



**Water** Revitalization Plan

# Community Listening Session

Spring 2024



**PHILADELPHIA**  
**WATER**  
— DEPARTMENT —



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# Who is the Philadelphia Water Department?

# Philadelphia Water Department provides three critical services:



DRINKING WATER



STORMWATER  
MANAGEMENT



WASTEWATER  
MANAGEMENT



**This Community  
Listening  
Session will  
focus on  
Philadelphia's  
drinking water  
services.**



# PWD Drinking Water – Quick facts

PWD manages drinking water from **source and treatment** to **delivery** to **homes and businesses**. The most recent U.S Census data shows we serve an estimated **1.58 million people**.



SOURCE & TREATMENT

DELIVERY

AT HOME

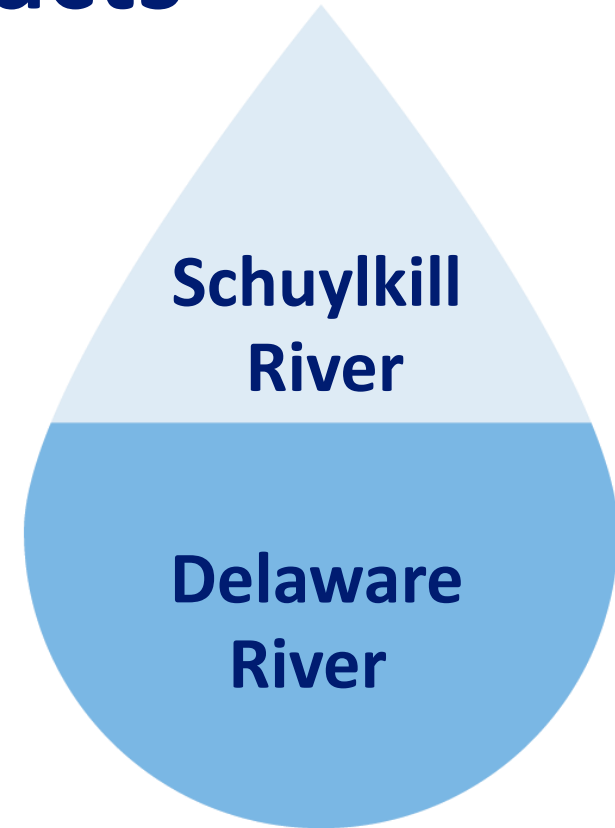


# PWD Drinking Water – Quick facts

The City gets approximately...

**58%**

of its water from the **Delaware River**.  
The rest comes from the **Schuylkill River\***



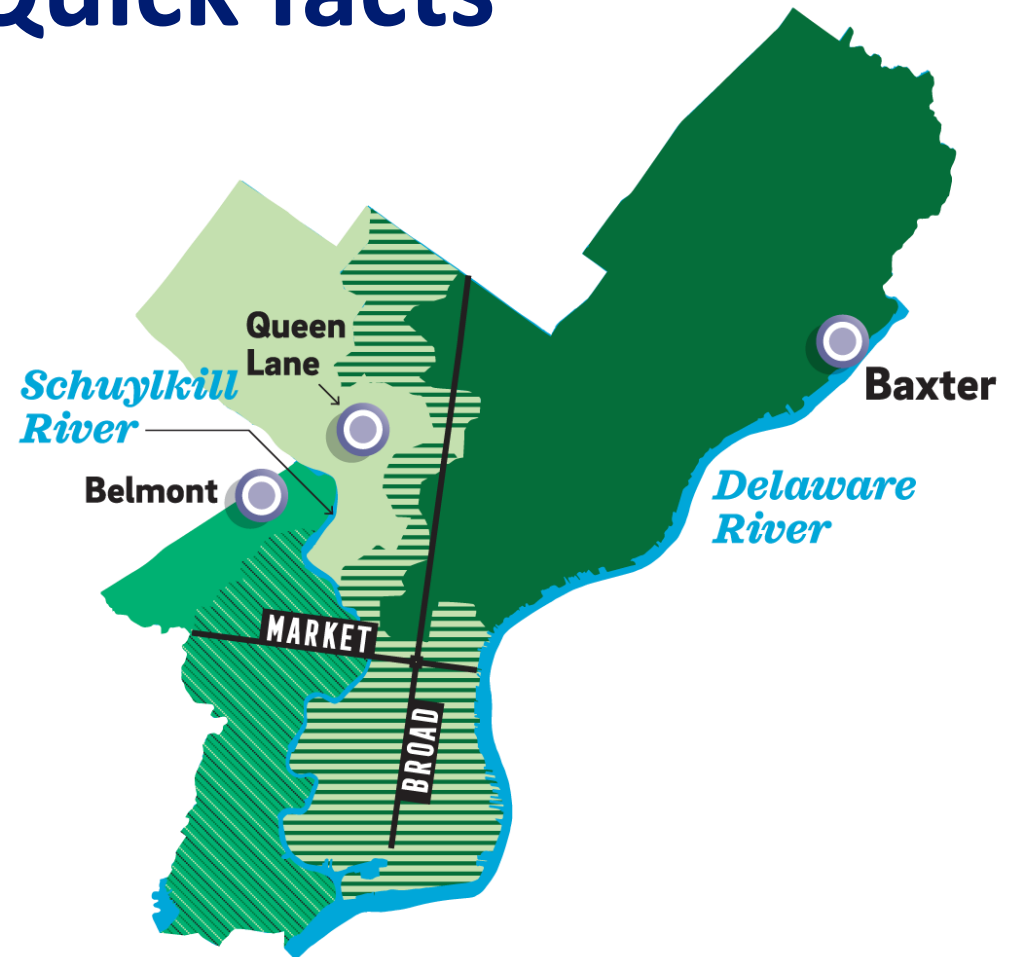
\*Based on typical operating conditions



# PWD Drinking Water – Quick facts

Before it reaches our homes and businesses, PWD treats Philadelphia's drinking water at one of **three Water Treatment Plants**.

-  Baxter
-  Queen Lane
-  Baxter/ Queen Lane Mix
-  Belmont
-  Belmont primarily, also receives Baxter/Queen Lane Mix



\*Based on typical operating conditions



# PWD Drinking Water – Quick facts

PWD maintains a network of...

# +3,100 miles

of water mains; about the same distance from here to Alaska



# How PWD makes drinking water drinkable:



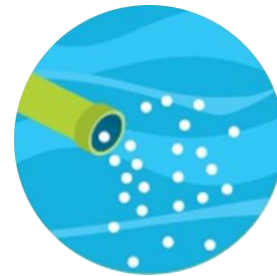
## The River

Philadelphia's tap water comes from the Delaware and Schuylkill Rivers.



## Gravity Settling

River water is pumped to reservoirs to allow sediment to settle.



## Disinfection

Sodium hypochlorite is added to kill disease-causing organisms.



## Coagulation & Flocculation

Chemicals are added to make fine suspended particles 'clump' together. Gentle mixing encourages the formation of 'floc' clumps of particles.



## Gravity Settling

The newly formed 'floc' settles by gravity and is removed from the bottom of the settling tanks.



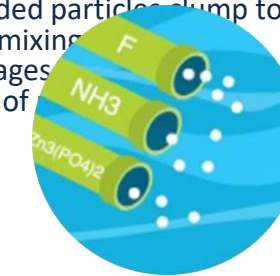
## Disinfection

Sodium Hypochlorite is added a second time to kill any remaining disease-causing organisms.



## Filtration

Water flows through filters which remove even more microscopic particles.



## Final Treatment

Fluoride is added to help prevent tooth decay. Zinc Orthophosphate is added to minimize pipe corrosion and Ammonia is added to keep the disinfectant in the water and reduce chlorine taste and odor.



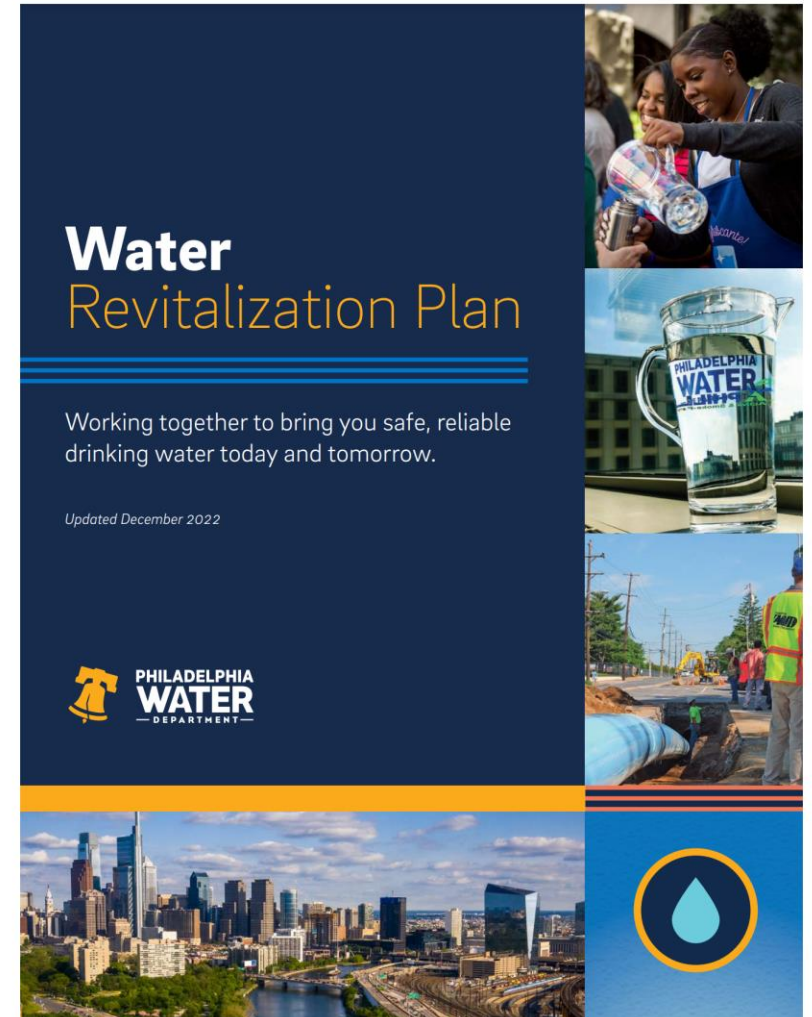


# What is the Water Revitalization Plan?

# Water Revitalization Plan

Building reliable infrastructure today for a resilient tomorrow

- This plan is the largest investment Philadelphia has made in our drinking water facilities in over a century.
- 25-year, multi-billion-dollar investment, to upgrade and expand Philadelphia's core drinking water infrastructure.



# The WRP Stakeholder Advisory Group

The Public Affairs Team selected committed community members to serve on the WRP Stakeholder Advisory Group.

Approximately 200 applicants submitted applications, resulting in a selection of 14 primary and 3 alternate members.

## Our SAG's role:

**Serve as advocates for the Water Revitalization Plan and communicate program progress**

**Participate in quarterly meetings**

**Review and monitor program progress**

**Utilize voices and influence within the community to gain support for programs**

**Represent Philadelphia Water Department and SAG initiatives, in a positive manner**

**Gather input from the public as it relates to ongoing WRP projects**



# How We Got Here

## Philadelphia's History of Water Revitalization

**1682**

Philadelphia is founded. ➤



**1793–98**

Yellow fever kills thousands of residents.

**1799–1822**

Philadelphia forms a watering committee. The water works opened and expanded. ➤



**1840s**

Philadelphia buys land upstream along Schuylkill River to protect the water source.

**1860–1909**

Philadelphia's population doubles. Typhoid kills 27,000.

**1900–1912**

Philadelphia builds five slow sand filtration plants. ➤



**1914**

The water supply is chlorinated. Typhoid and Cholera eradicated. ➤



**1957**

PWD constructs new rapid sand filters and pump stations. ➤



**1996**

PWD joins the Partnership for Safe Water demonstrating optimized treatment process.

**2019**

PWD develops a forward-looking, 25-year Water Revitalization Plan that provides a clear path to deliver safe, clean, and affordable drinking water into the future.





# Aging Infrastructure

Philadelphia faces a challenge similar to other large cities across the country.

**Ours and other cities must address aged facilities that present issues of:**

- Potential reliability risks
- Increased need for emergency repairs
- Related risks of service interruptions and cost inefficiencies





# Water Revitalization Plan Process

**1** History & Existing Conditions

**2** Goal Setting

**4** Risk Identification

**3** Planning Drivers

**5** System Alternatives Evaluation

**6** Capital Improvement Plan



# Our Goals

We used these criteria to evaluate each solution and help us identify potential risks.

## Water quality

Achieve present and future regulatory requirements

## Capital availability

Manage financial resources to make necessary investments in the water system while keeping rates affordable

## Service pressure

Provide reliable water pressure for system operation

## Operability

Ensure system-wide resiliency for a range of emergency conditions

## Water quantity

Provide long-term water supply to the service area

## Public inclusion

Engage customers throughout the process



# Water Revitalization Plan

## Plan Recommendations

### Projects will include:

- Water treatment plant upgrades
- Pumping station rehabilitation and construction
- New transmission main piping

10

Key Projects

400

Supporting  
Projects

25

Years

5




Year Updates

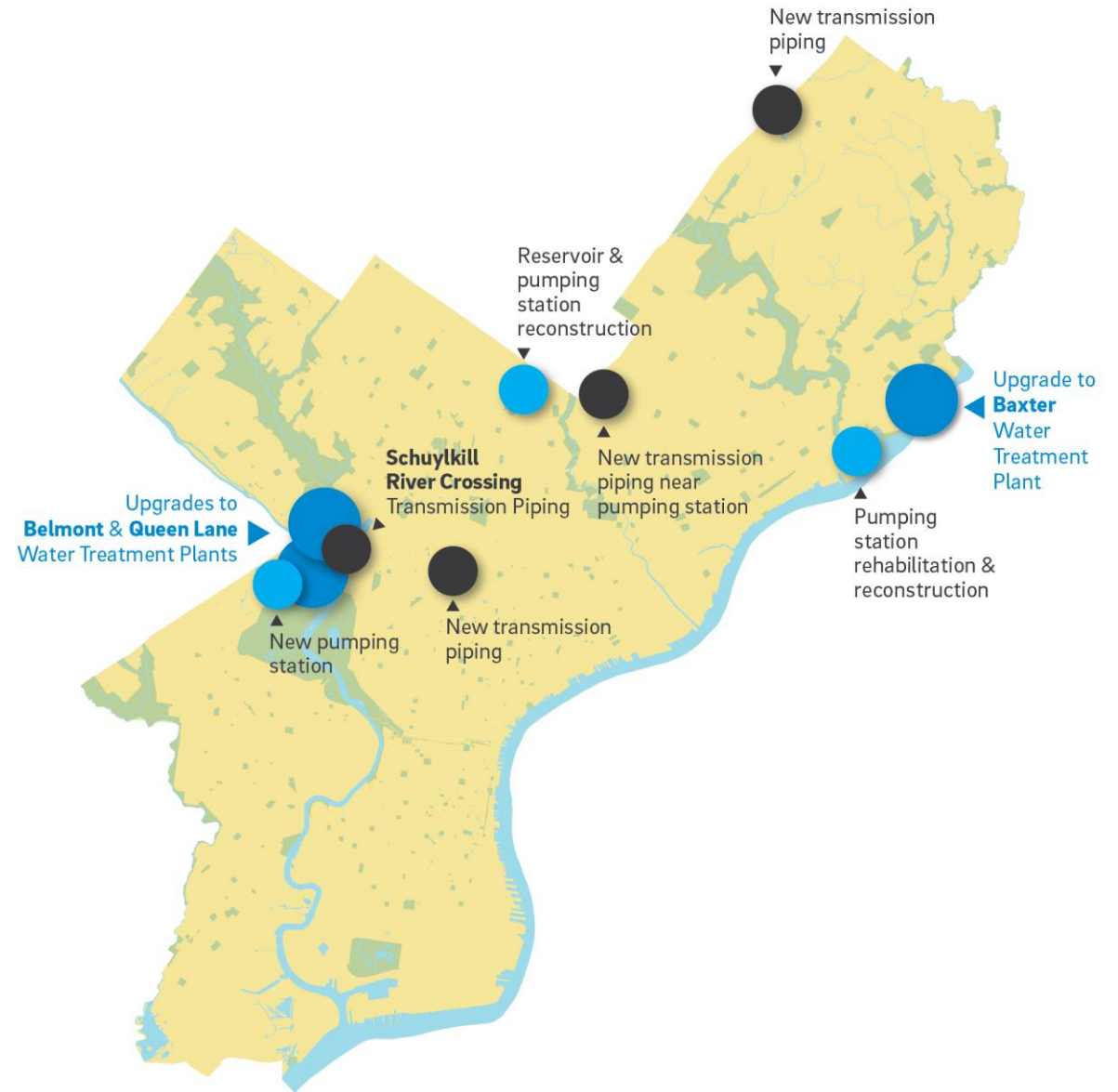


# Key Plan Projects

The Water Revitalization Plan identified approximately 400 projects focused on the improvement of existing facilities and construction of several new facilities.

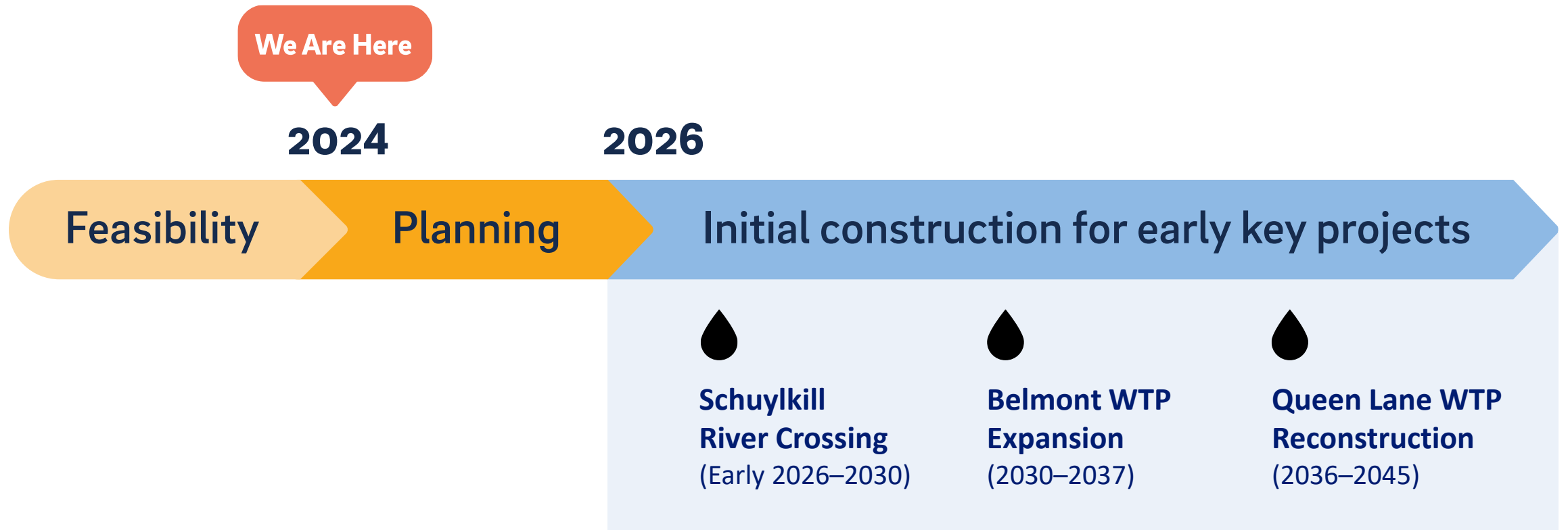
## LEGEND

-  **Water Treatment Plant**
-  **Pumping station**
-  **Transmission main**



# Launching the Plan

Projecting a phased, long-term approach





# How will the Water Revitalization Plan benefit all Philadelphians?

# For Our Residents

- Clean water on tap when you need it
  - Improved water service and a more reliable distribution system
- A focus on community
  - Best practices for construction ensure safe, clean worksites and minimize disturbances





# For Our Economy

- Working with Philadelphians
  - Construction jobs in Philadelphia over the next 25 years.
- Your dollar goes further
  - Projects are scheduled to balance spending as efficiently as possible over time.
- A solid investment
  - Increased transparency of PWD's long-term capital needs.



# For Our Future

- A commitment to health and safety
- An investment in future generations
  - Upgraded facilities to deliver safe, reliable drinking water supply for the next 50 years and beyond.





# How can I stay updated?

Water Revitalization Plan Newsletter:

[public.govdelivery.com/accounts/PAPHILAWA/TER/signup/36082](https://public.govdelivery.com/accounts/PAPHILAWA/TER/signup/36082)



Instagram: @phillyh2o

X: @PhillyH2O

Facebook: Philadelphia Water Department

WRP Support: [WRPsupport@phila.gov](mailto:WRPsupport@phila.gov)

General Support: [waterinfo@phila.gov](mailto:waterinfo@phila.gov) [WRPsupport@phila.gov](mailto:WRPsupport@phila.gov)

Water Revitalization Plan Landing Page:

[water.phila.gov/projects/revitalization/](https://water.phila.gov/projects/revitalization/)

