

Water Quality

Contact

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Purpose

The purpose is to protect streams and lakes from degradation of water quality due to post-construction runoff. Special classes of surface waters requiring consideration include: calcareous fens, designated Outstanding Resource Value Waters, designated Trout Streams, and Trout Lakes (See [Erosion Control](#) for control of impacts during construction.)

Threshold Criteria

Water quality issues need to be addressed whenever a project will add new sources, or additional water to water resources in the project area. In addition, bridge construction and drainage modifications near sensitive water bodies will raise water quality issues. Generally, there are different concerns for rural and urban design projects.

Rural Design Projects -- For rural projects water quality impacts are usually not an issue. Grass ditches remove much of the pollutant load found in highway runoff, and rural roadways generate a relatively small load of pollutants. However, bridge replacements over water often require special attention and/or early coordination (DNR Fisheries). Bridge replacements over

Designated Trout Streams – These generally require special attention and early coordination. New construction or drainage modifications directing new or additional highway runoff to **lakes and streams** are also a concern. For any project, consult with OES if sensitive water bodies such as Designated Trout Streams, Trout Lakes, Calcareous Fens, or Outstanding Resource Value Waters will receive highway runoff; special attention and coordination is generally required.

Urban Design Projects - In addition to the above concerns (with bridge replacements over water, new construction, drainage modifications, and/or sensitive water bodies) **any** urban design project which **increases** impervious surface (added lanes, wider paved shoulders, etc.) will initiate water quality concerns that need to be examined. Ponding or other treatment of discharge water may be required. Consult with OES and Hydraulics.

Prepared Statement

Rural Design Projects: (except bridge replacements over water) - Rural drainage systems consist of vegetated ditches and open channels as opposed to the curb and gutter and storm sewer drainage systems characteristic of urban drainage designs. Rural drainage systems provide some water quality treatment, reducing the pollutant load conveyed by highway runoff. Curb and gutter drainage allows little infiltration of runoff into soils and tends to convey most of the pollutants to receiving waters. Conversely, rural drainage systems allow pollutants to settle or become absorbed by the soil and vegetation. Since this project is of rural drainage design and does not introduce highway runoff to new or sensitive water bodies, no significant impacts on water quality should result.

Urban Design Projects: (except bridge replacements over water) - This project will not increase the existing impervious surface area and associated highway runoff; and it will not change the existing drainage system. Therefore, no significant impacts on water quality should result.

Bridge Replacement Over Water, Rural or Urban: - This project will be designed so that bridge runoff is directed to the ends of the bridge if feasible; thereafter, drainage water will flow over vegetated areas before reaching surface waters. Therefore, bridge runoff will not significantly impact water quality."

(In certain cases where sensitive waters will receive drainage or where bridges cross major rivers, detention ponds may be appropriate - check with OES)

Relationship to the HPDP

Class I Actions (EIS Projects)

Scoping Documents (SD) & Scoping Decision Document (SDD)

Conduct early assessment of magnitude of potential impacts - assess need for further study.

Draft Environmental Impact Statement (DEIS)

Conduct inventory of potential impacts for project alternatives. Contact United States Corps of Engineers (COE), United States Fish and Wildlife Service (USFWS), Minnesota Pollution Control Agency (MPCA), and Minnesota Department and Natural Resources (DNR) to determine level of agency interest.

Public Hearing

Include information on potential impacts of various alternatives.

Final Environmental Impact Statement (FEIS)

Include specifics of mitigation measures. Include letter of coordination/concurrence from USFWS.

Class II Actions (Categorical Exclusions)

Project Memorandum and Project Path Report

The project environmental document(s) should assess water quality impacts and discuss mitigation measures if appropriate.

Class III Actions (EA/EAW Projects)

Environmental Assessment (EA)

Conduct inventory of potential impacts for project alternatives. Contact US COE, USFWS, MPCA and DNR to determine level of agency interest. Include letters of coordination/concurrence.

For Class I and III Actions, ensure that all mitigation commitments are incorporated into the PS&E package during detail design.

Agencies Involved

Agency(s)	When they are involved and why
Minnesota Pollution Control Agency (MPCA)	<p>The MPCA must provide a Section 401 Water Quality Certification on all Section 404 Individual Permits. Section 401 Water Quality Certification is not required for projects covered by Section 404 General Permits or Letters of Permission.</p> <p>The MPCA also permits permanent dewatering of construction projects via a National Pollution Discharge Elimination System (NPDES) permit for discharge to surface waters, or a State Disposal System Permit if the discharge is to an aquifer.</p> <p>The MPCA also reviews and comments on EIS, EA and EAW documents.</p>
United States Corps of Engineers (COE), United States Fish and Wildlife Service (USFWS), Minnesota Department and Natural Resources (DNR)	<p>These agencies have limited interest in water quality but become involved via review of other permits, especially individual 404 Permits.</p> <p>These agencies review and comment on EIS, EA and EAW documents. DNR is sent copies of Project Memorandums for information purposes.</p> <p>The DNR, Division of Waters issues an Appropriations Permit for permanent dewatering operations.</p>
United States Environmental Protection Agency (EPA)	EPA becomes involved in EA and EIS projects when they review and comment on the anticipated impacts and proposed mitigation for the proposed project.

Permits and Approvals

Permit/Approval	Agency with Oversight
Section 401 Water Quality Certification	Minnesota Pollution Control Agency (MPCA)
Section 404 Permit	U. S. Army Corps of Engineers
Watershed District Review	Local Watershed District or Watershed Management Organization
Public Waters Work Permit	Minnesota Department of Natural Resources
NPDES Permit (Construction Runoff)	Minnesota Pollution Control Agency

Legal Basis

Description	Code
Federal Water Pollution Control Act of 1972 as amended by the Clean Water Act of 1977 and 1987	33 USC 1251-1376
Safe Drinking Act of 1972	42 USC 300f and 300j-6
Rivers and Harbors Act of 1899	33 USC 401 et. seq. - protection of Navigable Waters of the US
Water Pollution Control Act	Minnesota Statutes 115.01-115.09 , 115.44
Pollution Control Agency	Minnesota Statutes 116.01-116.06

Guidelines/Regulations

Creator (Agency/Author)	Subject of guideline/regulation	Date
FHWA	FHWA Technical Advisory T6640.8A (pp. 20-21)	10/30/87
FHWA	FHWA Water Quality Manual	1977
FHWA	"Erosion and Sediment Control on Highway Construction Projects", Federal Aid Policy Guide, 23 CFR 650B	12/07/94
United States Army Corps of Engineers (COE)	Discharge of pollutants into waters of the United States; 33 CFR : 209 Administrative Procedure 320 General Regulatory Policy 321 Permits for dams and dikes in navigable waters of the United States 322 Permits for structures or work in or affecting navigable waters of the United States 323 Permits for discharges of dredged or fill material into waters of the United States 325 Processing of the Department of the Army permits 328 Definition of waters of the United States	listing from Code of Federal Regulations as of 8/12/2009

Creator (Agency/Author)	Subject of guideline/regulation	Date
United States Army Corps of Engineers (COE)	401 Certification - US COE Section 404 Permit Regulations, as amended regarding excavation in waters of the United States	9/17/93
United States Environmental Protection Agency (EPA)	401 Certification; 40 CFR: 230 Section 404(b)(1) guidelines for specification of disposal sites for dredged or fill material	2007
Minnesota Pollution Control Agency (MPCA)	Water Quality Standards -Minnesota. Rules Chapter 7050 - outstanding resource value waters are preceded by an asterisk in the Classification of Waters in Major Surface Water Drainage Basin, listed in 7050.0470 .	
United States Environmental Protection Agency (EPA)	Safe Drinking Water - 40 CFR: 144 Underground injection control program 149 Sole source aquifers	2007
Minnesota Department of Natural Resources (DNR)	Trout streams and trout lakes - Mn/DNR Commissioner's Order 2450 Part 6262.0400 - lists trout waters by township, range and section.	June, 1992
	Minn. Rules Ch. 6264	2007

Helpful Links

MPCA

- [General Permit – NPDES](#)
- [Stormwater Program for Construction Activity](#)
- [Special Waters List \(Excel file download\)](#)
- [Known Calcareous Fens List \(Excel file download\)](#)
- [Minnesota Impaired Waters and Total Maximum Daily Loads \(TMDLs\)](#)
- [Stormwater Program for Municipal Separate Storm Sewer Systems \(MS4\)](#)
- [Minnesota Rules Chapter 7050 - Waters of the State](#)
- [Stormwater Best Management Practices Manual](#)