

Broadview Sewer and Drainage Improvement Project

**Broadview Community
Meeting
September 25, 2012**

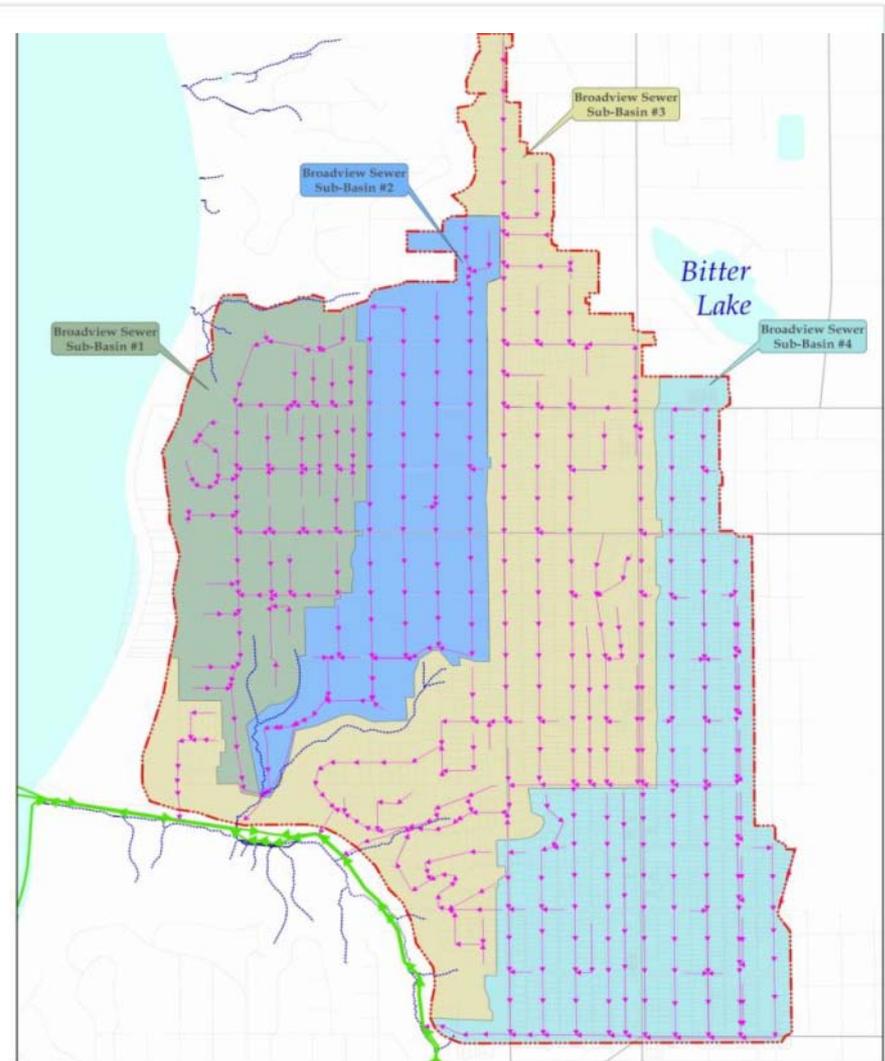


Broadview Basin History

- Broadview sewer system installed in 1950s

During Significant Storms:

- Stormwater and groundwater getting into sewer pipes
 - Causes sewer backups in some locations
- Stormwater flooding in areas of Broadview



Broadview Neighborhood Map

Project Goals

- Reduce sewer backups into homes, right of way and Piper's Creek
- Reduce stormwater flooding that is public health and safety risk
- Help protect Piper's Creek Watershed



Residents meet contractors for early action work

Surcharged Sewer Pipes in Dec 2010 Storm



Work Completed

- ✓ Completed sewer and stormwater flow monitoring
 - last winter and spring
- ✓ Developed computer model of sewer and stormwater flows
- ✓ Completed basin pipe condition assessment
- ✓ Implemented early actions
- ✓ Identified set of potential solutions



Worker conducting CCTV work

Modeling and Monitoring Completed

- ✓ Monitored flows in sewer pipes, stormwater ditches and in streets during storms
- ✓ Completed site visits in Broadview
- ✓ Developed computer model which:
 - Predicts flows for sewer and stormwater system
 - **Helped identify areas for service improvements**
 - Will predict how system would function with potential future improvements



Early Actions

- ✓ Sewer backflow valves installed
- ✓ Sealed sewer pipes on portion of 12th Ave and adjacent side sewers
- ✓ Localized drainage improvements underway



Flood grouting activities

Early Actions - Sewer backflow valves installed

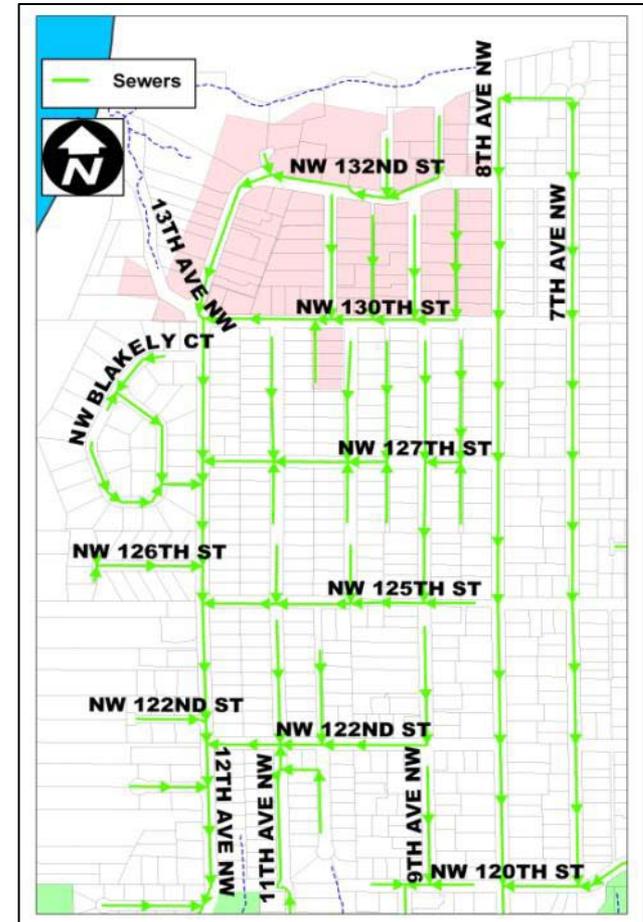
- ✓ Valves reduce risk of a sewer backing up into homes
- ✓ 19 valves installed on properties most at risk of sewer backups
- ✓ 4 valves are in process of being installed



Backflow valve

Early Actions - Sealed sewer pipes on portion of 12th Avenue

- ✓ Flood grouting/sealing of sewer pipes to reduce water infiltration into pipes
- ✓ 87 homes participated in the pilot project to seal their side sewers
- ✓ 50 additional maintenance holes sealed
- ✓ Results: Early data shows sealing was successful



Early Actions - Local drainage improvements

Drainage improvement planned in fall 2012

- 3rd Ave NW between NW 104th and NW 105th

Evaluating Solutions for following locations:

- NW 125th St at 9th Ave NW
- NW 120th St west of 9th Ave NW
- NW 120th between 6th & 7th Ave NW
- N 125th St and Phinney Ave N.

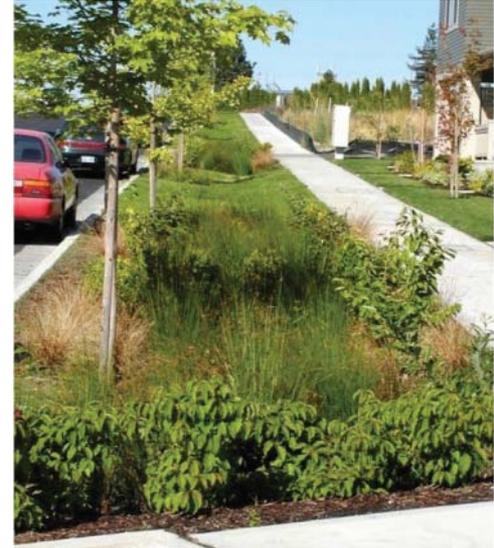
Tools for Improving Sewer Service

- Reduce amount of stormwater getting into sewers from:
 - Roof drains
 - Sump pumps and foundations drains
 - And re-route to stormwater system
- Reduce infiltration (groundwater entering sewer)
 - Seal sections of sewer system
 - Replace sections of sewer system
- Increase system capacity
 - By building new/larger pipes and/or adding storage
 - Downstream implications must be considered



Tools for Improving Stormwater Service

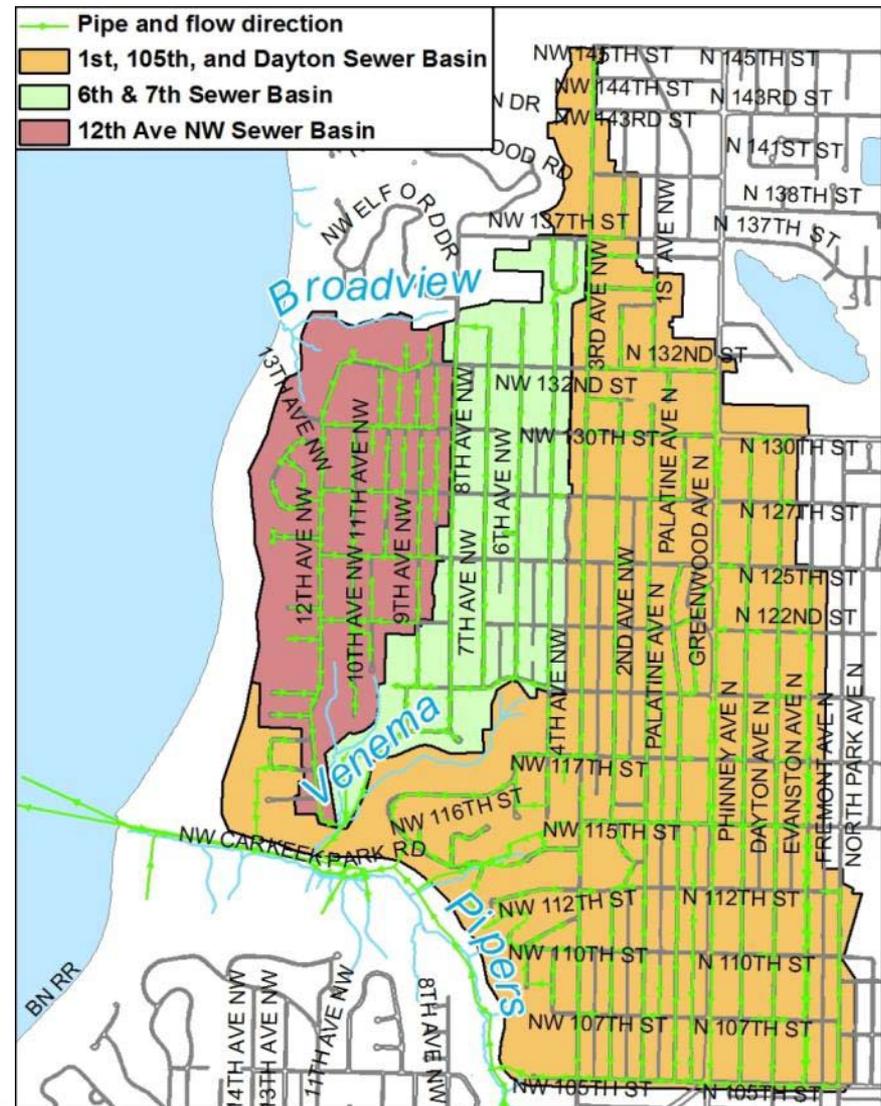
- Reduce stormwater volume through:
 - Shallow infiltration into ground – in vegetated areas
 - Deep infiltration into ground – with vegetated area prior to infiltration for water quality treatment
- Add stormwater storage in above-ground planted temporary holding area, or in pipe
- Increase capacity by:
 - Improved/expanded ditches and/or pipes



Project Focus Areas

Identifying solutions that meet project goals:

- **Dayton Avenue basin, includes 1st Ave and 105th** includes most of the east half of Broadview basin
- **12th Avenue basin** includes about half of west side of Broadview basin



Help prevent stormwater flooding into homes or onto properties

- ✓ Please help keep stormwater system (e.g., ditches and stormwater grates) near your home clear of debris and leaves

If you experience sewer backups or stormwater flooding

- ✓ Call (206) 386-1800 to reach someone 24 hours a day, 7 days a week

Pat O'Brien - Storm Observers Program

Simultaneous discussion sessions:

- **Dayton basin** – focus on potential sewer system improvements
- **12th Ave basin** – focus on potential sewer system improvements
- **Backflow Pilot Project**
- **Early Action/Local Drainage Improvements**
- **Floodgrouting Pilot Project** – sealed sections of sewer in upper 12th Ave NW
- **Restore Our Waters** – table
- **New GIS tool** showing in 3-D the existing stormwater and sewer system in Broadview

- Next community meeting in first quarter 2013 (approx), bringing latest information on alternatives for sewer system improvements

- **Contact us:**

- Phone: 206-409-3651

- Email: info@broadviewprojects.com

- Web:

<http://www.seattle.gov/util/broadviewprojects>
(web page in process of being updated)



Questions?

