

# LAND DISTURBANCE MANAGEMENT AND IMPERVIOUS SURFACE AREA STANDARDS

(fact sheet #7 of the Shoreland Management and Lake Classification Series)

## ISSUE:



Land disturbance through construction site activity and filling and grading has the potential to:

- ❖ Increase delivery of phosphorus rich sediment to the waterway, resulting in poor water quality and nuisance growth of algae and aquatic plants.
- ❖ Accelerate erosion of banks and shorelines through the removal of brush and shoreline vegetation;
- ❖ Adversely affect near shore habitat and aquatic communities by covering spawning grounds and other critical near shore areas with sediment.

## MINIMUM STATE STANDARD:

### Land Disturbance Activities

State law does not set forth concise guidelines regulating land disturbance activities in shoreland zones (aside from that occurring in shoreland-wetland districts). The Department of Natural Resources' 1985 "Model Shoreland Zoning Ordinance" distinguishes between land disturbing activities which require a permit and those which do not. A permit is required for any filling or grading of an area **within 300 feet of the ordinary high water mark (OHWM) and which drains toward the water and on which there is either:**

1. Any filling or grading on slopes of more than 20%.
2. Filling or grading of more than 1,000 square feet on slopes of 12-20%.
3. Filling or grading of more than 2,000 square feet on slopes less than 12%.

These state standards still allow substantial land disturbing activity to take place which may adversely **impact water quality**. For those activities which do not require a permit, the filling, grading, dredging and ditching must be done in a manner designed to minimize erosion, sedimentation and impairment of fish and wildlife habitat.

### Impervious Surface Area Standards

State law does not regulate amount of impervious surface area. However, runoff can be minimized by reducing the amount of impervious surface area. Counties may and some have implemented impervious surface area standards.

## OPTIONS

### Land Disturbance Activities

There are a number of strategies which a county or local unit of government can employ in managing runoff pollution from construction and land disturbing activity. Some suggestions follow:

- ❖ Require erosion control plans for slopes less than 12% and areas of less than 2,000 sq ft as well as for areas with greater slopes and surface area (see below).

- ❖ Require that actions designed to compensate for lost shore buffer functions (i.e., mitigation) be performed.
- ❖ Require that development and construction plans include erosion prevention controls.
- ❖ Require that ditches and slopes be stabilized within a certain period of time.
- ❖ Impose maximum amount of impervious surface area for residential areas (ex. 15%) and commercial areas (ex. 20%).
- ❖ Place burden on property owner to show that maximum amount of impervious surface area has not been exceeded.
- ❖ Educate landowners on the impacts of construction site activity and runoff pollution on water quality.

**The following ordinance provisions relating to filling and grading is taken from Waushara County's proposed shoreland protection ordinance:**

**EXAMPLE:**

**This proposal is characterized by three categories of land disturbing activities. Each category requires that certain standards be followed.**

**1. Slopes of less than 12% and areas of less than 2,000 sq. ft.**

- ❖ Best management practices are to be followed (see the Wisconsin DNR manual for construction site erosion control).
- ❖ If any sediment or harmful substance is discharged to any waterway or wetland as a result of such activities, the responsible parties shall perform such actions as necessary to remove the discharge, restore the site to its former condition, and fully repair any environmental damage.

**2. Slopes of 12-50% and areas of 2,000 sq. ft or greater**

- ❖ A stormwater management and erosion control plan approved by the Zoning Department is required (see manual for construction site erosion control published by the Wisconsin DNR).
- ❖ Best management practices should be included in the plan (see the Wisconsin DNR manual for construction site erosion control) and the following standards should be observed:
  - 1) The area of soil exposed and the duration of exposure shall be minimized.
  - 2) Prior to site clearing, the construction zone shall be fenced to confine heavy equipment operation and land disturbing activities.
  - 3) Runoff shall be diverted from exposed soils until stabilized by vegetation or other means.
  - 4) Excavated material shall be confined by filter fabric fencing or other appropriate measures until employed as back fill, final grading materials or otherwise permanently stabilized.
  - 5) Fill shall not be deposited in any floodplain, wetland or outside the designated and fenced construction without prior written authorization.
  - 6) Post construction runoff shall be infiltrated or stored to prevent erosion and sediment transport.
  - 7) Upland slopes and artificial water courses shall be stabilized according to accepted engineering studies.

**3. Slopes greater than 50%**

Land disturbing activities are prohibited.

**To learn about the value of a shoreline buffer for resource protection and wildlife habitat, see fact sheet #4. To learn about the impacts of development on water quality and wildlife habitat, see fact sheet #12.**

For examples of other ordinances with revised standards for land disturbing activity, contact:

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For more information, contact your regional Department of Natural Resources lake coordinator, the Wisconsin Association of Lakes [800/542-5253] or UWEX/UW-Stevens Point [715/346-2116].