Connecticut
Department of Energy &
Environmental Protection

National Pollutant Discharge Elimination System

Comprehensive General Permit for Discharges to Surface and Ground Water

Fact Sheet

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 General 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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Section 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").

The *Comprehensive General Permit for Discharges to Surface and Ground Water* ("Comprehensive general permit") provides discharge authorizations for wastewater discharge categories that were previously provided by separate general permits for each 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, effective April 1, 2023, and expires on April 1, 2026. The draft general permit is expected to become effective April 1, 2026 (and will hereafter be referred to in this document as the "2026 General Permit").

Section 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 15. General Definitions" of the general permit. Authorization for each category of discharge listed below is limited to the classification of the receiving waterbody and maximum discharge flows identified in Table 2.1 – Authorized Discharges by Category, Waterbody Type, and Maximum Flow (of the 2026 General Permit and provided below). Authorization is subject to the terms of this permit.

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

All other discharges of water, substance or material into the waters of the state other than those specified in this permit are not authorized by this general permit.

Any person or municipality which initiates, creates, originates, or maintains such a discharge shall apply for and obtain authorization under Section 22a-430 of the Conn. Gen. Stat. prior to the occurrence of such discharge.

Non-contact cooling water and water treatment wastewater are allowable discharges to waterbody Classes AA, A, and SA; as well as to Class GAA and GA provided the permittee complies with the permit conditions and effluent limits in the permit. Other wastewater categories are limited to Class B, SB, and C surface waters and Class GB and GC ground waters. Authorized discharge locations and maximum daily flows can be found in Table 2.1 of the 2026 General Permit and provided below.

Table 2.1 of the 2026 General Permit — Authorized Discharges by Category, Waterbody Type, and Maximum Flow

Category of Discharge	Ground Water Classification	Maximum Daily Flow to Ground Water (GPD)	Authorized Surface Water Classification	Maximum Daily Flow to Surface Water (GPD)
Non-Contact Cooling Water	All	500,000	All	500,000
Geothermal Heat Pump Water	GB, GC	500,000	B, SB, C	500,000
Hydrostatic Pressure Testing (Natural Gas, Petroleum Tanks, Pipelines)	GB, GC	500,000	B, SB, C	500,000
Fire Suppression System Testing	GB, GC	500,000	B, SB, C	500,000
Hydrant Flushing	GB, GC	500,000	B, SB, C	500,000
Boiler Blowdown	GB, GC	50,000	Not Authorized	Not Authorized
Pressure Washing	GB, GC	500,000	B, SB, C	500,000
Water Treatment System Wastewater	All	50,000 (subsurface system) And 500,000 (infiltration basin)	All	2,000,000

Section 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 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.

Section 4.0 Significant Changes to the General Permit

4.1 Structural Reorganization of Permit Content

While the discharge categories, conditions, and limits remain largely consistent with those in the 2018 General Permit, the 2026 General Permit incorporates substantial improvements to its organization and formatting. Content is now arranged to allow permittees to more easily identify requirements specific to their industrial activity (e.g., non-contact cooling, hydrostatic pressure testing) and their discharge destination (surface water or ground water). The revised structure directs users to sections containing all applicable conditions, numeric effluent limitations, and monitoring requirements for their particular discharge scenario.

4.2 Removal of the Instream Waste Concentration Eligibility Restriction

The 2018 General Permit included an eligibility threshold based on the instream waste concentration (IWC) of the discharge. Facilities with an IWC greater than 15 percent were ineligible for coverage and required to obtain an individual NPDES permit. For the 2026 General Permit, this restriction has been removed. The permit has been expanded to include a broader set of numeric effluent limits designed to ensure compliance with applicable water quality standards at all IWCs. The 2026 General Permit now provides effluent limits corresponding to the following IWC ranges:

- <1%
- 1%–5%
- 5%–20%
- 20%–40%
- 40%–70%
- 70%–100%

Additionally, the permit includes new numeric limits for copper and total residual chlorine for discharges to estuarine or marine waters. Arsenic has also been added for facilities discharging water treatment wastewater.

4.3 Addition of Pressure Washing as a Regulated Discharge Category

The 2026 General Permit adds “Pressure Washing” as a new industrial discharge category. Discharge to a sanitary sewer remains the preferred management option. However, when sewer access is unavailable or the wastewater cannot reasonably be collected and transported to a POTW, the general permit allows discharge to ground or surface waters, provided the permittee meets all applicable terms and conditions.

4.4 NetDMR Reporting Required for All Registered Permittees

Under the 2018 General Permit, only registrants with discharges to surface water were required to submit monitoring results through NetDMR. The 2026 General Permit expands this requirement to all registered permittees that are required to submit an application, regardless of discharge location. All

monitoring data collected under the permit must now be reported electronically through NetDMR.

4.5 Compliance Schedule for Ground Water Monitoring Wells

The 2026 General Permit requires water treatment facilities discharging 10,000 gallons per day or more to ground water to install ground water monitoring wells. A plan for well installation must be submitted within three (3) years of the permit's effective date. All required monitoring wells must be installed no later than the end of the five-year permit term.

The requirement to install groundwater monitoring wells is foundational to determining compliance with the core mandates of the Connecticut Water Pollution Control Act, specifically Sections 22a-426 and 22a-430 of the Connecticut General Statute**s**.

The data gathered through this monitoring is essential to satisfy the Department's policy to:

- Maintain or Restore Natural Quality: In Class GAA, GAAs, or GA areas, the Department's policy is to "maintain or restore all ground water in such areas to its natural quality" (CGS 22a-426 (a)(1)).
- Assure Potable Water Suitability: The monitoring must confirm that the ground water remains "suitable for drinking and other domestic uses without treatment" (CGS 22a-426 (a)(2)(A)).
- Prevent Pollution: Regulate discharges to "prevent pollution" (CGS 22a-426 (a)(2)(D)).

The resulting data should provide robust and scientifically sound information that is critical for the Department to:

- Evaluate attenuation and zones of influence.
- Ensure that outside the ZOI the groundwater meets MCL-based health criteria.
- Ensure that surface-water standards are not violated.
- Inform Future Permit Requirements: Develop targeted, data-driven regulatory standards for subsequent permits, ensuring they are protective yet efficient.
- Guide Responsible Siting: Establish best practices and criteria for the responsible and sustainable siting of future water treatment facilities within these sensitive areas.

This requirement is an investment in protecting a shared, finite resource—our groundwater—and enables the Department to create a more stable and predictable regulatory framework for the industry by ensuring every discharge meets the mandates of state law.

Section 5.0 Application Requirements

5.1 Authorization to Discharge Under This General Permit

Authorization to discharge under this general permit may be granted automatically when all eligibility requirements are met, or it may require submittal of a complete application followed by issuance of a Notice of Coverage by the Commissioner. Table 3.1 of the 2026 General Permit (and provided below) summarizes the application requirements and associated fees for discharge categories that require an application.

Table 3.1 of the 2026 General Permit - Summary of Application Requirements and Application Fees

Discharge Category	Discharge Location	Maximum Daily Flow (gpd)	Application Fee
Non-Contact Cooling Water	Surface Water	500,000	$1250
	Ground Water	Greater than 5,000	$1250
Geothermal Heat Pump Water	Surface Water	500,000	$1250
	Ground Water	Greater than 5,000	$1250
Boiler Blowdown	Ground Water	Greater than 5,000	$1250
Hydrostatic Pressure Testing Water	Surface & Ground Water	500,000	$1250
Water Treatment Wastewater	Surface Water	2,000,000	$1250
	Ground Water	Greater than 500	$1250

5.2 Wastewater Screening

Wastewater screening is required for emerging contaminants and for any pollutants that may be toxic, hazardous, or otherwise detrimental to the designated uses of the receiving watercourse under Connecticut's Water Quality Standards, when such contaminants or pollutants are reasonably known to be present or to have been handled, stored, released, or disposed of at the site where the wastewater originates. The existing requirements to screen water treatment plant wastewater and noncontact cooling water for nitrogen, phosphorus, or bacteria have been revised.

5.3 Professional Certifications

Professional certifications from a Qualified Professional, as defined in the general permit, remain required for all applications.

5.4 Modifications to Notice of Coverage

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 new application form must be submitted to DEEP prior to the modification occurring. If the modification is approvable, the permittee must obtain a new Notice of Coverage from DEEP prior to any expansion, alteration, or modification that may result in:

- a change in the nature of the activity generating the discharge;
- the introduction of a new source of discharge;
- the introduction of a pollutant not previously present in the discharge at the time of application;
- an increase in maximum daily flow; or
- relocation of the discharge to a different receiving water.

A Notice of Change, as outlined in Section 3.5 of the general permit, is used to correct inaccurate or misleading information, submit required discharge screening analyses under Section 3.4.7 at the initiation of a discharge, update contact information, or revise the wastewater description.

Modifications to treatment systems that are made to meet the terms and conditions of the general permit do not require prior DEEP approval, provided the permittee remains in full compliance with the permit. However, the permittee must notify the Commissioner at least 30 days before altering their wastewater collection or treatment system or changing their method of operation, as specified in Section 3 of the general permit.

5.5 Termination of Discharge

Permittees required to submit an application under this general permit must file a Notice of Termination with the Commissioner, using the prescribed form, within 14 days after the discharge has ceased.

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

6.1 Temperature

Temperature is a key physicochemical parameter influencing dissolved oxygen levels, metabolic rates, reproduction, and survival of aquatic organisms. Thermal enrichment from noncontact cooling water and geothermal heat pump systems can alter receiving water temperature regimes, potentially exceeding biological tolerance thresholds and impairing designated uses.
The 2026 General Permit therefore continues to require temperature monitoring to ensure compliance with applicable thermal criteria and to protect aquatic life and ecosystem function.

6.2 pH

Effluent pH strongly affects chemical speciation, bioavailability, and toxicity of many pollutants, including metals and ammonia. The retained effluent limitation of 6.0–9.0 standard units reflects the scientifically supported range necessary to maintain biological integrity and avoid solubilization of toxic metals in receiving waters. Maintaining pH within this range protects both human health and aquatic ecosystems, consistent with Connecticut's Water Quality Standards.

6.3 Total Suspended Solids (TSS)

TSS influences turbidity, light penetration, sedimentation, and the transport of particle-bound contaminants. In noncontact cooling water, TSS forms through the precipitation of hardness constituents (e.g., Ca^{2+}, Mg^{2+}) when water is heated; in water treatment residuals, TSS reflects particulates removed from the potable water supply.

The 2026 General Permit retains the 20 mg/L instantaneous maximum TSS limit for surface-water discharges to prevent sedimentation, smothering of benthic habitat, and pollutant transport. Groundwater discharges are not assigned a TSS limit due to rapid filtration and adsorption processes within subsurface soils. These natural attenuation processes protect groundwater quality and prevent migration of suspended particulates.

6.4 Metals

Metals included in the numeric effluent limit tables pose toxicity risks at relatively low concentrations, depending on oxidation state, speciation, and water chemistry (e.g., hardness, pH). Monitoring requirements remain in place to characterize treatment performance and pollutant partitioning and to ensure protection of both human health (e.g., drinking water pathways) and aquatic life.

6.5 Aluminum

Aluminum is widely used in coagulation processes and frequently occurs in drinking water treatment residuals. Aluminum toxicity to aquatic life is strongly dependent on pH, dissolved organic carbon, and hardness. Elevated concentrations can impair fish gill function, disrupt ion regulation, and cause acute toxicity in sensitive species.

The 2026 General Permit maintains aluminum monitoring and limits where applicable. EPA's 2018

updates to the Clean Water Act §304(a) recommended aquatic life criteria acknowledge the complex water chemistry governing aluminum solubility and toxicity. DEEP continues to collect data to support development of Connecticut-specific aluminum criteria, ensuring adequate protection of aquatic ecosystems.

6.6 Manganese

Manganese occurs naturally in Connecticut groundwater and may appear in wastewater from groundwater-derived systems. While manganese is an essential nutrient, elevated concentrations can pose risks including neurotoxicity (primarily via drinking water ingestion) and aesthetic or operational issues (staining, deposition). Monitoring ensures concentrations discharged to the environment do not accumulate in surface water or groundwater at levels of concern for human or ecological receptors.

6.7 Iron

Iron is abundant in groundwater and may also enter wastewater through use of iron-based coagulants. The 3.0 mg/L effluent limit is retained to prevent aesthetic impacts, ecological toxicity associated with iron hydroxide deposition, and interference with drinking water supply operations. Iron and manganese may occur in multiple physicochemical forms (colloidal, ferrous, chelated). Treatment requires: coagulation/flocculation for colloidal particles, oxidation (e.g., aeration, chlorine, permanganate) for soluble or complexed species, followed by precipitation and solids separation. pH manipulation is often critical to optimize hydroxide formation and ensure treatment efficacy.

6.8 Copper and Lead

Copper and lead primarily originate from corrosion and leaching of plumbing systems and distribution components. Copper toxicity affects fish olfactory function, behavior, and survival at low concentrations. Lead is a neurotoxin with no known safe level of exposure for humans, particularly children.

Leaching potential increases under low-pH or low-alkalinity conditions. For this reason, drinking water systems commonly add alkaline agents (e.g., sodium hydroxide, lime) to maintain non-corrosive conditions. Copper may also enter wastewater through copper-based algaecide use in surface water reservoirs. Boiler blowdown, a potential source of elevated copper and lead, is restricted to groundwater discharge only, where soil contact reduces mobility through adsorption and precipitation.

6.9 Zinc

Zinc enters water through corrosion of galvanized materials and dissolution under high dissolved solids or chloride conditions. Although an essential trace element, zinc exhibits aquatic toxicity at elevated concentrations and can impair fish gill function and invertebrate reproduction.

Zinc orthophosphate, commonly used as a corrosion inhibitor, plays an important role in minimizing lead leaching and thus indirectly supports human health protection. Monitoring is maintained to ensure zinc discharges remain below levels that may cause ecological harm.

6.10 Total Residual Chlorine (TRC)

Chlorine is applied as a disinfectant in drinking water systems to control pathogens; the Maximum Residual Disinfectant Level (MRDL) established by EPA is 4 mg/L. However, chlorine is acutely toxic to aquatic organisms at concentrations several orders of magnitude lower than those used for disinfection. Even short-term exposures can cause mortality in fish and invertebrates due to oxidative damage to gill and cellular tissues.

In groundwater, there can be the formation of Chlorinated By-products (including Disinfection By-Products (DBP)). When chlorine reacts with natural organic matter or reduced minerals in soil and groundwater, it can form:

- Chlorinated organics (e.g., chloroform, chlorinated acids)
- Haloacetic acids (HAAs)
- Trihalomethanes (THMs)

Some of these compounds are: carcinogenic (e.g., chloroform), persistent and mobile in groundwater and toxic to aquatic and human receptors. While reaction rates and formation potential depend on local geochemistry, formation of DBPs is a recognized risk when chlorine contacts organic carbon sources. The general permit therefore requires complete dechlorination prior to discharge to either surface or ground water to prevent toxicity and ensure compliance with Connecticut's Water Quality Standards.

6.11 Arsenic

Arsenic is a naturally occurring metalloid and a Class A human carcinogen. Drinking water treatment systems use coagulation, adsorption, ion exchange, and membrane filtration to remove arsenic from source waters, resulting in residuals that may contain elevated arsenic concentrations. Monitoring ensures that discharges containing arsenic do not adversely impact groundwater used for drinking water supply, do not accumulate in sediments, and do not pose chronic toxicity risks to aquatic life.

Section 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(l)(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").

Section 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 WQSs, 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 Water Quality Effluent Limits

During development of the 2026 general permit, DEEP conducted a comprehensive technical evaluation of available effluent data, including Discharge Monitoring Reports (DMRs) submitted by permittees since 2018. For discharges of noncontact cooling water and water treatment wastewater to surface waters, the dataset was sufficient to support Reasonable Potential Analyses (RPAs) to determine whether pollutants have the potential to exceed applicable Water Quality Standards and therefore require Water Quality–Based Effluent Limits (WQBELs).

Due to limited long-term and high-frequency data for several pollutants in both the 2018 and 2026 General Permit data sets, the Average Monthly Limit (AML) calculated through RPA was applied as the Instantaneous Maximum Effluent Limit in the general permit. This approach provides a conservative and protective numeric limit in situations where data availability is insufficient to derive statistically robust, multi-tier limits (AML and Maximum Daily Limit). Applying the AML as the instantaneous maximum ensures protection of both human health and aquatic life by preventing short-duration exceedances that may otherwise go unregulated.

Results of the 2026 RPA yielded effluent limits that are generally consistent with those established under the 2018 General Permit, indicating similar pollutant variability and environmental loading potential across the two permitting cycles. This alignment supports the scientific validity and continuity of DEEP's water quality–based permitting framework.

Evaluation of Whole Effluent Toxicity ("WET") data found mean No Observed Adverse Effect Level ("NOAEL") in undiluted samples at 94% for *Daphnia pulex* and 98% for *Pimephales promelas* with median values of 100%. Based on this information, DEEP determined that the permit conditions and numeric and narrative effluent limits of the general permit continue to be protective of the waters of the state and therefore the most stringent values are carried forward from the previous permit.

8.1.1 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.

8.1.2 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 Appendix B 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 Appendix B of the general permit or prescribed by the Commissioner.

Section 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 2026 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 2026 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 generally similar in nature and 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 solely 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). The use of contaminated source water is prohibited.

9.1.1 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 5.1.2.1 and 5.1.2.2 of the 2026 General Permit and provided below.

Table 5.1.2.1. 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
Acute Aquatic Toxicity, *Daphnia pulex* (freshwater)[2,3]	≥90[2,3]	percent	WQBEL Carried forward from current permit
Acute Aquatic Toxicity, *Pimephales promelas* (freshwater)[2,3]	≥90[2,3]	percent	WQBEL Carried forward from current permit
Acute Aquatic Toxicity, *Mysidopsis bahia*	≥90[2,3]	percent	WQBEL Carried forward from current permit

Parameter	Limit	Unit	Permit Limit Development
(marine & estuarine)[2,3]			
Acute Aquatic Toxicity, *Menidia beryllina* (marine & estuarine)[2,3]	≥90[2,3]	percent	WQBEL Carried forward from current permit
Oil & Grease, Non-polar Material	5.0	mg/L	TBEL Carried forward from current permit
Iron, total	3.0	mg/L	TBEL Carried forward from current permit
Total Phosphorus	Monitor	mg/L	
Total Suspended Solids	20	mg/L	TBEL Carried forward from current permit
Temperature (marine & estuarine)[4]	83	°F	WQBEL Carried forward from current permit
Temperature (freshwater)[4]	85	°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. See Appendix B for Whole Effluent Toxicity (WET) guidance and table.

[3] For aquatic toxicity, discharges to marine and estuarine waters shall perform the aquatic toxicity test using *Mysidopsis bahia* and *Menidia beryllina* and discharges to freshwater water shall use *Daphnia pulex* and *Pimephales promelas* species.

[4] Discharges to marine and estuarine waters shall not exceed 83°F and discharges to freshwater shall not exceed 85°F.

Table 5.1.2.2. Instantaneous Maximum Effluent Limits for Discharges of Non-contact Cooling Water or Geothermal Heat Pump Water to Surface Water by Instream Waste Concentration

Parameter	Instream Waste Concentration [1]									
	Reservoir & Lake	<1%	1 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%	Inter-mittent Discharge	Units	Permit Limit Development
Aluminum, total	1.5	1.50	1.41	0.36	0.18	0.10	0.071	1.5	mg/L	WQBEL calculated using RPA
Manganese, total	3.0	3.00	1.53	0.38	0.19	0.11	0.077	3.0	mg/L	WQBEL calculated using RPA
Copper, total[2] (Freshwater)	0.105	0.48	0.095	0.037	0.019	0.011	0.0075	0.12	mg/L	WQBEL calculated using RPA
Copper, total[3] (Est., Marine)	---	0.39	0.079	0.02	0.0098	0.0056	0.0039	0.039	mg/L	WQBEL calculated using RPA
Lead, total	0.048	0.098	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/L	WQBEL calculated using RPA
Zinc, total	0.29	2.00	0.64	0.16	0.081	0.046	0.032	0.32	mg/L	WQBEL calculated using RPA
Total Residual Chlorine[2] (Freshwater)	0.085	0.90	0.180	0.045	0.023	0.013	0.009	0.05	mg/L	WQBEL calculated using RPA
Total Residual Chlorine[3] (Estuarine, Marine)	---	0.61	0.12	0.031	0.015	0.0088	0.0061	0.039	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 (7Q10) of the receiving stream and multiplying the result by 100.

[2] If discharge is to freshwater, these limits apply.

[3] If discharge is to estuarine or marine water, these limits apply.

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). The use of contaminated source water is prohibited.

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 5.2.2.1 of the 2026 General Permit and provided below:

Table 5.2.2.1 — 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
Lead, total	0.01	mg/L	EPA Drinking Water Action Level
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	1.3	mg/L	EPA Drinking Water Action Level
Temperature	Monitor	°F	NA
Zinc, total	Monitor	mg/L	NA

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

The 2026 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.

9.3.1 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 6.1.2.1 and 6.1.2.2 of the 2026 General Permit and provided below.

Table 6.1.2.1. Instantaneous Maximum Effluent Limit or Range for Petroleum and Natural Gas Hydrostatic Pressure Testing Discharges to Surface Water

Parameter	Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Oil & Grease, Non-polar Material	5.0	mg/L	WQBEL Carried forward from current permit
Iron, total	3.0	mg/L	TBEL Carried forward from current permit

Parameter	Limit	Unit	Permit Limit Development
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 6.1.2.2. Instantaneous Maximum Effluent Limits for Discharges of Petroleum and Natural Gas Hydrostatic Pressure Testing Water to Surface Water by Instream Waste Concentration

Parameter		Instream Waste Concentration (1)								
	Reservoir & Lake	<1%	1 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%	Inter-mittent Discharge	Units	Permit Limit Development
Aluminum, total	1.5	1.50	1.41	0.36	0.18	0.10	0.071	1.5	mg/L	WQBEL calculated using RPA
Manganese, total	3.0	3.00	1.53	0.38	0.19	0.11	0.077	3.0	mg/L	WQBEL calculated using RPA
Copper, total[2] (Freshwater)	0.105	0.48	0.095	0.037	0.019	0.011	0.0075	0.12	mg/L	WQBEL calculated using RPA
Copper, total[3] (Estuarine, Marine)	---	0.39	0.079	0.02	0.0098	0.0056	0.0039	0.039	mg/L	WQBEL calculated using RPA
Lead, total	0.048	0.098	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/L	WQBEL calculated using RPA
Zinc, total	0.29	2.00	0.64	0.16	0.081	0.046	0.032	0.32	mg/L	WQBEL calculated using RPA
Total Residual Chlorine[2] (Freshwater)	0.085	0.90	0.180	0.045	0.023	0.013	0.009	0.05	mg/L	WQBEL calculated using RPA
Total Residual Chlorine[3] (Estuarine, Marine)	---	0.61	0.12	0.031	0.015	0.0088	0.0061	0.039	mg/L	WQBEL calculated using RPA

Parameter		Instream Waste Concentration (1)								
	Reservoir & Lake	<1%	1 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%	Inter-mittent Discharge	Units	Permit Limit Development

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 (7Q10) of the receiving stream and multiplying the result by 100.
[2]If discharge is to freshwater, these limits apply.
[3]If discharge is to estuarine or marine water, these limits apply.

9.4. 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.

9.4.1 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 Table 6.2.2.1 of the 2026 General Permit and provided below.

Table 6.2.2.1 — Maximum Limits for Petroleum and Natural Gas Hydrostatic Pressure Testing Wastewater Discharges to Ground Water\

Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	500,000	gpd	NA
Temperature	Report	°F	NA

Parameter	Maximum Limit	Unit	Permit Limit Development
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Oil & Grease, Non-polar Material	5.0	mg/L	TBEL Carried forward from current permit
Aluminum, total	1.5	mg/L	TBEL Carried forward from current permit
Copper, total	1.3	mg/L	EPA Drinking Water Action Level
Iron, total	3.0	mg/L	TBEL Carried forward from current permit
Lead, total	0.01	mg/L	EPA Drinking Water Action Level
Manganese, total	3.0	mg/L	TBEL Carried forward from current permit
Zinc, total	Report	mg/L	NA

9.5. Fire Suppression System Testing Discharges to Surface Water

The 2026 General Permit defines "Fire suppression system testing" as "wastewater generated by the testing or maintenance of a fire sprinkler or suppression system and does not include foams or other fire-fighting additives."

The 2018 General Permit provided the first permit authorization of these discharges and separated fire suppression system testing wastewater and hydrant flushing wastewater as distinct categories. The 2026 General Permit maintains that separation. The water quality of fire suppression system testing discharges can often be far worse aesthetically and qualitatively than hydrant flushing discharges. Fire suppression water has often been contained in a facilities fire suppression system for an extended period of time. During this period, this stagnant water can harbor bacteria and microbial growth that could be harmful to humans who comes in contact with it. The water can also accumulate metals such as iron, copper, and lead from pipe corrosion, as well as debris, sediment, and treatment chemicals (like corrosion inhibitors or antifreeze additives). Discharging it directly to surface water can introduce these pollutants, harming aquatic organisms, altering habitat chemistry, and violating water quality regulations. Instead, it should be captured, treated, or directed to a sanitary sewer for proper handling.

Conversely, hydrant flushing water comes from an active water distribution system meaning it has

already been treated to meet stringent drinking water standards for pathogens, metals, and other contaminants. The only volume of water that might remain stagnant between hydrant flushings is the water that might get locked up in the hydrant column. Unlike stagnant water in fire suppression systems, it is fresh, chlorinated, and generally free of harmful substances. When discharged, the small residual chlorine rapidly dissipates, and because the water is clean, it poses minimal risk to aquatic life or water quality. This makes surface water discharge acceptable in most cases, provided flows are managed to prevent erosion or physical disturbance.

Conditions for the discharge of fire suppression system testing 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.

The 2026 General Permit also requires controls as necessary to remove accumulated solids from the discharge and to prevent erosion, sedimentation, visible discoloration, and foaming of the receiving water body. The 2026 General Permit also requires energy dissipation to prevent erosion and scouring.

9.6. Fire Suppression System Testing Discharges to Ground Water

Conditions for the discharge of fire suppression system testing 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 the discharge to the ground when the ground surface is frozen. Table 7.2.1.2 of the 2026 General Permit also prescribes varying minimum horizontal separating distances from private or public water supply wells based on the withdrawal rate of the well to prevent contamination of the well from the fire suppression discharge.

9.7 Hydrant Flushing Wastewater Discharges to Surface Water

The 2026 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."

Like fire suppression discharges, hydrant flushing discharges can only be directed to a surface water if discharge to a municipal sanitary sewer or to a subsurface disposal system or land application to the ground surface are not available as options.

The 2026 General Permit also requires controls as necessary to remove accumulated solids from the discharge and to prevent erosion, sedimentation, visible discoloration, and foaming of the receiving water body. Because hydrant flushing is a high pressure, high volume discharge of water, the 2026 General Permit also requires energy dissipation to prevent erosion and scouring.

Whereas the amount of residual chlorine in fire suppression testing water might be low because the water has remained stagnant in the pipes for a long period of time, residual chlorine in hydrant flushing water is at a higher level. The 2026 General Permit suggests maximizing the travel time of the water over the ground or along paved surfaces to dissipate the chlorine.

The 2026 General Permit requires the Permittee undertaking the hydrant flushing to train their employees in standard operating procedures to ensure the employees are familiar with the requirements of this general permit and the procedures to minimize erosion, dissipate energy, and reduce chlorine in the hydrant flushing wastewater discharge.

9.8 Hydrant Flushing Discharges to Ground Water

Hydrant flushing Best Management Practices for discharges to ground water require erosion and sediment controls and structural practices to divert flows away from exposed soils and prevent the discharge from flowing off the discharger's property or into surface waters. The 2026 General Permit also requires that all steps must be taken to avoid land applying to the ground when the ground surface is frozen.

Table 8.2.1 of the 2026 General Permit also prescribes varying minimum horizontal separating distances from private or public water supply wells based on the withdrawal rate of the well to prevent contamination of the well from the hydrant flushing discharge.

9.9. Boiler Blowdown Discharges to Ground Water

The 2026 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 GB or GC 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 9.1.2.1 of the 2026 General Permit and provided below:

Table 9.1.2.1. Instantaneous Maximum Limits for Boiler Blowdown Discharges to Ground Water

Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	50,000	gpd	NA
Temperature	Monitor	°F	NA
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
Copper, total	1.3	mg/L	EPA Drinking Water Action Level
Iron, total	3.0	mg/L	TBEL Carried forward from current permit
Lead, total	0.01	mg/L	EPA Drinking Water Action Level
Zinc, total	Monitor	mg/L	NA

9.10. Pressure Washing Discharges to Surface Water

Pressure wash wastewater is a new category of discharge in the 2026 General Permit. The 2026 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, trailers or tank interiors or the chemical stripping of paint.

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.

9.11. 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.

9.12. Water Treatment Wastewater Discharges to Surface Water

The 2026 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 rinse out of containers used to store any chemical for which an effluent limit is not specified in 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 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.

9.12.1 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 11.1.3.1 and 11.1.3.2 of the 2026 General Permit and provided below.

Table 11.1.3.1. Instantaneous Maximum Effluent Limit or Range for Discharges of 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
Acute Aquatic Toxicity, *Daphnia* pulex (freshwater)[2,3]	≥90[2,3]	percent	WQBEL Carried forward from current permit
Acute Aquatic Toxicity, *Pimephales promelas* (freshwater)[2,3]	≥90[2,3]	percent	WQBEL Carried forward from current permit
Acute Aquatic Toxicity, *Mysidopsis bahia* (marine & estuarine)[2,3]	≥90[2,3]	percent	WQBEL Carried forward from current permit
Acute Aquatic Toxicity, *Menidia beryllina* (marine & estuarine)[2,3]	≥90[2,3]	percent	WQBEL Carried forward from current permit
Iron, total	3.0	mg/L	TBEL Carried forward from current permit
PFAS Analytes[4]	Monitor	Ng/L	NA
Total Suspended Solids	20 mg/L	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 in an undiluted sample of the effluent. See Appendix B for Whole Effluent Toxicity (WET) guidance and table.

[3] For aquatic toxicity, discharges to marine and estuarine waters shall perform the aquatic toxicity test using *Mysidopsis bahia* and *Menidia beryllina* and discharges to freshwater water shall use *Daphnia pulex* and *Pimephales promelas* species.

[4] Analysis for PFAS shall be performed using the method(s) approved by the EPA pursuant to 40 CFR 136 and by a laboratory certified to conduct such test methods. If no such test method is approved by EPA pursuant to 40 CFR 136, PFAS analyses shall be performed in accordance with EPA Method 1633 or 1633A (see https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas). See Appendix A for PFAS analyte list.

Table 11.1.3.2. Instantaneous Maximum Effluent Limits for Discharges of Water Treatment Wastewater to Surface Water by Instream Waste Concentration

Parameter		Instream Waste Concentration [1]								
	Reservoir & Lake	<1%	1 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%	Inter-mittent Discharge	Units	Permit Limit Development
Aluminum, total	1.5	1.50	1.41	0.36	0.18	0.10	0.071	1.5	mg/L	WQBEL calculated using RPA
Arsenic, total[2] (Freshwater)	0.84	1.71	0.34	0.085	0.043	0.024	0.017	0.17	ug/L	WQBEL calculated using RPA
Arsenic, total[3] (Estuarine, Marine)	---	3.26	0.65	0.16	0.082	0.047	0.033	0.33	ug/L	WQBEL calculated using RPA
Manganese, total	3.0	3.00	1.53	0.38	0.19	0.11	0.077	3.0	mg/L	WQBEL calculated using RPA
Copper, total[2] (Freshwater)	0.105	0.48	0.095	0.037	0.019	0.011	0.0075	0.12	mg/L	WQBEL calculated using RPA
Copper, total[3] (Estuarine, Marine)	---	0.39	0.079	0.02	0.0098	0.0056	0.0039	0.039	mg/L	WQBEL calculated using RPA
Lead, total	0.048	0.098	0.020	0.0049	0.0025	0.0014	0.00098	0.15	mg/L	WQBEL calculated using RPA
Zinc, total	0.29	2.00	0.64	0.16	0.081	0.046	0.032	0.32	mg/L	WQBEL calculated using RPA
Total Residual Chlorine[2] (Freshwater)	0.085	0.90	0.180	0.045	0.023	0.013	0.009	0.05	mg/L	WQBEL calculated using RPA
Total Residual Chlorine[3] (Estuarine, Marine)	---	0.61	0.12	0.031	0.015	0.0088	0.0061	0.039	mg/L	WQBEL calculated using RPA

Parameter		Instream Waste Concentration (1)								
	Reservoir & Lake	<1%	1 to 5%	>5% to 20%	>20% to 40%	>40% to 70%	>70% to 100%	Inter-mittent Discharge	Units	Permit Limit Development
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 (7Q10) of the receiving stream and multiplying the result by 100. [2]If discharge is to freshwater, these limits apply. [3]If discharge is to estuarine or marine water, these limits apply.										

9.13 Water Treatment Plant Wastewater Discharges to Ground Water

The general permit contains prohibitions for water treatment plant facility discharges to ground water containing detergents or surfactants, water treatment plant laboratory wastewaters greater than 500 gpd, 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.

9.13.1 Numeric Effluent Limits

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 11.2.3.1 of the 2026 General Permit and provided below:

Table 11.2.3.1 — Maximum Limits for Discharges of Water Treatment Plant Wastewater to Ground Water

Parameter	Maximum Limit	Unit	Permit Limit Development
Flow	50,000 to subsurface disposal system 500,000 to infiltration basin	gpd	NA
pH	6.0 – 9.0	S.U.	WQBEL Carried forward from current permit
PFAS Analytes[1]	Monitor	ng/L	NA
Lead, total	0.01	mg/L	EPA Drinking Water Action Level
Lead, dissolved	Monitor	mg/L	NA
Aluminum, total	Monitor	mg/L	NA
Aluminum, dissolved	1.5	mg/L	TBEL Carried forward from current permit
Iron, total	Monitor	mg/L	NA
Iron, dissolved	3.0	mg/L	TBEL Carried forward from current permit
Manganese, total	Monitor	mg/L	NA
Manganese, dissolved	3.0	mg/L	WQBEL Carried forward from current permit
Copper, total	1.3	mg/L	EPA Drinking Water Action Level
Copper, dissolved	Monitor	mg/L	NA
Zinc, total	Monitor	mg/L	NA
Zinc, dissolved	Monitor	mg/L	NA
Arsenic, total	Monitor	ug/L	EPA's National Primary Drinking Water Regulations

Parameter	Maximum Limit	Unit	Permit Limit Development
Arsenic, dissolved	10.0	ug/L	EPA's National Primary Drinking Water Regulations
Temperature	Monitor	°F	NA

Footnotes:

[1] Analysis for PFAS shall be performed using the method(s) approved by the EPA pursuant to 40 CFR 136 and by a laboratory certified to conduct such test methods. If no such test method is approved by EPA pursuant to 40 CFR 136, PFAS analyses shall be performed in accordance with EPA Method 1633 or 1633A (see https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas). Report in nanograms per liter (ng/L). See Appendix A for PFAS analyte list.

9.13.3 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 2026 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."

9.13.4 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. At the time, it was theorized that solids would adsorb to soil particles and just dissolved substances would infiltrate to groundwater. However, this deviation in the methodology is not supported by 40 CFR 136, the EPA Guidelines Establishing Test Procedures for the Analysis of Pollutants. In the 2026 General Permit, permittees monitor for both total and dissolved metals.

9.13.5 Ground Water Monitoring Wells & Compliance Schedule

The 2026 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 the impact of the ground water discharge(s).

Section 10.0 Analytical Methods

All sample analyses 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.

Section 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.

Section 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) of the Regs. Conn. State Agencies, 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.

Section 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.

Section 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 genal permit.

Section 15.0 Antidegradation

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

Section 16.0 Public Participation

As part of the general permit reissuance process, the Department conducted one (1) Public Listening Session to directly solicit feedback during the drafting phase.

- Session Date: June 13, 2023
- Purpose: At this session, the Department sought direct input from the public and stakeholders on

two key areas:

1. Feedback regarding the effectiveness and requirements of the existing permit provisions.
2. Suggestions for improvements and enhancements to the overall permitting process.

This feedback was critical in informing the technical and procedural decisions incorporated into the current draft of the 2026 General Permit.

Public Notice of Tentative Determination

Phase 1: Initial Public Input and Permit Drafting

The Department actively solicited public feedback during the initial stages of the general permit reissuance process:

- Public Listening Session: We held one (1) Public Listening Session on June 13, 2023. This session allowed stakeholders to provide direct feedback on the existing permit's provisions and offer suggestions for improving the overall permitting process.
- Initial Public Notice and Withdrawal: Following the incorporation of this initial feedback, the draft permit was placed on Public Notice. In response, the Department received substantive comments and a formal petition. Consequently, the Department withdrew the initial draft permit and began revising the draft to address the concerns raised.

Phase 2: Current Public Notice

The current Public Notice represents the second public solicitation for comment. This revised draft incorporates the extensive feedback received following the first notice and the June 2023 listening session, reflecting the Department's commitment to developing a comprehensive and effective final permit.

TENTATIVE DETERMINATION

The Commissioner of the Department of Energy and Environmental Protection ("DEEP") hereby gives notice that a tentative determination has been reached to renew with modifications the Comprehensive General Permit for Discharges to Surface and Ground Water ("general permit").

The current general permit was issued on April 1, 2023 and expires on April 1, 2026, having been continued in effect pursuant to section 22a-6aa of the Connecticut General Statutes

COMMISSIONER'S FINDINGS/REGULATORY CONDITIONS

In accordance with applicable federal and state law, the Commissioner has made a tentative determination that renewal of this general permit would not cause pollution of the waters of the state. The proposed general permit, if renewed, will require application (including re-application for existing permittees), contains effluent limits, and requires discharge monitoring and submission of electronic discharge monitoring reports for some of the categories of discharge to ensure that the discharge will not cause pollution.

PROPOSED GENERAL PERMIT

The purpose of the general permit is to protect the waters of the state from discharges of non-contact cooling water, geothermal heat pump water, water treatment wastewater, hydrostatic pressure testing of natural gas, petroleum tanks, and pipeline wastewater, fire suppression system testing water, hydrant flushing wastewater, boiler blowdown water, geothermal heat pump water, and pressure washing wastewater, and water treatment wastewater to surface water and ground water. The DEEP first issued the general permit in 2018 to consolidate many separate general permits and to authorize some common discharges such as hydrant flushing or fire suppression testing that previously did not have permit mechanisms.

Proposed Changes in this Renewal:

- The format and layout has been modernized to better facilitate its use by the regulated community.
- The 15% Instream Waste Concentration threshold for eligibility was removed.
- All discharges requiring application are required to submit electronic Discharge Monitoring Reports through NetDMR.
- The general permit incorporates DEEPs new online noncompliance reporting tools.
- Pressure washing has been added as a new category of discharge.
- Facilities with water treatment discharges to ground water are required to submit and implement a plan for the installation of monitoring wells before the 5-year term of this general permit has expired.

COMMISSIONER'S AUTHORITY

The Commissioner is authorized to issue this general permit pursuant to sections 22a-430 and 22a-430b of the Connecticut General Statutes section 22a-430-3 and 4 of the Regulations of Connecticut State Agencies. The Commissioner is authorized to approve or deny any application under this general permit pursuant to section 22a-430b of the Connecticut General Statutes.

INFORMATION REQUESTS/PUBLIC COMMENT

Interested persons may obtain a copy of this public notice, the proposed general permit and the general permit fact sheet on the DEEP website at portal.ct.gov/DEEP/About/Public-Notices.

Questions may be directed to James Creighton at 860-424-3681 or james.creighton@ct.gov.

Before making a final decision on this proposed general permit, the Commissioner shall consider written comments from interested persons that are received within 30 days from the publication date of this notice. Written comments should be directed to: James Creighton, Water Permitting and Enforcement Division, Bureau of Materials Management and Compliance Assurance, Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127 or may be submitted via electronic mail to: james.creighton@ct.gov.

PETITIONS FOR PUBLIC HEARING

The Commissioner may conduct a public hearing if the Commissioner determines that the public interest will be best served thereby. Upon receipt of a petition, the Commissioner shall take action as required by relevant laws, including Public Act 25-84, which was effective upon passage in June 2025. Petitions should include the name of the general permit noted above and also identify a contact person to receive notifications. Petitions may also identify a person who is authorized to engage in discussions regarding the proposed general permit 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, CT 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 and posted on the DEEP website at https://portal.ct.gov/DEEP. Additional information can be found at www.ct.gov/deep/adjudications.]