

MAINTENANCE BRIDGE FLUSHING GUIDANCE

MnDOT Office of Environmental Stewardship Environmental Investigation Unit

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This guidance document is prepared by MnDOT personnel and is intended only for use on MnDOT projects, including partnership projects, and MnDOT Maintenance Operations.

MNDOT has prepared this guidance document to provide its internal procedures and requirements for work performed on MnDOT rights of way, including MnDOT-owned facilities.

This document should not be construed as a full description of all regulations pertaining to the subject matter. This guidance is for routine maintenance of bridge decks using no greater than 120 psi for flushing operations. It is not intended for power washing of new bridges or any pressurized water-based blasting using over 120 psi. It is also not intended for power washing operations meant to remove paint or other coatings, oils or grease, or corrosion from the surface. For pressure washing over 120 psi or use of cleaning chemicals or use of other abrasives, refer to MPCA guidance document Power washing and Other Water-based Blasting at: <https://www.pca.state.mn.us/sites/default/files/w-hw4-39b.pdf> Contact the Environmental Investigation Unit in the MnDOT Office of Environmental Stewardship for additional information or legal requirements.

Subject: Bridge Flushing Guidance

MnDOT bridge flushing maintenance operations produce material that is primarily sand and other assorted debris that will need to be collected. The following guidance allows for beneficial reuse of the sand and proper management of associated debris. Under this guidance bridges will be flushed

with a 1.5 inch fire hose that produces 90 to 120 psi using water without any additives such as soap or other chemical cleaning agents. If additives are needed, contact the Environmental Investigation Unit in the MnDOT Office of Environmental Stewardship for additional requirements. Flush water does not need to be collected for disposal if additives are not used.

Pre Flushing topside of Bridge Deck

Collect material and debris from the bridge deck by mechanical and manual sweeping generally no more than 2 weeks prior to flushing operation. Place filter rolls around the drains or filter bags in the drains to prevent sediment from passing through. Manage the sweepings per the "Management of Street Sweepings" guidance document located at: <http://www.dot.state.mn.us/environment/regulatedmaterials/guidance.html> to the street sweepings link.

Pre Flushing Underside of Bridge Deck

Remove and manage trash and large debris prior to flushing underneath the bridge deck.

Flushing Sediment Collection

In areas where sediment may settle after flushing operations, a reasonable effort will be made to collect this material and manage with street sweepings. When sediment is deposited in vegetation, blend the material thinly and evenly into the vegetated slope at a thickness which will allow grasses to grow (maximum allowable thickness of 1/2 to 3/4 inch).

Protected Birds and Bats under Bridges

In accordance with MnDOT policy and in compliance with the Federal Migratory Bird Treaty Act, 50 CFR 21.41, the destruction of swallows and other protected birds will be avoided by conducting work outside of the nesting season. The nesting season is approximately May 15th through September 1st (inclusive). Unoccupied bird nests (no eggs or young) may be removed.

Check inspection reports for the presence of protected birds and bats prior to planning flushing operations (Element 900). Plan to flush bridges that are identified as having protected species prior to May 15th. If flushing cannot be accomplished prior to May 15th on those identified bridges, contact Chris Smith, MnDOT Protected Species Coordinator at 651-366-3605 or christopher.e.smith@state.mn.us to discuss options.

More information surrounding protected species can be found at the following website: <http://www.dot.state.mn.us/environment/wildlife.html>.

Flush Water Source

- **Use a municipal water source.**
- Best Practice: It is recommended by the DNR to have knowledge and make reasonable efforts to wash bridge outside of the work exclusion dates for protection of fish migration and spawning. Dates vary around the state, see page 3 of Chapter 1:
http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html
- Use of surface water as flush water should be avoided. If there is no other alternative, the Minnesota Department of Natural Resources (DNR) has the following requirements:
 - If pumping more than 10,000 gallons/day: Obtain an Appropriations permit (GP1997-0005),
http://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/permits.html
 - If pumping any amount from waters Designated as infested with Aquatic Invasive Species (AIS): obtain an Infested Waters permit:
<http://www.dnr.state.mn.us/invasives/ais/infested.html>
 - Best Practices to prevent the spread of AIS:
http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf

Contact the Environmental Investigation Unit for a full description of requirements prior to using surface water as flush water.

Please contact the Environmental Investigation Unit for further assistance.