

# Water Management Strategies

Water can cause significant damage to your home. A surface water management plan will remind you what actions must be taken to help keep water away from your home.

- Fill areas that have settled next to the foundation with clay—not topsoil— with a positive slope away from the foundation (10 per cent is recommended)
- Use downspout extensions to move water farther from the foundation and keep them extended year-round
- Ensure eavestroughs and downspouts are clear of debris
- Ensure window wells are clear of debris so water can flow to the weeping tile system. The top of a window well should be a minimum of two inches (50 mm) above finished grade. Do not plant flowers in window wells
- Sprinkler heads should not direct water against the foundation or cladding and should not be placed within the backfill area near the foundation
- Ensure your sump systems are in working order. Install a discharge hose if necessary to move water collected in your sump pit farther away from your home.
- Regularly clear any ice or frost buildup from storm water leaders connected to below grade storm lines and redirect any water through the overflow, away from the foundation.

For more detailed water management strategies, check out our [Surface Water Management](#) brochure. Visit [anhwp.com/surface-water](http://anhwp.com/surface-water)



## How is my lot designed to drain water?

In Alberta, most individual lots are graded according to a municipally-approved grading plan. Grading slopes the clay sub-soil away from the home. A second grading may take place to fine-tune the grade before topsoil is applied. In some jurisdictions, the homeowner is responsible for the second (final) grading of the lot. If you are unsure, contact your local authority (e.g. City of Calgary, Strathcona County) for lot grading requirements.

The lot may have drainage systems such as swales (shallow valleys), catch basins (storm water collection points) or holding ponds designed to control and assist in overall surface drainage.

Standing water near a home's foundation can find its way into the basement. For this reason, it's critical to drain pools of water as soon as possible. Homeowners are responsible to maintain drainage systems/

strategies that move water away from their homes and away from neighbours' properties. This can be accomplished by filling areas that have settled.

A lot is graded for drainage during normal rainfall but heavy or prolonged rain may result in standing water. Areas excavated during construction (e.g. utility trenches or basement areas) are more susceptible because they often settle over time, forming areas where water can collect and cause leakage problems.

To fill these settled areas (also called depressions), remove the topsoil and fill the depression with compacted clay—not topsoil. Topsoil absorbs water like a sponge and the water will simply drain through it and collect again when it reaches the clay layer located just below the topsoil.

### OTHER DRAINAGE CONSIDERATIONS

- Do not alter the general drainage pattern of your lot without consulting your municipal authority
- Do not divert water from your property onto a neighbour's property
- Clear ice and snow from drains each spring and provide a drainage pathway to move water away from your home.
- Some window wells feature a drain to direct water down to the weeping tile. Window wells should be kept free of leaves, dirt and debris that could hamper drainage.

# Eavestroughs & Downspouts



Efficient rooftop drainage will help you keep your basement dry. Eavestroughs move water to downspouts and away from your home or from your downspout to the drain, below ground. During heavy rainfall, this drainage system can move hundreds of gallons of water in a single day so it's important that eavestroughs are sloped towards the downspouts and are clear of debris. Surface particles from asphalt shingles are often washed away by rain and settle in the eavestroughs, reducing their efficiency. Clean your eavestroughs at least once a year to prevent this.

Downspouts ending on sod usually feature an extension to move water farther from the perimeter of the home. Always return downspout extensions to their lowered positions after cutting the lawn.

Surface drainage is far more efficient than weeping tile at keeping water away from your foundation.

Weeping tile is a piping system that collects and channels subsurface water away from the foundation. Surface water (e.g. rainwater) must be directed away from the perimeter of the home to reduce demand on a weeping tile system.

**For more detailed water management strategies, check out our [Surface Water Management](#) brochure. Visit [anhwp.com/surface-water](http://anhwp.com/surface-water)**



# Landscaping

Landscaping is **not** usually included in the contractual agreement between a builder and a homeowner. However, landscaping decisions and implementation can cause significant damage to a home so it's important to plan landscaping carefully and hire a professional if necessary.

---

## How does landscaping impact water drainage?

Across the Prairies and interior BC, the provinces can receive between 15 to 20 inches of precipitation per year. A 40' x 100' lot could receive more than 14 inches or 31,900 gallons (144,800 liters) of rain so it's important to consider the drainage plan for your lot when planning your landscape design. Here are some things to consider before landscaping:

- Grassed areas generally require steeper drainage slopes compared to hard surfaces like concrete or asphalt
- Planting beds should also be graded away from your foundation walls
- Some species of trees (such as poplar) have invasive root systems that can enter utility corridors and weeping tile systems. Tree roots have been known to rupture water and sewer lines and can exert enough force to crack concrete basement walls. Plant trees away from the perimeter of the home
- An established lawn prevents soil erosion. To avoid erosion, establish a lawn or implement your landscape design as soon as possible after the rough and final grades have been completed.

## How do I take care of my new landscaping?

Newly planted lawns, shrubs or trees require special care and attention in the first few years to ensure proper root establishment.

### SOD

Grass grows better in some areas than in others depending on exposure to sun, wind, rain and other factors such as drainage, soil type and maintenance. When establishing new sod, the first two weeks are critical. You should avoid walking on newly laid sod and should saturate the sod with water as soon as it's laid. Keep the grass moist for the next few days and in the second week, reduce watering to every other day. Once the grass has 'taken,' a weekly watering is usually adequate. Water evenly and slowly so the water penetrates the soil without running off.

Your lawn needs about 25mm (1 inch) of water a week—including rain—when it's actively growing in the summer. You can track this with a rain gauge. Shallow watering results in a shallow root system, leaving the lawn susceptible to damage. Deep watering establishes a strong, healthy root system. Hot, sunny areas may need more water and shady areas may require less water. It's important to avoid overwatering because saturated soil prevents air from reaching the root zone where it's needed.

Proper mowing keeps grass healthy. Grass cut too short is susceptible to sun damage.

Landscapers recommend grass should be approximately 50 mm (2 inches) long and also suggest you never cut more than 3 cms (1.18 inches) of grass blade height at one time. Sharp mower blades will also prevent ragged, brown tips on the grass. If you mow frequently, fine clippings will decompose and help maintain the lawn. Heavy clippings must be removed from the lawn.

Fertilizing for weed control also protects your lawn. Consult your garden centre for products and application techniques

Finally, to give your lawn a healthy start in the spring, remove snow from shaded areas to avoid 'winter kill.'

*Note: there are other effective methods to weed control without the use of chemicals, consult your local authority for guidelines*

### TREES AND SHRUBS

Building and repairing root systems and ensuring plants have adequate water are the most important elements when establishing newly transplanted trees and shrubs.

Trees and shrubs should be watered immediately after being transplanted with quality drinking water that includes a root starter fertilizer. Do not use water high in sodium such as water from water softeners or from sloughs. Also, use well water with caution as some wells contain water with high salt content.

Water shrubs and trees at least once per week for the first year. In the first year, fertilize with a root grow fertilizer each time



*Trees and shrubs require about one gallon of water per foot of growth at each watering (includes rain).*

you water between May 15 to June 30. Use a balanced fertilizer with each watering from July 1 to August 1. Do not fertilize trees and shrubs after August 1. The resulting new growth will not have time to harden off before winter and may die. Contact your local garden centre for advice on suitable fertilizers. Trees should also be watered thoroughly in early fall to ensure there is adequate moisture at the root zone during the winter. Evergreens may require watering in late winter or early spring to keep the root ball frozen, especially in areas that experience chinooks.

Trees and shrubs require about one gallon of water per foot of growth at each watering (includes rain). If 12.7 mm (0.5 inch) of rain falls in a week, you may not need to water. However, maintain the fertilizing schedule and use some water when you do so. Water slowly all around the plant from

the centre to the outer circle of the leaves. For evergreens, spray the leaves or needles on hot days in the morning and the evening.

Evergreens exposed to wind need extra protection in the winter to avoid drying and browning of the leaves. A young tree exposed to high winds should be staked until it's well established. Make sure you use the correct stakes and ties for your type of tree. Contact your local garden centre for specific advice on how to prepare your plants for winter.

When you plant a tree, it's important to consider how large the tree will be in 15 to 20 years because a plant in the wrong place is simply a weed. For example, a full-grown tree may block windows, impede upon walkways or encroach upon a deck and a mature evergreen can create so much shade that lawn will not grow beneath it.