Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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NPDES PERMIT

Issued to

Permittee:
Town of Portland
33 East Main Street
Portland, Connecticut 06480

Location Address:
Portland WPCF
3 Lower Main Street
Portland, Connecticut 06480

Permit ID: CT0101150 **Design Flow Rate: 1.2** MGD **Effective Date: October 01, 2017**

Receiving Stream: Connecticut River **Permit Expires: September 30, 2022**

SECTION 1: GENERAL PROVISIONS

(A) This permit is reissued in accordance with Section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and Section 402(b) of the Clean Water Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer a N.P.D.E.S. permit program.

(B) The Town of Portland, ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to Section 22a-430 of the CGS and are hereby incorporated into this permit. **Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(10)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of Section 22a-430-3.** To the extent this permit imposes conditions more stringent than those found in the regulations, this permit shall apply.

Section 22a-430-3 General Conditions

- **(a)** Definitions
- **(b)** General
- **(c)** Inspection and Entry
- **(d)** Effect of a Permit
- **(e)** Duty to Comply
- **(f)** Proper Operation and Maintenance
- **(g)** Sludge Disposal
- **(h)** Duty to Mitigate
- **(i)** Facility Modifications; Notification
- **(j)** Monitoring, Records and Reporting Requirements
- **(k)** Bypass
- **(l)** Conditions Applicable to POTWs
- **(m)** Effluent Limitation Violations
- **(n)** Enforcement
- **(o)** Resource Conservation
- **(p)** Spill Prevention and Control
- **(q)** Instrumentation, Alarms, Flow Recorders
- **(r)** Equalization

Section 22a-430-4 Procedures and Criteria

- **(a)** Duty to Apply

(b) Duty to Reapply
(c) Application Requirements
(d) Preliminary Review
(e) Tentative Determination
(f) Draft Permits, Fact Sheets
(g) Public Notice, Notice of Hearing
(h) Public Comments
(i) Final Determination
(j) Public Hearings
(k) Submission of Plans and Specifications. Approval.
(l) Establishing Effluent Limitations and Conditions
(m) Case-by-Case Determinations
(n) Permit Issuance or Renewal
(o) Permit or Application Transfer
(p) Permit Revocation, Denial or Modification
(q) Variances
(r) Secondary Treatment Requirements
(s) Treatment Requirements
(t) Discharges to POTWs - Prohibitions

(C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the Permittee to enforcement action including, but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.

(D) Any false statement in any information submitted pursuant to this Section of the permit may be punishable as a criminal offense under Section 22a-438 or 22a-131a of the CGS or in accordance with Section 22a-6, under Section 53a-157b of the CGS.

(E) The Permittee shall comply with Section 22a-416-1 through Section 22a-416-10 of the RCSA concerning operator certification.

(F) No provision of this permit and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by the Permittee pursuant to this permit will result in compliance or prevent or abate pollution.

(G) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

(H) An annual fee shall be paid for each year this permit is in effect as set forth in Section 22a-430-7 of the RCSA. As of October 1, 2009 the annual fee is $2,367.50.

SECTION 2: DEFINITIONS

(A) The definitions of the terms used in this permit shall be the same as the definitions contained in Section 22a-423 of the CGS and Section 22a-430-3(a) and 22a-430-6 of the RCSA, except for "Composite" and "No Observable Acute Effect Level (NOAEL)" which are redefined below.

(B) In addition to the above, the following definitions shall apply to this permit:

"------" in the limits column on the monitoring tables in Attachment 1 means a limit is not specified but a value must be reported on the DMR, MOR, and/or the ATMR.

"Annual" in the context of any sampling frequency, shall mean the sample must be collected in the month of July, August or September.

"Average Monthly Limit" means the maximum allowable "Average Monthly Concentration" as defined in Section 22a-430-3(a) of the RCSA when expressed as a concentration (e.g. mg/l); otherwise, it means "Average Monthly Discharge Limitation" as defined in Section 22a-430-3(a) of the RCSA.

"Bi-Weekly" in the context of any sampling frequency, shall mean once every two weeks.

"Composite" or **"(C)"** means a sample consisting of a minimum of eight aliquot samples collected at equal intervals of no less than 30 minutes and no more than 60 minutes and combined proportionally to flow over the sampling period provided that during the sampling period the peak hourly flow is experienced.

"Critical Test Concentration" or **"(CTC)"** means the specified effluent dilution at which the Permittee is to conduct a single-concentration Aquatic Toxicity Test.

"Daily Composite" or **"(DC)"** means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than sixty (60) minutes and combined proportionally to flow; or, a composite sample continuously collected over a full operating day proportionally to flow.

"Daily Concentration" means the concentration of a substance as measured in a daily composite sample, or, arithmetic average of all grab sample results defining a grab sample average.

"Daily Quantity" means the quantity of waste discharged during an operating day.

"Geometric Mean" is the "n"th root of the product of "n" observations.

"Infiltration" means water other than wastewater that enters a sewer system (including sewer system and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

"Inflow" means water other than wastewater that enters a sewer system (including sewer service connections) from sources such as, but not limited to, roof leaders, cellar drains, yard drains, area drains, drains from springs and swampy areas, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from, infiltration.

"Instantaneous Limit" means the highest allowable concentration of a substance as measured by a grab sample, or the highest allowable measurement of a parameter as obtained through instantaneous monitoring.

"In-stream Waste Concentration" or **"(IWC)"** means the concentration of a discharge in the receiving water after mixing has occurred in the allocated zone of influence.

"MGD" means million gallons per day.

"Maximum Daily Limit" means the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l), otherwise, it means the maximum allowable "Daily Quantity" as defined above, unless it is expressed as a flow quantity. If expressed as a flow quantity it means "Maximum Daily Flow" as defined in Section 22a-430-3(a) of the RCSA.

"Monthly Minimum Removal Efficiency" means the minimum reduction in the pollutant parameter specified when the effluent average monthly concentration for that parameter is compared to the influent average monthly concentration.

"NA" as a Monitoring Table abbreviation means "not applicable".

"NR" as a Monitoring Table abbreviation means "not required".

"No Observable Acute Effect Level" or **"(NOAEL)"** means any concentration equal to or less than the critical test concentration in a single concentration (pass/fail) toxicity test, conducted pursuant to Section 22a-430-3(j)(7)(A)(i) of the RCSA, demonstrating 90% or greater survival of test organisms at the CTC.

"Quarterly" in the context of any sampling frequency, shall mean sampling is required in the months of March, June, September, and December.

"Range During Sampling" or **"(RDS)"** as a sample type means the maximum and minimum of all values recorded as a result of analyzing each grab sample of; 1) a Composite Sample, or, 2) a Grab Sample Average. For those Permittee with pH meters that provide continuous monitoring and recording, Range During Sampling means the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

"Range During Month" or **"(RDM)"** as a sample type means the lowest and the highest values of all of the monitoring data for the reporting month.

"Sanitary Sewage" means wastewaters from residential, commercial and industrial sources introduced by direct connection to the sewerage collection system tributary to the treatment works including non-excessive inflow/infiltration sources.

"Twice per Month" in the context of any sampling frequency, mean two samples per calendar month collected no less than 12 days apart.

"ug/l" means micrograms per liter

"Work Day" in the context of a sampling frequency means, Monday through Friday excluding holidays.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner of Energy and Environmental Protection ("Commissioner") has issued a final decision and found continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on application #201700397 for permit reissuance received on January 09, 2017 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or his authorized agent for the discharges and/or activities authorized by, or associated with, this permit.

(C) The Commissioner reserves the right to make appropriate revisions to the permit, if required after Public Notice, in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Clean Water Act or the CGS or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Clean Water Act or CGS or regulations adopted thereunder which are then applicable.

SECTION 4: GENERAL LIMITATIONS AND OTHER CONDITIONS

(A) The Permittee shall not accept any new sources of non-domestic wastewater conveyed to its POTW through its sanitary sewerage system or by any means other than its sanitary sewage system unless the generator of such wastewater; (a) is authorized by a permit issued by the Commissioner under Section 22a-430 CGS (individual permit), or, (b) is authorized under Section 22a-430b (general permit), or, (c) has been issued an emergency or temporary authorization by the Commissioner under Section 22a-6k. All such non-domestic wastewaters shall be processed by the POTW via receiving facilities at a location and in a manner prescribed by the Permittee which are designed to contain and control any unplanned releases.

(B) No new discharge of domestic sewage from a single source to the POTW in excess of 50,000 gallons per day shall be allowed by the Permittee until the Permittee has notified in writing the Department of Energy and Environmental Protection, Municipal Wastewater Section of said new discharge.

(C) The Permittee shall maintain a system of user charges based on actual use sufficient to operate and maintain the POTW (including the collection system) and replace critical components.

(D) The Permittee shall maintain a sewer use ordinance that is consistent with the Model Sewer Ordinance for Connecticut Municipalities prepared by the Department of Energy and Environmental Protection. The Commissioner of Energy and Environmental Protection alone may authorize certain discharges which may not conform to the Model Sewer Ordinance.

(E) No discharge from the permitted facility beyond any zone of influence shall contain or cause in the receiving stream a visible oil sheen, floating solids, visible discoloration, or foaming beyond that which may result from a discharge from a permitted facility and none exceeding levels necessary to maintain all designated uses.

(F) No discharge from the permitted facility shall cause acute or chronic toxicity in the receiving water body beyond any Zone Of Influence (ZOI) specifically allocated to that discharge in this permit.

(G) The Permittee shall maintain an alternate power source adequate to provide full operation of all pump stations in the sewerage collection system and to provide a minimum of primary treatment and disinfection at the water pollution control facility to insure that no discharge of untreated wastewater will occur during a failure of a primary power source.

(H) The average monthly effluent concentration shall not exceed 15% of the average monthly influent concentration for BOD_5 and Total Suspended Solids for all daily composite samples taken in any calendar month.

(I) Any new or increased amount of sanitary sewage discharge to the sewer system is prohibited where it will cause a dry weather overflow or exacerbate an existing dry weather overflow.

(J) Sludge Conditions

(1) The Permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including but not limited to 40 CFR Part 503.

(2) If an applicable management practice or numerical limitation for pollutants in sewage sludge more stringent than existing federal and state regulations is promulgated under Section 405(d) of the Clean Water Act (CWA), this permit shall be modified or revoked and reissued to conform to the promulgated regulations.

(3) The Permittee shall give prior notice to the Commissioner of any change(s) planned in the Permittee' sludge use or disposal practice. A change in the Permittee' sludge use or disposal practice may be a cause for modification of the permit.

(4) Testing for inorganic pollutants shall follow "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846 as updated and/or revised.

(K) This permit becomes effective on the 1st day of the month following the date of signature of the Commissioner or designee.

(L) When the arithmetic mean of the average daily flow from the POTW for the previous 180 days exceeds 90% of the design flow rate, the Permittee shall develop and submit within one year, for the review and approval of the Commissioner, a plan to accommodate future increases in flow to the plant. This plan shall include a schedule for completing any recommended improvements and a plan for financing the improvements.

(M) When the arithmetic mean of the average daily BOD_5 or TSS loading into the POTW for the previous 180 days exceeds 90% of the design load rate, the Permittee shall develop and submit for the review and approval of the Commissioner within one year, a plan to accommodate future increases in load to the plant. This plan shall include a schedule for completing any recommended improvements and a plan for financing the improvements.

(N) On or before July 31st of each calendar year the main flow meter shall be calibrated by an independent contractor in accordance with the manufacturer's specifications. The actual record of the calibration shall be retained onsite and, upon request, the Permittee shall submit to the Commissioner a copy of that record.

(O) The Permittee shall operate and maintain all processes as installed in accordance with the approved plans and specifications and as outlined in the associated operation and maintenance manual. This includes but is not limited to all preliminary treatment processes, primary treatment processes, recycle pumping processes, anaerobic treatment processes, anoxic treatment processes, aerobic treatment processes, flocculation processes, effluent filtration processes or any other processes necessary for the optimal removal of pollutants. The Permittee shall not bypass or fail to operate any of the aforementioned processes without the written approval of the Commissioner.

(P) The Permittee is hereby authorized to accept septage at the treatment facilityor other locations as approved by the Commissioner.

(Q) The temperature of any discharge shall not increase the temperature of the receiving stream above 85°F, or, in any case, raise the normal temperature of the receiving stream more than 4°F beyond the permitted zone of influence.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(A) The discharge(s) shall not exceed and shall otherwise conform to the specific terms and conditions listed in this permit. The discharge is restricted by, and shall be monitored in accordance with Tables A through G incorporated in this permit as Attachment 1.

(B) The Permittee shall monitor the performance of the treatment process in accordance with the Monthly Operating Report (MOR) incorporated in this permit as Attachment 2.

SECTION 6: SAMPLE COLLECTION, HANDLING and ANALYTICAL TECHNIQUES

(A) Chemical Analysis

(1) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using the methods approved pursuant to the Code of Federal Regulations, Part 136 of Title 40 (40 CFR 136) unless an alternative method has been approved in writing 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 or the RCSA shall be analyzed in accordance with methods specified in this permit.

(2) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal, as defined in 40 CFR 136 unless otherwise specified.

(3) Grab samples shall be taken during the period of the day when the peak hourly flow is normally experienced.

(4) Samples collected for bacteriological examination shall be collected between the hours of 11 a.m. and 3 p.m. or at that time of day when the peak hourly flow is normally experienced.

(5) The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Attachment 1, Table C. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

Parameter	Minimum Level
Arsenic, Total	0.005 mg/l
Mercury, Total	0.0002mg/l

(6) The value of each parameter for which monitoring is required under this permit shall be reported to the maximum level of accuracy and precision possible consistent with the requirements of this Section of the permit.

(7) Effluent analyses for which quantification was verified during the analysis at or below the minimum levels specified in this Section and which indicate that a parameter was not detected shall be reported as "less than x" where 'x' is the numerical value equivalent to the analytical method detection limit for that analysis.

(8) Results of effluent analyses which indicate that a parameter was not present at a concentration greater than or equal to the Minimum Level specified for that analysis shall be considered equivalent to zero (0.0) for purposes of determining compliance with effluent limitations or conditions specified in this permit.

(B) Acute Aquatic Toxicity Test

(1) Samples for monitoring of Acute Aquatic Toxicity shall be collected and handled as prescribed in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA-821-R-02-012).

(a) Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held at 0 - 6°C until Acute Aquatic Toxicity testing is initiated.

(b) Effluent samples shall not be dechlorinated, filtered, or, modified in any way, prior to testing for Acute Aquatic Toxicity unless specifically approved in writing by the Commissioner for monitoring at this facility. Facilities with effluent dechlorination and/or filtration designed as part of the treatment process are not required to obtain approval from the Commissioner.

(c) Samples shall be taken at the final effluent for Acute Aquatic Toxicity unless otherwise approved in writing by the Commissioner for monitoring at this facility.

(d) Chemical analyses of the parameters identified in Attachment 1, Table C shall be conducted on an aliquot of the same sample tested for Acute Aquatic Toxicity.

(i) At a minimum, pH, specific conductance, total alkalinity, total hardness, and total residual chlorine shall be measured in the effluent sample and, during Acute Aquatic Toxicity tests, in the highest concentration of the test and in the dilution (control) water at the beginning of the test and at test termination. If total residual chlorine is not detected at test initiation, it does not need to be measured at test termination. Dissolved oxygen, pH, and temperature shall be measured in the control and all test concentrations at the beginning of the test, daily thereafter, and at test termination.

(e) Tests for Acute Aquatic Toxicity shall be initiated within 36 hours of sample collection.

(2) Monitoring for Acute Aquatic Toxicity to determine compliance with the permit condition on Acute Aquatic Toxicity (invertebrate) shall be conducted for 48 hours utilizing neonatal (less than 24 hours old) *Daphnia pulex*.

(3) Monitoring for Acute Aquatic Toxicity to determine compliance with the permit condition on Acute Aquatic Toxicity (vertebrate) shall be conducted for 48 hours utilizing larval (1 to 14-day old with no more than 24 hours range in age) *Pimephales promelas*.

(4) Tests for Acute Aquatic Toxicity shall be conducted as prescribed for static non-renewal acute tests in "Methods for measuring the Acute Aquatic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/821-R-02-012), except as specified below.

(a) For Acute Aquatic Toxicity limits, and for monitoring only conditions, expressed as a NOAEL value, Pass/Fail (single concentration) tests shall be conducted at a specified Critical Test Concentration (CTC) equal to the Aquatic Toxicity limit, (100% in the case of monitoring only conditions), as prescribed in Section 22a-430-3(j)(7)(A)(i) of the RCSA.

(b) Organisms shall not be fed during the tests.

(c) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50±5 mg/L as $CaCO_3$ shall be used as dilution water in the tests.

(d) Copper nitrate shall be used as the reference toxicant.

(5) For monitoring only conditions, toxicity shall be demonstrated when the results of a valid pass/fail Acute Aquatic Toxicity indicates less than 90% survival in the effluent at the CTC (100%).

(C) Chronic Aquatic Toxicity Test for Freshwater Discharges

(1) Chronic Aquatic Toxicity testing of the discharge shall be conducted annually during July, August, or September of each year.

(2) Chronic Aquatic Toxicity testing shall be performed on the discharge in accordance with the test methodology established in "Short-Term Methods for Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms" (EPA-821-R-02-013) as referenced in 40 CFR 136 for *Ceriodaphnia* survival and reproduction and Fathead minnow larval survival and growth.

(a) Chronic Aquatic Toxicity tests shall utilize a minimum of five effluent dilutions prepared using a dilution factor of 0.5 (100% effluent, 50% effluent, 25% effluent, 12.5% effluent, 6.25% effluent).

(b) Connecticut River water collected immediately upstream of the area influenced by the discharge shall be used as control (0% effluent) and dilution water in the toxicity tests.

(c) A laboratory water control consisting of synthetic freshwater prepared in accordance with EPA-821-R-02-013 at a hardness of 50±5 mg/l shall be used as an additional control (0% effluent) in the toxicity tests.

(d) Daily composite samples of the discharge (final effluent following disinfection) and grab samples of the Connecticut River, for use as site water control and dilution water, shall be collected on day 0 for test solution renewal on day 1 and day 2 of the test; day 2, for test solution renewal on day 3 and day 4 of the test; and day 4, for test solution renewal for the remainder of the test. Samples shall not be pH or hardness adjusted, or chemically altered in any way.

(3) All samples of the discharge and Connecitcut River water used in the Chronic Aquatic Toxicity test shall, at a minimum, be analyzed and results reported in accordance with the provisions listed in Section 6(A) of this permit for the parameters listed in Attachment 1, Table C included herein, excluding Acute Aquatic Toxicity organism testing.

SECTION 7: RECORDING AND REPORTING REQUIREMENTS

(A) The Permittee and/or the Signatory Authority shall continue to report the results of chemical analyses and any aquatic toxicity test required above in Section 5 and the referenced Attachment 1 by electronic submission of DMRs under this permit to the Department using NetDMR. The report shall include a detailed explanation of any violations of the limitations specified. DMRs shall be submitted electronically to the Department no later than the 15th day of the month following the month in which samples are collected.

(1) For composite samples, from other than automatic samplers, the instantaneous flow and the time of each aliquot sample collection shall be recorded and maintained at the POTW.

(B) Complete and accurate test data, including percent survival of test organisms in each replicate test chamber, LC_{50} values and 95% confidence intervals for definitive test protocols, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Protection and Land Reuse at the address specified above in Section 7 (A) of this permit by the 15th day of the month following the month in which samples are collected.

(C) The results of the process monitoring required above in Section 5 shall be entered on the Monthly Operating Report (MOR) form, included herein as Attachment 2, and reported to the Bureau of Water Protection and Land Reuse. The MOR report shall also be accompanied by a detailed explanation of any violations of the limitations specified. The MOR, must be received at the address specified above in Section 7 (A) of this permit by the 15th day of the month following the month in which the data and samples are collected.

(D) A complete and thorough report of the results of the chronic toxicity monitoring outlined in Section 6(C) shall be prepared as outlined in Section 10 of EPA-821-R-02-[013 (for freshwater)] [014 for estuarine and marine waters)] and submitted to the Department for review on or before December 31 of each calendar year to the address specified above in Section 7 (A) of this permit.

(E) NetDMR Reporting Requirements

(1) The Permittee and/or the Signatory Authority shall electronically submit DMRs and reports required under this permit to the Department using NetDMR in satisfaction of the DMR submission requirement of this permit. DMRs shall be submitted electronically to the Department no later than the 15th day of the month following the completed reporting period.

SECTION 8: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS, BYPASSES, MECHANICAL FAILURES, AND MONITORING EQUIPMENT FAILURES

(A) If any Acute Aquatic Toxicity sample analysis indicates toxicity, or that the test was invalid, an additional sample of the effluent shall be collected and tested for Acute Aquatic Toxicity and associated chemical parameters, as described above in Section 5 and Section 6, and the results reported to the Bureau of Water Protection and Land Reuse (Attn: Aquatic Toxicity) via the ATMR form (see Section 7 (B)) within 30 days of the previous test. These test results shall also be reported on the next month's DMR report pursuant to Section 7 (A). The results of all toxicity tests and associated chemical parameters, valid and invalid, shall be reported.

(B) If any two consecutive Acute Aquatic Toxicity test results or any three Acute Aquatic Toxicity test results in a twelve month period indicates toxicity, the Permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall submit a report, to the Bureau of Water Protection and Land Reuse (Attn: Aquatic Toxicity), for the review and written approval of the Commissioner in accordance with Section 22a-430-3(j)(10)(c) of the RCSA describing proposed steps to eliminate the toxic impact of the discharge on the receiving water body. Such a report shall include a proposed time schedule to accomplish toxicity reduction and the Permittee shall comply with any schedule approved by the Commissioner.

(C) Sewage Right-to-Know Electronic Bypass Reporting

(1) Section 22a-430-3(k) of the RCSA shall apply in all instances of bypass including a bypass of the treatment plant or a component of the sewage collection system planned during required maintenance. The Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater, the Department of Public Health, Water Supply Section and Recreation Section, and the local Director of Health shall be notified within 2 hours of the Permittee learning of the event via online reporting in a format approved by the Commissioner. A final incident report shall be submitted to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater within five days of the Permittee learning of each occurrence of a discharge or bypass of untreated or partially treated sewage via online reporting in a format approved by the Commissioner.

If the online reporting system is nonfunctional, then the Permittee shall notify DEEP via telephone during normal business hours (8:30 a.m. to 4:30 p.m. Monday through Friday) at (860) 424-3704 or after hours to the DEEP Emergency Response Unit at (860) 424-3338 and the Department of Public Health at (860) 509-8000 with the final incident report being submitted online.

(D) Section 22a-430-3(j) 11 (D) of the RCSA shall apply in the event of any noncompliance with a maximum daily limit and/or any noncompliance that is greater than two times any permit limit. The Permittee shall notify in the same manner as in paragraph C (1) of this Section, the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater Section except, if the online reporting system is nonfunctional and the noncompliance occurs outside normal working hours (8:30 a.m. to 4:30 p.m. Monday through Friday) the Permittee may wait to make the verbal report until 10:30 am of the next business day after learning of the noncompliance.

(E) Section 22a-430-3(j) 8 of the RCSA shall apply in all instances of monitoring equipment failures that prevent meeting the requirements in this permit. In the event of any such failure of the monitoring equipment including, but not limited to, loss of refrigeration for an auto-sampler or lab refrigerator or loss of flow proportion sampling ability, the Permittee shall notify in the same manner as in paragraph C (1) of this Section, the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater Section except, if the online reporting system is nonfunctional and the failure occurs outside normal working hours (8:30 a.m. to 4:30 p.m. Monday through Friday) the Permittee may wait to make the verbal report until 10:30 am of the next business day after learning of the failure.

(F) In addition to the reporting requirements contained in Section 22a-430-3(i), (j), and (k) of the Regulations of Connecticut State Agencies, the Permittee shall notify in the same manner as in paragraph C (1) of this Section, the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater concerning the failure of any major component of the treatment facilities which the Permittee may have reason to believe would result in an effluent violation.

This permit is hereby issued on 9/22/17

Betsey Wingfield
Bureau Chief
Bureau of Water Protection and Land Reuse

ATTACHMENT 1

Tables A through G

TABLE A

Discharge Serial Number (DSN): **001-1** | Monitoring Location: **1**

Wastewater Description: **Sanitary Sewage**

Monitoring Location Description: **Final Effluent**

Allocated Zone of Influence (ZOI): **184 cfs** | In-stream Waste Concentration (IWC): **1 %** (allocated)

PARAMETER	Units	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			REPORT FORM	Minimum Level Analysis See Section 6
		Average Monthly Limit	Maximum Daily Limit	Sample Freq.	Sample type	Instantaneous Limit or Required Range[3]	Sample Freq.	Sample Type		
Alkalinity	mg/l	NA	NA	NR	NA	----	Monthly	Grab	MOR	
Biochemical Oxygen Demand (5 day) [1], See remark C below.	mg/l	30	50	2/Week	Daily Composite	NA	NR	NA	DMR/MOR	
Enterococci May 1st through September 30th see remark B below	Colonies per100 ml	NA	NA	NR	NA	500	2/Week	Grab	DMR/MOR	
Flow	MGD	-----	------	Continuous[2]	Average Daily Flow	NA	NR	NA	DMR/MOR	
Nitrogen, Ammonia (total as N)	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	MOR	
Nitrogen, Nitrate (total as N)	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	MOR	
Nitrogen, Nitrite (total as N)	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	MOR	
Nitrogen, Total Kjeldahl	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	MOR	
Nitrogen, Total	mg/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	MOR	
Nitrogen, Total	lbs/day	NA	-----	Monthly	Daily Composite	NA	NR	NA	MOR	
Oxygen, Dissolved	mg/l	NA	NA	NR	NA	------	Work Day	Grab	MOR	
pH	S.U.	NA	NA	NR	NA	6 - 9	Work Day	Grab	DMR/MOR	
Phosphate, Ortho	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	MOR	
Phosphorus, Total	mg/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	DMR/MOR	
Solids, Settleable	ml/l	NA	NA	NR	NA	------	Work Day	Grab	MOR	

Solids, Total Suspended[1], See remark C below.	mg/l	30	50	2/week	Daily Composite	NA	NA	NA	DMR/MOR	
Temperature	°F	NA	NA	NR	NA	-----	Work Day	Grab	MOR	
Turbidity	NTU	NA	NA	NR	NA	-----	Work Day	Grab	MOR	
UV Dose May 1st through September 30th, See remark A below.	mW,s/cm 2	NA	NA	NR	NA	≥30.0	4/Work Day	Grab	DMR /MOR	
UV Transmittance May 1st through September 30th See remark A below.	%	NA	NA	NR	NA	------	Lowest reading of 4/Work Day	Grab	MOR	

TABLE A – CONDITIONS

Footnotes:

[1] The discharge shall not exceed an average monthly 30 mg/l or a maximum daily 50 mg/l.

[2] The Permittee shall record and report on the monthly operating report the minimum, maximum and total flow for each day of discharge and the average daily flow for each sampling month. The Permittee shall report, on the discharge monitoring report, the average daily flow and maximum daily flow for each sampling month.

[3] The instantaneous limits in this column are maximum limit except for UV Dose which are a minimum limits.

Remarks:

(A) Ultraviolet disinfection shall be utilized from May 1st through September 30th.

(B) The geometric mean of the Enterococci bacteria values for the effluent samples collected in a period of a calendar month shall not exceed 35 per 100 milliliters.

(C) The Average Weekly discharge Limitation for BOD_5 and Total Suspended Solids shall be 1.5 times the Average Monthly Limit listed above.

TABLE B

Discharge Serial Number (DSN): **001-1**				Monitoring Location: **K**	
Wastewater Description: **Sanitary Sewage**					
Monitoring Location Description: **Final Effluent**					
Allocated Zone of Influence (ZOI): **184 cfs**		In-stream Waste Concentration (IWC): **1 %** (allocated)			
PARAMETER	**Units**	**FLOW/TIME BASED MONITORING**			**REPORT FORM**
		Average Monthly Minimum	**Sample Freq.**	**Sample type**	
Biochemical Oxygen Demand (5 day) Percent Removal[1]	% of Influent	85	2/week	Calculated[2]	DMR
Solids, Total Suspended Percent Removal[1]	% of Influent	85	2/week	Calculated[2]	DMR

TABLE B – CONDITIONS

Footnotes:

[1] The discharge shall be less than or equal to 15% of the average monthly influent BOD_5 and total suspended solids (Table E, Monitoring Location G).

[2] Calculated based on the average monthly results described in Table A. Removal efficiency = $\frac{\text{Inf. BOD or TSS - Effluent BOD or TSS}}{\text{Inf. BOD or TSS}} \times 100$

TABLE C

Discharge Serial Number (DSN): **001-1**			Monitoring Location: **T**			
Wastewater Description: **Sanitary Sewage**						
Monitoring Location Description: **Final Effluent after completion of UV disinfection**						
Allocated Zone of Influence (ZOI): **184cfs**			In-stream Waste Concentration (IWC): **1% (allocated)**			
PARAMETER	**Units**	**Maximum Daily Limit**	**Sampling Frequency**	**Sample Type**	**Reporting form**	**Minimum Level Analysis See Section 6**
Aluminum, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Antimony, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
NOAEL Static 48Hr Acute D. Pulex[1]	% survival	------	Quarterly	Daily Composite	ATMR/DMR	
NOAEL Static 48Hr Acute Pimephales[1]	% survival	------	Quarterly	Daily Composite	ATMR/DMR	
Arsenic, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	*
Beryllium, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
BOD_5	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Cadmium, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Chromium, Hexavalent	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Chromium, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Chlorine, Total Residual	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Copper, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Cyanide, Amenable	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Cyanide, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Iron, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Lead, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Mercury, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	*
Nickel, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Nitrogen, Ammonia (total as N)	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Nitrogen, Nitrate, (total as N)	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Nitrogen, Nitrite, (total as N)	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Phosphorus, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Phenols, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Selenium, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Silver, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Suspended Solids, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Thallium, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	
Zinc, Total	mg/l	------	Quarterly	Daily Composite	ATMR/DMR	

TABLE C - CONDITIONS

Remarks:[1]The results of the Toxicity Tests are recorded in % survival. The Permittee shall report % survival on the DMR based on criteria in Section 6(B) of this permit.

ATMR – Aquatic Toxicity Monitoring Report

TABLE D

Discharge Serial Number: **001-1**	Monitoring Location: **N**			
Wastewater Description: **Activated Sludge**				
Monitoring Location Description: **Each Aeration Unit**				
PARAMETER	**REPORTING FORMAT**	**INSTANTANEOUS MONITORING**		**REPORTING FORM**
		Sample Frequency	Sample Type	
Oxygen, Dissolved	High & low for each WorkDay	4/WorkDay	Grab	MOR
Sludge Volume Index	WorkDay	WorkDay	Grab	MOR
Mixed Liquor Suspended Solids	WorkDay	WorkDay	Grab	MOR

TABLE E

Discharge Serial Number: **001-1**			Monitoring Location: **G**				
Wastewater Description: **Sanitary Sewage**							
Monitoring Location Description: **Influent**							
PARAMETER	**Units**	**DMR REPORTING FORMAT**	**FLOW/TIME BASED MONITORING**		**INSTANTANEOUS MONITORING**		**REPORTING FORM**
			Sample Frequency	**Sample Type**	**Sample Frequency**	**Sample Type**	
Biochemical Oxygen Demand (5 day)	mg/l	Monthly average	2/week	Daily Composite	NA	NA	DMR/MOR
Nitrogen, Ammonia (total as N)	mg/l		Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Nitrate (total as N)	mg/l		Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Nitrite (total as N)	mg/l		Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Total Kjeldahl	mg/l		Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Total	mg/l		Monthly	Daily Composite	NA	NA	MOR
Phosphate, Ortho	mg/l		Monthly	Daily Composite	NA	NA	MOR
Phosphorus, Total	mg/l		Monthly	Daily Composite	NA	NA	MOR
pH	S.U.		NA	NA	Work Day	Grab	MOR
Solids, Total Suspended	mg/l	Monthly average	2/week	Daily Composite	NA	NA	DMR/MOR
Temperature	°F		NA	NA	Work Day	Grab	MOR

TABLE F

Discharge Serial Number: **001-1**					Monitoring Location: **P**		
Wastewater Description: **Primary Effluent**							
Monitoring Location Description: **Primary Sedimentation Basin Effluent**							
PARAMETER	**Units**	**REPORTING FORMAT**	**TIME/FLOW BASED MONITORING**		**INSTANTANEOUS MONITORING**		**REPORTING FORM**
			Sample Frequency	**Sample Type**	**Sample Frequency**	**Sample type**	
Alkalinity, Total	mg/l		NA	NA	Monthly	Grab	MOR
Biochemical Oxygen Demand (5 day)	mg/l	Monthly average	Weekly	Composite	NA	NA	MOR
Nitrogen, Ammonia (total as N)	mg/l		Monthly	Composite	NA	NA	MOR
Nitrogen, Nitrate (total as N)	mg/l		Monthly	Composite	NA	NA	MOR
Nitrogen, Nitrite (total as N)	mg/l		Monthly	Composite	NA	NA	MOR
Nitrogen, Total Kjeldahl	mg/l		Monthly	Composite	NA	NA	MOR
Nitrogen, Total	mg/l		Monthly	Composite	NA	NA	MOR
pH	S.U.		NA	NA	Monthly	Grab	MOR
Solids, Total Suspended	mg/l	Monthly average	Weekly	Composite	NA	NA	MOR

TABLE G

Discharge Serial Number: **001-1**	Monitoring Location: **SL**		
Wastewater Description: **Dewatered Sludge**			
Monitoring Location Description: **Dewatered Sludge**			
PARAMETER	**INSTANTANEOUS MONITORING**		**REPORTING FORM**
	Units	**Grab Sample Freq.**	
Arsenic, Total	mg/kg	Quaterly	DMR
Beryllium, Total	mg/kg	Quaterly	DMR
Cadmium, Total	mg/kg	Quaterly	DMR
Chromium, Total	mg/kg	Quaterly	DMR
Copper, Total	mg/kg	Quaterly	DMR
Lead, Total	mg/kg	Quaterly	DMR
Mercury, Total	mg/kg	Quaterly	DMR
Nickel, Total	mg/kg	Quaterly	DMR
Nitrogen, Ammonia *	mg/kg	Quaterly	DMR*
Nitrogen, Nitrate (total as N) *	mg/kg	Quaterly	DMR*
Nitrogen, Organic *	mg/kg	Quaterly	DMR*
Nitrogen, Nitrite (total as N) *	mg/kg	Quaterly	DMR*
Nitrogen, Total *	mg/kg	Quaterly	DMR*
pH *	S.U.	Quaterly	DMR*
Polychlorinated Biphenyls	mg/kg	Quaterly	DMR
Solids, Fixed	%	Quaterly	DMR
Solids, Total	%	Quaterly	DMR
Solids, Volatile	%	Quaterly	DMR
Zinc, Total	mg/kg	Quaterly	DMR

(*) required for composting or land application only

Testing for inorganic pollutants shall follow "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846 as updated and/or revised.

ATTACHMENT 2

MONTHLY OPERATING REPORT FORM

Portland
Sample month/year:

Facility 113-001 Permit expiration date:
MOR for permit #CT0101150

Chief Plant Operator:
Phone:

Date received: (stamped)

	Daily Flow			Primary Sludge			Pre-Aeration Anoxic Zone #1		Nitrate Anoxic Effluent	Aeration Tank #1				Carbon Source	Internal recycle	Pre-Aeration Anoxic Zone #2		Nitrate Anoxic Effluent	Aeration Tank #2				Internal recycle	Return sludge		Waste sludge	Waste accepted	
	Max.	Min.	Total	Vol.	% solids	wt.	Hi DO	Lo DO		MLSS	SVI	high D.O.	low D.O.			Hi DO	Lo DO		MLSS	SVI	high D.O.	low D.O.		%flow	%solids		septic	indust
Units	mgd			gal.		lbs.	mg/l		mg/l			mg/l		gal/day	%	mg/l		mg/l			mg/l		%			lbs	gal	gal
Freq	daily			work day			4/work day		weekly	Work day		4/work day		daily	work day	4/work day		weekly	Work day		4/work day		work day	work day		work day	work day	
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BOD (5-day)			Suspended Solids			Settleable Solids	Turbidity	UV Dose		UV Transmittance	Enteroccoci	Ammonia			Nitrite			Nitrate			TKN			Total N		
Inf.	Prim. Eff.	Final Eff.	Inf.	Prim. Eff.	Final Eff.	Eff.	Eff.	High	Low			Inf.	Prim. Eff.	Final Eff.	Inf.	Prim. Eff.	Final Eff.	Inf.	Prim. Eff.	Final Eff.	Inf.	Prim. Eff.	Final Eff.	Inf.	Prim. Eff.	Final Eff.
mg/l			mg/l			ml/l	NTU	mW,sec/cm2		%	#/100 ml	mg/l			mg/l			mg/l			mg/l			mg/l		
2/week	weekly	2/week	2/week	weekly	2/week	work day	work day	4/work day		workday		Monthly			Monthly			Monthly			Monthly			Monthly		

Total N	Lowest D.O.	pH			Total P		Ortho P	Temp.		Alkalinity		
Eff.	Eff.	Inf.	Eff.	Inf.	Eff. lb/day	Inf.	Eff mg/l	Inf.	Eff.	Inf.	Aer. Eff.	Eff.
lb/d	mg/l	S.U.						°F		mg/l		
monthly	4 per workday	work day		Monthly		Monthly		work day		monthly		

Sludge Disposal Location:

Please return forms to:
DEEP - Water Bureau
ATTN: Municipal Wastewater Monitoring Coordinator
Municipal Facilities
79 Elm Street
Hartford, CT 06106-5127

Statement of Acknowledgement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Authorized Official:

Title:

Signature: ______________________

Date: __________

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: Town of Portland

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT01001150 **APPLICATION #:** 201700397 **FACILITY ID.** 113-001

Mailing Address:	Location Address:
Street: 33 East Main St. P.O. Box 71	Street: 3 Lower Main Street
City: Portland ST: CT Zip: 06480	City: Portland ST: CT Zip: 06480
Contact Name: Richard Kelsey	Contact Name: Jim Lynch
Phone No.: 860-342-6734	Phone No.: 860-342-3159
	DMR Contact email address: rkelsey@portlandct.org

PERMIT INFORMATION

DURATION 5 YEAR X 10 YEAR ___ 30 YEAR ___

TYPE New ___ Reissuance X Modification ___

CATEGORIZATION POINT (X) NON-POINT ( ) GIS #

NPDES (X) PRETREAT () GROUND WATER (UIC) ( ) GROUND WATER (OTHER) ( )

NPDES MAJOR **(MA)** X
NPDES SIGNIFICANT MINOR or PRETREAT SIU **(SI)** ___
NPDES or PRETREATMENT MINOR **(MI)** ___

COMPLIANCE SCHEDULE YES___ NO X
POLLUTION PREVENTION ___ TREATMENT REQUIREMENT___
WATER QUALITY REQUIREMENT ___ OTHER ___

OWNERSHIP CODE
Private ___ Federal ___ State ___ Municipal (town only) X other public___

DEP STAFF ENGINEER Stela Marusin **DATE DRAFTED:** 02/23/2017

PERMIT FEES

Discharge Code	DSN Number	Annual Fee
111000c	001	2,367.50

FOR NPDES DISCHARGES

Drainage Basin Code: 4000-03 Water Quality Classification Goal: SB Segment: Connecticut River -03

NATURE OF BUSINESS GENERATING DISCHARGE
Municipal Sanitary Sewage Treatment

PROCESS AND TREATMENT DESCRIPTION (by DSN)
Secondary treatment, denitrification and seasonal ultraviolet disinfection.

RESOURCES USED TO DRAFT PERMIT

___ *Federal Effluent Limitation Guideline 40CFR 133 Secondary Treatment Category*

___ *Performance Standards*

___ *Federal Development Document*

name of category

_X_ *Department File Information*

_X_ *Connecticut Water Quality Standards*

_X_ *Anti-degradation Policy*

__ *Coastal Management Consistency Review Form*

__ *Other - Explain*

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

_X_ *Secondary Treatment (Section 22a-430-4(r) of the Regulations of Connecticut State Agencies)*

_X_ *Case-by-Case Determination (See Other Comments)*

__ *In order to meet in-stream water quality (See General Comments)*

_X_ *Anti-degradation policy*

GENERAL COMMENTS

The Town of Portland ("Permittee") operates a municipal water pollution control facility ("the facility") located at 3 Lower Main Street, Portland CT. The facility is designed to treat and discharge up to 1.2 million gallons a day of effluent into Connecticut River. The facility currently uses secondary treatment with denitrification and UV disinfection to treat effluent before being discharged. Pursuant to Conn. Gen. Stat. § 22a-430, the Department of Energy and Environmental Protection has issued the Town of Portland a permit for the discharge from this facility. The Town of Portland has submitted an application to renew its permit. The Department has made a tentative determination to approve Portland's application and has prepared a draft permit consistent with that determination.

The most significant change from the current permit is the removal of the Fecal Coliform monitoring requirement since there are no shell fish beds in the vicinity of the POTW that are conducive for commercial use. Facility will continue to perform Enterococci monitoring on a seasonal basis.

SPECIFIC REQUIREMENTS OR REVISIONS

The Department reviewed the application for consistency with Connecticut's Water Quality Standards and determined that with the limits in the draft permit, including those discussed below, that the draft permit is consistent with maintenance and protection of water quality in accordance with the Tier I Anti-degradation Evaluation and Implementation Review provisions of such Standards

The need for inclusion of water quality based discharge limitations in this permit was evaluated consistent with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Discharge monitoring data was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. In addition to this review, the statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the need for such limits. Comparison of the attached monitoring data and its inherent variability with the calculated water quality based limits indicates a low statistical probability of exceeding such limits. Therefore, no water quality based limits were included in the permit at this time.

WATER QUALITY LIMIT CALCULATIONS

See attached

WQB LIMITS:

Discharger: Portland — by: EsguerraC, 3/10/2017, 08:30

Receiving Water: CT River

Design Flow: 1.200
Allocated ZOI: 184.00
Samples/Month: 4

CURRENT CONDITIONS
Avg. Flow: 0.403 MGD
Max. Flow: 0.770 MGD
IWC: 1.00 %

WQB Limits - **Freshwater**

Compound	C.V.	AML ug/l	MDL ug/l	AML kg/d	MDL kg/d	LIMIT? ML?
Aluminum	0.7	6.91E+03	1.49E+04	3.14E+01	6.77E+01	
Ammonia	2.3	4.02E+04	1.26E+05	1.83E+02	5.75E+02	
Antimony	0.2	1.78E+04	2.36E+04	8.08E+01	1.07E+02	
Arsenic	0.0	2.10E-02	2.10E-02	9.55E-05	9.55E-05	ML
Beryllium	1.0	2.61E+02	6.58E+02	1.19E+00	2.99E+00	
Cadmium	0.5	1.06E+01	1.95E+01	4.81E-02	8.87E-02	
Chlorine	0.6	6.15E+02	1.23E+03	2.79E+00	5.61E+00	
Chromium (hex)	0.2	1.03E+03	1.36E+03	4.68E+00	6.20E+00	
Chromium (tri)	0.4	3.67E+03	6.15E+03	1.67E+01	2.80E+01	
Copper	0.3	4.80E+02	7.21E+02	2.18E+00	3.28E+00	
Cyanide (amen)	0.0	5.21E+02	5.21E+02	2.37E+00	2.37E+00	
Lead	1.2	8.23E+01	2.22E+02	3.74E-01	1.01E+00	
Mercury	1.4	5.11E+00	1.45E+01	2.32E-02	6.57E-02	
Nickel	0.4	2.53E+03	4.23E+03	1.15E+01	1.92E+01	
Phenol	0.0	1.60E+04	1.60E+04	7.28E+01	7.28E+01	
Selenium	0.5	4.23E+02	7.81E+02	1.92E+00	3.55E+00	
Silver	0.0	1.02E+02	1.02E+02	4.64E-01	4.64E-01	
Thallium	0.4	4.80E+01	8.05E+01	2.18E-01	3.66E-01	
Zinc	0.4	3.88E+03	6.51E+03	1.77E+01	2.96E+01	

Current Conditions

Compound	# DETECTS	AMC ug/l	MMC ug/l	AMM kg/d	MMM kg/d
Aluminum	6	4.60E+01	1.40E+02	7.03E-02	4.08E-01
Ammonia	18	1.05E+03	1.04E+04	1.60E+00	3.03E+01
Antimony	1	1.79E+01	2.00E+01	2.73E-02	5.83E-02
Arsenic	0	5.00E+00	5.00E+00	7.64E-03	1.46E-02
Beryllium	0	4.30E+00	1.00E+01	6.57E-03	2.92E-02
Cadmium	0	8.00E+00	1.00E+01	1.22E-02	2.92E-02
Chlorine					
Chromium (hex)	0	9.50E+00	1.00E+01	1.45E-02	2.92E-02
Chromium (tri)	0	1.68E+01	2.00E+01	2.57E-02	5.83E-02
Copper	12	2.26E+01	4.00E+01	3.45E-02	1.17E-01
Cyanide (amen)	0	1.00E+01	1.00E+01	1.53E-02	2.92E-02
Lead	6	3.60E+00	2.00E+01	5.50E-03	5.83E-02
Mercury	2	3.00E-01	2.00E+00	4.58E-04	5.83E-03
Nickel	1	1.69E+01	2.00E+01	2.58E-02	5.83E-02
Phenol	0	5.00E+01	5.00E+01	7.64E-02	1.46E-01
Selenium	0	2.80E+00	5.00E+00	4.28E-03	1.46E-02
Silver	0	2.00E+00	2.00E+00	3.06E-03	5.83E-03
Thallium	0	1.68E+01	2.00E+01	2.57E-02	5.83E-02
Zinc	18	5.60E+01	1.20E+02	8.55E-02	3.50E-01

	A	B	C	D	E	F	G
60	Final WQB Limits						
61		AML (kg/d)	MDL (kg/d)				
62							
63							
64							
65	Interim WQB Limits						
66		AML (kg/d)	MDL (kg/d)				
67							
68							
69							
70	Minimum Levels						
71							
72	Arsenic	0.005 mg/L					
73							
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Effluent Chemistry: PORTLAND WPCF

as of Tuesday, March 07, 2017 Design Flow 1.2 MGD Avg. Monthly Flow : MGD Max. Monthly Flow : MGD

Receiving Waterbody: Connecticut River
Allocated ZOI: 184 cfs
Database IWC: 1% (allocated)

Date	BOD	TSS	NH3	NO2	NO3	CNt	CNa	Be	As	Cd	Cr6	Cr3	Cu	Pb	Th	Ni	Ag	Zn	Sb	Se	Phen	Hg	Al	P	Fe
3/7/2012	10.90	5.60	3.20	0.250	5.87	< 10.0	< 10.0	< 10.0	< 5.0	10.0	< 10.0	<20.0	<20.0	< 2.0	< 20.0	< 20.0	< 2.0	40.0	< 20.0	< 2.0	< 50.0	< 0.2			<
6/6/2012	4.68	5.50	0.10	0.140	4.17	< 10.0	< 10.0	< 10.0	< 5.0	10.0	< 10.0	<20.0	20.0	< 2.0	< 20.0	< 20.0	< 2.0	50.0	< 20.0	< 2.0	< 50.0	< 0.2			<
9/5/2012	9.10	6.50	0.43	< 0.100	3.38	< 10.0	< 10.0	< 10.0	< 5.0	10.0	< 10.0	<20.0	20.0	< 2.0	< 20.0	< 20.0	< 2.0	69.0	< 20.0	< 2.0	< 50.0	< 0.2	140.0	2730.0	< 60.0
12/2/2012	9.20	10.70	0.68	0.490	2.23	< 10.0	< 10.0	< 10.0	< 5.0	10.0	< 10.0	<20.0	<20.0	< 2.0	< 20.0	< 20.0	< 2.0	< 70.0	20.0	< 2.0	< 50.0	< 0.2	30.0	2420.0	< 60.0
3/13/2013	16.00	16.20	0.44	0.160	35.00	< 10.0	< 10.0	< 10.0	< 5.0	10.0	< 10.0	<20.0	<20.0	< 2.0	< 20.0	< 20.0	< 2.0	20.0	< 20.0	< 2.0	< 50.0	< 0.2	< 20.0	650.0	< 20.0
6/11/2013	3.00	7.70	0.36	0.210	3.98	< 10.0	< 10.0	< 10.0	< 5.0	10.0	< 10.0	<20.0	<20.0	20.0	< 20.0	< 20.0	< 2.0	50.0	< 20.0	< 5.0	< 50.0	0.2	30.0	1380.0	< 70.0
9/10/2013	3.99	6.80	0.52	< 0.100	5.77	< 10.0	< 10.0	< 10.0	< 5.0	10.0	< 10.0	<20.0	20.0	< 2.0	< 20.0	< 20.0	< 2.0	50.0	< 20.0	< 2.0	< 50.0	2.0			<
12/4/2013			0.80	0.330	3.25	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 1.0	<20.0	<20.0	< 2.0	< 20.0	< 20.0	< 2.0	70.0	< 20.0	< 2.0	< 50.0	< 0.2			<
3/12/2014			0.15	< 0.010	4.28	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 10.0	<20.0	20.0	< 2.0	< 20.0	< 20.0	< 2.0	50.0	< 20.0	< 2.0	< 50.0	< 0.2	< 20.0	1130.0	< 50.0
6/4/2014			0.15	< 0.100	4.76	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 10.0	<20.0	20.0	< 2.0	< 20.0	< 20.0	< 2.0	40.0	< 20.0	< 2.0	< 50.0	< 0.2	< 20.0	1620.0	< 70.0
9/9/2014	8.91	15.80	0.20	< 0.100	4.38	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 10.0	<20.0	40.0	2.0	< 20.0	< 20.0	< 2.0	120.0	< 20.0	< 2.0	< 50.0	< 0.2	50.0	5470.0	130.0
12/11/2014	8.10	15.10	0.82	< 0.100	0.44	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 10.0	<20.0	<20.0	2.0	< 20.0	< 20.0	< 2.0	40.0	< 20.0	< 2.0	< 50.0	< 0.2	70.0	1130.0	240.0
3/3/2015	14.70	11.00	10.40	0.110	1.69	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 10.0	<20.0	20.0	2.0	< 20.0	< 20.0	< 2.0	70.0	< 20.0	< 2.0	< 50.0	< 0.2	< 20.0	1530.0	70.0
6/3/2015	2.60	11.50	0.16	< 0.100	3.22	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 10.0	<20.0	<20.0	2.0	< 20.0	< 20.0	< 2.0	40.0	< 20.0	< 2.0	< 50.0	< 0.2	< 20.0	310.0	60.0
9/2/2015	5.62	15.70	0.72	0.390	2.81	< 10.0	< 10.0	< 1.0	< 5.0	10.0	< 10.0	<20.0	20.0	< 2.0	< 20.0	< 20.0	< 2.0	80.0	< 20.0	< 2.0	< 50.0	< 0.2	70.0	4970.0	< 130.0

Date	BOD	TSS	NH3	NO2	NO3	CNt	CNa	Be	As	Cd	Cr6	Cr3	Cu	Pb	Th	Ni	Ag	Zn	Sb	Se	Phen	Hg	Al	P	Fe
12/2/2015	2.74		0.13	< 0.100	6.84	< 10.0	< 10.0	< 1.0	< 5.0	0.5	< 10.0	< 5.0	19.0	< 5.0	< 5.0	< 5.0	< 2.0	51.0	< 10.0	< 5.0	< 50.0	< 0.2	< 50.0	3150.0	< 54.0
3/2/2016	8.30	8.00	0.27	0.150	9.83	< 10.0	< 10.0	< 1.0	< 5.0	0.5	< 10.0	< 5.0	22.0	< 5.0	< 5.0	< 5.0	< 2.0	50.0	< 10.0	< 5.0	< 50.0	< 0.2	< 50.0	1120.0	< 50.0
6/7/2016	2.80	11.00	0.24	< 0.100	4.24	< 10.0	< 10.0	< 1.0	< 5.0	0.5	< 10.0	< 5.0	40.0	5.0	< 5.0	5.0	< 2.0	58.0	< 10.0	< 5.0	< 50.0	< 0.2	< 50.0	2440.0	125.0
9/6/2016	3.60	8.00	< 0.10	0.100	5.01	< 10.0	< 10.0	< 1.0	< 5.0	0.5	< 10.0	< 5.0	29.0	5.0	< 5.0	< 5.0	< 2.0	46.0	< 10.0	< 5.0	< 50.0	< 0.2	< 50.0	2930.0	54.0

Text334:

	BOD	TSS	NH3	NO2	NO3	CNt	CNa	Be	As	Cd	Cr6	Cr3	Cu	Pb	Th	Ni	Ag	Zn	Sb	Se	Phen	Hg	Al	P	Fe
Count	16	15	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	15	15	15
# Detected	16	15	18	10	19	0	0	0	0	0	0	0	12	6	0	1	0	18	1	0	0	2	6	15	2
Average	7.14	10.34	1.05	0.165	5.90	10.0	10.0	4.3	5.0	8.0	9.5	16.8	22.6	3.6	16.8	16.9	2.0	56.0	17.9	2.8	50.0	0.3	2198.7	2198.7	82.9
Maximum	16.00	16.20	10.40	0.490	35.00	10.0	10.0	10.0	5.0	10.0	10.0	20.0	40.0	20.0	20.0	20.0	2.0	120.0	20.0	5.0	50.0	2.0	140.0	5470.0	240.0
CV	0.6	0.4	2.3	0.7	1.2	0.0	0.0	1.0	0.0	0.5	0.2	0.4	0.3	1.2	0.4	0.4	0.0	0.4	0.2	0.5	0.0	1.4	0.7	0.7	0.7

Bold => mg/L Normal => ug/L