

# INFILTRATION AND INFLOW (I/I) CONTROL PROGRAM

## REGIONAL BEST MANAGEMENT PRACTICES

EVALUATION OF INFLOW AND INFILTRATION  
REDUCTION CONCEPTS PHASE 2

MARCH 24, 2021

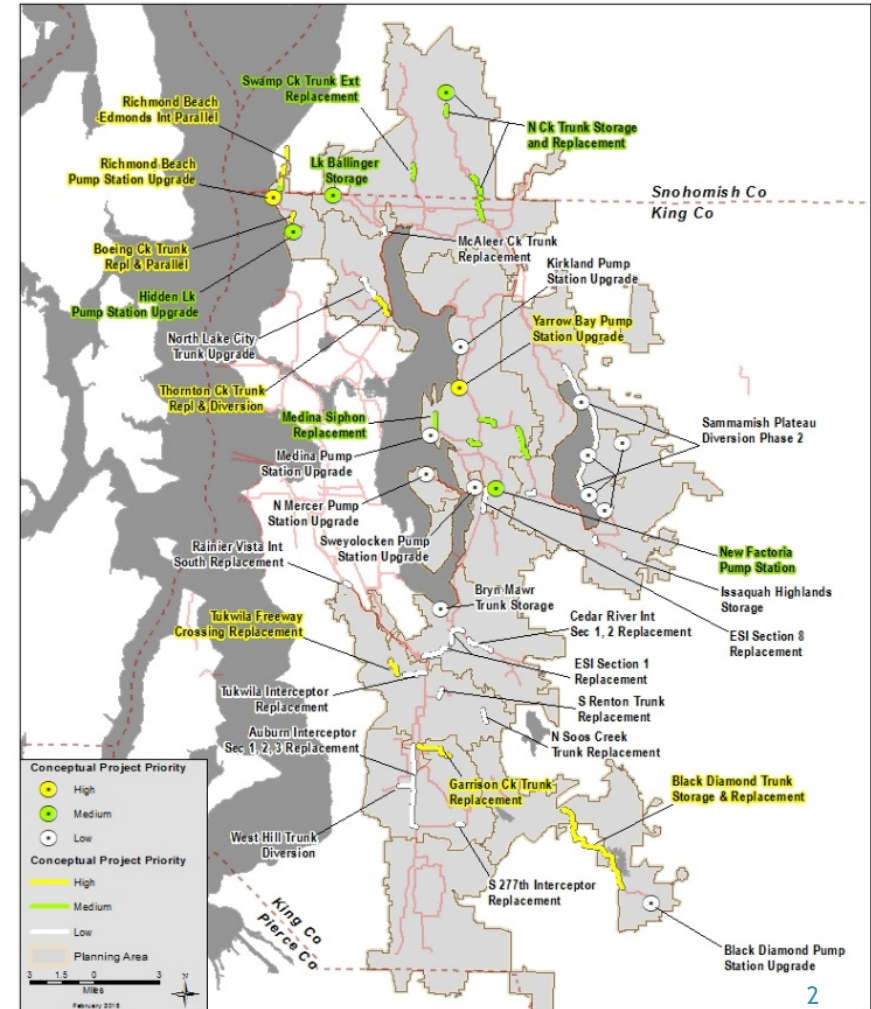
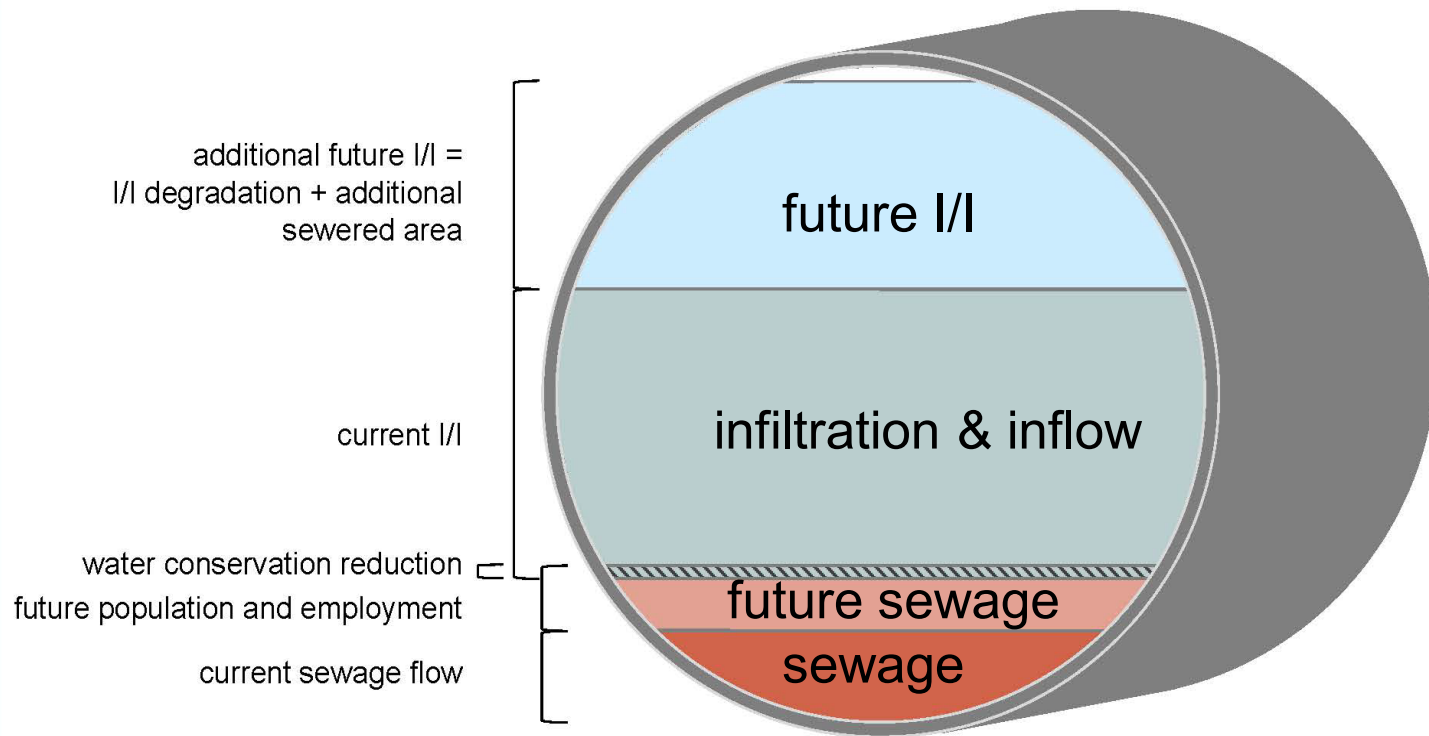


**King County**

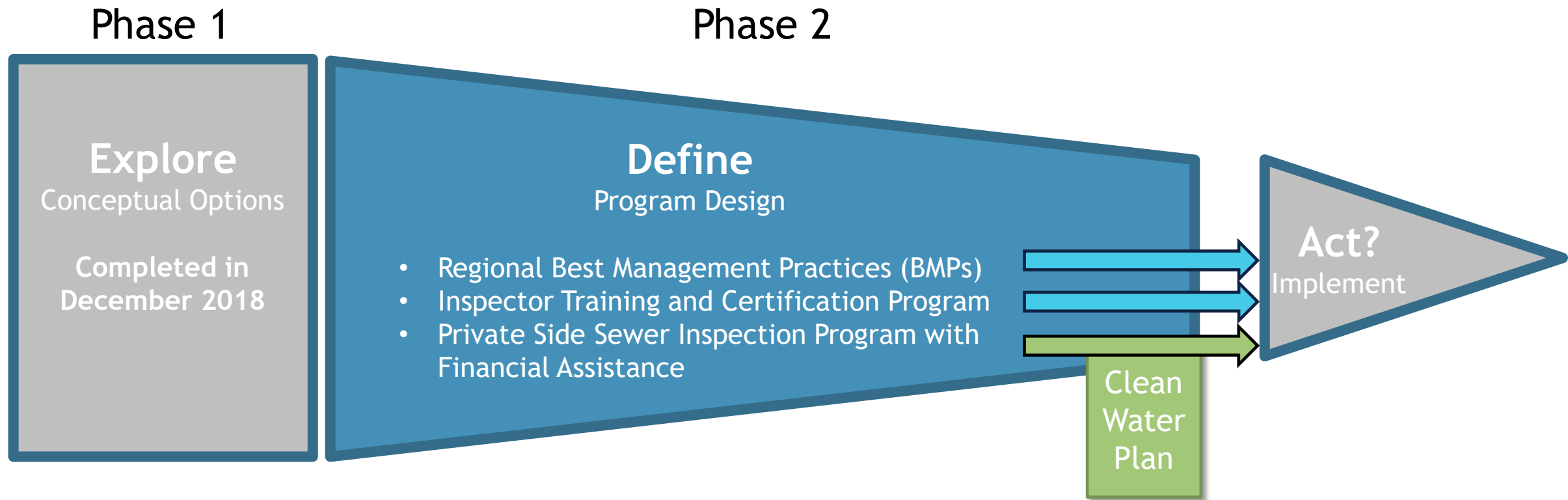
Department of Natural Resources and Parks  
**Wastewater Treatment Division**

# I/I IN THE REGIONAL WASTEWATER CONVEYANCE SYSTEM

## Components of Future Flows



# OVERVIEW OF CURRENT I/I WORK



# REGIONAL BEST MANAGEMENT PRACTICES FOUNDATION

## Goal

- Regional, consistent use of three to five best management practices (BMPs) with the greatest potential to reduce I/I in separated basins applied by the majority if not all WTD's component agencies.

## Assumptions

- BMPs that address I/I sources related to side sewers, not mainlines, are expected to have a higher potential for more local agencies to achieve reduction goals.
- Establishing regional BMPs will raise awareness of the need for increased, proactive attention on side sewers to achieve project goals.

Draft technical memo available on King County Regional I/I Control website at:  
<https://www.kingcounty.gov/services/environment/wastewater/ii.aspx>

## BMPS RECOMMENDED

**Strengthen illicit connection authority, making rules clearer to customers**

A5. Unauthorized connection prohibition

**Support customers in taking care of their responsibility to limit I/I**

B3. Model courtesy notice to property owner / occupant regarding roots in lateral connections

B5. Side sewer maintenance guideline documents

C3. Illicit source disconnection public education materials

# WHAT WILL BE PRODUCED FOR EACH BMP?

- Brief discussion of intent of BMP
- Model language that can be customized
- Suggested steps for implementation
- Examples of how BMP was implemented elsewhere and templates if available
- Information will be available online in a side sewer BMP toolkit for use by sewer agencies

## Before you buy or sell a property ... Get to know what's underground

Side sewer repairs or replacement can be expensive – averaging \$5,000 to \$15,000 – and can often come as a surprise to property owners when sewage starts coming out of sinks, toilets, bathtubs and other building drains. Property owners should plan for side sewer maintenance and repair just as they do for replacement of roofs, furnaces and other major working systems of the building or residence.

Side sewers are the pipe that connects a building plumbing to the City-maintained sanitary sewer main. The sewer main carries wastewater from your side sewer to the City's treatment facilities.

To protect the value of your investment and avoid the surprise of costly repairs, the City of Tacoma recommends inspecting a building's side sewer if it is more than 25 years old and/or does not have plastic PVC pipe running from the building to the City sewer main.

### Why does this matter to me?

- In Tacoma, property owners are responsible for repair and maintenance of their private side sewer.
- Buildings constructed prior to 1980 are likely to have side sewers made of clay or concrete pipes. These can crack, shift out of place, and/or be subject to intrusion by roots, causing leakage or blockage in the pipe.
- When your side sewer is blocked, sewage from your home can back-up in your pipes and surface through your bathtubs and other building drains, causing a health issue as well as a potentially expensive mess. Side sewer blockages are typically caused by failures in the pipe. Potential failures can be easily detected by a simple inspection before they cause a serious problem.
- Rainwater and groundwater that gets into the sanitary sewer system from leaks in the sewer and roof and foundation drains can cause overflows of untreated or partially treated wastewater.
- Businesses and local waterways. This rainwater and groundwater should be directed to the local surface water system. Just as a groundwater can leak into a side sewer and become a public health hazard.
- If you know the condition of your property's side sewer you can better prepare for repair or replacement instead of finding out about a problem when the sewer backs up.

### How do I find out?

1. Ask the person who is selling or buying the property to have a professional sewer inspection performed.

## Private Contractor Inspection Information

### HOW DO I FIND SOMEONE TO INSPECT MY SIDE SEWER?

To find an inspection company, search the Internet or local yellow pages for "drain cleaners" or "sewer contractors" and call to inquire about video inspection services. Homeowners should ask for a Television Inspection that meets the City of Tacoma's 2016 Side Sewer and Sanitary Sewer Availability Manual section 3.2 available on [tacomacities.org](http://tacomacities.org) under Resource Library - SANITARY SEWER & STORMWATER LIBRARY.

### HOW MUCH CAN I EXPECT AN INSPECTION TO COST?

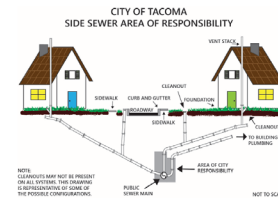
The cost of an inspection can vary depending on the length of the side sewer and how easy or difficult it is to access the side sewer. An average side sewer inspection costs \$200 to \$400. Costs may vary greatly from one company to the next. The Better Business Bureau is also a good resource for finding reputable companies. 253-520-2004. Since companies offer a wide range of prices, it's a good idea to get at least three written bids before choosing a company.

### WHAT SHOULD I EXPECT FROM AN INSPECTION?

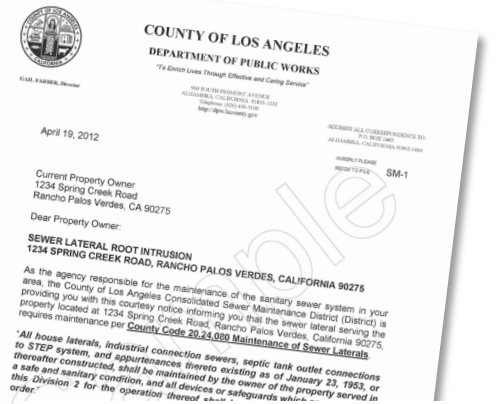
An inspector will insert a video camera into the side sewer through a cleanout either outside or inside the building. If no cleanout is available, the inspector may need to install a cleanout or remove and replace a toilet to access wastewater plumbing. In some cases, plumbing vents on a roof can be used for video camera access. If you would like to receive a video recording of the inspection, ask about the inspector's equipment capability prior to selecting a company.

### HOW WILL I KNOW IF REPAIRS SHOULD BE MADE?

The inspector should be able to point out defects to you on the video as they are performing the inspection and provide you with recommendations on whether repairs or replacements may be needed. Although many side sewer inspection companies may also offer repair services and may provide you a quote, it is also a good idea to get a few more written bids before choosing a repair company. If you're unsure about whether the repairs being recommended are necessary, you may also want to share the video inspection with another inspection company to receive a second opinion before agreeing to costly repairs. To read about the City of Tacoma's recommendations regarding specific side sewer problems and repairs please refer to the Side Sewer Condition Assessment & Repair Manual. For a copy, go to <http://www.ci.tacoma.wa.us/development> or call the Development at 253-691-5760.



Note: This Tip Sheet does not substitute for codes and regulations. The applicant is responsible for compliance with all codes and regulations, whether or not described in this document. More information: City of Tacoma, Planning and Development Services | [www.tacomacities.org](http://www.tacomacities.org) (253) 691-6020 To request this information in an alternative format or a reasonable accommodation, please call 253-591-5630 (voice) or TTY or 576 users please dial 711 to connect to Washington Relay Services. 9-2016-10286



**EVERY YEAR DELAWARE COUNTY RESIDENTS PAY MILLIONS OF DOLLARS TO TREAT RAINWATER IN THE SANITARY SEWER SYSTEMS!**

**THAT'S TENS OF THOUSANDS OF DOLLARS WASTED EACH WEEK AND IT'S PAID FOR THROUGH YOUR SEWER FEES!**



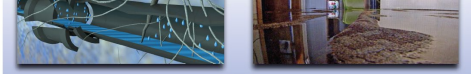
**SEWER LATERALS NEED TO BE INSPECTED PERIODICALLY. IF YOU HAVE NOT INSPECTED, REPAIRED, OR REPLACED YOUR LATERAL, IT COULD BE FAILING.**

Falling laterals have old-age cracks, loose pipe joints, and tree roots, which let rainwater into the sewer system.

Rainwater also enters the lateral through connected downspouts, basement sump pumps, foundation drains, and driveway drains.

**WHEN RAINWATER IS ALLOWED INTO YOUR LATERAL, THE SEWER MAINS CAN OVERLOAD, LEADING TO A BACKUP OF RAW SEWAGE IN BASEMENTS.**

Sewage is foul smelling, very difficult to clean up, and it can make your family very sick. It is a nightmare if sewage backs up into a house, damaging furniture, children's toys, irreplaceable family photos, or an entertainment/recreational area.



# I/I AND CLEAN WATER PLAN

- Side Sewer BMPs will compliment Clean Water Plan outcomes.
- The Clean Water Plan will consider the significant I/I in the regional system and the related capacity improvement costs.
- The Clean Water Plan will update policies guiding the I/I Program and set the direction for I/I reduction activities.
- I/I Actions explored by the Plan are:
  - I/I Reduction - Point of Sale Side Sewer Inspection Program
  - I/I Reduction - Peak Flow Limitation Program

# TIMELINE

- March 24, 2021 - Request that the members discuss these BMPs within their jurisdictions.
- April 1, 2021 E&P meeting - draft a recommendation letter from full MWPAAC to the WTD Director to implement these actions
- April 28, 2021 - present the recommendation letter to full MWPAAC for approval
- Spring/Summer 2021 - WTD prepares materials and distributes to member agencies
- Fall 2021 - member agencies prepare customer materials and begin to implement program



THANK YOU

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**206-477-8554**



END