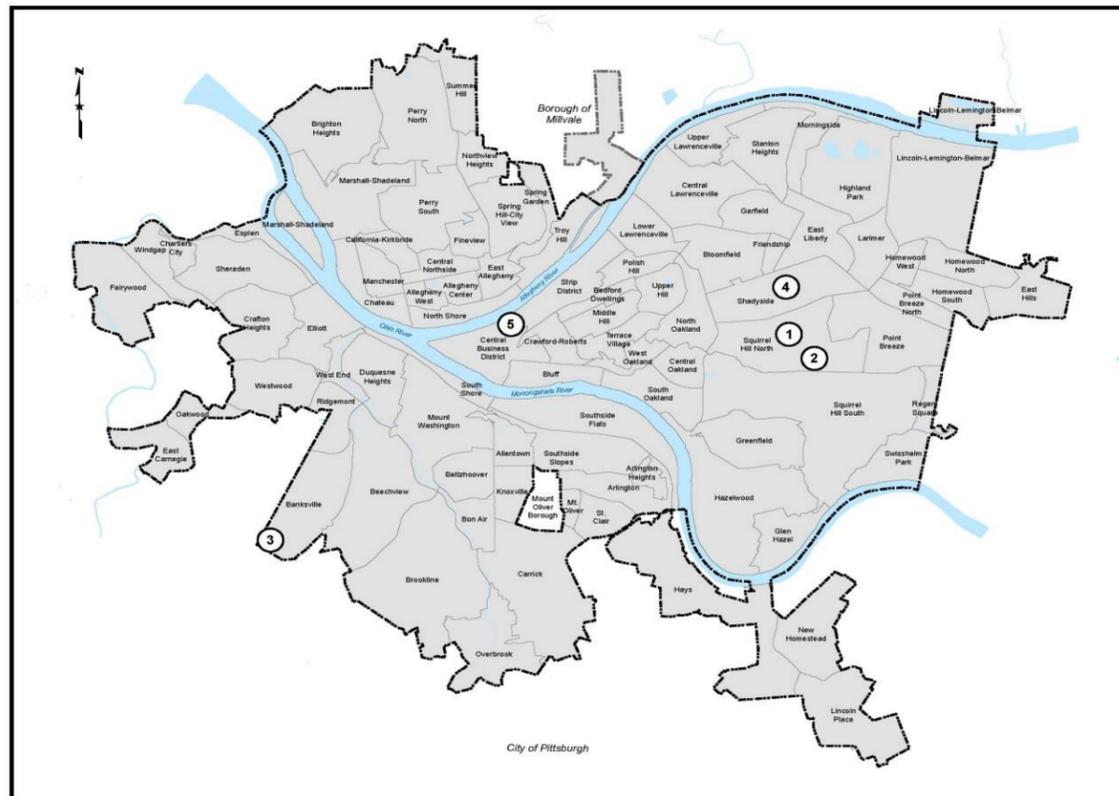
Medium/High Risk of Failure Pipe Replacements
 Valve and Hydrant Contract
 Millvale Water System Improvements
 Water Line Replacement / Relay Contract
 Water Meter Replacement Program
 Ellsworth Avenue Waterline Contract
 River Avenue Waterline Relay
 Joint Municipal Projects Cost Share- Water

MAP LOCATION

Various Locations
 Various Locations
 1
 Various Locations
 Various Locations
 2
 3
 Various Locations

Anticipated Waste / Storm Water Systems (Sewer)

Project	Project Description	Public Benefit	2014 - 2018 Anticipated Budget
Fair Oaks Sanitary Sewer Line Replacement	Construct a new dedicated sanitary sewer in Fair Oaks Street that will tie back into the existing combination sewer at the intersection of Wilkins Ave & Beeler St.	System Reliability	\$590,000
Valmont 24-inch Sewer Separation	Existing combination sewer was found to be partially collapsed. Tried lining the sewer with no success, homes along Valmont have experienced frequent sewer back-ups.	System Reliability	\$460,000
Red Oak Drive Sewer Separation	Existing combination sewers are surcharging need to construct separate sanitary sewer system	System Reliability	\$400,000
Sewerline Improvement on Holden and Summerlea Street (Phase II)	Improvement of sewerlines in Summerlea Street and Holden Street.	System Reliability	\$730,000
11 th Street Storm Sewer Extensions	Design and construction of a dedicated storm sewer in 11 th Street from Waterfront Place up to Bedford Avenue	System Reliability	\$3,000,000
Sewer Improvements Construction/Reconstruction) Annual Capital	Improvement of Sewers at various locations as needed.	System Reliability/Preserve Public Asset	\$5,175,000
CB/SI Reconstruction Contract	Yearly CBs and storm inlets construction/reconstruction at various locations.	System Reliability/Preserve Public Asset	3,600,000
Gunite Repair (Sewer Lines Greater than 42") Annual Capital	Repairing large diameter sewers greater than 42" using gunite application, dry method at various locations in the PWSA sewer systems.	System Reliability/Preserve Public Asset	\$6,900,000
Sewer Lining (MH to MH) Annual Capital	Relining existing PWSA sewer(s) various locations with a new polyester /fiberglass liners.	System Reliability/Preserve Public Asset	\$5,175,000
Joint Municipal Projects Cost Share – Sewer	Joint Venturing with other municipalities and/or other agencies on sewer improvement projects, including Green Infrastructure.	System Reliability/Preserve Public Asset	\$3,000,000
Sewers – Sewage Pump Station Upgrades	Requested for solicitation of bids for the upgrade of Mifflin Road Sewage Pump Station due to aging.	System Reliability/Preserve Public Asset	\$3,090,000
PWSA Diversion Chamber Rehabilitation	Rehabilitation of existing PWSA diversion chambers and related facilities.	System Reliability/Preserve Public Asset	\$9,000,000
	TOTALS		\$41,120,000

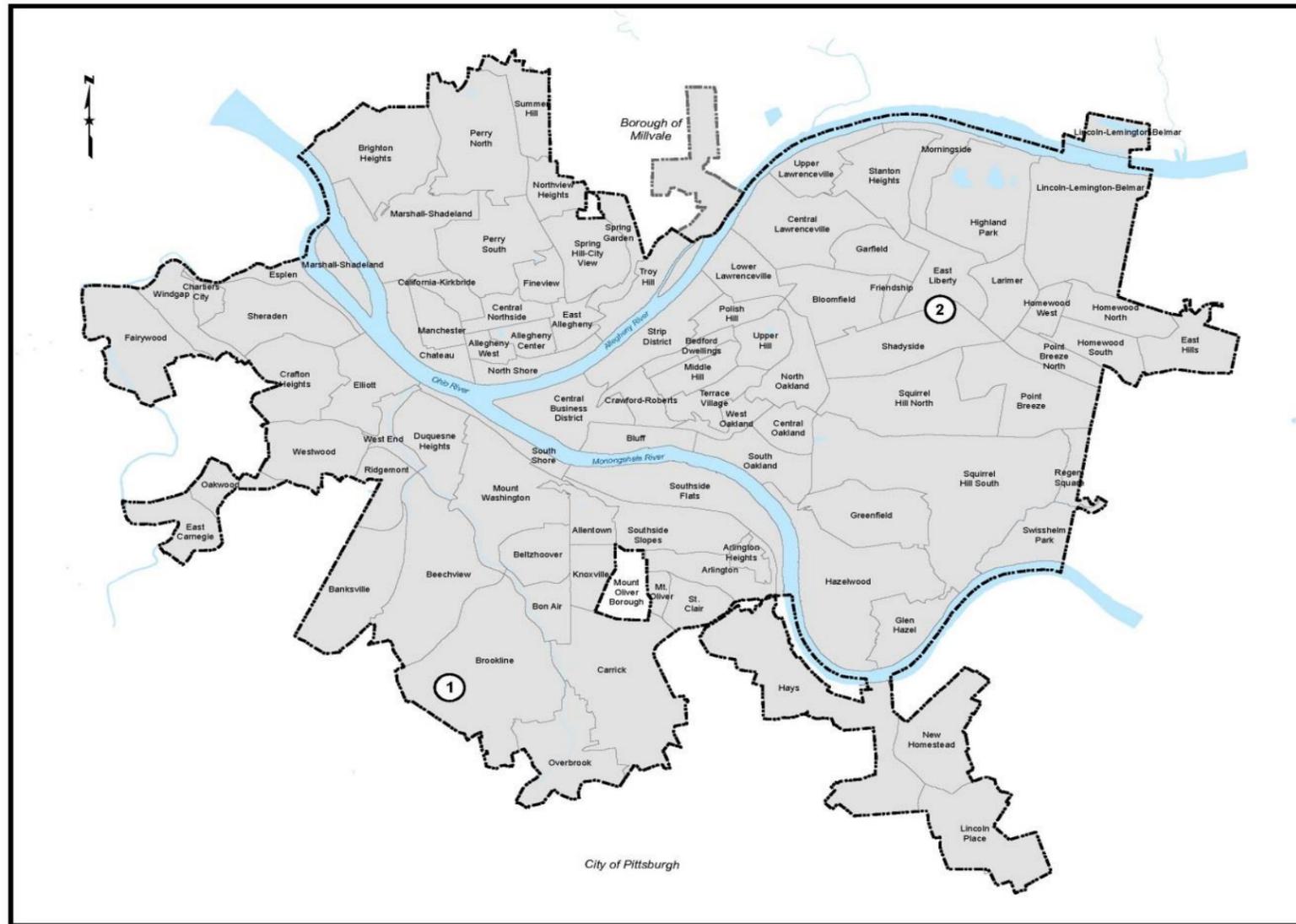


WASTE / STORM WATER SYSTEMS (SEWER)

<u>PROJECT NAME</u>	<u>MAP LOCATION</u>
Fair Oaks Sanitary Sewer Replacement	1
Valmont 24 Inch Sewer Relay	2
Red Oak Drive Sewer Separation	3
Sewer Improvement on Holden and Summerlea	4
11th Street Storm Sewer Extensions	5
Sewer Improvement Contract	Various Locations
Catch Basin/Storm Inlet Reconstruction Contract	Various Locations
Gunite Repair Contract	Various Locations
Sewer Lining Contract	Various Locations
Joint Municipal Projects Cost Share- Sewer	Various Locations
Sewage Pump Station Upgrades	Various Locations
PWSA Diversion Chamber Rehabilitation	Various Locations

City Projects

Project	Project Description	Public Benefit	2014 - 2018 Anticipated Budget
Brookline Boulevard Water & Sewer Lines – Starkamp St to Pioneer Ave	City is reconstructing Brookline Boulevard with various improvements.	System Reliability/Preserve Public Asset	\$200,000
City of Pittsburgh Paving Program Cost Share – Reconstruction	To be used for various City Projects (See City 3 year budget for additional information).	System Reliability/Preserve Public Asset	\$2,000,000
City of Pittsburgh Paving Program Cost Share – Resurfacing	To be used for various City Resurfacing Programs (See City Resurfacing Projects Various Locations).	System Reliability/Preserve Public Asset	\$1,500,000
South Highland Street Bridge 8” Waterline Replacement & Catch Basin Installation	City to install 8” waterline on Bridge and 4 catch basins under Span 1 in Ellsworth Avenue (50% Reimbursement for water and 20% for 4 cbs)	System Reliability/Preserve Public Asset	\$23,500
TOTALS			\$3,723,500



CITY PROJECTS

PROJECT NAME

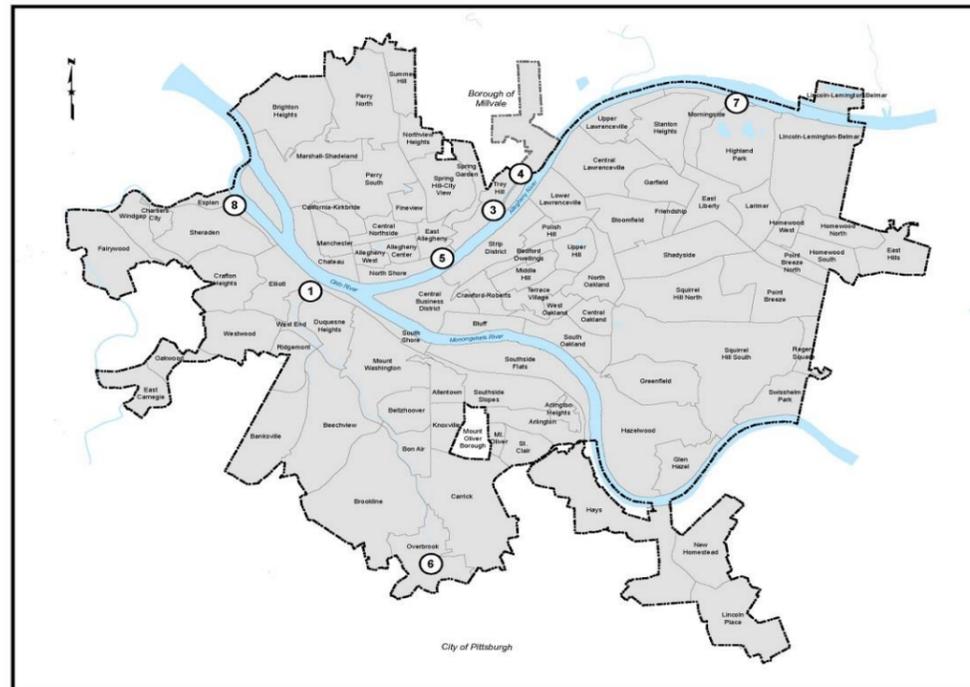
- Brookline Boulevard Water and Sewer Lines
- City Paving Program Cost Share - Reconstruction
- City Paving Program Cost Share - Resurfacing
- South Highland Street Bridge 8" Waterline Replacement and Catch Basin Installation

MAP LOCATION

- 1 Various Locations
- 2 Various Locations

PennDOT Projects

Project	Project Description		2014 - 2018 Anticipated Budget
PennDOT Cost Share – Reconstruction Project	Reconstruction/Relocation of various PWSA W & S facilities for joint projects (Current known locations listed below)	System Reliability/Preserve Public Asset	\$9,000,000
Route 19 Section A-27 West End Circle Waterline Relocation	Reconstruction due to the relocation of waterlines in Steuben St (8” & 12”), S. Main St (12”) and Greenleaf St (8”). PennDOT cost sharing agreement on the utility relocation.	System Reliability/Preserve Public Asset	\$1,000,000
PennDOT – Route 28 to Bay Valley Foods – Waterline Relay	Reconstruction due to the relocation and upsizing of the 10” waterline to 16”.	System Reliability/Preserve Public Asset	\$200,000
PennDOT – Route 28, Section A-09 Waterline Relocation	Reconstruction due to the relocation and upsizing of the 16” and 10” waterlines, now 24” and 16”. PennDOT cost sharing agreement on the utility relocation to pay 50% of the shared work.	System Reliability/Preserve Public Asset	
PennDOT – Route 28, Section A-10 Waterline Relocation	Reconstruction due to the relocation and upsizing of the 16” and 10” waterlines, now 24” and 16”. PennDOT cost sharing agreement on the utility relocation to pay 50% of the shared work.	System Reliability/Preserve Public Asset	
PennDOT – Route 28, Section A-53 Waterline Relocation	Reconstruction due to the relocation and upsizing of the 16” and 10” waterlines, now 24” and 16”. PennDOT cost sharing agreement on the utility relocation to pay 50% of the shared work.	System Reliability/Preserve Public Asset	
PennDOT – Route 51 / Route 88 Sewers, Section A11	Relocate & Reconstruction sections of PWSA Sanitary and storm sewers impacted by construction of bridges and/or culverts.	System Reliability/Preserve Public Asset	
PennDOT – Heth’s Run Bridge, Route 8, Section A12, Waterline and Combination Sewer	Relocation and replacement of certain water & combination sewer facilities. PennDOT cost sharing agreement on the utility relocation.	System Reliability/Preserve Public Asset	
PennDOT – West Carson Viaduct Replacement, Route 51, Section A63	Replacement and rehabilitation of water and sewer facilities.	System Reliability/Preserve Public Asset	
PennDOT Cost Share – Resurfacing	Typically 50/50 cost sharing for new castings and/or rehabilitation of existing PWSA water and sewer facilities in conjunction various PennDot Street resurfacing projects.	System Reliability/Preserve Public Asset	\$2,000,000
TOTALS			\$12,200,000



PENNDOT PROJECTS

PROJECT NAME

- PennDOT Cost Share - Reconstruction
- Route 19 Section A-27 West End Circle Waterline Relocation
- Route 28 to Bay Valley Foods Waterline Relay
- Route 28 Section A-09 Waterline Relocation
- Route 28 Section A-10 Waterline Relocation
- Route 28 Section A-53 Waterline Relocation
- Route 51 and Route 88 Sewers
- Heth's Run Bridge, Route 8, Section A-12 Waterline and Combination Sewer
- West Carson Viaduct Replacement, Route 51
- PennDOT Cost Share - Resurfacing

MAP LOCATION

- Various Locations
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- Various Locations

Miscellaneous Other Projects

Project	Project Description	Public Benefit	2014 - 2018 Anticipated Budget
Saw Mill Run Green Infrastructure Project	PWSA will assess the potential for Integrated Watershed Management (IWM) through a demonstration program in the Saw Mill Run sewershed.	Storm Water Management Efficiency	\$8,750,000
CMMS	Implement CMMS – Hardware and Mobile solution	System Efficiency Improvement	\$400,000
			\$9,150,000

Project Totals for Capital Expenditures Plan

			2014 - 2018 Anticipated Budget
			\$156,000,000