

BMP 43.00. Bridge Maintenance

Objectives

Perform Bridge Maintenance in a manner that protects quality of waters of the U.S. from pollutants created or caused by maintenance activities. Since many of these bridge maintenance activities require permits, contact the Environmental Analyst prior to planning the work.

Bridge Deck Cleaning

Prior to and during bridge cleaning, apply water to the surface in sufficient amounts to dampen the accumulated sediment and prevent dust generation but not so much that sediment particles are mobilized or run-off occurs.

Avoid material being swept over the edge of the bridge when removing sand, gravel, and debris with shovels, brooms, or mechanical sweepers. When mechanically sweeping bridges, ensure that the broom is orientated such that material is not swept over the edge of the bridge.

Bridge Structure Cleaning

When cleaning the lower chord of bridge trusses use compressed air. When necessary, water may be used to clean the lower chords.

Repairing Spalled Concrete and Expansion Joints

When repairing spalled concrete, clean the local area prior to work in a manner that minimizes discharge to waters of the U.S. Clean without using water, if possible. After work is complete, collect the debris created using brooms and shovels then relocate it to an approved disposal site. Repair spalled concrete during dry weather to limit the potential for discharges to waterways. Conduct concrete washout at a designated and contained area to prevent the discharge of concrete waste pollutants to storm water and groundwater. See standard drawings for Concrete Washouts.

Vegetation Management

During vegetation management avoid ground and wildlife disturbance. Avoid allowing cut vegetation to enter waters of the U.S. by removing cuttings. If any cut vegetation is left to decompose, then leave it

high on the bank to prevent it from entering waters of the U.S.

Armoring Slopes

Prevent erosion caused by heavy rain, high water events, human interference, and normal wear on surfaces by inspecting and reinforcing armored slopes with riprap. Place armor rock to re-establish the existing armor in areas near the bridge surface to areas below the water line. When possible, complete work during low water seasons to avoid working in the water, and use sediment control measures such as fiber rolls to protect the water bodies.

Repairing Timber Abutments and Wingwalls

Repair of broken members on timber abutments and wingwalls should be “in-kind” with all-weather wood not treated with creosote. Options are wood treated with AZCA (ammoniacal copper zinc arsenate), copper naphthenate or ACQ (ammoniacal copper quaternary). If retrofitting or doing a partial replacement, use wood treatment that is acceptable to the resource agencies. Contact the regional environmental analyst. Conduct work during dry conditions to avoid impacts to the waterway.

Vegetative and Woody Debris Removal from Piers

Remove vegetation caught on the pier either by hand or using mechanical equipment. When possible, remove the material and haul to an approved disposal site. If the material includes large trees, free the material to allow it to float down stream past the bridge structure unless otherwise specified by permitting.

Reference Drawings

- BMP – 06.00 Concrete Washout
- BMP – 10.00 Fiber Rolls for Erosion and Sediment Control