



Orono Lake Shoreline Workshop

Image: Google Earth 2018

James Bedell | Area Hydrologist

1035 South Benton Dr. Sauk Rapids, MN

320-223-7850 james.bedell@state.mn.us

Project Anticipated Timeline

- End of August review completed and issuance of permit
- Begin drawdown on September 8, 2020 via the dam
- Drawdown complete by September 15, 2020
- Recommended to remove all floating structures (docks) and vehicles by September 8th
- Recommended that all structures near excavation sites be removed to prevent damage to the structures
- Reservoir to begin refilling on April 1, 2021

Common Projects Riparian Owners Ask About

- Can I create a beach sand area
- Can I place rip rap
- There is a mucky spot can I remove it
- There are rocks and debris that I want to remove
- Can I remove Garbage from the lake
- Can I remove the weeds

Beach Sand Blankets

Beach sand blankets can be placed without a permit under certain guidelines and conditions

- Beach material must be clean and washed free of fine particles and must be of the appropriate grain size (coarse sand or larger) to stay in place under wave action.
- The lakebed must be capable of holding beach material in place. If the lake bottom is soft, the sand or gravel will only sink into the muck and disappear.
- You are only allowed to install sand or gravel **twice** in the same location without a permit.
- Beach blankets may **not** be placed over emergent vegetation such as bulrush or cattails unless you obtain a permit from the Division of Fisheries.
- A plant barrier or liner is **not** allowed underneath the sand
- The sand or gravel layer may be up to **6 inches thick**; up to **50 feet wide** along the shoreline or **one-half the width** of the lot, whichever is less; and up to **10 feet** waterward of the ordinary high-water level

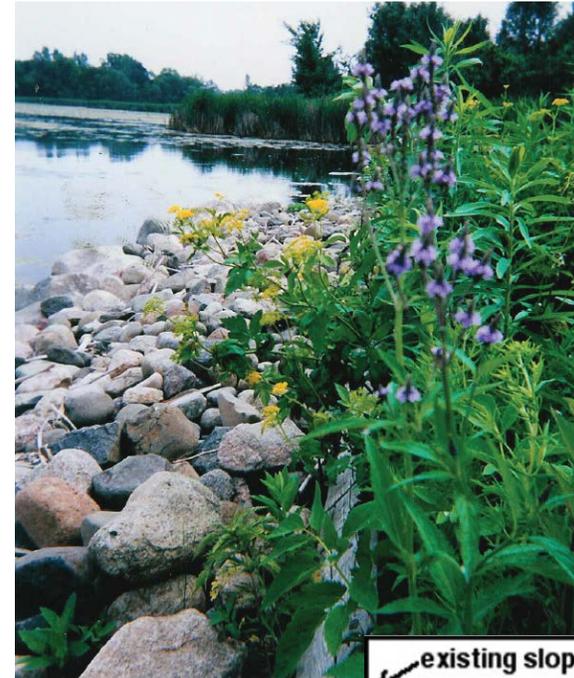


Beach blanket at shoreline.

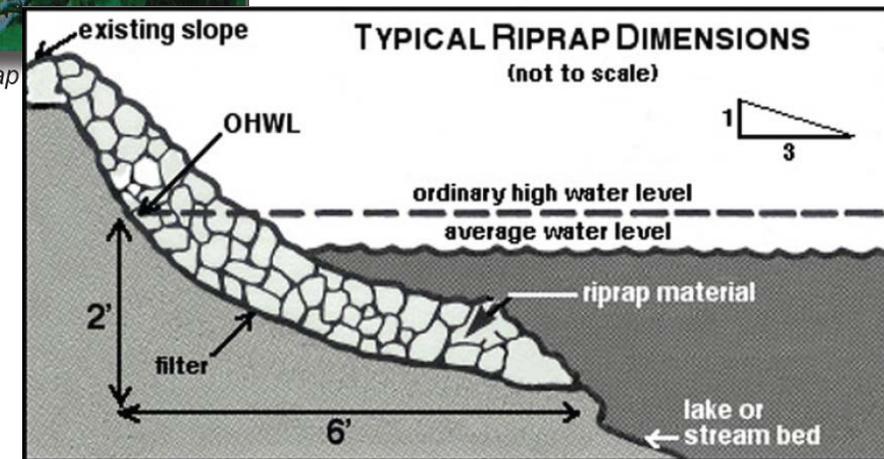
Riprap

Riprap can be placed without a permit under certain guidelines and conditions

- DNR Area Hydrologist must be consulted to determine whether riprap is needed due to erosion (demonstrated need)
- Riprap must consist of coarse stone randomly and loosely placed
- Riprap must not cover aquatic emergent vegetation without a aquatic plant management permit from DNR's Fisheries
- Only natural stone between the size of 6" to 30"
- Filter fabric or crushed rock or gravel must be placed below the riprap
- Riprap must be installed to achieve a 3 to 1 slope or less (4 to 1, etc..)
- Must conform to the natural alignment of the shore as it presents itself today
- Must not extend further then 6' feet waterward of the Ordinary High Water elevation (OHW).
- And be no more than 200 linear feet
- Site must not be posted as a fish spawning area



Shoreline stabilized with riprap
a vegetative buffer.



Bio-Engineering for Erosion Control

Bio-engineering can be done without a permit under certain guidelines and conditions and should be your first course of action

- The project is approved by DNR staff and is designed or reviewed by the local soil and water conservation district or the local watershed district;
- The design does not interfere with navigation or other riparian uses of the waterbody;
- the project is done during times of the year when it will not interfere with fish spawning or the nesting of protected bird species
- Local origin native plant species, adapted for the site, are used;
- An aquatic plant management permit is obtained when aquatic plants are used;
- The waterward encroachment is the minimum necessary for the project

Before



During



After



Established



Removal of Muck and Rock

Muck and rocks are lake bed and so removal requires a public water work permit

- The drawdown will likely cause consolidation of loose sediment (muck)
- Rocks provide fish habitat so removal could be detrimental



Removal of Garabage

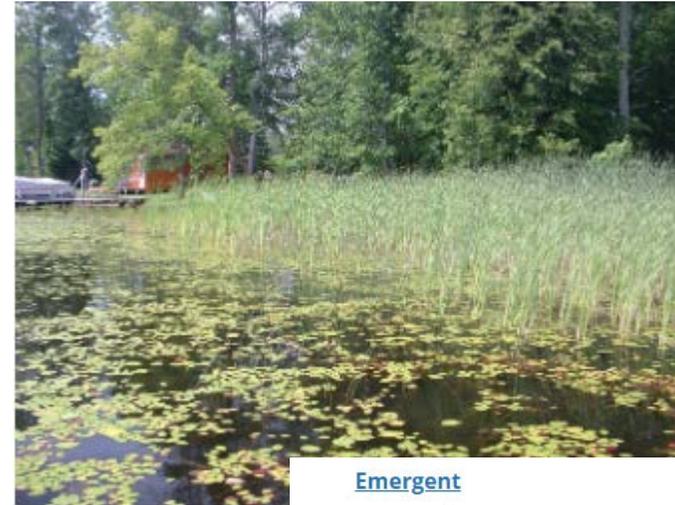
Removal of garbage can be done without a permit under certain guidelines and conditions and should be your first course of action

- Garbage are human made items such as cans, tires, cement block, etc
- Sunk logs can not be removed
- Trees , logs and brush are encouraged to remain as it provides habitat



Removal of weeds or planting aquatic vegetation

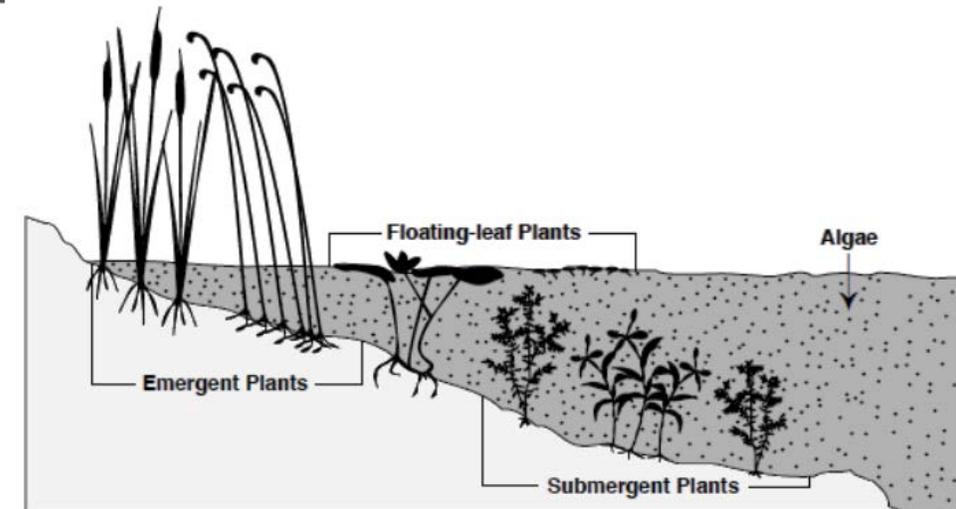
- Removing submerged vegetation larger than 2,500 sq ft requires a permit
- Removal of emergent, and floating leaf vegetation (cattails, bulrushes, lily pads)
- Applying chemical pesticide
- Moving a bog
- Planting Aquatic plants
- <https://www.dnr.state.mn.us/apm/aquatic-plant-management-permits.html>



Emergent

Floating-leaf

Submergent



Thank You!

James Bedell

james.bedell@state.mn.us

320-223-7850

Links and Resources

- <https://www.dnr.state.mn.us/apm/aquatic-plant-management-permits.html>
- <https://www.dnr.state.mn.us/permits/water/needpermit.html>
- <https://www.dnr.state.mn.us/rys/index.html>
- Before Beginning any project below the Ordinary High Water elevation always give the Area Hydrologist a call
- Aquatic Plant Manager Audrey Posterick 320-232-1079