Holden Natural Drainage Systems (NDS) Project |Frequently Asked Questions

Updated Spring 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, pesticides, and soaps from the ground. 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 your neighborhood
- To reduce localized flooding where possible, provide more street trees and landscape plantings, and improve pedestrian safety by adding roadway elements such as curb bulbs and ADA ramps

SPU is planning to build natural drainage systems in the space between existing sidewalks and the edge of the roadway on SW Holden Street between 16th Avenue SW and 17th Avenue SW, and on a portion of the east side of 17th Avenue 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 pollution 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 block designed to capture and slow stormwater, and filter pollutants before they can reach our waterways. NDS cells are located in the roadway shoulder (the space between the street edge and property line) and are filled with a special soil and deep-rooted plants to temporarily hold and filter polluted stormwater from streets.

TIMELINE

What is the timeline for this project?

Currently, this project is in the early design phase, where we have identified several locations for NDS installation. We plan to refine the design based on further studies and community feedback by mid-2023. Design will continue through 2024, and construction is expected to begin in late 2024 and be wrapped up in 2025. Timeline may change depending on feedback from the community and other impacted 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 a flooding problem
- Location of nearby adverse conditions (steep slopes, high groundwater, contaminated sites)
- Potential impacts to existing trees
- Existing soil conditions
- Location and condition of existing utilities
- Community feedback
- Width of existing 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

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 washing off roadways and parking areas, as well as minimizing/delaying flows to stormwater systems during rain events.

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

How will this work affect existing plants and trees?

This project may likely affect some trees on your street, but SPU will replace any one tree removed with new trees to enhance the neighborhood's tree canopy. Some smaller or unhealthy trees may need to be replaced or transplanted. Protecting trees during construction is a priority.

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 encroachment 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 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.

How will the water flow over my driveway once this project is complete?

Stormwater will be conveyed to the NDS and/or new drainage collection structures through a new road edge gutter. This new road edge gutter will convey water across driveways and down the street.

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.

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 project?

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 stormwater straight into the ground, not toward yards or basements. SPU uses soil testing information to locate these projects only where the conditions are good for infiltrating stormwater straight down into the ground. If needed, the design of the site may provide an underground liner for extra protection.

Will this project affect street parking?

This project will likely affect street parking. 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 feedback do you want from residents?

Community involvement is important to SPU. SPU will consult with the community during early planning, design, and construction with the goal of understanding specific concerns and interests from the community. We want to understand specific concerns and interests from you and your neighbors. We will collect information from you using tools such as surveys, online and in-person events, and meetings with neighborhood stakeholders. We will keep you informed through email, mailers, and community briefings.

How will you use community feedback?

While SPU can build these systems only where it is technically feasible, 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

Email: Wan-Yee.Kuo@seattle.gov

Phone: (206) 684-3957

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