

# Natural Shoreline Lakescaping & Restoration, Part 1

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This will be the first of five educational articles, describing the step-by-step process used to restore a shoreline that has been damaged by erosion and storm water runoff; then to provide natural shoreline protection and water filtration through the planting of native Michigan plants in landscaping beltways along the shoreline.

Step one in this process is to determine what the issues and concerns are for the property. An owner interview is conducted in order to make a full record of the known difficulties, and to better understand the owner's hopes and desires for the outcome of the project. The interview is followed up with a thorough walking tour of the entire property, noting the terrain features, the existing structures, the landscaping, any areas of impervious pavement, and the shoreline condition (existing erosion, docks, rip rap in place, etc.). A full inventory is also made of all trees, bushes, and other vegetation. A base map is created from all this information along with complete property measurements.

A two-page checklist is filled out regarding many other factors about the property, both upland and at the shoreline. Important upland factors include such things as soil contents, existing lawn, bare earth areas, septic drain-field and pump-out locations, places with standing water, and evidence of erosion. At the water's edge, the existence of neighboring seawalls, the nature of the shoreline slope, the water level, the direction and fetch of the wind, the presence of ice-push ridges, and the property's location on the lake, are all noted in the checklist.

Once the survey and checklist are completed, energy, fetch, and wave height calculations are made. A big factor in determining restoration requirements, is *fetch*. Fetch is the area of the lake surface over which the wind blows in an essentially constant direction, thus causing waves. The relationship of the lake's fetch to a given shoreline property will play a large role in determining the character and quantity of biodegradable materials that will be required for that shoreline's restoration and future erosion control. All materials are fully reviewed with the property owner, in terms of content, process, and purpose, so that the property owner is well informed regarding how each component contributes to the project's final outcome.

The second step is to develop a visually aesthetic planting design that will meet the property owner's desires in terms of color, texture, and aroma. It will also be important to consider what birds and other wildlife will be attracted by the various native plants.

I look forward to continuing this discussion in the July TLA Quarterly, helping to make our readers aware of this wonderful, natural way to protect our shorelines, the health of our waters, and the

economic value of our properties. Protecting shorelines with beautiful native Michigan plants benefits us all, our children, our grand-children, and the ecosystem upon which we all depend. Can't wait until July? Check out [www.bloominbuddy.com](http://www.bloominbuddy.com) for more.

In the meantime, take this simple assessment and rate your shoreline health.

	1. Low Risk/ recommended	2. Medium risk/ potential hazard	3. High risk/ unsafe situation	Your risk
Vegetative buffer strip or zone	Buffer strip 30' wide or grater of native plants and shrubs. Unfertilized.	Buffer strip of unmowed grass, 10 feet wide. Unfertilized.	No buffer strip or, lawn mowed to shoreline. Fertilized	
Shoreline or riparian zone	Small plant-free swim area; rest of beach contains natural shoreline vegetation, including emergent plants.	N/A	Shoreline entirely free of aquatic vegetation	
Seawalls	Shoreline with original slope and native vegetation to water's edge.	Shoreline stabilized with rock rip rap following natural contours	Abrupt concrete, metal or wood seawall	
Fertilizer type	Soil is tested prior to fertilization. Fertilizer contains phosphorus only if indicated by soil test. So fertilizer applied within 10 feet of shore.	Soil is not tested prior to fertilization. Fertilizer contains low or no phosphorus and/or no pesticides. N fertilizer applied within 10 feet of shore.	Soil is not tested prior to fertilization. Fertilizer containing phosphorus and/or pesticides applied near shore.	
Fall cleanup	Raking leaves and yard waste at least 30' away from the lake and composting them.	Composting leaves and yard waste at least 10 feet from shore.	Burning leaves and other yard waste along shore and washing ashes into the water.	