

REGIONAL I/I CONTROL PROGRAM
SAMPLE PUBLIC INFORMATION MATERIAL FROM PILOT PROJECTS (SEE POLICIES 2 & 3)

APPENDIX D



COPY



King County

Department of
Natural Resources and Parks
Wastewater Treatment Division
Regional I/I Control Program



Construction Update

Mercer Island Sewer Repair Pilot Project

Construction activities begin the week of August 11, 2003

This month Gelco Services, Inc., begins cleaning and lining the sewer mains in a portion of the East Seattle neighborhood as part of a joint City of Mercer Island and King County Wastewater Treatment Division's Regional Infiltration/Inflow Control Program. During the summer of 2002 crews conducted a sewer system evaluation study that included smoke testing and closed circuit television (CCTV) inspections to determine the health of the sewer system in the neighborhood. This work showed defects such as cracks, offset joints and tree root intrusion.

Infiltration/Inflow (I/I) is clean storm and/or groundwater that enters the sewer system through cracked pipes, leaky manholes, or improperly connected storm drains, down spouts and sump pumps. Most inflow comes from stormwater and most infiltration comes from groundwater.

More than 16,000 linear feet of mains will be rehabilitated using a technology known as **cured-in-place lining**. The pipe is repaired by first pulling a fiberglass and resin liner into the pipe. The liner is then inflated with steam, which expands the liner and forces it to conform to the pipe being repaired. The liner then cures in several hours, leaving a smooth, jointless, one-piece, leak-free pipe. There is no excavation required for

Please Note:

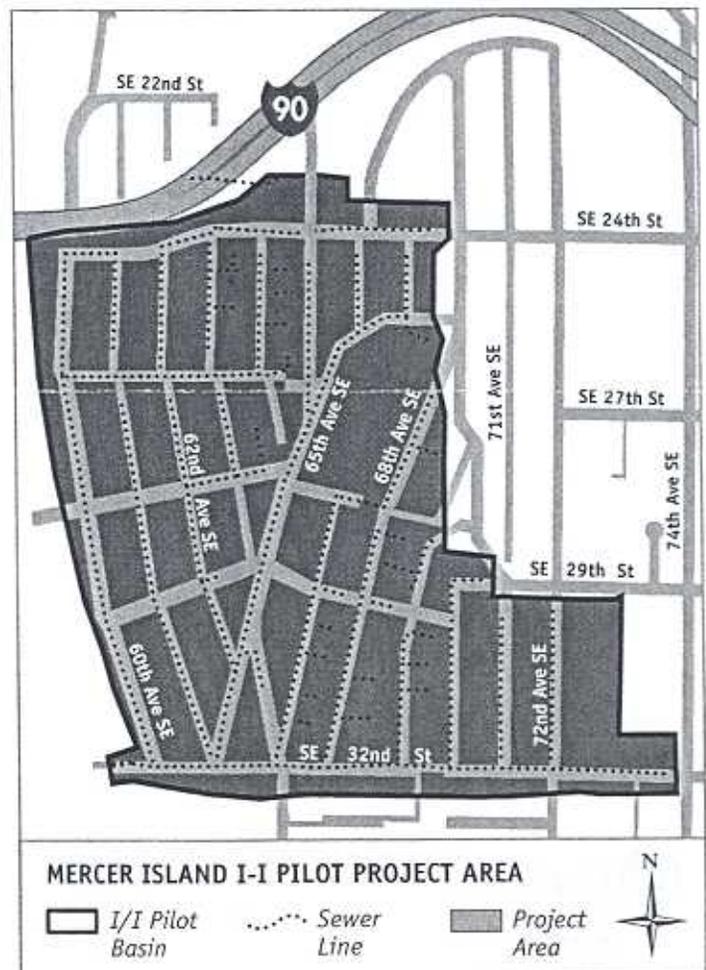
During the lining process, homes can be disconnected from the sewer for up to 8 hours. Crews will notify residents 48-hours before construction by placing a notice, usually a door-hanger at the front door. Residents are asked to reschedule uses of water such as showers, washing machines and dishwashers for the day and to not flush toilets during the sewer service disruption. Water flowing into the pipe adversely affects the curing process.

installation of the sewer main liners. The normal sequence of work is as follows:

- Step 1: Pipeline is cleaned and videotaped;
- Step 2: Liner is installed in the sewer main;
- Step 3: Holes are cut in the liner to reopen the service connections.

Step 1 of this process is usually completed a few days before any lining work is done. Then, steps 2 and 3 are performed, usually in one twelve hour period.

(Continued on back)



Although this trenchless method means we are not tearing up the street to fix the mains there are still several impacts to the neighborhood. Traffic flaggers and signs will help direct drivers safely around the trucks and equipment. Residents will experience sewer service interruptions while crews install the pipe lining.

For More Information:

I/I Program Web Site: <http://dnr.metrokc.gov/wtd/i-i>

Mercer Island Pilot Project Web Site: <http://dnr.metrokc.gov/wtd/i-i/Pilots/MIPilot/index.htm>

Pilot Project Schedule

July 2003: Construction contract awarded to Gelco Services, Inc.

August–October 2003: Sewer main cleaning, lining

November 1, 2003: Construction work and restoration substantially completed

If you have any questions or concerns about this pilot project, please contact:

After Hours/King County Pager: 206-540-7437

Mary Lundt, Project Manager
King County Wastewater Treatment Division
206-263-3184
E-mail: mary.lundt@metrokc.gov

Patrick Yamashita, City Engineer
City of Mercer Island
206-236-3620
E-mail: patrick.yamashita@ci.mercer-island.wa.us



King County

Department of Natural Resources and Parks
Wastewater Treatment Division
201 South Jackson Street, Suite 512
Seattle, WA 98104-3855



Alternative formats available
206-263-6029 (voice) or 711 (TTY)

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City of Kent/King County Infiltration/Inflow Removal Pilot Project



Background

King County is responsible for transporting and treating wastewater collected by 32 local agencies in the Seattle metropolitan area. These agencies are working together to define ways to remove clean water, called infiltration (groundwater) and inflow (stormwater) or I/I, from the wastewater system.

A major part of the Regional I/I Control Program is planning, designing, constructing, and then monitoring the effectiveness of a limited number of pilot projects to remove I/I. It is anticipated that these pilot projects will test different techniques for I/I removal that are applicable for the entire region. Through a regional consensus process, local agencies selected ten final pilot projects from a broad list of candidates. A project proposed by the City of Kent was selected as one of the ten projects. Flow measurements for the project area indicated a significant amount of I/I. This pilot project will be funded through the King County I/I Control Program.

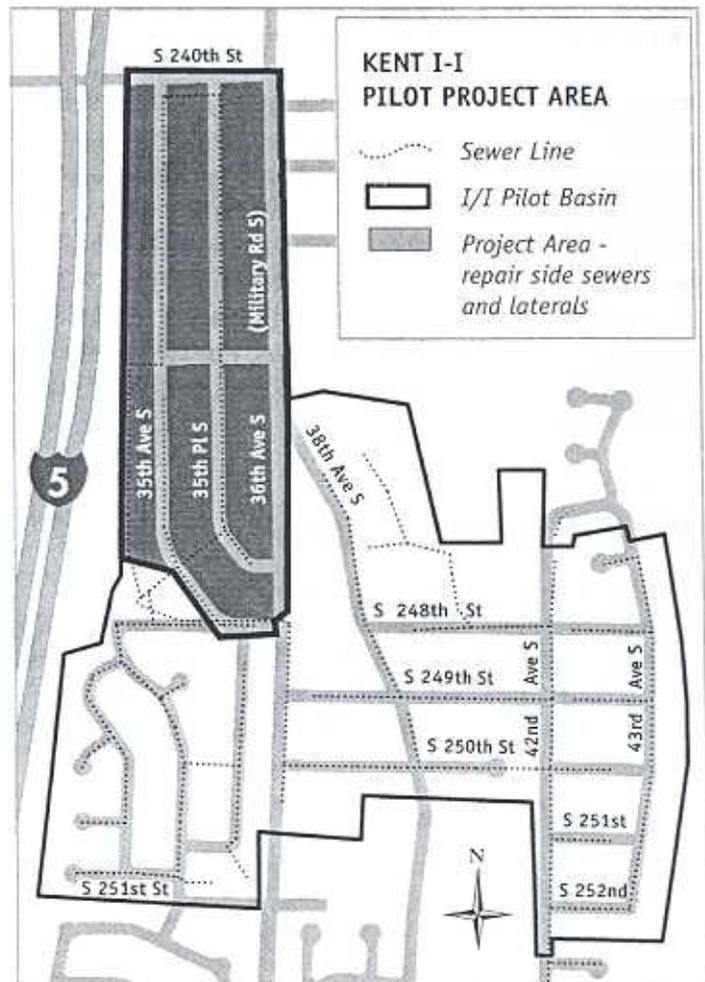
Kent Pilot Project Description

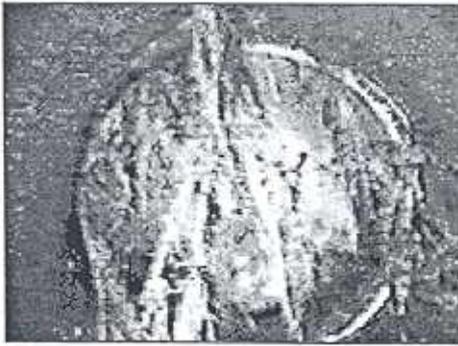
The Kent pilot project will rehabilitate side sewers on private property from the connection at the house down to the main sewer pipe in the street. Sewer system investigations conducted last fall, which included a combination of smoke testing and closed circuit television (CCTV) inspections showed defects in the side sewers such as cracks, offset joints and tree root intrusion. The purpose of the Kent pilot project is to determine the cost effectiveness and technical effectiveness of removing I/I by repairing private side sewers in the basin.

The repair method to be used in the Kent pilot project is a technology known as cured-in-place lining. We plan to use a specific type of lining known as "T-Liner".

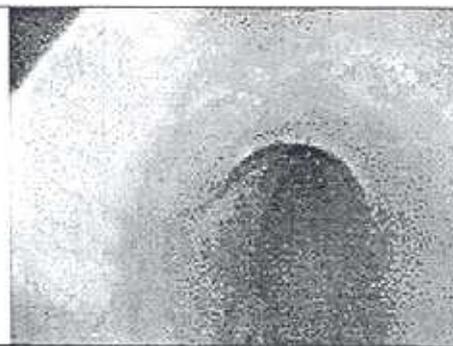
The majority of the 168 side sewers in the pilot project area will receive this lining, in effect giving the homeowner a new side sewer. Small excavations will be required for the installation of cleanouts to facilitate installation of the liner. The contractor will restore areas disturbed by excavation after installing the cleanouts and completing the lining process.

This trenchless technology is much less invasive to the property than typical full trench excavation methods and provides a quality repair solution. The liner material is a felt tube specifically manufactured for the length





Before:
The picture shows tree root intrusion causing a blockage and allowing groundwater to enter.



After:
The liner cures in approximately 2 hours, leaving a smooth, jointless, one-piece, leak-free seal.

and diameter of the pipes being repaired. The tube is vacuum impregnated with a polyester or vinyl ester resin and placed inside a protective installation device that is inserted into the existing sewer through the cleanout installed near the home where the side sewer connects with the building. The lining is installed by an inversion technique using air or water pressure. The lining and resin cure in about 2 hours, leaving a smooth, jointless, one-piece, leak-free seal.

During construction homes would be disconnected from the sewer for up to 8 hours. We would notify residents when the work will occur so they can make arrangements and reschedule uses of water such as showers, washing machines and dishwashers.

The County will monitor flows in the basin after construction (winter 2003/2004) to determine the amount of I/I removed as a result of the side sewer rehabilitation work. The shaded area in the map on the previous page depicts the approximate area in which work will be conducted (area along 35th Ave. S., 35th Pl. S., 36th Pl. S. and Military Rd S.). However, depending on availability of funds and whether the side sewers meet project criteria, not all homes in the shaded area will be included in the project.

Pilot Project Schedule

Designs and specifications for this project are to be completed in mid March 2003. The project will be bid in late-April/early-May 2003. King County will award the contract and work will begin in early June 2003. All construction and restoration work will be complete by fall 2003.

For More Information

King County and the City of Kent will provide more detailed information before construction begins, and will work closely with property owners and residents of the pilot project area to minimize the impacts of construction.

You can get more information about the King County Regional I/I Control Program by visiting the King County website (<http://dnr.metrokc.gov/wtd/i-i>). If you have any questions or concerns, please contact:

Erica Herrin, Project Manager
King County Wastewater Treatment Division
206-684-1138 E-mail: erica.herrin@metrokc.gov

Dave Brock or John Hawkins
City of Kent, Public Works Operations
253-856-5600 E-mail: dbrock@ci.kent.wa.us

Available in alternative formats
206-684-1138 or TTY Relay:711



King County

Department of Natural Resources and Parks
Wastewater Treatment Division
King Street Center
201 South Jackson Street, Suite 512
Seattle, WA 98104-3855

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