100-J General Permit Information Session

Water Quality Permitting and Program Development

July 29, 2025

Today's agenda

- Welcome and introductions
- Participation options
- 100-J NPDES general permit
- Application notification requirements

Participation on Teams

- Participation is not recorded
- Time for questions at the end
  - Raise your hand
  - Put a question in the chat
- Addressing 100-J basics today
  - Registration due dates
  - Notification about studies and/or documentation
  - Where to find information

100-J NPDES general permit

- Effective May 31, 2024
- Non-contact cooling water, defrost water, heat pump transfer water and cooling tower blowdown from industrial and commercial facilities
  - Maximum daily design flow
  - No more than 0.5 million gallons/day
- Cooling water and sump pump discharges from hydroelectric facilities

100-J NPDES general permit basics

- Monitoring and Reporting
  - Monitoring
    - Measure the discharge flow
    - Sample for temperature, total residual chlorine, pH, oil and grease and alkalinity
    - Calculate thermal load and excess thermal load
    - Visual monitoring for oily sheen may include sampling follow-up
  - Reporting
    - Monthly discharge monitoring report
    - Spill reporting

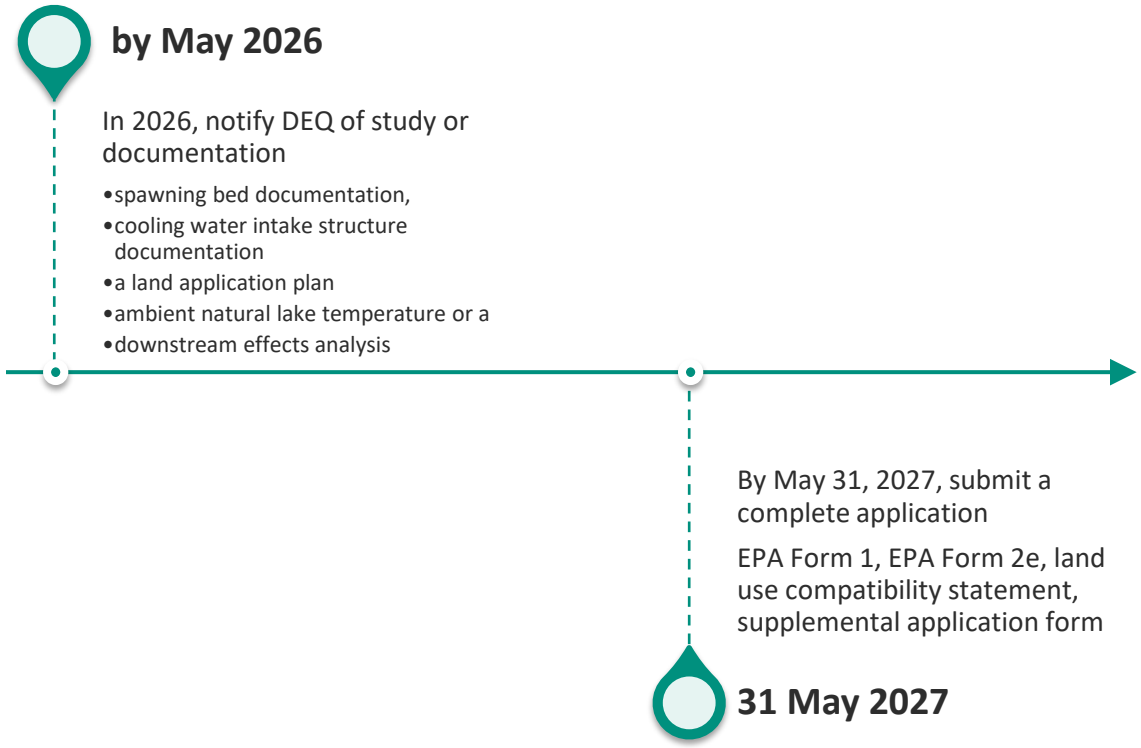
100-J NPDES general permit basics

- Plans
  - Sampling
    - Quality assurance/ quality control
    - Methods in 40 CFR Part 136
  - Land Application
    - Monitoring
    - Annual report
  - Spill/emergency response
  - Oil and grease management

100-J NPDES general permit next steps

- Registration for Permit Coverage
- Application Due Dates
  - Existing sources
    - ✓July 2024 submitted intent to apply – 60-day notice
    - In 2026, notify DEQ about your study and/or documentation
    - By May 31, 2027, submit your complete application
  - New Source
    - 180 days prior to discharge

Application Notification



- By May 2026, notify DEQ:
  - Spawning bed documentation
  - CWIS documentation
  - Land application plan
  - Ambient natural lake temperature analysis
  - Downstream effects analysis *

*To date a downstream effects analysis only applicable for a discharge in one location – West Extension Irrigation Canal

Spawning Bed Documentation

- For a spawning use designation
  - permit limits for spawning will apply unless DEQ approves spawning bed documentation
- Schedule A, Table A1-1 or Table A2-1
  - Date specific (seasonal)
  - Salmon and steelhead spawning temperature limit 13.3°C
  - Bull trout spawning temperature limit 9.3°C
  - Excess thermal load limit million kcal/ day calculation [Q_{ed} * S_{MZ}* 1.14]
  - Seven-day rolling average

Spawning Bed Documentation

Table A1-1 Permit Limits

Parameter	Units	Average Monthly	Daily Maximum
Effluent Flow (See note 1)	MGD	-------	0.5
Total Residual Chlorine (See notes 2 and 3)	mg/L	0.011	0.019
pH (See note 4)	SU	Instantaneous limit between a daily minimum of 6.0 and a daily maximum of 9.0	
Temperature (Spawning, See note 5)	°C	9.3 during periods where bull trout spawning is a designated use and 13.3 during periods where salmon and steelhead spawning is a designated use (as a 7-day rolling average)	
Temperature (Acute Impairment)	°C	-------	32
Thermal Load (See note 6 and 8)	MGD * °F	-------	25
Excess Thermal Load Limit (Non-Natural Lake Discharge, See notes 6, 7, 8, and 9)	million kcal/day	$Q_{ed} * S_{MZ} * 1.14$ (as a 7-day rolling average)	
Excess Thermal Load Limit (Natural Lake Discharge, See notes 6, 7, 8 and 10)	million kcal/day	$Q_{ed} * 1.14$ (as a 7-day rolling average)	

Table A2-1 Permit Limits

Parameter	Units	Average Monthly	Daily Maximum
pH (See note 1)	SU	Instantaneous limit between a daily minimum of 6.0 and a daily maximum of 9.0	
Total Residual Chlorine (See notes 2 and 3)	mg/L	0.011	0.019
Temperature	°C	--------	32
Temperature (See note 4)	°C	9.3 during periods where bull trout spawning is a designated use and 13.3 during periods where salmon and steelhead spawning is a designated use (as a 7-day rolling average)	
Excess Thermal Load Limit– Hydropower Facilities (See notes 5, 6 and 7)	million kcal/day	$Q_{ed} * S_{MZ} * 1.14$ (as a 7-day rolling average)	

Spawning Bed Documentation

- Assess if spawning is a designated fish use
  - Use the location of the facility outfall
  - Use currently applicable DEQ fish use maps
    - Assess if spawning is a designated fish use and verify when
    - Beneficial Uses of Oregon Waters
    - Integrated Report on Surface Water quality and 303(d) List of Water Impaired Waters

Currently Applicable Beneficial Uses of Oregon Waters

Beneficial Uses of Oregon's Waters

WATER QUALITY MONITORING
WATER QUALITY ASSESSMENT
WATER QUALITY STANDARDS
The Oregon Water Data Portal
Ballast Water
Nutrient Reduction Strategy

Water quality standards are established to protect beneficial uses of the state's waters. Beneficial uses are designated for all waters of the state in the Oregon Administrative Rules for water quality standards (Chapter 340, Division 41). In some cases, beneficial uses vary by waterbody or reach. In other cases, uses are designated for all waters in a basin or sub-basin.

Beneficial uses include:

- Fish and aquatic life
- Water contact recreation
- Fishing
- Domestic water supply
- Industrial water supply
- Boating
- Irrigation
- Livestock watering
- Aesthetic quality
- Wildlife and hunting
- Hydropower
- Commercial navigation and transportation

Water quality standards include designated beneficial uses and water quality criteria established to protect the sensitive beneficial uses. For example, the uses most sensitive to dissolved oxygen are fish and aquatic life. Fish and other aquatic organisms need an adequate supply of oxygen in the water to be healthy and productive. In this case, the criteria identify minimal amounts of dissolved oxygen that need to be in the water to protect the fish. In other cases, such as bacteria or some toxic substances, human health is the most sensitive beneficial use. These criteria identify the maximum concentration that may be in the water without risk to aquatic organisms or human health.

Currently applicable beneficial uses of Oregon's waters

Each basin's currently applicable beneficial uses are provided below. Corresponding tables and maps can be downloaded in PDF format by clicking on the link within each basin. One table identifies all the beneficial uses that are designated within the basin. Additional tables and maps identify categories of fish and aquatic life, shellfish harvesting, and contact recreation, which vary by waterbody. The maps also show where estuarine waters end, and freshwater begins, in coastal basins.

- Oregon Basin Index Map (Figure 1)

Currently applicable beneficial use tables and maps by basin

- Main stem Columbia River
- Main stem Snake River
- Deschutes Basin
- Goose and Summer Lakes
- Grande Ronde

Currently Applicable Beneficial Uses of Oregon Waters

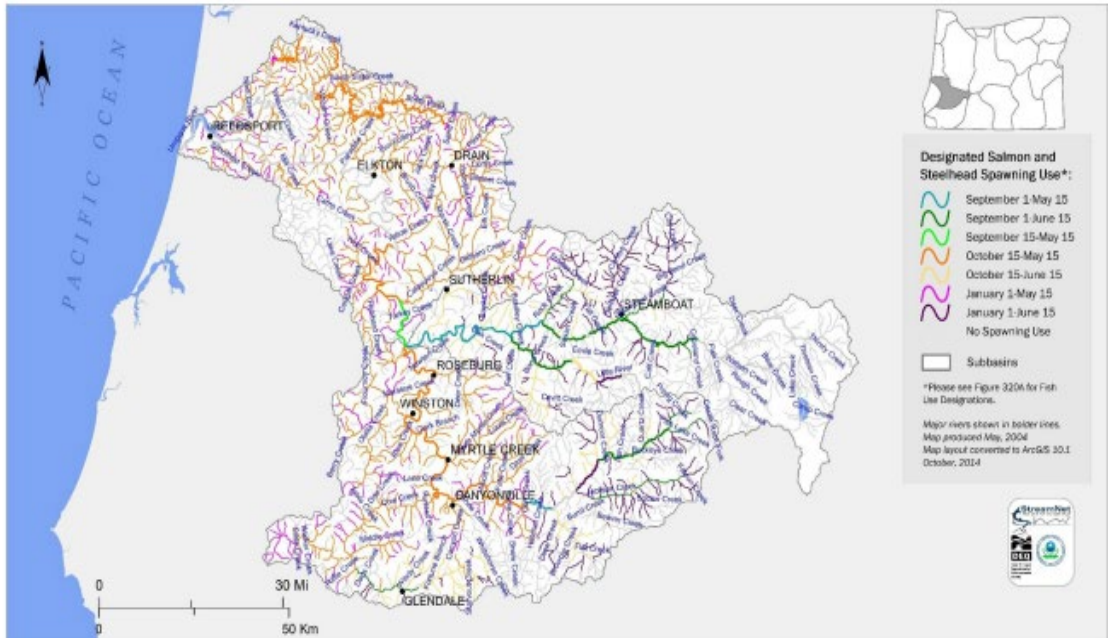
- John Day
- Klamath
- Malheur Lake
- Malheur River
- Mid Coast
- North Coast-Lower Columbia
- Owyhee
- Powder
- Rogue
- Sandy
- South Coast
- Umatilla
- Umpqua
- Walla Walla
- Willamette

State of Oregon Department of Environmental Quality

OAR 340-041-0320 – Figure 320B

Salmon and Steelhead Spawning Use Designations*

Umpqua Basin, Oregon



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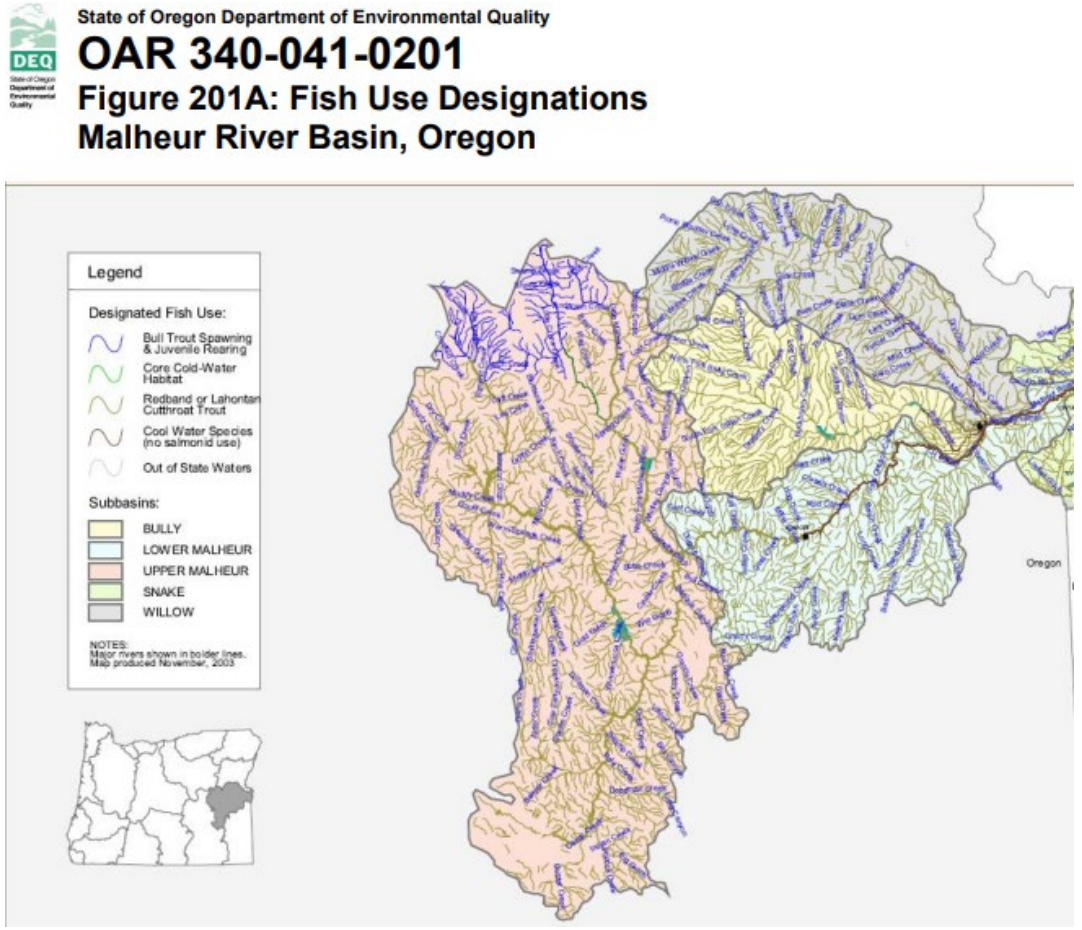

Integrated Report

EPA Approved Integrated Report

WATER QUALITY MONITORING

WATER QUALITY ASSESSMENT

WATER QUALITY STANDARDS

The Oregon Water Data Portal

Ballast Water

Nutrient Reduction Strategy

The 2022 Integrated Report was approved by the U.S. Environmental Protection Agency on Sep. 1, 2022 and is now current and in effect. The federal Clean Water Act requires Oregon to report on the quality of its surface waters every two years. Although not a written report, the Integrated Report is a reporting of the status of water quality in Oregon and a list of waters considered to be impaired. See the Water Quality Assessment page for more information.

- EPA approved 303(d) list of impaired waters

The Integrated Report can be accessed in four ways:

- An interactive story map provides an overview of the water quality assessment process, displays assessment results and presents an overview of how DEQ's water quality programs are connected through monitoring, assessment and watershed protection.
- An interactive web map application that displays the Integrated Report by overall status of an assessment unit. The application also provides all applicable water quality standards. For assistance, see the web map instructions.
- An online searchable database provides parameter specific categorical conclusions for all assessed units and raw data used for download.
- An ArcGIS Assessment Geodatabase spatially displays information from Oregon's 2022 Integrated Report. GIS data is also available through ArcGIS online web services.

- Choose the web map on this page

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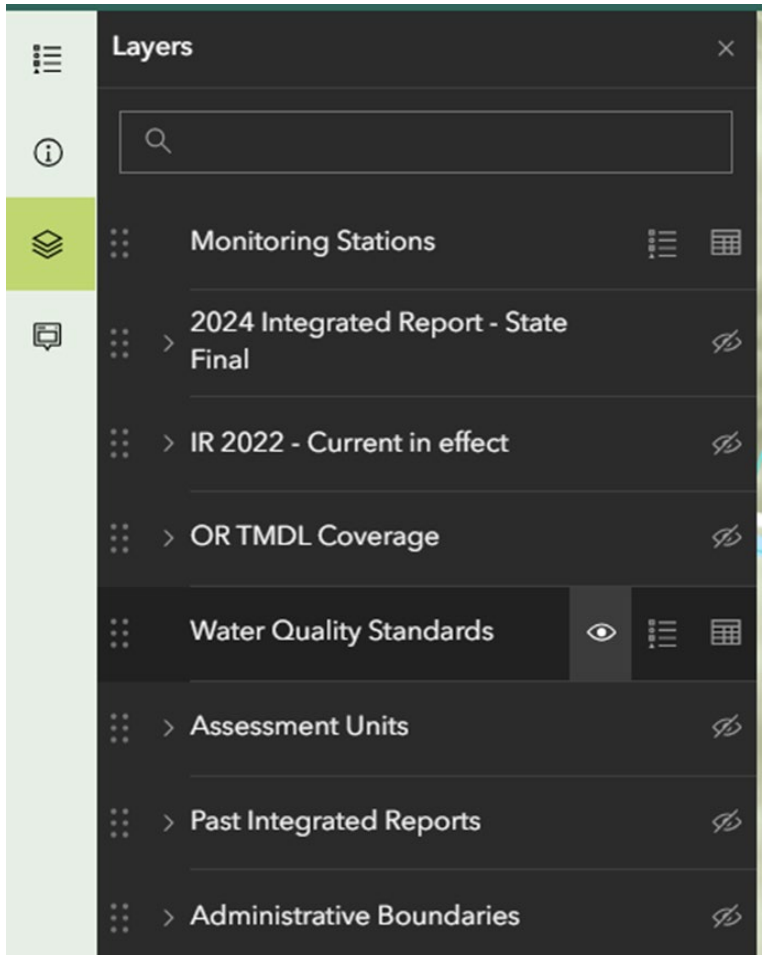
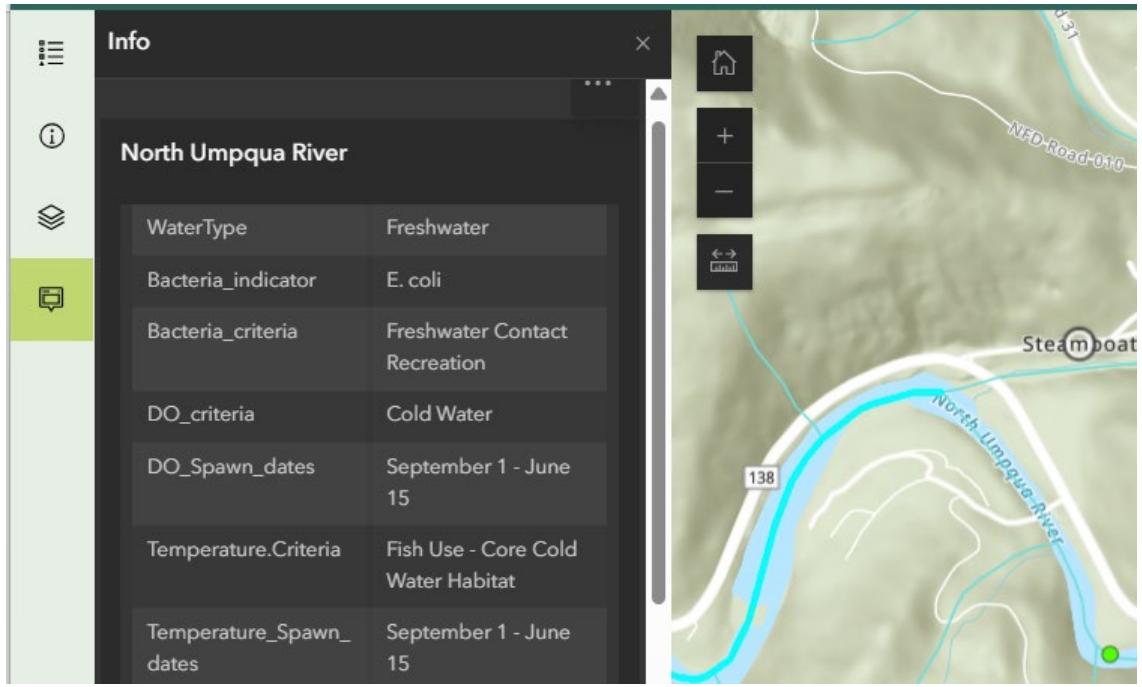
Integrated Report

- Click on the Layer icon 
- Select the water quality standards layer 
- Turn off other layers 



Integrated Report



- Zoom into or search for the water segment in the vicinity of the outfall
- Click on that segment
- Click on the Info icon 
- Note spawning does occur
- Note spawning dates

Spawning Bed Documentation

- Schedule D1, condition 2. or Schedule D2, condition 1
- Assessment by fisheries biologist
  - Certify that there are no active spawning areas where spawning redds are located or likely to be located
- Use one of three methods to determine where assessment occurs
  - Within downstream distance in permit Table D1 or D2
  - Within regulatory mixing zone using a level 1 mixing zone analysis
  - Within regulatory mixing zone using a level 1 mixing zone analysis with a temperature analysis

Spawning Bed Documentation

- Assessment must be conducted by a fisheries biologist
  - Certify that there are no active spawning areas where spawning redds are located or likely to be located
- Within distance downstream in permit Table D1 or D2
  - Look up based on low flow (7Q10) of receiving stream flow (cfs)

7Q10 Receiving stream flow (cfs) during the designated spawning period	Downstream Distance (from outfall) (ft)
1-5	5
6-20	30
21-100	50
101-500	100
500+	500

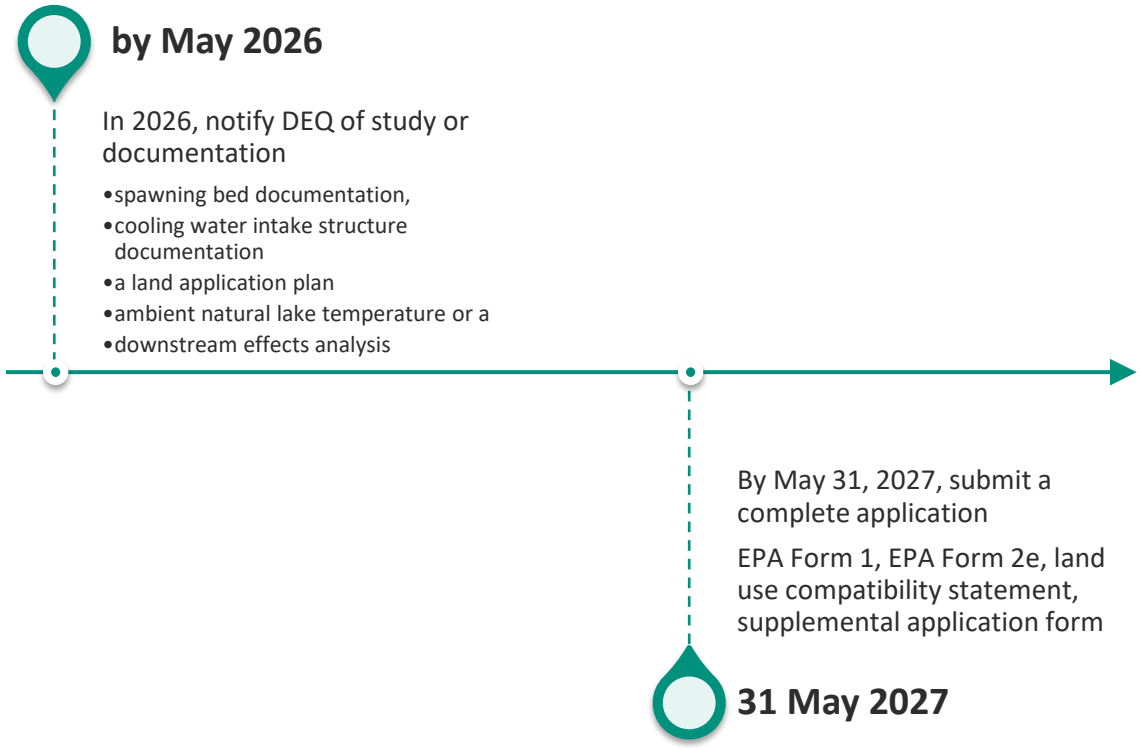
Spawning Bed Documentation

- Assessment by fisheries biologist
  - Certify that there are no active spawning areas where spawning redds are located or likely to be located
- Within regulatory mixing zone using a Level 1 mixing zone analysis
  - Use level 1 mixing zone analysis to delineate downstream distance
  - Link to mixing zone internal management directive
  - Certified by registered professional engineer

Spawning Bed Documentation

- Assessment by fisheries biologist
  - If there is an active spawning area, where redds are located or likely to be located.
- Within regulatory mixing zone using a Level 1 mixing zone analysis with temperature analysis
  - Use level 1 mixing zone analysis
  - Link to mixing zone internal management directive
  - Temperature does not exceed 0.3ºC above spawning criteria
  - Certified by registered professional engineer

Application Notification



- By May 2026, notify DEQ:
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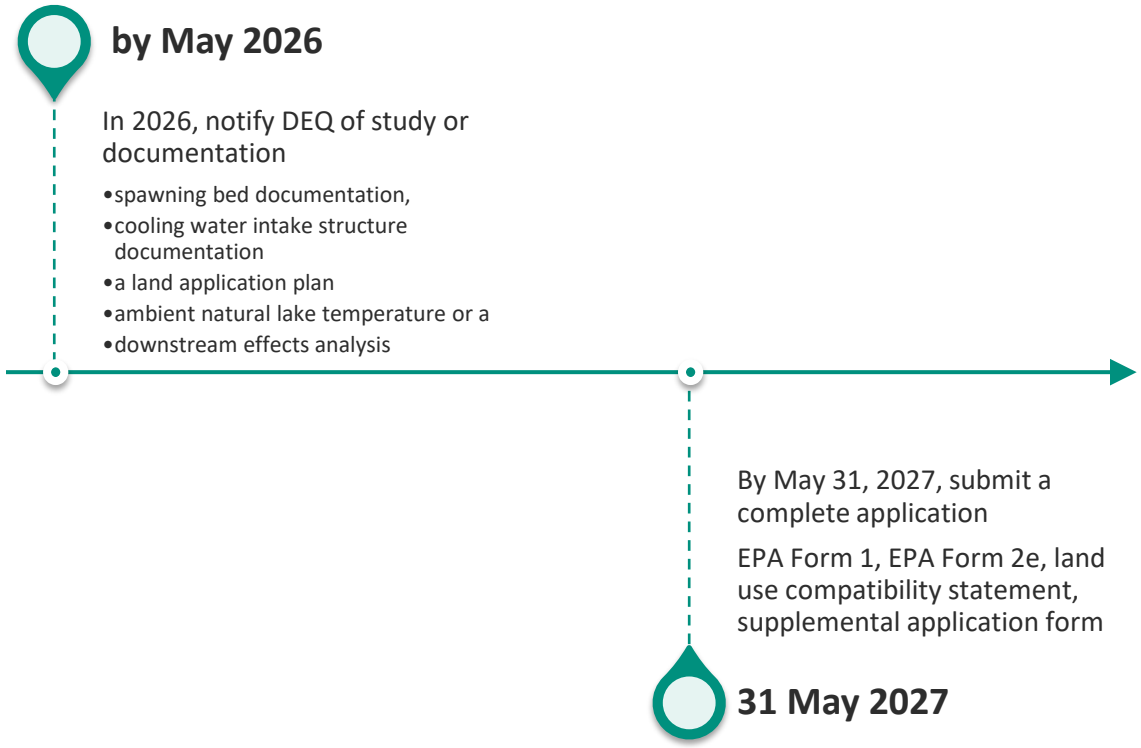
Cooling Water Intake Structure Documentation

- Coverage and Eligibility
- Schedule D1, condition 3 and Schedule D2, condition 2
- Use of surface water for cooling
  - Includes surface water obtained from a supplier

Cooling Water Intake Structure Documentation

- Hydroelectric Facility
  - Any one of the factors contained in July 2022 EPA guidance
    - Volume of cooling water
    - Cooling water withdrawn relative to waterbody flow
    - Location of the intake structure
    - Technologies at the facility
  - FERC license and/or biological opinion
- Industrial Facility
  - Oregon Department of Fish and Wildlife
  - Inspection letter

Application Notification



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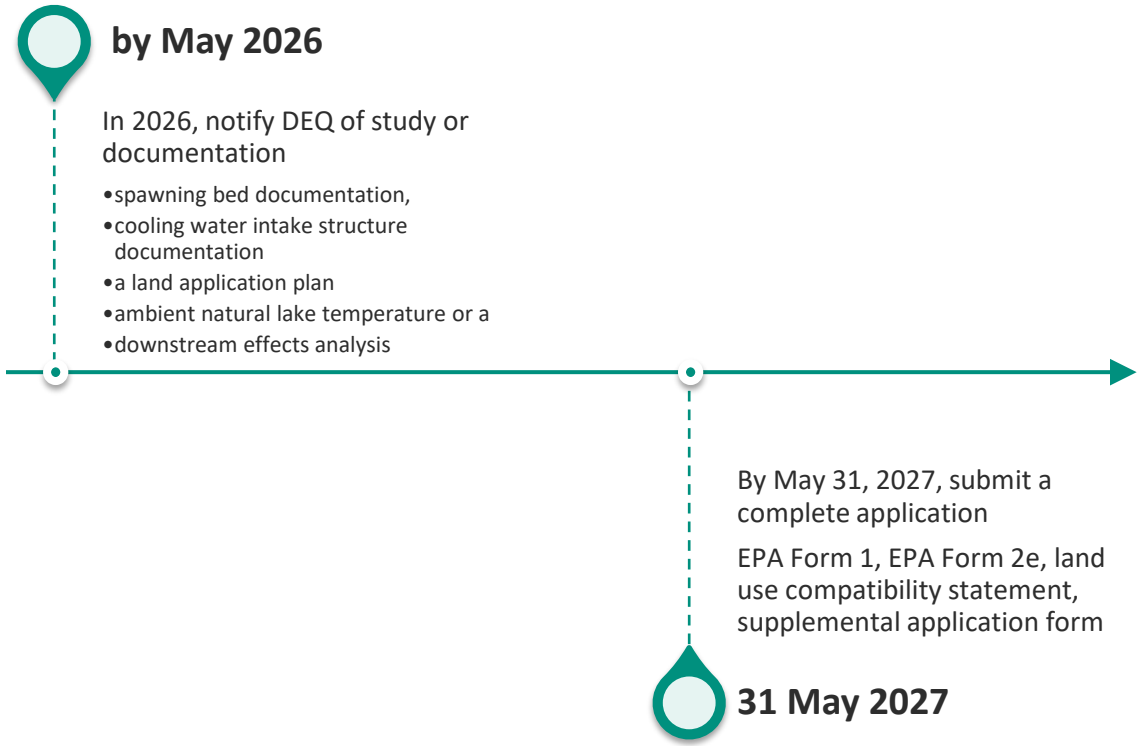
Land Application Plan

- Schedule A1, condition 4
- Land application of industrial non-contact cooling water
  - Agronomic rates
  - Management practices
  - Physical location, soil profile and vegetation
  - Setbacks
  - Benchmarks for pH, Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR)
  - Ownership, property agreement

Application Notification



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Ambient Natural Lake Analysis

- Table A1-1

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Ambient Natural Lake Temperature Analysis

- Schedule D1, condition 5

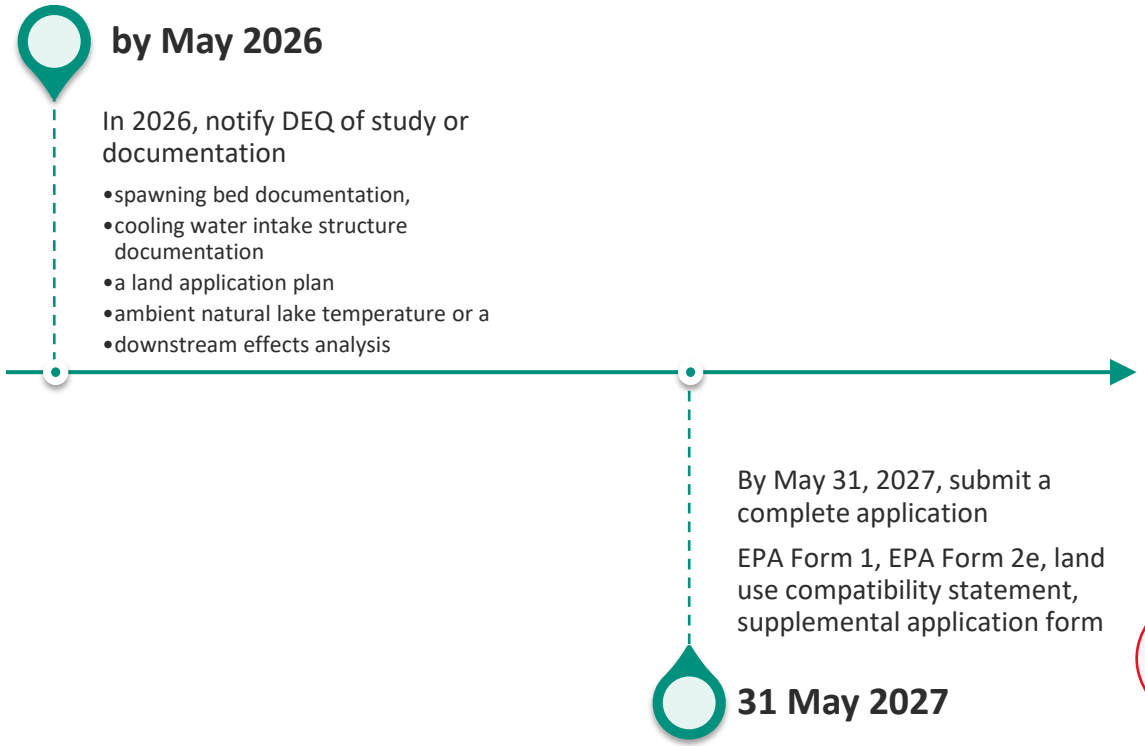
- Natural lake
  - Is a term used in DEQ's in temperature criteria
  - Typically, is any lake that is not a reservoir behind a dam

- Analysis is required determine ambient temperature of a natural lake OAR 340-041-0028(6)

Ambient Natural Lake Temperature Analysis

- DEQ must approve monitoring protocol
  - Submit a monitoring protocol
- Monitoring protocol must describe:
  - Locations and depths
  - A sampling timeframe representative of discharge
  - Equipment type and calibration procedures
- Results submitted with application
  - Temperature data, average temperature, calibration data

Application Notification



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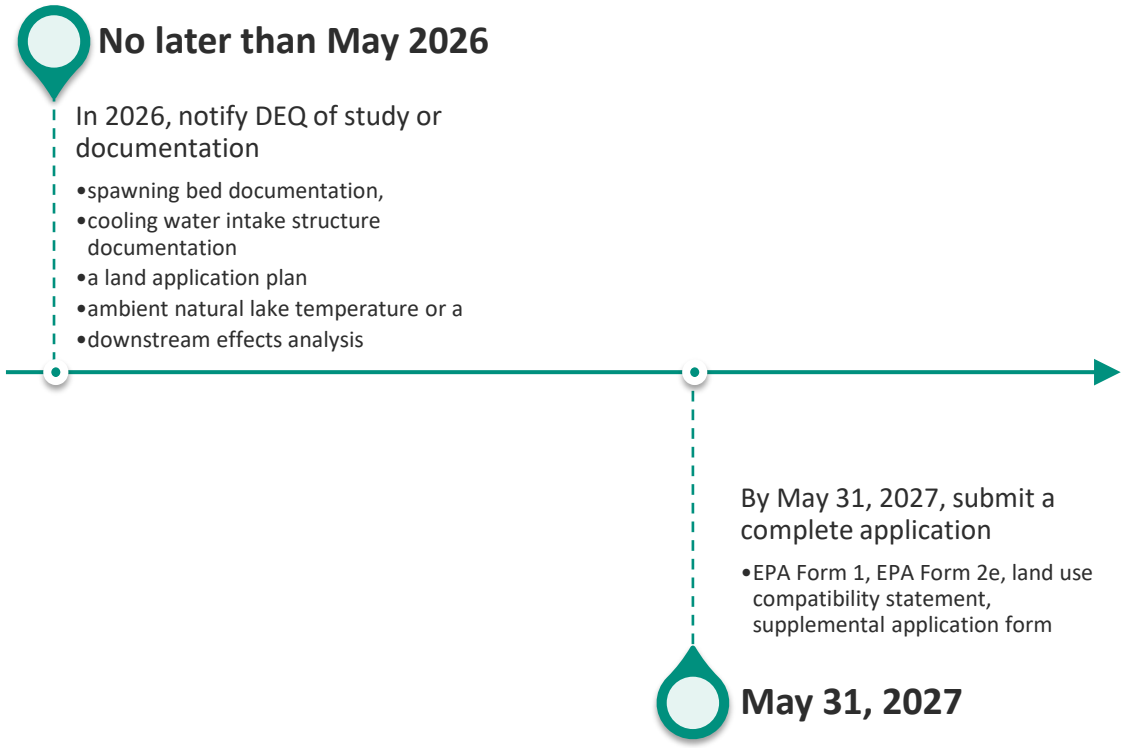
Application Preparation



- By May 2027, submit a complete application:
  - EPA Form 1
  - EPA Form 2e
  - Land Use Compatibility Statement
  - Supplemental Application Form

Permit Applications and Renewal Forms

100-J Cooling water/heat pumps, General NPDES

General Industrial NPDES Permits - 100-J Permit

New and renewal permit application forms are available on Your DEQ Online.

Learn how to use Your DEQ Online system by visiting **NPDES and WPCF Wastewater Permits in Your DEQ Online** web page.

- 100-J Supplemental Application Form
- EPA Form 1
- EPA Form 2E
- LUCS

Fee range

- Please see Table 70G for application and annual fees.
- No fees required at time of renewal.
- An annual fee is required.

Visit DEQ's **100-J General Permit web page** for more information.

Contact Information

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npdesgeneralpermit@deq.oregon.gov

100-J General NPDES Permit web page

Title VI and Alternative Formats

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