

COVERAGE AND ELIGIBILITY

1. Types of Discharges Authorized by this Permit

This general permit provides coverage for the following types of discharges:

- a. This permit is for a discharge of non-contact cooling water wastewater. A discharge may occur as once-through non-contact cooling water, recycled cooling water, defrost water, heat pump transfer water and cooling tower blowdown. This water is typically supplied from a water treatment facility (potable water), or groundwater and is used to transfer heat but is not in direct contact with any raw material or material used in production. Sources assigned to this permit may include industrial and commercial facilities that use water to cool machinery and equipment.

Non-contact cooling water is typically distributed through pipes, jackets, tubes or coils for heat exchange. Once through non-contact cooling water is not recycled. Recirculated non-contact cooling water is discharged as blowdown or bled off to prevent a buildup of solid material in the non-contact cooling water system. Typically, water replacement, blowdown, and chemical addition are practices that keep equipment operating efficiently.

- b. This permit is for a discharge of cooling water and sump pump type discharges from a hydroelectric facility. The source of the cooling water may be the same surface water that is used through a turbine to generate power.

Within a hydroelectric facility, equipment that is cooled with non-contact cooling water may include a turbine hydro-generator, HVAC unit, turbine shaft bearings (e.g. thrust and guide), turbine speed governor, transformer and other equipment associated with turbine power generation and transmission. This cooling water may be discharged with tailrace waters.

Equipment and floor drain wastewater (sump pump type wastewater) may consist of lubricants (hydraulic oil and insulating oils) that escape from seals and hydraulic valves, unwatering wastewater drainage to access submersed equipment, navigation lock seeps, and spillway seeps. These types of wastewaters are discharged through discrete outfalls and typically not with tailrace water.

2. Discharges Not Authorized By This Permit

Discharges and facility operations not authorized for general permit coverage are set below:

- a. Any industrial, non-hydroelectric, facility with a total maximum daily design flow greater than 0.5 million gallons per day is not eligible for permit coverage.
- b. Pursuant to OAR 340-041-0004(8), a discharge to waters designated currently or in the future as Outstanding Resource Waters is not eligible for permit coverage.
- c. This permit does not authorize a discharge to an ocean or bay.
- d. A discharge from a hydroelectric facility located in two or more states is not eligible for permit coverage.
- e. New discharges to waters as listed in Table 1 below are not eligible for permit coverage.

Table 1

TMDL Document	Date of EPA Approval	Basin, Subbasin, and/or Watershed
Willamette Basin TMDL	DEQ, 2006	Lower Willamette Subbasin (Columbia Slough and Fairview Creek watersheds only)
Bear Creek Watershed Total Maximum Daily Load and Water Quality Management Plan	DEQ, 2007	Rogue: Bear Creek Watershed
Molalla-Pudding Subbasin TMDL and WQMP	DEQ, 2008	Willamette: Molalla-Pudding Subbasin
Middle Columbia-Hood (Miles Creeks) Subbasin TMDL and WQMP	DEQ, 2008	Columbia-Hood: Middle Columbia-Hood Subbasins (Miles Creeks)
Western Hood Subbasin Temperature Total Maximum Daily Load, Revision to the 2001 Western Hood Subbasin TMDL	DEQ, 2018	Columbia-Hood: Western Hood Subbasin
Willow Creek Subbasin Temperature, pH, and Bacteria Total Maximum Daily Loads and Water Quality Management Plan	DEQ, 2007	Umatilla: Willow Creek
Walla Walla Subbasin Stream Temperature Total Maximum Daily Load and Water Quality Management Plan	DEQ, 2005	Umatilla: Walla Walla
Little River Watershed TMDL	DEQ, 2001	Umpqua: Little River Watershed
Malheur River Basin TMDL and WQMP	DEQ, 2010	Malheur Basin
Columbia and Lower Snake Rivers Temperature TMDL ¹	EPA, 2020	Columbia and Lower Snake Rivers
Note:		
1. For permit development- Columbia River TMDL may have a process to access to reserve capacity for new discharges sometime before the permit is issued.		

- f. A mainstem Willamette river bubble allocation is not available for a new discharge, except for a limited number per stream segment as listed in Table 2 below:

Table 2

Willamette Mainstem Bubble Allocation	
Mainstem Segment	Total Number of 100J Allowable Registrants¹
Lower Willamette (River Mile 0 – 50, Mouth Willamette River - Yamhill River)	13
Middle Willamette (River Mile 50 – 108, Yamhill River - Santiam River)	3

Upper Willamette (River Mile 108 – 186, Santiam River - Confluence of The Coast Fork/Middle Fork Willamette)	6
Note: 1. For discharges no greater than 0.5 MGD.	

- g. Any facility that uses a cooling water intake structure is not eligible for permit coverage in one or more of the following circumstances:
 - i. Any industrial facility that withdraws surface water for cooling.
 - ii. Any industrial facility that uses surface water for cooling water that is obtained by any sort of contract or arrangement with an independent supplier.
 - iii. Any hydroelectric facility without a FERC license or Biological Opinion for that facility.
 - iv. Any hydroelectric facility with a FERC license or Biological Opinion does not meet one or more of the four factors under EPA’s July 2022 *Revised Framework for Considering Existing Hydroelectric Facility Technologies in Establishing Case-by-Case, Best Professional Judgment Clean Water Act § 316(b) NPDES Permit Conditions* as summarized below.
 - (1) Volume of cooling water used relative to other power generation facilities and relative to total water use at the facility
 - (2) Cooling water withdrawn relative to waterbody flow
 - (3) Location of the intake structure
 - (4) Technologies at the facility
- h. Any facility subject to steam electric power generating facilities effluent limit guidelines included in 40 CFR Part 423 is not eligible for permit coverage.

SCHEDULE A1: WASTE DISCHARGE LIMITS FOR INDUSTRIAL FACILITIES

1. Permit Limits

During the term of this permit, the registrant must comply with the limits in the following table:

Table A1-1: Permit Limits

Parameter	Units	Average Monthly	Daily Maximum
Effluent Flow ¹	MGD	-----	0.5
Total Residual Chlorine ²	mg/L	0.011	0.019
Toxics		The discharge of biocides and water treatment chemicals that contain chromium, copper, zinc, chlorinated phenols or other priority pollutants is prohibited.	

Parameter	Units	Average Monthly	Daily Maximum
pH ³	SU	Instantaneous limit between a daily minimum of 6.0 and a daily maximum of 9.0	
Temperature 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)	
Temperature ⁵	°C	-----	32 or (13.9/Q _e) - 17.8, whichever is lower
Excess Thermal ^{6,7,8}	million kcal/day	Non-Lake Discharge: Q _{ed} * S ₂₅ * 1.14 Lake Discharge: Q _{ed} * 1.14 (as a 7-day rolling average)	

Notes:

1. Total maximum daily design flow.
2. DEQ has established a Quantitation Limit of 0.05 mg/L for Total Residual Chlorine. Any analysis done for Total Residual Chlorine must have a quantitation limit that is either equal to or less than 0.05 mg/L. In cases where the average monthly or maximum daily limit for Total Residual Chlorine is lower than the Quantitation Limit, DEQ will use the reported Quantitation Limit as the compliance evaluation level.
3. When a discharge occurs to a Category 4A water for which a total maximum daily load is approved or established by EPA, effluent limits for pH shall be consistent with the wasteload allocation established in the TMDL. When a discharge occurs to a Category 5 impaired water on DEQ's 303(d) list, the instantaneous limit must meet the daily minimum and daily maximum pH for freshwater quality basin criterion in OAR 340-041-0101 through 340-041-0350.
4. Applicable only to discharges to receiving streams segments where and when spawning criteria apply and when active area spawning documentation is not provided. Documentation must certify that an active salmonid spawning area, where spawning redds are located or likely to be located, is either not downstream of the discharge, or is at a location where the critical plume dilution is at or above the critical mixing zone dilution. (Critical dilution to be assessed at the relevant 7Q10 stream low flow and the maximum facility design flow.) This documentation must be from a fisheries biologist (for spawning area location) and/or from a registered professional engineer (for critical plume dilution).
5. "Q_e" is the actual total daily average effluent flow from facility for all outfalls (MGD).
6. "Q_{ed}" is the design average effluent flow from facility for all outfalls (MGD). Total maximum daily design flow is not to exceed 0.5 MGD.
7. The excess thermal load is the thermal load above the applicable biologically based numeric temperature criterion. For a lake discharge, the downstream biologically based numeric temperature criterion will apply. If there is no biologically based numeric temperature criterion applicable to the receiving water, then this limit does not apply.
8. "S₂₅" is the critical dilution provided by DEQ at the time of permit assignment and is limited to a maximum value of 22. (The critical dilution provided for a lake discharge is limited to 1.)

2. Additional Permit Limits

- a. In addition to the limits included above, a registrant must also comply with the applicable excess thermal load limit as contained in Appendix A.

- b. If available, a facility seeking coverage for discharge to the mainstem Willamette river must obtain a bubble allocation.
- c. The registrant is prohibited from discharging a visible sheen.

3. Regulatory Mixing Zone

Pursuant to OAR 340-041-0053, the permittee is granted a regulatory mixing zone as described below:

- a. For discharges to streams, the regulatory mixing zone allows mixing with 25 percent of the receiving stream. The zone of immediate dilution (ZID) allows mixing with 10 percent of the receiving stream.
- b. For discharges to lakes, there is no regulatory mixing zone or zone of initial dilution.

4. Land Application of Industrial Wastewater

- a. This permit only authorizes the registrant to reuse or dispose of process wastewater generated at their facility, unless all of the following conditions are met:
 - i. Both the person generating process wastewater and the person reusing process wastewater agree to reuse the process wastewater in accordance with all conditions of this permit.
 - ii. A written agreement between the generator and user is in place, is current, and is being honored between the person generating process wastewater and owner of the property where process wastewater reuse occurs.
 - iii. The agreement includes Inspection and Entry conditions that is applicable to all portions of the process wastewater distribution system.
 - iv. Managed in accordance with its DEQ-approved Land Application Plan.
 - v. Used in a manner and applied at a rate that does not adversely affect groundwater quality.
 - vi. Applied at a rate and in accordance with site management practices that ensure continued agricultural, horticultural, or silvicultural production and does not inhibit or reduce the productivity of the site.
 - vii. Irrigated using sound irrigation practices to prevent:
 - (1) Offsite surface runoff or subsurface drainage through drainage tile;
 - (2) Creation of odors, fly and mosquito breeding, or other nuisance conditions; and
 - (3) Overloading of land with nutrients, organics, or other pollutants.
 - viii. Treated and used according to the criteria listed in Table A1-2 below.
 - (1) Setbacks. The process wastewater reuse system must be designed, installed, and operated to meet the following setbacks (in feet):

Table A1-2

Feature requiring setback	Process wastewater storage or surge tank (feet)	Point of process wastewater applied to landscape (feet)
Groundwater supplies and wells	50	100
Springs	50	100
Waters of the state, excluding springs	50	50

Stormwater management structures, collection systems, and catch basins	10	10
Underground injection control systems (UICs)	10	10
Property boundaries	5	2
Building structures	0	0

- b. Process Wastewater Irrigation Management. The registrant may irrigate with process wastewater pursuant to the following limitations:
- i. Irrigation sites must be located on stable geologic formations not subject to flooding or excessive runoff to adjacent land at the time of irrigation.
 - ii. Process wastewater must not be applied to areas with slopes exceeding 45 percent.
 - iii. Process wastewater must not be discharged to frozen or saturated soil.
 - iv. Process wastewater used for irrigation must be applied using sound irrigation practices such that:
 - v. There is no runoff of process wastewater,
 - vi. Does not cause erosion,
 - vii. Does not hydraulically overload the soil profile,
 - viii. Does not overload the soil with nutrients or organics.
 - ix. The soil and vegetation in the irrigation area must have capacity to accommodate the volume and rate of process wastewater applied so that discharge to surface water or leaching to groundwater does not occur.
 - x. Process wastewater irrigation must not create objectionable odors, fly or mosquito breeding, or other nuisance conditions.
 - xi. Process wastewater irrigation must not reduce or inhibit the field's productivity.
- c. Process Wastewater Strength in Table A1-3. Process wastewater may be reused for irrigation or other beneficial purposes without additional approval as follows:
- i. The process wastewater meets the process wastewater benchmarks in Table <<A1-3>> below.

Table A1-3: Process Wastewater Benchmarks

Constituent	Units	Monthly Average Benchmarks
Sodium Adsorption Ratio (SAR)		3
Electrical Conductivity (EC)	dS/m	2
pH	SU	6.0 – 8.5

- ii. The process wastewater is irrigated at standard irrigation rates so as not to hydraulically overload the soil. Avoid ponding, soil saturation and runoff

SCHEDULE A2: WASTE DISCHARGE LIMITS FOR HYDROELECTRIC FACILITIES

1. Permit Limits

During the term of this permit, the registrant must comply with the limits in the following table:

Table A2-1: Permit Limits

Parameter	Units	Average Monthly	Daily Maximum
pH ¹	SU	Instantaneous limit between a daily minimum of 6.0 and a daily maximum of 9.0	
Total Residual Chlorine ²	mg/L	0.011	0.019
Temperature	°C	-----	32
Temperature ³	°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 – Hydropower Facilities ^{4,5}	million kcal/day	$Q_{ed} * S_{25} * 1.14$ (as a 7-day rolling average)	
Oil and Grease ⁶	mg/L	-----	10

Notes:

1. When a discharge occurs to a Category 4A water for which a total maximum daily load is approved or established by EPA, effluent limits for pH shall be consistent with the wasteload allocation established in the TMDL. When a discharge occurs to a Category 5 impaired water on DEQ’s 303(d) list, instantaneous limit must meet the daily minimum and daily maximum pH for freshwater quality basin criterion in OAR 340-041-0101 through 340-041-0350.
2. DEQ has established a Quantitation Limit of 0.05 mg/L for Total Residual Chlorine. Any analysis done for Total Residual Chlorine must have a quantitation limit that is either equal to or less than 0.05 mg/L. In cases where the average monthly or maximum daily limit for Total Residual Chlorine is lower than the Quantitation Limit, DEQ will use the reported Quantitation Limit as the compliance evaluation level.
3. Applicable only to discharges to receiving streams segments where and when spawning criteria apply and when active area spawning documentation is not provided. Documentation must certify that an active salmonid spawning area, where spawning redds are located or likely to be located, is either not downstream of the discharge, or is at a location where the critical plume dilution is at or above the critical mixing zone dilution. (Critical dilution to be assessed at the relevant 7Q10 stream low flow and the maximum facility design flow.) This documentation must be from a fisheries biologist (for spawning area location) and/or from a registered professional engineer (for critical plume dilution).
4. “Q_{ed}” is the design average effluent flow from facility for all outfalls (MGD).
5. “S₂₅” is the critical dilution provided by DEQ at the time of permit assignment and is limited to a maximum value of 22.
6. Oil and Grease limits will apply to any outfall identified on the application form as containing a sump pump type discharge, including but not limited to any combination of floor drainage wastewater unwatering wastewater, roof drains, air compressor condensation, cooling water, equipment valves and seal leakage wastewater.

1. Additional Permit Limits

- a. A registrant must also comply with the applicable excess thermal load limit as contained in Appendix A.
- b. If available, a facility seeking coverage for discharge to the mainstem Willamette river must obtain a bubble allocation.
- c. The registrant is prohibited from discharging a visible sheen.

2. Regulatory Mixing Zone

Pursuant to OAR 340-041-0053, the permittee is granted a regulatory mixing zone as described below:

The regulatory mixing zone allows mixing with 25 percent of the receiving stream. The zone of immediate dilution (ZID) allows mixing with 10 percent of the receiving stream.

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