

## FACT SHEET

# SHORELAND ALTERATIONS (GRADING AND FILLING)

### CARLTON COUNTY ZONING ORDINANCE #27

Carlton County Zoning & Environmental Services, 301 Walnut Ave, P.O. Box 220, Carlton, MN  
218-384-9176 - [www.carltoncountymn.gov](http://www.carltoncountymn.gov)

**WHY IS IT REGULATED?** Alterations of vegetation and topography are regulated within shoreland to prevent erosion into public waters, reduce excess nutrients like phosphorous and nitrogen from washing into the lake, preserve shoreland aesthetics and historic values, prevent bank slumping, and protect fish and wildlife habitat. The preservation of existing native vegetation and soils are a priority in shoreland. A list of vegetation native to Carlton County can be obtained from the Zoning & Environmental Services office.

### **DEFINITIONS:**

**ORDINARY HIGH-WATER LEVEL (OHWL):** The boundary of public waters and wetlands is the elevation delineating the highest water level, which has been maintained for a sufficient period of time to leave evidence upon the landscape. This point is commonly where the natural vegetation changes from predominantly aquatic to predominately terrestrial. For rivers and streams, the OHWL is the elevation at the top of the bank of the channel.

**SHORE IMPACT ZONE:** The shore impact zone is the land located between the ordinary high-water level (OHWL) of a public water and a line parallel to it at a setback of 50% of the structure setback.

**GRADING AND FILLING:** Soil materials that are removed from an area of land such as an excavation (grading) and soil materials that are added to an area of land (filling). The soil graded, plus the soil filled, equals the total disturbance.

### **CARLTON COUNTY ZONING ORDINANCE #27 - Article 4, Section 5, Subd. H 10B:**

This section of the ordinance regulates topographic alterations such as grading and filling. A Shoreland Alterations permit shall be required for grading and filling activities within 300 feet of any lake, river, or stream. However, no separate permit shall be required for grading, filling, and excavations necessary for the construction of structures, sewage treatment systems, and driveways that are constructed in a manner that complies with the standards listed on page 2 of this fact sheet.

### **SHORELAND ALTERATIONS PERMIT**

A permit for grading and filling activities shall be obtained from the Zoning Administrator for the following grading and filling activities:

- The movement (total disturbance) of between 5 and 10 cubic yards of material per site within a bluff, red clay bluff zone, or steep slope.
- The movement (total disturbance) of between 10 to 50 cubic yards of material per site within the shore impact zone, but outside a bluff, red clay bluff zone, or steep slope.
- The movement (total disturbance) of more than 50 cubic yards of material per site outside of the shore impact zone and bluff impact zone.

## SHORELAND ALTERATIONS INTERIM USE PERMIT

An Interim Use Permit shall be required from the County Board for grading and filling activities that involve the following:

- The movement (total disturbance) of 10 or more cubic yards of material per site within a bluff, red clay bluff zone, or steep slope.
- The movement (total disturbance) of more than 50 cubic yards of material per site within the shore and bluff impact zones.
- Plans for an Interim Use Permit shall be prepared and submitted by an engineer, soil scientist, landscape designer, or other qualified professional and include the following information:
  - Existing and final topography utilizing 2-foot contours.
  - A site restoration plan showing trees to be removed and replaced, and final ground cover.
  - A drainage and erosion control plan showing the type and location of erosion control measures to be used.
  - A development plan showing how the re-contoured lot may be developed in a manner consistent with Ordinance #27; and
  - The plan shall be reviewed by the Soil and Water Conservation District before the commencement of grading and filling activity.

## RIP RAP (ROCK) ON SHORELINE

- Placement of rock riprap, including associated grading of the shoreline and placement of a filter blanket, requires a shoreland alteration permit and shall be done in accordance with Minnesota Department of Natural Resource (MN DNR) standards. The MN DNR standards require – a) the finished slope does not exceed three (3) feet horizontal to one (1) foot vertical, b) the landward extent of the riprap is within ten (10) feet of the OHWL, and c) the height of the riprap above the OHWL does not exceed three (3) feet.
- ***Riprap will only be allowed in situations where active erosion problems exist.***
- Any permit for riprap must contain a plan to establish a vegetative buffer with the depth to be determined by the Zoning and Environmental Services Department for the entire width of the lot, except for lake or river access areas. Plans for such buffers shall be approved by the Carlton County Zoning and Environmental Services Department and shall be implemented immediately.
- Rock riprap shall only be used for the correction of an established erosion problem that cannot be controlled through the use of suitable vegetation, slope stabilization using coir logs, willow wattle, or similar bioengineering means. Riprap and retaining walls used for ornamental purposes, or for terracing natural slopes are prohibited within the shore impact zone and bluff impact zones.

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## ALL SHORELAND ALTERATIONS PERMITS SHALL COMPLY WITH THE FOLLOWING STANDARDS:

- The applicant shall prepare and submit a plan for review showing existing and proposed contours, erosion control plan, and final ground cover. If required, the plan shall be reviewed by the Soil and Water Conservation District.
- Alterations must be designed and conducted in a manner that ensures only the smallest area of soil is exposed for the shortest time possible.
- Mulches or similar materials must be used for temporary bare soil coverage and permanent vegetation established within a reasonable period of time.
- Methods must be used to minimize soil erosion and trap sediments before they reach any surface water feature. Methods to trap sediments must be in place before soil disturbances begin.
- Fill or excavated material shall not be placed upon/within bluffs, bluff impact zones, or steep slopes.
- Any alterations below the OHWL of public waters must be authorized by the Department of Natural Resources.

- Alterations to topography must be accessory to a permitted use or conditional use and not adversely affect adjacent or nearby properties.
- After-the-fact alterations will require the submittal of and adherence to an approved restoration plan that mitigates the extent of the violation.

#### TIPS TO CONSIDER:

- Verify with the Carlton County Zoning & Environmental Services Office that you are not disturbing a wetland. Grading and filling in a wetland require a separate permit process.
- Plan to preserve existing vegetation as much as possible. Vegetation will naturally curb erosion, improve the appearance and value of your property, and reduce the cost of landscaping later. **Removal of any vegetation within the building setback of lakes, rivers, and streams is regulated under Carlton County Ordinance #27.** Please call Carlton County Zoning & Environmental Services Office before removing any vegetation and review the Vegetation Alterations and Removal Fact Sheet.
- Discuss clearing limits with your contractor in advance. Field mark these limits with ribbons or flagging. Flag particular trees and shrubs that you want to be protected. Remember to keep heavy machinery away from trees to avoid compacting their roots, otherwise, they may die a few years later.
- Discuss with your contractor exactly which erosion control measures will be used, who is responsible for the purchase of the erosion control supplies (silt fencing, seed, mulch, etc.), and who is responsible for implementation. Timely stabilization with the appropriate materials will save you time and money and help minimize pollution to the lake or stream.
- Plan earth-moving activities early enough in the year so that you can revegetate the site by September 15th. Plan to mulch disturbed areas over the winter if construction is delayed past September 15th. This will protect bare soil from spring runoff.
- Before the project starts, install a filter barrier on the downslope side of the construction area. This barrier should include a silt fence or embedded hay bales. A staked erosion control log can be used for smaller projects. Trench silt fencing in about 6 inches. Trench hay bales 4 inches deep and install 2 stakes per bale.
- When earth moving, separate topsoil so it can be spread back on top of the site. You'll have greater success in establishing a new lawn or buffer strip area, and you won't have the added expense of buying topsoil. Ring the downslope edge of topsoil stockpiles with silt fencing or embedded hay bales.
- Install a high-quality natural-fiber erosion control blanket and anchor properly so the soil and seed won't wash away. Do not use a blanket with plastic netting or labeled as photo-biodegradable. The plastic netting erosion control blanket is lower in strength and quality and is not appropriate for holding bare soil in place on a steep slope. Secondly, plastic netting causes problems for wildlife and contributes to plastic pollution in the waterway.
- Always follow the manufacturers' instructions for the installation of erosion control blankets. This is not a place to cut corners as loss of soil, seed, and mulch will cost you more in the end.
- The best time to seed a native seed mix in Minnesota is late summer (mid-August to mid-September) due to favorable conditions for germination and growth. Seeding can be done in the spring from mid-May to mid-June; however, weeds and high summer temperatures often reduce the chance of success.