

# SEWAGE BACKUP

## What is a sewage backup?

Sewage consists of wastewater from toilets, sinks, tubs, showers, dishwashers and washing machines. A backup happens when sewage from a private sewage system (septic system) or sanitary sewer system enters a home and/or floods onto property.

Sewage backups can be caused by a blockage or plumbing problem. Blockages that lead to backups are often caused by people putting fats, oils, and grease (FOG), and/or non-flushable items such as wipes, paper towels, food or other garbage down the drain or toilet. These items belong in the green bin or garbage.

## Health concerns

Water contaminated with sewage may carry pathogenic micro-organisms which can make people ill. Sewage backups can also contaminate drinking water supplies, surface water and property.

## Where does my sewage go?

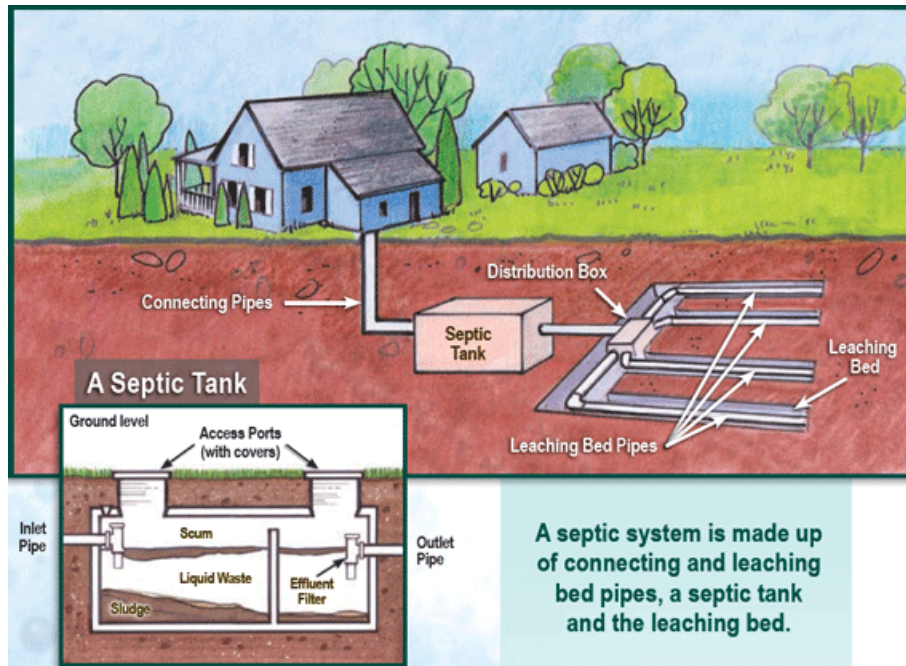
There are two types of sewage treatment systems: private and municipal. Sewage goes to either a private sewage disposal system, or to a municipal system where it is transported to a water resource recovery facility (WRRF) for treatment.

## PRIVATE SEWAGE SYSTEMS

In a private sewage system, household wastewater flows through drainpipes to an outdoor, underground septic or holding tank where solids settle and separate from the liquid. The liquid waste flows through a series of pipes and is slowly released into the leaching bed. The leaching bed is made up of porous materials, such as sand and gravel, and acts as a filter to clean the water before it seeps back into the ground. Heavier solids settle to the bottom of the septic tank where they are gradually decomposed by bacteria. Some non-decomposed solids remain, forming a sludge layer that must be pumped out by a licensed sewage hauler every three to five years.

A permit issued by the local municipal building department is required for all new homes serviced by a private sewage system or for any alteration to an existing system or building. If you need information on your private sewage system, contact your local municipality.

## Private Sewage Disposal System



*Image provided courtesy of Conservation Ontario*

## MUNICIPAL SEWER SYSTEMS

### What is a sanitary sewer?

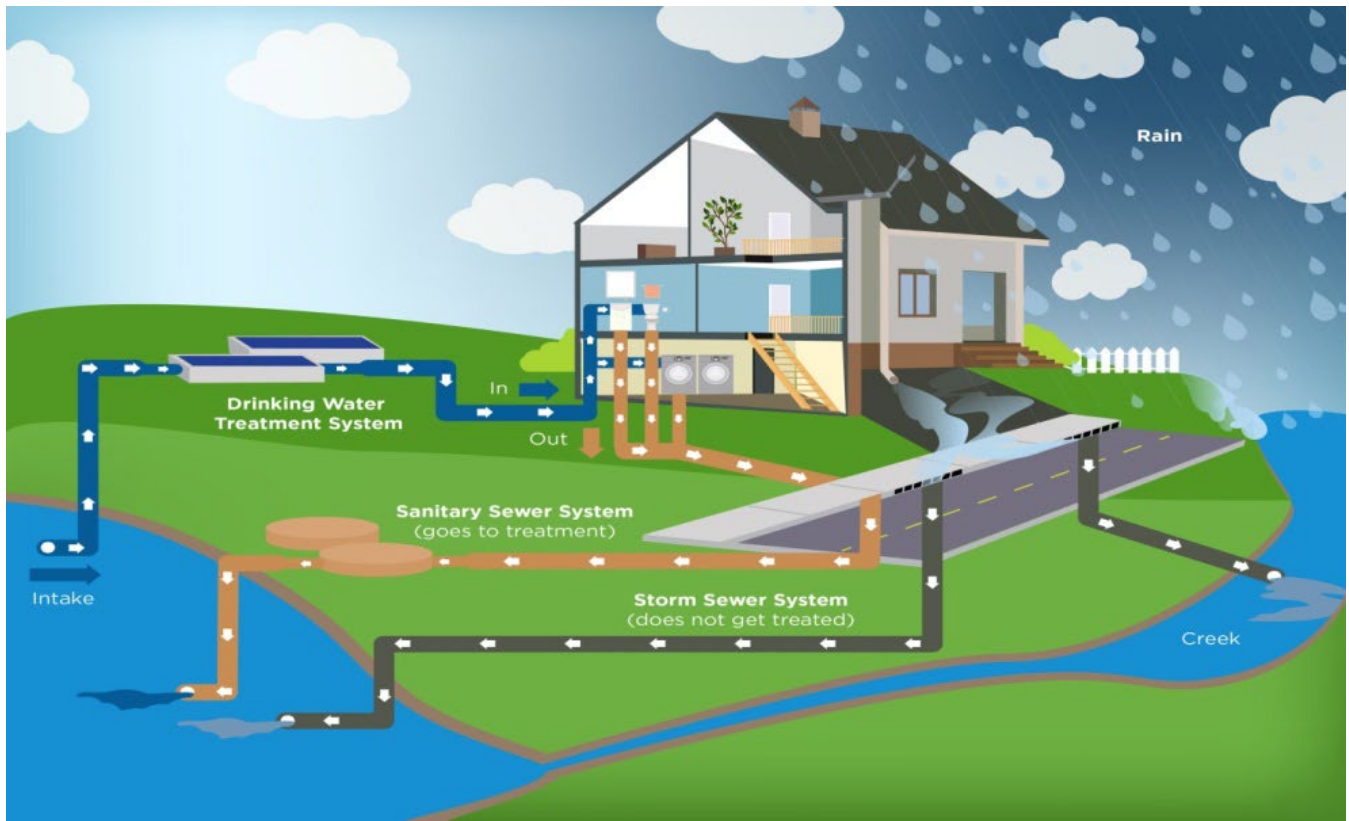
Image provided courtesy of Conservation Ontario A sanitary sewer system collects wastewater and directs it to a water resource recovery facility (WRRF). All drains and toilets in a home discharge to a sanitary sewer pipe (owned and maintained by the homeowner) that runs from the home to the property line. Your local city or town is responsible for the portion of sanitary sewer between the property line and the main sewer. York Region is responsible for the main sewer which collects and transports wastewater to a sewage treatment facility. From there, solids are burned to provide energy and liquids are cleaned and discharged back into the environment.

### What is a storm sewer?

Storm sewers collect and transport storm water such as rain and melted snow or ice from roofs, streets, parking lots and other paved areas to holding ponds or directly into streams, creeks, rivers, and lakes without treatment. A storm sewer under a local road is the responsibility of the local city or town, while a storm sewer under a Regional road is York Region's responsibility.

Storm sewer blockages are often caused when engine oils, sand, leaves, and other debris are put into storm drains. Storm sewer backups can lead to flooding in surrounding areas. Homes with improper storm water drainage may be at greater risk of basement flooding because the water pools and can be redirected back to the house where it can leak into cracks in floors or foundations and through window wells.

## Municipal sewer systems



### How can I prevent a sewer backup at home?

- Before washing pots, pans, and dirty dishes, wait for fats, oils, and grease (FOG) to harden then scrape or wipe into your green bin. Visit [york.ca/ProtectYourPipes](http://york.ca/ProtectYourPipes) for more disposal tips
- Single-use wipes (even if marked 'flushable') go in the garbage; personal care products and diapers go in the green bin
- Review your home insurance policy and/or contact your agent to verify if your policy covers damages due to a sewer backup
- Contact a licensed plumber to have an approved backwater prevention device (e.g., backwater valve) installed to reduce the risk of sewage entering the basement if your home is served by a municipal sewer system; your local city or town may have information on approved backwater prevention devices
- Make sure your property has good drainage and the foundation walls and floors are free from cracks; see the Institute for Catastrophic Loss Reduction's [Handbook for Reducing Basement Flooding](#) for more information
- Keep eavestroughs and downspouts clear to allow proper drainage. Position downspouts away from driveways and walkways
- Disconnect downspouts and weeping tiles from the sanitary sewer system
- Visit [york.ca/Bindicator](http://york.ca/Bindicator) to find the best option for item disposal

### What should I do immediately after a sewage backup?

- Stop using your plumbing until the sewer problem is checked and fixed
- Stay out of sewage floodwater, especially near electrical lines or outlets

- Turn off power at the breaker box if there is standing water or the possibility of wires getting wet. Ask your electrical utility for help if needed
- Contact a licensed professional to investigate and assess the source of the problem if your home is served by a private sewage system. Your local municipal building department can also provide direction
- Contact your local Public Works department to request an investigation and assess the source of the problem if your home is served by a municipal sewer system. You may be advised to contact a licensed plumber if the problem is linked to the drain or toilet system of your home
- Contact your landlord if you are a tenant
- Check your insurance policy to see if you have sewer backup coverage

## **Public health precautions to take when preparing to clean up after a sewage backup**

- Children, pregnant women, and people with respiratory conditions should not handle sewage water or materials contaminated by sewage
- Never touch raw sewage with your bare hands. Wear rubber boots and gloves, eye protection and a face mask when cleaning and disinfecting
- Always wash hands with soap and potable water after cleanup activities or after handling articles contaminated by sewage. If soap and potable water are not available for hand washing, use an alcohol-based hand sanitizer that has 70-90% alcohol with a Natural Product Number (NPN) and is within its expiry date
- If you are exposed to sewage water and you develop diarrhea, vomiting or fever, seek immediate medical attention
- If you have open cuts or wounds that are exposed to sewage water, thoroughly clean with soap and potable water and seek medical attention if needed
- Do not eat food that has been in contact with sewage, including contents in the freezer, fridge, bottled drinks and products in cans and jars. If you are unsure whether an item is spoiled or contaminated with sewage flood water, throw it out
- If your private well has been contaminated with sewage water, do not use the water for cooking, drinking, or bathing. Use bottled water or water from an approved source. Flooded wells should be tested for bacteria before resuming water consumption

## **How to clean up after a sewage backup:**

- Dry out the affected space by opening doors and windows and using fans and dehumidifying equipment to prevent mould growth
- Assume that everything touched by sewage water has been contaminated and must be cleaned and disinfected or thrown away. If the material is replaceable and cannot be thoroughly cleaned and rapidly dried, it should be replaced
- Discard items that have been contaminated with sewage water and cannot be washed and disinfected, such as mattresses, carpeting, carpet padding, rugs, upholstered furniture, cosmetics, stuffed animals, baby toys, pillows, wooden cutting boards, baby bottle nipples, pacifiers, foam-rubber items, books, and wall coverings
- All hard surfaces and items that can be cleaned and disinfected, such as flooring, sealed wood/drywall, concrete, molding, plastic and metal furniture, countertops, appliances, children's toys, sinks and other plumbing fixtures should be washed with a solution of potable water and soap, and then disinfected using a bleach solution
- Children's toys that have been disinfected should be rinsed thoroughly with potable water after disinfection

- Professional assistance may be required to remove carpets, drywall, or insulation soaked or damaged by flood waters
- Drywall exposed to high humidity or standing water for a prolonged period of time should be removed and discarded. Persistent mould growth may require professional assistance

**Use undiluted household bleach (5.25%) when preparing a solution (5,000 PPM)**

- Mix 100ml (20 teaspoons) of bleach into 1L (4 cups) of water
- When making bleach and water solution, always add the bleach to the water
- Ensure the bleach remains on the surface for at least 10 minutes
- Never mix bleach with ammonia or other household cleaners. Mixing bleach with ammonia products will produce dangerous toxic fumes
- Ensure the area you are working in is well-ventilated – use fans or open windows and doors
- Ensure a new diluted bleach solution is made daily, if needed

**For more information on this or any other health-related topic, please contact York Region Health Connection at 1-800-361-5653; TTY 1-866-512-6228 or visit [york.ca](http://york.ca)**

## Resources

- [Government of Canada: Addressing Moisture and Mould in Your Home](#)
- [Government of Canada: After a flood](#)
- Institute for Catastrophic Loss Reduction: [Handbook for Reducing Basement Flooding](#)
- [Infection Prevention Tips for Flood and Hurricane Season](#), Association for Professionals in Infection Control and Epidemiology
- [Protect Your Pipes](#): York Region's webpage for proper disposal tips
- [Septic Smart! Understanding Your Home's Wastewater System](#), Rideau Valley Conservation Authority
- [Ontario Ministry of Environment, Conservation and Parks – Septic Systems](#)
- York Region Emergency Management - [York Region's Emergency Preparedness Guide](#)