

## BMP 44.00. Ditch Maintenance

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### *Objectives*

Perform Ditch Maintenance in a manner that prevents pollutants from entering surface and storm waters. Pollutants may come from the road or include eroded sediment.

### *Debris Clearing*

Accumulated debris, consisting of sediment deposits, brush, and trash, have the potential to be carried by stormwater runoff downstream and into waters of the U.S. Collect and dispose of all debris at an approved disposal site.

### *Regrading*

Install perimeter sediment controls prior to regrading ditches to limit the potential for sediment to be transported to a water of the U.S. Establish a minimum 50-foot buffer where practicable between streams and ground-disturbing ditch work to protect water quality and fish habitat. Where appropriate, provide velocity dissipation such as temporary check dams to reduce the potential for erosion in the ditch. Riprap at culverts is a permanent best management practice (BMP) that prevents erosion due to scour at the inlet and outlet of a culvert. Ditch lining is another permanent BMP that provides protection from erosion in the ditch. Installation and maintenance methods for these BMPs are described in the standard drawings.

When regrading, restore the original cross-section and flow line. When possible, equipment is to remain on the roadway during regrading. Haul removed materials to a pre-approved disposal site. Hydroseed when ditch regrading has been completed to stabilize bare soil and prevent erosion.

### *Hydroseeding*

Hydroseed as necessary when maintenance activities have removed the existing vegetation, such as after culvert replacement and ditch regrading.

Hydroseeding establishes vegetation to prevent the ditch from eroding. Hydroseeding equipment is to remain on the roadway during hydroseeding activities. It is preferred to reseed recontoured ditches in the same day. If this isn't practicable, then reseed as soon as practicable after the regrading

work is complete. Use certified native seed mixes to revegetate ditches. Avoid work that requires hydroseeding during the fall in areas with high leaf concentrations due to the need to remove the debris prior to hydroseeding. The Alaska Plant Material Center recommends seeding before the following dates for optimum success:

- Arctic Coast: July 15
- Western Alaska: August 15
- Southcentral Alaska: August 31
- Southeast Alaska and Aleutian Islands: September 15
- Interior Alaska: August 15-31

Discuss seeding with the regional maintenance environmental analyst for more information.

### *Cross Drain Culvert Cleaning*

Cross drain culvert maintenance is specific to culverts that convey run-off from the roadway and not streams or other waters of the U.S. Perform minor cleaning by hand when possible. When wheel mounted equipment is used, keep it on the roadway whenever possible. Transport material removed from the ditch and culvert to an approved disposal site.

Prevent erosion at outlets and inlets with armoring when necessary since these are areas of high flow, concentrated drainage, and steep slopes, which are susceptible to erosion. Replace existing or augment depleted armor to maintain the erosion control function.

### *Stream Culvert Cleaning*

In-stream culvert maintenance is associated with waterways, wetlands, or other waters of the U.S. and requires permitting from appropriate agencies. When possible, schedule work during low flow to limit impacts to the stream. Working during low flow will reduce the amount of sediment that is conveyed to the stream.

Perform minor cleaning by hand when possible. Transport material removed from the ditch and culvert to an approved disposal site.

#### *Guardrail Cleaning*

During guardrail cleaning, manage removed sediment to prevent it from entering a water of the U.S. Pull material into the roadway and collect it for disposal. Where appropriate, sweep the roadway after guardrail cleaning.

#### *Vegetation Management*

During vegetation management, avoid ground and wildlife disturbance. When possible, avoid clearing and grubbing activities during sensitive migratory bird nesting windows. Contact your Environmental Analyst to find out what the windows are.

Avoid allowing cut vegetation to enter waters of the U.S. by removing cuttings. For vegetation cutting near waters of the U.S., place any cut vegetation that is left to decompose high on the bank to prevent it from entering the water.

During grubbing (e.g., ground disturbing activities), keep these practices in mind to protect storm water. Provide perimeter controls such as compost berms or socks, fiber rolls, prefabricated barrier systems, or silt fence to prevent sediment from being transported from the grubbed area. Hydroseed the area when the grubbing is completed to stabilize bare soil and prevent erosion.

#### *Reference Drawings*

- BMP – 31.00 Temporary Check Dams
- BMP – 04.00 Compost Berm and Sock
- BMP – 10.00 Fiber Rolls for Erosion and Sediment Control
- BMP – 13.00 Prefabricated Barrier System
- BMP – 20.00 Silt Fence