Greenspace and Buffer Areas


Minnesota Stormwater Manual

BENEFITS

	L	M	H
Flow Control	■	■	
Erosion Control	■	■	■
Sediment Control			
Runoff Reduction	■	■	
Flow Diversion			

Description: Protecting undisturbed areas and preserving existing vegetation is one of the simplest and most effective methods of erosion protection and runoff reduction.

Typical Uses: Preservation of existing vegetation, protection of sensitive areas, buffer areas around bodies of water.

Advantages:
- Undisturbed areas generate less runoff and sediment.
- Reduced soil compaction due to equipment.
- Buffer areas filter sediment and nutrients from runoff before entering streams and lakes.

Limitations:
- May limit staging areas, potentially complicating construction phasing.
- Requires planning during design to prevent the need for grading and improvements within the targeted area.

Longevity: Permanent

SUDAS Specifications: N/A

A. Description/Uses

Preserving greenspace and protecting sensitive vegetated areas from disturbance reduces the potential for erosion and sediment runoff from the construction site as well as post construction soil compaction. This provides exceptional benefits both during and after project construction.

Buffer areas around sensitive waters protect water quality and aquatic habitat by providing shade that moderates sunlight and water temperature, infiltrating and slowing runoff, trapping sediment and other pollutants, providing habitat for fish and wildlife, stabilizing shorelines, and preventing erosion.

B. Design Considerations

1. **Greenspace Preservation:** The designer should take a comprehensive look at the overall construction site, proposed phasing, type of work, and staging areas necessary to identify potential areas of the site that should remain undisturbed.

   The designer should limit the construction area to as small a footprint as possible while recognizing that the contractor still requires adequate staging areas for equipment and materials. Severely limiting the allowable work area can increase project costs.

2. **Buffer Zones:** General Permit No. 2 requires that natural buffers be maintained around water bodies unless it is infeasible to do so. While General Permit No. 2 does not provide any specific requirements for buffer widths, a minimum 50 foot wide vegetative buffer is recommended. In sensitive areas or where a wide area of disturbance is proposed adjacent to the water body, wider buffers should be provided.

   The preservation of a buffer zone is not considered a standalone best management practice for construction stormwater, but a protective area around a water body to remain undisturbed during or after construction activities. Appropriate erosion and sediment controls are still required within the area of work.

   Improvement or repair of buffer zones that are actively eroding and contributing sediment or other pollutants to the adjacent surface water is both allowed and encouraged. Such enhancements, which must be addressed in the SWPPP, and approved by the permitting authority, can include targeted grading, seeding and mulching, application of rolled erosion control products, and other measures intended solely to address the actively eroding areas. Depending on the location and drainage area of this work, an Iowa DNR Floodplain Development Permit may be required.

   Where the scope of work makes it infeasible to maintain the recommended buffer area, redundant sediment control BMPs should be provided. For example, if silt fence is provided as a perimeter control, a straw RECP could also be installed to provide pollutant removal similar to the natural buffer zone.

C. Application

Areas to be preserved should be clearly identified on the construction plans. To ensure greenspace and buffer areas are protected, the contract documents may require the contractor to erect construction fence or silt fence around the perimeter of the work area prior to initiating grading operations.