King County
Department of Natural Resources and Parks
Wastewater Treatment Division

Puget Sound Beaches CSO Control Projects - North Beach Basin
Presentation to Broadview Sewer Task Force

July 29, 2010
6:30-8:30 pm
Carkeek Park Environmental Learning Center
950 NW Carkeek Park Rd.
Seattle, WA 98177

Meeting Summary

Welcome and Introduction

April Sotura of the Broadview Sewer Task Force opened the meeting with an introduction to the group and the meeting purpose:

- Provide information on the North Beach CSO control project and how it relates to the county's Carkeek Wet Weather Treatment Plant and the Broadview community
- Address how King County and Seattle Public Utilities are working in partnership to protect Puget Sound and people's home from sewer discharges.
- For the Broadview Sewer Task Force, provide input during the meeting on their recommendations for CSO control in the North Beach area. The Broadview Sewer Task Force feels these efforts are important for relieving excess flow from the Broadview area.

King County North Beach CSO Control Projects Team
Linda Sullivan, Capital Projects Managing Supervisor, identified the WTD Capital Projects Management Unit as responsible for design and implementation of funded capital projects like the CSO control project in the North Beach utility basin.

Linda provided an overview of the North Beach CSO Control Project.

- This project is one of four CSO control projects King County is working on in the Seattle area
- Under the West Point Treatment Plant NPDES permit, all four projects must meet a December 31, 2010 deadline to submit a Draft Facilities Plan to the Washington Department of Ecology.
- King County has conducted extensive public outreach efforts for the North Beach Project.
- An expanded interdisciplinary team will evaluate alternatives in August and make a recommendation on a project proposal for environmental review and inclusion in a Draft Facilities Plan.

King County Presentation on the North Beach CSO Control Project
The PowerPoint presentation is available at www.kingcounty.gov\CSOBeachProjects or by request at 206-263-7301.

John Phillips, King County CSO Program, provided an overview of the CSO Program requirements and approaches for CSO control to be considered by project teams.

Karl Hadler, Carollo Engineers, provided a presentation on the North Beach CSO control Project, including:

- Orientation to the North Beach utility basin
- Flow control requirements to meet regulations for CSO control
- Range of alternatives developed for North Beach basin
- Currently recommended alternatives for North Beach basin

Linda Sullivan concluded the presentation with a summary of upcoming project milestones and deadlines for the North Beach project.

Discussion
Input was provided during the comment period for community leaders and during a panel discussion that included Martha Burke, SPU; Karl Hadler, Carollo Engineers; Karen Burgess, Wash. State Dept. of Ecology; and John Phillips, King County.

Members of Broadview Sewer Task Force indicated that the North Beach CSO Control project does not appear to have a relationship to Broadview sewer systems, with one exception. One alternative, which involves a new pump station, storage tank, and force main at North Beach, will convey flows to the county's 8th Avenue Interceptor. Carkeek Pump Station will only be able to convey reduced flows to accommodate North Beach flows directly to the interceptor. Alternative 1D is proposed to send 3.5 mgd to the interceptor instead of the 3.0 mgd sent to Carkeek in order to reduce storage size at North Beach. This would result in a reduction of 0.5 mgd below current conveyance from Carkeek. Attendees voiced concern about potential effects on Broadview that might result from further reducing flows from the Carkeek Pump Station. If that alternative is selected for North Beach, impacts of various flow rates should be considered however, it is likely the impacts are minimal since flow not pumped through Carkeek is treated through the wet weather facility.

Karen Burgess from Ecology provided an overview of CSO regulations and clarification on regulatory issues in response to concerns and questions:

- What operational parameters for untreated discharges are constrained in the NPDES permit for CSO facilities?
    - Reports include time of discharge, volume, and duration of CSO discharges

  - The number of events are constrained in the permit; North Beach is required to have only 1 discharge per year on a long term average. Current number is 10 per year on average.
- Did the Ecology fine King County for violations at the Carkeek Wet Weather Plant? Where do these fines go to?
  - Ecology fined King County for violations at all four of its CSO treatment facilities, Carkeek, Alki, Elliot West, and Henderson. The fines were related to operational issues. These facilities are used only intermittently, which makes operations difficult.
  - Fine payments are directed to an environmental restoration fund.
- Does the Department of Ecology fine the city or county for sewer backups in homes?
  - No. Ecology is charged with environmental protection related to discharges that affect waters of the state. Sewer backups into homes are currently a public health concern. However, there is proposed rule making by the EPA to address Sanitary Sewer Overflows (SSOs), including backups into homes. Information can be found at http://cfpub.epa.gov/npdes/home.cfm?program_id=4 .
- Do the city and the county have to address infiltration and inflow issues that cause backups?
  - King County and the City of Seattle are wastewater service providers and may not have authority to address I/I problems that are outside of their systems. Often, I/I is coming into systems from sources that wastewater service entities don't have authority to regulate or enforce correction.
  - The proposed EPA rules include management of I/I in the sewer system.

Martha Burke from Seattle Public Utilities addressed questions and concerns related to sewer backups in homes related by Broadview residents.

  - SPU recognizes the issues Broadview has experienced and has just posted on the Web an analysis of the Broadview system
  - SPU is looking city wide at capacity issues, and targeting areas with capacity limitations. They are working with King County because the systems are interconnected.
  - SPU is working to prioritize projects within the current budget. They are requesting a rate increase from City Council in order to address CSO control requirements.

John Phillips addressed questions about King County not choosing to do I/I reduction in North Beach.

King County evaluated I/I reduction to control North Beach to 1 event/year.

I/I reduction still required a storage tank

While many pilot projects have been conducted, none have been conducted on a large scale to control a CSO.

All of the current I/I projects are to reduce surcharging of sewer lines form a local system to King County's system.

The panel addressed questions about King County's North Beach project and existing facilities in North Beach and Carkeek.

- What is the size of storm used to design the North Beach project? *The design level storm is a 1 year event.*
- Can you send storm flows through the storm system in North Beach sub-basin NB02 instead of the sewer, and would it provide capacity for Broadview flows? *No, this is not feasible due to the location of the sub-basin – it would require pumping from other places in the basin. The storm system may also lack capacity to take additional flows.*
- Are there sewer backups in North Beach? Martha Burke from SPU confirmed there were sewer backups, but it was noted that they were upstream of the King County's North Beach Pump Station.
- Does Alternative 1D, which diverts flows from Carkeek, provide a benefit in increased capacity to Carkeek? *No, the contribution of flows from North Beach to the 8th Avenue Interceptor in Alternative 1D results in subtraction of flow from the Carkeek facility to this same interceptor, which does not have capacity for additional flows.*
- Will you replace the North Beach force main? It is almost 50 years old and was supposed to last only 50 years. Are you going to run it to failure and then try to replace it? *Fifty years is a projected service life often exceeded by many of our pipelines. WTD does not abandon existing infrastructure with remaining service life without careful consideration. We do not plan to run the North Beach force main to failure, but to obtain an updated estimate for service life and plan for its replacement if it is not addressed in this project.*
- Can sewer flows from Broadview be stored in Carkeek Park? *Alternatives to store or treat more flows in Carkeek Park were eliminated from consideration on the North Beach project. These alternatives require expanding facilities beyond the county's property in Carkeek Park. In addition, there is no benefit to storing flows at a facility that can provide treatment.*
- Can SPU upsize pipes and send more flows to King County's Carkeek Park Wet Weather facility? **Karen Burgess, Ecology, provided clarification on her response for this summary.** The West Point NPDES permit does not always place limits on the volume of treated discharge or number of discharges from CSO Treatment Plants (i.e. Elliott West and Henderson). There is no regulatory requirement for Ecology to place limits on volume and number of discharges for CSO treatment plants. In the case of Carkeek, there are some high design-based yearly limits for discharge volume and number of events included in the permit. However, in reality these limits are not typically reached. But rather, it is the discharge limits placed on the quality of treated discharge (i.e. solids and chlorine) that typically limits the volume of wastewater that can be treated and discharged at Carkeek. John Phillips from King County noted that the water quality standards that may not be achievable at increased flows with the treatment technology in place at Carkeek, and that the plant is run at its operating limits with the current wet weather flows.

Jack Heavner
President, Carkeek Park Advisory Council
Mr. Heavner provided a perspective of Carkeek Park as a recovering wilderness currently being maintained by volunteers. He noted that there are salmon runs in park that should not be affected by CSOs or SSOs. Mr. Heavner understands that 8th Avenue Interceptor has capacity limitations prefers the proposal for peak flow storage in the park or street at North Beach, allowing a future option to remove the forcemain in tidelands. He encourages enlarging sewer lines in the future to protect Carkeek Park from overflows.

Nancy Malmgren
Director, Carkeek Watershed Community Action Project
Ms. Malmgren said her position is that s sewage treatment plant shouldn't be located in Carkeek Park. She felt it was imperative that plant be operated in such a manner that it uses the best treatment available and does not result in sewer overflows in the park. She felt that I/I reduction was necessary to reduce storm flows to Carkeek Park, and encouraged people to consider the park and Puget Sound by maintaining residential side sewers.

Susan George
Broadview Sewer Task Force
Ms. George stated that the Task Force was primarily concerned about sewage backups into homes and did not see that the North Beach CSO Control Project affected Broadview residents or addressed their issues.

Additional community member comments

- While there isn't an apparent benefit to the Broadview community, the community has concerns about the health of the entire area
- A resident encouraged primary focus on increasing system capacity to send flows downstream away from homes.
- One resident expressed concern that agencies focus on protecting salmon and the environment from sewage more than people and public health.