

Residential flooding

Surface Water & Wastewater



City of Tacoma Public Works
Environmental Services

www.cityoftacoma.org/surfacewater
www.cityoftacoma.org/wastewater



- What to do
- Cleanup
- Prevention & Troubleshooting
- Who to call

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Immediate action tips

Safety first

INSIDE: If water has reached electrical outlets or appliance connections and you can safely reach the electrical panel, immediately turn off power to the flooded areas. If you are unable to turn off the electricity, wait until the water has receded before you enter the area. Do not enter the flooded area if electricity could come in contact with the floodwater through submerged power cords, plugs or outlets. (Remember to consider furnaces and motors from appliances such as sump pumps, generators, etc.)

OUTSIDE: If you encounter flooded streets near your home or business or when out and about, be careful not to drive through or walk through these areas. While the water might not look deep, there can be unseen hazards such as curbs and open manholes.

How to tell if it's stormwater or wastewater

If water is coming up through a toilet or interior drain and you are not using water in the house, or if you can't tell how the water is getting into your house, it could be a sanitary sewer backup and you should call the City of Tacoma at (253) 591-5585 so our crews can check the City's system in your area.

If water is coming through cracks in the walls or floor, coming up out of basement sumps, coming in through window wells, or flowing overland, it is probably stormwater or groundwater. Generally, this water will be very clear with no discernable odor. Make sure all your roof drains are routed well away from your house. Use plastic and sandbags to protect basement entryways.

Did you know that heavy rains can cause sanitary sewer problems?

While Tacoma's stormwater and sanitary sewer systems are separate, heavy rains can cause problems in the wastewater system when groundwater and stormwater get into the sanitary system through inflow and infiltration rather than the stormwater system. Inflow is when stormwater get into the sanitary system through direct connections, like when roof drains and basement sump pumps or foundation drains are connected to the sanitary system. Infiltration is when groundwater and stormwater get through cracks in the public or private parts of the sanitary sewer system.

Inflow and infiltration add extra hydraulic loading to the sanitary sewer system, which can cause it to surcharge and back up into homes and businesses. To help reduce problems with inflow and infiltration, make sure that roof drains, basement sumps and foundation drains are routed to the storm drainage system.

Stormwater

- 1. Protect your home by redirecting the flow of stormwater** away from your home and into a nearby street gutter.
- 2. Use sandbags and plastic sheeting** to block the flow of stormwater from getting into your basement or the lower levels of your home.
- 3. If stormwater is flowing past the drain faster than it can go down the drain,** try building a dam of sandbags on the downstream side of the storm drain to provide a place for water to pond before it drains down.



- 4. If you know your property has problems with stormwater flooding,** have a sump pump installed to direct any potential flow away from the home into the yard or a nearby street gutter.



Wastewater

If sewage is backing up from plumbing fixtures or drains, stop using water in your home (such as the shower and washing machine). If the backup stops, it is likely that your private side sewer is blocked, and you might be able to restore drainage by rooting or jetting the line. This kind of problem is the homeowner's responsibility.

If sewage is backing up into your home when you are not using water in your home, there could be a blockage in the municipal sewer main. Call City of Tacoma Sewer Transmission Maintenance immediately for assistance at (253) 591-5585 (messages monitored 24-7).

When a sewage backup is occurring, do not use your toilet, shower, washing machine or other appliances that send water down a drain.

If water is coming out of a floor drain, use a drain plug to block the hole. Cover the plugged hole with a sandbag to keep the plug in place. ➔



How to clean up

It is important to act quickly to protect undamaged property and to clean and dry affected property.

- **Wear rubber gloves and boots.** Avoid tracking water from flooded areas into other parts of your home.
- **Wash your hands with soap and water** after working in flooded areas.
- **Remove undamaged items from the area.** This can often be accomplished by shifting them to a table or other elevated dry surface away from wet items. Be careful not to box or bag wet and dry items together.
- **Extract water from carpet and pad with a wet-dry vacuum** so they can be removed more easily.
- **Wet drywall will likely require removal.**
- **Clothing, linens, etc., that you would like to save should be washed or dry-cleaned as soon as possible.** We recommend that you not allow wet clothing or linens to sit for more than 24 hours before cleaning.
- **Sanitize the surfaces of concrete, unfinished wood, metal or other materials** that will not be damaged by household chlorine bleach with a solution of no more than 10% bleach and water (up to 1 cup of household bleach for every 10 cups of water). Please be cautious when using this solution. Non-bleach sanitizing products should be used to clean fabrics, leather or materials that will be affected by bleach.
- **Dry the area and personal property thoroughly.** Provide low heat and fans. You may also choose to rent a dehumidifier. Good air flow is very important to prevent mold.

If you hire a professional cleaning service, we recommend that you choose one experienced in stormwater or wastewater flooding response (as appropriate). You will find professional cleaning services listed in telephone directories under the heading "Fire and Water Damage Restoration."



Cleanup checklist

If you choose to clean up after a flood yourself, remember that it is very important to clean and dry the affected property as quickly as possible after flood waters have receded.

A quick checklist of tools you will need include:

- Gloves and boots
- House fans
- Bleach
- Mop
- Bucket
- Wet/dry vacuum
- Trash bags
- Tarp or plastic sheeting
- Squeegee

Troubleshooting: **stormwater** sewer problems

Tacoma typically gets about 40 inches of rainfall each year – with sometimes 4 inches or more of that falling within a 24-hour period, which may cause flooding.

Where does all that rainwater go?

In Tacoma, water flows through the storm drains to a system of pipes and ponds that carry it (untreated) to the nearest body of water – that could be a stream, a lake or Commencement Bay.

What happens when Tacoma gets a lot of rain?

The City's stormwater system can only handle a certain amount of water at a time. When there is too much of it, some streets and low areas tend to flood.

Is there anything I can do to prevent stormwater flooding?

Most often, residential stormwater flooding problems are related to lack of maintenance of roof downspouts, gutters, driveway drains or clogged storm drains in the street. Some tips:

- Regularly clean your gutters. Dispose of debris in your yard waste bin or a compost pile.

- **Direct downspouts at least 10 feet away from your building's foundation.** It is best if the water is piped to a street gutter or ditch.
- **If the soil on your property soaks up water quickly,** it may be helpful to build a rain garden to absorb stormwater from your roof or driveway (well away from your foundation). For tips on how to build a rain garden, refer to the WSU Extension Rain Garden Handbook for Western Washington Homeowners (www.pierce.wsu.edu/Water_Quality/LID/index.htm). But remember, rain gardens also require an emergency overflow directed away from private property to a street gutter or ditch.
- **Clean sediments, leaves and garbage out of private storm drains.**
- **Keep nearby public and private storm drains in the street clear of leaves and debris,** especially during a rain storm. Drains near street corners and low areas of streets and parking lots usually need special attention. Make sure to clear ditch culverts as well.
- **Dispose of fallen leaves and other yard waste properly.** Place them in your brown yard waste container, compost them in your garden, or take them to the Tacoma Landfill. Please do not blow leaves into the street and leave them there. If you use a yard maintenance service, please let them know that they should not blow or rake leaves into the street or alley. This can cause flooding.
- **Use landscape barriers, such as rocks or landscaping blocks,** to prevent bark, dirt and other landscape materials from washing into the streets and clogging drains.
- **If you are in an area where flooding is known to occur,** keep sandbags on hand and put valuables in an elevated, dry location. Consider installing a sump pump with a backup generator.



Direct downspouts to at least 10 feet away from your home or business's foundation. This can be done with "flex pipe" (shown above) or a "curb cut" (shown below).



Troubleshooting: **wastewater** sewer problems

The City of Tacoma maintains more than 700 miles of sewer lines. Wastewater crews are available 24 hours a day to respond to problems with City lines and service. However, most of the problems homeowners face are found in the sewer line that connects their house to the City's main line. This private line – commonly called a "side sewer" or a "lateral sewer" – is the homeowner's responsibility.

This information is intended to help you discover where the problem is, and how to get it fixed as soon as possible. It is the City's mission to provide customers with an efficient, cost-effective and professionally maintained wastewater and surface water collection system.

Call the City if ...

Call the City immediately if sewage is coming up inside your home when you are not using water. Wastewater crews will check the City sewer system serving your area and will send a maintenance crew if needed. The crew will notify you of the results as soon as possible. Wastewater maintenance crews are responsible for maintaining the City's main sewer lines and the connection to customers' side-sewers, but not the side sewers themselves.

Call a PRIVATE service provider if ...

Call a private service provider (roofer company) if you have slow drainage or you suspect a blockage. The problem is likely in your side-sewer line. However, if the worker is unable to unblock the line and you are still having problems with your sewer system, call the City before you incur any more expense.

Which private service provider should I call?

Companies offer a full range of services including unblocking, repairing and replacing lines of pipe, and TV inspection, but some specialize only in certain areas. Make sure to ask which services they provide. You can check with the Better Business Bureau, (206) 431-2222, or betterbusinessbureau.org, to find reputable companies. You might also want to ask friends and relatives for recommendations. Since companies offer a wide range of prices, it's a good idea to get at least three written estimates before choosing a company for major repairs.

- **Rooter services:** Drain cleaners or "rooters" unclog plumbing and private side sewers using water pressure or mechanical "snakes." Make sure the roofer service's snake cable is long enough to reach from your side sewer to the City's main sewer line (typically located underneath the street or alley). Rooter companies may also repair and/or replace side sewers.
- **Side sewer contractors:** Side sewer contractors repair and/or replace structural problems such as breaks or holes in side sewers. Some contractors may also unclog lines.
- **Plumbers:** Plumbers repair leaky or broken fixtures and install systems in new construction and remodeling. If only some of your fixtures are not draining, or if your pipes are leaking, a plumber may be able to remedy the problem.



Roots from trees and bushes are a common cause of clogged side-sewer lines. Roots can easily penetrate pipes made of porous concrete such as this one, which is more than 25 years old. Modern side-sewer lines are made of heavy duty, water-tight plastic and therefore last much longer.

Troubleshooting: wastewater sewer problems

continued

What questions should I ask the service provider?

We recommend having all questions answered in legible writing at the time of service with the provider's signature and date.

- **Where is the blockage?** If you have your line roouted, have the service provider write down the specific footage where the blockage was found, or where he or she thinks it is located. Also have the provider mark the spot on the ground. This information is helpful to determine if the problem is within the City's area of responsibility. It can also be helpful if the pipe must be dug up to be repaired.
- **What is causing the problem?** Have the service provider write down the probable cause of the blockage. Identifying the type of blockage is helpful in determining what method should be used to open it, and in determining if regular maintenance of your side sewer is needed to prevent future backups.
- **Should I have a service provider use a TV camera to see blockages in my line?** Generally, this is NOT an effective method of determining what is blocking a line. TV cameras usually cannot see underwater, so if a line is blocked and not draining, it won't be able to see inside your pipes. Camera inspections are most useful after the blockage has been cleared to determine the condition of your pipes and where future problems might occur.



This image, taken during a camera inspection of a sewer, shows where a side sewer has separated from the sewer main.

Can I do it myself?

- **Unclogging a line:** A variety of tools and products can be found at your local home improvement store. Portable roter machines are available at many rental companies. You'll need to measure the distance between your side sewer and the City's main line to determine what size machine to rent.
- **Repairing or replacing a broken or leaky side-sewer line on my own property:** You may work on your own private sewer system, but the City requires you to get a permit so wastewater maintenance crews can keep track of work that may affect the City's main line. Permits are available at the City of Tacoma Building and Land use Department, 747 Market St., Room 345, during business hours, M-F, 8 a.m. to 5 p.m. Call (253) 591-5030 for more information.
- **How do I know where my side sewer is and where it hooks into the City's main line?** Check your house plans for side sewer locations or call the previous owner. You may also try accessing the permit records kept by the City of Tacoma Building and Land Use Department, (253) 591-5030. Unfortunately, the City has very little information on homes built before 1950. Also, if previous work on your side sewer was done without a permit, the City will not have record of it. If you have trouble finding a record of your home's system, check your neighbor's records to see if you have a combined sewer system. Some older homes share a sewer line with neighboring properties prior to connection in the City's right-of-way.
- **What if the problem lies in my private side-sewer line within the City right-of-way?** All activity in the City right-of-way must be done by a contractor who is licensed and bonded to work in the City of Tacoma. Check in the phone book under "Sewer Contractors."

Protect your home from future sewer flooding problems

Backwater valves allow only one-way flow from your household plumbing to the City's sewer system. If there is a blockage or excess flow in the City's sewer main, a properly operating backwater valve can close and prevent the sewage from



backing up into your home through your household fixtures. Backwater valve protection is necessary when a building floor drain is lower than the nearest upstream sewer manhole cover.

If you have a backwater valve, remember to inspect its operation at least every six months and clean it if necessary.

Do you have a backwater valve?

This is one example of what a backwater valve looks like. Not sure if you have a backwater valve? Look for a bolted iron plate cover or a white or black plastic cap over a hole in the basement or near your house.

Not sure how to maintain it? Take the cover off and inspect for blockage and rust. Make sure all the joints work and wash and oil them if needed.

Still confused? If you're a City of Tacoma Wastewater Management customer and have trouble finding your backwater valve or need more information, call (253) 591-5588.

Low-interest loans available

The City offers low-interest loans through its Sewer Conservation loan program to qualified businesses and homeowners for side-sewer repair and replacement.

Call (253) 591-5588 for more information, or go to www.cityoftacoma.org/sewerloan.

Who to call ...

To report stormwater flooding or sewage backups: (253) 591-5585

To locate your underground utilities: (800) 424-5555 or www.callbeforeyoudig.com

Surface Water/Wastewater Services general information: (253) 591-5588

For information about possible loans, grants, or other assistance related to events declared federal disasters, call the Federal Emergency Management Agency: (800) 621-3362

For assistance with temporary housing, food, clothing and possible grant assistance, call the American Red Cross: (253) 474-0400 or www.redcross.org

For general information: (253) 591-5588

If you are in immediate danger, call 911.