

**PENNSYLVANIA INFRASTRUCTURE INVESTMENT AUTHORITY  
PENNVEST APPLICATION FORMS**

**City of Philadelphia  
City of Philadelphia 2024 Linear Assets - Water  
512033132210-CW  
02/13/2023**

DESCRIPTION

PROJECT DESCRIPTION

What is the project type?	Drinking Water
What is the project name?	City of Philadelphia - 2024 Linear Assets - Water
What is the project's Primary County?	Philadelphia
What is the project's Primary Municipality?	Philadelphia City
What is the application type?	Traditional Construction
What is the project stage?	Construction
Is this related to a previous advanced funding application through PENNVEST?	No
If yes, enter the project name or number.	

COMMENTS

SYSTEM

SYSTEM DESCRIPTION

What type of system is this?	Existing System
What is your NPDES number?	PA-0026689, PA-0026671, PA-0054712
What is your PWSID number?	1510001
Do you own the system?	Yes
If no, explain	
Do you operate the system?	Yes
if no, explain	
Do you maintain the system?	Yes
If no, explain	
Will you construct the system?	Yes

If no, explain

Does this project include costs associated with the purchase of system capacity from another entity (i.e. capital contribution)? No

If yes, explain

Does this project include costs associated with the construction of capacity in your system for use and/or purchase by other entity (ies) (i.e. capital contribution)? No

If yes, explain

Is, or does the Applicant intend to be, a party to any inter-municipal agreements which affect this project or your system? Yes

Has the applicant issued debt or borrowed money, or does the applicant intend to issue debt or borrow money, under a trust indenture (i.e. Bonds)? Yes

Do you charge residential or commercial user fees? Yes

#### COMMENTS

#### FUNDING

##### REQUESTED PENNVEST AMOUNT

This is your requested PENNVEST amount. \$31,125,965.00

##### COMMITTED OTHER SOURCES OF FUNDS

Source Type	Source Name	Source Amount	Funding Comments
		\$	
<b>Total:</b>		\$0.00	

##### ESTIMATED TOTAL PROJECT COST

This is your estimated total project cost. \$31,125,965.00

#### COMMENTS

## PROJECT CONTACTS

City of Philadelphia		Legal Entity	
<b>Address:</b> 1401 John F. Kennedy Boulevard Philadelphia, PA 19107		<b>Email:</b> <b>Phone:</b> 2156854948	
<b>SAP Vendor Number:</b> 177575013	<b>DUNS:</b> 133889241	<b>Federal ID/FIN:</b> 236003047	

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Ballard Spahr, LLP		<b>Email:</b>	allenv@ballardspahr.com
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		<b>Phone Ext:</b>	

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		<b>Phone Ext:</b>	

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	<b>Phone Ext:</b>

<b>Rammon, Desiree</b>	DEP Project Manager
PADEP Safe Drinking Water	<b>Email:</b> drammon@pa.gov
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<b>Rogalski, Patricia</b>	Borrower
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	<b>Phone Ext:</b>

<b>Yangalay, Lawrence</b>	Borrower
Philadelphia Water Department	<b>Email:</b> Lawrence.yangalay@phila.gov

	<b>Phone:</b>
	<b>Phone Ext:</b>

**PROJECT SITE(S)****City of Philadelphia****Primary Site****Address:**

1401 John F Kennedy Boulevard  
Philadelphia, PA 19102

**Latitude:**

39.9540966

**Longitude:**

-75.1644793

**40857 - Carlisle / 15th****Address:**

822 15th Avenue  
Prospect Park, PA 19076

**Latitude:**

39.890336

**Longitude:**

-75.312993

**40907 - Etting/Napa/ Corlies/Marston****Address:**

1322 South Corlies Street  
Philadelphia, PA 19146

**Latitude:**

39.93695655

**Longitude:**

-75.1942815

**40926 - Amber/Braddock/Helen/Joyce****Address:**

3518 Joyce Street  
Philadelphia, PA 19134

**Latitude:**

39.99753398

**Longitude:**

-75.1032625

**40981 - Fitzgerald/American/Daly****Address:**

428 Fitzgerald Street  
Philadelphia, PA 19148

**Latitude:**

39.91910998

**Longitude:**

-75.1549618

**40987 - Broomall/Malcolm/56th etal****Address:**

5619 Broomall Street  
Philadelphia, PA 19143

**Latitude:**

39.94353706

**Longitude:**

-75.2331942

**41012 - 8th/Franklin****Address:****Latitude:**

39.91874738

2427 South 8th Street Philadelphia, PA 19148	<b>Longitude:</b> -75.1606833
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#### 41031 - Butler / Pike / Lawrence

<b>Address:</b> 443 West Butler Street Philadelphia, PA 19140	<b>Latitude:</b> 40.00893281 <b>Longitude:</b> -75.1360483
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#### 41048 - Venango, Kensington - Frankford

<b>Address:</b> 3562 Stouton Street Philadelphia, PA 19134	<b>Latitude:</b> 40.00010201 <b>Longitude:</b> -75.1038411
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#### 41075 - Shunk / Mildred / Darien / 9th / Hutchinson

<b>Address:</b> 2628 South Darien Street Philadelphia, PA 19148	<b>Latitude:</b> 39.91630625 <b>Longitude:</b> -75.1622566
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#### 41077 - Brandywine / 19th / 23rd / Pennsylvania

<b>Address:</b> 2216 Brandywine Street Philadelphia, PA 19130	<b>Latitude:</b> 39.96489408 <b>Longitude:</b> -75.1751032
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#### 41079 - Cantrell / Daly / Jackson / Winton / 8th

<b>Address:</b> 1023 Jackson Street Philadelphia, PA 19148	<b>Latitude:</b> 39.92237368 <b>Longitude:</b> -75.1639277
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#### 41102 - Clarion / Iseminger / Juniper / 11th

<b>Address:</b> 2424 South Iseminger Street Philadelphia, PA 19148	<b>Latitude:</b> 39.91968318 <b>Longitude:</b> -75.16797
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#### 41114 - Hoffman / Dudley / Mifflin / 4th / 5th . McKean

<b>Address:</b> 523 Hoffman Street Philadelphia, PA 19148	<b>Latitude:</b> 39.92457778 <b>Longitude:</b> -75.1554033
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#### 41118 - Belmar / Beaumont / Florence / Litchfield

<b>Address:</b> 5632 Litchfield Street Philadelphia, PA 19143	<b>Latitude:</b> 39.93980922 <b>Longitude:</b> -75.2294548
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41127 - Fontain / 16th / Cleveland / Gratz	
<b>Address:</b> 2018 North Cleveland Street Philadelphia, PA 19121	<b>Latitude:</b> 39.98455308 <b>Longitude:</b> -75.1637191

41133 - Pine / Addison / Larchwood / Irving	
<b>Address:</b> 400-16 South 52nd Street Philadelphia, PA 19143	<b>Latitude:</b> 39.9536581 <b>Longitude:</b> -75.2272161

## PROJECT PLAN

### PROJECT PLAN

Planning Consultation Date	09/15/2022
Planning Completion Date	09/22/2022
Design Start Date	06/28/2020
Design Completed Date	06/28/2021
Date Obtained All Needed DEP Permits	06/28/2021
Anticipated Construction Start Date	06/05/2023
Anticipated Construction End Date	02/03/2025

Letter of No Prejudice Issued by PENNVEST

### PROJECT PHASE

Phase Name	Design Complete	Obtain All Permits	Start Construction	End Construction

### COMMENTS

## NARRATIVE : DESCRIPTION

### NARRATIVE DESCRIPTIONS

Describe the problem that this project will correct or resolve. Please be specific and include such discussion points as the cause and impact of the problem, permit exceedances or compliance related problems, if any and/or any additional operational issues caused or contributed by the identified problem(s).

Every day, the Philadelphia Water Department pumps about 223 million gallons of water out of the Schuylkill and Delaware Rivers. About 17% of that never reaches customers, seeping instead into the ground due to main breaks and general background leakage that plague the City's underground transmission and distribution water mains.

#### Total non-revenue water

The Water Department's non-revenue water was 91.8 MGD for Fiscal Year 2019, 94.6 MGD for Fiscal Year 2020 and 102.6 MGD for Fiscal Year 2021. That means unnecessary treatment costs and energy wastes. Excessive levels of non-revenue water result in wasting a natural resource, lost revenue due to leaks and breaks, and unnecessary chemical and power expenditures to treat water that is not being metered.

In addition to potentially causing street or property flooding, a break in a water main impacts water quality both during the break and for a short time after repairs to fix the break.

PWD water treatment plants work to provide safe drinking water that meets or exceeds all federal and state regulatory requirements. Even though PWD's infrastructure is aging, water quality delivered through existing infrastructure remains largely unchanged. Water quality can be temporarily impacted due to water main breaks but only until air and sediment is removed by flushing. PWD's goal is to reduce main breaks overall by reducing the frequency through planned water main replacements.

#### Water Main Break:

The water main has been identified for replacement due to an increase in break rate or predicted increase in break rate based on pipe characteristics and external factors.

#### Water Hydraulic:

The water main has been identified for replacement due to: poor hydraulic performance identified by hydrant flow tests, seen as an opportunity to significantly improve the hydraulics in the area neighborhood by upsizing mains, or an opportunity to remove the last first generation water main in the area.

Describe the scope of the project. List in quantitative terms what is planned to be constructed, rehabilitated and decommissioned. For Example: 'The 12,000 feet of 8-inch waterline will be replaced, one 200,000 gallon standpipe will be constructed, the current Market Street Pump Station will be decommissioned, a new 250 gallon per minute duplex pump station will be constructed on Leisure Street, 44 hydrants will be replaced...'

The project encompasses the replacement of 9.74 miles of water main piping along the roadway within 16 sections of the City of Philadelphia. Locations selected for PENNVEST funding are:

- 40857 - Carlisle / 15th (0.455 miles)
- 40907 - Etting / Napa / Corlies / Marston (0.508 miles)
- 40926 - Amber / Braddock / Helen / Joyce (0.793 miles)
- 40981 - Fitzgerald / American / Daly (0.450 miles)
- 40987 - Broomall/Malcolm/56th etal (0.839 miles)
- 41012 - 8th / Franklin (0.434 miles)
- 41031 - Butler / Pike / Lawrence (0.349 miles)
- 41048 - Venango, Kensington - Frankford (0.358 miles)
- 41075 - Shunk / Mildred / Darien / 9th / Hutchinson (0.642 miles)
- 41077 - Brandywine / 19th / 23rd / Pennsylvania (0.868 miles)
- 41079 - Cantrell / Daly / Jackson / Winton / 8th (0.850 miles)
- 41102 - Clarion / Iseminger / Juniper / 11th (0.746 miles)
- 41114 - Hoffman / Dudley / Mifflin / 4th / 5th / McKean (0.727 miles)
- 41118 - Belmar / Beaumont / Florence / Litchfield (0.610 miles)
- 41127 - Fountain / 16th / Cleveland / Gratz (0.571 miles)
- 41133 - Pine / Addison / Larchwood / Irving (0.541 miles)

Describe the cost effectiveness of this project. List physical and administrative alternatives and selected alternatives and justify proposed alternative. Include all issues discussed in Planning Consultation related to cost effectiveness.

Program Level Alternative Analysis

These projects are to replace existing aging water mains. There is no alternative to replacement. The mains selected for replacement have the highest rate of historic or probable failure.

Site Scale Alternatives Analysis

No site scale alternatives were evaluated. A new water main is proposed in the same street adjacent to the existing main. The existing main will remain in service until the new main is installed and new service lines are connected to it. Each project is coordinated with the other utility companies in the street as well as the City’s Street’s department paving program.

Water Main Break History at Project Locations:

Work Order # # of Breaks

40857	12
40907	37
40926	17
40981	27
40987	29
41012	25
41031	14
41048	21
41075	29
41077	20
41079	26
41102	34
41114	17
41118	20
41127	22
41133	14

Project Useful Life

The project service life of the PWD Linear Assets Projects is anticipated to be 105 years which exceeds the PennVEST loan duration. PWD Water mains typically have a service life that exceeds 80 years. It is anticipated that new ductile iron pipes will last 80-200 years. The City's useful / depreciable life for water mains is approximately 50 years.

Cost Effective Analysis

Main selected for this project are among the City's oldest and were selected using PWD's water main asset management prioritization system. PWD's main replacement program uses a scoring system to prioritize replacement and provide a systematic approach to the management of assets. Generally, the older the main and the more frequently it has experienced breaks, the higher the priority for its replacement.

The average age of water mains in the City leads to PWD is correcting leaks and breaks at a much higher rate than suggested by industry standards. PWD assesses its water main break rate against the optimal level of 15 breaks per 100 miles/year as defined by the Distribution System Optimization Program under the American Water Works Association Partnership for Safe Water. Currently the PWD five-year average breaks per 100 miles is 25.7 per year.

Main breaks can cause a loss of water pressure and temporary loss of service as the main is shut down to isolate the emergency. Replacement of these mains will reduce the frequency of water main breaks, which will minimize the risk to public health caused by the resulting potential exposure to infectious diseases and will reduce the impact of unplanned water outages and street closures required due to emergency repairs. The replacement of older, leak-prone mains will also provide for more efficient management of water resources by reducing the amount of treated water that is lost from the system.

Conclusion

Replacement and modernization of the aged mains will elevate the resilience and reliability of the City's water infrastructure to provide more reliable service to minimize pipeline failures and related disruptions in service.

COMMENTS

NARRATIVE : DRINKING WATER SUPPORTING PROJECT INFORMATION

DRINKING WATER SUPPORTING PROJECT INFORMATION

Category/Subcategory	Total
Distribution / Replace Pipe Length (Feet)	55,440

PROBLEM DESCRIPTION	
Unfiltered Water Source:	No
Ground water source under influence of Surface Water:	No
Insufficient pressure in distribution system:	No
Inadequate water storage volume in system:	No
Insufficient yeild of the existing water source:	No
Additional Capacity required due to service area growth and development:	No
Antiquated, undersized, or leaky distribution lines:	Yes
Contamination of existing wells:	No
If applicable, surveyed malfunction rate of on-lot septic systems(%):	0
Treatment plant does not meet current or future treatment standards:	No
Deterioration or disrepair of existing facilities:	Yes
COMMENTS	

PROJECT SPECIFIC DATA : LAND USE	
LAND USE	
Has the area served by this project been covered by an adopted municipal comprehensive plan?	Yes
Is this project located in an area where there is an adopted county comprehensive plan?	Yes
Is there an adopted multi-municipal or multi-county comprehensive plan for the area(s) covered by this project?	No
Is there an adopted county or municipal zoning ordinance or a joint municipal zoning ordinance for the area covered by this project?	Yes
Is the proposed project consistent with these comprehensive plans and/or zoning ordinances?	Yes

Is the project consistent with county agricultural preservation efforts.

No

COMMENTS

PROJECT SPECIFIC DATA : DRINKING WATER SUPPORTING PROJECT INFORMATION

DRINKING WATER COST BREAKDOWN

Planning & Design Only :	\$0.00	0.00%
Source Development Amount:	\$0.00	0.00%
Transmission Amount:	\$0.00	0.00%
Treatment Amount:	\$0.00	0.00%
Finished Water Storage Amount:	\$0.00	0.00%
Distributed System Amount:	\$31,125,965.00	100.00%
Pump Stations Amount:	\$0.00	0.00%
Meters Amount:	\$0.00	0.00%
Safety/Security Amount:	\$0.00	0.00%
Purchase of Systems Amount:	\$0.00	0.00%
Restructing Amount:	\$0.00	0.00%
Land Acquisiton Amount:	\$0.00	0.00%
Total:	\$31,125,965.00	

## DRINKING WATER COMPLIANCE

Does the project help to bring the facility back into compliance with existing or future State or Federal regulatory requirements?

No

If yes, enter what percentage of the project meets that criteria:

Does the project help the facility to maintain current compliance?

No

If yes, enter what percentage of the project meets that criteria:

Does the project help the facility to achieve compliance with upcoming requirements?

No

If yes, enter what percentage of the project meets that criteria

Does the project assist the facility with other non-compliance related activities?

No

If yes, enter what percentage of the project meets that criteria:

## DRINKING WATER ENHANCEMENT

Does the project help enhance well capacity? (source development/upgrade)

No

If yes, the impact is:

Does the project enhance treatment plant capacity?

No

If yes, the impact is:

Does the project enhance security measures at the drinking water facility?

No

If yes, the impact is:

Does project enhance public safety? (Fire hydrants and related)

Yes

If yes, the impact is:

Direct

COMMENTS

PROJECT SPECIFIC DATA : STORMWATER SUPPORTING PROJECT INFORMATION

MEASURES STORMWATER COST BREAKDOWN

Stormwater Conveyance	\$31,125,965.00	100.00%
Stormwater Treatment	\$0.00	0.00%
Green Infrastructure	\$0.00	0.00%
Stormwater Management	\$0.00	0.00%
Total:	\$31,125,965.00	

COMMENTS

DRINKING WATER BENEFITS

COMMUNITY HEALTH (DRINKING WATER)

Explain any existing environmental condition that will be addressed with the project (example: sludge handling facility).

N/A

How will this project improve the quality of life for the system customers?

The water main reconstruction projects aim to address issues with aging infrastructure. Main breaks in dense urban environmental can lead to street flooding, potentially damaging property and can also impact water quality.

SOURCE WATER PROTECTION (DRINKING WATER)

If this project WILL increase the available water, please explain.

N/A

If this project promotes water conservation, please explain.

N/A

If this project includes or promotes water system consolidation, please explain efforts to consolidate/regionalize.

N/A

#### PUBLIC SAFETY (DRINKING WATER)

Will this project address replacement or major rehabilitation of an unsafe water supply storage tank?	No
Does this project include installation or replacement of fire hydrants?	Yes
Does this project include work to address workplace safety standards?	No
Will this project address issues related to water source and/or system security?	No
Will this project allow the system to meet fire codes - quantity/pressure for fire protection?	Yes

#### PUBLIC HEALTH (DRINKING WATER)

Will this project eliminate critical or chronic health hazards?	No
Violation of Primary Maximum Contaminant Level (MCL)? List the contaminant along with the exceedance and frequency of exceedance, if applicable.	
Presence of coliform or fecal coliform?	No
No water available at the tap?	No
Giardia or Cryptosporidium Cysts in the filtered water?	No

#### DEP COMPLIANCE (DRINKING WATER)

If this project satisfies a compliance order or to address a problem with acute health or safety hazards (example Primary MCL violation), please explain.

N/A

If this project satisfies compliance with issues where a compliance order has not been issued or that are not an acute health or safety hazard, please explain.

N/A

If this project has components that take proactive steps to maintain compliance and ensure adequate operation and maintenance of the water system, please explain?

N/A

#### COMMENTS

BENEFITS WASTEWATER

INFRASTRUCTURE HEALTH (WASTEWATER)

Will this project address hydraulic overloading that results in sewage backing up into basements of structures?

Does the system have an up-to-date Emergency Response Plan? Yes

Does the system have an up-to-date Asset Management Plan? Yes

If the rates being charged by the system are NOT sufficient to implement the system's long term budget, please explain.

COMMUNITY HEALTH (WASTEWATER)

If this project WILL eliminate one or more existing National Pollutant Discharge Elimination System (NPDES) discharges, please explain.

If this project WILL eliminate all NPDES - system permitted combined sewer overflow (CSO) points in a combined wastewater collection/conveyance, please explain.

If this project WILL result in consolidation or regionalization of operational, maintenance, or monitoring functions with other discharges, please explain.

## PUBLIC HEALTH (WASTEWATER)

If this project eliminates on-lot disposal systems that have been confirmed as malfunctioning, how many were tested?

Provide the percentage of confirmed malfunctions

Will this project eliminate untreated or inadequately treated sewage discharged from collection and conveyance?

Will this project address Wet Weather discharges?

Will this project address Dry Weather discharges?

If any downstream public bathing beaches have been closed due to water quality standards directly related to this facility, please explain.

If public water supply sources or private wells are subject to contamination that will be addressed by this project, please explain.

## AQUATIC HEALTH (WASTEWATER)

If this project eliminates a wildcat sewer system discharge, please explain:

Number of EDU's in the project service area?

Number of EDU's served by wildcat sewers in the project service area?

Is this treatment facility hydraulically overloaded during dry weather?

Is this treatment facility hydraulically overloaded during wet weather?

Please name the surface water bodies impacted by this project and do these surface water bodies support cold or warm water fishery, please explain.

## DEP COMPLIANCE (WASTEWATER)

Is this project part of an approved Corrective Action Plan schedule to bring the wastewater facility into compliance with an NPDES permit?

If this project satisfies a non-compliance consent order and agreement at a wastewater treatment facility or wastewater collection/conveyance facility, please explain.

Is this project necessary to upgrade treatment facilities as a result of an NPDES permit?

## COMMENTS

### BENEFITS : NON-POINT SOURCE

#### NPS SUB TYPES

Not Applicable

#### EXPLANATION FOR OTHER NON-POINT SOURCE SUB TYPE

#### NPS COMPLIANCE WITH ACT 167 AND MS-4

Is the project in an MS-4 regulated community (with either a draft or final permit?

If Yes, does the MS-4 permit require the work that is proposed in the funding application?

#### NPS PLANNING

Is your project addressing a Department of Environmental Protection approved 319 Watershed Implementation Plan (WIP), or contained in an Municipal Separate Storm Sewer System (MS4) Pollutant Reduction Plan (PRP), or Total Maximum Daily Load (TMDL) strategy plan that is submitted for an MS4 Notification of Intent (NOI) permit application.

If Yes, please explain:

If No, will your project implement Best Management Practices (BMP) identified as needed to improve water quality in a water quality plan?

If Yes, please explain:

#### URBAN RUNOFF PROJECTS

What is the total area treated by BMP in acres?

What is the impervious area treated by each BMP in acres?

What is the runoff or storage volume in acre-ft for each BMP?

#### AGRICULTURAL PROJECTS

How many animals are currently at the project site?

Explain what manure management controls or BMPs are currently being implemented and what is the state of their condition?

What is the name of the receiving stream and how far is the receiving stream from the project site?

Is the receiving stream impaired due to agriculture and/or sediment?

What is the estimated annual nitrogen reduction to the stream as a result of the project?

What is the estimated annual phosphorus reduction to the stream as a result of the project?

What is the estimated annual sediment reduction to the stream as a result of the project?

#### NPS SAFETY

If the project addresses a critical or on-going safety or health hazard, please explain.

#### BROWNFIELDS SYSTEM INFORMATION

Who owns the property to be remediated?

Does the project site have ACT 2 Clearance, or will the project site obtain ACT 2 Clearance as a result of project?

Will the owner's company be completing any of the construction (force account)?

Can you provide evidence that all federal supercrosscutters have been met? If so, please upload any evidence of federal supercrosscutters compliance.

Is the cost of acquiring the land to be remediated as part of this project?

Do you have a survey and title search of the real estate to be used for collateral; including title insurance policies and endorsements?

Do you have 'as is', 'as remediated' or 'as developed' appraisals of any real estate to be used for collateral?

## NPS WATER QUALITY IMPACTS

Identify the receiving water(s) impacted by this project.

Describe the length stream or acres of lake that will show water quality improvement as a result of your project.

Is the receiving water(s) listed as impaired on the PA Integrated Water Quality and Assessment Report?

If Yes, list the causes of impairment.

If Yes, identify the benefits of the project on water quality.

If Yes, how are the benefits of the project linked to the impairment?

Is the receiving water(s) listed as high quality (HQ) or exceptional value (EV) by DEP?

If Yes, list the pollutant(s) to be a threat to the HQ/EV existing use.

If Yes, list the source of water quality data/report that documents the threat to HQ/EV.

If Yes, explain how the benefits of the project will remove the threat to HQ/EV.

The receiving water(s) or groundwater is not listed as impaired or HQ/EV by the DEP, but has identified water quality problems:

If Yes, list the source of water quality data, assessment report, or watershed plan that documents the water quality problems.

If Yes, explain how the project will have a direct and substantial benefit in addressing the documented water quality problems.

If Yes, will this project have direct pollutant benefits to waters beyond the immediate receiving waters (e.g. Chesapeake Bay Estuary, Gulf of Mexico, Lake Erie, or Delaware Estuary)? Please explain.

## NPS COMPLIANCE

Has DEP taken enforcement action(order or consent order and agreement) or issued a Notice of Violation which requires the project?

Is there an approved Total Maximum Daily Load(TMDL) which requires reductions in the pollutants(s) to be controlled by the project?

## COMMENTS

## KEYSTONE BENEFITS

### KEYSTONE BENEFITS

If any of the communities served by this project have been granted special economic designation by the Department of Community and Economic Development or by the Govenor's Action Team, please identify the program and the municipality(ies) and county(ies).

Not applicable to the City of Philadlephia.

If any of the communities served by this project have been designated as distressed under the Municipalities Financial Recovery Act 47 of 1987, please identify the municipality(ies) and county(ies).

Not applicable to the City of Philadelphia.

If this project directly serves a Brownfield site as designated by the PA Department of Environmental Protection, please identify the site.

Not applicable to this project.

If this project serves a City, Borough or 1st Class Township, please identify.

Yes. The City of Philadelphia, Pennsylvania, a corporation, body politic and City of the first class existing under the laws of the Commonwealth of Pennsylvania.

## COMMENTS

## GREEN INFRASTRUCTURE COMPONENTS

### GREEN INFRASTRUCTURE

If the project results in reduced (minimum 20%) water use, please explain.

N/A

If the project recycles water, please explain.

N/A

If the project reduces (minimum 20%) infiltration of water into sewer pipes being repaired/replaced, please explain.

N/A

If the project reduces (minimum 20%) leakage from the water pipes being repaired/replaced, please explain.

Will this project reduce facility and/or better manage energy consumption?

No

If the project saves energy (minimum 20%), please explain.

N/A

If this project generates energy, what percent?

N/A

If the project infiltrates evapo-transpires or controls stormwater, please explain.

N/A

If the project implements Ag BMP's, Low-Impact Development, wetland restoration or construction, greenhouse gas reduction, or applies differential uses of water treated to varying levels, please explain.

N/A

### COMMENTS

INCOME

COUNTY MUNICIPALITY & APPLICATION LEGISLATIVE

Primary	County		Municipality		System Served	Project Served	Households Served	Bulk
<input checked="" type="checkbox"/>	Philadelphia		Philadelphia City		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	508,241	<input type="checkbox"/>
							Total: 508241	
Primary	District	Congress Name		District	House Name	District	Senate Name	
<input checked="" type="checkbox"/>	3	Evans, Dwight		186	Harris, Jordan	8	Williams, Anthony	
<input type="checkbox"/>	2	Boyle, Brendan		180	Giral, Jose	2	Tartaglione, Christine	
<input type="checkbox"/>	3	Evans, Dwight		184	Fiedler, Elizabeth	1	Saval, Nikil	
<input type="checkbox"/>	3	Evans, Dwight		188	Krajewski, Rick	8	Williams, Anthony	
<input type="checkbox"/>	3	Evans, Dwight		195	Harris, Keith	3	Street, Sharif	
<input type="checkbox"/>	3	Evans, Dwight		190	Green, G. Roni	7	Hughes, Vincent	

BILLING

	Last Completed Audited Year	First Full Year After Project is Completed
	2021	2026
Estimate Population	1,576,251	1,576,251
Households served by System	415,317	415,317
Total EDUs served by system	800,705	800,705
Residential EDUs served by system	415,317	415,317
Average annual Residential bill	\$830.00	\$830.00
Total residential bills levied	\$0.00	\$0.00
Total residential bills collected	\$659,765.00	\$659,765.00
Total Commercial/Industrial bills levied	\$0.00	\$0.00
Total Commercial/Industrial bills collected	\$43,283.00	\$43,283.00

INCOME FOR GOVERNMENT ENTITY

	Last Completed Fiscal Year	First Full Year After Project Completed
	2021	2026
Total Bills Collected	\$703,048.00	\$703,048.00
Other Charges Collected	\$15,524.00	\$15,524.00
Total Operating Revenues	\$718,572.00	\$718,572.00
Non-Operating Revenues	\$1,095.00	\$1,095.00
Total Income	\$719,667.00	\$719,667.00

## INCOME FOR PROFIT ENTITY

	Last Completed Fiscal Year	First Full Year After Project Completed
	2021	2026
Sales of Products	\$0.00	\$0.00
Investment Income	\$0.00	\$0.00
Rental Income	\$0.00	\$0.00
Other Income	\$0.00	\$0.00
Total Income	\$0.00	\$0.00

## INCOME FOR NON-PROFIT ENTITY

	Last Completed Fiscal Year	First Full Year After Project Completed
	2021	2026
Provisions of Services	\$0.00	\$0.00
Government Grants Subsidies	\$0.00	\$0.00
Program Services	\$0.00	\$0.00
Investment Income	\$0.00	\$0.00
Contribution from Donors	\$0.00	\$0.00
Rental Income	\$0.00	\$0.00
Other Income	\$0.00	\$0.00
Total Income	\$0.00	\$0.00

## OPERATING EXPENSES

	Last Completed Fiscal Year	First Full Year After Project Completed
	2021	2026
Labor Salaries Benefits	\$276,722.00	\$276,722.00
Utilities	\$0.00	\$0.00
Rent	\$0.00	\$0.00
Materials/Supplies	\$35,235.00	\$35,235.00
Cost of Goods Sold	\$0.00	\$0.00
Program Expenses	\$0.00	\$0.00
Administration Expenses	\$3,233.00	\$3,233.00
Professional Fees	\$95,875.00	\$95,875.00
Depreciation Expense	\$134,748.00	\$134,748.00
Other Expenses	\$0.00	\$0.00
Outside Services	\$0.00	\$0.00
Total (Minus Depreciation Expense)	\$411,065.00	\$411,065.00

## NON-OPERATING EXPENSES

	Last Completed Fiscal Year	First Full Year After Project Completed
	2021	2026
Annual Debt Service Excluding This Project	\$70,560.00	\$70,560.00
Other Non-Operating Expenses	\$20,071.00	\$20,071.00
Total	\$90,631.00	\$90,631.00
NET CASH		

	Last Completed Fiscal Year	First Full Year After Project Completed
	2021	2026
Total Cash	\$719,667.00	\$719,667.00
Total Cash Expenses	\$501,696.00	\$501,696.00
Total Cash (Minus Total Cash Expenses)	\$217,971.00	\$217,971.00

## COMMENTS

Households served and Population reflect estimates as of 7.1.21 and detailed:  
<https://www.census.gov/quickfacts/philadelphiacitypennsylvania>.

1,479,196 Sewer EDUs and 916,551 Water EDUs (EDU values represent the 5-year average (2017 to 2021) number of EDUs for that category.) EDU calculation = FY2021 analysis prepared by B&V.

Annual Typical Residential Bill data as of FY21  $\$69.15 * 12 = 829.80$

Annual Typical Residential Bill data as of most recent rate approval (FY23) =  $73.62 * 12 = 883.44$

Estimated Allocations and billed as total system.

Water = \$25

Sewer = \$18.10

Stormwater = \$18.05

Service Charge = \$12.47

Income / Revenues

Commercial / Industrial = bulk (wholesale) contract revenues Of \$43.3M

Other Charges = Operating grants of \$2.7M + Miscellaneous Operating Revenue of \$12.8M

## DEBT

## DEBT

\$

## COMMENTS

As of June 30, 2022, there was \$2,435,116,138 aggregate principal amount of Water and Wastewater Revenue Bonds are outstanding.

Outstanding Indebtedness as of June 30, 2022\*

Pennvest 2009B	\$ 42,886,030	\$ 14,535,463	Fixed	2032
Pennvest 2009C	57,268,193	25,005,737	Fixed	2032
Pennvest 2009D	84,759,263	38,651,545	Fixed	2032
Pennvest 2010B	30,000,000	18,214,113	Fixed	2033
2013A	170,000,000	24,075,000	Fixed	2023
2014A	123,170,000	43,125,000	Fixed	2026
2015B	141,740,000	109,015,000	Fixed	2035
2016A	192,680,000	169,830,000	Fixed	2035
2017A	279,865,000	239,865,000	Fixed	2052
2017B	174,110,000	162,085,000	Fixed	2034
2018A	276,935,000	246,935,000	Fixed	2053
2019A	68,335,000	67,645,000	Fixed	2040
2019B	250,660,000	250,660,000	Fixed	2054
2020	127,740,000	127,740,000	Fixed	2040
2020A	201,530,000	201,530,000	Fixed	2050
2020B	95,025,000	91,885,000	Fixed	2035
Pennvest 2021A	80,821,155	11,173,671†	Fixed	2044
2021B	368,720,000	359,910,000	Fixed	2045
2021C	231,930,000	231,930,000	Fixed	2051
Pennvest 2021D	5,794,470	1,305,609	Fixed	2044
Pennvest 2022A±	16,301,250	-	Fixed	2045
Pennvest 2022B±	35,861,985	-	Fixed	2045
<b>TOTAL</b>	<b>\$3,020,270,361</b>	<b>\$2,435,116,138</b>		

Excludes the issuance of the Bonds and the Commercial Paper Notes Outstanding. For information respecting the Water

Department's Commercial Paper Notes Outstanding, see "CAPITAL IMPROVEMENT PROGRAM – Commercial Paper Program" herein.

† Does not reflect \$5,219,250 of Pennvest 2021A proceeds drawn on or about July 1, 2022 for reimbursements of construction costs for the Torresdale project increasing the outstanding principal amount of Pennvest 2021A Bonds to \$16,392,921.

±Proceeds of the Pennvest 2022A and the Pennvest 2022B Bond have not been drawn as of the date of this Official Statement and are not outstanding.

\* Excludes the issuance of the Bonds and the Commercial Paper Notes Outstanding. For information respecting the Water Department’s Commercial Paper Notes Outstanding, see “CAPITAL IMPROVEMENT PROGRAM – Commercial Paper Program” herein.

† Does not reflect \$5,219,250 of Pennvest 2021A proceeds drawn on or about July 1, 2022 for reimbursements of construction costs for the Torresdale project increasing the outstanding principal amount of Pennvest 2021A Bonds to \$16,392,921.

±Proceeds of the Pennvest 2022A and the Pennvest 2022B Bond have not been drawn as of the date of this Official Statement ding. For more information respecting the Pennvest Loans, see “CAPITAL IMPROVEMENT PROGRAM st Loans” herein.

BUDGET INFORMATION

PROJECT BUDGET

Administrative Cost:	\$0.00
Legal Fees:	\$0.00
Financial/Accounting Charges:	\$0.00
Interest During Construction:	\$0.00
Engineering/Architecture Fees:	\$0.00
Permits:	\$0.00
Land	\$0.00

Construction	\$29,643,776.00
Contingency	\$1,482,189.00
Other Costs:	\$0.00
Total:	\$31,125,965.00
COMMENTS	

RATES

RATES

Metered:	Monthly
Flat:	Not Selected Yet
Other:	Not Selected Yet

Explain special rate structure or agreement. Indicate if no rates apply for this project.

Water rates for general service customers of the Water Department consist of a service charge related to the size of the meter, plus a schedule of quantity charges for water use. Sewer rates for general service customers are similar. To more fairly reflect the burden on the System, stormwater charges are calculated based on a customer's property size and its relative imperviousness. A uniform stormwater charge based on the average size and imperviousness of residential properties is billed to residential customers. Charges to non-residential and condominium customers are based on each property's specific size and impervious area.

Special rates with partial discounts are established pursuant to the Water Department's Rates and Charges for the following customers: (1) public and private schools which provide instruction up to or below the twelfth grade; (2) institutions of "purely public charity;" (3) places used for religious worship; (4) residences of eligible senior citizens; (5) universities and colleges; and (6) public housing properties of the Philadelphia Housing Authority. In addition, the Rate Board approved discounts of 100% on stormwater rates for eligible community gardens in 2016 and an exemption from water, sewer and stormwater rates for unoccupied properties of the Philadelphia Land Bank in 2018. Some real estate also is exempt from stormwater charges, including, cemeteries, residential sideyards, City-owned or City-controlled vacant lots or improvements, portions of Fairmount Park, streets, medians, sidewalks, and rights-of-way. Water and sewer charges, including stormwater charges, terminate when any vacant or unoccupied premises are acquired by the City and when property is acquired by the Philadelphia Housing Development Corporation or the Philadelphia Redevelopment Authority under provisions of the Philadelphia Code pertaining to vacant properties. In addition to the special rates referenced above, the Water Department offers additional assistance and incentive programs to customers, which constitute either an Operating Expense of the Water Department or contra-revenue in the form of credits or reductions to customers' bills.

The Tiered Assistance Program ("TAP") program was launched on July 1, 2017 and assists low-income households at or below 150% of the federal poverty level ("FPL") and those experiencing a special hardship, as discussed herein. Under the TAP program bills are tied to household income and do not fluctuate based on actual consumption.

## COMMENTS