



Erosion



Shoreline erosion can happen naturally or it can be the result of human disturbances. The former happens at a very slow rate, but the latter happens quickly. According to a University of Michigan study, human activities cause 10 times more erosion of continental surfaces than natural processes (ice, wind and water) combined.

Removing shoreline vegetation, runoff, boat wakes, construction and even foot traffic can cause erosion and affect water quality, wildlife habitat and shoreline stability.

To prevent erosion, you can:

1 Protect the Natural Shoreline

The best way to do this is to maintain its natural characteristics. This means keeping lots of vegetation, maintaining a shoreline buffer and leaving the stones, boulders, snags and dead branches in place (assuming it's safe to do so). These materials absorb the energy from erosive forces like waves and keep the shoreline "glued" together.

2 Reduce Runoff

Where possible, plant and retain native vegetation to keep large amounts of runoff from entering your lake. Minimize paved and hard surfaces on your property such as driveways and decks. Direct runoff from driveways to settling areas and runoff from roofs into rain barrels.

3 Minimize the Wake from Boats and Other Motorized Watercrafts

Boat wakes erode shorelines, disturb aquatic ecosystems, swamp birds' nests, damage docks and boats, upset canoes and endanger swimmers. So slow down when you're close to shore.

4 Take Precautions During Construction

Make plans to control erosion. Use filter cloths, hay bales and silt fences to help control erosion. Cover fill piles with tarps to keep soil from being carried away by runoff. And limit construction during wet seasons to limit damage caused by heavy equipment.

5 Limit Foot Traffic

Foot traffic can trample vegetation, especially on steep slopes, causing soil to loosen and fall. Install footpaths to and from the shoreline, make sure they're built in an S-pattern to prevent soil and runoff from barreling straight down the path into your lake, and insist that people use them.

Consider these basic erosion control methods

✓ Create a Shoreline Buffer

The roots of whatever you plant will grip soil and keep it from blowing or falling away. For more information on shoreline buffers be sure to [visit our Shoreline Restoration section](#).

Active Planting/Bioengineering Techniques

This uses living plant material to immediately control erosion and continually becomes more effective over time as the plants take root. [For more information, visit this site](#).

Install Riprap

Riprap is a layer of rocks that are placed on a gentle slope (3:1 angle is best) and works to absorb and deflect waves and boat wake. Riprap also creates wildlife habitat by allowing vegetation to grow between the rocks.