



# North Creek Interceptor Sewer *Project*

## King County makes progress with maintenance and repair activities!

To protect public health and the environment in the Bothell area, King County is working on a project to upgrade a major sewer line called the North Creek Interceptor that's been in continuous service since the 1970s.

After overflows from the North Creek Interceptor (NCI) occurred during winter storms, King County Wastewater Treatment Division mobilized a team to carry out inspections, maintenance, and repair work on the County's sewer system. This work will help maintain service while a long term project to increase capacity of the NCI continues through the design and construction process.

King County maintained a brisk pace of activities since December 2012 to identify and address maintenance and repair needs. Inspections and flow monitoring identified infiltration and inflow (I/I) as a source of additional water entering into the pipeline. I/I occurs when groundwater and stormwater enter through leaky pipes, improper storm drain connections, and other means. This excess water takes up capacity that could otherwise be used for wastewater.

By the end of January 2013, the County team was able to achieve an estimated 60-80% reduction in overflow frequency from the NCI. Work to identify and reduce sources of I/I included:

- Video inspection of over 18,000 lineal feet of pipeline
- Inspection of 80 manholes, some located in areas with difficult access
- Repair of seven manholes where inflow was observed; design for repair of approximately 12 additional manholes is underway. Inspections completed at this time indicate that the pipeline itself is in satisfactory condition
- Installation of 19 additional flow monitors
- Identification and disconnection of an illicit storm drain connection with a potential to pump up to 144,000 gallons a day of stormwater into the sewer system.



*Solids containment  
for manhole overflows*



*Manhole raised above  
water and sealed*



*Flow meter installed in manhole*

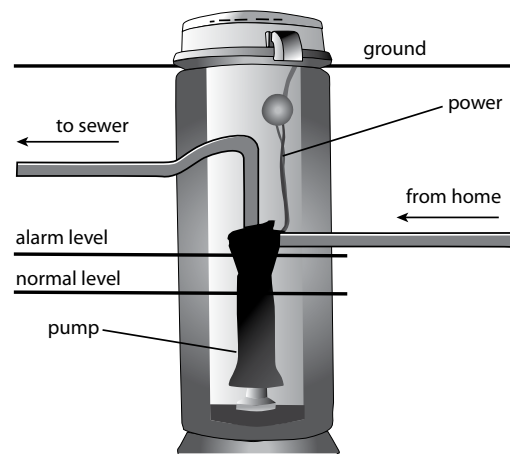
*King County is completing design of the NCI Project, which includes replacement of a main wastewater conveyance pipeline that serves parts of Bothell and unincorporated Snohomish County. This pipeline is an integral part of the regional wastewater system that carries flows from local jurisdictions to King County's treatment plants. Upgrades are necessary to provide additional capacity for homes and businesses and to ensure safe and reliable operations for the future.*



## Protecting public health when overflows occur

King County WTD worked closely with residents, agencies and jurisdictions when sewer overflows occurred from the NCI. The County provided cleanup services and temporary accommodation to affected residents. Notifications were provided to the City of Bothell Snohomish County, Alderwood Water and Wastewater District (AWWD), and the Washington Department of Ecology. After overflows affecting

North Creek, water quality was monitored until it returned to baseline levels, usually over a period of days. Crews cleaned up and installed containment and erosion control around two manholes that experienced overflows during storms.



North Creek grinder pump

While the County is working hard to reduce potential overflows, additional measures have been implemented to respond even more quickly should an overflow occur. A flow meter with alarms has been installed in a key location in the NCI system to alert WTD crews when flows in the pipeline increase. The alarms are sent via phone and email to County Operations staff, who are on call 24/7. A response plan has been developed to investigate areas with potential to overflow and provide notifications of the overflows.

## King County installs grinder pump units

In May 2013, King County's contractor will install temporary devices, grinder pump systems, on the sewer pipelines serving eight homes in Bothell along the NCI pipeline. These systems will help residents to continue using drains to the sewer during large storms that exceed system capacity and will help protect against sewer backups. The County's team has worked on design and permitting since December 2012. First, the team obtained survey information about side sewer and utility locations, and modeled flows in the system. Then, engineering staff identified appropriate equipment. The team continued on to acquire approvals for the grinder pump systems and power feeds, required permits, and necessary easements. Installation of the grinder pumps and supporting utilities will require 1-2 weeks of work.

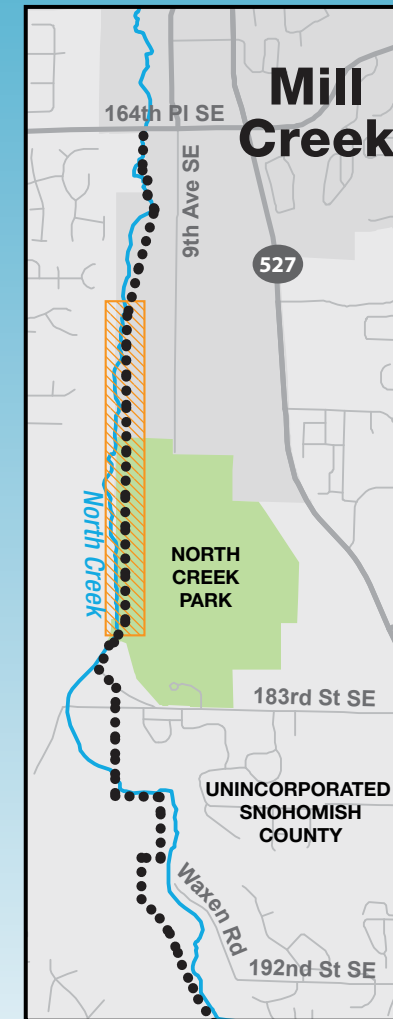
## Don't Flush Trash!

Residents using the grinder pump units will receive information about what they can do to help prevent problems with the units. Everyone can help keep sewer system operating costs down and prevent sewer problems by using toilets and drains wisely. Even products labeled "flushable" can affect residential, local, and regional sewers. For more information on what you can do to protect the sewer system and area waterways, visit [www.kingcounty.gov/environment/wtd/Education/ThingsYouCanDo](http://www.kingcounty.gov/environment/wtd/Education/ThingsYouCanDo)

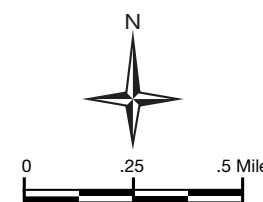


# MAINTENANCE AND REPAIR AREAS

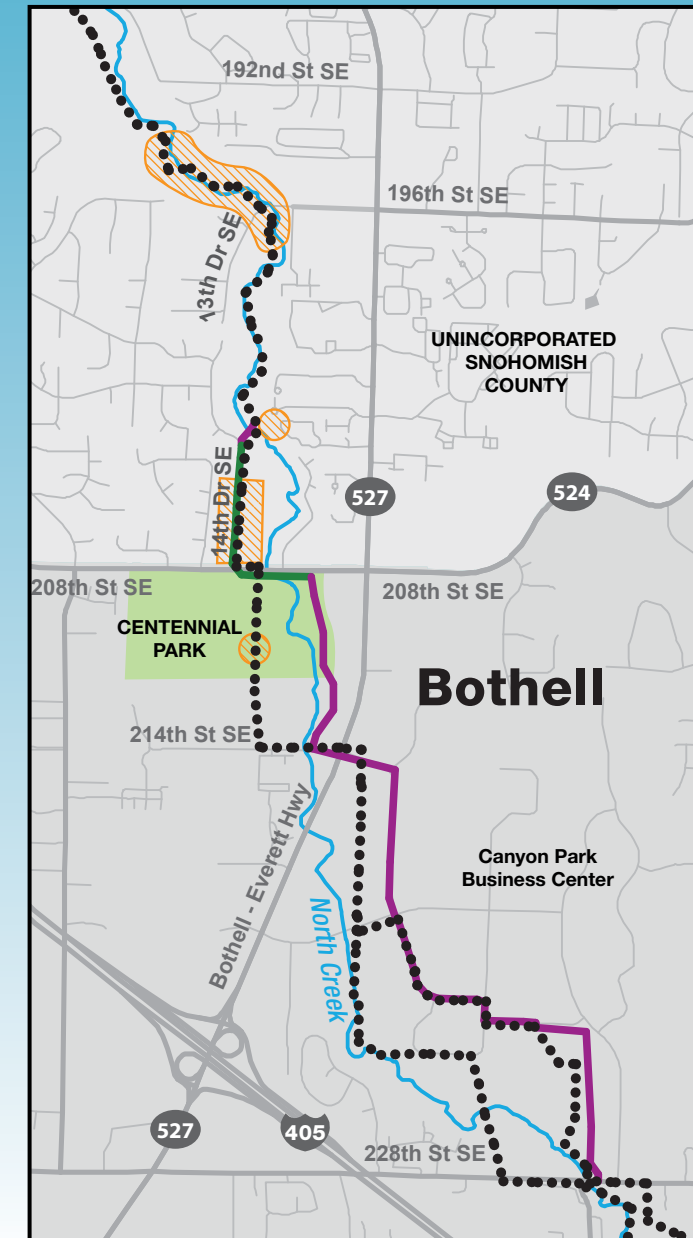
## North



- North Creek Interceptor (NCI) existing
- NCI - new (already built, not in service)
- NCI - new (proposed, to be built)
- Wastewater pipeline maintenance and repair areas
- North Creek



## South



## Keeping people informed and up-to-date

When King County identifies issues in the regional sewer system, we work to keep communities aware of problems and what we are doing to address them. We have worked closely with neighbors when overflows have occurred, and used a variety of ways to keep the public informed:

- Newsletter distributed by mail and email early February
- Fliers distributed in work areas
- Notices and information materials provided to AWWD and City of Bothell for distribution
- Project Web page maintained and updated
- Community meeting held February 28, 2013
- Briefings for businesses and residential complexes provided upon request
- Notification to City of Bothell when overflows occur

## What's Next?

King County WTD is continuing to work with AWWD to identify potential sources of I/I in the sewer system. During Summer 2013, the County's contractor will conduct additional repair work on manholes associated with the NCI pipeline. We will continue to keep project neighbors, agencies, and local jurisdictions current on progress.



## King County

Department of  
Natural Resources and Parks

### Wastewater Treatment Division

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# Keep up to date as King County continues work on the North Creek Interceptor!

Design of the North Creek Interceptor Sewer Project continues to advance. Watch the project Web page for updates and opportunities for public participation!

Visit the Web at [www.kingcounty.gov/environment/wtd/Construction/North/NCI](http://www.kingcounty.gov/environment/wtd/Construction/North/NCI)

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