

SHORELINE EROSION PROJECT – MY EXPERIENCE

Soil erosion along the shorelines of Duck Lake and Green Lake is a real concern for many of the homeowners living here. The management of the antiquated dam system designed many years ago to control lake levels has not been ideal and the result can be seen along parts of our lakes' shoreline. Several homeowners have taken action to stop the erosion that often accompanies the changing water levels and ice movement.

Watching my shoreline slowly being washed away for the past couple of years I decided to try and find the best way possible to prevent further loss. So this article was written to describe how I proceeded to fix my problem. Should you decide to take a similar approach my hope is that you will find some of this information helpful.



THE PROBLEM IN A PICTURE: Wave action and springtime ice movement undercut and washed approximately 5 feet of the property shoreline. This portion of my shoreline shows several white birch trees that were once in my yard but are now in the lake.

My first thought was to seek out the necessary permits and undertake the work myself to stop the erosion. But after a few evenings of trying to find the documents/permits I became frustrated and bogged down in paperwork that I could not comprehend. I decided to get a contractor.

After listening to recommendations from friends I found a contractor who had done several similar projects near where I live and so I discussed with him the scope of the project.

SCOPE: The scope of this project ended up including approximately 22 tons of fieldstone to be placed on top of a geo-textile fabric along 100 feet of shoreline with a 20 ft. opening along the shoreline to create a small beach area (20ft x 20ft in size) made from the addition of 15 yards of beach sand. While working this project I would also have the contractor add about 15 yards of topsoil to fill and smooth out ruts in the yard area starting near the water and going back into the yard.

PRICE: I agreed to the contractor quoted price for this project and that I would obtain the necessary permit from the DEQ.

After some more on-line research I found what I believed to be the right form for the permit and completed it to include the required diagrams. The contractor was helpful in providing a copy of another diagram used when filing for a and obtaining a similar permit. There are three parts to a complete Joint Permit Application package:

1. Application Form: State DEQ: Joint Permit Application Page iv of iv EQP 2731 (Rev. 2/2017) A 14 page form with 5 Appendixes of instructions.
2. Maps and Drawings (Examples are provided in the Appendixes)
3. Fee

I hand delivered my permit to the Cadillac DEQ office so I could get a check of the form for completeness and in hopes that this might expedite the approval process. The reception desk took the permit and I was assigned an individual to work my specific permit request. That person was very helpful, reviewed my form and put it in the application stack. After several phone conversations, sending pictures, a personal visit to the work site and two application revisions the DEQ finally had all the information necessary to complete processing of my permit. A little

over a month from the initial application submittal I received a permit. I was told this was about the normal amount of time required to obtain such a permit.

The contractor started the project just a few days following the receipt of the permit and completed the project in three days. Here are a couple of pictures taken after the contractor had finished.



About a month later I received notification from the Grand Traverse County Dept of Environmental Health Soil Erosion and Sedimentation Control (SESC) office informing me that they had received a copy of the DEQ paperwork and that they also required a permit. My contractor said he was not aware that a permit would be required; but he was willing to pay half the associated cost that came to \$450 (including fines). I obtained the required permit. Discussion with the Grand Traverse Dept of Environmental Health revealed that this was not the first time individuals had failed to seek this type of permit.

During my discussions with others and in my research this requirement went unnoticed; but it does, in fact, exist. So as a follow-up I asked the county if they would clarify the requirement in a format that I could share with the GLDA Association membership. The Environmental Health director provided the following information for publication here:

“Most of us who live or spend time in Northern Michigan value the natural beauty and clear pristine waters of the area. The Natural Resources and Environmental Protection Act (NREPA) regulates many activities that potentially could pollute our air, drinking water, and recreational waters. Part 91 of NREPA focuses on Soil Erosion and Sedimentation Control (SESC). Many people are unaware of the potential impacts of erosion and sedimentation. Construction and/or landscaping activities may disturb the ground surface and make soil vulnerable to erosion. Rain, wind, and/or wave action can cause unstabilized soil to migrate onto neighboring properties and into wetlands, lakes, rivers, or streams. Sedimentation not only causes a mess, but can damage natural ecosystems.

The Grand Traverse County Health Department enforces Part 91 through the Grand Traverse County SESC Ordinance. The current ordinance was adopted in April 2018 and requires a SESC permit when large earth changes occur (> 1 acre) or the earth change is within 500 feet of a lake, river, stream, or regulated wetland, collectively referred to “waters of the state (WOS).” Also, anytime an earth change takes place in areas of 20% or greater slope, a SESC permit is required. There are a couple of circumstances where a SESC permit is not required for earth disturbances near WOS. If the earth disturbance is within 100 feet of a water body but has an area less than 100 ft², then the need for a SESC is waived. In addition, if the earth change is farther than 100 feet, but still within 500 feet of WOS, then any earth disturbance less than 225 ft² is exempt. Keep in mind that any work below the ordinary high water mark of a lake, river, or stream and in a regulated wetland, requires a permit from the Department of

Environmental Quality. If you are not sure if you need a SESC permit, please do not hesitate to call Grand Traverse County Health Department - Environmental Health Division (231-995-6051). Our staff will answer all your questions and help you navigate through the permitting process if necessary. Please allow two to three weeks for permitting before you start your project.

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Environmental Health Director”**

The above article was written in the hope of helping GLDLA members understand better some of the requirements they face in stopping/repairing damage caused to their shoreline due to changing water levels, wave action or ice movement. So, what I thought would be a simple, quickly accomplished project had a much larger scope and consequently a longer time involvement than I had anticipated.