Appendix A: Side Sewer Best Management Practices Toolkit

The Side Sewer Best Management Practices (BMP) Toolkit was developed as part of Phase 2 of the Evaluation of I/I Reduction Concepts project under the I/I Program, and is Appendix A from the Final Regional BMP Development Technical Memo. The Toolkit provides guidance on four BMPs.

BMP: Unauthorized Connection Prohibition

BMP: Courtesy Notice to Property Owner/Occupant Regarding Roots in Side Sewer Connections

BMP: Side Sewer Maintenance Guidance Document

BMP: Private Property I/I Source Disconnection/Redirection Public Education Materials

For each of the BMPs, the following are provided:

- BMP Description
- Instructions to Local Agencies
- Example Website Landing Page Content
- Example BMP Content

BMP: Unauthorized Connection Prohibition

BMP Description: Unauthorized Connection Prohibition

This BMP involves developing and adopting language in the local agency's legal authority which clearly states that unauthorized sewer connections must be removed and provides appropriate enforcement mechanisms to enforce proper disconnection. Additionally, the example language includes provisions to ensure only one side sewer connection from each structure is made to the main sewer, and that the side sewer is directly connected to the appropriate draining fixtures within the structure.

Instructions to Local Agencies

Though most local agencies and districts have language in their legal authorities regarding unauthorized connections, in many instances this language could be strengthened to state the details more clearly. Your agency's legal authorities should clearly state that it has the authority to perform tests on private property to identify unauthorized connections and to establish the following:

- what happens when unauthorized connections are found (who is responsible for disconnecting and redirecting clear water flow to an appropriate stormwater conveyance system)
- what timeframes are allowable to complete the work, and
- what penalties can be incurred if compliance is not met.

When adopting this BMP, your agency should review its legal authorities, including its current unauthorized connection prohibition and available enforcement response mechanism, to identify areas where the language could be strengthened. This may require the involvement of the agency's legal counsel and governing body (e.g., General Manager, Chief Executive Officers, Board, Directors, etc.).

Before implementing this BMP, all elements of the initiative should be carefully considered to encourage stakeholder buy-in to prevent unintended consequences, and foster continued long-term success. A review of the strengthened ordinance's impact on your agency's resources should be conducted so that barriers or challenges can be identified and resolved. This review includes, but is not limited to, the following elements:

- Staffing requirements, roles, and responsibilities (note: this may include resources from outside agencies if private property inspections are performed by others)
- Customer education and communication plan, including notice of changes in legal authority, enforcement response plan, and resources available for proper unauthorized connection disconnection/redirection compliance procedures
- Budget and funding impacts
- An information management system to track appropriate implementation-related data (e.g., education and communication plan) with data management tools (e.g., Microsoft Excel or Access)
- Standard/acceptable means and methods to address unauthorized connections (including disconnection/redirection practices)

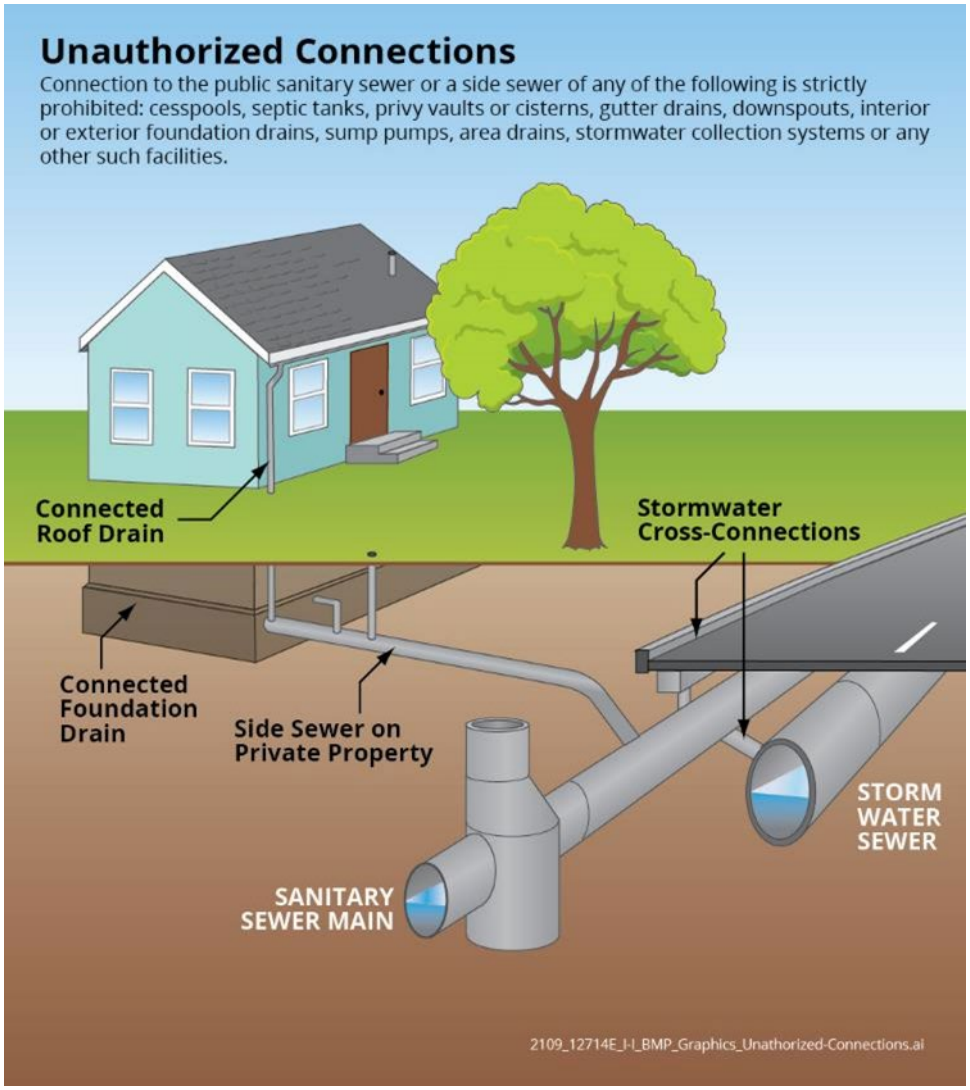
- Performance criteria to measure effectiveness (including an adaptive management approach to modify the prohibition if certain elements are not as effective as intended). There is no suggested performance criterion for this BMP, but your agency is encouraged to identify those criteria that reflect any outcomes anticipated as a result of BMP implementation. For example, if your agency is undertaking I/I reduction efforts that address private property I/I sources, you may want to track various elements associated with unauthorized connection identification, customer notification, and compliance enforcement processes.

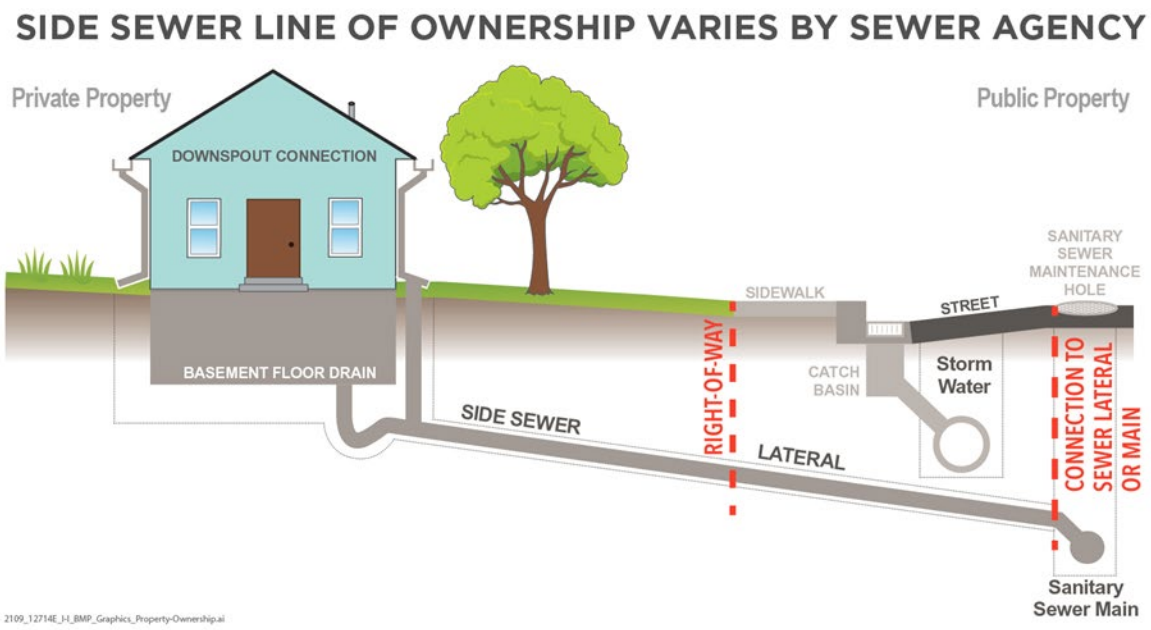
A written standard operating procedure (SOP) should be developed to clearly delineate roles and responsibilities, timing, and other critical aspects of BMP implementation.

Example Website Landing Page Content

Unauthorized Sewer Connections

Your home may have only one connection from your side sewer to the main sewer, and your side sewer must be directly connected to the appropriate fixtures within your home. If your property contains a sewer connection that allows stormwater into the sewer system, you are responsible for redirecting the water flow to a stormwater drain or open drainage way (i.e., ditch or stream).





Example BMP Content

Provided on the following pages.

Unauthorized Connections

Unauthorized Connections Prohibited

The introduction of stormwater, surface water, and groundwater into the sanitary sewer system by infiltration, inflow, discharge, or other means, has far-reaching impacts. It increases the costs of constructing and operating the sewer system, adversely impacts the effective treatment of wastewater, creates conditions that pollute waterways, and poses a direct threat to public health and safety by causing sewer backups, sewer bypasses, stream pollution, and groundwater pollution.

The connection of cesspools, septic tanks, privy vaults or cisterns, gutter drains, downspouts, interior or exterior foundation drains, sump pumps, area drains, stormwater collection systems, <*add other sources commonly identified in local agency's service area*>, or any other such facilities to the public sanitary sewer or a side sewer, is strictly prohibited.

This prohibition is necessary and advisable for the protection of the health, safety, and welfare of the people within the [*LOCAL AGENCY*] service area, and for compliance with the [*LOCAL AGENCY*]'s <*reference sewer service agreement with appropriate entity*> contract with <*appropriate entity*>, state, and federal laws, rules, and regulations. After <*legal authority effective date*>, this prohibition shall be applicable to all persons and properties located within the [*LOCAL AGENCY*]'s jurisdiction for which sanitary sewer facilities or services are available or utilized, including authorized contract service areas.

Notice and Renewal of Unauthorized Connections

Upon determination by the [LOCAL AGENCY] that a property has a connection not authorized by this <*cite legal authority*>, the property owner shall disconnect such unauthorized connection within <*timeframe such as thirty (30) days*> from the date of notice by the [*LOCAL AGENCY*].

Any notice given by hand delivery shall be effective at the time of delivery. Any notice sent by registered or certified mail, return receipt requested, shall be deemed given on the date of delivery shown on the receipt card, or if no delivery date is shown, the postmark thereon or two (2) business days after deposit in the United States mail, whichever is earlier. Notices delivered by an express courier that guarantees next-day delivery shall be deemed given one (1) business day after delivery of the same to the courier. If notice is received on a Saturday, Sunday, or legal holiday, it shall be deemed received on the next business day.

A property owner shall notify the [*LOCAL AGENCY*] at least <*timeframe such as twenty-four (24) hours*> in advance of the removal of an unauthorized connection to allow for inspection by the [*LOCAL AGENCY*]. <*state requirements for notifications given prior to weekends or holidays*>

Investigation, Testing, and Inspection Charge

A charge of <*state appropriate fee, such as $xxx.00*> will be billed against any property found to have an unauthorized connection. This charge is to recover the cost of the [*LOCAL AGENCY*]'s investigation, testing, and inspection of an unauthorized connection, and to cover the costs of the [*LOCAL AGENCY*]'s inspection, investigation, and monitoring of the disconnection and redirection of flows from the sanitary sewer system attributed to the unauthorized connections.

In addition to the testing and inspection charge, the property owner will reimburse the [*LOCAL AGENCY*] for its actual reasonable costs, plus the [*LOCAL AGENCY*]'s normal overhead rate, for construction and/or repair by the [*LOCAL AGENCY*] determined by the [*LOCAL AGENCY*] to be necessary or proper to protect, correct, or repair the [*LOCAL AGENCY*] sanitary sewer system infrastructure because of an unauthorized connection.

Failure to remove an unauthorized connection within the time allotted herein shall result in an additional monitoring and enforcement charge of <*appropriate fee such as $xxx.00*> per day. All charges in this <*cite legal authority*> shall be <*cite how the charges will be collected, such as additions to sewer use fee, lien against property, etc.*>.

Failure to remove an unauthorized connection within <*state timeframe, such as thirty (30) days*> from notice as provided herein may be grounds for termination of sewer service by the [*LOCAL AGENCY*] upon its determination that such action is reasonablynecessary to correct an unauthorized connection, and after reasonable opportunity for a hearing before the [*LOCAL AGENCY*]. Notice of intent to terminate service shall be given to the <*appropriate parties, such as health department*>.

Property Owner, Contractor, Builder, Permit Suspension

In addition to the foregoing provisions, and supplemental thereto, if investigation by the [*LOCAL AGENCY*] determines that a property owner, contractor, or builder has willfully made an unauthorized connection, or has directed that an unauthorized connection be made, all rights under this <*cite legal authority*> shall be suspended.

No permits of any type will be issued to or for said property owner, contractor, or builder until any unauthorized connection has been removed, and all charges required by this Section have been paid. Suspension shall be effective after <*state timeframe, such as fifteen (15) days*> notice to be given in the same manner as described hereinabove for notice to property owners; provided, however, that the commencement of such suspension shall be stayed pending a hearing before the <*appropriate parties*> <state when the hearing may be scheduled>, if requested by the contractor in writing within the <*state timeframe, such as fifteen (15) days*> period.

Exemptions and Exceptions

The [*LOCAL AGENCY*] is authorized to issue exemptions or exceptions to the requirements of this <*cite legal authority*> for specific connections whenever, under application and review, the [*LOCAL AGENCY*] finds and determines that:

A. The disconnection of a particular source or connection, prohibited by this <*cite legal authority*>, could seriously compromise the integrity of the dwelling, building, or structure; or

B. The disconnection of a particular source or connection, or remediation of the disconnected stormwater, surface water, or groundwater, would not be cost effective; and,

C. Continuation of the source or connection, otherwise prohibited by this <*cite legal authority*>, would not, in opinion of the <*state position, such as Chief Engineer*> of the [*LOCAL AGENCY*] or other [*LOCAL AGENCY*] appointed professional engineer, likely contribute to any sewer backup or bypass nor adversely impact the effective operation of the sanitary sewer system.

Compliance

The responsibility for the acts, omissions, compliance, or lack of compliance by property owners or their contractors performing side sewer installation pursuant to this *<cite legal authority>* shall be the property owner's. The [*LOCAL AGENCY*]'s duties and responsibilities pursuant to this *<cite legal authority>* shall exist to the general public, and not to any specific individual or entity.

The [*LOCAL AGENCY*]'s inspection is not an assurance and/or guarantee of the owner's or contractor's compliance. The [*LOCAL AGENCY*]'s employees' failure to properly inspect and/or enforce these provisions shall in no way relieve the property owner or contractor from their responsibility to strictly comply herewith.

Notice shall be given to the property owner of any side sewer that has been connected to the [*LOCAL AGENCY*]'s sewer system if it does not strictly comply with the provisions and standards of this <*cite legal authority*>. If such side sewer is not brought into compliance within thirty (30) days of such notice, the [*LOCAL AGENCY*], or its authorized representative, may enter the property and make such corrections as are necessary to bring the side sewer into compliance. The cost of such corrections shall be charged against the property owner, and shall be <*cite how the charges will be collected, such as additions to sewer use fee, lien against property, etc.*> pursuant to <*cite legal authority*>.

In the event correction cannot be made to a non-complying side sewer, and such side sewer could cause damage to the [*LOCAL AGENCY*]'s sanitary sewer system, the [*LOCAL AGENCY*] reserves the right to immediately disconnect such non-complying side sewer, without notice, as necessary to protect the [*LOCAL AGENCY*]'s sanitary sewer system. Notice shall be given to the property owner as soon as practicable.

If the [*LOCAL AGENCY*] disconnects a side sewer service connection, the [*LOCAL AGENCY*] will also notify the <*appropriate state or local authority such as a health department*>.

BMP: Courtesy Notice to Property Owner/Occupant Regarding Roots in Lateral Connections

BMP Description: Courtesy Notice to Property Owner/Occupant Regarding Roots in Side Sewer Connections

This BMP involves developing a notice for local agencies' private property owner education and outreach programs. Roots in laterals and service connections (side sewer connections) are commonly observed during routine sewer main closed-circuit television (CCTV) inspections performed by many sewer utilities and their CCTV inspection contractors.[1] By notifying the property owner/resident of this finding, the property owner can also be made aware of their responsibility for maintaining the side sewer, including the need to hire a plumber to clear roots.

When proactively cleaning the side sewer, a plumber will notify the property owner/occupant of a defect and address it immediately to prevent the likelihood of a backup (or sanitary sewer overflow [SSO] from cleanout) and to reduce infiltration into the sewer system. Additionally, if the side sewer defect is located within the right-of-way, the appropriate party (utility or property owner) can address the defect before a backup or SSO occurs or a void develops. These actions reduce the number of backup-related service requests and emergency repair work that would eventually arise for the utility.

Instructions to Local Agencies

Prior to implementing this BMP, all elements of the initiative should be carefully considered to encourage stakeholder buy-in, prevent unintended consequences, and foster continued success of this BMP. A review of the impact on your agency's resources should be conducted for instances when property owner/ occupants are notified of roots observed in side sewers during mainline sewer inspections. The agency can then identify and resolve resource barriers or challenges, which may include, but are not limited to, the following elements:

- Staffing requirements, roles, and responsibilities (note: this may include resources from outside agencies if sewer main inspections are performed by others)
- Customer education and communication plan, including standard responses (scripts) to customer inquiries and resources available for property/private system owners to learn more about their responsibilities and options for addressing problems
- Budget and funding impacts
- An information management system to track appropriate data (e.g., customer notifications, dates, etc.) with data management tools such as Microsoft Excel or Access
- Acceptable means and methods to address roots in lateral occurrences (note: this may require involvement of local plumbers and side sewer contractors)
- Performance criteria to measure effectiveness (including applying an adaptive management approach to modify the notification process if certain elements are not as effective as intended).

A suggested performance criterion, indirectly related to I/I prevention or reduction, involves the number of service requests (backups and/or slow service) that field personnel must respond to where roots had previously been observed in side sewer connections. This type of emergency service

[1] This observation is commonly made during routine sewer main CCTV inspections using a typical pan and tilt camera; a side sewer (or lateral) launch from the mainline is not advised when visible roots are observed in a service connection as the lateral camera may become entangled in the root mass.

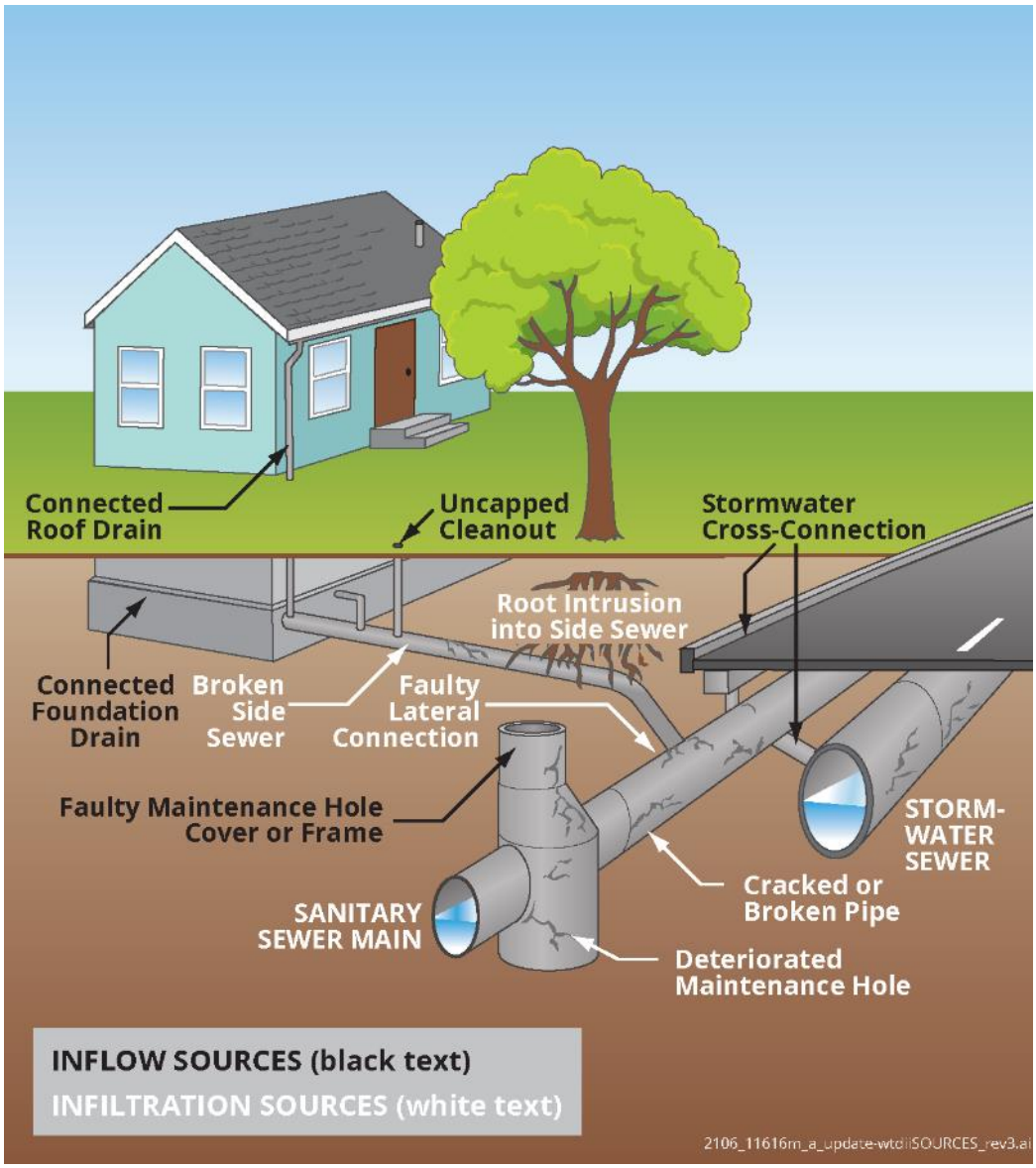
request is often an overwhelming burden on operations and maintenance personnel that could be avoided by taking proactive measures.

A written standard operating procedure (SOP) should be developed that clearly identifies roles and responsibilities, timing, and other critical aspects of BMP implementation. For this BMP, the workflow will begin at the point when a "roots in connection" defect is identified during sewer main CCTV inspection.

Example Website Landing Page Content

Notice to Property Owner/Occupant of Roots in Side Sewers

The side sewer that runs from your home, business, or other property and connects to the [*LOCAL AGENCY*] sewer line is your responsibility. If you received a notice about roots, debris, or other defects in the side sewer on your property, then you are responsible for fixing those issues before they cause a bigger problem for you or the [*LOCAL AGENCY*].



Example BMP Content

The following section provides examples of content that could be branded by the [LOCAL AGENCY] and included in this BMP.

[LOCAL AGENCY LETTERHEAD]

<Date>

<Property Owner/Occupant>
<Address>
<City>, <State> <Postal Code>

Dear Property Owner/Occupant:

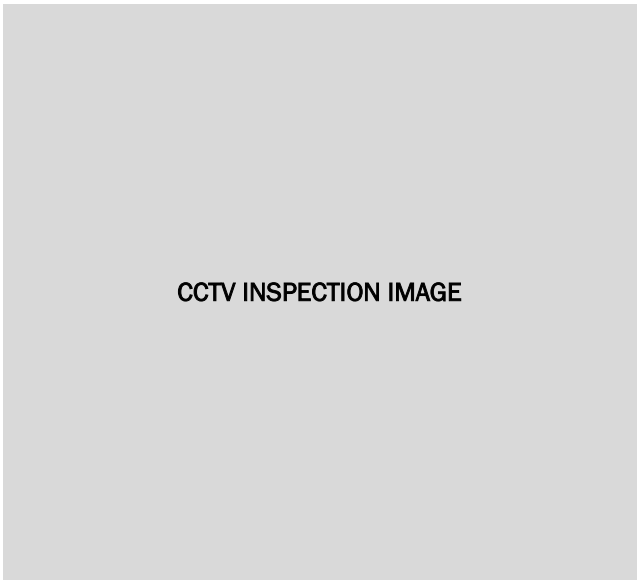
NOTICE OF ROOTS OBSERVED IN SIDE SEWER AT <*ADDRESS*>

This is a courtesy notice to inform you that the side sewer serving the property located at <*Address*> requires maintenance per [*LOCAL AGENCY]*:

[*TEXT OF LOCAL AGENCY CODE*]

The [*LOCAL AGENCY]* operates and maintains the sanitary sewer system that serves all properties within the [*LOCAL AGENCY]* service area. Recently, [*LOCAL AGENCY]* crews performed routine closed-circuit television (CCTV) inspections of the sewer mains in your area and discovered the presence of roots in the side sewer connection located on your property.

Below are images from the CCTV inspection that show the roots at the connection point of your side sewer and the [*LOCAL AGENCY]* sewer main. This indicates that there may be roots within in your side sewer.



This root intrusion may result in a blockage of your side sewer, which can cause a sewage backup or overflow on your property or within your home. It may also result in a blockage in the main sewer line and cause a sanitary sewer overflow upstream of your property.

When a blockage occurs within a side sewer (the line that connects a home or business to the [*LOCAL AGENCY*]'s sewer line), the property owner/occupant is responsible for clearing the blockage. As the property owner/occupant, it is your responsibility to contact a qualified plumbing contractor to service your side sewer. We request that you do this within **90 days** to prevent an overflow or backup. You are also responsible to pay the costs associated with clearing any blockages located within the side sewer on the property.

Before a plumbing contractor services your side sewer, call [*LOCAL AGENCY CONTACT*] to authorize access to the downstream manhole. The plumbing contractor will need access to this area. During side sewer service, a plumbing contractor must protect the [*LOCAL AGENCY'S*] sewer mains by trapping any roots or debris dislodged from your side sewer line.

After your side sewer has been serviced, please notify *[PERSON]* at *[CONTACT INFO]*.

If an overflow or backup occurs, take photos of the overflow/backup and affected area, and document your actions. You may need this information for insurance purposes. In the interest of your personal health and public health, make sure that any water, sewage, or other debris is cleaned up promptly and thoroughly. Wet areas should be thoroughly dried and disinfected. Failure to properly clean the entire contaminated area can result in adverse and sometimes serious health consequences. Information about proper cleaning after a sewer backup is enclosed.

If you have questions regarding the [*LOCAL AGENCY'S]* sanitary sewer maintenance program, sewer backup response, or a specific incident, contact the [*LOCAL AGENCY]* at [*CONTACT INFO]*.

Sincerely,

[SIGNATURE]

[NAME/TITLE]
[CONTACT INFORMATION]

What to Do If You Experience a Sewage Backup

1. Report the sewer backup immediately by calling [*LOCAL AGENCY]* immediately at [*PHONE NUMBER*]. [*LOCAL AGENCY]* will work with you to identify the location of the blockage. If the blockage is in one of *[LOCAL AGENCY'S]* main sewer lines, they will attempt to clear the blockage.

2. If the blockage is in the side sewer connected to your property, you must contact a qualified plumbing contractor and make arrangements for the blockage to be cleared. Remember: you are responsible for scheduling and paying for service to clear such a blockage. Many local plumbers can provide this service. **Do not try to unclog a sewer pipe yourself.**

3. If you have homeowner's or other property insurance coverage, notify your insurance agent of the sewer backup to see if such a claim is covered. Take photos of the damage. Document the actions taken (calls, contacts, costs) in response to the sewer backup. Keep receipts for plumbing services and any items your insurance policy may cover.

4. After the [*LOCAL AGENCY]* or a plumbing contractor has cleared the blockage, clean the entire contaminated area in a safe and professional manner. **It is a good idea to use the services of a reputable company experienced in cleaning up after sewer backups.** If you clean the area yourself, here are some tips:
   - Restrict accidental access to the contaminated area until cleanup has been completed. If possible, remove vulnerable/sensitive family members from the home until cleanup is complete.
   - Wear protective clothing such as rubber boots, gloves, eye protection, and nose/mouth protection to prevent contact with waterborne bacteria, which can cause illnesses.
   - Be careful not to contaminate other areas/rooms by walking around with dirty shoes.
   - Remove any dry/uncontaminated items from the area.
   - Wash any walls, floors, and other surfaces that sewage may have come into contact with. Use a low-suds detergent and clean, hot water.
   - Wash/sanitize or dispose of any soft items that were contaminated (clothing, rugs, soft toys, etc.).
   - Remove any dirt or debris from surfaces.
   - Rinse surfaces with warm water after cleaning.
   - Sanitize all surfaces with a sanitizing solution.
   - Open any outside windows and doors to air out the space.

Storm Season increases risk of floods and sewer overflows

Know Your Sewer System.

Know Who To Call.

1 Home With Septic
Clean-up service* ( ) _____
Insurance ( ) _____
Septic service or plumber ( ) _____

2 Home On Local Sewer System
Clean-up service* ( ) _____
Insurance ( ) _____
Plumber
( ) _____
Local sewer agency**
( ) _____

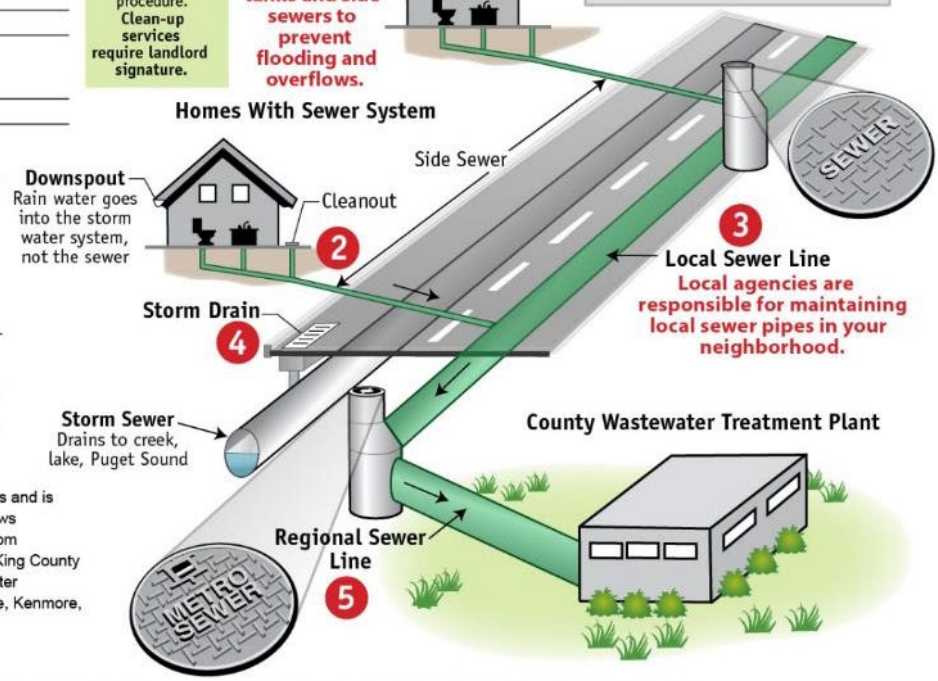
3 Maintenance Hole Overflows
Local sewer agency**
( ) _____

4 Storm Drain/Street Flooding
City Public Works/Surface Water Utility**
( ) _____

5 Regional System Overflows
King County collects sewage for local agencies and is responsible for regional treatment. For overflows occurring in the regional system, (overflows from manholes that say "Metro" on the lid, or near King County pump stations), call the King County Wastewater Treatment Division at 206-263-3801 (in Seattle, Kenmore, Shoreline), or 206-684-2404 (all other areas).

Renters: Talk with your landlords about 24-hour sewer overflow procedure. **Clean-up services require landlord signature.**

Homeowners are responsible for maintaining their septic tanks and side sewers to prevent flooding and overflows.



King County
Department of Natural Resources and Parks
Wastewater Treatment Division

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*Clean-up services: search "Water Damage Restoration" in the yellow pages
**Find emergency contact numbers in your utility bill(s) or blue pages in the phone book

Keep yourself safe during a flooding event or sewage overflow

1. Evacuate if necessary – call 911 in emergencies
2. Stay out of flooded areas and avoid contact with any type of flood water
3. Safely turn off electricity to affected area
4. Stop using plumbing that drains to the sewer system
5. Prevent the spread of contaminants and odors: turn off furnaces, air conditioners, and close vents
6. If you have been exposed to floodwater or wastewater, change clothing and shoes and wash affected skin surfaces.
7. Contact your doctor at the first sign of illness or infection
8. Hire a professional service to clean up damaged areas of your home. You can find services listed in phone directories under "Water Damage Restoration". Use caution if you choose to clean up the spill; wear boots, rubber gloves and properly dispose of contaminated material.

Learn more about responding to sewer spills at *kingcounty.gov*. Search "sewer spills." Floods are a common emergency in our area. Learn how to prepare and respond at *www.govlink.org/storm/*

Alternative formats available
Call 206-263-6028 or 711 (TTY)

Printed on recycled stock. Please recycle.
1104_2068_SewerOverflowCard_rev1.indd sk, md
Produced by: King County DNRP, WLRD, GIS, Visual Comm. & Web Unit

Help prevent overflows

Protect sewer pipes, the treatment system and the Puget Sound

Inspect your side sewers and septic systems regularly.

Prevent tree roots from breaking sewer pipes.

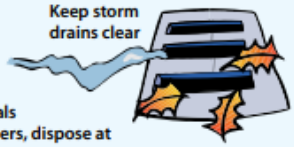
Dispose of garbage and hair in the trash can, not the toilets.

Reduce the amount of rainwater entering the sewer system. Choose rain gardens, rain barrels, pervious pavement and green roofs.

Dispose of grease in the trash can or recycle it.

Prevent harmful chemicals from entering the wastewater system. Use simple, biodegradable household and personal products.

Prevent medicines from entering the wastewater system. Return medicines to a pharmacy or dispose in the trash can.



Keep storm drains clear

Store hazardous materials in spill proof containers, dispose at hazardous waste facilities.

King County
Department of Natural Resources and Parks
Wastewater Treatment Division

BMP: Side Sewer Maintenance Guidance Documents

BMP Description: Side Sewer Maintenance Guidance Documents

This BMP involves developing private property owner education and outreach programs to clearly define side sewer maintenance responsibilities. Example content for educational materials (e.g., web content, bill stuffers, and brochures) for local agencies to use are included in this Side Sewer BMP Toolkit.

Comprehensive and easily accessible side sewer maintenance guidelines are extremely important for educating property owners about their responsibilities for maintaining, inspecting, and repairing their side sewers.

As side sewers age and deteriorate, it is increasingly important that property owners work to maintain the side sewer's structural integrity and prevent I/I entry to the sanitary sewer.

Instructions to Local Agencies

When adopting this BMP, you should review your agency's legal authorities, including the current sewer use regulations, to gain a full understanding of your agency's legal responsibilities and the private property/private system owners' legal responsibilities for side sewer inspection, maintenance, and repair. This may require the involvement of your agency's legal counsel and governing body (e.g., General Manager, Chief Executive Officers, Board, Directors, etc.). If needed, you may consider writing and adopting a policy that clearly delineate the limits of each party's side sewer maintenance responsibilities.

Prior to implementing this BMP, all elements of the initiative should be carefully considered to encourage stakeholder buy-in, prevent unintended consequences, and foster long-term success of this BMP. A review of the impact on your agency's resources should be conducted before side sewer maintenance guidance documents are made available to customers so that barriers or challenges can be identified and resolved. This review includes, but is not limited to, the following elements::

- Staffing requirements, roles, and responsibilities
- Customer education and communication plans, including standard responses (scripts) to customer inquiries and relaying available resources for customers to learn more about their responsibilities for side sewer maintenance
- Budget and funding impacts
- An information management system to track appropriate data (e.g., customer communication log, etc.) using data management tools such as Microsoft Excel or Access
- Acceptable means and methods for side sewer inspection, maintenance, and repair
- Performance criteria to measure effectiveness (including applying an adaptive management approach to modify the guidance documents if certain elements are not as effective as intended). The suggested performance criteria for this BMP could be the number of webpage views and downloads of the side sewer maintenance guidance documents if they are posted on your agency's website.

A written standard operating procedure (SOP) should be developed to clearly delineate roles and responsibilities, timing, and other critical aspects of BMP implementation.

Example Website Landing Page Content

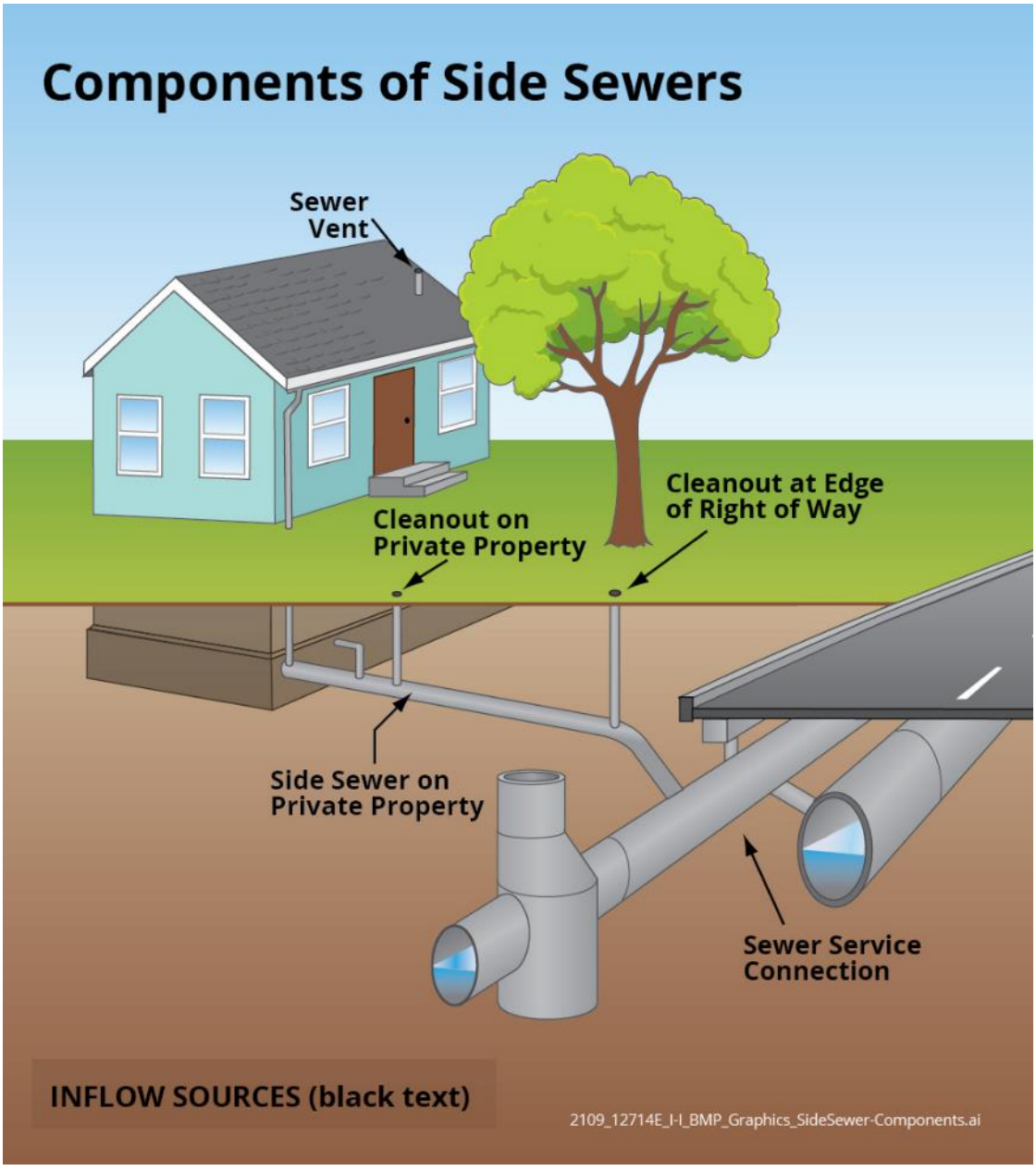
Side Sewer Maintenance Guidance

Over time, side sewers age and break down, which can allow stormwater to flow into the sewer system and overload the sewer pipes. Property owners also own the side sewer and are responsible for having the side sewer inspected, maintaining it, and repairing or cleaning it if needed. This can help prevent stormwater from entering the sewer pipes and causing bigger problems within the sewer system.

Example BMP Content[1]

What is a side sewer?

A “side sewer” is the pipe that conveys wastewater from your house’s sinks, tubs, toilets, and other drains to the public sewer main. Usually there is a cleanout on the side sewer near your house, and one at the property line.



[1] Seattle Public Utilities has helpful information on its “Side Sewer Maintenance” webpage. The following website content template is taken partially from this webpage. Other content has been extracted from other sewer utilities’ webpages:

https://www.seattle.gov/utilities/your-services/sewer-and-drainage/side-sewers/maintenance

https://www.portlandoregon.gov/bes/article/247465

https://www.wef.org/resources/for-the-public/public-information/fact-sheets/

Who owns the side sewer on my property?

You own and are responsible for maintaining the side sewer on your property <*describe limits of ownership*>. [*LOCAL AGENCY*] owns and is responsible for <*describe limits of ownership and maintenance responsibilities*>. <*If appropriate, discuss who is responsible for making side sewer repairs within the right-of-way*>

What responsibilities do I have for my side sewer?

<*Describe property owner's responsibilities for proper use, maintenance, inspection, repair and/or replacement*>. <*Then describe the LOCAL AGENCY's responsibilities for the side sewer and/or service connection*>.

Many materials frequently flushed or poured down the drain can harm your side sewer, the [*LOCAL AGENCY*]'s sewer system, and the environment. You can help prevent this from happening by:

- Never pouring grease down sinks or toilets. Put cooking grease and food scraps into a can or the trash for disposal or composting (where available)
- Using baskets or strainers in sink drains to catch food scraps and other solids, and then emptying them into the trash

Toilets should be used to flush toilet tissue and human waste only; when anything else is flushed, it can result in costly blockages and sewage backups on your property, as well as problems in the [*LOCAL AGENCY*]'s sewer system. Few if any items marked as disposable can be safely flushed down the toilet. You should never flush the following items:

- Other-the-counter or prescription medicine
- Disposable menstrual products
- Baby wipes and diapers
- "Flushable" wipes
- Rags and towels
- Disposable gloves
- Syringes
- Toys
- Kitty litter
- Disposable toilet brushes

How do I get my side sewer inspected?

A licensed plumber or side sewer contractor can inspect your side sewer using a closed-circuit television (CCTV) camera that is typically inserted into your side sewer through a cleanout inside or outside of your house.

The inspection may reveal if there are structural problems with your side sewer (e.g., cracks, holes, etc.) or obstructions such as roots, grease, wipes, or other objects that may be preventing wastewater from freely flowing through the side sewer. The plumber or side sewer contractor can often clean your side sewer using high pressure water to dislodge roots and grease. In some cases, your side sewer may need to be repaired if material is built up on a crack or other defect, and is unable to be loosened and removed during cleaning.

Regular cleaning can prevent most costly repairs. However, over time, broken side sewers must be either repaired or rehabilitated to either prevent wastewater from backing up into your house or, to prevent groundwater from entering the sanitary sewer system.

What happens if I need to repair my side sewer?

<describe the LOCAL AGENCY's requirements for side sewer repairs, including permitting and inspection process.>

The Seattle Public Utilities (SPU) webpage on Side Sewer Defects & Issues provides helpful information on common side sewer defects. SPU's webpage on Side Sewer Repair Methods summarizes the types of structural repairs that may be appropriate to address these problems.

Contact <*contact name and contact information*> at [*LOCAL AGENCY*] if you have questions on <*agency type*>'s requirements for side sewer repairs.

What is a backwater valve, who owns it, and am I responsible to maintain it?

Some properties may have a backwater valve installed on the side sewer to help prevent sewage from flowing backward into your pipes and basement or crawl space. If you have this type of valve installed on your side sewer, you are responsible for its maintenance.

For more information on how to maintain the backwater valve, consult the information provided by [*LOCAL AGENCY*] when the valve was installed, or look on the valve manufacturer's website.

BMP: Private Property Inflow/Infiltration Source Disconnection/Redirection Public Education Materials

BMP Description: Private Property Inflow/Infiltration Source Disconnection/ Redirection Public Education Materials

This BMP involves developing private property owner education and outreach programs for inflow and infiltration (I/I) source disconnection and redirection. Example content for educational materials (i.e., web content, bill stuffers, and brochures) for local agencies to use are included in this Side Sewer BMP Toolkit.

Although this BMP may not apply to all local agencies at this time, those that experience excessive peak I/I flows will most likely opt to address both public and private property sources of I/I. Private property I/I sources (roof leaders, area drains, window well drains, foundation drains, etc.) can contribute significantly to peak flows that occur during wet weather events.

Making educational materials on I/I source disconnection/redirection available to customers served by your sewer agency is extremely valuable, as it enables customers to better understand their responsibilities and how they are connected to the system.

Instructions to Local Agencies

When considering this BMP you should review your agency's legal authorities, including current sewer use regulations, to gain a full understanding of your agency's legal responsibilities and the private property/private system owners' legal responsibilities for unauthorized connections. This may require the involvement of your agency's legal counsel and governing body (e.g., General Manager, Chief Executive Officers, Board, Directors, etc.). If needed, you may consider writing and adopting a policy that clearly identifies types of unauthorized connections and how they are to be disconnected/redirected from your agency's sanitary sewer system.

Prior to implementing this BMP, all elements of the initiative should be carefully considered to encourage stakeholder buy-in, prevent unintended consequences, and foster long-term success. A review of the impact on your agency's resources should be conducted before making I/I source disconnection/redirection public education materials available to customer, so that barriers or challenges are identified and resolved. This review should include:

- Staffing requirements, roles, and responsibilities
- Customer education and communication plans, including standard responses (scripts) to customer inquiries and relaying available resources for customers to learn more about their responsibilities for side sewer maintenance
- Budget and funding impacts
- An information management system to track appropriate data (e.g., customer communication log, etc.) using data management tools such as a Microsoft Excel or Access
- Acceptable means and methods for I/I source disconnection/redirection (note: this determination may require coordination with other Departments or outside groups involved with building codes, code inspectors, etc.)

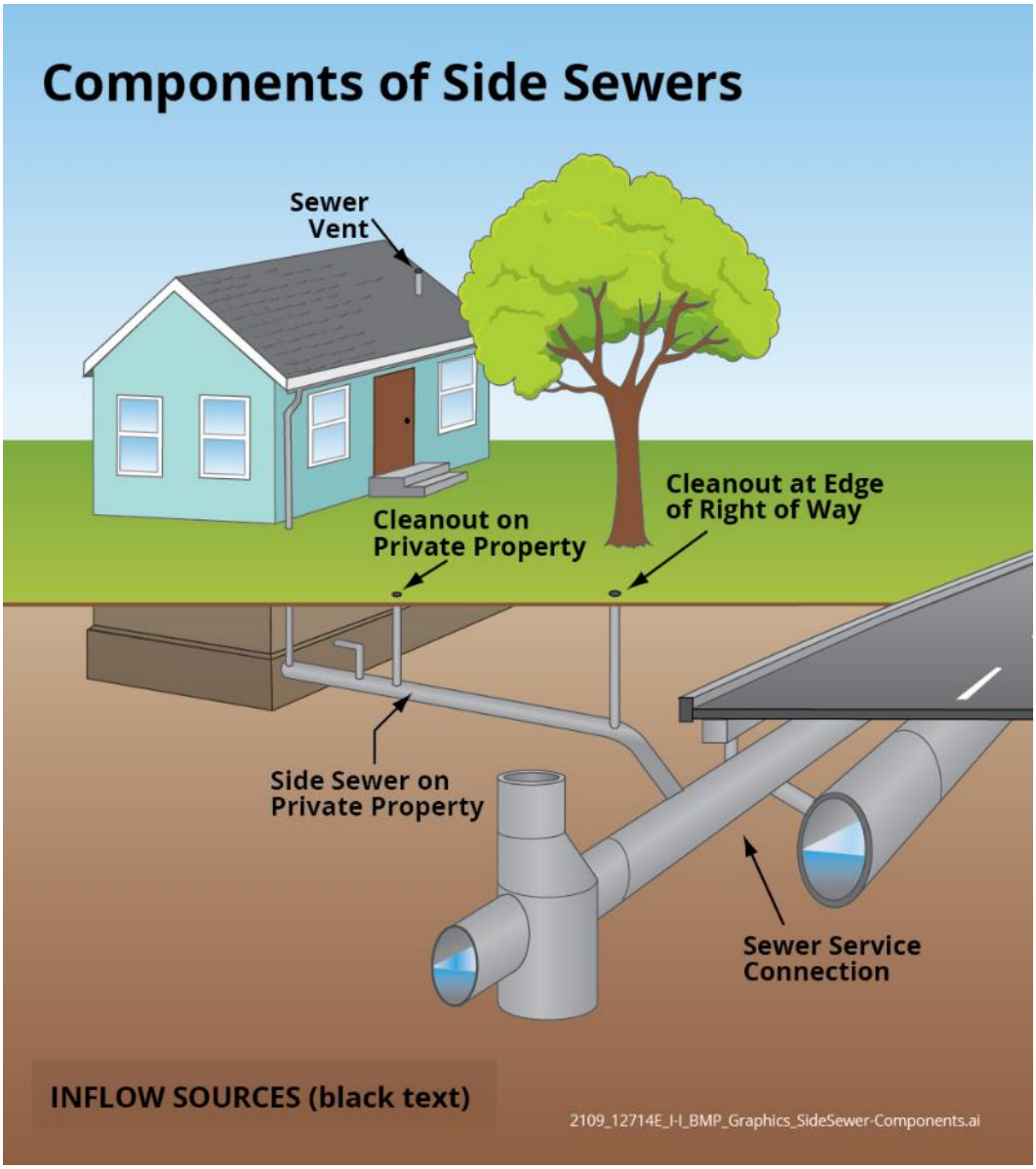
- Performance criteria to measure effectiveness (including an adaptive management approach to modify the public education materials if certain elements are not as effective as intended)
    - A suggested performance criterion for this BMP could be the number of page views or downloads from the webpages covering I/I source disconnection/redirection information.

A written standard operating procedure (SOP) should be developed to clearly delineate roles and responsibilities, timing, and other critical aspects of BMP implementation.

Example Website Landing Page Content

Keeping Stormwater Out of the Sewer

Wet weather events can cause stormwater to enter the sanitary sewer system and overload the sewer pipes. You can help prevent this by disconnecting your downspouts, roof leaders, window well drains, and sump pumps from the sewer system and redirecting them into a stormwater drain, rain garden, rain barrel, or cistern.



Example BMP Content [1]

What is inflow and infiltration?

Inflow and **infiltration** are terms used to describe how groundwater and stormwater enter the sanitary sewer system. The two terms are commonly referred to as I/I.

Inflow is stormwater or surface water that is piped directly into a sewer system or flows into it from runoff. As shown in the graphic below, these connections may include driveway and gutter drains, downspouts, interior or exterior foundation drains, sump pumps, and area drains, and should never be connected into a sanitary system designed to carry only wastewater.

Infiltration is excess water that enters the sewer system through open joints, cracks, and breaks in the pipes. These defects may allow constant infiltration of groundwater.

The design life of mainline and side sewer pipe is typically 50 years, depending on the material and quality of installation. In many cases throughout the region, collection system pipes and household laterals have gone much longer than that without inspection or repair and are likely to be cracked or broken.

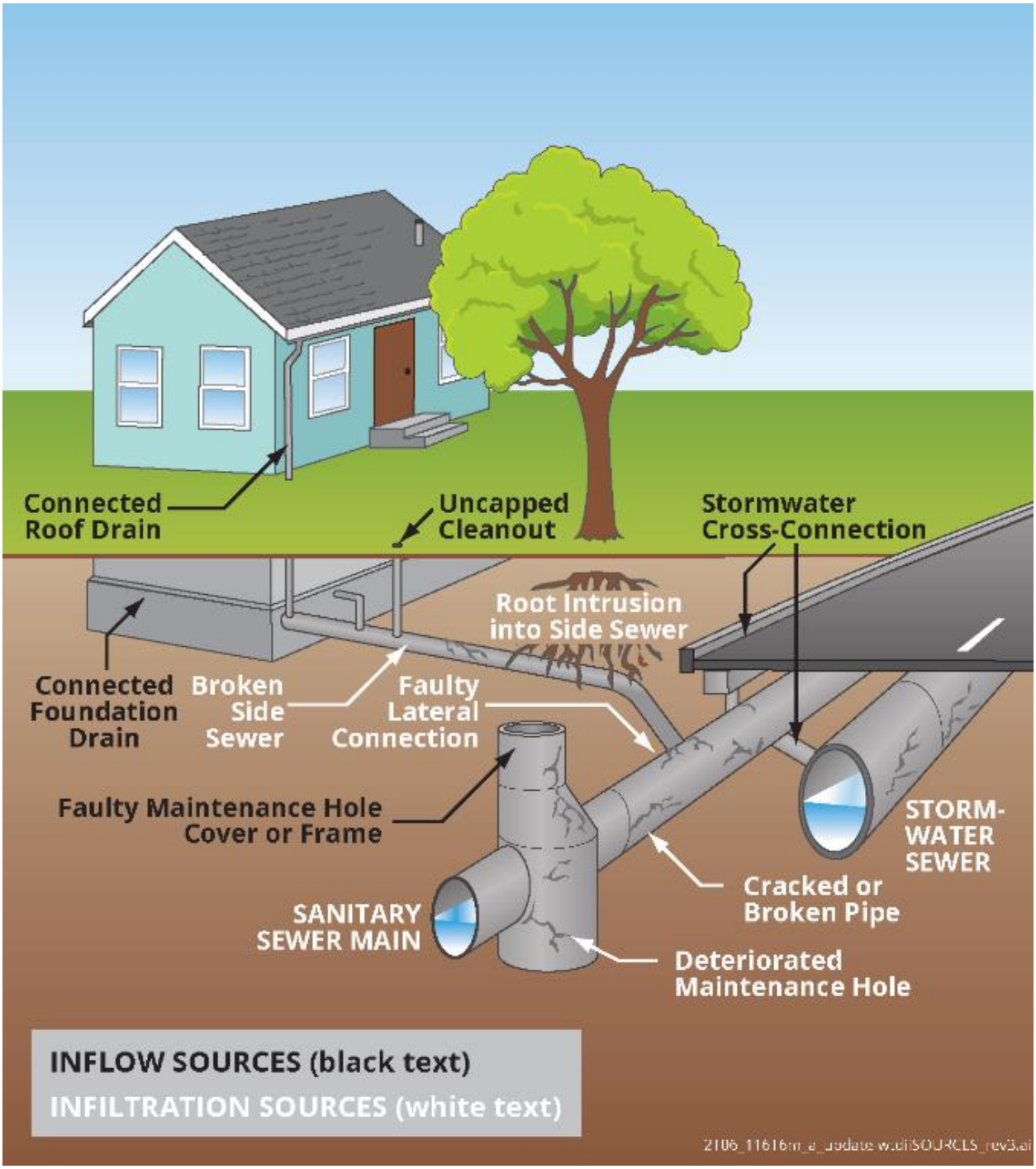
[1] King County has many examples of I/I source disconnection/redirection information on its "Do your part on rainy days" webpage. The website content template provided in this BMP was taken partially from this webpage. Other content has been extracted from the following King County webpages:

https://kingcounty.gov/services/environment/wastewater/cso/about/help.aspx

https://kingcounty.gov/services/environment/wastewater/ii/problem.aspx

https://kingcounty.gov/services/environment/wastewater/ii/finding.aspx

https://kingcounty.gov/services/environment/wastewater/ii/fixing.aspx


Connected Roof Drain
Uncapped Cleanout
Stormwater Cross-Connection
Root Intrusion into Side Sewer
Connected Foundation Drain
Broken Side Sewer
Faulty Lateral Connection
Faulty Maintenance Hole Cover or Frame
STORM-WATER SEWER
Cracked or Broken Pipe
SANITARY SEWER MAIN
Deteriorated Maintenance Hole
INFLOW SOURCES (black text)
INFILTRATION SOURCES (white text)

What is a sanitary sewer overflow?

When I/I enters the sewer system, it takes up space that would otherwise be used to convey wastewater. If the sewers become overloaded, raw sewage may overflow at various points throughout the sewer system before it reaches the treatment plant. When an overflow occurs in a separate sewer system, it is called a sanitary sewer overflow (SSO). These overflows may occur in a street from a manhole cover, in a yard from a cleanout cap, or in a basement of a residence or business. These unintentional overflows are illegal in separate sanitary sewer systems under the federal Clean Water Act.

What can I do to stop I/I from entering the sanitary sewer system from my property?

There are many ways to keep the rain that falls on your property out of the sanitary sewer system and thereby reduce the chances for SSOs and basement backups. Methods include disconnecting your downspouts, installing a rain garden, cistern, or rain barrel, and repairing leaky side sewers. Information on each of these methods is provided below.

One-inch of rain falling on a 1,200 square foot roof will generate approximately 750 gallons of water. Downspouts can discharge at a rate of 7 – 12 gallons per minute during a heavy storm. Runoff from only 80 square feet of roof area will fill a 50-gallon rain barrel during a 1-inch rain.

How do I disconnect my downspout?

Disconnecting your downspout from a side sewer and redirecting the flow to a grassy area, garden, or cistern is a simple process that can make a big difference to the environment. If your downspouts disappear into the ground through a standpipe rather than discharge into your yard, they may be directly connected to the sanitary sewer.

Before disconnecting your downspouts, you should carefully consider your yard layout and make a project plan. A short video produced by the City of Portland, Oregon, provides guidelines on how to disconnect your downspout (https://www.portlandoregon.gov/bes/article/322320).

Detailed information on necessary supplies, tools, , and instructions for completing the project is provided below. A diagram illustrating the general downspout layout is also provided.

Suggested Supply List

- Hacksaw
- Cordless drill
- Tape measure
- Pliers
- Sheet metal screws
- Downspout elbow
- Downspout extension
- Splash block (if needed)
- Standpipe cap[2]

[2] Standpipe caps come in a variety of types and sizes. Be sure to double check measurements before purchasing supplies. Capping the standpipe will prevent water from entering the side sewer and also keep pests and rodents out.

Instructions

1. Cut the existing downspout approximately 9 inches above the sewer standpipe with a hacksaw.
2. Cap the sewer standpipe.
3. Attach the elbow by crimping the downspout with pliers to ensure a good fit. Connect the elbow to the downspout using sheet metal screws.
4. Attach the elbow into the extension and secure with sheet metal screws. Water should drain at least 5 feet away from the house and not onto the driveway, walkway, or sidewalk. The end of the downspout extension should be at least 4 feet from the property line and possibly more if the yard slopes toward your neighbor's property.
5. A splash block may be used to help direct water away from the house and areas that may pond when it rains.

To find out more about drainage on your property, contact [*LOCAL AGENCY*] for more information. [LOCAL AGENCY] may also be able to help you determine if a downspout shouldn't be disconnected, and what is required to comply with local building codes.

How do I install a rain barrel, cistern, rain garden?

Disconnected downspouts can also be directed to a rain garden, rain barrel, or cistern (rain tank). A rain garden is a shallow planted depression designed to hold water until it soaks into the ground. Rain barrels capture water from a roof and hold it for later use, like watering lawns, gardens, or indoor plants. Cisterns are similar to rain barrels, but can be much larger and may be located above or below ground.

For rain barrel and cistern information and sources for the Pacific Northwest, see King County's webpage: https://kingcounty.gov/services/environment/stewardship/nw-yard-and-garden/rain-barrels.aspx

For information on installing a curbside rain garden or bioretention system, you may need to apply for a free permit from the Seattle Department of Transportation. For more information, see the website: https://www.seattle.gov/transportation/permits-and-services/permits/planting-in-the-right-of-way

How do I disconnect and redirect my sump pump?

Sump pumps that are directly connected to your side sewer can add up to 8 gallons per minute of flow to the sanitary sewer system during a 1-inch rainstorm. Proper sump pump discharges are directed to the outside of the house, not the side sewer. To redirect the sump pump discharge to the sanitary sewer system, the change could be as simple as redirecting the discharge outside the house through a hose.

Water should be discharged away from your house or it may seep back into your basement. The sump pump discharge water should flow to an area where it can seep into the ground or be stored for later use. The flow should be redirected to your lawn, a rain garden, or possibly a cistern.

In some cases, it may not be practical to redirect your sump pump discharge. If you have questions on how to proceed, contact a qualified plumbing professional or [LOCAL AGENCY] for more information.