South Magnolia Combined Sewer Overflow (CSO) Control Project

Neighborhood Meeting Summary

August 17 and 18, 2011 6:30-8:00 pm
Magnolia Park, 1461 Magnolia Blvd, Seattle, 98199
32nd Avenue West street end, Seattle, 98199

Overview

On August 17 and 18, 2011 the King County Wastewater Treatment Division (WTD) hosted two neighborhood meetings for the South Magnolia Combined Sewer Overflow (CSO) Control Project. The meetings were intended as an opportunity to meet project area neighbors, have them meet King County project team staff, and share information on the upcoming project.

Eighteen members of the public attended the August 17 meeting, and about ten members of the public attended the August 18 meeting. This summary includes email communications from four residents who were unable to attend meetings.

Meeting Purpose
The meetings were intended to -

- Provide an update on the County's South Magnolia CSO Control Project
- Discuss facilities planned for the project, and how they will operate
- Discuss upcoming geotechnical survey activities
- Provide information on next steps in the project and opportunities for public participation
- Discuss the community's questions and concerns

Summary of Questions and Input
Questions, feedback, and discussion from meeting attendees and email communications are summarized below.

Has King County decided on a storage tank location in the Smith Cove Park/West Yard area? At this time, the final tank site has not been decided, but King County continues working closely with Seattle Parks and the Port of Seattle. Don Harris of Seattle Parks indicated the Port of Seattle and City of Seattle are still discussing the potential land swap.

What is the "ancillary equipment facility" and will it be above ground?
The ancillary equipment facility includes an odor control and electrical unit and is expected to have a footprint of approximately 40' x 60' and be up to 16' high. It is currently planned to be built above ground unless it is located in a park.

Where will the gravity sewer pipeline be located?
The intent of the geotechnical investigations is to determine the optimal alignment for the underground gravity sewer pipeline between the existing sewer on 32nd Avenue NW and the proposed CSO storage tank location near 23rd Avenue NW. Currently, two alternative alignments are being investigated; one primarily along West Galer Street and one primarily along West Eaton Street. The pipeline will be installed using a trenchless method such as horizontal directional drilling or microtunnelling. The alignment may travel under West Galer Street or West Eaton Street. The West Galer Street alignment allows routing of the pipeline under the right-of-way, while the West Eaton Street alignment requires routing of the pipeline under some private property. However, the pipeline will be placed in the area with the best underground conditions.

If the alignment is in the right-of-way, tracking devices will be used with pipeline drilling equipment to insure that it is located within the established easement. The location will be confirmed with post-construction surveys and documented on as-built drawings.

If the recommended pipeline alignment falls beneath privately owned property, King County will contact the property owners to discuss the easement process, determine the square footage needed for the pipe, and determine fair market value for a subterranean (subsurface) easement. No work will occur on private property during geotechnical investigations.

If the pipeline is located under private property, how will you monitor conditions during installation and address any problems?
Due to the expected depth of the pipe below the ground surface (over 100 feet deep), we do not expect any impacts to homes, whether the pipeline is installed in the right-of-way or under private property. However, we will take proactive measures to assess any potential issues by conducting settlement monitoring and offering pre-construction photo surveys for structures in a zone around the alignment. In the unlikely event that there is an issue, monitoring data, photo surveys, timely reports of problems to King County, and filing appropriate claim forms helps to expedite investigation and resolution of any problems.

What can neighbors expect during geotechnical investigations?

There will be nine preliminary borings, four of which will be conducted along two alternative alignments on West Eaton and West Galer Streets. Drill rigs may operate at multiple sites simultaneously. Each bore hole will be up to 220 feet deep and will take 5 days to drill. The initial borings will help to determine potential alignments and which additional borings will be needed.

The boring contractor will comply with City of Seattle permit requirements for work hours, traffic control, and noise. There will be traffic disruptions, with one lane remaining open at all times. People will hear motor noise during the drilling phase, with 2-3 minutes of higher level noise during soil sampling. Neighbors will receive advance notice of any drilling activities, including the boring schedule, work hours, traffic information, and contact information for questions or concerns.

What kind of information is generated from these investigations?
King County's team will assess soils and will monitor groundwater conditions and slope movement using equipment installed in the boreholes following sampling. A data report is generated from these activities.

King County has received neighborhood information about underground seeps and streams, and sandy, flowing soils. These conditions, while probably at an elevation far above the pipeline alignment, along with data, will be evaluated in the potential alignment area by sampling and monitoring at the selected locations if necessary.

Will geotechnical findings showing poor soil negatively affect property values?
Property values are affected by many variables on a site specific, local, regional, national, and international level. Many physical characteristics and critical areas parameters of properties are available from online sources like the King County property research Web pages (http://www.kingcounty.gov/operations/GIS/PropResearch.aspx). The geotechnical information from this report is obtained to inform this project rather than to contribute to information included in property databases.

How will Magnolia learn about the results of these investigations?
King County will host a community meeting in late fall to provide geotechnical information related to the alternative pipeline alignment, and the decision on the storage tank site location. We will post information and meeting materials on the project Website at www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnoliaCSOStorage.aspx . Draft Data reports are available upon request.

What if the soil conditions aren't good for the pipeline alignment anywhere in the area?
Preliminary analysis of known soil conditions included in Appendix A of the Draft Facility Plan suggests that soils are appropriate at the depth of the proposed pipeline installation. To read more from the draft facility plan visit http://your.kingcounty.gov/dnrp/library/wastewater/wtd/construction/CSOBeach/TechDocs/FacilityPlans/SMagnolia/Draft/AppA_SM.pdf. Upcoming geotechnical work will help to confirm soil conditions and provide data to help in the determination of an optimal alignment for the pipe.

What is the process and duration of pipeline installation?
If HDD is used, the installation of the pipeline begins with a pilot bore hole which is enlarged over several weeks using a reamer. During this process, the hole is filled with a drilling mud that is designed to stabilize the hole until the pipe is installed. While the hole is being enlarged, the pipe is being prepared at the surface. The pipe is then pulled through the prepared hole to the exit point. Construction will take several months during daytime hours, with 24-hour work required during the pipeline pull, expected to take 1-2 days.

How is the surface protected during pipeline installation?
King County recommends using trenchless technology such as horizontal directional drilling (HDD) or microtunneling to limit impacts to the surface during construction. If HDD is used, the bore hole is held open and stabilized by a heavy drilling mud until the pipeline is pulled through the hole and left in place. Over time, the drilling mud around the pipe solidifies and fills the annulus between the pipe and soil. If microtunneling is used, the soils are continuously supported and stabilized by the microtunnel boring machine and pipe.

Residents recall the catastrophic 1957 Ravenna sinkhole as an example of subsurface failure of a wastewater conveyance tunnel that resulted in significant surface damage. The pipeline planned for installation in Magnolia will be different from the Ravenna tunnel, which was built at the turn of the century and was 50 years old at the time of the failure. King County will use current available materials, modern geotechnical investigation techniques, and current technology for pipeline installation. In contrast, the Ravenna sewer tunnel was six feet in diameter, shallow in depth, and constructed of brick in waterbearing sands which eventually flowed into the tunnel and precipitated the catastrophic sinkhole.

Can the pipeline fail during an earthquake?

King County operates a conveyance system of over 350 miles of underground pipelines which have not experienced failure during large earthquakes including the 2001 Nisqually Quake. This is because during an earthquake, pipelines move with the soil. The pipeline planned for Magnolia will be continuously fused, thick-walled, and made of flexible material.

Do lessons learned from tunneling experience on the Brightwater project inform the pipeline design for the Magnolia CSO Control Project?
King County's Bellevue Force Main project, successfully completed in January 2011 (www.kingcounty.gov/environment/wtd/Construction/Completed/Bellevue.aspx) is more similar to the Magnolia project than the large bore tunneling required to build 14 miles of tunnel to the new Brightwater treatment system (www.kingcounty.gov/environment/wtd/Construction/North/Brightwater.aspx) .
The Bellevue project included installation of 5,300 feet of 24-inch diameter pipeline using Horizontal Directional Drilling under hills, structures, and even Interstate 405. Drilling was

successfully completed in a variety of soils, including sandy soils. In Magnolia, the pipeline alignment is about half the length (2,700 feet) and will be approximately 30 to 36-inch diameter, and IS anticipated to be installed in heavy Lawton clays in ground beneath the hill.

Will multiple projects (such as the CSO Project and the planned Magnolia Bridge Replacement Project) in the area affect the stability of the bluff, especially landslide prone areas?
Each project conducts investigations to determine feasibility of work in the area, and utilizes existing information about other projects as well as coordination activities needed between the projects to insure compatibility of final installations. As an example, King County is working closely with Seattle Department of Transportation to discuss potential tank locations in relation to planning for the future Magnolia Bridge project. Both the tank and the pipeline locations will avoid landslide prone areas. No compounded effects of projects are anticipated across the Magnolia Bluff area.

Where will construction activities occur?
During construction there will be two work areas. The diversion structure is located on 32nd Avenue West, and one portion of the pipeline installation will be located there. The Smith Cove Park/West Yard area will be the site of the highest level of activity and materials storage, with the major activity for pipeline installation, as well as tank construction, occurring in this area. Construction of the overall project will take up to two years but construction of the gravity sewer line will be a small part of that, up to several months. The diversion structure construction (east side of 32nd Avenue West) will also take several months, and residents along 32nd Ave West will see construction activity for five to six months. Department of Ecology permit conditions require construction on the overall project to begin by the end of 2013.

What can neighbors expect during construction? There will be noise during construction, but the hillside on 32nd Avenue West will provide a natural sound barrier. Other temporary sound barriers may be considered as needed during construction.

No construction impacts are expected for houses along West Galer or West Eaton Streets.

Residents that live at the end of 32nd Ave West will experience traffic disruptions, but parking, deliveries, and regular and emergency services will be maintained for all homes in the area. One resident requested special residential parking permits during construction since there will be less public parking available.

Where will King County locate staging and haul routes?
The team expects major staging and hauling to occur in the West Yard/Smith Cove Park area, but that there will also be staging for the construction of the diversion structure along 32nd Ave

West. Haul routes will be established as part of the Street Use Permit acquired from the City of Seattle. A rig to pull the final pipe through the prepared bore hole will be located at 32nd Avenue West during the pipe pullback operation.

Will there be odors from the new facilities in the Smith Cove Park/West Yard area and on 32nd Avenue West?

King County considers the need for odor control on all capital improvement projects. Odor control for the new underground storage tank will be included in the ancillary equipment facility. Odor control is not anticipated for the new diversion structure on 32nd Avenue West since the system will function similar to current conditions, but they will assess the need for odor control during design. Odor control for storage facilities is different from treatment facilities like West Point Treatment Plant because the volume and concentration of wastewater in a CSO event, is lower, and the facility is used only intermittently.

How will you restore the streets after construction? Can you build sidewalks?

Requirements for restoring the right-of-way, including sidewalks, are established in the street use permit that the project will acquire from the City of Seattle. Streets that are heavily disturbed may be regraded and overlaid. However, if a street is not affected by the project it will not be restored; for example, streets at the surface along the underground pipeline alignment would not be restored since the streets will not be disturbed for pipeline installation.

What other project alternatives did you consider?

Two other alternatives were considered; information about them can be found at (www.kingcounty.gov/environment/wtd/Construction/Seattle/BeachCSO/Basins/SouthMagnolia/ProjectAlts.aspx). The current proposed alternative received positive feedback from the community in an online survey and at a March 2010 community meeting.

Could King County parallel the existing South Magnolia Trunk Line or tie into that pipeline instead of building a new pipeline?

Enlarging or adding a new pipeline along the South Magnolia Trunk Line, which travels through tidelands at the base of Magnolia Bluff, is not feasible for several reasons. The hydraulic profile makes this option infeasible for conveying flows to the underground storage tank. The existing trunk line, which is already has insufficient capacity during storms, is located in a shoreline zone which involves significant permitting requirements which would exceed the compliance schedule for this project. The construction would also require excavations along the toe of existing landslides which could destabilize these areas. In addition, a pump station would most likely be needed to meet the conveyance requirements to transfer peak flows to storage.

Will King County issue an Environmental Impact Statement?
King County has already completed environmental review under the State Environmental Policy Act (SEPA). In April 2011, neighbors were mailed a letter including the threshold determination, which was a Determination of Nonsignificance (DNS), and a notice of the public comment period on the assembled SEPA checklist.

How much does this project cost, and is funding available for this project?
The total planning level cost of the project is estimated at this time between $33-40 million. The project is funded through regional sewer rates and is budgeted at this time.

According to recent news, CSO control projects don't provide a benefit to Puget Sound, and the money should be spent elsewhere. Can you stop this project and refocus funds?
Controlling CSOs reduces discharge of both untreated stormwater and sewage to Puget Sound, including about 31 million gallons that are discharged from the Magnolia CSO off 32nd Avenue West in about 19 events each year. While Puget Sound faces many threats to water quality, public health and environmental effects of stormwater and sewage discharges can't be ignored. The Puget Sound Beaches CSO Control Projects, including Magnolia, North Beach, Barton, and Murray, were prioritized because discharges occur near popular recreational beaches. The North Beach CSO can discharge from a secondary outfall located on the beach itself. For more perspectives on the benefits of CSO control, see
http://seattletimes.nwsource.com/html/opinion/2015895907_guest15wilke.html
http://ecologywa.blogspot.com/2011/07/combined-sewer-overflow-programs.html

CSO control regulations are federally mandated through the Environmental Protection Agency, and administered by the Washington Department of Ecology. The Puget Sound Beaches CSO Control Projects, including Magnolia, North Beach, Barton, and Murray, are included in the current National Pollutant Discharge Elimination System permit for West Point Treatment Plant; compliance deadlines can be found on page 53 of the permit (www.kingcounty.gov/environment/wtd/About/System/NPDES.aspx).

King County's Wastewater Treatment Division is funded by sewer rates; these funds can't be diverted to other infrastructure projects such as street repair.

People concerned about CSO regulations, prioritization of these projects and expenditures of funds can contact their elected officials, the Washington Department of Ecology, and the Environmental Protection Agency.

How did King County involve the Magnolia community in these projects?
The Magnolia community has received mailings on this project since 2007, and notices and updates have been provided to local media sources like the Queen Anne Magnolia Herald and Magnolia Voice. The project team has provided briefings for community groups and organizations in Magnolia and hosted two community meetings during the 2009-2010 decision process on a recommended project alternative. A project Web page has been maintained since 2007, and in 2009 included on online survey allowing people to comment on each alternative.

King County always looks for ways to improve outreach and community awareness of our work, and we appreciate suggestions we received at these meetings, and by email and phone, for improving our materials to more actively engage the community. Community members appreciated the neighborhood meetings with some preference broader community meetings, and suggested venues like Block Watch meetings to get updates from project staff.

Attendance
King County Wastewater Treatment Division
Shahrzad Namini, Project Manager
Monica Van der Vieren, Community Relations Lead

Tetra Tech
Jeff Lykken, Project Manager
Kevin Dour, Assistant Project Manager

City of Seattle Parks Department
Don Harris, Property and Acquisition Service Manager

Shannon and Wilson
Mike Kucker, geotechnical analyst

Staheli Trenchless Consultants
Matt Pease, engineer

Triangle Associates, Inc.
Kristine Cramer, Community Relations