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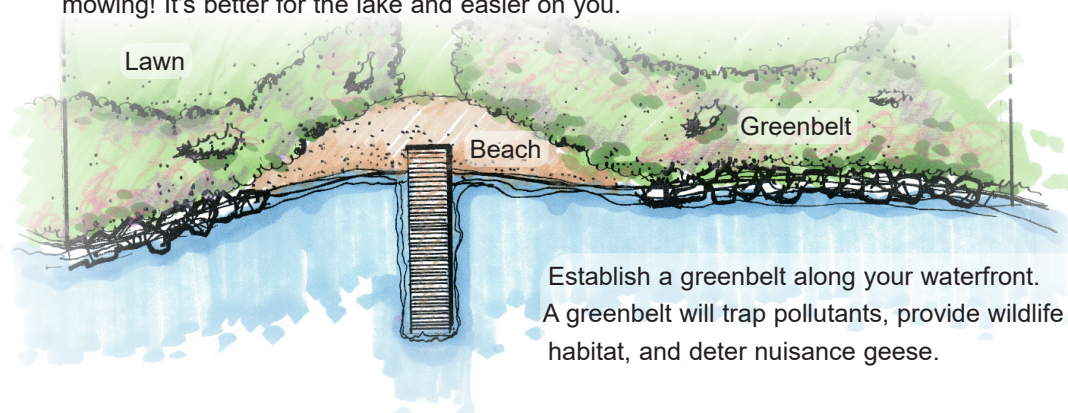
1. Don't use lawn fertilizer that contains phosphorus. If you use a professional lawn care service, insist upon a fertilizer that does not contain phosphorus.
2. Use the minimum amount of fertilizer recommended on the label—more is not necessarily better!
3. Water the lawn sparingly to avoid washing nutrients and sediments into the lake.
4. Don't feed ducks and geese near the lake. Waterfowl droppings are high in nutrients and may cause swimmer's itch.
5. Don't burn leaves and grass clippings near the shoreline. Nutrients concentrate in the ash and can easily wash into the lake.
6. Don't mow to the water's edge. Instead, allow a strip of natural vegetation (i.e., a greenbelt) to become established along your waterfront. A greenbelt will trap pollutants and discourage nuisance geese from frequenting your property. Visit mishorelandstewards.org and mishorelinepartnership.org
7. Where possible, promote infiltration of stormwater into the ground. Build a rain garden to capture runoff from driveways and downspouts. Visit www.raingardennetwork.com
8. Don't dump anything in area wetlands. Wetlands are natural purifiers.
9. Collecting roof runoff in rain barrels reduces the amount of water that flows from your property. To find out more, visit epa.gov/soakuptherain/soak-rain-rain-barrels
10. Don't be complacent—our collective actions will make or break the lake! Minimize lawn area. Less turf means less fertilizer, less pesticides—and less mowing! It's better for the lake and easier on you.



When buying fertilizer, look at the number in the middle on the label—it should be zero.



Rain garden



Establish a greenbelt along your waterfront. A greenbelt will trap pollutants, provide wildlife habitat, and deter nuisance geese.

For more information, visit MichiganLakeInfo.com



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Seen me lately? Probably not. No plants = no cover = no frogs or other critters.

Environmental Consultant
Progressive AE



Natural shorelands 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 a recent U.S. Environmental Protection Agency nation-wide study, loss of natural shoreland was identified as the greatest threat to the nation's lakes. The study found that lakes with poor shoreland habitat were three times more likely to be in poor biological condition. Preserving (or restoring) natural shoreland is one of the most important things we can do to protect the lake.



Due to historical shoreline development patterns, natural shorelands are nearly non-existent on many inland lakes. The challenge and opportunity in the future will be to restore the many ecological benefits of natural shorelands while maintaining full recreational use and enjoyment of our lake. We need to work together to strike a healthy balance.

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. In Michigan, restoration of natural shorelands is fast becoming a priority and several voluntary initiatives are being undertaken to restore natural shorelands. 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.

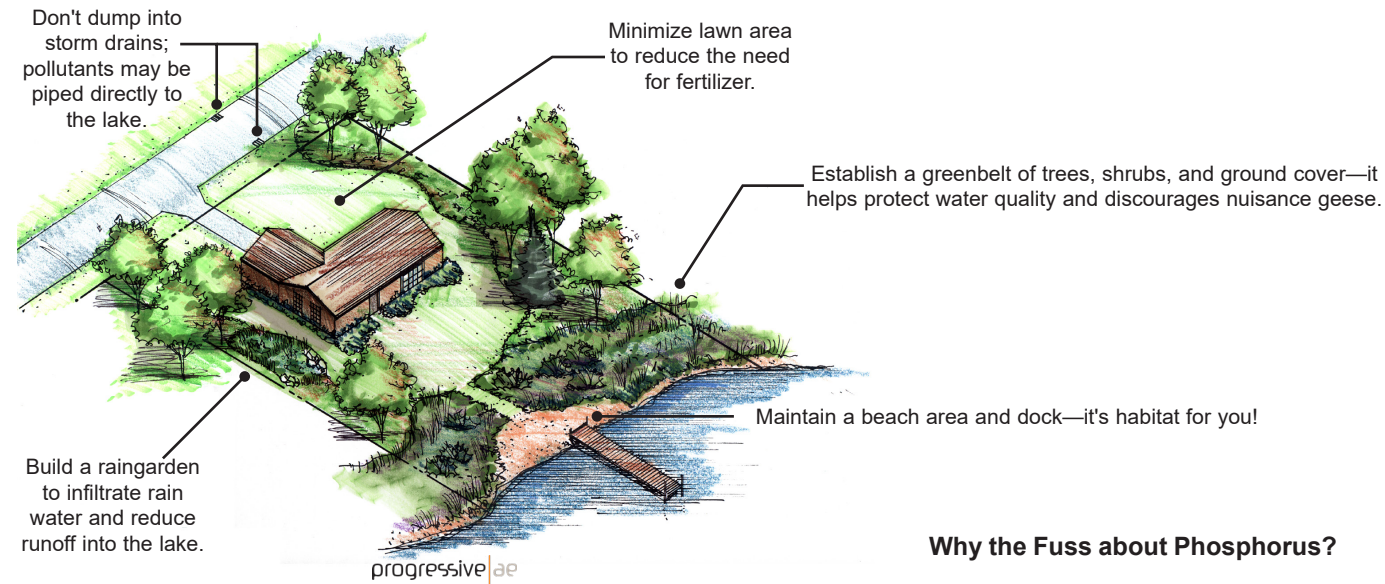
This booklet illustrates several shoreland management practices and provides useful links to shoreland management resources. Please take a minute to review this information and see what practices might work on your property.

1

Shoreland Management

What you can do to enhance your shorelands and protect Hess Lake.

2



Failure to preserve some of the natural features of the shoreland will diminish the quality of the lake.



If you think your shoreline can never be restored to a more natural condition, think again! The Michigan Natural Shoreline Partnership is an excellent resource for those wanting to restore natural features on their shorelands. To find out more about the Partnership, visit www.mishorelinepartnership.org.

Why the Fuss about Phosphorus?

Phosphorus is the nutrient that most often stimulates the excessive growth of aquatic plants and algae, leading to a number of problems collectively known as eutrophication. Once in a lake, a pound of phosphorus can generate hundreds of pounds of aquatic vegetation. Lawn fertilizers are 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.

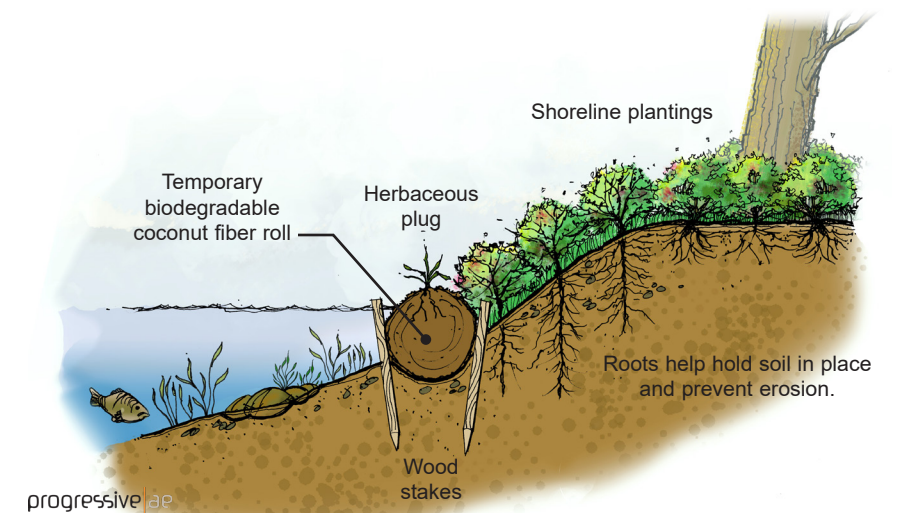
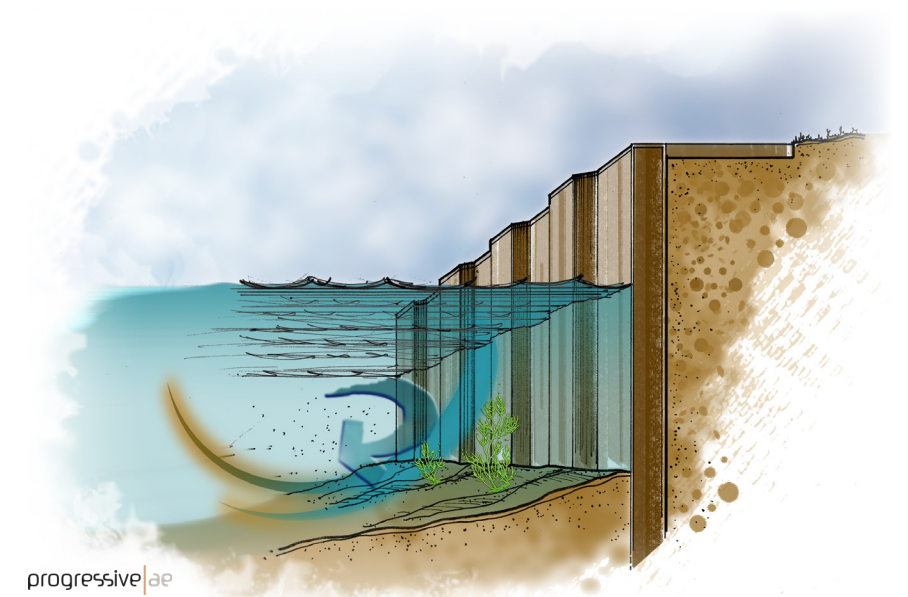


What's wrong with a seawall?

Most seawalls were built to help prevent erosion and stabilize the shoreline. However, there have been several unintended consequences of seawall construction:

- Seawalls deflect waves and can accelerate erosion at the foot of the seawall and nearby properties that lack seawalls.
- When a wave hits a seawall, its energy is not dissipated. Instead the wave is redirected back to the lake creating rough water conditions.
- Seawalls block the migration of frogs and other animals to shore.
- Some of the problems with seawalls can be lessened by placing large stone in the water at the base of the seawall. Remember, any work below the ordinary high water mark will require a permit from the Michigan Department of Environment, Great Lakes and Energy (EGLE). EGLE has an expedited permitting process for natural shoreline restoration.
- If you are considering altering or removing your seawall, consider a "bio-engineering" approach in which natural materials are used.

3



Bio-engineering is a method of stabilizing shorelines with shrubs, trees, and groundcover to prevent erosion and provide fish and wildlife habitat.