

Chapter 430 Surface Water Quality

430.01	Surface Water Quality Requirements
430.02	Analyzing Surface Water Impacts
430.03	Surface Water Interagency Agreements
430.04	Water Quality Permits and Approvals
430.05	Surface Water Quality Resource Materials
430.06	Applicable Statutes and Regulations
430.07	Abbreviations and Acronyms
430.08	Glossary

430.01 Surface Water Quality Requirements

Water quality and other surface water-related issues that WSDOT must address during project development and design include:

- In-water work
- Interference with stream flows
- Critical areas
- Stormwater runoff
- Herbicide application
- Water rights

WSDOT must comply with all applicable federal, state, and local laws, regulations, policies, and plans. According to these laws, regulations, policies, and plans, WSDOT must evaluate potential surface water impacts prior to submitting permit applications to resource agencies so project construction can proceed.

Surface water quality obligations emerge through several laws and regulations including the Clean Water Act (CWA), water quality modifications, and Washington State's Water Pollution Control laws and regulations ([RCW 90.48](#) and [WAC 173-201A](#)). Applications for water quality-related permits include the Joint Aquatic Resources Permit Application (JARPA) for Section 401 Water Quality Certifications, and the National Pollutant Discharge Elimination System (NPDES) permits, among others. [Section 430.04](#) lists permits, certificates, and approvals related to water quality.

[Chapter 600](#) covers aspects of erosion and sediment control and includes a section on water quality during construction. For other water-related issues required under NEPA and SEPA see [Chapters 431, 432, and 433](#).

430.02 Analyzing Surface Water Impacts

WSDOT estimates potential surface water impacts during scoping and through the NEPA and SEPA environmental documentation process. If the project may result in adverse impacts to surface water, NEPA and SEPA require a surface water impact analysis to be completed and recorded in the environmental document (see [Chapter 400](#)). Surface water impact analysis involves characterizing surface water, groundwater, wellhead protection areas, source water protection areas, soils and topographic features affecting basin hydrology, existing water quality conditions, and land use patterns affecting stormwater runoff conditions. The analysis also includes assessing potential impacts to water quality in a watershed.

1. **Determining the Necessary Level of Effort** – A proposed project generally needs to analyze surface water impacts when the project could affect receiving waters by:
 - Increasing the amount of pollutants discharged to surface waters.
 - Presenting a risk of eroded sediments or spilled pollutants entering surface waters.
 - Involving construction or other work in or over surface water bodies, their buffers, or floodplains.
 - Using, diverting, obstructing, or changing the natural flow or bed of surface water.

Situations where build options reduce the amount of pollutants to surface waters may also require a surface water impact analysis if significant differences exist in the water quality benefits provided by each of the alternatives. Document the analysis of surface water impacts as part of the environmental document for the project (i.e., ECS, EA, or EIS). In rare cases, when warranted by the nature of the project, the analysis can be documented in a separate discipline report which supplements the environmental document. In these situations, use the [Surface Water Discipline Report Checklist](#) to help ensure adequate consideration of all project-related surface water issues in the report.

If uncertainty exists as to whether surface water impacts may occur, perform a preliminary investigation of the impacts from each of the alternatives. Project managers can also contact the regional water quality lead for assistance. End the investigation if it becomes apparent no significant impacts or differences in water quality exist among the alternatives. In the project file, explain why the project did not need a surface water impact analysis.

2. **Methodology for Analyzing Surface Water Impacts** – Calculate annual pollutant loads to assess potential impacts of a project. The [Surface Water Technical Guidance](#) describes the two appropriate methods to use in the early planning stage of a project. Do not use other pollutant loading methodologies in analyzing surface water impacts.
3. **Highway Runoff Manual** – The [Highway Runoff Manual](#) M 31-16 (HRM) summarizes stormwater management requirements and describes approved methods of managing stormwater runoff known as Best Management Practices (BMPs). Used together, [HRM](#) and [Hydraulics Manual](#) M 23-03, provide tools for designing effective stormwater collection, conveyance, and treatment systems for highways, ferry terminals, park and ride lots, and other transportation-related facilities.

The project stormwater designer must first follow [HRM](#) Chapter 2 guidelines for integrating the planning and design of stormwater-related project elements into the context of WSDOT's project development process. Then the designer must use Chapter 3 to determine the applicable minimum requirements for a specific project. In most cases, this process will spur the need to design construction and post construction BMPs according to the criteria in Chapters 4, 5, and 6. Chapter 6 describes and links to WSDOT's [Temporary Erosion and Sediment Control Manual](#) M 3109 (TESCM).

The [TESCM](#) describes how to meet the requirements of the National Pollutant Discharge and Elimination System (NPDES) Construction Stormwater General Permit (CSWGP). It covers Stormwater Pollution Prevention Plans (SWPPP), BMP selection, discharge sampling and reporting, and other compliance-related issues, as well as potential effects to receiving water during construction.

The Washington State Department of Ecology (Ecology) approved the [TESCM](#) and [HRM](#) as equivalent to the Ecology *Stormwater Management Manuals* for Western and Eastern Washington for compliance with Ecology-issued stormwater permits and [WAC 173-270](#).

Standard BMP options from the [HRM](#) fit most projects. See [HRM](#) Section 1-4 on who to contact when a site presents a challenge and does not lend itself easily to the approaches prescribed in the manual.

4. **303(d) and TMDL Impaired Water Bodies**

The CWA Section 303(d) requires Washington State to identify polluted water bodies every two years and submit the list to the Environmental Protection Agency (EPA). Ecology develops a Total Maximum Daily Load (TMDL) for each water body segment included on the 303(d) list ([40 CFR 130.7](#)). TMDL water cleanup plans:

- Identify water pollution problems in the watershed.
- Specify how much pollution needs to be reduced or eliminated.
- Provide targets and strategies to achieve beneficial uses.
- Include a TMDL effectiveness monitoring plan to verify compliance with targets.

Once approved by EPA, TMDL-related obligations can be included as commitments in the Corps Section 404 and 401 permits, or as additional requirements in NPDES 402 stormwater permits.

Ecology may assign WSDOT specific action items, compliance timelines, and waste load allocations (WLAs) when a TMDL identifies WSDOT discharges as a source or conveyer of the pollutant of concern. Ecology includes EPA-approved TMDLs that contain WLAs and/or actions for WSDOT in Appendix 3 of WSDOT's NPDES Municipal Stormwater Permit.

For 303(d)s and TMDLs approved by EPA that do not specifically identify WSDOT stormwater discharges as a pollutant source, projects should avoid discharging stormwater to the impaired water body, and avoid adverse impacts where feasible. Follow the guidance on WSDOT's [Water resources policies and procedures](#) webpage to determine if stormwater from a project will discharge to an impaired water body. For more information on TMDLs or 303(d) listings, contact the Stormwater Branch in the Environmental Services Office, or visit [Ecology's Water Quality Improvement](#) website.

430.03 Surface Water Interagency Agreements

[Appendix B](#) contains the following interagency agreements pertaining to surface water:

- **Memorandum of Agreement (MOA) on Hydraulic Project Approvals (HPA) for Transportation Activities** – WSDOT and Washington Department of Fish and Wildlife (WDFW) signed the “Administration of Hydraulic Project Approvals for Transportation Activities and Implementation of the Fish Passage Retrofit Program and Chronic Deficiency Program” MOA to establish mutual understanding and procedures between the agencies for complying with the Hydraulic Code Rules ([WAC 220-660](#)) applicable to transportation projects. Additional information about HPAs is available in Chapter 2 of the [Complete Permit Application Guidance](#).
- **Implementing Agreement Regarding Application of the [Highway Runoff Manual](#)** – In February 2009, WSDOT and Ecology signed an [implementing agreement](#) committing WSDOT to apply the [HRM](#) statewide to direct the planning, design, construction, and maintenance of stormwater facilities. The implementing agreement was most recently amended and revised in March 2019.

430.04 Water Quality Permits and Approvals

WSDOT must comply with all applicable federal, state, and local laws, regulations, policies, and plans. Consider obligations for each water quality permit or approval listed in this section during design and environmental review.

Surface water quality requirements and BMPs get implemented through the JARPA process, NPDES permits, WSDOT’s [HRM](#), actions triggered from Biological Opinions, and project-specific BMPs. Find additional information about these permits on WSDOT’s [Environmental permits and approvals](#) website.

430.04(1) **Federal**

- CWA Section 404 Permit – Wetland/Streams
- CWA Section 401 – Water Quality Certification – This certification requires tribal consultation or approval under federal statutes. The Confederated Tribes of the Chehalis Reservation, Kalispel Tribe of Indians, Makah Tribe, Port Gamble S’Klallam Tribe, Puyallup Tribe of Indians, Spokane Tribe of Indians, and Tulalip Tribe have authority to approve Section 401 Water Quality Certifications.
- Coastal Zone Management Act Consistency Determination

430.04(2) **State**

- CWA NPDES Construction Stormwater General Permit
- CWA NPDES Industrial Stormwater General Permit
- CWA NPDES WSDOT Municipal Stormwater General Permit
- CWA NPDES General Permits
- Hydraulic Project Approval
- Aquatic Lands Use Authorization

430.04(3) Local

- Floodplain Development Permit
- Shoreline Permits/Exemptions
- Critical Areas Ordinance Permit

430.05 Surface Water Quality Resource Materials

1. **GIS Workbench** – The WSDOT GIS Environmental Workbench provides a GIS interface for internal WSDOT users. It has numerous environmental and natural resource management data layers from federal, state, and local agencies that provide useful information for surface water quality analyses. Available databases include water resource inventory areas (WRIAs) and sub-basins, major shorelines, 303(d)s and TMDLs, and NPDES municipal stormwater permit areas.
2. **FHWA Guidance Documents and Resources**
 - **FHWA Technical Advisory** – FHWA [Technical Advisory T 6640.8A](#) (October 30, 1987) provides guidelines for preparing environmental documents.
 - **FHWA Environmental Review Toolkit and Guidebook** – This online resource contains several guidance documents and federal MOAs on topics related to surface water quality, the CWA, and coastal zone management.
3. **Department of Ecology Resources**
 - **Water Quality 305(b) Assessment** – The CWA Section 305(b) requires Washington State to prepare a water quality assessment report every five years and submit it to EPA. In addition, EPA requires the state to submit certain assessment data annually for compilation in a national report. For access to the data and a description of requirements for ecoregions, stream/river basins, estuaries, and lakes, refer to the [Washington State's Current Water Quality Assessment](#).
 - **Watershed Basin Reports and Action Plans (Local or State Plans)** – Many watershed and basin plans include specific recommended action items on priority environmental issues. The surface water analysis should address the guidance outlined in watershed/basin action plans related to surface waters.
 - **Water Quality Atlas** – The [Water Quality Atlas](#) is a web based map application to obtain information about water quality in Washington State. Available datasets include 303(d)s and TMDLs, and NPDES municipal stormwater permit areas, among others.

430.06 Applicable Statutes and Regulations

This section identifies the primary statutes and regulations applicable to water quality issues.

430.06(1) *Federal*

1. **National Environmental Policy Act** – The National Environmental Policy Act (NEPA), [42 USC 4321](#), requires that all major actions sponsored, funded, permitted, or approved by federal agencies undergo environmental planning. This planning ensures that environmental values, such as impacts to water quality, receive appropriate consideration during decision making. [23 CFR 771](#) (FHWA) and [40 CFR 1500–1508](#) (CEQ) contain Federal implementing regulations. For details on NEPA procedures see [Chapter 400](#).
2. **Clean Water Act** – The Water Pollution Control Act, better known as the Clean Water Act (CWA), [33 USC 1251](#) et seq., provides federal regulation of water pollution sources. In Washington State, the EPA has delegated administrative authority of the CWA to Ecology except on tribal and Federal lands (and discharges to tribal waters).
3. **Endangered Species Act (ESA)** – [USFWS](#) and [NOAA Fisheries](#) administer this act. A federal nexus triggers formal consultation under the act. These triggers include permits, funding or actions on federal land, and by the potential harm, harassment, or take of listed species or impacts to their habitat. Informal consultation, under Section 10 of the act, requires applicants to comply with the ESA even if a federal nexus does not occur.

The ESA has relevance to discharges to surface waters with listed aquatic species. The presence of salmonids that are listed under the ESA within a waterbody that is receiving surface water discharges may trigger additional requirements for surface water discharges beyond those required in the [HRM](#) or by Ecology. Contact a WSDOT project biologist about any additional requirements due to the presence of ESA listed species in the project-affected watershed.

430.06(2) *State*

1. **State Environmental Policy Act (SEPA)** – SEPA requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental values receive consideration during decision making, including impacts to surface water quality. [WAC 197-11](#) and [WAC 468-12](#) (WSDOT) describe state implementing regulations. For details on SEPA procedures see [Chapter 400](#).
2. **State Water Quality Laws and Rules** – The Water Pollution Control Act ([RCW 90.48](#)) is the primary water pollution law for Washington State. State statute prohibits the discharge of pollutants into waters of the state unless authorized. [WAC 173-201A](#) identifies and mandates water quality standards pertaining to surface waters. WSDOT must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART) prior to discharge into the state's waters.

With respect to all state highway rights-of-way in the Puget Sound basin under WSDOT control, [WAC 173-270-030\(1\)](#) requires WSDOT to use the [HRM](#) to direct stormwater management for its existing and new facilities and rights-of-way. Exceptions where more

stringent stormwater management requirements may apply are addressed in [WAC 173-270-030\(3\)\(b\)](#).

3. **Coastal Zone Management (CZM) Act Certification** – Ecology includes a [CZM Act Certification](#) consistency response with the CWA Section 401 certification for any work in Washington’s 15 coastal counties. Additional information is available in Chapter 4 of the [Complete Permit Application Guidance](#).
4. **Hydraulic Code** – WDFW administers the HPA program under the State Hydraulic Code. This code protects fish and their aquatic environment. HPA permits include provisions that list BMPs that protect water quality.

430.06(3) Tribal

Some tribes have adopted specific water quality standards that may be stricter than those required by Ecology. For projects where stormwater is discharging within tribal lands or waters please coordinate with your region’s water quality program staff to determine what standards apply. Information about Section 401 Water Quality Certification is available in [Chapter 530](#).

430.07 Abbreviations and Acronyms

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Corps	US Army Corps of Engineers
CSWGP	Construction Stormwater General Permit
CWA	Clean Water Act
CZM	Coastal Zone Management
Ecology	Washington State Department of Ecology
EA	Environmental Assessment
ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
ERS	Environmental Review Summary
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FHWA	Federal Highway Administration
GIS	Geographic Information System
HPA	Hydraulic Project Approval
HIRUN	Highway Runoff Dilution and Loading Stormwater model
HRM	Highway Runoff Manual M 31-16

JARPA	Joint Aquatic Resources Permit Application
MHHW	Mean Higher High Water
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NWP	Nationwide Permit (US Army Corps of Engineers)
OHWM	Ordinary High Water Mark or line
RCW	Revised Code of Washington State
SEPA	State Environmental Policy Act
SWPPP	Stormwater Pollution Prevention Plan
TESCM	Temporary Erosion and Sediment Control Manual M 3109
TMDL	Total Maximum Daily Load
USC	United States Code
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington State Department of Fish and Wildlife
WLA	Waste Load Allocation
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WSF	Washington State Ferries

430.08 Glossary

These definitions provided context for the Stormwater process. Some terms may have other meanings in a different context.

Council on Environmental Quality (CEQ) – Coordinates Federal environmental efforts and works closely with agencies and other White House offices on the development of environmental policies and initiatives.

Coastal Zone Management (CZM) Act Certification – The Act, administered by NOAA's Office of Ocean and Coastal Resource Management, provides for management of the nation's coastal resources, including the Great Lakes, and balances economic development with environmental conservation and applies to fifteen coastal counties in WA which are located adjacent to salt water.

Highway Runoff Manual (HRM) – WSDOT's [Highway Runoff Manual](#) M 31-16 directs the planning and design of stormwater management facilities that meet state and Federal regulations for new and redeveloped Washington state highways, rest areas, park-and-ride lots, ferry terminals, and highway maintenance facilities throughout the state.

National Pollution Discharge Elimination System (NPDES) – Pollution control permits that require point source dischargers to obtain permits. These are issued to WSDOT and other entities, by Ecology, for construction stormwater, municipal separate storm sewer systems, industrial, and sand and gravel operations.

Stormwater – That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body or a constructed infiltration facility.

Surface Water – All water naturally open to the atmosphere, such as rivers, lakes, reservoirs, ponds, streams, wetlands, seas, and estuaries.

Total Maximum Daily Load (TMDL) – A requirement of the Clean Water Act, TMDLs consist of a watershed-based pollution control plan developed to address water quality impairment.

Watershed – The land area that drains into a surface waterbody; the watershed for a major river may encompass a number of smaller watersheds that ultimately combine at a common point.

Waters of the State or State Waters – Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses located within the jurisdiction of the state of Washington. ([RCW 90.48.020](#))

This page intentionally left blank.