Near Shore Alterations Permit Application Checklist

This document is intended for guidance in submitting a complete permit application. Please contact the Pelican River Watershed District at (218) 846-0436 or PRWDpermit@arvig.net for more information.

____1. Permit application form, signed by landowner or Authorized Agent (*must be notarized*); attach any required mitigation, conditional use, or variances requirements by Becker County or City of Detroit Lakes.

____2. Permit review fee (See Fee Schedule).

____3. Construction Erosion Prevention and Sediment Control Plan.

____4. Long Term Maintenance Plan for Stormwater or Vegetative Buffers.

____5. Detailed Site Plan showing existing and proposed changes.

A. Shoreline Erosion Repair

Revegetation and bioengineering

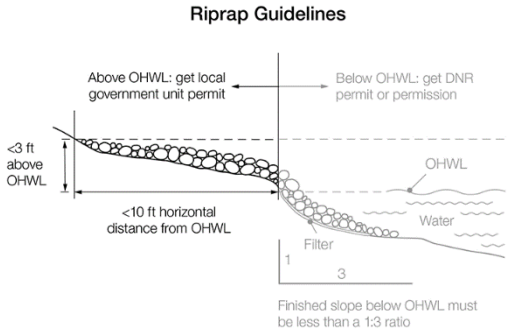
- Use of native, non-invasive trees, shrubs, and ground cover is preferred.
- Natural vegetation, shrubs, trees should be left intact to the maximum extent practicable
- Steep slopes may require the use of jute or turf reinforcement mats to prepare the site for planting.
- See prwd.org/resources-category/rules-regulatory for more examples.

Bio-armor (combination of native plants and extra shoreline support with natural rock rip-rap)

- Use of plants and minimal natural rock riprap.
- Vegetation (trees, shrubs, and other plantings) planted among the rocks and at the top of the bank will greatly increase the long-term stability of the shoreline from ice and wave action, provide a buffer to filter rainwater, and provide wildlife habitat.

Natural Rock Rip-rap

- Riprap must consist of randomly and loosely placed rock, interlocking placement or linear placement of large "base row" boulders is not allowed.
- Riprap must average between 6" and 30" in diameter.
- Rock must be clean and free of dirt and debris.
- Riprap will be placed to conform to the natural alignment of the shoreline (MN DNR)
- Riprap will consist of coarse stones that are randomly and loosely placed. Panning, walls, or rock of uniform size and placement is prohibited. (MN DNR)



- The height of the riprap extends no higher that three feet above the ordinary high water level, or one foot above the highest known water level, or one foot above evidence of erosion, whichever is less; and extend no more than 6 feet lakeward of the OHW
- Riprap must not cover emergent vegetation.
- Filter barrier must be installed between the rock and native soil, granular (crushed rock) filter material is recommended.
- The finished slope must be not greater than 3:1 (horizontal: vertical)
- The maximum shoreline length of riprap allowed is 200 feet.

B. Beach or Perched Sand Blanket

- Placed in a location that will not readily wash or erode into the waterbody. Shorelines with slopes greater than 5% percent are not suitable for a sand blanket. A perched sand blanket may be installed if suitable.
- Construction of beaches in or on slopes greater than 25%, on emergent vegetation or wetland areas (emergent, marshy shorelines) is not allowed.
- The lake bottom must be suitable (hard bottom – sand, gravel) of supporting the material. Installations on silt, muck, emergent vegetation, or visible fish spawning areas is not allowed.
- The maximum size cannot be greater the 50 linear feet, (or ½ width of the lot, whichever is less), by 10 feet wide. The depth of sand on the beach will not exceed six (6) inches.
- Designs will incorporate a a method for diverting surface water runoff around the beach area to prevent erosion of sand into the lake during rain events. Examples of diversions include installation of a low berm along the backside/landward of the sand blanket or where high volume of runoff is occurring, a combination of swales, raingardens or berms may need to be considered. It is far more cost-effective (and beneficial to the lake) to incorporate sound stormwater diversions in the initial design phases than having to reconstruct beaches and replenish beach sand in the future.
- Use of only clean sand or gravel (no silt, loam, clay – these cause water quality problems if they enter the lake)
- No fabric under the sand blanket is allowed.
- **Beach Replenishment:** Replenishment of sand may be repeated once at the same location but may not exceed the amount of sand and dimensions of the original sand blanket (MN DNR). More than one sand replenishment requires a permit from the MN DNR.

C. Vegetation Alteration: trees, shrubs, groundcover, shoreline buffers, landscaping

- A permit is required for vegetation alterations (trees, shrubs, ground cover, shoreline buffers, landscaping) , installation of landscape features, vegetative buffers, and for removal of dead, diseased, or unsafe trees within the Shore or Bluff Impact Zones, or on steep slopes within the Shoreland Zone.
- For removal of dead, diseased, or unsafe trees, each tree removed will be replaced with a native tree species on a 1:1 basis. PRWD or MN DNR Staff must verify prior to removal.
- Stumps may be ground down flush to the ground; below-ground roots must be left in place.
- Tree replacement will be appropriate native species of 1.5” – 2.0” trunk caliper size
- Removal of tree and/or stumps is considered excavation and will be permitted only if their removal is required for the legal placement of lake access paths or structures where the removal cannot be avoided; each tree/stump removed will be replaced with native tree species on a 2:1 basis.
- Mitigation trees must be in the SIZ or BIZ, and in close proximity of the tree to be removed.
- Limited clearing is permitted for a single lake access/view corridor, if a view and/or access already exists, vegetation removal is not permitted.
- **Violations:** Tree removal violations will be mitigated with a native tree species on a 3:1 basis (3 trees planted for each tree removed). Vegetation reestablishment may also be required.

D. Shoreline Pressure Ridge Repair

- Modifications or repairs are only allowed on ice pressure ridges that experienced recent damage from ice action within the past 6 months.
- A ridge of no less than eight (8) inches must be maintained parallel to the shore or ice ridge repaired to previous.
- height (whichever is higher). The 8-inch difference shall be measured between the ridge top and 3 feet.
- landward of the ridge.

- All ice ridge material that is composed of muck, clay, or organic sediment cannot be put in the lake and must be placed and stabilized at an upland site above the ordinary high-water level (OHWL);
- All ice ridge material that is composed of sand or gravel may be regraded to conform to the original cross-section and alignment of the lakebed, with a finished surface at or below the ordinary high-water level (OHWL) or it may be removed.
- No additional excavation or replacement fill material occurs on the site.
- All exposed areas are immediately stabilized as needed to prevent erosion and sedimentation.
- A four (4) foot lake access/walkway may be placed on top of the ridge, but not cut through the ridge.
- Historic ice ridges (older than 1 year) must be maintained and are not allowed to be removed or modified.

E. **Stairways, Lifts, Landings, Lake Access Walkways, Structures, Impervious Surfaces**

Proposed activity must meet all other local ordinance requirements (City of Detroit Lakes, Becker County, Township). Stormwater from all new and reconstructed impervious surfaces in the shore and bluff impact zones and on steep slopes must be treated following PRWD standards. See the Stormwater Management Section for more information.

For lake access walkways and landings (all projects must also meet City of Detroit Lakes and Becker County Ordinance requirements):

- One walkway is allowed for lake access at a maximum of 4 feet wide.
- One 32 square-foot landing is allowed along the staircase.
- Walkways can be built on top of ice ridges, not through.
- New patios or decks are not allowed in the shore impact zone.

F. Retaining walls

- Please Contact PRWD to assess your proposed retaining wall in the Shore Impact Zone. Retaining wall construction, repair, replacement within the Shore and Bluff impact zones is permitted only *for areas of land instability or erosion that* ***cannot be corrected by any other means as deemed by the District Engineer.***
- **Step One:** Pre-application meeting to review existing site and alternatives.
    - **i.** Note: If the District Engineer determines alternative stabilization practices may be used (vegetation, re-grading, etc.) a retaining wall is not allowed. Findings will include a detailed description of all alternatives that were considered and why they were not feasible. Walls that create beach or recreational use areas are not allowed to be constructed or rebuilt.
- **Step Two:** If no alternative exists per pre-application meeting findings, the following:
    i. Engineered drawings showing the wall design and analysis which shows that the wall will withstand expected ice and wave action and the base of the wall must be above the highest known water elevation.
    ii. Cash surety in that amount of the estimated construction costs, as determined the District Engineer.
    iii. The District Engineer may require a geotechnical report, if necessary, to review if soil conditions are suitable for wall construction.

G. Non-conforming Structures

- Most projects that are granted a variance or conditional use by Becker County or the City of Detroit Lakes for impervious surface lot coverage, structures in the shore impact zone, or for projects requiring on-site mitigation measures (i.e., shoreline buffers, stormwater management practices, plantings) will require a District permit. District permits are approved only after the required approvals (variance, conditional use, or permit) have been granted by local zoning authorities. The District works closely with Becker County and the City of Detroit Lakes and assists in review of mitigation requirements. It is best to contact the District early in the planning phase (218) 846-0436 or email at prwdpermit@arvig.net.