

# Managing Excess Runoff

**Castle Rock Water** suggests these steps to troubleshoot excess water issues during dry weather

*It is normal for water to periodically flow over sidewalks and driveways due to rain, snow melt, and sump pump discharge. If water continues to flow over your sidewalk, during dry weather, it could become a nuisance, creating algae growth in the summer and ice in the winter. When water becomes a nuisance, it is the homeowner's responsibility, by law, to eliminate hazards. Should the source be a leak or an irrigation issue, this is a waste of water and money.*

## Step 1: Find the source

**Overwatering is the primary cause of excess water flowing over sidewalks. The first step in mitigation is to check your irrigation**

- Have you observed water flowing in the spring, winter and fall? If the excess water only appears during the summer, this could signify an overwatering issue.
- During irrigation season, follow the every 3rd day watering schedule outlined by the Town of Castle Rock. The schedule is found at [CRgov.com/WaterSchedule](http://CRgov.com/WaterSchedule).
- Do not overwater. Find how much to irrigate each landscape bed with interactive tools on [CRconserve.com](http://CRconserve.com).
- Program for cycle and soak irrigation, especially with new landscaping. Ensure the generous application of water for new plant material is not running off.
- Is your property in a new development? Have you recently installed new landscaping? It will take several years for you and your neighbors' plant material to become fully mature.
- Learn more about efficient watering techniques at a Water Wiser workshop. Workshop registration can be found on [CRconserve.com](http://CRconserve.com).

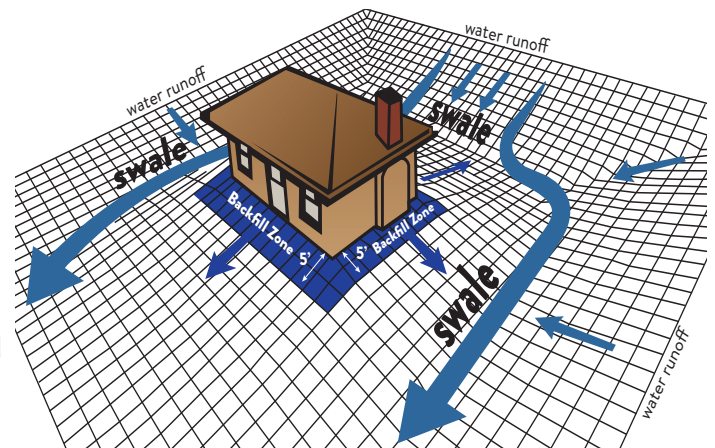
- Verify that all sprinklers, drip emitters and other irrigation are greater than 5 feet away from the building foundation. This allows water to flow more readily through drainage swales.
- Check that your irrigation system is not leaking. See how to find if you have an irrigation leak at [CRconserve.com](http://CRconserve.com).
- If you feel a leak is in the service line and not within your home, call for flow detection service from Castle Rock Water: 720-733-6000.

## Step 2: Ensure good drainage

**Improperly placed discharge pipes and obstructed swales can affect drainage flows**

- Check that sump pump and down spout discharges are positioned more than 5 feet from the foundation, away from the backfill zone, to prevent water from re-circulating through the building's drainage system.
- Verify the gutters on your home have positive drainage to downspouts along the entire gutter. Low points within the gutter system would overflow and land in the backfill zone.

- Do not bury downspouts. If they must be buried, ensure they daylight and are not obstructed.
- Keep discharges at least 10 feet from the sidewalk. Discharge flow should run through a landscape area prior to draining to the street. Routing discharge pipes to plant material can reduce irrigation demand and runoff. (image, pg. 2)
- Make sure the builder-certified swales are maintained and not blocked by paths, fences and plant material.
- Swales are designed to accommodate potential drainage from surrounding properties through your property.
- Use appropriate landscape materials, such as rock, in concentrated flow areas.
- Make sure the ground slopes away from the foundation walls by a minimum of 10 percent for the first 10-feet fall.



## Step 3: Reduce contributing conditions

### Take steps for algae control

- Fertilizer is the primary nutrient that allows that slimy, green algae to thrive. Water runoff can easily carry excess fertilizer, pesticides and herbicides which create hazards and pollute our watershed.
- Instead of using fertilizer, amend the soil/lawn with an aged, organic compost (not manure). Creating fertile soil allows water to absorb more readily and provides for a healthier landscape.
- Mulch grass clippings instead of bagging.
- Be sure excess clippings and yard waste are disposed of properly and not left on the sidewalk to travel down the stormdrain.
- If fertilizer is used, use an organic, slow-release one, apply sparingly, and ensure it does not run off your landscape.



*Improper discharge  
Cut back minimum 10 feet from sidewalk*

### Handle snow removal appropriately

- Prevent ice build-up by removing the snow regularly and often from sidewalk, curb, gutters and driveways. It is the homeowner's responsibility to remove ice on sidewalks and driveways (Municipal Code 12.16.030).
- When removing snow, place it in the yard and not the street. This allows the snow to melt into the yard for better drainage, provides winter watering, and reduces potential ice build-up in the street.
- Excess drainage from the sump pump can potentially be reduced by removing accumulated snow from the backfill area next to the house.
- For snow plow tracking and concerns about ice buildup in roads, visit [CRgov.com/snow](http://CRgov.com/snow).



*Remove ice and snow often*

## Step 4: Work collaboratively

### Excess water is often not isolated to a single property

- Talk to your adjacent neighbors about following the steps outlined in this brochure.
- If your property is next to an open space, talk to your HOA about overwatering and drainage remedies.
- Work with your builder to address drainage issues, through the warranty process.
- Consult a landscape professional for site specific solutions to optimize drainage.



*Maintain swales*

*Municipal Code 12.16.030  
Curbs, Gutters and Sidewalks:  
It shall be the further responsibility  
of all property owners in the Town  
to maintain all curbs, gutters and  
sidewalks on or adjacent to their  
property free from all obstructions,  
snow and other hazards*

## Step 5: Still having problems

### When proper irrigation and matured landscaping doesn't mitigate excess water during dry conditions

Should nuisance water still persist during dry weather conditions, a chase drain installation may be desirable to reduce sidewalks maintenance. A chase drain is a metal drain placed within the sidewalk to direct water flow through the sidewalk instead of over it.

- Work with your builder to request a chase drain.
- If your builder is no longer available, contact Castle Rock Water at 720-733-2235 for additional options.

Castle Rock Water  
175 Kellogg Court  
Castle Rock, CO 80109  
720-733-6000

[CRgov.com/Water](http://CRgov.com/Water)  
[CRconserve.com](http://CRconserve.com)



*Report accidental or illegal dumping  
or discharge of any substance into  
the stormdrain, immediately.*

**Stormwater Hotline**  
**720-733-2235**