



Water Revitalization Plan

SRX Preliminary Geotechnical Investigation

Test Drilling/Boring Presentation

June 6, 2023



PHILADELPHIA
WATER
— DEPARTMENT —



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Overview and Objectives

The **Water Revitalization Plan** is PWD's 25-year plan to upgrade and strengthen the City's drinking water infrastructure. It includes improving the pipes, treatment plants, and processes we rely on for safe water in every neighborhood.

The **Schuylkill River Crossing (SRX) project** is the first major project of the Water Revitalization Plan. SRX is a large-scale tunnel project connecting two of our City's drinking water treatment plants to ensure that Philadelphia's current residents and future generations maintain access to safe, reliable drinking water.

Meeting objective:

- To discuss the need for a preliminary geotechnical investigation, location of drilling/borings, and potential community impacts.






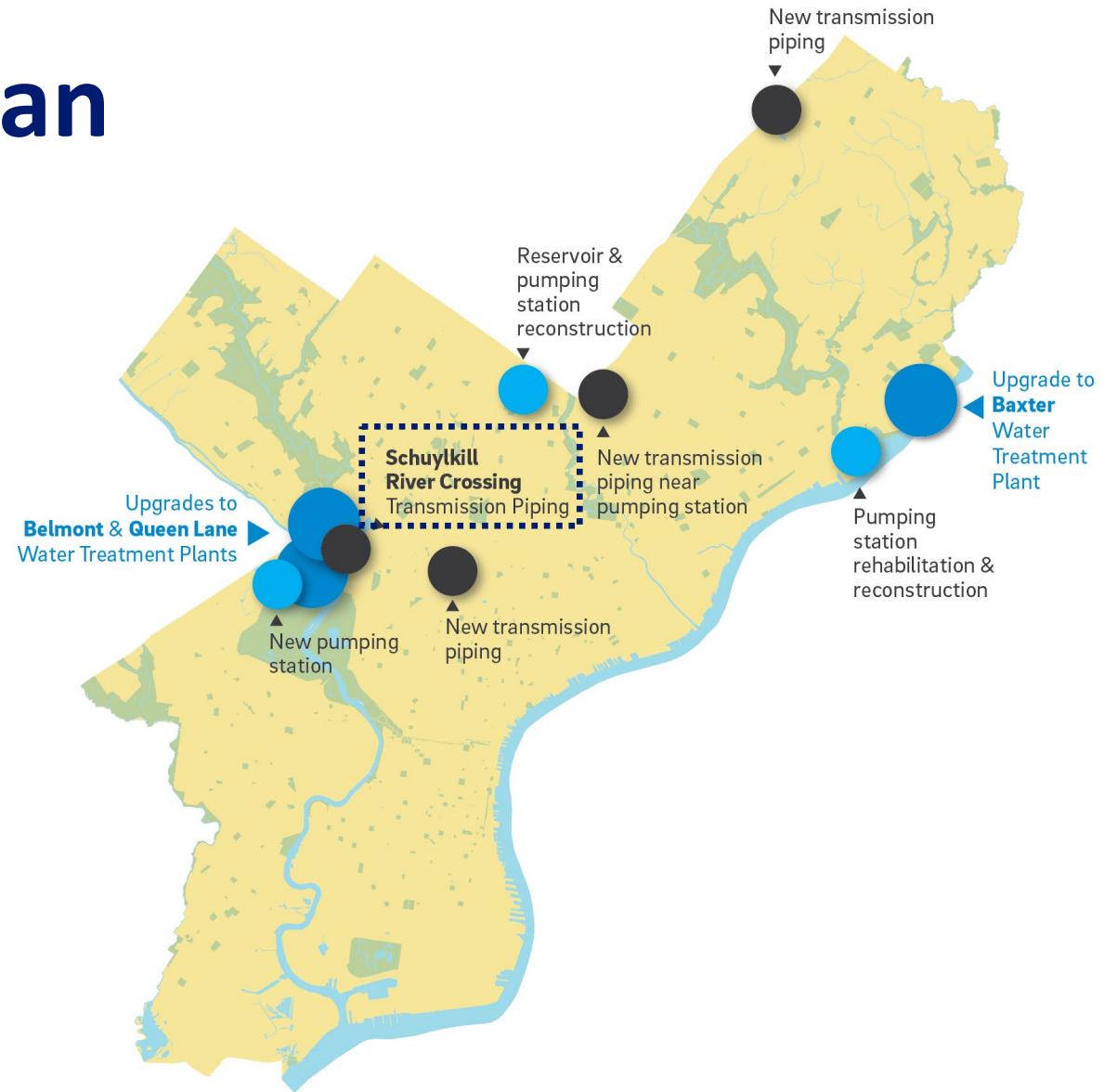
Water Revitalization Plan

Key Projects

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

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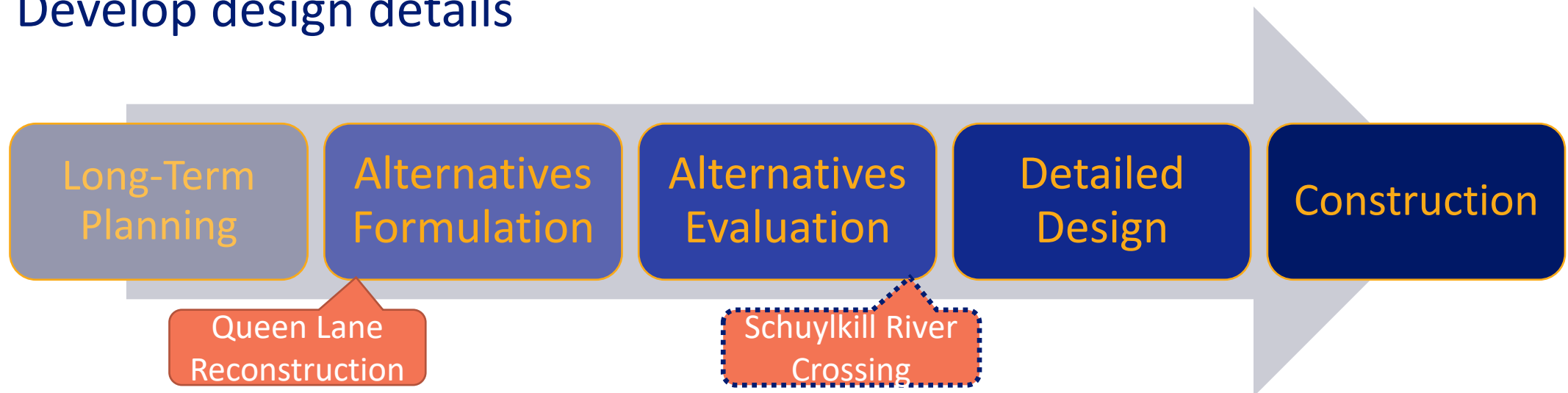
-  **Water Treatment Plant**
-  **Pumping station**
-  **Transmission main**



Review of Water Revitalization Plan Process

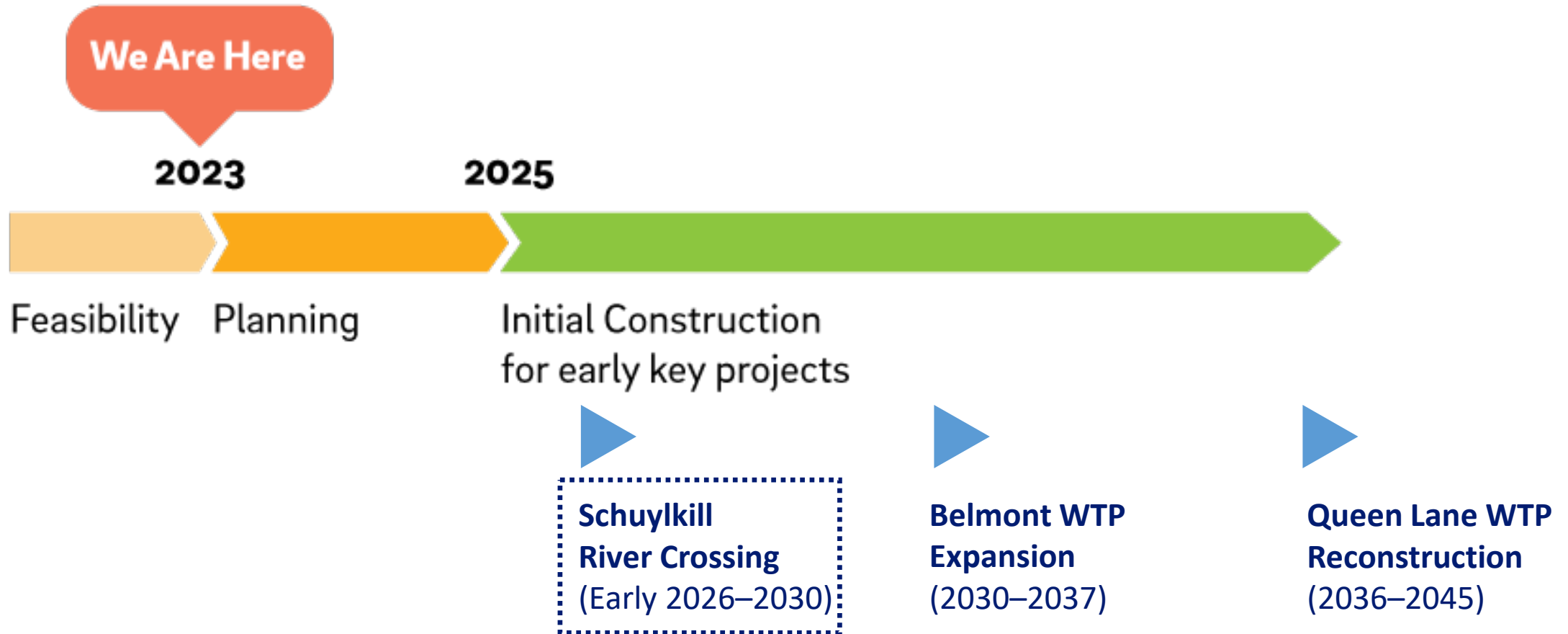
Projects Coming to Your Neighborhood

- Identify projects through long-term planning
- Formulate technical alternatives
- Evaluate alternatives and recommend preferred alternative
- Develop design details



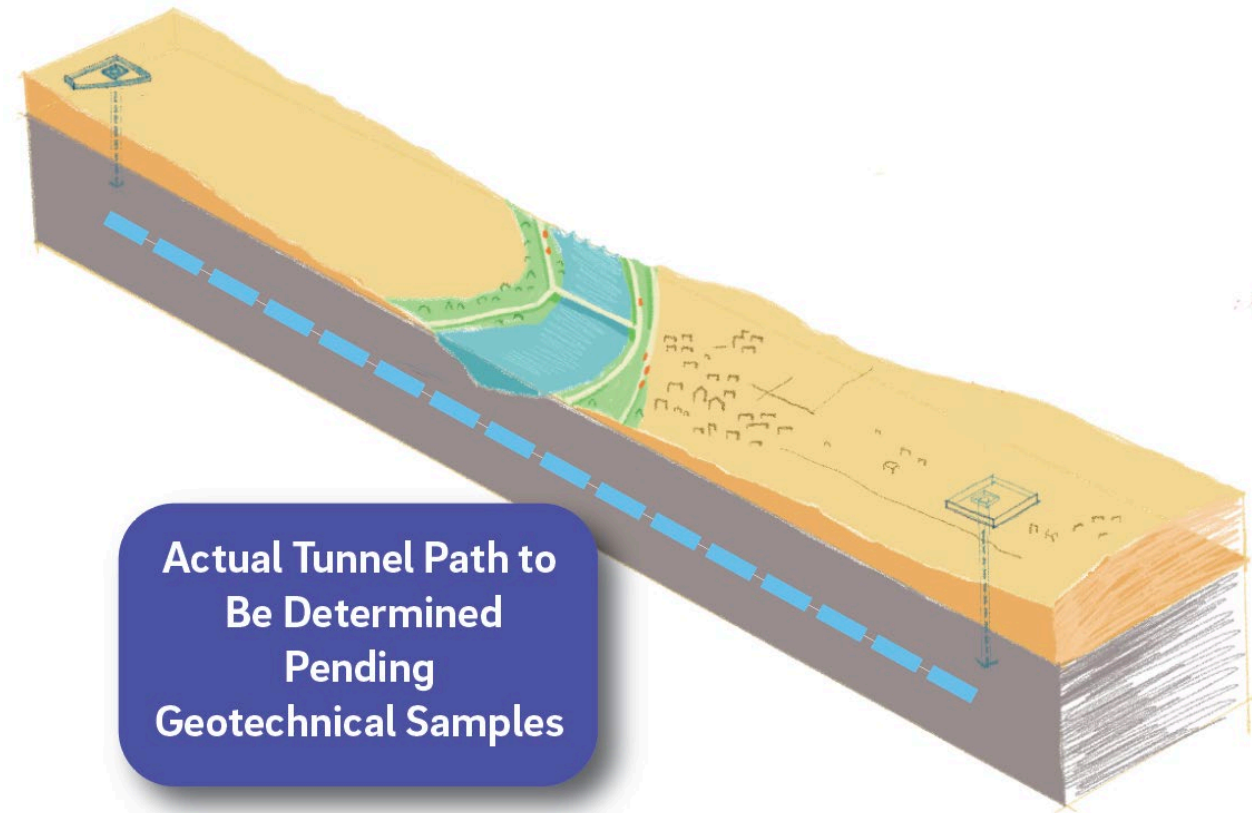
Launching the Plan

A phased long-term approach



Schuylkill River Crossing (SRX) Project

- SRX is a large-scale tunnel project, connecting two of our City's drinking water plants to ensure that Philadelphia's current residents and future generations maintain access to safe, reliable drinking water.
- A tunnel will be constructed through rock over 100 feet (on average) below ground.
- Construction is estimated to begin in early 2026. In the meantime, PWD will provide timeline updates to all nearby residents and communities.



Preliminary Geotechnical Investigation

Purpose of the preliminary geotechnical investigation:

- To collect rock samples to better understand the conditions below ground. This preliminary investigation will inform the alignment evaluation, detailed design, and need for potential additional geotechnical investigations.

What does geotechnical investigation involve?

- The subsurface exploration is performed by drilling boreholes at designated locations. For the information gathered to be relevant and accurate to the project, boreholes are drilled as close to the project site as possible.
- Specific to the SRX project, five (5) locations have been identified as possible candidates to explore the subsurface along different parts of a potential tunnel alignment.



Boring Information

What is a boring?

- A boring is essentially a small, deep hole in the ground about the diameter of a softball. The depth of these specific borings will range from 106 - 320 feet.

Why were these sites selected for boring?

- Boring locations have been chosen with the intent of posing minimal disruptions to the community, while obtaining critical subsurface information.
- Borings will be near the potential tunnel alignment. The sites are generally flat, free of obstacles and vegetation, and have no overhead constraints (electrical lines, etc.).



Preliminary Geotechnical Investigation



Boring Community Impacts

What are the anticipated impacts to the community?

- You may see drilling equipment, or “drill rigs,” with three-or four-person teams at the location outlined on the map.
- The equipment will remain at the sites, weather permitting, until the borings are complete.
- All holes will be patched shortly after testing.

Will there be noise or vibration?

- Construction sound will be similar to a large idling truck. There will be periodic throttling of the drill rig, which sounds like steel banging.
- There will be negligible vibration, similar to a large truck idling, at the beginning and end of shifts.



Boring Work Activities

1. Prior to drilling operations

- Existing conditions are documented; underground utilities are identified.

2. Mobilization

- Schedule
 - Typical work hours: 7am - 3pm
 - Estimated at 1 - 2 weeks per site, starting in mid-June through late July
- Equipment/vehicles
 - Truck-mounted drill rig (as shown on right)
 - 1 truck (drilling personnel)
 - 1 water truck (only if other water source not available)
 - 1 other vehicle (field engineer/inspector)
- Typical setup (as shown on right)

3. At completion of drilling operations

- Borehole is filled with a mixture of soil and cement (as shown on right)



Truck-mounted drill rig



Typical setup



Borehole filled at completion





Questions?

Water Revitalization Plan landing page:
water.phila.gov/projects/revitalization/

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