



The Sucker Series

Water Runoff and Construction Practices

Dealing with Water Runoff at Home

Water runoff from every home, yard, and driveway in the Sucker River Watershed contributes to erosion and can carry pollution with it. It doesn't matter if you live right on the stream, or miles away, all the water runoff eventually ends up in the river. Drainage problems on your property could cause erosion on your land (or a neighbor's land), which causes dirt and muck to get into the Sucker and eventually the Lake.

Less water running off your property means less soil leaving with it. Every bit of water that is slowed down helps prevent pollution. Of course, nobody wants to have water in their basement or puddles near their house's foundation.

Landscaping options are the best solution to drainage problems. Planting trees, shrubs, or a garden helps soak up water. Plants also help prevent erosion and gulying on your property. A grassed, gently sloped drainage swale can

drain water more efficiently from your yard into a vegetated area.

Another option is to mount a rain barrel on the side of your house where rain runs off, whether from a downspout or directly off the rooftop (see photo and insert below).

Proper grading around your home will keep your basement from flooding. Your yard should be graded so water will drain away from the house and not towards it. Fill around older houses can settle, leaving low areas near the foundation. Keep in mind: within the first 10 feet away from your house horizontally, the ground should drop at least 6 inches vertically.

WHAT'S A RAIN BARREL?

One way to deal with rooftop runoff is to place a rain barrel under downspouts or eaves where water drains. Rain barrels store water for gardening and can protect your basement/foundation from roof runoff. Modern versions of this old farm favorite have screens to prevent mosquito breeding inside.



Home Sweet Home:

Preventing Erosion During Construction

Any construction activity that disturbs soils can trigger erosion that can cause sediment to get into local streams or wetlands. In fact, water that runs off construction sites can contain up to 150 times more sediment than under natural conditions!

Luckily, this type of pollution can be prevented by planning ahead and using good practices during construction. The first and best thing to do is to simply phase your activity so that the least amount of open, disturbed soil is exposed to rain. That means, only clear the amount of land that you need to work on. Another thing to do is simply watch which way the water runs;



then you can put protection where it is really needed.

There are products on the market such as silt fence, bio logs, and erosion control blanket to control erosion. But on a small home-building site, solutions can be as simple as building a soil berm to control where runoff goes, or breaking up hay bales to apply a layer of protection over exposed soils. Stockpiles can be protected simply by covering them with inexpensive tarps.

Fall is a good time to think about erosion control. Throwing seed (like clover, or winter wheat) and mulch on soils before winter can protect the work you put into grading the site. When seeds pop-up in early spring, it stops runoff from eroding away soils and the loss of valuable topsoil.

To learn more visit:
www.southstlouisswcd.org
and click "Construction Stormwater"

BEAVERS: Friend or Foe?

They can be fun to watch, until they start causing problems!

The largest member of the rodent family, beavers are found near rivers and other bodies of water, particularly where trees are nearby. Their created ponds help slow and store water and provide wildlife habitat. They can be fun to watch too. With their strong jaws and teeth, beavers can chew through a six-inch tree in 15 minutes! But when beaver populations get too high, they can cause big problems. Beavers cut down valuable riparian trees, which are needed in order to provide shade for trout streams in summer months. Pounded water from behind beaver dams can contribute warmed water to streams. Flooding of public roads is a hazard when beavers build dams near culverts (see photo and inset above).



A beaver dam was removed near the Bergquist Road in mid-July by St. Louis County in order to prevent road flooding. The dam break released about 1,000,000 gallons of water!

A preventative approach can be taken to discourage beavers from building a dam on or near your property. Planting more conifers can help, since beavers love birch, poplar, alder, and willow. Heavy wire mesh, hardware cloth or tar paper can help discourage beavers from cutting your trees too. If you have beaver damage on your property, contact the local Minnesota DNR Wildlife Office in Two Harbors at (218) 834- 6619 (Bob Kirsch, Area Wildlife Manager). Landowners are allowed to trap beavers that cause damage on their land. Or they can have someone do it for them- the DNR can provide names of trappers. Either way, simply let them know before you start trapping.

Information for this article was taken from the Minnesota DNR website. For more info: www.dnr.state.mn.us/snapshots/mammals/beaver.html



What Permits Do I Need?

Whether working on your home, garage, or just grading or filling your property, permits are needed for most activities. Here are some permits you might need:

BUILDING PERMIT:

Duluth Township: Application available online at www.duluthtownship.org or call (218) 525-5705

Normanna Township: Application through St Louis County Physical Planning online at www.stlouiscounty.org/planning/Planning.html or call (218) 725-5000

WETLAND PERMIT

Any fill or activity in a wetland must follow State, Local, and Federal law. Information is online at www.southstlouisswcd.org/wca.html or call the South St Louis SWCD for technical assistance at (218) 723-4867

STORMWATER PERMIT

If you will disturb *1 acre of soil or more* a State Stormwater Construction permit is needed. Application and information is available online at: www.pca.state.mn.us/water/stormwater/stormwater-c.html or call the Minnesota Pollution Control Agency at (218) 723-4660 or call the SWCD for technical assistance at (218) 723-4867



Driveways: Build 'em Right and Maintain Them to Save Time and Money

Gravel driveways cost less than asphalt or concrete and keep the rural feel to your property. But gravel driveways do need maintenance as they age, or as ruts and potholes form. Also, gravel driveways can wash out if they aren't planned or built properly. Driveway problems can cost your local Township money by adding to cost of road maintenance. Road Supervisor for Duluth Township, Dan Tanner, explains "The budget for all our road and bridge maintenance is \$60,000 a year, which includes money to unplug culverts and re-grade ditches after driveways wash into them". Although driveway failure counts for only a small part of that budget, it *can* add up, especially if problems aren't solved. Here are some tips to help make sure your driveway will hold up for the long run.



Building: On steep slopes, meander your driveway (snake it down the hill in an "S" curve, instead of a straight line). This gives water several places to veer off the driveway, so it won't sheet down in a straight line (taking your gravel with it). Installing water bars, dips,

or swales can divert water off the driveway to chop up the flow too. During construction, minimize the amount of vegetation cleared to prevent erosion. Grass or other vegetation on the edges of the driveway will stabilize soils. Crown the driveway in middle so that runoff flows to the sides of the driveway, and not down the middle. And make sure to use enough gravel to prevent the driveway from eroding. It's no fun to spend \$10+ per yard on gravel, but use enough and spread/shape it properly to prevent future problems.

Maintenance: Gravel may need to be added at times, as ruts or potholes form. And keep dead brush/leaves out of ditches on the side of your driveway- it can kill vegetation that prevents erosion. And don't throw brush, leaves, or lawn clippings in road ditches either- that can clog culverts, which causes flooding.

Culverts: Size your driveway culvert big enough to handle spring runoff and rains. During installation, set the culvert deep enough. Remember: "*Set it low, and let it flow.*"