

Bridge Cleaning and Washing Best Management Practices

As approved by MaineDEP

**For both MaineDOT and all municipal
structures**

Overview

Preventative maintenance is an important element in the successful preservation of Maine's bridges. To ensure the long-term integrity of the concrete deck and structural steel components, these features need to be periodically cleaned and washed. The primary goal of cleaning and washing is to remove residual chlorides that if left, would result in the corrosion and deterioration of the bridge. Enhanced functionality of the bridge also improves when accumulated material is removed from the drainage and expansion/contraction devices. These maintenance initiatives must be implemented in a manner that minimizes impact to the environment.

Description

Winter sand and other debris shall be removed annually in the spring from bridge roadway and curb surfaces and from between guardrail faces through manual or mechanical methods. Approximately 25 feet of approach roadway shall be included for cleaning at each bridge site. Once cleaned, the bridge steel and concrete surfaces shall be thoroughly flushed with water. To minimize impacts to the environment, cleaning and washing must coincide with spring high water flows.

Procedures

1. Perform bridge cleaning and washing during spring high water events.
2. Establish an appropriate traffic control plan for the work.
3. Collect and remove sand and other debris from the bridge deck, curb and roadway approaches using the most efficient and appropriate methods.

4. Material lying underneath or behind approach guardrail shall be "cut" to the shoulder cross slope grade and uniformly broadcast out beyond the shoulder break onto grassy or otherwise vegetative slopes. Other materials collected can be used to fill embankment erosion gullies or holes located near the bridge structure. Material may also be removed and deposited off site. Ensure the off site location is environmental appropriate.
5. Temporarily block bridge deck drains and scuppers.
6. If birds are building nests, laying eggs or tending young, avoid washing area or obtain appropriate environmental permits to address issue.
7. For washing, do not use any soaps or detergents.
8. Ensure water-blast spray and back splash is directed away from or otherwise shielded from vehicular traffic and/or pedestrians.

Closure

Periodic cleaning and washing are effective preventative maintenance techniques employed to minimize the adverse affects of residual chlorides on the structural integrity of bridges. These cost-efficient maintenance practices assist in enhancing the functionality and extending the operational life expectancy of bridge structures. Implementation of Best Management Practices ensures the cleaning and washing activities have minimal effects on the environment.

If you have any questions regarding this matter, please feel free to contact Brian Kavanah at 207- 287-7700, brian.w.kavanah@maine.gov or Phil Garwood at 441-9034, phil.e.garwood@maine.gov.