

# SHORELAND MANAGEMENT

## A GUIDE FOR SPRING LAKE

Created by Progressive Companies - Water Resources Group

Natural shoreland areas around lakes help to reduce pollution runoff and provide valuable fish and wildlife habitat. As such, natural shorelands are essential to a healthy lake. In addition to providing important environmental benefits, natural shorelands can be beautiful. Recognizing the value of natural shorelands, several states including Minnesota, Wisconsin, Vermont, Maine, and New Hampshire have adopted state-wide shoreland protection regulations. Many lake communities have realized that restoring natural shorelands is a win-win-win scenario: a healthier lake with better water quality; improved fisheries; and better lake living.



Maintaining and preserving natural features of a shoreland will help to improve the quality of Spring Lake. Instead of installing seawalls or hard surfaces along the lake's edge, consider using native plantings and maintaining a buffer zone to reduce pollution run off from your lawn (Figure 1). A big contributor to excessive plant and algae growth on Spring Lake is the presence of phosphorus. Lawn fertilizers can be a primary source of phosphorus. Michigan law prohibits the application of lawn fertilizers containing phosphorus unless a soil test documents a phosphorus deficiency or a new lawn is being established.

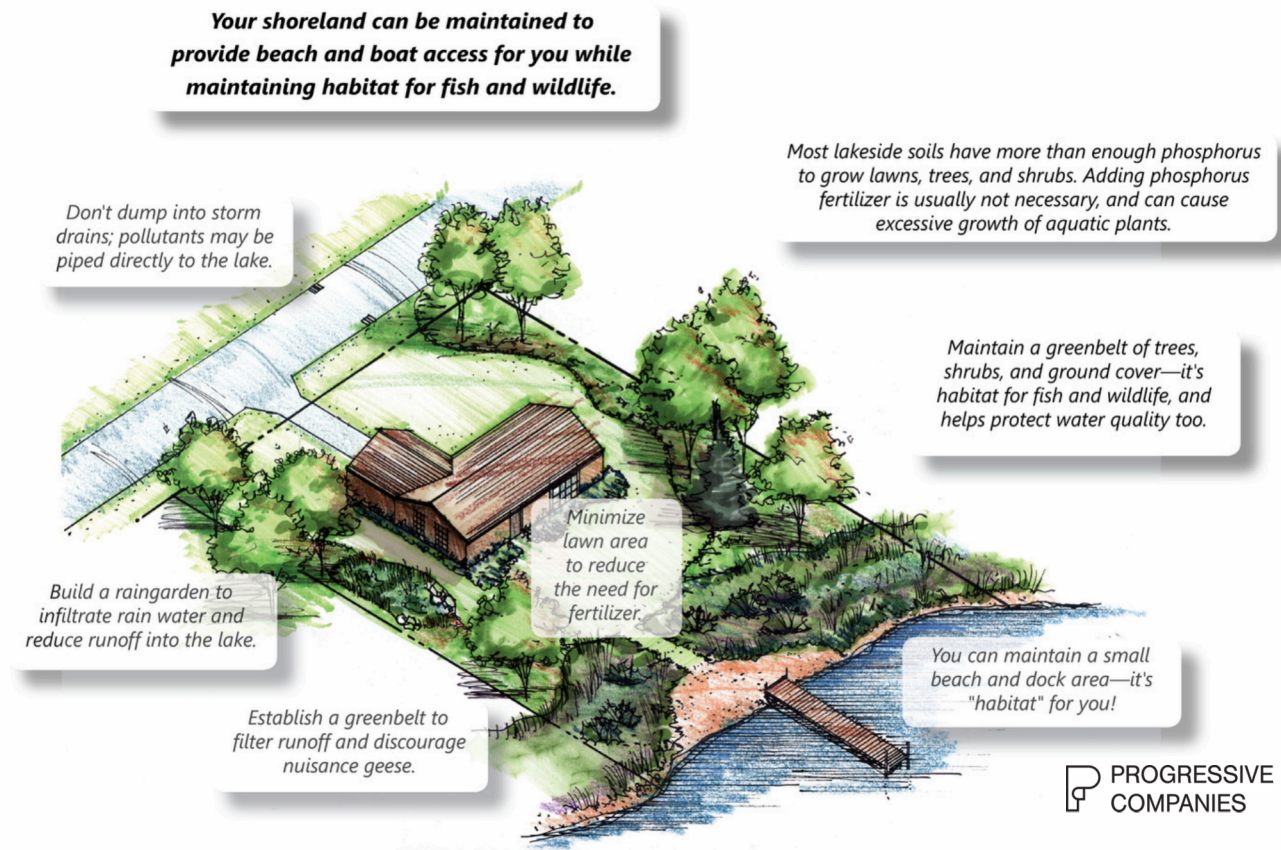


Figure 1. Shoreland landscaping.

## How Riparian Land Owners Can Reduce Nutrient Loading to Help Protect Spring Lake:

- Avoid the use of lawn fertilizer that contains phosphorus. If you use a professional lawn care service, insist upon a fertilizer that does not contain phosphorus.
- Reduce fertilizer use when possible. Use the minimum amount of fertilizer as recommended on the label (or less).
- Water your lawn sparingly to avoid washing nutrients and sediment into the lake.
- Do not feed ducks and geese near the lake. Waterfowl droppings are high in nutrients.
- Do not burn leaves and grass clippings near the shoreline. Nutrients concentrate in the ash and can easily wash into the lake.
- Do not mow the water's edge. Instead, allow a strip of natural vegetation to become established along your waterfront. This natural buffer will trap pollutants and discourage nuisance geese from frequenting your property (Figure 2).
  - Visit: [www.shoreline.msu.edu](http://www.shoreline.msu.edu).
- Promote infiltration of stormwater into the ground. Building a rain garden helps to capture runoff from driveways and downspouts.
  - Visit: [www.raingardennetwork.com](http://www.raingardennetwork.com).

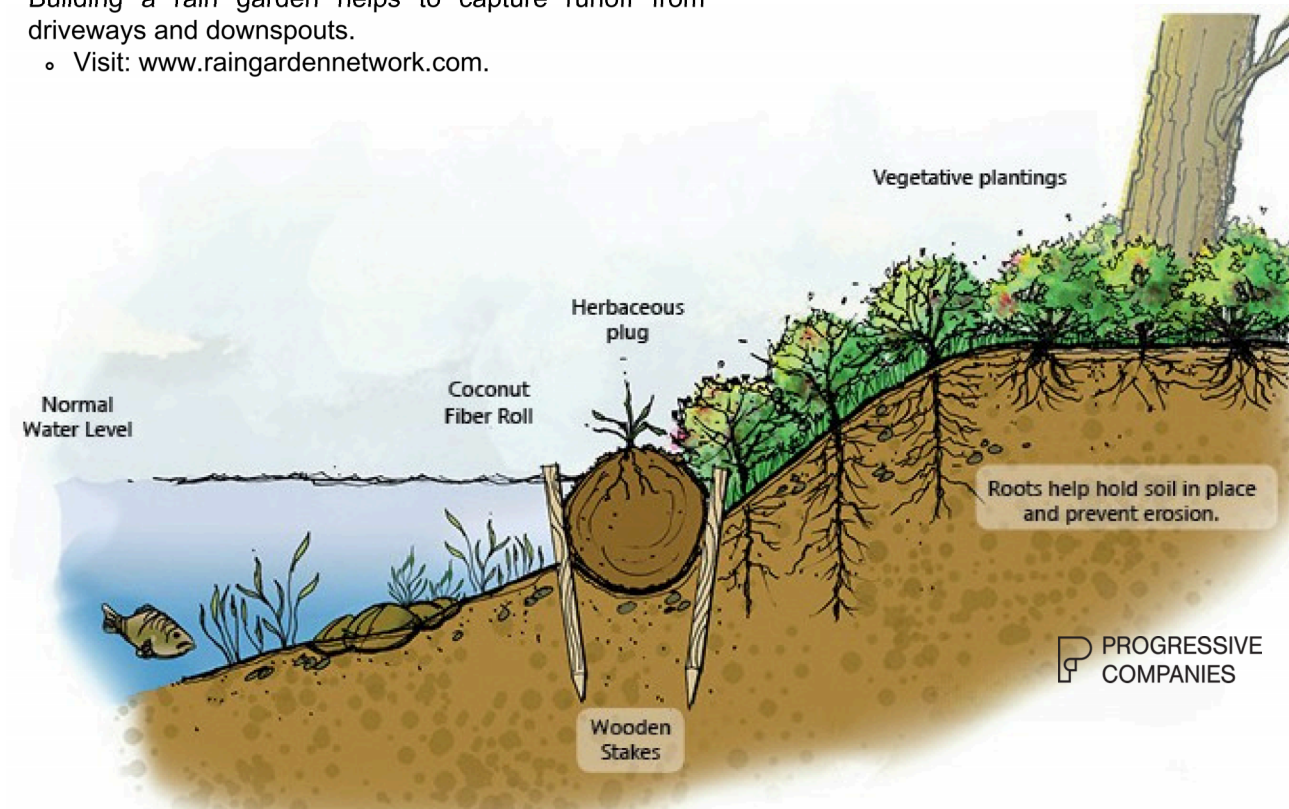


Figure 2. Bio-engineered shoreline.





## Seawalls: Understanding Impacts and Exploring Solutions

According to the Michigan Natural Shoreline Partnership, the loss of natural shoreline is the biggest threat to the overall health of Michigan Lakes. Most seawalls are built to help prevent erosion and stabilize the shoreline. However, there are often unintended consequences with seawall construction:

- Seawalls deflect wave energy (Figure 3), rather than dissipating it, and can accelerate erosion at the foot of the seawall and along adjacent properties that lack seawalls.
- When a wave hits a seawall, its energy is redirected back to the lake creating rough water conditions and reducing water clarity.
- Seawalls block the migration of frogs and other animals to shore.
- The natural beauty of a lake is negatively impacted when a scenic, organic shoreline is replaced with a manufactured, industrial-looking structure.
- Seawalls can exacerbate flooding by preventing water from naturally draining into the landscape. Instead, the water often pools, causing localized flooding and potentially damaging property.

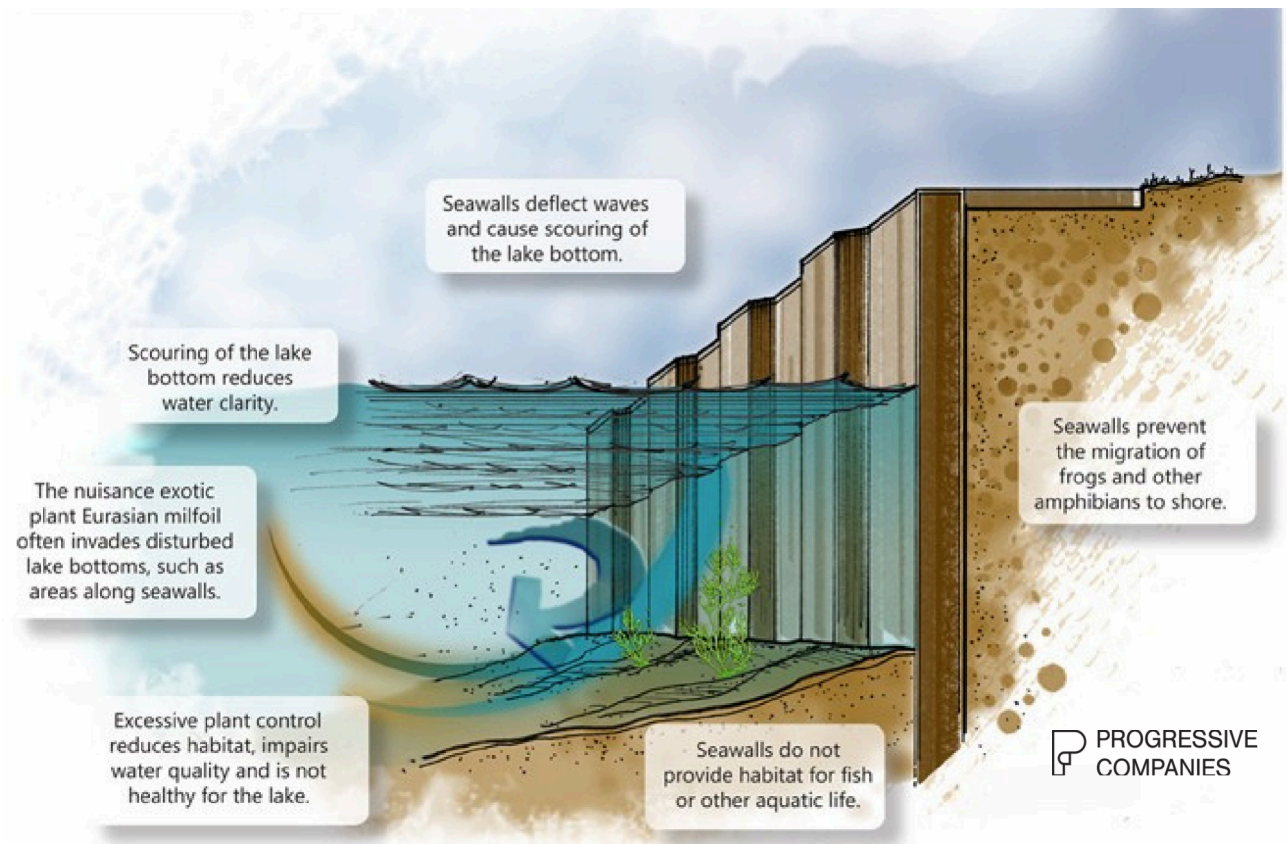


Figure 3. Affects of seawalls on the lake ecosystem.

When considering alternatives to seawalls, it's important to explore methods that aim to reduce negative impacts. Potential shoreline considerations and solutions for removing or improving currently standing seawalls include:

- Replace the seawall with a bio-engineered natural shoreline (Figure 2) to help improve water quality, minimize erosion, and reestablish fish and wildlife habitat.
- Add rock riprap in front of the seawall to improve wave energy dissipation and lake-shoreline interface habitat.
- Work to be conducted below the ordinary high water mark will require a permit from the Michigan Department of Environment, Great Lakes, and Energy (EGLE).
- To find more information about how to establish a natural shoreline or to contact a certified natural shoreline contractor, visit: <https://www.shorelinepartnership.org>.