

LOG HOME LIVING

Keeping Your Log Home Dry | Savvy Builder | Log Home Living

Summer delivers lots of rain in a hurry, and your home and landscaping can feel the brunt of it. Here's how to properly plan for the deluge and stay high and dry no matter the season. by Jim Cooper

[1] We get some amazing summer rain in our neck of the woods. What are some general rules of thumb for keeping water away from my foundation?

When installing your foundation, make sure your contractor installs proper drainage. This is typically a loop of perforated plastic pipe that surrounds the base of the foundation and drains away from your home. The pipe should be buried in gravel with its top below the leading edge of the footing. If you live in an area prone to wet basements, I'd install



perimeter foundation drainage around the inside and outside of the footing.

Be sure the ground surrounding your foundation slopes away for at least 10 feet. If necessary, create a drainage swale, which is a wide, shallow depression that can carry water. You can landscape the swale, and it should be vegetated to help slow water flow. If the contours of your building site don't allow the foundation drain to exit at the ground surface away from the house, install a sump pump (an electric pump that sits in a drum-like container beneath the foundation floor).

Most building codes require that waterproofing be applied to the foundation. However, unless instructed otherwise, many foundation contractors will apply a gooey black substance that provides minimal protection. For a few hundred dollars more, you can have more formidable waterproofing. Good systems create a drainage plane at the foundation wall that allows water to move easily down the outside of the foundation to the drainage system. Ask your foundation contractor about options.

[2] Before I build my house, what are the biggest steps I can take to keep water out of my basement?

Start with generous roof overhangs as part of the design for your home. An acceptable overhang will be a minimum of 2 feet (measured horizontally from the wall of your home to the edge of the roof), but 4-foot overhangs are best. On gable ends, consider a 3- or 4-foot overhang. The best overhang for a log wall goes by another name: porch.

Wide overhangs have benefits beyond directing water. They also keep interiors cool by shading windows and help reduce maintenance, especially on gables. If you need the passive-solar benefits of direct winter sunlight, ask your designer to size overhangs to block high summer sun but not low winter rays. This will vary with your building location and climate.

Also, use gutters with adequate downspouts. Gutters capture most of the water coming off of the roof, but a gully washer will quickly overwhelm undersized or too few downspouts. Also make sure that downspouts end on a splash block or continue into underground drainage that exits some distance away from the house. Downspout drainage should be kept separate from foundation drainage. You don't want your foundation drainage clogged with leaves and debris.

[3] I'm already in my house and sometimes get water in my basement. What can I do to keep it out?

Try to determine the source of the water. This may require some detective work, as water has a way of disappearing in one place and reappearing in another without leaving a trace as to how it got there.

Possible sources of water entry are foundation windows, cracks in basement walls, joints between the foundation wall and floor, or even faulty gutters. I once traced a basement leak to a loose gutter spike located directly above a basement window. When the spike came loose, it caused the gutter to sag, and during heavy rains, water collected at the sag until the gutter overflowed — right into the window well. A powerful rain would fill the window well with gallons of rainwater, which leaked into the window framing and down the foundation wall. Re-securing the gutter solved the problem.

If you encounter a basement leak, realize that simply squirting some caulk or sealant into a suspicious crack rarely solves the problem. Sometimes it even makes it worse. Sealing cracks without identifying the source of the water usually only puts the problem temporarily out of sight. While you're feeling smug about how cheaply you solved the problem, water is building...and building.



Water is a truly remarkable force. It carves canyons and shapes mountain ranges. Imagine what it can do to a little caulk. I once saw an entire block foundation wall collapse simply from pressure built up by a clogged foundation drain.

[4] I've heard that some homeowners forgo gutters, but isn't the idea to usher water off your roof and away from your home?

Gutters serve two useful purposes. First, they keep water from running down your neck as you dash under the eave to escape a cloudburst. Second, and most important, they move large amounts of water away from your foundation.

A rainstorm that dumps 1 inch of water deposits about 3 quarts of water on every square foot of roof area (measured horizontally — pitch doesn't count). This means a 36-by-48-foot roof "footprint" will catch more than 1,000 gallons of water during a 1-inch rainstorm. If your house has a simple gable roof that sheds water toward the two eaves, 11 gallons of water will pass over each foot of eave. Without gutters, at least some of that water can end up in your basement.

If you live in an area of substantial rainfall and want to skip gutters, the width of your roof overhang and the slope of ground away from your house become very important. Make sure that your yard slopes at least 6 inches in the first 10 feet away from the house. Also be sure that the top of your foundation is at least 8 inches above the ground surface. These are building-code minimums in many areas. It won't hurt to raise the foundation even more to get exposed wood above the "splash zone," where water cascading from the roof hits the ground and splashes up on the surface of your home.

[5] My yard looks like a minefield after some summer storms. How do I keep erosion to a minimum?

Careful grading and thoughtful landscaping provide the best erosion control for a finished yard. Slope for the first 10 to 20 feet should be sufficient to protect the foundation but not so steep as to create sheets of rushing water. Your excavator may also create wide, shallow

channels or swales that collect rainwater, slowing and diverting it. Swales may lead to a pond, rain garden or into nearby woods.

If slopes are steep enough to create an erosion problem, study the water's path. Look for ways to interrupt the flow or slow its speed, such as using diverters on the roof to direct water toward certain areas or landscaping features like rocks and flowerbeds. Rain gardens exist for this very purpose.

[6] I don't have a paved driveway; we have gravel and stone. Problem is, when we get lots of rain, my investment washes away — is there any way to prevent this?

I feel your pain. I used to have a similar problem with my driveway, and I quickly became friends with an excavator I phoned every spring and fall to undo Mother Nature's handiwork.

Gravel driveways are tough to deal with because you often have to accept what your landscape gives you. A driveway that snakes across slopes — rather than a straight run of gravel — certainly helps when it comes to erosion. But there may still be places where volumes of water rush over the drive, digging deep trenches and carrying away gravel.

Try to use trenches to capture and divert water from the roadway. Sometimes it's best to install a culvert that carries water under the drive. If your drive runs through woodlands, do everything you can to preserve trees. They will help prevent concentrated rainfall. Sloping driveways in open areas can catch a lot of water that quickly gathers speed, leading to severe erosion. If your drive passes through a meadow, make sure the land on either side is well-vegetated — dense native grass and groundcovers work much better than mowed turf.

Water is among nature's most awesome forces — and yes, it's a force that sometimes puts a strain on your home. But if you plan well and remain vigilant, a little H₂O is never going to outsmart you and ruin the natural drama of a perfectly harmless summer storm.