

## **Flood-proofing your home**

Municipal governments prevent flooding by maintaining the sewage systems. If you experience drainage problems at your home, ensure that the source of flooding is not on your property. Take steps to flood-proof your home.

### **What is a sanitary sewer?**

A sanitary sewer is a pipe located in the street and designed to transport wastewater from your home. This consists of water from sanitary fixtures and floor drains inside your house as well as groundwater from weeping tiles around the foundation of your home.

### **What is a storm sewer?**

A storm sewer is a pipe, located in the street, which is designed to carry storm-related water runoff. Storm sewers are normally much larger than sanitary sewers because they are designed to carry much larger amounts of flow.

### **What causes sewer backup?**

- Extra storm-related water from sources other than wastewater and groundwater should flow into the storm sewer or soak into the ground without entering the sanitary sewer.
- If excess storm water does enter the sanitary sewer system, it causes a supercharged sewer flow. An eight-inch (20 centimetres) sanitary sewer can handle wastewater from up to 500 homes; however, it takes only a few unexpected water sources to overload this kind of system.

### **How can a supercharged sanitary sewer cause basement flooding?**

A supercharged sewer flows at a greater than normal level. Basement flooding can occur if the home has sanitary fixtures or floor drains below the supercharged level.

### **Downspouts and roof drainage**

- Most homes are equipped with downspouts which discharge the water collected by eaves troughs directly into the ground. Excess water runs into the front street where it enters the storm sewer. It is very important that this water does not enter the sanitary sewer. If your downspout drains too close to the side of your house, this water can drain into the sanitary sewer through the weeping tile adjacent to your house foundation.
- Damage or sanitary sewer surcharging can occur if rainwater drains too close to your house on ground that may not be tightly compacted. The excavation for your basement may have been dug a few feet wider on all sides to allow working room during construction of the basement walls. When this extra space was backfilled, the soil may not have been tamped down as tightly as the original soil, making it more likely to settle and trap surface water.
- Surface water soaking down to your foundation can create problems: it can damage your foundation; seep through cracks in your basement wall, causing dampness; or overload the sanitary sewer by draining through weeping tiles, causing a sewer backup.

## What can I do to prevent flooding in my home?

You may be able to do some “flood-proofing” tasks yourself, while other changes need a qualified contractor or tradesman.

- Fill in any settlement next to your house.
- Redirect storm water away from your house.
- Make sure the ground slopes away from your house on all sides.
- Always keep your downspout extension in place.
- Check to see that your downspout extension drains a good distance away from your house in an area that will not erode.
- Be careful that water does not drain into your neighbour’s property.
- If your downspout is connected to the weeping tile adjacent to your home, disconnect it immediately.
- If you are constructing a new home and plan to build on a slab, or install a washroom in the basement, consider taking the necessary precautions to prevent sewage and water from backing up into your house through the sanitary drains.
- One aspect of flood protection involves the installation of backflow valves on toilets, floor drains, washing machine drains, rain downspouts, sump pumps and any sink drains in the basement. Main sewer lines and septic connections should also be considered. These are designed to prevent sewage and water from backing up through these waste lines. Some backflow valves operate automatically while others may have to be closed by hand. In most cases the backflow valves may need to be installed by a qualified plumber or contractor according to existing building codes.

For more information on hazards in Alberta, contact your municipality’s Director of Emergency Management or the Alberta Emergency Management Agency at 780-422-9000 (Dial 310-0000 for toll-free access outside Edmonton) or visit [www.aema.alberta.ca](http://www.aema.alberta.ca)