PREVENT EROSION

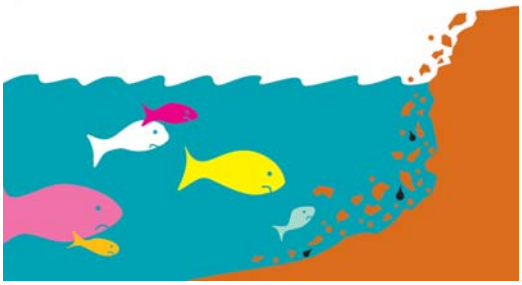
Soil erosion costs Maine homeowners millions of dollars a year. Soil loss not only causes damage to roads and property but eventually finds its way to a lake, pond, river or stream. It contributes to the phosphorus load and can result in algae blooms. In addition, silt removal from roadside ditches and storm drains is required, costing taxpayers money. Soil is a valuable resource on the land, but when washed into streams, lakes, and estuaries it is Maine's biggest water quality problem.

The Problem

Believe it or not, the biggest threat to Maine's water quality is plain old dirt, washing into our rivers, lakes and streams... from our lawns, roads, driveways and construction sites.

Wherever you see bare soil, you're seeing water pollution just waiting to happen. Because without vegetation, dirt washes away every time it rains. And it ends up in our rivers, lakes and streams. Dirt clogs waterways and destroys fishes' gills. It also carries oil, fertilizer, pesticides and other chemicals that contaminate the water and lead to shallower streams and scummy green lakes.

Many fish and aquatic insects lay their eggs in gravel beds. The sediments that are deposited in the stream cover up these areas, sometimes even entombing young fish and eggs.



The sediment may also destroy a stream's natural 'riffle and pool' pattern and can make a stream shallower. When streams become wider and more shallow, flooding problems can increase. The shallow water is heated more efficiently by the sun, causing water temperatures to rise and then cold water fish, such as trout, are replaced by warm water fish.

Sediments cloud the water and cover plant leaves, reducing sunlight penetration and inhibiting photosynthesis (plant food production). Sediment accumulations also harm duck populations by filling in their wetland habitats.

The Solution

Erosion process can be accelerated or slowed by the practices you adopt, and sediment going into the creek is a pollutant. What can you do? A few simple things are a great start.

Go natural!
Utilize natural materials, such as wildflowers, grasses and shrubs, to stabilize shorelines, streambanks, and road edges. Stabilizing these areas with living plant materials is called "bioengineering" and improves wildlife and aquatic habitat.

Did you know?
In the USA, soil is eroding at about seventeen times the rate at which it forms.

Buffer it.
Try to catch soil before it reaches the road or the water. Plant shrubs and trees to create a buffer between your property and the water to filter out pollutants. You can divert the water running off driveways, roads and gardens into a stable vegetated area where the dirt can get trapped. The best idea is to plant a ribbon of trees and shrubs, referred to as a vegetated buffer, downslope of places like your home to capture soil and pollutants before they reach a roadway or waterway.

Cover your bald spots.
Especially on slopes and at the waters' edge. Seed and mulch any bare soil on your land as quickly as possible with an appropriate vegetative cover, such as sod or seed. Be sure to mulch the area

with straw or other appropriate cover to prevent erosion until the seeds germinate. Keeping soil undercover - covered by grass, shrubs and trees - means the rain doesn't have a chance to get at it and move it.

If you've got erosion issues near your home – along a roof edge or near a downspout – consider installing an infiltration or dripline trench and dry wells. For fact sheets with detailed instructions, diagrams and color photos about installation and maintenance, visit http://www.maine.gov/dep/blwq/docwatershed/materials.htm.

Less is more.
Minimize disturbance to ground cover when doing any type of land clearing work. Avoid mass-grading large areas which will allow more disturbed soil to be exposed and vulnerable to erosion from runoff after it rains or when snow melts. At the waterfront, leave as many aquatic plants in place as possible—they will hold bottom sediments in place and protect the shoreline from the erosive forces of wind and ice action.

Grab it.
Rain barrels provide an innovative way to capture rainwater from your roof, and store it for later use. Water collected from rain barrels can be used to water lawns, gardens, and indoor plants. You can lower your water bill, conserve well water in the dry season, and reduce erosion and polluted runoff.

Keep it legal.
Obtain required permits and install necessary soil erosion controls. Any earth-changing activity that will impact more than one acre of land, or is within 500 feet of a lake, stream or wetland requires a soil erosion control permit. For more information on Maine's Erosion and Sedimentation Control law, visit http://www.maine.gov/dep/blwq/docstand/stormwater/erosion.htm.

Don't be stumped.
Incorporate large woody debris, such as stumps, logs and tree trunks, as a management option for streambanks and shorelines. Woody debris provides essential aquatic habitat and stabilizes shorelines and streambanks from erosion.

Mulch It.
Spread mulch, such as compost, wood chips, shredded leaves, or shredded bark around trees and plants. Mulch helps to retain moisture in the soil by reducing evaporation. It also cuts down on weeds and moderates the temperature of the soil.

Did you know?
Each year rainstorms and snowmelt wash tons of dirt off the land around Maine.

PROTECT KITTERY WATERS

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