

DRAINAGE AROUND YOUR HOME

Do any of the following conditions exist around your home?

- Wet or damp basement or crawl space
- Puddles or pools in yard for long periods after a rainfall
- Soil erosion or slides
- Poorly-growing trees, shrubs, or other plants

If so, your property may have a drainage problem. The following information will help you identify the problem and find a solution. Bellevue Utilities can also send one of our employees out to your home to offer advice about your problem and specific drainage measures that may be needed. Call Utilities at 425-452-7840. See Other Resources below.

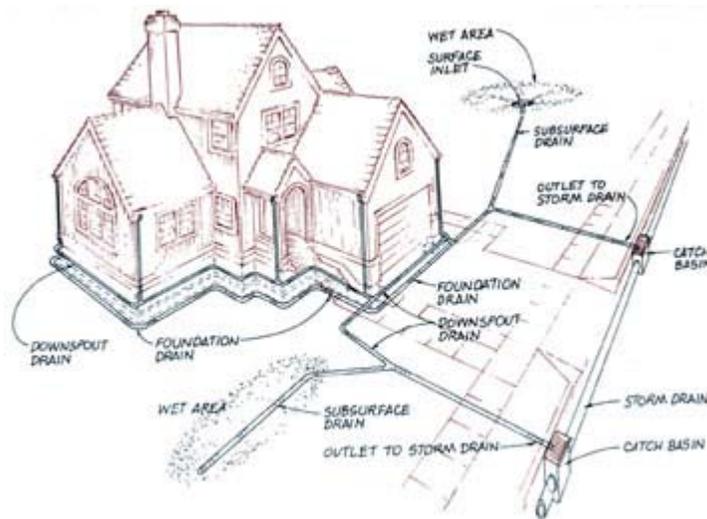


Do you know the most common cause of drainage problems?

Insufficient maintenance of your home's drainage system. Leaves, needles, and other vegetation collect in gutters, downspouts, and pipes, and on top of storm drainage inlets. To avoid problems, inspect these structures around your property regularly and remove any debris.

SLOW-DRAINING SOILS

If the soil at your homesite has a dense layer, especially a layer of clay, water may not be able to pass through. This restriction can cause ponding in the lawn or water in the crawlspace. If the dense layer is near the surface and the ponding is in a small, low-lying wet spot, dig a small trench through the layer and fill it with sand or gravel. The water will then be able to seep into the less dense soil underneath. For large wet areas, install subsurface drains, such as those described in the following section.



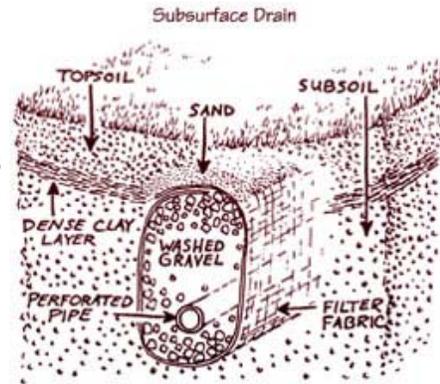
If you're planning to connect drain outlets to the street drainage system, please contact Utilities first. Staff can provide pre-construction advice in making the connection, which will help prevent problems. YOU'LL ALSO NEED A PERMIT. (See below for phone number.)

Even on well-drained soil, heavy foot traffic during wet periods can compact soil and reduce the ability for water to seep into it. Restricting foot traffic in wet yards will help prevent soil compaction.

SPRINGS

A spring is water emerging from the ground. The water source may be close by or many miles away. Springs are very common in Bellevue and can occur throughout the year or only during periods of heavy rainfall.

If your house is constructed over or near a spring and water flow around your home is a problem, install **subsurface drains** along the outside of the foundation wall. Subsurface drains are commonly made of perforated plastic concrete, or metal pipe. The pipe should be at least 4 inches in diameter and surrounded with 6 to 12 inches of washed gravel and/or sand. Wrapping the gravel in a blanket of filter fabric will protect it from being clogged by soil particles. If your lawn or on-site septic field is affected by a spring, install a subsurface drain to collect the groundwater and divert it from these areas.



PONDING

After a rainfall, you may notice ponding in your yard or driveway. To prevent surface water ponding, slope your yard so that surface water drains away from the house. A minimum slope of 1/8 inch vertical per 1 foot horizontal is generally adequate. When filling low areas during grading, use the most free-draining soil available. Save the topsoil and spread it over the newly filled and graded areas to help establish vegetation.

Another way to control ponding in low areas of your yard is to install downspouts. Whenever possible, have downspouts empty into a subsurface drain. You can also install a shallow channel or a surface inlet leading to a subsurface drain.

SEASONAL HIGH WATER TABLE

The water table is the upper surface of groundwater or the level below which the soil is saturated. This level may vary by several feet throughout the year depending on soil, landscape, and weather conditions. In many areas of Bellevue, the seasonal high water table is as little as one foot below the ground surface.

In selecting a homesite, the level of the seasonal high water table is a very important consideration. If the water table is 6 feet deep or more, water damage is usually not a concern. **But, if the seasonal high water table is at or near the ground surface for long periods, water can cause damage to a home built there.**

Installing drains around the outside wall or under the basement floor will help. If you're thinking of lowering the water table under the basement floor, however, please consult a qualified engineer. On some soils, especially slow-draining silts and clays, unequal settlement can crack walls.

FLOODING

If your home is in the flood plain of a nearby stream or creek, it may flood if the stream overflows during periods of heavy rainfall. In upland areas, flooding can occur if your house is built in the path of a natural drainage way or on a site that is lower than the surrounding area. Remember that a drainage way or low area that appears safe in dry seasons can carry runoff water in wet seasons.

Some homeowners try floodproofing their home by diking, waterproofing walls, and making provisions to block windows, doors and other openings. Although these measures may reduce damage, they are sometimes expensive, require careful evaluation to prevent structural damage, and are not always effective against severe floods.

Providing adequate protection against flooding often requires community-wide efforts. Drainage problems and solutions may cross property lines, both public and private, and involve several homeowners as well as the city.

OTHER SOURCES OF INFORMATION

Utilities can provide more information about planning and installing specific drainage measures around your home. For other sources, check the yellow pages under *Drainage Contractors*, *Pipe*, *Waterproofing Contractors*, and *Waterproofing Materials*.

UTILITIES PHONE NUMBERS

24-Hour Emergency Service.....425-452-7840

Flooding occurring now
Hazardous road conditions
Pollutant spills
No water, sewer overflows, water main breaks

Advice and other Non-Emergency Calls.....425-452-7840 (M-F 7:00 a.m. - 3:30 p.m.)

General information requests
Requests for drainage advice at your home
Flooding occurred in past; not occurring now

Stream Team Information.....425-452-5200

Volunteers working to help protect and enhance water quality and fish and wildlife habitat.

Permits.....425-452-6800

You will need a permit from the city's Development Services for the following. Please call for more information.

Land clearing over 1,000 square feet
Earth-moving of over 50 cubic yards
Work along streams, wetlands, or floodplains
Changes to an existing drainage system
Connections to Bellevue's drainage system
New construction or remodels