

Prevent Shoreline Erosion and Preserve Natural Shorelines

A preventative shoreline erosion tip sheet provided as a service of AdkAction.org.

Please post where family, guests, and renters can see.

Only you can help mitigate the harmful effects of shoreline erosion!

What is Shoreline Erosion?

Shoreline erosion occurs naturally over time as a result of wind, precipitation, wave action, and gravity. However, human activities such as wakeboarding and shoreline construction can increase erosion, which has damaging effects on wildlife, water quality, architecture, and recreation.



Photo by Rebekah White

Wakes from motorized vessels accelerate erosion by exposing or uprooting vegetation and causing banks to collapse. Wake impact also causes increased sedimentation, which degrades the aquatic environment.

A wave that is 5 in. high or less (produced under 6mph) does not cause substantial shoreline damage. Therefore, it is recommended that boats always reduce speeds when operating near shorelines (5 mph within 100 ft of shore).

Shoreline Erosion and Wildlife

The shoreline is a crucial habitat for many aquatic or semi-aquatic species. Fish enjoy the warm shallow waters, and plants that are rooted in this shallow water provide much-needed shelter for these creatures. Shorelines are home to amphibians, reptiles, and small mammals and aquatic plants that attract macroinvertebrates. Many organisms lay their eggs along the shoreline. Erosion can have a devastating impact on these species.

- Eroded sediments create unwanted shoals and shallows and cut off light to underwater plants.
- Large swells cause suspended sediment, which reduces the clarity of the water and clogs fish gills.
- Silt creation increases water temperature, to which fish are extremely sensitive.
- Fish and frog spawning habitat is destroyed when small rocks and sand containing eggs are scattered by wave action.
- Sediment adds large amounts of potentially harmful nutrients to the water, such as phosphorus, which causes algal blooms.
- Wakes can distribute invasive plants.

Reducing Your Impact

When recreating or building along the shoreline, take into consideration that it is an area to be shared by all—including wildlife. Erosion can have detrimental effects on many organisms, but by being vigilant, those effects can be mitigated or reversed.



Photo by Nancy Varin LaBombard

- Consider installing bird, bat, or butterfly feeders or houses if you are concerned about driving wildlife away from the area.
- Be aware of loons and other birds that nest hidden in grasses along the shoreline, as these nests can be disturbed or destroyed by wakes from boats.
- Do not approach loons with chicks, and try to avoid areas of the lake with nests in the times when young are raised (typically May-July).

Wakeboarding, Waterskiing and Jet skiing

These recreational sports are rising in popularity on Adirondack lakes. Unfortunately, these activities can increase shoreline erosion. With caution, these sports can be enjoyed while their impacts on shoreline erosion can be mitigated.

The extent of erosion caused by wakes depends on the vessel's distance from shore, hull size, weight, and speed, as well as the depth of the water. Generally, it is advised to:

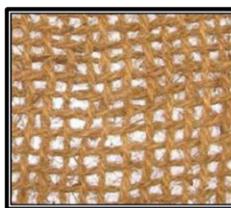
- Reduce wakes within 500 feet of shore.
- Do not add ballast or other extra weight to your boat, as it artificially enhances wakes above safe heights.
- Motor near rocky, undeveloped shorelines as opposed to sandy or marshy areas or sensitive wetlands.
- Avoid going in tight circles.
- Visit different areas on a lake to minimize impact in any one area.
- Paddle to deeper areas instead of using your motor when in shallow or heavily vegetated waters.

Make sure to adhere to all NYS and local laws regarding passenger safety, noise levels, and environmental regulations before heading out on the water.

Construction Tips

When beginning a construction project along the shore, it is wise to keep several things in mind.

- Carefully review APA and DEC rules limiting clearing within 50-100 ft of the water (depending on structure type and location), and remember that DEC permits are required before disturbing any water body or shoreline.



Cocoa mats and logs help stabilize eroded shorelines (photo by Granite Environmental, Inc.)

- Leave natural vegetation in place; along with providing soil stabilization, this vegetation is often a source of food and shelter, as well as a nesting site, for many animals.
- Consider replanting native plants, even simply grass or wildflowers, in eroded or recently cleared areas.

Construction Tips (cont.)

- Replanting native plants benefits wildlife and protects against future erosion.
- Consult your local Soil and Water Conservation Department for advice on suitable native plants to stabilize slopes.
- Create a four-tier shoreline buffer of trees, shrubs, plants, and duff.
- Use erosion control remedies such as cocoa mats, cocoa logs, coir mats, and coir logs. There are many types of erosion control nets, mats, and blankets on the market, all of which are inexpensive and easy to use.
- Avoid "hard" construction approaches such as rock walls because they create physical barriers and reflect, rather than absorb, wave energies.

For more information...

- Visit www.adkaction.org/shoreline-erosion
- Talk to your county's Soil and Water Conservation Department
- "Like" the Facebook page, "Save Our Adirondack Shorelines Ourselves"