

Temporary Grading Practices For Erosion Control

(Surface Roughening and Temporary Ditch Sumps)
(1067)

Wisconsin Department of Natural Resources
Technical Standard

I. Definition

*Temporary*¹ grading practices used to minimize construction site erosion. These practices include, but are not limited to surface roughening (directional tracking and tillage) and temporary ditch sumps.

II. Purpose

The purpose of these practices are to minimize erosion and sediment transport during grading operations on construction sites.

III. Conditions Where Practice Applies

These practices apply where land disturbing activities occur on construction sites. These practices shall be used in conjunction with other erosion control practices.

IV. Federal, State, and Local Laws

Users of this standard shall be aware of applicable federal, state, and local laws, rules, regulations, or permit requirements governing these practices. This standard does not contain the text of federal, state, or local laws.

V. Criteria

These interim practices may be employed in addition to the approved grading plan to reduce erosion and sediment transport.

- A. Surface Roughening - Surface roughening is abrading the soil surface with horizontal ridges and depressions across the slope to reduce runoff velocities.
1. Directional Tracking - The process of creating ridges with tracked vehicles on unvegetated slopes. This method is used for short durations on sites actively being graded and shall be used in

conjunction with other practices. This practice shall be in place at the end of each workday.

Directional tracking involves driving a tracked vehicle up and down a slope. The tracks create horizontal grooves and ridges. The rough surface slows sheet runoff and helps to prevent rills from forming. (Conversely, if the tracked vehicle is driven along the contour the tracks create vertical grooves and ridges for the water to follow, increasing erosion.)

2. Tillage - Utilizing conventional tillage equipment to create a series of ridges and furrows on the contour no more than 15 inches apart.

- B. Temporary Ditch Sump - Temporary ditch sumps are ½ to 5 cubic yard excavations made in a drainageway during earthmoving operations. Their purpose is to slow and pond runoff during the time that drainageways are being graded. Sumps shall be in place prior to anticipated rain events.

Construction involves excavating sumps (holes) in the rough ditch grade, and using the excavated material to form a dike on the downstream side of the sump.

Temporary ditch sumps are not effective perimeter controls. Other sediment control practices shall be utilized prior to channels discharging into public waterways.

VI. Considerations

- A. Directional tracking may compact the soil, therefore additional seedbed preparation may be required. Refer to WDNR Technical Standard Seeding for

¹ Words in the standard that are shown in italics are described in X. Definitions. The words are italicized the first time they are used in the text.

Construction Site Erosion Control (1059) for seedbed preparation and seeding criteria.

- B. When constructing a temporary ditch sump, compacting the dike provides additional stability.
- C. Consider at a minimum excavating ½ cubic yard per 1% gradient, for every 500 feet of channel when constructing temporary ditch sumps

VII. Plans and Specifications

Due to the interim nature of these practices, and the fact that location determinations are made in the field, they need only be referenced in the erosion control plan narration or general notes.

VIII. Operation and Maintenance

These practices shall be inspected and repaired or reinstalled after every runoff event.

IX. References

Virginia Department of Conservation and Recreation. 1992. Virginia Erosion and Sediment Control Handbook, Third Edition. Chapter 3 – 3.29 Surface Roughening.

Dane County. 2002. Dane County Erosion Control and Stormwater Manual, First Edition. Appendix Surface Roughening S-16.1.

X. Definitions

Temporary (I): An erosion control measure that is utilized during construction site grading activities.