

Getting to a Project Decision

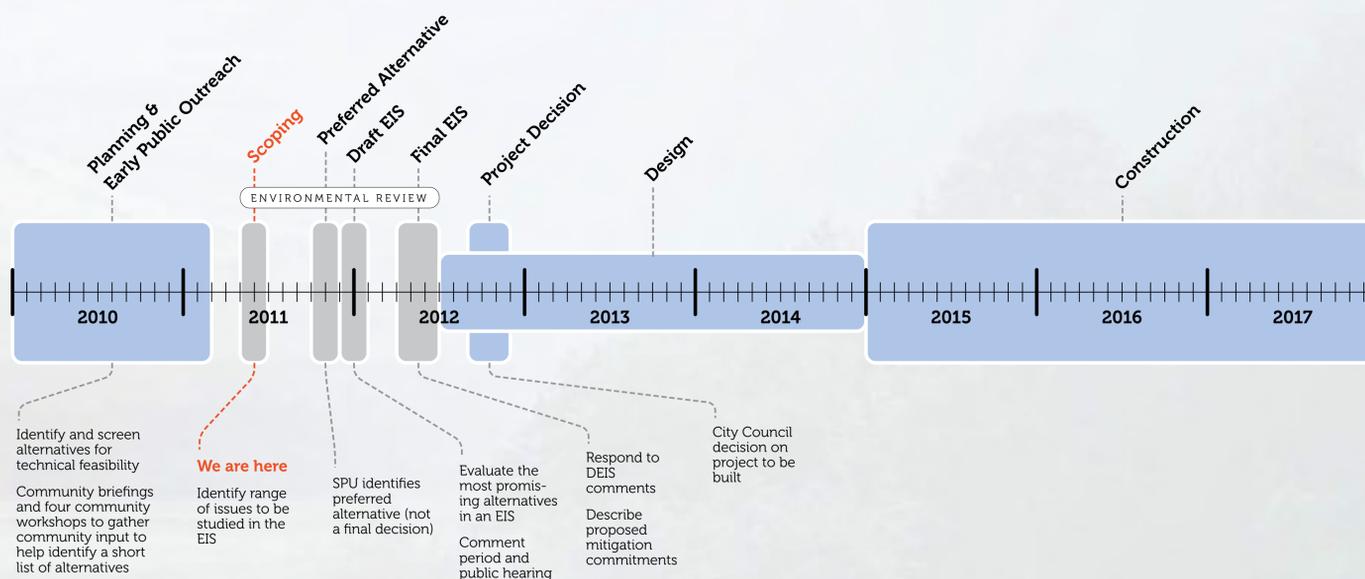


Based on project needs and community input, Seattle Public Utilities has decided to conduct separate siting and environmental review processes for the proposed projects to address overflows at Seward Park (Basin 44) and Martha Washington Park vicinity (Basin 45) outfalls.

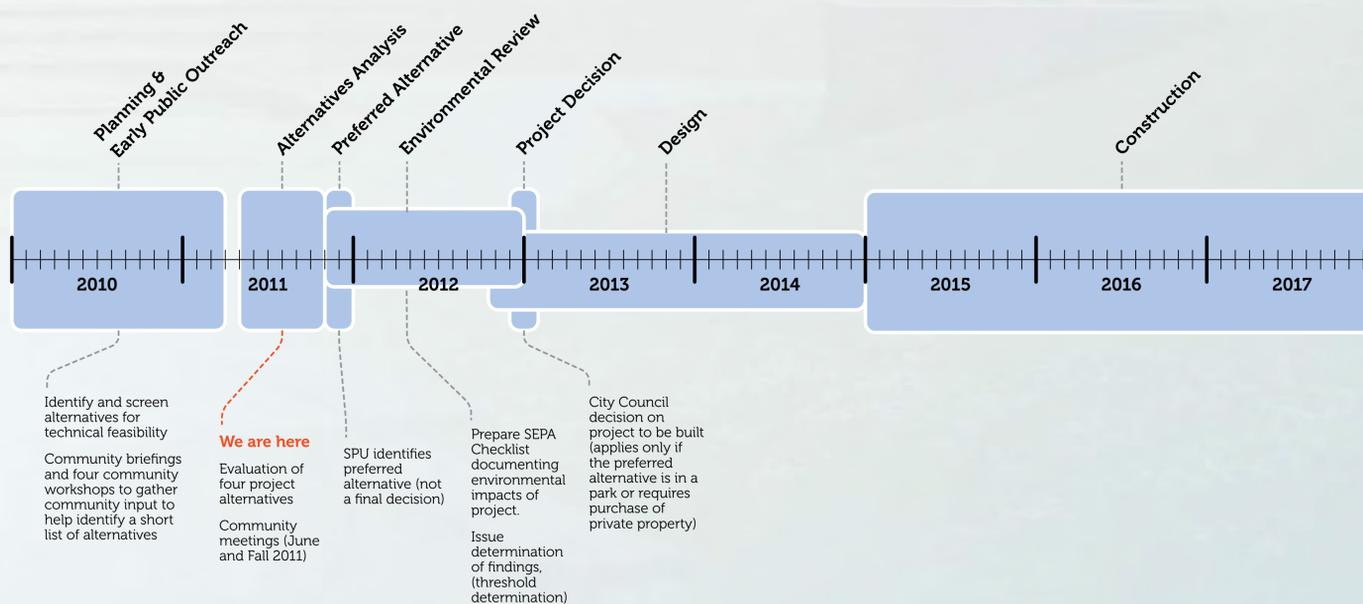
Starting in June 2011, all public meetings will be project-specific so we can work with each neighborhood to focus on the issues that are specific to the two unique project areas.

We encourage members of the community who are interested in both Seward Park and Martha Washington Park vicinity projects to attend meetings for both projects.

Seward Park (Basin 44) Project Timeline



Martha Washington Park Vicinity (Basin 45) Project Timeline



Want to Learn More?

Public input is an important part of our decision process. Here's how to stay informed:

E-mail: SPU_HCSO@seattle.gov

Phone: 206.826.4767

Online: www.seattle.gov/CSO/NorthHenderson

Join the project listserv for updates:

[http://www.seattle.gov/lists/cso-northhenderson.htm/](http://www.seattle.gov/lists/cso-northhenderson.htm)

View real time reports of overflows at: www.kingcounty.gov/CSOStatus

Martha Washington Park Vicinity (Basin 45) CSO Reduction Project

Seattle Public Utilities will prepare an Environmental Checklist under the State Environmental Policy Act (SEPA) to evaluate how the proposed project could impact people and the environment.

The completed environmental checklist will describe the proposed project and identify potential impacts of the proposed project on each of the following elements of the environment:

Natural Environment



Earth

- Geology
- Topography
- Soils
- Erosion



Air Quality

- Dust and exhaust
- Odor
- Greenhouse gas emission



Water

- Lakes and wetlands
- Stormwater
- Groundwater



Plants and animals



Energy and Natural Resources

Built Environment

- Environmental Health
- Noise
- Land and shoreline use
- Housing
- Aesthetics
- Light and Glare
- Recreation
- Historic and Cultural Preservation
- Transportation
- Public Services
- Utilities

Seattle Public Utilities anticipates completing the environmental checklist and making a determination of its findings (threshold determination) in late 2012.



Seattle Public Utilities hosted five public meetings and several briefings to gather community input to help identify and screen project alternatives.

Community Meetings:

September 16, 2010

Project basics.

November 18, 2010

CSO reduction options (storage, transfer, separation, treatment).

December 14, 2010

Site specific CSO reduction alternatives.

January 19, 2011

Alternatives analysis using weighted community evaluation criteria.

March 10, 2011

Presented results of alternatives evaluation.

Community Briefings:

June 23, 2010

Southeast District Council.

October 2, 2010

Friends of Seward Park.

October 4, 2010

Friends of Seattle's Olmsted Parks.

Questions about the Program

- Will the proposed project benefit water quality in Lake Washington?
- What is the proposed decision-making process?
- What are the public's opportunities for input?

Technical Questions

- What will this facility look like, smell like, and sound like?
- What are the soil conditions in this area? How do they impact siting and design?
- Can you provide more details on the costs of the various alternatives?
- What can we expect during construction (noise, dust, access restrictions, etc.)?
- What are the long-term maintenance requirements?

Community Preferences

- Preserve character of parks and avoid impacts to Seward Park and Martha Washington Park.
- Do NOT site the project on private property unless there is a willing seller.
- Concern about negative impacts on property values.

Comments on the Alternatives

- Support for managing CSOs for Basins 44 and 45 separately rather than combined solutions (e.g., large storage tunnel and convey & store).
- Support for underground storage in Seward Park.
- Support for underground storage in Basin 45, but no clear consensus on a community-preferred site and configuration.
- Continued interest in an alternative for Basin 45 that combines infiltration reduction with supplemental underground storage.

Alternative 1

Martha Washington Park Underground Storage



Description of Proposed Facility

Seattle Public Utilities is considering two options for 200,000 gallons of storage underneath Martha Washington Park. Option 1 - Build twin storage pipes using open-cut construction. Each pipe would be 72 inches in diameter, approximately 475 feet long. Option 2 - build either twin 72-inch diameter or a single 108-inch diameter storage pipes using trenchless technology. With either option, an underground facilities vault - approximately 45 feet long x 25 feet wide - would be constructed. Seattle Public Utilities is in the process of evaluating alternative locations for the facilities vault, which would house electrical, mechanical, and odor control equipment. A 230 foot, 18-inch diameter gravity pressure main would also be constructed.

Martha Washington Park Area

Today



Martha Washington Park, looking south.

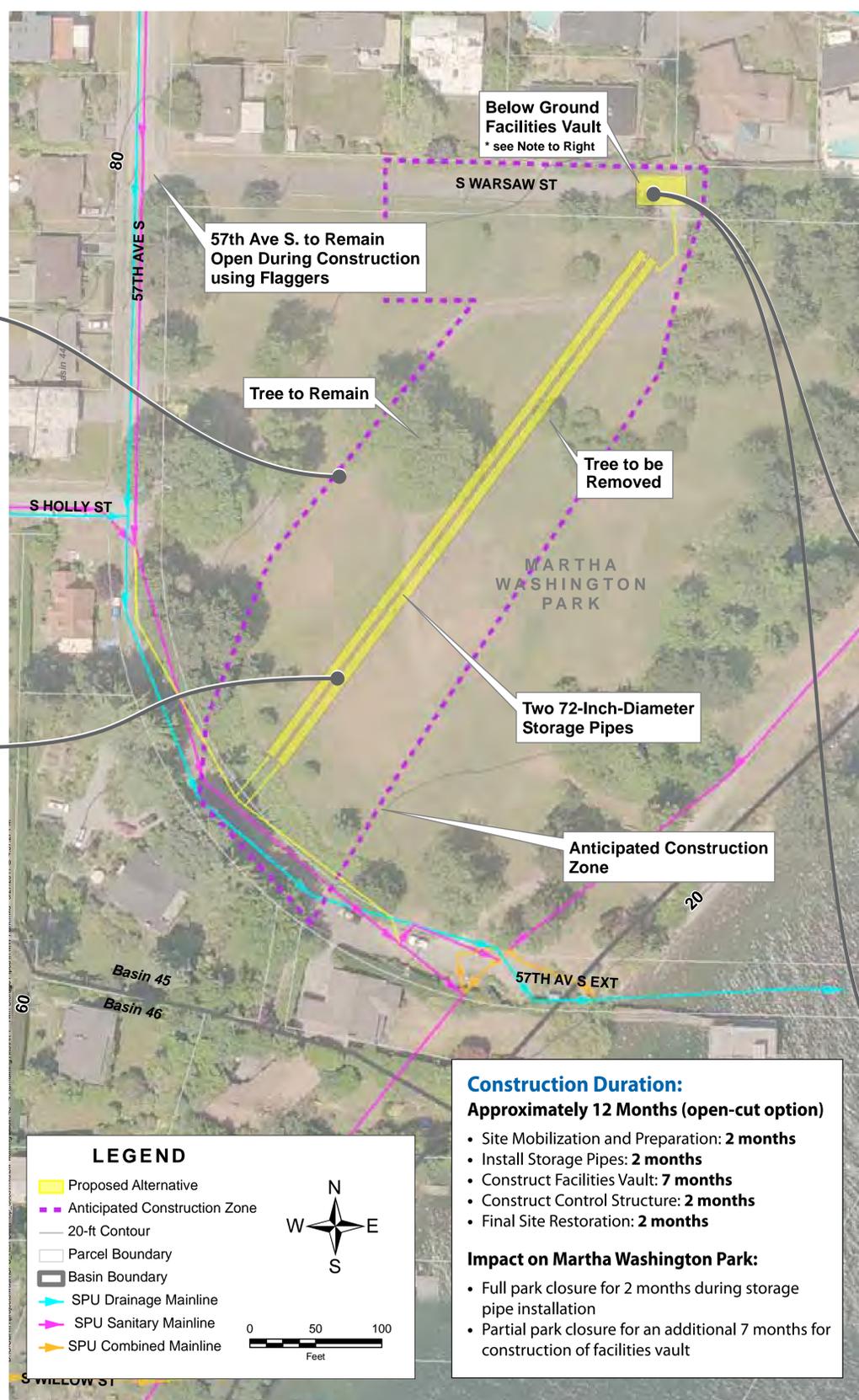
During construction



Rendering of open-cut pipe installation in Martha Washington Park during construction

After Construction

- Once construction is complete, most of the facility would be underground.
- Martha Washington Park would be reopened to the public.



Key Elements - Twin Storage Pipes, Open Cut Construction

Facilities Vault

NOTE: This is one potential location for the below ground facilities vault. Other locations may be possible and are being evaluated. The location shown is for illustrative purposes only, to help you visualize what it could look like. Opportunities may exist to also improve odor control at the existing pump station.

Today



East end of S Warsaw Street, near Martha Washington Park. One potential location of the proposed underground facilities vault.

After Construction



Access hatches for facilities. Trucks would access the facilities vault via the access hatches periodically for maintenance.

Construction Duration:

Approximately 12 Months (open-cut option)

- Site Mobilization and Preparation: 2 months
- Install Storage Pipes: 2 months
- Construct Facilities Vault: 7 months
- Construct Control Structure: 2 months
- Final Site Restoration: 2 months

Impact on Martha Washington Park:

- Full park closure for 2 months during storage pipe installation
- Partial park closure for an additional 7 months for construction of facilities vault

Alternative 2

57th Avenue S Underground Storage



Description of Proposed Facility

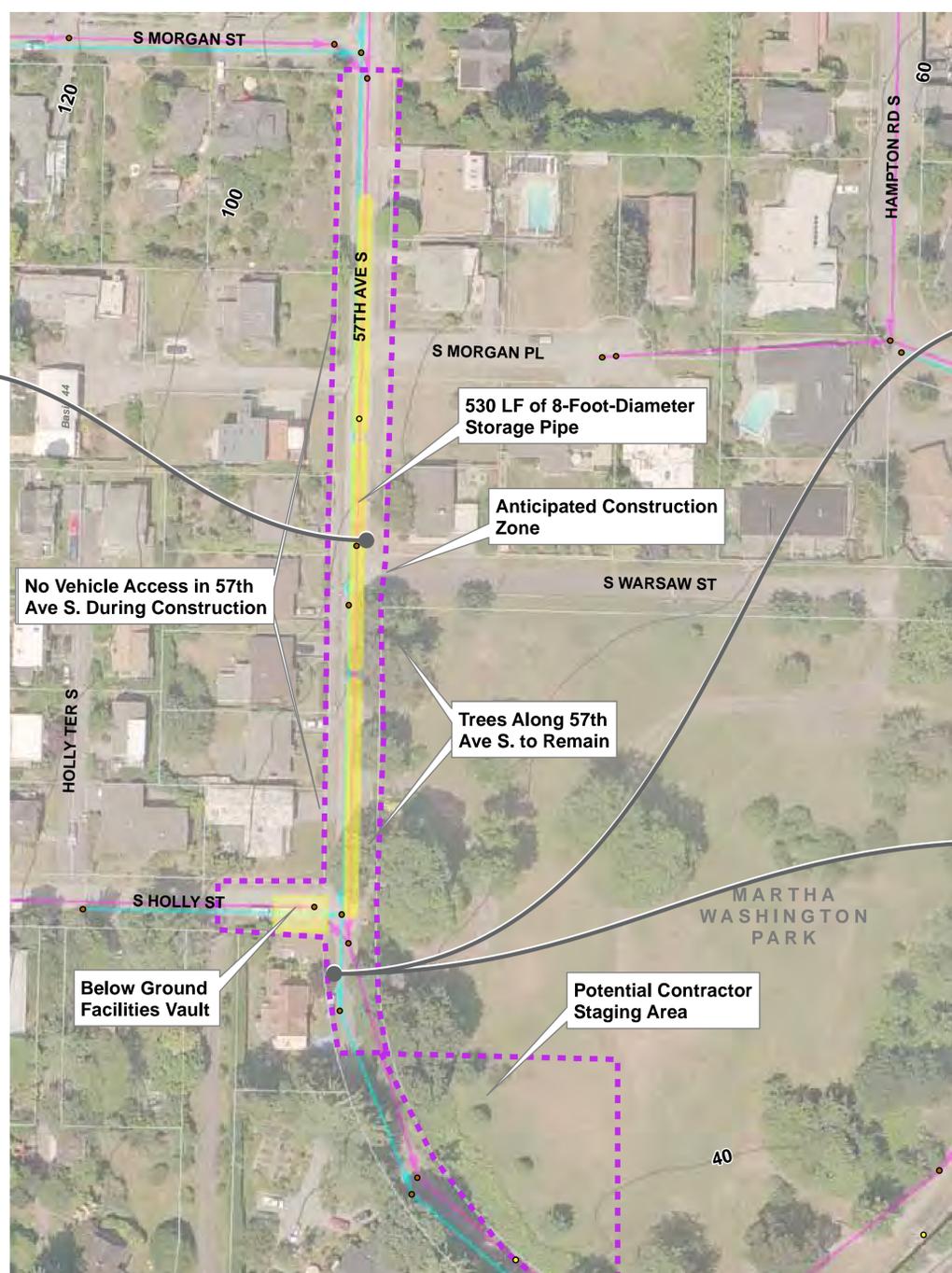
Build a series of three storage pipes underneath 57th Avenue South from S Holly Street to just south of S Morgan Street, on the city owned right-of-way. The 200,000 gallon storage pipes would be approximately 8 feet in diameter, 530 feet long, and built approximately 3 to 9 feet below ground (from the road to the crown of the storage pipe). An underground facilities vault, approximately 45 feet long x 25 feet wide, would be constructed at the corner of S Holly Street and 57th Avenue South. The facilities vault would house electrical, mechanical, and odor control equipment.

57th Avenue S Storage Pipes

During construction



Rendering of pipe installation under 57th Avenue South.



Facilities Vault

Today



Corner of 57th Avenue S and South Holly Street, looking north.

After Construction



Access hatches for facilities vault on South Holly Street at 57th Ave S. Trucks would access this area periodically for maintenance.

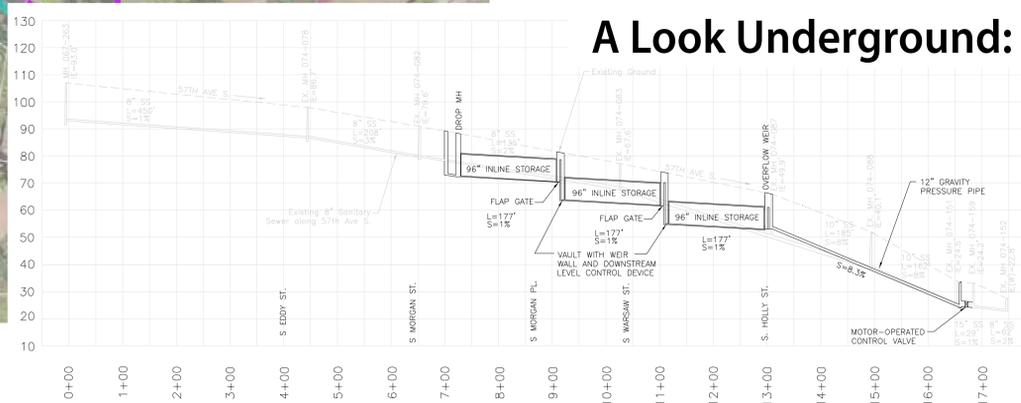
Construction Duration: Approximately 19 Months

- Site Mobilization and Preparation: **2 months**
- Install Storage Pipe and Relocate Utilities: **5 months**
- Construct Facilities Vault: **7 months**
- Construct Control Structure: **2 months**
- Final Site Restoration: **2 months**

Impact on Martha Washington Park:

- Partial park closure for 7 months for staging during construction of facilities vault

A Look Underground:



Alternative 3

Underground Storage on Private Property



Description of Proposed Facility

Build a 200,000 gallon underground storage facility on private property if there was a property owner willing to sell to Seattle Public Utilities. Only a small area within Basin 45 is appropriate for a private property solution, and Seattle Public Utilities is in the process of contacting property owners to determine if there is a willing seller within this area. Seattle Public Utilities would only consider a private property option if there was a willing seller.

While the exact dimensions of the facility would depend upon the specific site, it is likely that the tank would be approximately 60 feet long, 45 feet wide, and 15 feet deep. Other elements would likely include an approximately 50-foot long, 18-inch diameter gravity sewer and 30 foot long, 12-inch diameter force main.

Seattle Public Utilities would consider two options for an underground facilities vault to house electrical, mechanical, and odor control equipment, either at grade with access hatches from above ground or an above ground facilities vault with a small building.

Seattle Public Utilities is taking the following steps to evaluate this alternative:

1. Seattle Public Utilities is contacting owners of suitable parcels to determine if they are willing to sell.
2. If any willing sellers are identified, conduct preliminary technical analysis to screen out any fatal flaws.
3. Seattle Public Utilities will report to the community on feasible private property alternatives by the fall of 2011, if any appropriate parcels and willing sellers are identified.

During construction



During construction, residents may experience minor traffic disruptions on the street in front of the work zone.

After construction

Above Ground Restoration Option



Rendering of above ground facilities building. This is one of two types of restoration options SPU is considering. Trucks would access this area periodically for maintenance.

Below Ground Restoration Option



Rendering of below ground facilities vault. This is one of two types of restoration options SPU is considering. Trucks would access this area periodically for maintenance.

Construction Duration:

Approximately 17 Months

- Site Mobilization and Preparation: **2 months**
- Install Influent Gravity Sewer: **2 months**
- Demolish existing house, Construct Storage Tank and Facilities Vault: **13 months**
- Final Site Restoration: **2 months**

Impact on Martha Washington Park:

- Park could be used for construction staging requiring partial park closures

Alternative 4

Infiltration Reduction + Alternative 1, 2, or 3

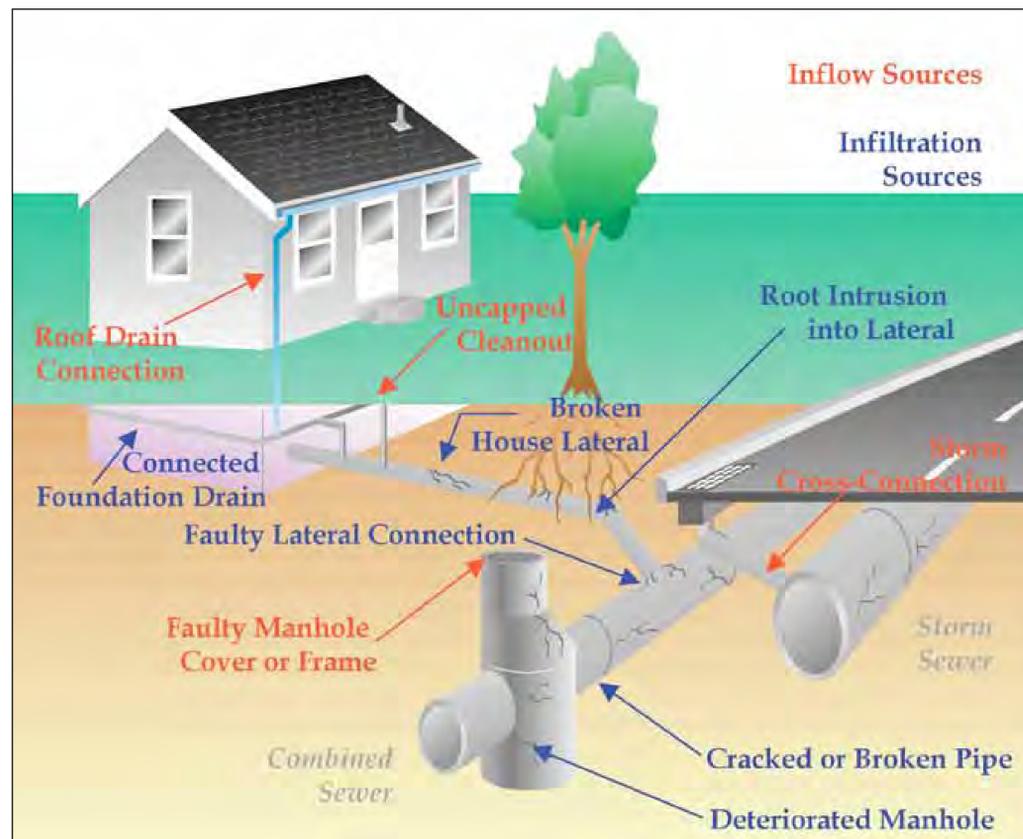


What is Infiltration?

- Infiltration is groundwater that enters the combined sewer system through cracks and openings in the sewers or foundation drains

What is Infiltration Reduction?

- Repair or replace broken side sewers and sewer mains in Basin 45 to eliminate sources of stormwater from the collection system.
- Infiltration reduction alone would not be sufficient to completely meet the regulatory standard of one overflow per outfall per year:
 - With this alternative, SPU proposes to monitor the effectiveness of infiltration reduction; a smaller storage facility would need to be built later to store remaining control volume.
 - The storage facility would be a smaller version of alternative 1, 2, or 3, to provide approximately 50,000 to 130,000 gallons of storage (according to preliminary estimates).



Construction Duration:

Approximately 7 months + Duration of Alternative 1, 2 or 3

- Replace existing sewer mains, side sewers, and repave streets: **7 months**
- Construct storage facility (Alternative 1, 2 or 3): **12-19 months**

How Would it be Constructed?

- Rehabilitate all sewer mains and side sewers to individual properties using pipe bursting technology.
- Replace concrete panels where side sewers connect to sewer main and where maintenance holes on sewer main are pipe-burst.
- It is anticipated that Green Stormwater Infrastructure (GSI) such as cisterns or rain gardens could be built on approximately 10% of private properties where roof downspouts would be disconnected from existing sewer system

Alternative 4

Infiltration Reduction + Alternative 1, 2, or 3



How Would Infiltration Reduction Work in Henderson Basin 45?

Replacing Side Sewers



Legend

- Rain Cisterns
- New Stormwater Lateral
- Pipe Burst Side Sewers and Mains
- Rain Garden
- Pavement Replacement Area

Replacing Sewer Mains



Actions on Private Property

Repair side sewers



Install a rain garden, where feasible



Install a cistern, where feasible



Disconnect roof drains from sewer

Stormwater treatment vaults needed at each intersection

