



DWR – NPDES-SOP – G – 16 –Erosion Prevention and Sediment Control Handbook – 01092026
Erosion Prevention and Sediment Control Handbook

4.2.6.7 Sod



Source: TDOT

Definition and Purpose

Sodding is a permanent measure that protects exposed soils by laying a continuous cover of grass. Laying sod establishes immediate ground cover, thereby providing stabilization and preventing erosion. It is particularly useful in situations where seeding is not feasible or where immediate stabilization is required, such as on slopes, drainage channels, swales, or other areas prone to erosion.

Appropriate Applications

Sod can be laid over nearly all graded or cleared areas practically any time of the year (KTC, 2015), although the best times are Spring and Fall. It is one of the best options where immediate, vegetated cover is required. Example applications include:

- Areas where prompt use and aesthetics are important such as lawns and golf courses (USEPA, 2021);
- Steep slopes where vegetative cover may be difficult to establish;
- Grassed swales and waterways; and
- Areas around drop inlets that require stabilization.

Limitations and Maintenance

One of the primary drawbacks of sodding is its higher cost compared to seeding, as well as the challenges associated with obtaining, transporting, and storing sod. To establish a



DWR – NPDES-SOP – G – 16 –Erosion Prevention and Sediment Control Handbook – 01092026

Erosion Prevention and Sediment Control Handbook

healthy sod cover, the soil must be adequately prepared, and proper irrigation must be maintained before, during, and after installation. If the sod does not receive enough moisture, especially in the first few weeks, the roots can die back or dry out entirely, leading to sod failure. Regular inspections are necessary during the initial establishment period to monitor moisture levels and grass health, with irrigation needed every few days if there is no significant rainfall. Once established, sod requires ongoing maintenance, including fertilization and mowing. Fertilization schedules differ based on grass type, with warm-season grasses fertilized from late spring to early summer and cool-season grasses from late winter to early fall (NCDEQ, 2013; USEPA, 2021). In cases where sod does not establish properly, consider alternate fertilizer applications or completely remove and replace the sod, with the underlying causes addressed to prevent recurrence.

Planning and Design Considerations

Quality turf can be established with seed or sod. Therefore, it is essential to evaluate whether the benefits of sod justify the expense, especially in situations where rapid stabilization or reduced failure risk is crucial. If sod is used for swales or around inlets, ensure the sod is adequately pinned or staked to the ground and that it can withstand the forces it is subjected to in accordance with Sections 4.2.6.1 and 4.4.4, respectively. Additionally, consider any environmental concerns with sod. Typically, sod has a plastic netting to hold it together and staking materials are either plastic, metal, or wood. Plastic and metal materials will not easily degrade and may remain in the ground for many decades. Plastic-free sod alternatives are available; it is recommended to check with local suppliers for such products.

The type of sod selected should be composed of plants adapted to both the site and the intended purpose (ALSWCC, 2018; NCDEQ, 2013). In general, warm season grasses such as bermudagrass sod would be best in west TN and cool season grasses such as fescue sod would be best in east TN. Both can be used in middle TN, with warmer season grasses in southern middle TN and cooler season grasses in northern middle TN. Bermudagrass is a dormant winter plant and is expected to turn brown for the season, while fescue grass remains relatively green year long. Regardless of type, only high-quality sod of known genetic origin, free from noxious weeds, diseases, or insect infestations should be used (USEPA, 2021). Additionally, sod should be machine cut, containing minimum three-fourths of an inch of soil (not including shoots or thatch), should not be cut in excessively dry or wet weather, and should be cut to size, not sawed (NCDEQ, 2013).

To ensure successful sodding, prepare the site thoroughly before the sod is delivered. Clear surface of trash, woody debris, stones and clumps larger than one inch. Bring the soil surface to final grade and fill low spots in order to avoid standing water (ALSWCC, 2018). The soil should be adequately prepared to address compaction, pH, and fertility issues, as these



DWR – NPDES-SOP – G – 16 –Erosion Prevention and Sediment Control Handbook – 01092026

Erosion Prevention and Sediment Control Handbook

factors significantly impact the success of sod establishment. Refer to Section 4.2.6.11 for soil amendment options. For best results, a soil test can be conducted, which can also reduce the need for fertilizers and lime (KTC, 2015).

Use the following installation guidelines to increase sod establishment:

- Sod should be installed within 36 hours of harvest to maintain its viability, as leaving it stacked or rolled can cause heat buildup and damage;
- Do not install sod on gravel, frozen soils, or soils that have been treated recently with sterilant or herbicides. Furthermore, avoid installation during hot months if the site does not have irrigation;
- Moisten and rake the soil surface just before sod is installed;
- Ensure that the sod is in good contact with the prepared soil surface;
- Lay the first row of sod in a straight line with subsequent rows placed parallel to and butting tightly against each other. When smaller rolls are used, stagger strips in a brick-like pattern (Figure 4.2.6.7-A). Ensure the edges of differing pieces of sod abut. Do not stretch or overlap the sod strips;
- Install strips of sod with their longest dimension perpendicular to the slope. On slopes 3:1 or steeper, or wherever erosion may be a problem, secure with pegs or staples;
- After installation, roll sod to provide firm contact between roots and soil, if feasible. This may not be practical on small construction sites or slopes;
- Irrigate the soil after installation; and
- Keep sodded area consistently moist and do not mow until sod is firmly rooted, which is typically two to three weeks.

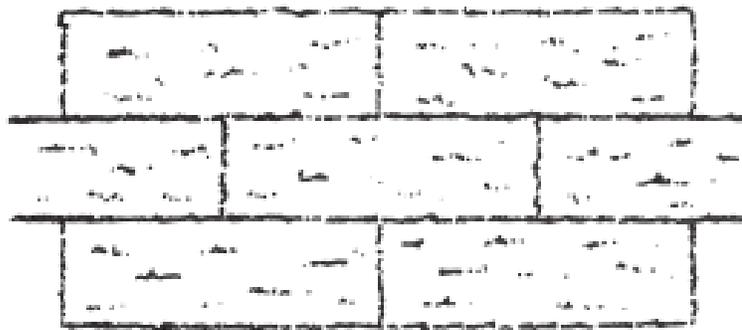


Figure 4.2.6.7-A: Staggered pattern for laying sod. Source: NCDEQ (2013).

Example Application

No formal design or quantities are required for this measure and therefore are not presented here.



**DWR – NPDES-SOP – G – 16 –Erosion Prevention and Sediment Control Handbook –
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Erosion Prevention and Sediment Control Handbook**

References

- ALSWCC. (2018). *Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas.*
- KTC. (2015). *Best Management Practices (BMPs) for Controlling Erosion, Sediment, and Pollutant Runoff from Construction Sites.*
- NCDEQ. (2013). *Erosion and Sediment Control Planning and Design Manual.*
- TDOT. *Drainage Manual Ch10.*
- USEPA. (2021). *Stormwater Best Management Practices: Sodding.*