

SLOPES V Stormwater Requirements Summary

I reviewed the SLOPES V Transportation Biological Opinion to identify stormwater requirements associated with transportation projects. These are projects that trigger Army Corps review due to their impacts below Ordinary High Water of Waters of the US. Because SLOPES V covers the same species and areas of Oregon as the NFIP Biological Opinion, it stands to reason that stormwater requirements should be similar. There are also Regional General Permits and Nationwide Permits for certain activities that replace some of the following SLOPES V general requirements.

The following are actions covered by SLOPES V that trigger Stormwater Management requirements:

1. Increase in ISA w/in the project area
2. Construct new pavement that increases capacity or widens road prism
3. Reconstructs pavement down to subgrade*
4. Overwater structure replacement
5. Change stormwater conveyance

* Stormwater management is not required for the following pavement actions: minor repairs, patching, chip seal, grind/inlay, overlay or resurfacing.

Stormwater requirements:

1. Water quality treatment for runoff from all contributing ISA
 - a. Design storm: 50% of cumulative rainfall from 2-year, 24 hr storm
 - i. Climate zone 4: Treat 67% of cumulative rainfall from 2-year, 24 hr storm
 - ii. There are other requirements for Zones 5 and 9, but neither is w/in the NFIP Biological Opinion boundary.
2. Water quantity treatment
 - a. Not needed if discharging into major waterbody (Columbia, Willamette downstream of Eugene)
 - b. Match pre-development rates
 - c. Design storm is continuous simulation of 50% of 2-year and 10-year events
 - d. Treatment should be designed to maintain the frequency and duration of instream flows generated by storms within the following endpoints:
 - i. Lower discharge endpoint
 1. Western Region – 42% of 2-year event
 2. Eastern Region
 - a. SE, NE, North Central- 48% of 2-year event
 - b. Eastern Cascade – 56% of 2-year event
 - ii. Upper discharge endpoint
 1. Entrenchment ration <2.2 – 10-year event, 24 hr storm
 2. Entrenchment ratio >2.2 – bank overtopping event
3. Include Low Impact Development approaches. SLOPES V does not state which LIDs should be used.

4. Include Low Impact Development approaches. For runoff that cannot be infiltrated or evaporated and will discharge into surface or subsurface waters, use one or more of the following LIDAs
 - a. Bioretention cell
 - b. Bioslope/ ecology embankment
 - c. Bioswale
 - d. Constructed wetlands
 - e. Infiltration Pond
 - f. Proprietary media filter devices
 - g. Porous pavement
5. Any stormwater management facility that requires a new or enlarged structure within the riparian zone, or that has insufficient capacity to infiltrate and retain the volume of stormwater called for by this opinion will require compensatory mitigation.

Compensatory Mitigation for stormwater management facilities

1. The primary habitat functions of concern are related to the physical and biological features essential to the long-term conservation of listed species, *i.e.*, water quality, water quantity, channel substrate, floodplain connectivity, forage, natural cover, space, and free passage.
2. Acceptable mitigation for riparian habitat displaced by a stormwater treatment facility is restoration of shallow-water or off-channel habitat.
3. Acceptable mitigation for inadequate stormwater treatment includes providing adequate stormwater treatment where it did not exist before, and retrofitting an existing but substandard stormwater facility to provide capacity necessary to infiltrate and retain the proper volume of stormwater.

2017 Nationwide Permit Conditions Associated with Development:

General condition 11 - Stormwater Discharge Pollution Prevention

1. Erosion Control is required on projects.
2. Post-Construction Stormwater Management – If the activity will result in creation of new impervious surfaces and federally listed aquatic species or their habitat may be affected by the proposed activity, permittee shall forward SWMP to Portland District Engineer for consultation under ESA.

NWP 14 – Linear Transportation Projects

1. The limit of impact is ½ acre in non-tidal waters and 1/3 acre in tidal waters
2. The Pre-construction notification threshold is over 1/10 acre discharges into special aquatic sites.
3. This does not authorize storage buildings, parking lots, train stations, aircraft hangars, or other non-linear transportation features.

NWP 29 – Residential Developments

1. This NWP covers the construction or expansion of a single residence, a multiple unit residential development, or a residential subdivision.

2. Allows discharges of dredged or fill material into non-tidal waters of the US, impacting up to ½ acre or 300 linear feet of stream bed. The streambed limit can be waived for intermittent and ephemeral streams by the District Engineer.
3. Pre-construction notification is required for all activities, and must indicate location of sites for disposal of dredged or excavated material and baseline information.
4. Flood control facilities will not be considered abandoned if the prospective permittee is in the process of obtaining other authorizations or approvals required for maintenance activities and is experiencing delays in obtaining those authorizations or approvals.

NWP 39 – Commercial and Institutional Developments

1. This Nationwide Permit is for the construction or expansion of commercial and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures. Attendant features include roads, parking lots, garages, yards, utility lines, stormwater management facilities, and recreation facilities such as playgrounds and playing fields.
2. The impact limits are ½ acre or 300 linear feet of streambed. The streambed limit can be waived by the DE for intermittent and ephemeral streams.
3. Pre-construction notification is required for all activities.
4. Any loss of stream bed are applied to the ½ acre limit.
5. This NWP does not authorize construction of new golf courses or ski areas. It authorizes the construction of oil or gas wells.

NWP 43 – Stormwater Management Facilities

1. This Nationwide Permit covers the construction of stormwater management facilities, including stormwater detention basins and retention basins and other stormwater management facilities; the construction of water control structures, outfall structures and emergency spillways; and the construction of low impact development integrated management features.
2. The impact limits are ½ acre or 300 linear feet of streambed. The streambed limit can be waived by the District Engineer for intermittent and ephemeral streams.
3. Pre-construction notification is required for all activities involving expansion or construction of SWM facilities.
4. Authorizes maintenance of stormwater management facilities. Authorizes the construction of pollutant reduction green infrastructure features designed to reduce inputs of sediments, nutrients, and other pollutants into waters to meet reduction targets established under the TMDL set under the CWA.
5. Does not authorize construction of new stormwater management facilities in perennial streams. Maintenance does not require PCN if limited to restoring original design capacities.