

Holden Natural Drainage Systems (NDS) Project

Frequently Asked Questions

Updated November 2023

PROJECT OVERVIEW

What is stormwater and why is it a problem?

Stormwater is water that falls during a rainstorm or melting snow. In developed areas like Seattle, there are many hard surfaces such as roadways and rooftops that do not allow water to soak into the ground. When a lot of water runs over these hard surfaces, flooding can occur.

The runoff from rain can also pick up harmful pollutants such as fertilizers and pesticides from lawns, and other harmful pollutants such as copper, zinc, and 6ppd-quinone (a recently discovered car tire-driven chemical that contributes to pre-spawn salmon mortality) among other chemicals from streets and parking lots. Runoff can carry pollutants to the nearest storm drain and local waterways, contaminating water quality and harming fish, wildlife, and our ecosystems.

What are the project goals?

- To improve water quality in Longfellow Creek and help manage stormwater flows by constructing natural drainage systems in the neighborhood
- To reduce localized flooding where possible
- To provide more street trees and landscape plantings
- To improve pedestrian safety by adding roadway elements such as curb bulbs and ADA ramps
- To help improve the health of creek ecosystems

SPU is planning to build natural drainage systems in the space between the existing sidewalks and the edge of the street on SW Holden St west of 16th Ave SW and half a block west of 17th Ave SW. This project is part of the Plan to Protect Seattle's Waterways. For more information on the Plan, please view the following link:

www.seattle.gov/utilities/documents/plans/drainage-and-sewer-plans/waterway-protection

Why is Seattle Public Utilities (SPU) bringing this project to your neighborhood?

This project will help reduce polluted stormwater runoff from entering Longfellow Creek and flowing into Puget Sound. Every year, more than 12 million pounds of pollutants are carried into our water bodies through stormwater runoff. SPU is building natural drainage systems (NDS) to help solve this problem.

NDS are made up of a series of cells, or shallow depressions, along a street block designed to capture and slow stormwater and filter pollutants before they can reach our waterways. NDS cells are located in the space between the street edge and property line and are filled with a special soil and deep-rooted plants that temporarily hold and filter polluted stormwater from streets.

TIMELINE

What is the timeline for this project?

This project is in the mid-design phase. We plan to refine the design based on further studies and community feedback by late 2023. Design will continue through 2024, and construction is expected to begin in early 2025. The project timeline may change depending on feedback from the community and other related parties. Opportunities for public feedback will be available throughout the design process.

SITE SELECTION PROCESS

How does SPU select locations for building natural drainage systems?

SPU selects potential project locations by working with other city departments (for example, when undertaking planned street or pedestrian improvements), by looking for areas where this project may address water quality and/or stormwater flow issues, and by collecting information from the community.

SPU selects sites within the Longfellow Creek watershed based on a variety of factors:

- How much stormwater can be managed and cleaned
- Ability to address flooding problems
- Location of nearby adverse conditions (steep slopes, high groundwater, contaminated sites)
- Potential impacts to existing mature trees
- Existing soil conditions
- Location and condition of existing utilities
- Community feedback
- Width of public right-of-way
- Presence of driveways
- Existing parking congestion and availability of off-street parking
- Cost/benefit evaluation balancing project construction, operation, and maintenance costs and community benefits

The Holden NDS Project site was selected because untreated stormwater from the roadways in this area ultimately reach Longfellow Creek. The project aims to treat roadway stormwater flows and improve water quality within the Creek. The Holden NDS Project site was also a good candidate as the cells installed for water quality will serve as permanent curb bulbs, replacing the temporary painted curb bulbs installed by the Seattle Department of Transportation (SDOT) at 17th Ave SW and SW Holden St.

POTENTIAL IMPACTS

What will I see on the side of the street?

Natural drainage systems are often built between the street and the sidewalk (or existing right-of-way when there is no sidewalk) in residential neighborhoods. The projects use a combination of different soil types and plants to create a natural “filter” that captures and breaks down pollutants that wash off roadways and parking areas. Further, the natural drainage systems reduce/slow down flows in stormwater drainage systems during rain events.

Since this project is built with growing plants, the way the plants look will change over time and they may take up to two years to fully develop. The grasses, shrubs, and trees installed at construction will grow as the plants mature. The plants will also look different as seasons change throughout the year. In the first few years, the stormwater collected in the natural drainage system will be more visible; as the plants mature, the collected stormwater will be less visible.

Will this project affect existing plants and trees?

This project will replace some grass areas that are next to the existing sidewalk with new grass in some locations. In other locations, some of the grass areas will be converted to NDS. Currently, this project does not plan to remove any existing trees.

Will I have to relocate my fence, plants, or other items if they are within the public right-of-way?

SPU will work with each resident who may be impacted by NDS improvements. Depending on different factors (i.e. equity, cost, regulation etc.) and agreements, fences and other encroachments will need to be removed by the impacted resident at the resident’s expense, or sometimes they may be removed by SPU and placed on the resident's property during construction. While SPU makes every effort to protect trees, they may need to be removed if SPU cannot work around them. However, impacted residents will be given the opportunity to replant trees at another location on their property. It is highly encouraged that residents remove items that they wish to keep that are located in the public right-of-way prior to the start of construction because SPU will not be able to guarantee the items will not be damaged.

Will my driveway be impacted by this project?

NDS may require some driveways to be restored to the City's standard width (typically 10' depending on the property configuration) within the public right-of-way. SPU will work with each impacted resident to the extent allowed by City Policies and practices.

Will my utilities be impacted by this project?

Some gas lines, side sewers, electrical lines, communication lines, and water utilities will need to be adjusted during construction. We will work with each resident who may be impacted by utility relocation.

Will my mailbox be impacted by this project?

Some mailboxes may need to be relocated due to NDS improvements.

I have an upcoming construction project. How do I find out where my property line is?

Please call the Seattle Department of Construction & Inspections (SDCI) Help Desk for more information at (206) 684-8850. More significant work may require a survey. SDCI will be able to help residents identify what is needed and how to determine property boundaries.

DESIGN UPDATES

During early design, there were plans to build an NDS on a portion of the east side of 17th Ave SW. Why was that removed?

SPU included the east side of 17th Ave SW as a potential location for NDS early in the design. After further analysis, we have eliminated the natural drainage systems from 17th Avenue SW from the project because the 17th Avenue SW system does not provide enough treatment to justify the construction and long-term maintenance investment. While we understand that there is a lot of community interest in additional natural drainage systems in the neighborhood, the current project focus is to plan and design natural drainage systems on SW Holden Street.

What updates have been made between March 2023 and mid-design?

Design updates include:

- Proposed four new curb ramps at the intersection of 17th Ave SW and SW Holden St
- Replaced eight curb ramps with new ADA compliant curb ramps at the intersection of 16th Ave SW and SW Holden St
- Removed the potential NDS on the east side of 17th Ave SW based on updated cost and benefit analysis
- Further refined locations, types, and sizes of NDS on SW Holden St

- Confirmed roadway configuration and the speed cushion modification needs with Seattle Department of Transportation
- Developed draft landscaping plans

What kinds of plants will be chosen to complete the NDS design? Can I pick the plants that will be located near my property?

Within the NDS planting areas, we are held to pre-approved plant species for specific water quality treatment function and ease of maintenance. The planting selection in the non-NDS zone has a little more flexibility, however, it depends on suitability, availability, equity, and maintenance. We are open to receiving feedback, but cannot guarantee the project will implement the suggestions.

WHAT TO EXPECT

Will I see water in the natural drainage systems?

During storms, each project site will temporarily hold up to 12 inches of water and then drain within 24 hours after the rain ends. When there are back-to-back storms or larger storms, the water level will rise and fall, which is a sign that the project is functioning properly.

What if it rains so much that the project site overflows?

The natural drainage systems are designed to completely drain within 24 hours of the storm passing. If there is more water than the project can hold at one time, you will see any excess stormwater flow out of the system and into the nearest pipe, ditch, or storm drain.

What happens if the natural drainage system does not drain within 24 hours?

Seattle Public Utilities' Operation Response Center maintains a 24/7 hotline for people to call and report drainage issues. If the completed project near your home isn't draining properly or requires maintenance, please call (206) 386-1800.

Who is responsible for maintenance of the natural drainage systems?

SPU is responsible for all maintenance needs of this NDS including watering, weeding, and general upkeep. SPU will also prune trees and shrubs as needed. You will not be asked to perform any maintenance. In fact, it is important for residents to stay out of the natural drainage systems so they are able to function properly. Plants will mature over time and the mix of plants will likely change, but this doesn't affect the function. The planting strip that is not part of the NDS will be the responsibility of the adjacent property owner as is typical for streets in Seattle. Please view the following link for more information:

www.seattle.gov/transportation/projects-and-programs/programs/maintenance-and-paving/property-owners-responsibilities

Will this project cause my basement to flood or drainage problems around my house?

This project is designed to carry filtered stormwater directly to the drainage systems, not toward yards or basements. If needed, the natural drainage systems will have an underground liner for extra protection.

Will this project affect street parking?

This project will remove parking on the south side of SW Holden St and install an NDS in its place. SPU understands that parking and pedestrian access are very important to residents, and carefully considers the impacts to and solutions for parking. Additionally, SPU evaluates the condition and availability of off-street parking nearby.

Will this project attract mosquitoes?

This project will not attract mosquitoes. Mosquitoes need stagnant water (found in bird baths, old tires, dog water bowls, etc.) and natural drainage systems are designed to constantly drain and keep water moving.

Will my children and pets be safe when the water is collected and stored here?

Natural drainage systems are designed with safety in mind. They will typically drain within 24 hours following a storm and, in most cases, drain even faster.

COMMUNITY INPUT

How much input do you want from residents?

Community involvement is important to SPU. SPU will continue to consult with the community throughout design and construction with the goal of understanding specific concerns and interests from the community. We will collect information from residents using tools such as surveys, online and in-person events, and meetings with local stakeholders. We will keep residents informed through email, mailers, and community briefings.

How will you use community feedback?

SPU can only build these systems where it is technically feasible. However, we incorporate community feedback into the final decisions as much as possible.

STAY IN TOUCH

Have a question or concern? SPU is happy to answer questions and provide information about the project, including its impacts to you and your neighborhood.

Contact: Wan-Yee Kuo, Senior Project Manager

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Phone: (206) 684-3957

Visit: <http://www.seattle.gov/utilities/HoldenNDS>