



Permit Requirements for Culverts

Important Law Change

Minnesota law was changed¹ in 2015 to exempt some culvert restoration and replacement projects from Minnesota Department of Natural Resources (DNR) public waters permitting requirements. A long-standing rule already exempts bridge and culvert projects when the stream is a public watercourse with a total drainage area, at its mouth, of five square miles or less, except on designated trout streams and their tributaries. An additional exemption has been added for culvert restoration or replacement of the same size and elevation, if the replacement does not affect designated trout streams. The following table summarizes the characteristics of culvert projects on public watercourses that are now exempt from DNR permit requirements under the new law.

DNR permit not required	DNR permit required
<i>If ALL of the following are true:</i>	<i>If ANY of the following is true:</i>
The stream is not a designated trout stream or tributary to a designated trout stream.	The stream is a designated trout stream or a tributary to designated trout stream.
An existing culvert is being restored or replaced at the same location.	A new crossing is being constructed, or an existing crossing is being relocated.
The diameter, length, shape and elevation are all the same as the culvert being replaced.	The diameter, length, shape or elevation is different than the culvert being replaced.
The number of culverts being replaced is the same as the existing number of culverts at a given location.	The number of culverts is different.
The alignment is the same as the culvert being replaced.	The alignment is different than the culvert being replaced.
	A new culvert lining is being installed into an existing culvert
The “culvert” is not a water-level control structure that controls the elevation for an upstream wetland or lake.	The “culvert” is actually a water-level control structure.

Proper Design of Culverts

Although the new law allows some existing culverts on public waters to be replaced ‘in-kind’ (same size and elevations) without DNR authorization, doing so may not be in the best interests of the environment or of the project proposer. Flood elevations, fish passage, ecological connectivity, lake and wetland control elevation, road safety and

¹ Minnesota Statutes [103G.245](#) Subd. 2 (3)

fiscal responsibility are all factors to consider when a crossing is to be replaced. The DNR encourages the correcting of ecological and hydraulic deficiencies of existing culverts to prevent replicating poor design.

Problem indicators on existing crossings:

- Plunge pools, stream bank scour and sediment deposits
- Debris accumulation
- Perched outlet
- Change in road overtopping frequency or depth

A properly designed crossing should:

- Minimize consequences of scour, debris accumulation, and overtopping
- Not result in stream instability such as unstable stream banks, down-cutting of the stream profile, or unstable road slopes
- Mimic natural stream flow conditions
- Have appropriate hydraulic capacity:
 - Headwater depth does not cause pressurized flow during flood events
 - Culvert hydraulics do not cause scour at the outlet or inlet
- Maximize the life cycle of crossing

Water-level Control Structures

A DNR permit is required to reconstruct culverts that function as water-level control structures for public water wetlands or lakes. Stream crossings can act as an elevation control for an upstream wetland or lake. Many roads travel along wetlands and lakes, often crossing the outlet stream. State law prohibits construction or reconstruction of outlet control structures of public waters without DNR authorization.

Local Zoning Permit May Now Be Required

A permit from the local government zoning authority may now be required where one was not required prior to the 2015 law change. Floodplain zoning ordinances require a local government zoning permit for culvert projects in a mapped floodplain if a DNR permit is not required. Contact your local zoning administrator for more information.

Other Regulations Apply

Only DNR public water work permits for culverts were affected by the new law. If more than 10,000 gallons in a day or 1 million gallons in a year will be appropriated for the project, a water appropriation permit is required from DNR. Other governmental units (federal, state, city, county, township, and watershed authority) may require a permit. All equipment used in designated infested waters must be inspected and adequately decontaminated prior to being transported from the worksite. For more information, refer to [Best Practices for Preventing the Spread of Aquatic Invasive Species²](http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf).

² http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf

U.S. Army Corps of Engineers Permits

Your culvert project may require a U.S. Army Corps of Engineers permit even if exempt from a DNR permit. Contact the [U.S. Army Corps of Engineers](#)³ for further information.

Public Waters

Public waters are all waterbasins, wetlands, and watercourses that meet the criteria set in Minnesota Statutes, Section 103G.005, subd. 15, and are designated on the DNR's public waters inventory maps. All designated trout streams and trout stream tributaries are public waters. The DNR has jurisdiction for crossings involving public waters.

Project Review Recommended

We recommend that all parties planning to replace or restore a culvert in public waters apply for authorization using the online [Minnesota Permitting and Reporting System](#)⁴ (MPARS). The application is reviewed by a local DNR hydrologist who will determine if the project is exempt from DNR permitting requirements. Replacing an existing culvert with one of the same size and elevation to avoid DNR public waters permitting may be short-sighted and not the best choice given the length of expected service from culverts. Replacing a culvert designed many years or decades ago likely will not address issues such as changing landscapes, climate, flood frequency, or other agencies' regulations. Replacing a poorly designed culvert without consideration of current conditions can perpetuate avoidable maintenance costs and unsafe conditions.

Existing Public Water Work Permits

DNR public water work permits are permissive, meaning that they allow certain proposed work to be conducted. If you already have an individual permit or general permit for a culvert replacement or restoration and have questions about how this new law applies in your case, please contact the [Area Hydrologist](#)⁵ for your county.

More Information

For more information, please contact the [Area Hydrologist](#) for your county.

Minnesota Department of Natural Resources
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September 8, 2015

This information can be made available in alternative formats such as large print, braille or audio tape by emailing info.dnr@state.mn.us or by calling 651-259-5016.

³ <http://www.mvp.usace.army.mil/Missions/Regulatory/DistrictBoundariesContact.aspx>

⁴ <http://www.dnr.state.mn.us/mpars/index.html>

⁵ http://files.dnr.state.mn.us/waters/area_hydros.pdf