King County
Department of Natural Resources and Parks
Wastewater Treatment Division

Fast Facts about Barton

An occasional message to provide project updates and clarify information about King County's clean-water agency

June 21, 2012

The Barton CSO project has a lot of people talking about rain gardens and bioswales in West Seattle. You may have seen or heard about other projects in the area -- some that went well, and some that didn't. But comparisons to the Barton proposal seem to be creating confusion among neighbors.

We'll be in the neighborhood this weekend to meet directly with residents. This will be a great opportunity to ask questions, share concerns and give us input on design for your block.

In the meantime, we want to share some basic information about the Barton project, clear up misinformation, and explain why the proposal is based on thoroughly tested science and engineering.

Green infrastructure – putting nature to work in the built environment

Cities around the country are increasingly turning to "green" infrastructure as an effective way to control stormwater and reduce pollution.

The biorentention swales King County is planning to install to control CSOs are not rain gardens. They are drainage systems designed to combine nature with engineering to effectively control stormwater to keep it out of King County's wastewater pipes during heavy rains. Landscaped swales will rely on soils, plants and trees to capture stormwater and direct it deep underground through underdrains and wells.

King County hired geological experts and engineers to study soil composition and monitor drainage patterns to ensure the bioretention swales would be a safe, feasible option to control combined sewer overflows. Local green stormwater infrastructure projects that were not successful did not conduct this level of planning and technical analysis.

Also, "green" options aren't feasible in every neighborhood. That's why we're going with traditional "gray" infrastructure like storage tanks and pipes in other neighborhoods such as Magnolia and North Beach. Residents near these facilities can also expect impacts during the new facilities' construction and operation.

Why my street? How will my neighborhood change?

In identifying locations, we looked at many factors including water flow patterns, planter strip width, road slope, and existing site features such as large trees and driveways. Most swales are sited at the south end of a given block to capture the maximum amount of water in the minimum amount of space.

Current design includes bump outs or curb bulbs to capture the maximum amount of water at the lower ends of streets. These features have the added benefit of calming traffic, which some residents favor. However, they could also reduce parking availability on some streets.

Crossing zones are currently set approximately 35 feet apart, which may raise questions about distance and stepping materials. As we finalize design, we'll be interested in working with people to address concerns this may pose.

Some people have expressed concerns about basement flooding. Basement drainage problems will not be worsened by the project. The bioswales will have an underdrain to intercept and collect the storm water and convey it to a well which then takes runoff into a deep soil layer well below basement levels for infiltration to the local aquifer.

In terms of aesthetics, residents will have the option of choosing some of the vegetation for their block. King County will solicit community input as design moves forward.

To preserve tree canopy, we'll also incorporate existing trees into the swale design where possible. If a tree must be removed, the City of Seattle requires replanting at a 2 to 1 ratio – two trees replaced for every tree removed.

What about maintenance?

The bioretention swales are considered a King County facility and must function properly to meet permit requirements. Maintenance is part of that commitment to function, and includes watering, weeding, and regular upkeep. Maintenance will be the responsibility of either King County or the City of Seattle, not the adjacent property owner.

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What about standing water and safety?

Standing water will be minimal and designed to drain within 24 hours. Standing water is most likely to follow extremely heavy rainfall when children typically aren't outside playing. Additionally, specially amended soils will be added to the swales to promote fast infiltration to the underdrains, which will take the water to a deep well for infiltration. King County's maintenance department will assess site conditions after a storm and address any concerns on a site-specific basis.

More questions?
Please reply to this e-mail message or contact Kristine Cramer, King County Community Relations, at 206-263-3184 or Kristine.cramer@kingcounty.gov.

For this information in alternative formats, call 206-684-1280 or 711 (TTY).