



**South Magnolia Combined Sewer Overflow (CSO) Control Project  
Summary of Public Meeting  
February 15, 2012**

**Overview**

King County's South Magnolia CSO Control Project team held a public meeting at the Magnolia Community Center on Wednesday, February 15 from 6:30 p.m. – 8 p.m. The meeting focused on the configuration of the underground storage tank that will be built in South Magnolia's Terminal 91 West Yard to meet current regulations that require no more than one combined sewer overflow (CSO) on a long-term average.

**Meeting Purpose**

The purpose of this public meeting was to:

- Provide a project update
- Give a summary of the January technical information session on pipeline alignment and conveyance
- Describe how community input informed current design
- Describe storage tank configuration and what to expect during construction
- Provide an overview of systems operations
- Next steps and opportunities for public participation
- Address questions and concerns, and receive input from the community

**Introduction**

Monica Van der Vieren, King County Community Relations, welcomed everyone to the meeting and thanked attendees for coming. She noted there was some confusion about the purpose of the meeting and numerous community members thought the meeting was to discuss artificial turf on the Smith Cove Park athletic field. Monica clarified that the purpose of this meeting was to talk about the South Magnolia CSO Control Project, and specifically about the storage tank configuration and construction. She noted that the issue of artificial turf was not part of the project but should be discussed with the Seattle Parks Department. Monica noted that Terry Dunning, with the Seattle Parks Department was in attendance and thanked him for coming.

Monica also explained that King County and the County's project team are working on different levels to consider a historic interest among the community, the Port of Seattle, and the City of Seattle to swap or acquire for public use land in the Smith Cove Park/Terminal 91 West Yard area. She described how the CSO Control Project team had worked to identify a tank location



that would accommodate those interests, and indicated that the design team would explain how they had considered a range of future uses during the first phase of project design.

Monica introduced the other project team members, as well as Terry Dunning from Seattle Parks and Recreation Department and Rosie Courtney from the Port of Seattle.

### **Presentation Overview**

The PowerPoint presentation from the community meeting can be found at:

<http://www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnoliaCSOStorage/MeetingCalendar.aspx> or provided upon request.

The presentation includes:

- Project status update
  - Overview of January meeting on pipeline alignment and conveyance
  - Status of Port property acquisition
- Project elements
  - Conveyance and selected alignment
  - System operation
- Underground storage tank
  - Operations and design
  - Storage tank configuration
  - Construction overview
- Working with the community
- Project schedule and upcoming milestones
- Next steps
  - Project activities
  - Public participation
  - Contact information

### **Summary of Questions and Input**

Questions, comments, and discussion from the meeting attendees are summarized below.

#### ***Project need and background***

##### **Does stormwater from sewer overflows come only from our sewer pipes or from streets too?**

Because there is a partially combined sewer system in the Magnolia Basin, stormwater from homes and streets and sewage flow into the same sewer pipes. Aging or damaged side sewers on private property may also allow stormwater and groundwater to enter the sewer system. During heavy rains when flows exceed system capacity, a combination of stormwater and



sewage is discharged into the Puget Sound. For more information on CSOs, visit [www.kingcounty.gov/environment/wastewater/CSO/FAQ.aspx](http://www.kingcounty.gov/environment/wastewater/CSO/FAQ.aspx).

**Are federal regulations driving the need for this project?**

The United States Environmental Protection Agency (EPA) has developed a Combined Sewer Overflow Control Policy (<http://cfpub.epa.gov/npdes/cso/cpolicy.cfm>). Administration of the policy is overseen by the Washington State Department of Ecology. Ecology has established deadlines for the four Puget Sound Beaches CSO Control Projects as part of the West Point Treatment Plant National Pollutant Discharge Elimination (NPDES) permit.

**Was limiting runoff into the sewer system using bioswales considered as an option?**

Bioswales and other green infrastructure alternatives were considered during the alternatives analysis phase. Due to unsuitable soils and a high water table, these options were found to be infeasible in three of four of the basins evaluated; only the Barton basin in West Seattle was identified as a suitable candidate for this type of CSO control method ([www.kingcounty.gov/environment/wtd/Construction/Seattle/BartonCSO-GSI.aspx](http://www.kingcounty.gov/environment/wtd/Construction/Seattle/BartonCSO-GSI.aspx)). In addition, the amount of flow that could be handled by a bioswale is decreased because of the area has a partially separated sewer system. For more information on the alternatives analysis and why the storage option was chosen, please visit the planning phase project webpage at [www.kingcounty.gov/environment/wtd/Construction/Seattle/BeachCSO](http://www.kingcounty.gov/environment/wtd/Construction/Seattle/BeachCSO) or contact Monica Van der Vieren.

**How will the new system operate?**

Jeff Lykken, Tetra Tech Project Manager, described how the new and existing systems will work during a range of weather conditions. Both the existing South Magnolia Trunk and the new gravity sewer can be utilized at moderate to heavy rains, reducing the storage size needed. A short animation explaining how the system will function can be viewed at [www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnoliaCSOStorage/Operation](http://www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnoliaCSOStorage/Operation)

***Tank configuration and potential impacts***

**How will clean water be supplied to the tipping buckets?**

Large tipping buckets located inside of the storage tank will be used to flush the tank with clean water after the tank has finished draining the stored combined sewer flows. Water will be supplied to the tipping buckets from an existing water line on 23<sup>rd</sup> Avenue West.



**What is the source of power for tank operations? Where will the transformer and power be located? Will it need electrical lines and will they be buried?**

The source of power for tank operations will be electrical power that is currently located on 23<sup>rd</sup> Avenue West. A new transformer will be required, however siting of the transformer has not been performed yet. The new transformer will be located above grade. Whether the electrical service lines are above-grade or underground will be determined further along during design. A back-up diesel generator will also be located on site to keep the tank operational in case of an electrical outage.

**Will there be light emissions from the tank, e.g. above doorways or on-the-ground lighting?**

King County is aware that potential glare from lighting is a concern of neighbors. Lighting has not been determined by the project team yet. Lighting design will be considered in the next phase of design using this input.

**Will there be noise from daily operations of the CSO control facility?**

The noise from facility operations will comply with local noise ordinances. There will be sound from fans inside the building, as well as the sound of spilling water when the tipping buckets are operating to clean the tank.

**What potential is there for odors from the tank? When during operations is the greatest need for air management?**

Odors from the tank would be most probable several days following a storage event. The tank is designed to operate under negative pressure, limiting air escaping to the surface. The odor control facility will include an active carbon scrubbing unit that will be sized to manage air flow coming from the tank when it fills with combined stormwater and wastewater displaces air. To remove odor buildup from organic compounds, the tank will be flushed after use with clean water; multiple flushings can be performed if needed.

**How tall is the air venting stack on the tank?**

The stack will be about 24 feet above grade as shown on the architectural rendering.

***Construction impacts***

**Can you route construction traffic through the Port of Seattle instead of using the Magnolia Bridge off-ramp and surface streets?**

King County is currently working with Seattle Department of Transportation (SDOT) on haul routes and other elements of the street use permit that the County will obtain. The project



team can review suggestions for haul routes to determine feasibility, and discuss routes with SDOT.

**An attendee recommended that pipeline construction impacting the soccer fields be completed during the winter.**

The project team noted this comment and will work with the Seattle Parks Department on scheduling and other elements as part of establishing easements. Construction sequencing constraints may determine when this work can be completed.

**How are soil conditions being monitored to detect movement or potential for landslides due to construction of the gravity sewer pipeline?**

King County installed piezometers for groundwater levels and inclinometers for slope movements in boring locations up to 300 feet deep along the conveyance alignment. Initial readings were taken in November 2011 and readings will be performed seasonally during design. Readings will be performed prior to, during and after pipeline installation.

The project team does not expect movement during construction because drilling is occurring deep underground in solid, glacially consolidated soils and away from the face of the hill.

Information from the January 21, 2012 technical information session about geotechnical findings and pipeline locations can be found at

<http://www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnoliaCSOStorage/MeetingCalendar>).

King County will establish construction requirements to prevent problems during drilling in shallow areas at the entrance and exit at Smith Cove Park and 32nd Avenue West, respectively. To protect the surface in these areas, crews will install steel conductor casings underground prior to drilling. During drilling activities, crews will be continuously monitoring in real-time to insure that drilling pressures are maintained.

**Will King County be mapping the additional drain pipes in the conveyance pipeline alignment area?**

King County staff has collected information on some horizontal drain pipes that were installed by residents to convey water from the West Galer area to a stormwater discharge at Elliot Bay. While there are reports of additional drain pipes in the area, the project team has not identified official records of these structures. Residents are encouraged to provide information on any others not shown on project maps.

At this time, the project team believes that the pipeline conveyance alignment is deeper than these drain pipes and therefore does not present a potential conflict.



### ***Emergency management***

#### **How will the system operate if an electrical failure occurs?**

In the case of a power outage, the tank will operate using the standby diesel generator located on site. The diversion structure at 32<sup>nd</sup> Avenue West will require power to operate gates that would shut if the tank is full; in the case of a power outage that affected the gate at 32<sup>nd</sup> Avenue West, a secondary gate at the tank, powered by the on site generator, would provide a barrier to additional flows.

#### **How will you monitor the CSO control facility during emergency situations?**

Operating facilities associated with West Point Treatment Plant are remotely monitored 24/7 at West Point Main Control. In the event of an emergency, staff is alerted by the monitoring system and crews are dispatched to the site. King County maintains a round-the-clock response system in the event of operational failures or natural events that result in problems in the regional wastewater system.

#### **Is there a potential risk of overflow at the tank?**

Certain weather conditions could result in flows beyond system capacity when the tank is in full storage mode. If the tank is filled to capacity, gates at the new diversion structure on 32<sup>nd</sup> Avenue West will close automatically preventing additional flows from reaching the tank; sending excess flows out of the existing outfall into Puget Sound. Backup gates at the tank can be utilized if power outages prevent operation of gates at the diversion structure at 32<sup>nd</sup> Avenue West. Crews will be able to operate gates manually if the remote operation system is not functional.

Because our region can experience large and complex storm events that overwhelm design system capacity and controls despite our best efforts, King County has an emergency response system in place. Crews are dispatched to address overflows or damage to the system, and support staff work to notify the public and keep people up to date if repairs are needed. For information about current incidents, visit [www.kingcounty.gov](http://www.kingcounty.gov) for recent press releases. For information about reporting problems to King County, visit

[www.kingcounty.gov/environment/wtd/Response](http://www.kingcounty.gov/environment/wtd/Response)

#### **Does your design consider what would happen to the CSO control facility in the case of an earthquake or tsunami?**

We live in a seismically active region that necessitates carefully designing facilities and building to appropriate codes. King County is following international building codes for seismic safety for the storage tank and the odor control/electrical building. Because the West Yard includes fill



material, the storage tank will be supported by pilings installed deep enough to reach stable soils.

Tsunamis, while rare in the Puget Sound, have occurred in the region's history. West Point Treatment Plant is constructed in an area that has been affected by a tsunami and would be vulnerable in such an event. While the CSO control facility may also be affected, it is not necessary for system function; if the tank or equipment became nonfunctional and required repairs, the system would return to the current functions, using the CSO outfall when capacity is exceeded.

### ***Site design and land use***

#### **When will aesthetics of the tank site be discussed?**

At this phase, configuration of the tank and equipment building, and at-grade elements like access hatches and slabs are fixed. Architecture and landscaping will be addressed during the next design phase of the project. King County will hold a public meeting in June or July to share the preliminary design with the community. This site presents an interesting challenge to King County since future use of the West Yard is currently unknown; even if the community goal of creating park space is realized, there are a variety of definitions of what a park can be. The Port of Seattle has indicated there may be potential to develop a building space there. While it is difficult to design to the unknown, the team has worked hard to consider a range of future uses during design:

- Reducing the number of surface hatches
- Reducing the size of the above ground building compared to the Facility Plan
- Positioning the building between people using the space from operations and maintenance activities
- Designing 50% of the tank surface to be vegetated

Because the future use of the site is currently undefined, one option is to develop a flexible design at this time and add appropriate design elements once land use has been decided.

#### **Is it possible to move the tipping buckets and associated access hatches to the west end of the tank in order to provide more public access on the east side of the tank site?**

No, the tipping buckets and access hatches must be located at the highest internal point of the tank – the east end – so that flows can travel by gravity back to the building area. From there, flows are pumped back to the sewer system. Additionally, if the tipping buckets were to be located on the west side of the site, the building would have to be relocated to the east side, which would be closer to the shoreline zone.



**Where would a future fence go on the site? If the West Yard became a park, the community would prefer that there is minimal fencing**

King County is currently evaluating this, including looking at safety and security concerns and where maintenance activities will occur. To ensure the safety of both the public and county operations and maintenance staff, the entire site may need to be enclosed in a fence. The community's concern about limiting fencing if possible will be considered.

**Will the pile of dirt currently at the site be moved and leveled?**

The entire site will be needed for temporary construction use, so clearing the surface, including the pile of dirt currently at the site will be necessary prior to tank construction.

**What is the update on change in ownership of the West Yard and when will future land use be discussed?**

Land use discussions are still occurring regarding the West Yard. King County is continuing the property acquisition process for easements on the Port of Seattle's West Yard for storage tank construction. While a condemnation ordinance was requested and approved to insure that the CSO Control project stays on schedule, King County continues to negotiate with the Port of Seattle on needed easements.

**Does the condemnation ordinance apply to the entire West Yard or just a portion of the property?**

The condemnation ordinance requested by King County applies on a permanent basis only to the portion of the West Yard that will be used for the storage tank construction (the northwestern portion), not the entire West Yard. A temporary easement will be needed for access to and use of the remainder of the West Yard during construction.

**How can the community contribute to the conversation about the future use of the West Yard property? Who is the best contact for community members to discuss this?**

Rosie Courtney, Port of Seattle, reported that the Neighbors Advisory Committee was informed in January that King County would be providing an offer to purchase the entire West Yard site from the Port of Seattle. King County staff at the meeting could not confirm this report, but could confirm that negotiations for easements were continuing.

Community members have already contacted elected officials in King County, the Port of Seattle, and the City of Seattle regarding their interest in creating additional publicly accessible park space at the West Yard, and the project team encouraged people to continue discussing this issue.





**Project Team Attendees**

Shahrzad Namini	<i>King County Wastewater Treatment Division</i>	Project Manager
Monica Van der Vieren	<i>King County Wastewater Treatment Division</i>	Community Relations Lead
Adair Muth	<i>King County Wastewater Treatment Division</i>	Community Relations
Jeff Lykken	<i>Tetra Tech</i>	Project Manager
Dave Upmeyer	<i>Tetra Tech</i>	Design Manager
Kim Staheli	<i>Staheli Trenchless Consultants</i>	Principle Engineer
Robert Wheeler	<i>Triangle Associates, Inc.</i>	Community Relations
Julia Salinas	<i>Triangle Associates, Inc.</i>	Community Relations

**Other Agency Attendees**

Rosie Courtney	<i>Port of Seattle</i>
Terry Dunning	<i>Seattle Parks Department</i>

**ALTERNATIVE FORMATS AVAILABLE 206-684-1280 / 711 (TTY Relay)**