

Native Soil / Vegetation Preservation

Preserving native soil / existing vegetation in a forested area (including trees, grasses, and other plants) by preventing disturbance or damage to specified areas of a construction site to the maximum extent practicable will minimize the impacts of development on storm water runoff and enhance aesthetic benefits.

Limitations

- It may constrict the area available for construction activities.
- It may not be cost-effective in areas with high land values.

Recommended V_Q Credit

Preserved / protected area, in square footage, removed from storm water quality calculations.

Recommended Guidelines

1. *General Considerations*

- 1.1. Design the site to maximize preservation of natural vegetation through to minimize the impact of construction activities on existing vegetation.
- 1.2. If feasible, the preserved area should be located down-slope from the building sites, since flow control and water quality are enhanced by flow dispersion through undisturbed soils and native vegetation.
- 1.3. Areas to be preserved should be identified in the plans and clearly marked in the field before any site disturbance begins.
- 1.4. Clearly mark all trees to be preserved, and protect against ground disturbance within the drip-line of each marked tree as shown on the attached figure. The drip-line marks the edge of the tree's foliage where drips from rainfall would drop. Most of the tree's roots lie within the drip-line and are vulnerable to damage.
- 1.5. Preserving natural vegetation may affect some aspects of staging, work sequencing, and construction cost. In addition, control measures may be needed around the perimeter of the preserved area to maintain adequate water flow and drainage and to prevent damage from excessive erosion or sedimentation. These factors should be taken into consideration when preparing site plan and cost estimates.
- 1.6. Consider the use of design exceptions to enable preservation of natural vegetation in certain areas where it would typically be removed and where its preservation would not pose safety problems.

1.7. Do not modify existing drainage patterns through or into any preservation area unless specifically directed by the plans or approved by the local permitting authority.

2. *Construction Considerations*

2.1. Keep all construction equipment, materials, and waste out of the designated areas.

2.2. Perform maintenance activities as needed to ensure that the vegetation remains healthy and able to aid in erosion control and sediment collection.

3. *Maintenance considerations*

3.1. Inspect at regular intervals to make sure the preserved vegetated areas remain undisturbed and are not being overwhelmed by sediment.

3.2. Implement maintenance or restorative actions as needed. Different species, soil types, and climatic conditions will require different maintenance activities such as mowing.

3.3. Maintenance should be performed regularly, especially during construction.

Native Soil / Vegetation Preservation Resources

- Naval Facilities Engineering Service Center, Environmental Services
<http://enviro.nfesc.navy.mil/stormwaterbmp/HTML/BMP112.htm>
- Storm Water Management Manual for Western Washington
- <http://www.ecy.wa.gov/pubs/9915.pdf>
- Minnesota Urban Small Sites BMP Manual
- http://www.metrocouncil.org/environment/Watershed/BMP/CH3_RPPConstSequenc.pdf
- Estimating Soil Storage Capacity for Storm Water Modeling Applications by
By Michael A. Gregory, Brett A. Cunningham, Michael F. Schmidt, and Brian W. Mack