



RESIDENTIAL EXCESS RUNOFF

Sources and Solutions





AT A GLANCE

Use these links to quickly navigate

What Do State and Local Rules Say?	2
Ensure Good Drainage	3
Locate the Problem and Identify Solutions	
Precipitation (rain and snow)	4
Downspouts and Rain Gutters	4
Side Swale / Drainage Swale	5
Overwatering	5
Improperly Landscaped Area	6
Irrigation Line Damage	6
Perimeter Drain	7
Basement Sump Pump	7
Still Having Problems after Troubleshooting?	8
Bigger Issue than Just Your Home?	8
Contact Information	8

Excess stormwater runoff from your property can be a nuisance for you, your neighbors and the city stormwater system. Most problems with excess runoff develop because of poor *infiltration*, the process by which water on the ground surface enters the soil. Poor infiltration is likely to happen when one or more components of effective landscape design are altered.

Good landscape design directs average stormwater runoff from precipitation and snowmelt into designated property drainage areas to *infiltrate*, or be absorbed, into the property. To be most effective, a home’s downspout must empty, or *discharge*, into drainage areas (called “*swales*”) that are created between houses during new construction. When swales are overwhelmed—such as during heavy storms, good design allows for excess runoff to go over sidewalks and into the tree lawn. (Note: The design of some older properties may not include these elements.)

Identifying and addressing the causes of excess runoff, as well as ensuring your property offers adequate areas for runoff water to soak into the ground, may reduce the risk of injury, property damage, neighborly disputes and environmental harm.

This brochure provides a path to troubleshooting the cause of your excess runoff, as well as offering ways to correct the issues identified.

What Do State and Local Rules Say?

Excessive amounts of stormwater runoff that flow from your property onto another area can create annoying or potentially dangerous situations. But are they a violation of state or local regulations?

Colorado common law says a property owner cannot prevent historic off-site drainage from crossing their property. That has to be allowed.

Longmont’s regulations apply to city rights of way, such as streets, alleys, bike paths and city-maintained walkways. They have no jurisdiction over private property.

When disagreements happen about runoff from one property onto another, it is a private property issue that needs to be resolved between neighbors. Longmont offers a community mediation program that may be able to help. [Learn more here.](#)

ENSURE GOOD DRAINAGE

Soil along the Front Range is typically clay-based and likely to become hard and dense. This can make it more difficult for runoff from storm drainage or lawn and garden watering to be absorbed into the soil.

The general actions listed here can help improve your property's soil drainage and infiltration, whether or not you identify with any of the specific drainage problems listed in this brochure.

- ✓ **Increase the soil's ability to absorb water** by decompacting and aerating the soil and adding compost annually.
- ✓ **Eliminate or reduce the amount of traditional grass lawns** that require more watering. You may qualify for a discount with Resource Central's Lawn Replacement Program. ResourceCentral.org/lawn/
- ✓ **Check your watering practices** by receiving a free Slow the Flow irrigation assessment or upgrade your irrigation equipment with an Efficiency Works rebate. bit.ly/water-rebates

These tips can help keep slimy algae from building up and adding to your runoff.

- **If you choose to use fertilizers**, select those with low- or no-phosphorus content.
- **Collect and compost lawn clippings.** Longmont offers affordable curbside composting and drop off options for your lawn waste. LongmontColorado.gov/wasteservices

- ✓ **Choose water-wise landscaping options** that incorporate effective infiltration areas instead. You may qualify for a discount on a professionally designed Garden in a Box from Resource Central. ResourceCentral.org/gardens

- ✓ **Remove snow as soon as possible after a storm.** Clear sidewalk, curb and street gutters to help prevent ice buildup. This action is especially needed for north-facing areas, where melting happens more slowly. **Bonus: Shoveling snow into the yard adds free moisture for your lawn and trees.**



Tips for New Construction

Before purchasing

Ask the builder to describe to you how on-site stormwater management was designed and where it is supposed to go if there is runoff from the property.

After closing

If drainage appears to be a problem after moving in, work with the builder to have drainage issues resolved during the warranty period.

LOCATE THE PROBLEM AND IDENTIFY SOLUTIONS



Precipitation (rain and snow)

Runoff from rain or melting snow should make its way from the side swale across the sidewalk and into the tree lawn.

SIGN

Excess amounts of runoff or ice extend beyond the width of the swale and contribute to slippery or icy conditions beyond your property

CAUSED BY

- Side swales that have been filled in with vegetation or hardscape such as a sidewalk
- Front yards that are heavily sloped toward the street
- Front yards that are covered in plastic or nonporous landscaping fabric
- North-facing areas that do not receive enough sun exposure during winter
- Tree lawns that cannot accept excess runoff because they are too high

POSSIBLE SOLUTIONS

- Restore the side swale to a less developed condition to allow runoff a place to infiltrate.
- If the yard slopes toward the street, ensure the downspouts discharge as far from the sidewalk as possible for maximum infiltration.
- Restore some porous areas to the front yard to allow additional area for water to soak in.



Downspouts and Rain Gutters

SIGNS

- Water pools near the base of the downspouts or forms icy buildup
- Water pours over clogged gutters or discharges from areas other than downspout openings

CAUSED BY

- Debris from clogged gutters
- Lack of adequate areas for downspout discharge to infiltrate
- Downspouts that discharge into hardscape or sloping areas with little or no infiltration



POSSIBLE SOLUTIONS

- Clean gutters regularly to prevent clogging.
- Direct downspouts into side swales, front or back lawn, or an open area.
- Locate downspouts a minimum of 5 feet from the house, and make sure they drain away from the home.
- Discharge as far from the sidewalk as possible to decrease chances of overflow onto the sidewalk.
- If buried, make sure there is an appropriate discharge location.
- Do not combine with sump pump discharge.

Don't Let Icy Spots Become a Nuisance

- Safely treat icy spots using sand, cat litter or an ice melt product.
- Remove ice from driveways, sidewalks, walkways, steps and parking spaces in a reasonable time.
- Clear the street gutters in front of your home as well. Allowing runoff to reach city storm drains will help resolve some issues from even taking hold.
- Review the city's Snow Savvy Guide for residential requirements and more tips. [LongmontColorado.gov/snow](https://www.longmontcolorado.gov/snow)

LOCATE THE PROBLEM AND IDENTIFY SOLUTIONS



Altered Side Swale / Drainage Swale



WHAT'S A SWALE?

A swale is a shallow trough-like depression designed to carry water into the tree lawn or street during rainstorms or snow melts. Swales are often found between or behind homes in newer developments.

SIGN

Water runs off the property too quickly to infiltrate into the soil and continuously overtops the sidewalk

CAUSED BY

- Side swales are replaced with sidewalks or filled with landscaping like trees or shrubs
- The size of the swale has been reduced or the side slopes have been changed

(Both of these actions reduce capacity of the swale, increasing the likelihood of continuously overtopping onto the sidewalk.)

POSSIBLE SOLUTIONS

- Do not change the side slopes of the swale. Doing so can lead to a reduced capacity for stormwater.
- Do not fill swales with bushes, trees, berms, sidewalk or other improvements.
- If changes have been made and you are experiencing excessive runoff from your property, contact a professional for advice.



Overwatering

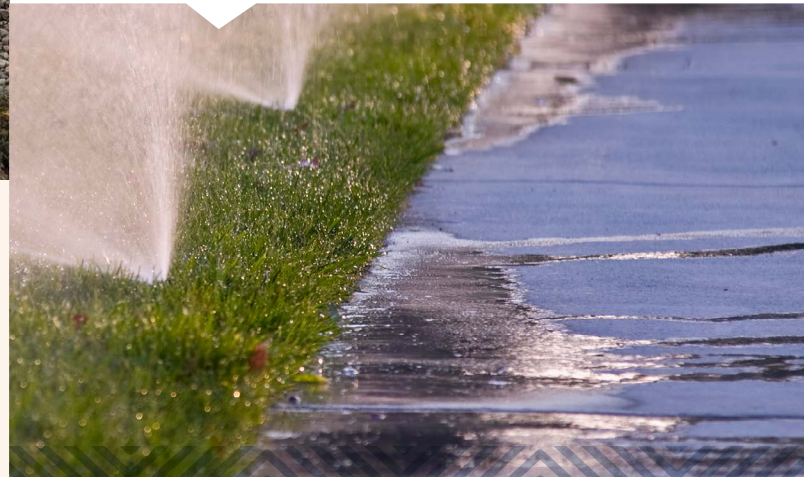
Longmont's clay soil can be slow to absorb water.

SIGN

Water pools on the sidewalk or other public areas even after the water is shut off

CAUSED BY

Watering too often or for too long, or watering when the soil is already saturated from rain or snow



POSSIBLE SOLUTIONS

- Sign up for a free Slow the Flow Assessment of your sprinkler system at ResourceCentral.org/sprinklers
- Upgrade and receive a rebate for more efficient sprinkler equipment. bit.ly/water-rebates
- Water your lawn using two shorter cycles between 6 p.m. and 10 a.m.
- Aerate regularly to reduce compaction and help break up clay soils.
- Incorporate compost into soils to break down clay.



Learn more about effective watering techniques and outdoor water conservation bit.ly/water-matters

LOCATE THE PROBLEM AND IDENTIFY SOLUTIONS



Improperly Landscaped Areas

Water-wise landscaping (sometimes referred to as xeriscape) promotes water efficiency by using plants that are adaptable to Colorado's semi-arid climate.

SIGN

Water pools in undesirable areas, such as the sidewalk, steps or driveway

CAUSED BY

- Lack of areas for water to soak into the ground
- Landscape fabric that doesn't allow for enough infiltration
- Downspouts that discharge too near the sidewalk and cause water to flow onto the sidewalk instead of soaking into the ground
- Sprinkler heads placed near the sidewalk, steps or driveway where water can pool
- Tree lawns that are too high to receive runoff from the sidewalk



POSSIBLE SOLUTIONS

- Research best landscaping practices or consider working with a landscape professional to design the area.
- Take a water-wise landscape seminar, remove turf or purchase a Garden in a Box with ResourceCentral.org
- Ensure any runoff from water-wise areas is directed into side swales as far from the sidewalk or roadway as possible to prevent constant overflow onto the sidewalk.
- Consider replacing the existing tree lawn with water-wise landscaping that is placed low enough to receive runoff, as shown in the photo above. (This may require HOA approval, as well as ongoing maintenance, such as weeding.)



Irrigation Line Damage



Pipes and drip lines carry water to plants that depend on them.

SIGNS

- Water bubbles up or sprays into the air when watering
- Water pools in irrigated areas even when lines are not scheduled to be active

CAUSED BY

Leaks in lines serving flower beds or other vegetated areas

POSSIBLE SOLUTIONS

- Sign up for a *free* sprinkler inspection from Resource Central ResourceCentral.org/sprinklers
- If leaks are found, contact a repair person or consult online videos for repair instructions.

Learn more about how to effectively incorporate water-wise concepts with DenverWater.org/xeriscape



LOCATE THE PROBLEM AND IDENTIFY SOLUTIONS



Perimeter Drain

This common foundation solution is a system of perforated pipes around the home's foundation designed to collect the water and deliver it to the sump pump where it can be pumped or drain away from the home.

SIGN

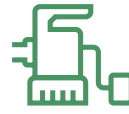
Water pools near where the perimeter drain empties

CAUSED BY

- Water from the perimeter drain empties into an area without adequate infiltration
- Discharge location is too close to the sidewalk, driveway or entrance to the house, resulting in excess runoff

POSSIBLE SOLUTIONS

- Confirm whether the home has one and if it is performing as intended.
- Drain into the front or back yard where there is plenty of room for the discharge to absorb into the ground.
- Drain into side swale as far from the sidewalk or roadway as possible to allow infiltration and to decrease chances of overflow onto the sidewalk.
- Drain in a separate location from the downspout.



Basement Sump Pump (or Need for One)

Sump pumps remove water from around a home's foundation (via a perimeter drain). A basement sump pump usually only pumps when the groundwater table is high. Usually this occurs after years of watering in the area or in case of very heavy rains.

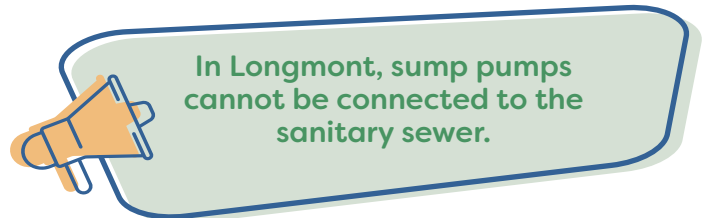
You may have a sump pump pit without the pump. If a pump is needed, it should be installed by a professional.

SIGNS

- Sump pump constantly runs
- The drainage hose discharge location is slimy or creates algae buildup
- House has no sump pump, but you are noticing wet walls or flooding

CAUSED BY

- Overwatering (in the entire neighborhood) for a long time
- Naturally high groundwater or seepage from nearby irrigation ditch



POSSIBLE SOLUTIONS

- Ensure the pump drains to a portion of the yard with good soil drainage to allow infiltration.
- Discharge onto a splash block to spread out the flow before yard infiltration.
- Consider a rain garden, which allows drainage to seep slowly into the ground.
- Do not combine sump pump drainage with downspouts.
- Tie the sump pump discharge pipe into a storm sewer inlet, storm sewer manhole or storm sewer pipe. These actions would be at the owner's expense and would require a [Right-of-Way Permit](#) from the City of Longmont. (Other permits may be required as well.)

STILL HAVING PROBLEMS?

Hopefully this brochure has helped you identify the cause and possible solution for any excess runoff issues affecting your property. If you've checked out all the causes listed here, but still have problems with excess runoff and infiltration, even in dry weather conditions, your property may be a candidate for a chase drain.

A *chase drain* is a metal drain placed within the sidewalk to direct water flow under the sidewalk instead of over it. Installation of a chase drain will be done by city staff and requires completion of a Chase Drain Application, which is available from the city's Public Works department.

BIGGER ISSUE THAN JUST YOUR HOME?

Some excess runoff issues may have a deeper cause than can be addressed by this brochure. If neighbors are experiencing the same drainage issues you may need to work collaboratively to research a solution.

This research may need to involve multiple sources, such as:

- your neighborhood's homeowners association (HOA), if there is one
- your home builder for the neighborhood
- a professional landscaping firm
- a geotechnical company

The city's Neighborhood Group Leaders Association offers resources and grants that may help with resolving neighborhood drainage issues. [Neighborhood Group Leaders Association](#)

The City of Longmont's engineering staff is not able to lead this larger process, although staff members may be available for support and consultation.



CONTACT INFORMATION



Learn more about water-wise landscape concepts

Online: bit.ly/water-matters and DenverWater.org/xeriscape



Sign up for free sprinkler audits or evaluations

Online: ResourceCentral.org/sprinklers



Report standing or overflowing water on city streets or sidewalks

Online: ServiceWorks.LongmontColorado.gov

Call:
303-651-8416