



Comprehensive General Permit for Discharges to Surface and Ground Water

Fact Sheet

Draft

This fact sheet sets forth the significant factual, legal, and policy considerations examined during preparation of this draft master general permit. This action has been prepared in accordance with the Connecticut State Statutes and its implementing regulations, the Regulations of Connecticut State Agencies. Issuance of a general permit serves to simplify and streamline the National Pollutant Discharge Elimination System (“NPDES”) and state ground water permitting process by authorizing multiple similar activities under one permit in lieu of each facility having to obtain an individual permit. This general permit provides permit conditions and limitations to protect waters of the State from pollution.

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1.0 General Permit History & Authority

In 1965, the Connecticut Clean Water Task Force was commissioned to investigate the condition of rivers and harbors in Connecticut. The Connecticut Clean Water Task Force developed an action program called Clean Water for Connecticut in 1966. On May 1, 1967, Connecticut's Clean Water Bill was signed into law, inaugurating the state's modern water pollution control program. The Connecticut Water Quality Standards were then approved by the federal government in 1970. A year later the Department of Environmental Protection was created, and Congress began drafting the federal legislation for the first national Clean Water Act using Connecticut's Clean Water Act as a guide.

Congress passed the Federal Water Pollution Control Act of 1972 ("Clean Water Act" or "CWA") on October 18, 1972, 33 U.S.C. 1251 et seq., with the objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" section 101(a), 33 U.S.C. 1251(a). To help achieve this objective, the CWA provides that "the discharge of any pollutant by any person shall be unlawful" except in compliance with other provisions of the statute, CWA section 301(a), 33 U.S.C. 1311(a).

Pursuant to the CWA and Title 22a 430 of the Connecticut General Statutes, any person who initiates or creates a discharge of pollutants to the waters of the state must first obtain a permit authorizing the discharge. The Connecticut Department of Energy and Environmental Protection ("DEEP") is a delegated authority to implement the federal National Pollutant Discharge Elimination System ("NPDES") Program. In accordance with this delegation, DEEP has been provided the authority to promulgate regulations and issue permits in accordance with the Connecticut General Statutes ("CGS") and Regulations of Connecticut State Agencies ("RCSA").

DEEP is authorized to administer a Pretreatment Program pursuant to 40 Code of Federal Regulations ("CFR") Part 403 in accordance with section 22a-430 of Chapter 446k of the CGS and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and a modified Memorandum of Agreement (MOA) dated June 3, 1981, by the Administrator of the United States Environmental Protection Agency.

The *Comprehensive General Permit for Discharges to Surface Water and Ground Water* ("Comprehensive general permit") provides discharge authorizations in a single permit for wastewater discharge categories whose discharge authorizations were previously provided by separate general permits for each discharge category. DEEP issued the first Comprehensive GP December 14, 2017, which became effective March 30, 2018, (and will hereafter be referred to in this document as the "2018 general permit"). The current Comprehensive GP was reissued March 15, 2023, without revisions, became effective April 1, 2023, and will expire April 1, 2025. The draft general permit is expected to become effective April 1, 2025 (and will hereafter be referred to in this document as the "2025 general permit").

2.0 Authorization Under This General Permit

The Comprehensive GP provides discharge authorizations for the following categories of wastewater as each is defined in “Section 9. General Definitions” of the general permit:

- Non-contact cooling water
- Geothermal heat pump water
- Water treatment wastewater
- Hydrostatic pressure testing of natural gas, petroleum tanks, and pipeline water
- Fire suppression system testing water
- Hydrant flushing water
- Boiler blowdown water
- Pressure washing water

Most of these wastewater categories can be discharged to Classes AA, A, SA, and SB surface waters as well as to ground water through various conveyance pathways provided the permittee complies with the permit conditions and effluent limits in the permit. Authorized discharge locations can be found in Table 2.1 of the general permit.

Table 2.1—Authorized Discharge Locations Based on Category of Discharge		
Category of Discharge	Ground Water Classification	Surface Water Classification
Non-Contact Cooling	All	All
Geothermal Heat Pump	All	All
Water Treatment	All	All
Hydrostatic Pressure Testing of Natural Gas and Petroleum Tanks/Pipelines	Not Authorized	A, SA, B, SB
Fire Suppression System Testing	All	All
Hydrant Flushing	All	All
Boiler Blowdown	All	Not Authorized
Pressure Washing	All	All

3.0 Discharges to Impaired Waters or Waters with Total Maximum Daily Loads (TMDL)

Discharges directed to an impaired waterbody that is listed in the most recent Connecticut Integrated Water Quality Report pursuant to Clean Water Act section 303(d) and 305(b) must comply with the requirements listed in Section 2.2.9 of this general permit. Discharges to an impaired water must provide additional documentation to the Commissioner that demonstrates that the discharge is not expected to cause or contribute to an exceedance of the water quality standard(s) that caused the impairment. The Commissioner may require additional control measures for discharges to impaired waterbody segments or other sensitive areas.

For discharges to waters with an established TMDL, the Commissioner will determine if there are sufficient remaining allocations in the TMDL to allow the discharge and the Commissioner may authorize the discharge with additional permit conditions or compliance schedules designed to meet the requirements of the TMDL or load allocation.

4.0 Significant Changes to the General Permit

4.1. Instream Waste Concentration Limit Removed

The 2018 general permit contained an eligibility restriction based on the instream waste concentration of the discharge. In that permit, a permittee that had an instream waste concentration of greater than 15% was ineligible for the general permit and was required to apply for an individual NPDES discharge permit. The 2025 general permit was expanded to include additional permit limits to protect the instream water quality standards at all IWCs. The 2025 general permit includes numeric effluent limits for instream waste concentrations of 0 - 5%, > 5% - 20%, > 20% - 40%, > 40% - 70%, and > 70% - 100%.

4.2. Structural Change in How General Permit Information is Presented

The discharge categories, permit conditions, and limits in the 2025 general permit are predominantly the same as those in the 2018 general permit. The general permit includes a modernized format and layout. The permittee is better able to navigate the permit terms and conditions based on their industrial category (e.g. non-contact cooling, hydrostatic pressure testing, etc.) and their final discharge location (surface or ground water). The permittee can now proceed to a specific section of the general permit that will provide them with specific permit conditions, numeric effluent limits, and monitoring requirements.

4.3. Pressure Washing Added as a Discharge Category

The industrial category of Pressure Washing has been added to the 2025 general permit. Discharge to sanitary sewer is the preferred discharge option for any pressure washing discharges, but if access to sanitary sewer is not available or the permittee is unable to collect and dispose of the discharge at a POTW, the user may discharge to the ground or surface water in accordance with the permit terms and conditions.

4.4. NetDMR Reporting of all Monitoring Results for Discharges Requiring Registration

The 2018 general permit only required registered permittees with discharges to surface water to report monitoring results through NetDMR. The 2025 general permit requires all registered permittees to report monitoring results through NetDMR regardless of the discharge location.

4.5. Compliance Schedule for Installation of Monitoring Wells

The 2025 general permit requires water treatment discharges to ground water to submit a plan within three (3) years of the effective date of the general permit for the installation of ground water monitoring wells

to assess the impact of the discharge on ground water. The wells must be installed by the end of the five-year term.

5.0 Registration Requirements

5.1 Obtaining Authorization to Discharge under this General Permit

Authorization to discharge under this general permit is either automatic (provided the permittee meets all eligibility requirements of the permit) or must be obtained by submitting a complete registration and receiving an Approval of the Registration from the Commissioner. Table 3.1 provides a complete summary of registration requirements for each category of discharge.

Table 3.1—Registration and Fee Requirements				
(Note: This table is solely provided as a summary of the registration requirements)				
Discharge Category	Discharge Location	Maximum Daily Flow (gpd)	Registration	Fee¹
Non-Contact Cooling	Surface Water	500,000	Yes	\$1250
	Ground Water	< 5,000	No	NA
		≥ 5,000	Yes	\$1250
Geothermal Heat Pump	Surface Water	500,000	Yes	\$1250
	Ground Water	< 5,000	No	NA
		≥ 5,000	Yes	\$1250
Water Treatment	Surface Water	2,000,000	Yes	\$1250
	Ground Water	< 500	No	NA
		≥ 500	Yes	\$1250
Hydrostatic Pressure Testing of Natural Gas/Petroleum Tanks and/or Pipelines	Surface or Ground Water	500,000	Yes	\$1250
Fire Suppression System Testing	Surface or Ground Water	500,000	No	NA
Hydrant Flushing	Surface or Ground Water	500,000	No	NA
Boiler Blowdown	Ground Water	< 5,000	No	NA
Pressure Washing	Surface or Ground Water	500,000	No	NA

5.2. Wastewater Screening

Wastewater screening will be required for emerging contaminants and any pollutants that may be considered toxic, hazardous, or detrimental to any use of the watercourse designated pursuant to Connecticut's Water Quality Standards into which such wastewater is or will be discharged if the emerging contaminants or pollutants are reasonably known to be present, to have been handled, stored, released, or disposed of at the site where the subject wastewater originates.

The requirements in the current general permit to screen existing drinking water treatment plant wastewater and noncontact cooling water for nitrogen, phosphorus, or bacteria have been modified.

5.3. Professional Certifications

Professional certifications by a Qualified Professional as defined in the general permit will continue to be required for all registrations.

5.4 Registration Modification

If a permittee with an existing authorization under this general permit seeks to modify the conditions or numeric effluent limits of the approved discharge, a modified registration form must be submitted to DEEP prior to the modification occurring. If the modification is approvable the permittee must obtain a Modified Approval of Registration from DEEP prior to any expansion, alteration, or modification that may result in (1) a change to the nature of the activity generating the discharge (2) the introduction of a new source of discharge; (3) the introduction of a new pollutant that was not present in a discharge at the time of registration; (4) an increase in the maximum daily flow, or (5) a relocation of the discharge to a different receiving water. Contents of a modified application are described in Section 3.8 of the general permit.

Treatment system modifications to meet the permit terms and conditions do not require DEEP approval, contingent on the permittee's compliance with the general permit. The permittee must notify the Commissioner at least 30 days prior to altering its wastewater collection or treatment system, or its method of operation as described in Section 3 of the general permit.

5.5. Termination of Discharge

Permittees that require a submission of a registration, must submit a Notice of Termination to the Commissioner on a prescribed form within 14 days of the cessation of the discharge.

6.0 Pollutants of Concern Identified for Industrial Categories Covered Under the General Permit

6.1. Temperature

Temperature is a primary pollutant of concern for noncontact cooling water and geothermal heat pump water. The 2018 general permit required weekly temperature monitoring of the discharge and monthly temperature monitoring of the upstream and downstream receiving waterbody for the first time.

6.2. pH

The pH limit of 6.0 - 9.0 standard units has been carried forward in general permits. This range is protective of the instream water quality standards and is carried forward in 2025 general permit.

6.3 Total Suspended Solids (TSS)

Another pollutant common to all of the waste streams covered by this general permit is total suspended

solids (TSS). TSS forms in noncontact cooling water as calcium and magnesium precipitate forms colloidal solids from the rise in temperature of the noncontact cooling water once it contacts a surface with a temperature hotter than the temperature of the source water. All of the water treatment processes and associated wastewater processes are designed to remove suspended material from potable water and wastewater. For these discharges to surface water, DEEP is carrying forward the TSS effluent limits of 20 mg/L (Instant Maximum) as a technology-based effluent limit in the permit to meet the requirements of best control technology/best available technology (“BCT/BAT”). Discharges to ground water do not have a TSS limit as solids will immediately adsorb to soil particles once the discharge enters the ground.

6.4 Metals

Conventional metal pollutants have been included in the numeric effluent limit tables and in monitoring requirements to determine the extent of pollutant partitioning which results from the treatment process. Each metal in the numeric effluent limit tables is discussed below.

6.5 Aluminum

Although aluminum is included in each of the numeric effluent limit tables for each subcategory of discharge, its presence in drinking water treatment plant wastewater is most significant. Many of the drinking water treatment plants use aluminum compounds (e.g. aluminum sulfate, also known as “alum”, or polyaluminum chloride) as coagulants to remove suspended solids and other impurities. As these coagulated compounds grow in size, they gain mass and eventually settle to the bottom of the tanks they are found in. Some treatment systems at water treatment plants that discharge to a POTW remove the sediments continuously from the bottom of the tank without the need to drain the basin. Drinking water treatment plants that discharge to ground or surface water allow the supernatant to drain off to maximize sediment (and, thus, aluminum) removal.

In 2018, EPA updated its national Clean Water Act Section 304(a) recommendations for freshwater aquatic life criteria for aluminum. These recommendations advised that numeric effluent limits for aluminum should be calculated using site-specific receiving water characteristics such as pH, total hardness, and dissolved organic carbon. This method can be used in an individual permit, but because the numeric effluent limits in the 2025 general permit must apply to receiving waters across the state of Connecticut where these receiving water characteristics vary greatly, site-specific water chemistry could not be considered when calculating numeric effluent limits. DEEP is continuing to collect data to inform the development of state specific water quality criteria.

6.6. Manganese

Manganese is a naturally occurring metal commonly found in ground water sources throughout Connecticut. Any of the discharge categories using ground water as a source wastewater are likely to contain manganese in the discharge.

6.7. Iron

Iron, like manganese, is a naturally occurring metal commonly found in ground water sources throughout Connecticut. Like manganese, any of the discharge categories using ground water as a source wastewater are likely to contain manganese in the discharge. Additionally, iron salts are the active ingredients in some coagulants. As noted in the Drinking Water Treatment Plant Residuals Management Technical Report (EPA 820-R-11-003), iron was listed as a pollutant of concern for certain drinking water treatment plants. The limit of 3.0 mg/l for both discharges to surface water and ground water has been carried forward as a technology-based limit in the permit to meet the requirements of best control technology/best available technology (BCT/BAT).

Iron/manganese may be present in water as colloidal iron/manganese, soluble ferrous iron/manganese, or a chelated compound. Colloidal iron/manganese can be removed by coagulation, flocculation and precipitation or filtration. Removal of soluble ferrous iron/manganese and chelated compounds requires oxidation to form a precipitate. Oxidation can be accomplished by aeration, chlorine, hypochlorites, chlorine dioxide, or potassium permanganate (KMnO₄). Adjusting the pH optimizes the precipitation by balancing solubility and oxidation potential.

6.8. Copper/Lead

Copper and lead are often found in wastewater due to their presence in conveyance systems and the connecting parts of those conveyance systems. The source of the copper is often the copper pipes and brass fittings that the source water or process water flows through. The source of the lead can be the solder used to connect the pipes or possibly even pipes used to convey the source water. Homes, commercial businesses and factories built before 1940 may have lead service lines that connect them to public water. Plumbing systems built before 1986 may have lead parts. New “lead free” pipes and plumbing parts may still contain 0.25% lead. Brass parts may also contain some lead.

Because acidic water is more likely to leach copper and lead from the conveyance systems they are in, drinking water treatment plants will usually add an alkaline solution to the water before it flows to the distribution system to ensure the pH of the water is more on the caustic side of the pH scale. Additionally, water treatment plant wastewater can exhibit copper due to copper based chemicals used as an algicide in drinking water reservoirs. Boiler blowdown also contains higher levels of copper and lead in wastewater and is only authorized to discharge to ground water in this general permit.

6.9. Zinc

The common source of zinc in water is the corrosion of galvanized metal. Water having high concentrations of total dissolved solids or chlorides will also dissolve zinc from galvanized metal. Elevated levels of dissolved solids and chlorides increases the electrical conductivity of the water, making it easier for the chemical reactions involved in corrosion to occur.

Zinc Orthophosphate is a commonly used corrosion inhibitor in municipal and well water treatment applications. This corrosion inhibitor is particularly important because it aids in prevention of lead leaching from the pipes into the water distribution network.

6.10. Total Residual Chlorine

Chlorine is added to water at drinking water treatment plants for disinfection purposes. EPA and public health departments require some residual chlorine in the distribution system to ensure the water remains free from bacteria, microbes, and other organisms. EPA’s National Primary Drinking Water Regulations allow up to 4 mg/l of chlorine in drinking water as the Maximum Residual Disinfectant Level (MRDL).

Chlorine is toxic to vertebrates and invertebrates at very low concentrations and dechlorination is required to meet the total residual chlorine effluent limits prior to discharges to ground and surface water.

7.0 Technology Based Effluent Limitations

Technology-based treatment requirements represent the minimum level of control that must be imposed under CWA § 301(b) and 402 to meet best practicable control technology currently available (“BPT”) for conventional pollutants and some metals, best conventional control technology (“BCT”) for conventional

pollutants, and best available technology economically achievable (“BAT”) for toxic and non-conventional pollutants. *See* 40 CFR § 125 Subpart A and RCSA Section 22a-430-4(1)(4)(A).

Subpart A of 40 CFR § 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under § 301(b) of the CWA, including the application of EPA promulgated Effluent Limitation Guidelines (“ELGs”) and case-by-case determinations of effluent limitations under CWA § 402(a)(1). EPA promulgates New Source Performance Standards (NSPS) under CWA § 306 and 40 CFR § 401.12. *See also* 40 CFR § 122.2 (definition of “new source”) and 122.29. In the absence of published technology-based effluent guidelines, the permit writer is authorized under CWA § 402(a)(1)(B) and RCSA Section 22a-430-4(m) to establish effluent limitations on a case-by-case basis using best professional judgment (“BPJ”).

8.0 Reasonable Potential Analysis and Water Quality Based Effluent Limits Calculation

Pursuant to CWA § 301(b)(1)(C) and 40 CFR § 122.44(d)(1), NPDES permits must contain any requirements in addition to Technology-Based Effluent Limits (“TBELs”) that are necessary to achieve water quality standards established under § 303 of the CWA. *See also* 33 U.S.C. § 1311(b)(1)(C). In addition, limitations “must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality.” *See* 40 CFR § 122.44(d)(1)(i).

To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any water quality standard (WQS), EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 CFR § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQs, the permit must contain Water Quality Based Effluent Limits (“WQBELs”) or require additional monitoring if there is insufficient data to develop a WQBEL, for that pollutant. *See* 40 CFR § 122.44(d)(1)(i).

8.1. Calculation of Numeric Effluent Limits

During the development of the 2025 general permit, DEEP performed a technical analysis of the numeric data from the Discharge Monitoring Reports (“DMRs”) submitted since 2018. DMRs from permittees discharging noncontact cooling water and water treatment wastewater to surface water provided sufficient data to perform Reasonable Potential Analyses (“RPA”) to produce WQBELs for these categories.

The 2018 and 2025 general permits require grab samples for monitoring noncontact cooling water and water. Due to the low availability of data, the Average Monthly Limit (“AML”) calculated in the RPA is set as the Instantaneous Maximum Effluent Limit in the general permit. Results of the RPA produced similar effluent limits to those from the 2018 general permit. The effluent limit for manganese was developed using the new in stream criteria.

Evaluation of Whole Effluent Toxicity (“WET”) data found mean No Observed Adverse Effect Level (“NOAEL”) in undiluted samples at 94% for *D. Pulex* and 98% for *Pimephales* with median values of 100%. Based on this information, DEEP determined that most of the numeric effluent limits continue to

be protective of the waters of the state and therefore the most stringent values are carried forward from the previous permits.

8.2. Effluent Limits for Surface Water Discharges

The permit includes permit limits and conditions to meet all applicable narrative and numeric water quality standards, criteria and associated policies contained in Section 22a-426 of the RCSA, Connecticut Water Quality Standards. Numeric WQBEL were calculated for all parameters with an instream water quality criteria. Each parameter was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the IWC. These parameters and limits are included in the Numeric Effluent Limits tables of the general permit based on Instream waste Concentration.

8.3. Whole Effluent Toxicity

Discharges of noncontact cooling water or water treatment wastewater to surface water must monitor and meet whole WET limits at a frequency based on maximum daily discharge flow. WET testing shall be performed in accordance with Section 4.15 of the general permit. Acute aquatic toxicity monitoring shall be performed using the NOAEL protocol specified in section 22a-430- 3(j)(7)(A) of the RCSA and as prescribed in the reference document *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA-821- R-02-012), or the most current version, with any exceptions or clarifications noted in Section 4.15 of the general permit or prescribed by the Commissioner.

9.0 Changes to Each Industrial Category

Below is a summary of parameters included in this general permit and any changes made to permit limits from the previous iterations of the permit.

9.1 Non-Contact Cooling and Geothermal Heat Pump Discharges to Surface Water

The 2025 general permit defines “Non-contact cooling” as “wastewater which has been used for cooling purposes, does not come into direct contact with a product or process, and has a maximum daily flow of no greater than 500,000 gallons per day. This definition does not include air compressor condensate or blowdown from boiler equipment.”

The 2025 general permit defines a “Geothermal heat pump” as “a central heating and/or cooling system that transfers heat to or from ground water.” The wastewater produced is the wastewater after the pump has transferred the heat to or from the ground water. Non-contact cooling water and geothermal heat pump water are combined in this section because the effluent characteristics of the two wastewaters are nearly identical and the same conditions apply to both categories of wastewater.

The general permit contains conditions and prohibitions for non-contact cooling water and geothermal heat pump water discharges to surface water. The discharge must be comprised of once-through heat exchange system water to which no chemicals have been added for water conditioning. The source of the water can be uncontaminated ground water, a public source (often referred to as city water), or a surface water (preferably flowing sources such as a river or stream).

9.1.2 Numeric Effluent Limits

Noncontact cooling water or geothermal heat pump water may be discharged to surface water if the discharge complies with the following permit conditions and limits in Tables 4.1.2.1 and 4.1.2.2 below.

Table 4.1.2.1. Instantaneous Maximum Effluent Limit or Range for Discharges of Noncontact Cooling Water or Geothermal Heat Pump Water to Surface Water			
Parameter	Limit	Unit	Permit Limit Development
Flow	500,000	gpd	Limited by definition of noncontact cooling water
pH ¹	6.0 – 9.0	s.u.	WQBEL Carried forward from current permit
Aquatic toxicity, Daphnia, Pulex ^{2,3}	>90	percent	WQBEL Carried forward from current permit
Aquatic toxicity, Pimephales promelas ^{2,3}	>90	percent	WQBEL Carried forward from current permit
Aquatic toxicity, Mysidopsis bahia ^{2,3}	>90	percent	WQBEL Carried forward from current permit
Aquatic toxicity, Menidia beryllina ^{2,3}	>90	percent	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons	5.0	mg/l	TBEL Carried forward from current permit
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Total Suspended Solids	20	mg/l	TBEL Carried forward from current permit
Temperature	100	°F	WQBEL Carried forward from current permit
Footnotes:			
¹ The pH of the discharge shall not be less than 6.0 or more than 9.0 S.U.			
² The results of the aquatic toxicity tests should be reported as percent survival of an undiluted sample in the effluent.			
³ For salinity less than 5 ppt toxicity tests shall employ neonatal (less than 24-hours old) Daphnia pulex and juvenile (1-14 days old, with no greater than a 24-hour range in age) Pimephales promelas as test organisms. For salinity greater than or equal to 5 ppt toxicity tests shall utilize neonatal (1-5 days old with no more than 24-hours range in age) Mysidopsis bahia and juvenile (9-14 days old, with no greater than a 24-hour range in age) Menidia beryllina as test organisms.			

Table 4.1.2.2. Instantaneous Maximum Effluent Limits for Discharges of Noncontact Cooling Water or Geothermal Heat Pump Water to Surface Water by Instream Waste Concentration

Parameter	Instream Waste Concentration ⁽¹⁾							Units	Permit Limit Development
	Reservoir & Lake	0 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%	Intermittent Discharge		
Aluminum, total	1.5	1.42	0.36	0.18	0.10	0.071	1.5	mg/l	QBEL calculated using RPA
Manganese, total	1.56	0.64	0.16	0.08	0.046	0.032	3.0	mg/l	QBEL calculated using RPA
Copper, total	0.105	0.096	0.024	0.012	0.0069	0.0048	0.12	mg/l	QBEL calculated using RPA
Lead, total	0.046	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/l	QBEL calculated using RPA
Zinc, total	0.292	0.65	0.16	0.081	0.046	0.032	0.32	mg/l	QBEL calculated using RPA
Total Residual Chlorine	0.085	0.180	0.045	0.023	0.013	0.009	0.05	mg/l	QBEL calculated using RPA

Footnotes:

¹The Instream Waste Concentration shall be calculated by dividing the maximum gallon/hr flow of the discharge by the sum of the maximum gallon/hr flow of the discharge and the seven-day ten-year low flow of the receiving stream and multiplying the result by 100.

9.1.3 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.1.2.1 and 4.1.2.2. The frequency of parameter and aquatic toxicity monitoring are dependent on discharge flows according to Table 4.1.3 of the general permit. Discharges of non-contact cooling water also have a requirement to monitor the discharge for temperature weekly and the receiving waterbody temperature monthly. This information is provided as an attachment to the DMR.

9.2. Non-Contact Cooling and Geothermal Heat Pump Discharges to Ground Water

The general permit contains conditions and prohibitions for non-contact cooling water and geothermal heat pump water discharges to ground water. The discharge must be comprised of once-through heat exchange system water to which no chemicals have been added for water conditioning. The source of the water can be uncontaminated ground water, a public source (often referred to as city water), or a surface water (preferably flowing sources such as a river or stream).

9.2.1. Numeric Effluent Limits

Noncontact cooling water or geothermal heat pump water may be land applied to the ground, to a subsurface disposal system, or an infiltration basin provided the discharge complies with the limits in Table 4.2.2.1 below:

Table 4.2.2.1 — Maximum Limits for Discharges of Noncontact Cooling Water or Geothermal Heat Pump Water to Ground Water			
Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	500,000	gpd	Limited by definition of noncontact cooling water
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons (TPH)	5.0	mg/l	TBEL Carried forward from current permit
Lead, total	Monitor	mg/l	NA
Aluminum, total	1.5	mg/l	WQBEL Carried forward from current permit
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Manganese, total	3.0	mg/l	TBEL Carried forward from current permit
Copper, total	Monitor	mg/l	NA
Temperature	Monitor	°F	NA
Zinc, total	Monitor	mg/l	NA

9.2.2. Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.2.2.1. The frequency of parameter monitoring is dependent on discharge flows according to Table 4.2.3 in the general permit.

9.3. Water Treatment Wastewater Discharges to Surface Water

The 2025 general permit defines “water treatment wastewater” as wastewaters generated by a well or water treatment facility used to produce water supplies for potable or industrial process use, including but not limited to wastewaters from the following:

- clarifier tank sludge blowdown;
- clarifier tank supernatant;
- facility and equipment cleaning rinsewaters, excluding rinsewaters generated by the rinseout of containers used to store any chemical for which an effluent limit is not specified in Section 4.2 or Section 4.4 of this general permit;
- activated carbon and filter media backwash, including filter to waste, and regeneration wastewaters;
- raw or treated water from equipment leakage and bleed-off;

- mechanical and non-mechanical sludge dewatering wastewaters;
- infiltration bed and settling lagoon wastewaters;
- raw or treated water from process sampling points and on-line process analytical instrumentation;
- designed overflows from storage tanks and other WTW facilities resulting from emergency conditions and routine maintenance;
- potable water system maintenance or sampling wastewaters;
- start-up wastewaters for water treatment plants, facilities or equipment which commenced operation after the date of issuance of this general permit;
- ion exchange regeneration wastewaters;
- reverse osmosis reject water;
- laboratory wastewaters, and
- Low flow water treatment plant wastewater.

The general permit contains conditions for water treatment plant wastewater discharges to surface water. The conditions common to most categories in the general permit that discharge to surface water include requirements related to aesthetic concerns, toxicity, temperature, and floor drains. The maximum daily discharge limit for water treatment plant wastewater to surface water has been expanded to 2,000,000 gallons per day along with protective effluent limits. The permit requires solids removal before discharge for certain types of water treatment plant wastewater to achieve the 20.0 mg/l effluent limit.

9.3.1 Numeric Effluent Limits

Water treatment plant wastewater may be discharged to surface water if the discharge complies with the following permit conditions and limits in Tables 4.3.3.1 and 4.3.3.2 below.

Table 4.3.3.1. Instantaneous Maximum Effluent Limit or Range for Discharges of Drinking Water Treatment Plant Wastewater to Surface Water			
Parameter	Limit	Unit	Permit Limit Development
Flow	2,000,000	gpd	NA
pH ¹	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Aquatic toxicity, Daphnia, Pulex ^{2,3}	>90	percent	WQBEL Carried forward from current permit
Aquatic toxicity, Pimephales promelas ^{2,3}	>90	percent	WQBEL Carried forward from current permit
Aquatic toxicity, Mysidopsis bahia ^{2,3}	>90	percent	WQBEL Carried forward from current permit
Aquatic toxicity, Menidia beryllina ^{2,3}	>90%	percent	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons	5.0	mg/l	TBEL Carried forward from current permit
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Total Suspended Solids		mg/l	TBEL Carried forward from current permit
Total Dissolved Solids	Monitor	mg/l	NA
Footnotes:			
¹ The pH of the discharge shall not be less than 6.0 or more than 9.0 S.U.			
² The results of the aquatic toxicity tests should be reported as percent survival of an undiluted sample in the effluent.			
³ For salinity less than 5 ppt toxicity tests shall employ neonatal (less than 24-hours old) Daphnia pulex and juvenile (1-14 days old, with no greater than a 24-hour range in age) Pimephales promelas as test organisms. For			

salinity greater than or equal to 5 ppt toxicity tests shall utilize neonatal (1-5 days old with no more than 24-hours range in age) *Mysidopsis bahia* and juvenile (9-14 days old, with no greater than a 24-hour range in age) *Menidia beryllina* as test organisms.

Table 4.3.3.2. Instantaneous Maximum Effluent Limits for Discharges of Drinking Water Treatment Plant Wastewater to Surface Water by Instream Waste Concentration

Parameter	Instream Waste Concentration ⁽¹⁾						Intermittent Discharge	Units	Permit Limit Development
	Reservoir & Lake	0 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%			
Aluminum, total	1.5	1.42	0.36	0.18	0.10	0.071	1.5	mg/l	WQBEL calculated using RPA
Manganese, total	1.56	0.64	0.16	0.08	0.046	0.032	3.0	mg/l	WQBEL calculated using RPA
Copper, total	0.105	0.096	0.024	0.012	0.0069	0.0048	0.12	mg/l	WQBEL calculated using RPA
Lead, total	0.046	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/l	WQBEL calculated using RPA
Zinc, total	0.292	0.65	0.16	0.081	0.046	0.032	0.32	mg/l	WQBEL calculated using RPA
Total Residual Chlorine	0.085	0.180	0.045	0.023	0.013	0.009	0.05	mg/l	WQBEL calculated using RPA

Footnotes:

¹ The Instream Waste Concentration shall be calculated by dividing the maximum gallon/hr flow of the discharge by the sum of the maximum gallon/hr flow of the discharge and the seven day ten year low flow of the receiving stream and multiplying the result by 100.

9.3.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.3.3.1 and 4.3.3.2. The frequency of parameter and aquatic toxicity monitoring are dependent on discharge flows according to Table 4.3.4.1 in the general permit.

9.4 Water Treatment Plant Wastewater Discharges to Ground Water

The general permit contains prohibitions for water treatment plant wastewater discharges to ground water including facility and equipment cleaning rinsewaters containing detergents or surfactants, water treatment plant laboratory wastewaters greater than 500 gpd, start-up wastewaters from drinking water treatment plant wastewater facilities which contain detergents or surfactants, regeneration and backwash wastewaters from sodium chloride ion exchange units, activated carbon backwash and regeneration wastewaters for filters which treat for volatile organic

compounds, and clarifier tank sludge blowdown to a subsurface disposal system.

The general permit contains conditions for water treatment plant wastewater discharges to ground water including a limit on discharges to a subsurface disposal system of 50,000 gallons per day and a requirement for solids removal for clarifier tank sludge blowdown, greensand filter ion exchange regeneration wastewaters, and filter media backwash and regeneration wastewaters in order to achieve the total suspended solids limit of 20.0 mg/l.

Other conditions require that discharge lagoons be constructed and maintained above the 100-year base flood elevation and a prohibition on stormwater runoff to any wastewater treatment lagoons or beds. Certain design criteria require minimum separating distances between a disposal system and any potable water supply well based on yield from the public well. Other design criteria require minimum depths between the bottom of a lagoon and underlying bedrock or the seasonal high ground water table. Other conditions prevent interference between discharges of water treatment plant wastewater and another subsurface disposal system.

9.4.1 Numeric Effluent Limits

Drinking water treatment plant wastewater may be land applied to the ground, to a subsurface disposal system, or an infiltration basin provided the discharge complies with the limits in Table 4.4.3.1 below:

Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons (TPH)	5.0	mg/l	TBEL Carried forward from current permit
Lead, total	Monitor	mg/l	NA
Lead, dissolved	Monitor	mg/l	NA
Aluminum, total	1.5	mg/l	TBEL Carried forward from current permit
Aluminum, dissolved	Monitor	mg/l	NA
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Iron, dissolved	Monitor	mg/l	NA
Manganese, total	3.0	mg/l	WQBEL Carried forward from current permit
Manganese, dissolved	Monitor	mg/l	NA
Copper, total	Monitor	mg/l	NA
Zinc, total	Monitor	mg/l	NA

Parameter	Maximum Limit	Unit	Permit Limit Development
Zinc, dissolved	Monitor	mg/l	NA
Temperature	Monitor	°F	NA

9.4.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.4.3.1. The frequency of parameter monitoring is dependent on discharge flows according to Table 4.4.4 of the general permit.

9.4.3 Monitoring Location

The 2018 general permit did not specify a clear location of where the grab sample for water treatment plant discharges to ground water should be taken. As a result, monitoring data collected from a request to permittees yielded inconsistent results because the samples were collected at varying locations at each facility. The 2025 general permit clearly indicates that “The sample shall be collected at the end of the discharge pipe before the discharge enters the infiltration basin, subsurface disposal system, or ground surface.”

9.4.4 Sample Type

The 2018 general permit instructed permittees that “Samples collected shall be prepared by settling of solids and filtration through a 0.45 uM filter prior to analysis.” Oral history within the division provided that this filtration method was incorporated to simulate the percolation of the wastewater through the soil matrix. It was theorized that solids would adsorb to soil particles and just dissolved substances would infiltrate to groundwater. However, this method is not supported by 40 CFR 136, the EPA Guidelines Establishing Test Procedures for the Analysis of Pollutants. In the 2025 general permit, permittees monitor for both total and dissolved metals.

9.4.5 Ground Water Monitoring Wells & Compliance Schedule

The 2025 general permit includes a compliance schedule that requires permittees discharging water treatment wastewater to ground water to submit a plan for the installation of monitoring wells that will be used as the ground water compliance location. Well design and installation must be in accordance with the EPA Guidance Document titled “Design and Installation of Monitoring Wells,” document number SESDGUID-101-RO, effective February 18, 2018. The plan should include a potentiometric surface map to determine the location of at least one (1) upgradient monitoring well to determine background concentrations and sufficient downgradient monitoring wells at the edge of the property boundary based on groundwater hydrology.

The compliance schedule also requires that within 54 months of the effective date of this general permit, the permittees must install the monitoring wells described in the plan they submitted. The monitoring wells will be used to monitor ground water discharge compliance during the term following the term of this general permit.

9.5. Petroleum and Natural Gas Hydrostatic Pressure Testing Discharges to Surface Water

The 2025 general permit defines “Hydrostatic pressure testing” as “waters used to test the structural integrity of new tanks and pipelines, and tanks and pipelines which have been used to hold or transfer drinking water, sewage, petroleum, or natural gas.” This general permit specifies petroleum and natural gas tanks because these tanks represent the majority of tanks tested and the petroleum-based pollutants that could be present in the tank pose a greater environmental risk than tanks holding just water or sewage. Water is used to test the structural integrity of the tanks before placing the tank back into service because, if a leak is found, it is much easier and less expensive to discharge just the wastewater rather than empty and temporarily store the product the tank might have been holding.

Conditions for the discharge of petroleum and natural gas hydrostatic pressure testing discharges to surface water include common requirements pertaining to aesthetics, toxicity, temperature, and a prohibition against the use of toxic chemicals listed in the Regulations of Connecticut State Agencies.

Unique to the petroleum and natural gas hydrostatic testing category are requirements for a thorough cleaning of the interior of tanks and pipelines prior to any hydrostatic pressure testing. Options to clean include compressed air, pressure washing, a combination of the two or any technique that will reduce pollutants from entering the hydrostatic testing water. Wastewaters generated from those cleaning procedures are not authorized to be discharged by this general permit and must be collected for off-site transport and disposal by a licensed waste transporter.

Best management practices such as check dams, or temporary basins must be employed to prevent erosion and any visible discoloration and foaming of the receiving water. An additional requirement included the intake point of the pipe used to draw the test water from the surface water to be located at a depth which minimizes the entrainment of sediments.

9.5.1 Numeric Effluent Limits

Hydrostatic pressure testing wastewater may be discharged to surface water if the discharge complies with the following permit conditions and limits in Tables 4.5.2.1 and 4.5.2.2 below.

Parameter	Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
pH	6.0 – 9.0	S.U.	QBEL Carried forward from current permit
Total Petroleum Hydrocarbons	5.0	mg/l	QBEL Carried forward from current permit
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Total Suspended Solids	45	mg/l	TBEL Carried forward from current permit
Footnotes:			
¹ The pH of the discharge shall not be less than 6.0 or more than 9.0 S.U.			

Table 4.5.2.2—Maximum Limits for Discharges of Petroleum and Natural Gas Hydrostatic Pressure Testing Wastewater to Surface Water by Instream Waste Concentration

Parameter	Instream Waste Concentration ⁽¹⁾						Intermittent Discharge	Units	Permit Limit Development
	Reservoir & Lake	0 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%			
Aluminum, total	1.5	1.42	0.36	0.18	0.10	0.071	1.5	mg/l	WQBEL calculated using RPA
Manganese, total	1.56	0.64	0.16	0.08	0.046	0.032	3.0	mg/l	WQBEL calculated using RPA
Copper, total	0.105	0.096	0.024	0.012	0.0069	0.0048	0.12	mg/l	WQBEL calculated using RPA
Lead, total	0.046	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/l	WQBEL calculated using RPA
Zinc, total	0.292	0.65	0.16	0.081	0.046	0.032	0.32	mg/l	WQBEL calculated using RPA
Total Residual Chlorine	0.085	0.180	0.045	0.023	0.013	0.009	0.05	mg/l	WQBEL calculated using RPA

Footnote:

¹ The Instream Waste Concentration shall be calculated by dividing the maximum gallon/hr flow of the discharge by the sum of the maximum gallon/hr flow of the discharge and the seven day ten year low flow of the receiving stream and multiplying the result by 100.

9.5.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.5.2.1 and 4.5.2.2. Permittees will be required to monitor the first 10% and the last 10% per discharge for flows greater than 500 gpd and retain results onsite.

9.6. Petroleum and Natural Gas Hydrostatic Pressure Testing Discharges to Ground Water

Conditions for the discharge of petroleum and natural gas hydrostatic pressure testing discharges to ground water include common requirements pertaining to aesthetics, toxicity, temperature, and a prohibition against the use of toxic chemicals listed in the Regulations of Connecticut State Agencies.

Unique to the petroleum and natural gas hydrostatic testing category are requirements for a thorough cleaning of the interior of tanks and pipelines prior to any hydrostatic pressure testing. Options to clean include compressed air, pressure washing, a combination of the two or any technique that will reduce

pollutants from entering the hydrostatic testing water. Wastewaters generated from those cleaning procedures are not authorized to be discharged by this general permit and must be collected for off-site transport and disposal by a licensed waste transporter.

Best management practices such as check dams or temporary basins must be employed to prevent erosion and any visible discoloration and foaming of the receiving water. An additional condition requires the intake point of the pipe used to draw the test water from the surface water to be located at a depth which minimizes the entrainment of sediments.

9.6.1 Numeric Effluent Limits

Hydrostatic pressure testing wastewater may be discharged to ground water if the discharge complies with the following permit conditions and limits in Tables 4.6.2.1 below.

Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
Temperature	Report	°F	NA
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons (TPH)	5.0	mg/l	TBEL Carried forward from current permit
Aluminum, total	1.5	mg/l	TBEL Carried forward from current permit
Copper, total	Report	mg/l	NA
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Lead, total	Report	mg/l	NA
Manganese, total	3.0	mg/l	TBEL Carried forward from current permit
Zinc, total	Report	mg/l	NA

9.6.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.6.2.1. Permittees will be required to monitor the first 10% and the last 10% per discharge for flows greater than 500 gpd and retain results onsite.

9.7. Fire Suppression System Testing and Hydrant Flushing Discharges to Surface Water

The 2025 general permit defines “Fire suppression system testing” as “wastewater generated by the testing or maintenance of a fire sprinkler or suppression system that meets all effluent limits specified in Section 4.7 or 4.8 of this general permit and does not include foams or other fire-fighting additives.

The 2025 General permit defines “Hydrant flushing wastewater” as “waters generated from the flushing of hydrants in order to remove accumulated rust and sediment from the pipes and water mains, assess water flow and pressure and to examine conditions of the water distribution system to determine any needed improvements.”

The 2018 general permit provided the first permit authorization of these discharges but separated fire suppression system testing wastewater and hydrant flushing wastewater as distinct categories. However, feedback received from the public listening session for the 2025 general permit held August 31, 2023 encouraged the Water Permitting and Enforcement Division of DEEP to consider the possibility of combining these discharges because their requirements were quite similar. The Water Permitting and Enforcement Division evaluated the feedback and believes these discharges can be combined under a single set of requirements and still protect the waters of the state.

Conditions for the discharge of fire suppression system testing and hydrant flushing discharges to surface water include discharge to a surface water only if a discharge to a municipal sanitary sewer, a subsurface disposal system, or land application to the ground surface are not available as options. Other conditions require controls as necessary to remove accumulated solids from the discharge and to prevent erosion.

9.7.1 Numeric Effluent Limits

Fire suppression system testing or hydrant flushing wastewaters may be discharged to surface water if the discharge complies with the following permit conditions and limits in Tables 4.7.2.1 and 4.7.2.2 below.

Table 4.7.2.1 Instantaneous Maximum Limits for Fire Suppression System Testing and Hydrant Flushing Discharges to Surface Water			
Parameter	Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
pH	6.0 – 9.0	s.u.	TBEL Carried forward from current permit
Total Petroleum Hydrocarbons	5.0	mg/l	TBEL Carried forward from current permit
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Total Suspended Solids	20	mg/l	TBEL Carried forward from current permit
Total Dissolved Solids	Report	mg/l	NA
Footnotes:			
¹ The pH of the discharge shall not be less than 6.0 or more than 9.0 S.U.			

Table 4.7.2.2. Instantaneous Maximum Effluent Limits for Fire Suppression System Testing and Hydrant Flushing to Surface Water by Instream Waste Concentration

Parameter	Instream Waste Concentration ⁽¹⁾						Intermittent Discharge	Units	Permit Limit Development
	Reservoir & Lake	0 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%			
Aluminum, total	1.5	1.42	0.36	0.18	0.10	0.071	1.5	mg/l	WQBEL calculated using RPA
Manganese, total	1.56	0.64	0.16	0.08	0.046	0.032	3.0	mg/l	WQBEL calculated using RPA
Copper, total	0.105	0.096	0.024	0.012	0.0069	0.0048	0.12	mg/l	WQBEL calculated using RPA
Lead, total	0.046	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/l	WQBEL calculated using RPA
Zinc, total	0.292	0.65	0.16	0.081	0.046	0.032	0.32	mg/l	WQBEL calculated using RPA
Total Residual Chlorine	0.085	0.180	0.045	0.023	0.013	0.009	0.05	mg/l	WQBEL calculated using RPA

Footnotes:

¹ The Instream Waste Concentration shall be calculated by dividing the maximum gallon/hr flow of the discharge by the sum of the maximum gallon/hr flow of the discharge and the seven day ten year low flow of the receiving stream and multiplying the result by 100.

9.7.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.7.2.1 and 4.7.2.2. Permittees will be required to monitor the first 10% and the last 10% per discharge for flows greater than 500 gpd and retain results onsite.

9.8. Fire Suppression System Testing and Hydrant Flushing Wastewater Discharges to Ground Water Conditions

Conditions for the discharge of fire suppression system testing and hydrant flushing discharges to ground water include erosion and sediment controls and structural practices to divert flows away from exposed soils and limit the discharge of pollutants from the site into surface waters. The general permit requires that all steps be taken to avoid land applying to the ground when the ground surface is frozen.

9.8.1 Numeric Effluent Limits

Fire suppression system testing or hydrant flushing wastewaters may be discharged to ground water if the discharge complies with the following permit conditions and limits in Tables 4.8.2.1 below.

Table 4.8.2.1 — Maximum Limits for Fire Suppression System Testing or Hydrant Flushing Wastewater Discharges to Ground Water			
Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	500,000	gpd	not applicable
Temperature	Report	°F	not applicable
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons (TPH)	5.0	mg/l	TBEL Carried forward from current permit
Aluminum, total	1.5	mg/l	TBEL Carried forward from current permit
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Manganese, total	3.0	mg/l	TBEL Carried forward from current permit
Footnotes:			
¹ The pH of the discharge shall not be less than 6.0 or more than 9.0 S.U.			

9.8.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.8.2.1. Permittees will be required to monitor the first 10% and the last 10% per discharge for flows greater than 500 gpd and retain results onsite.

9.9. Boiler Blowdown Discharges to Ground Water

The 2025 general permit defines “boiler blowdown” as “wastewater resulting from periodic or continuous bleed off or draining of bottom, bulk or surface water from a boiler during boiler operation for the purpose of eliminating excess solids from the boiler water, and shall include steam condensate from boiler operations but does not include boil-out or boiler acid cleaning wastewater.”

Conditions for the discharge of boiler blowdown discharges to ground water include authorization only for boiler blowdown discharges from boiler water to which chemicals are not added and a requirement that all boiler blowdown discharges be directed to an engineered subsurface disposal system. Discharges of boiler blowdown wastewaters can only be discharged to ground water that has an existing or future Water Quality Classification of GA or GB in the Connecticut Water Quality Standards. Boil-out and boiler acid wastewaters must be permitted separately or collected by a waste transporter holding a valid license issued by the Commissioner for that purpose.

9.9.1 Numeric Effluent Limits

Boiler blowdown wastewaters may be discharged to ground water if the discharge complies with the following permit conditions and limits in Tables 4.9.2.1 below

Table 4.9.2.1. Instantaneous Maximum Limits for Boiler Blowdown Discharges to Ground Water			
Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
Temperature	Report	°F	NA
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons (TPH)	5.0	mg/l	TBEL Carried forward from current permit
Aluminum, total	1.5	mg/l	TBEL Carried forward from current permit
Copper, total	Report	mg/l	NA
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Lead, total	Report	mg/l	NA
Zinc, total	Report	mg/l	NA

9.9.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.9.2.1. Permittees will be required to monitor the first 10% and the last 10% per discharge for flows greater than 500 gpd and retain results onsite.

9.10. Pressure Washing Discharges to Surface Water

Pressure wash wastewater is a new category of discharge in the 2025 general permit. The 2025 general permit defines “pressure washing” as the hydraulic cleaning of structures and other hard surfaces, including but not limited to masonry, metals and concrete, without the use of chemical or biological agents. Most often used in washing dirt, graffiti or oily or atmospheric deposits from the exterior of buildings, cooling towers, bridges, sidewalks or gas station pads, this definition does not include the washing of vehicles (with the exception of boats and construction equipment), trailers or tank interiors or the chemical stripping of paint (with the exception of graffiti removal).

Conditions for the discharge of pressure washing wastewater to surface water contain common requirements pertaining to aesthetics, toxicity, temperature, and a prohibition against the use of toxic chemicals listed in the Regulations of Connecticut State Agencies. Additional conditions prohibit the use of cleaners, detergents, chemical or biological additives to the pressure wash water. A condition also prohibits the discharge of pressure washing wastewater used for the chemical and/or mechanical stripping of paint, other than graffiti removal, including the pressure washing of boat bottom hulls or other surfaces that are painted with an anti-fouling paint.

9.10.1 Numeric Effluent Limits

Pressure washing wastewaters may be discharged to surface water if the discharge complies with the following permit conditions and limits in Tables 4.10.2.1 and 4.10.2.2 below:

Parameter	Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
pH	6.0 – 9.0	s.u.	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons	5.0	mg/l	TBEL Carried forward from current permit
Total Suspended Solids	20.0	mg/l	TBEL Carried forward from current permit
Total Dissolved Solids	Report	mg/l	NA

Footnotes:
¹ The pH of the discharge shall not be less than 6.0 or more than 9.0 S.U.

Parameter	Instream Waste Concentration ⁽¹⁾						Intermittent Discharge	Units	Permit Limit Development
	Reservoir & Lake	0 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%			
Aluminum, total	1.5	1.42	0.36	0.18	0.10	0.071	1.5	mg/l	WQBEL calculated using RPA
Manganese, total	1.56	0.64	0.16	0.08	0.046	0.032	3.0	mg/l	WQBEL calculated using RPA
Copper, total	0.105	0.096	0.024	0.012	0.0069	0.0048	0.12	mg/l	WQBEL calculated using RPA
Lead, total	0.046	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/l	WQBEL calculated using RPA
Zinc, total	0.292	0.65	0.16	0.081	0.046	0.032	0.32	mg/l	WQBEL calculated using RPA
Total Residual Chlorine	0.085	0.180	0.045	0.023	0.013	0.009	0.05	mg/l	WQBEL calculated using RPA

Footnote:
¹ The Instream Waste Concentration shall be calculated by dividing the maximum gallon/hr flow of the discharge by the sum of the maximum gallon/hr flow of the discharge and the seven day ten year low flow of the receiving stream and multiplying the result by 100.

9.10.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Tables 4.10.2.1 and 4.10.2.2. Permittees will be required to monitor the first 10% and the last 10% per discharge for flows greater than 500 gpd and retain results onsite.

9.11. Pressure Washing Wastewater Discharges to Ground Water

Conditions for the discharge of pressure washing wastewater to ground water are similar to those for discharge to surface water. To begin, all discharges of pressure washing wastewater must be land applied to a pervious ground surface without runoff to storm drains or surface water bodies. To achieve this, all storm drains in the vicinity of the pressure washing operation must be obstructed in a manner which ensures that no pressure washing wastewater reaches any storm drain or surface water body. Other conditions contain common requirements pertaining to aesthetics, toxicity, temperature, and a prohibition against the use of toxic chemicals listed in the Regulations of Connecticut State Agencies. Additional conditions prohibit the use of cleaners, detergents, chemical or biological additives to the pressure wash water. A condition also prohibits the discharge of pressure washing wastewater used for the chemical and/or mechanical stripping of paint, other than graffiti removal, including the pressure washing of boat bottom hulls or other surfaces that are painted with an anti-fouling paint. Dischargers must ensure that all discharges do not impact any drinking water wells.

9.11.1 Numeric Effluent Limits

Pressure washing wastewaters may be discharged to ground water if the discharge complies with the following permit conditions and limits in Table 4.11.2.1 below:

Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
Temperature	Report	°F	NA
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Total Petroleum Hydrocarbons (TPH)	5.0	mg/l	TBEL Carried forward from current permit
Aluminum, total	1.5	mg/l	TBEL Carried forward from current permit
Copper, total	Report	mg/l	NA
Iron, total	3.0	mg/l	TBEL Carried forward from current permit
Lead, total	Report	mg/l	NA

Parameter	Maximum Limit	Unit	Permit Limit Development
Manganese, total	3.0	mg/l	TBEL Carried forward from current permit
Zinc, total	Report	mg/l	NA

9.11.2 Monitoring

The general permit requires all discharges be monitored to assure the wastewater treatment system is properly operating and to ensure compliance with effluent limits to protect waters of the state from pollution. Registrants are required to monitor for all parameters in Table 4.11.2.1. Permittees will be required to monitor the first 10% and the last 10% per discharge for flows greater than 500 gpd and retain results onsite.

10.0 Analytical Methods

All sample analysis required under this general permit shall be conducted by a laboratory certified in accordance with the certification requirements specified in section 19-29a of the General Statutes. All samples shall be analyzed using sufficiently sensitive test methods pursuant to 40 CFR 136 unless an alternative method has been approved in writing by the Commissioner pursuant to 40 CFR 136.4 or as provided in section 22a-430-3(j)(7) of the RCSA. Chemicals which do not have methods of analysis defined in 40 CFR 136 shall be analyzed in accordance with methods specified by the Commissioner.

11.0 Reporting

The results of chemical analyses for registered discharges and any aquatic toxicity test required by this permit will be submitted electronically using NetDMR as prescribed in the general permit.

12.0 Duty to Correct and Report Violations

12.1 Corrective Actions

A Permittee is required upon learning of a violation of any condition of the general permit to immediately take all reasonable actions to determine the cause of the violation, correct the violation, mitigate the impact of the violation, and prevent its recurrence.

12.2 Notification

In accordance with 22a-430-3(j)(11)(D) the permittee shall, within two (2) hours of becoming aware of the circumstances, or at the start of the next business day; but no more than 24 hours from when they become aware of the circumstances outside normal business hours, notify the Commissioner of any actual or anticipated noncompliance with permit terms or conditions if (i) the noncompliance is greater than two times the permitted level except for violations of any limitation for a surface water discharge, in which case all violations shall be reported or (ii) the condition may endanger human health, the environment or the operation of a POTW, including sludge handling and disposal

12.3 Five Day Follow Up Report

The Permittee must submit a report within five (5) days of the noncompliance that contains: a description of the noncompliance and its cause;

the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

Notification of actual or anticipated noncompliance does not stay any permit term or condition. DEEP has developed an online Noncompliance Reporting web-based platform accessible at: [Noncompliance Notification Form](#) and [Noncompliance Follow-Up Report Form](#)

12.4 Additional Notification Requirements

In accordance with 22a-430-3(j)(11)(E), the permittee shall notify the Director within seventy-two hours and in writing within 30 days when they know or have reason to believe that the concentration in the discharge of any listed substance or any toxic substance has exceeded or will exceed the highest of the following levels:

- One hundred micrograms per liter;
- Two hundred micrograms per liter for acrolein and acrylonitrile, five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony;
- An alternative level specified by the Commissioner, provided such level shall not exceed the level which can be achieved by the permittee's treatment system; and
- A level two times the level specified in the permit application.

13.0 State Regulations of Connecticut State Agencies

The permittee shall comply with sections 22a-430-3 and 22a-430-4 of the Regulations of Connecticut State Agencies which are incorporated into the general permit.

14.0 Federal Standard Conditions

The federal and state standard conditions in 40 CFR 122.41, Conditions applicable to all permits, are incorporated into the general permit.

15.0 Antidegradation

Activities permitted by this general permit must be consistent with the Antidegradation Standards of section 22a-426 of the RCSA.

16.0 Public Participation

DEEP held one (1) listening session soliciting public feedback during the drafting of the general permit as part of the reissuance process. The meeting was held on June 13, 2023. At this meeting DEEP solicited feedback on the existing permit and suggestions to improve the permitting process.

17.0 Public Notice of Tentative Determination

The following public notice of tentative determination was published on the DEEP website and in newspapers reaching a broad circulation in areas throughout Connecticut when the 2025 draft general permit was publicly noticed at the tentative determination stage:

“The Commissioner shall consider written comments on the general permit from interested persons that are received within 30 days of the public notice of the Commissioner’s tentative determination to issue the general permit. Written comments should be directed to James Creighton, Bureau of Materials Management and Compliance Assurance, Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127, or james.creighton@ct.gov. The Commissioner may hold a public hearing prior to approving or denying an application if, in the Commissioner's discretion, the public interest will be best served thereby, and shall hold a hearing upon receipt of a petition signed by at least twenty-five persons. Notice of any public hearing shall be published at least 30 days prior to the hearing.

Petitions for a hearing should include the application number noted above and identify a contact person to receive notifications. Petitions may also identify a person who is authorized to engage in discussions regarding the application and, if resolution is reached, withdraw the petition. Original signed petitions may be scanned and sent electronically to deep.adjudications@ct.gov or may be mailed or delivered to DEEP Office of Adjudications, 79 Elm Street, 3rd floor, Hartford, 06106-5127. All petitions must be received within the comment period noted above.

If submitted electronically, original signed petitions must also be mailed or delivered to the address above within ten days of electronic submittal. If a hearing is held, timely notice of such hearing will be published in a newspaper of general circulation. For additional information go to www.ct.gov/deep/adjudications.”

Draft