

MUNICIPAL NPDES PERMIT

issued to

Permittee:

Town of Southington
999 Meriden Waterbury Road
Southington, Connecticut 06479

Location Address:

Town of Southington
999 Meriden Waterbury Turnpike
Plantsville, Connecticut 06479

Facility ID: 131-001**Permit ID: CT0100536****Permit Expires:****Receiving Stream: Quinnipiac River****Design Flow Rate: 7,400,000 MGD**

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 Southington**, ("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 \$2,807.50.

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.
- "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.
- "Completion of the facility expansion and upgrade"** means when the engineer provides certificates of substantial completion for all of the treatment structures.
- "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 permittees 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 modification of the existing system or installation of a new system would protect the waters of the state from pollution. The Commissioner's decision is based on application no. 200901266 for permit reissuance received on May 5, 2009 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 sewerage 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 may be authorized by the permittee until the discharger has registered the discharge under the "General Permit for Domestic Sewage" reissued by the Commissioner on June 12, 2002 pursuant to Section 22a-430b of the CGS.
- (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 shall contain or cause in the receiving stream a visible oil sheen, floating solids, visible discoloration, or foaming to the greatest extent practicable.
- (F) No discharge 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 BOD₅ 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 permittees' sludge use or disposal practice. A change in the permittees' 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.
- (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 BOD₅ 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 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 recycle pumping systems, aeration equipment, aeration tank cycling, mixing equipment, anoxic basin, chemical feed systems, effluent filters or any other process equipment necessary for the optimal removal of pollutants. The permittee shall not bypass or fail to operate any of the approved process equipment without the written approval of the Commissioner.
- (P) On or before 2.5 years from issuance each anaerobic digester unit shall be sampled, in a manner approved in writing by the Commissioner, to determine the amount of grit and depth of scum blanket. The results of the sampling shall be maintained at the POTW and, upon request, the permittee shall submit to the Commissioner a copy of the sampling data.
- (Q) The permittee is hereby authorized to accept septage at the treatment facility or other locations as approved by the Commissioner.
- (R) 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.
- (S) The terms and conditions of this Permit, including but not limited to any effluent limit or similar requirement, remain in effect and enforceable until this permit expires. However, the inclusion of any such term or condition in this permit, including but not limited to, any effluent limit or similar requirement, shall not be deemed or construed to be a waiver of the permittee's ability to contest such term or condition should any such term or condition be included in any subsequent permit issued by the Commissioner.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- (A) The Permittee's discharge(s) shall not exceed and shall otherwise conform to the specific terms and conditions listed in this permit. The Permittee's discharge shall be restricted by, and shall be monitored in accordance with Tables A through H 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.
- (C) Each year for the period beginning April 1st through and including October 31st (referred to in this paragraph as "the season") for discharge (DSN) 001-1, the Permittee shall comply with the following limits, which are independent separate requirements; each being enforceable independent of the other:
- (i) the seasonal average for total phosphorus shall not exceed 0.7 mg/l. This seasonal average shall be calculated by determining the average monthly discharge of total phosphorus for each month during the season, adding the monthly averages together and dividing by 7; and
 - (ii) For no two consecutive months during the season shall the average monthly discharge for total phosphorus exceed 0.7 mg/l.

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, Tables A and 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.

<u>Parameter</u>	<u>Minimum Level</u>
Aluminum	0.050 mg/l
Antimony, Total	0.010 mg/l
Arsenic, Total	0.005 mg/l
Beryllium, Total	0.001 mg/l
Cadmium, Total	0.0005 mg/l
Chlorine, Total Residual	0.050 mg/l
Chromium, Total	0.005 mg/l
Chromium, Total Hexavalent	0.010 mg/l
Copper, Total	0.005 mg/l
Cyanide, Total	0.010 mg/l
Iron, Total	0.040 mg/l
Lead, Total	0.005 mg/l
Mercury, Total	0.0002 mg/l
Nickel, Total	0.005 mg/l
Phosphorus, Total	0.010 mg/l
Selenium, Total	0.005 mg/l

Silver, Total	0.002 mg/l
Thallium, Total	0.005 mg/l
Zinc, Total	0.020 mg/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 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 limit 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 limit 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 limits expressed as NOAEL = 100%, compliance shall be demonstrated when the results of a valid pass/fail Acute Aquatic Toxicity Test indicate 90% or greater survival in the effluent sample 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) Quinnipiac 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 Quinnipiac 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 Quinnipiac 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.

SECTION 7: RECORDING AND REPORTING REQUIREMENTS

- (A) The results of chemical analyses and any aquatic toxicity test required above in Section 5 and the referenced Attachment 1 shall be entered on the Discharge Monitoring Report (DMR) and reported to the Bureau of Water Protection and Land Reuse. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR must be received at the following address by the 15th day of the month following the month in which samples are collected.

ATTN: Municipal Wastewater Monitoring Coordinator
 Connecticut Department of Energy and Environmental Protection
 Bureau of Water Protection and Land Reuse, Planning and Standards Division
 79 Elm Street
 Hartford, Connecticut 06106-5127

- (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 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) Unless otherwise approved in writing by the Commissioner, no later than one-hundred and twenty (120) days after the issuance of this permit, the Permittee shall begin reporting to the Department electronically using NetDMR, a web-based tool that allows Permittees to electronically submit discharge monitoring reports (DMRs) and other required reports through a secure internet connection. Specific requirements regarding subscription to NetDMR and submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

(a) NetDMR Subscriber Agreement

On or before fifteen (15) days after the issuance of this permit, the Permittee and/or the person authorized to sign the Permittee's discharge monitoring reports ("Signatory Authority") as described in RCSA Section 22a-430-3(b)(2) shall contact the Department and initiate the subscription process for electronic submission of Discharge Monitoring Report (DMR) information. On or before ninety (90) days after issuance of this permit the Permittee shall submit a signed and notarized copy of the *Connecticut DEP NetDMR Subscriber Agreement* to the Department.

(b) Submittal of Reports Using NetDMR

Unless otherwise approved by the Commissioner, on or before one-hundred and twenty (120) days after issuance of this permit, 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.

(c) Submittal of NetDMR Opt-Out Requests

If the Permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for electronically submitting DMRs and reports, the Commissioner may approve the submission of DMRs and other required reports in hard copy form ("opt-out request"). Opt-out requests must be submitted in writing to the Department for written approval on or before fifteen (15) days prior to the date a Permittee would be required under this permit to begin filing DMRs and other reports using NetDMR. This demonstration shall be valid for twelve (12) months from the date of the Department's approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to the Department using NetDMR unless the Permittee submits a renewed opt-out request and such request is approved by the Department.

All opt-out requests and requests for the NetDMR subscriber form should be sent to the following address:

Attn: NetDMR Coordinator
Connecticut Department of Energy and Environmental Protection
Water Permitting and Enforcement Division – 2nd Floor
79 Elm Street
Hartford, CT 06106-5127

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 that an Aquatic toxicity effluent limitation has been exceeded, 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 that the Acute Aquatic Toxicity limit has been exceeded, 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) 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, Planning and Standards Division, Municipal Facilities Section (860) 424-3704, the Department of Public Health, Water Supply Section (860) 509-7333 and Recreation Section (860) 509-7297, and the local Director of Health shall be notified within 2 hours of the permittee learning of the event by telephone during normal business hours. If the discharge or bypass occurs outside normal working hours (8:30 a.m. to 4:30 p.m. Monday through Friday), notification shall be made within 2 hours of the permittee learning of the event to the Emergency Response Unit at (860) 424-3338 and the Department of Public Health at (860) 509-8000. A written report shall be submitted to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division, Municipal Facilities Section within five days of the permittee learning of each occurrence, or potential occurrence, of a discharge or bypass of untreated or partially treated sewage.

The written report shall contain:

- (a) The nature and cause of the bypass, permit violation, treatment component failure, and/or equipment failure,
 - (b) the time the incident occurred and the anticipated time which it is expected to continue or, if the condition has been corrected, the duration,
 - (c) the estimated volume of the bypass or discharge of partially treated or raw sewage,
 - (d) the steps being taken to reduce or minimize the effect on the receiving waters, and
 - (e) the steps that will be taken to prevent reoccurrence of the condition in the future.
- (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 of this Section, the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse Planning and Standards Division, Municipal Facilities Section except, if 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 of this Section, the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division, Municipal Facilities Section except, if 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 of this Section, the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division, Municipal Facilities Section 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.

SECTION 9: COMPLIANCE SCHEDULES

- (A) The permittee shall comply with the following requirements regarding **phosphorus** for DSN 001-1, in accordance with the following schedule:
- (1) Beginning April 1, 2013, the permittee shall comply with the total phosphorus limit **identified in footnotes 3 and 4 of Table A of this permit as Total Phosphorus (A)**.
 - (2) On or before **December 15, 2017** the permittee shall retain one or more qualified consultants acceptable to the Commissioner to prepare the documents and implement or oversee the actions required by this permit and shall, by that date, notify the Commissioner in writing of the identity of such consultant(s). The municipality shall retain one or more qualified consultants acceptable to the Commissioner until this permit is fully complied with, and, within ten days after retaining any consultant other than the one originally identified under this paragraph, the municipality shall notify the Commissioner in writing of the identity of such other consultant. The consultant(s) retained shall be a qualified professional engineer licensed to practice in Connecticut. The permittee shall submit to the Commissioner a description of a consultant's education, experience and training which is relevant to the work required by this permit within ten days after a request for such a description. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable consultant unacceptable.
 - (3) On or before **October 31, 2018**, the permittee shall submit to the Commissioner for his review and written approval a comprehensive and thorough engineering report which evaluates: a) the alternatives to achieve compliance with the limits identified in Table A of this permit as Total Phosphorus(B) and Total Phosphorus (C); b) states in detail the most expeditious schedule for performing each alternative, c) lists all permits and approvals required for each alternative, including but not limited to, any permits required under sections 22a-32, 22a-42a, 22a-342, 22a-361, 22a-368 or 22a-430 of the Connecticut General Statutes; d) proposes a preferred alternative with supporting justification therefor; and e) proposes a detailed program and schedule to carry out the preferred alternative, including but not limited to, a schedule for applying for and obtaining all permits and approvals required for such alternative. The schedule shall provide for completion of all actions necessary to achieve compliance with the limits identified in Table A of this permit as Total Phosphorus (B) and Total Phosphorus (C), as soon as possible, but in no event later than **April 1, 2022**.
 - (4) Unless another deadline is specified in writing by the Commissioner, on or before **three hundred sixty-five (365) days** after the Commissioner's written approval of the report described in the preceding paragraph, the permittee shall (1) submit for the Commissioner's review and written approval, contract plans and specifications to implement the alternative approved in writing by the Commissioner to achieve compliance with the limits identified in Table A of this permit as Total Phosphorus (B) and Total Phosphorus (C); and (2) submit applications for all permits and approvals required under Sections 22a-32, 22a-42a, 22a-342, 22a-361, 22a-368 or 22a-430 of the Connecticut General Statutes to implement the alternative approved in writing by the Commissioner to achieve compliance with the limits identified in Table A of this permit as Total Phosphorus(B) and Total Phosphorus (C). The permittee shall use best efforts to obtain all required permits and approvals.
 - (5) In accordance with the schedule approved in writing by the Commissioner, but in no event later than **April 1, 2020**, the permittee shall begin construction of the contract plans and specifications approved in writing by the Commissioner to achieve compliance with the limits identified in Table A of this permit as Total Phosphorus (B) and Total Phosphorus (C). Within fifteen days after beginning such actions, the permittee shall certify to the Commissioner in writing that construction, as required by this paragraph, has begun.
 - (6) In accordance with the schedule approved in writing by the Commissioner, but in no event later than **April 1, 2022**, the permittee shall complete the actions approved in writing by the Commissioner necessary to achieve compliance with the limits identified in Table A of this permit as Total Phosphorus (B) and Total Phosphorus (C). Within fifteen days after completing such actions, the permittee shall certify to the Commissioner in writing that such actions, as required by this paragraph, have been completed.
 - (7) The permittee may request that the Commissioner approve, in writing, revisions to any document previously approved by the Commissioner hereunder in order to make such document consistent with law or for any other appropriate reason.
- (B) With respect to the requirements of paragraph 9(A) of this section the permittee shall submit to the Commissioner **semi-annual** status reports beginning **sixty** days after the date of approval of the report referenced in paragraph (9)(A)(3) of this Section. Status reports shall include, but not be limited to, a detailed description of progress made by the permittee in performing actions required by this Section of the permit in accordance with the approved schedule including, but not

limited to, development of engineering plans and specifications, construction activity, contract bidding, operational changes, preparation and submittal of permit applications, and any other actions required under paragraph (9) (A) of this Section.

- (C) The permittee shall use best efforts to submit to the Commissioner all documents required by this Section of the permit in a complete and approvable form. If the Commissioner notified the permittee that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and the permittee shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within thirty days of the Commissioner's notice of deficiencies. In approving any document or other action under this Compliance Schedule, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Section of the permit. Nothing in this paragraph shall excuse noncompliance or delay.
- (D) Dates. The date of submission to the Commissioner of any document required by this section of the permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this section of the permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this Section of the permit means calendar day. Any document or action which is required by this Section only of the permit, to be submitted, or performed, by a date which falls on, Saturday, Sunday, or, a Connecticut or federal holiday, shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or Connecticut or federal holiday.
- (E) Notification of noncompliance. In the event that the permittee becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Section of the permit or of any document required hereunder, the permittee shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, the permittee shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and the permittee shall comply with any dates which may be approved in writing by the Commissioner. Notification by the permittee shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
- (F) Notice to Commissioner of changes. Within fifteen days of the date the permittee becomes aware of a change in any information submitted to the Commissioner under this Section of the permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the permittee shall submit the correct or omitted information to the Commissioner.
- (G) Submission of documents. Any document, other than a DMR, ATMR or MOR required to be submitted to the Commissioner under this Section of the permit shall, unless otherwise specified in writing by the Commissioner, be directed to:

Stacy Pappano
Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
Planning and Standards Division
79 Elm Street
Hartford, Connecticut 06106-5127

This permit is hereby issued on

Betsey Wingfield
Bureau Chief
Bureau of Water Protection and Land Reuse

BW/sp

ATTACHMENT 1

Tables A through H

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): 10.8 cfs						In-stream Waste Concentration (IWC): 51.5 %				
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 ²	Sample Freq.	Sample Type		
Alkalinity	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	MOR	
Carbonaceous Biochemical Oxygen Demand (5 day), See remark D	mg/l	25	50	3/Week	Daily Composite	NA	NR	NA	DMR/MOR	
Escherichia coli (May 1 st through September 30 th), see remarks (B) and (C) below	Colonies per100 ml	NA	NA	NR	NA	410	3/Week	Grab	DMR/MOR	
Flow	MGD	-----	-----	Continuous ¹	Average Daily Flow	NA	NR	NA	DMR/MOR	
Nitrogen, Ammonia (total as N) April May June July - September October November - March	mg/l	8 6 4 2 4 NA	-----	3/Week 3/Week 3/Week 3/Week 3/Week Monthly	Daily Composite	NA	NR	NA	DMR/MOR DMR/MOR DMR/MOR DMR/MOR DMR/MOR 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	-----	Weekly	Daily Composite	NA	NR	NA	MOR	

Phosphorus (A) , Total ^{3/4} See Remark E April 1 st through October 31 st November 1 st through March 30 th	mg/l	---- NA	NA -----	2/Week Monthly	Daily Composite	NA	NR	NA	MOR	*
Phosphorus (B) , Total ⁵ April 1 st through October 31 st November 1 st through March 30 th	mg/l	0.14 NA	0.28 -----	2/Week Monthly	Daily Composite	NA	NR	NA	DMR/MOR	*
Phosphorus, Total April 1 st through October 31 st November 1 st through March 30 th	lbs/day	----- NA	NA -----	2/Week Monthly	Daily Composite	NA	NR	NA	MOR	
Phosphorus (C) , Total ⁶ (Average Seasonal Load Cap) October 31 st	lbs/day	-----	NA	Weekly	Daily Composite	Calculated	NA	NA	DMR/MOR	
Solids, Settleable	ml/l	NA	NA	NR	NA	-----	Work Day	Grab	MOR	
Solids, Total Suspended, See remark D	mg/l	30	50	3/Week	Daily Composite	NA	NR	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 1 st through September 30 th), See remark A	mW,s/cm ²	NA	NA	NR	NA	30,000	4/Work Day	Grab	MOR	
UV Transmittance (May 1 st through September 30 th), See remark A	%	NA	NA	NR	NA	-----	4/Work Day	Grab	MOR	

TABLE A – CONDITIONS

Footnotes:

- ¹ 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.
- ² The instantaneous limits in this column are maximum limits except for Dissolved Oxygen and UV Dose which are minimum limits.
- ³ For the period beginning April 1st through and including October 31st, in no two consecutive months shall the average monthly limit exceed 0.7 mg/l.
- ⁴ For the season, beginning April 1st through and including October 31st, the seasonal average shall not exceed 0.7 mg/l. The seasonal average shall be calculated by determining the average monthly discharge of total phosphorus for each month of the season (April through and including October) adding the average monthly discharges together and dividing by 7.
- ⁵ This limit shall be effective beginning **April 1, 2022**.
- ⁶ This limit shall be effective beginning **April 30, 2022** The Average Seasonal Load Cap shall be calculated as follows: The permittee's discharge shall not exceed the total phosphorus **Average Seasonal Load Cap of 7.53 lb/day of total phosphorus per day for any two consecutive calendar years or any two of three consecutive calendar years.**

Remarks:

- A** Ultraviolet disinfection shall be utilized from May 1st through September 30th.
- B** The geometric mean of the Escherichia coli bacteria values for the effluent samples collected in a period of thirty (30) consecutive days during the period from May 1st through September 30th shall not exceed 126 per 100 milliliters.
- C** The Escherichia coli bacteria values for any single effluent sample collected during the period from May 1st through September 30th shall not exceed 410 per 100 milliliters.

TABLE A – CONDITIONS (continued)

D The Average Weekly discharge Limitation for BOD₅ and Total Suspended Solids shall be 1.5 times the Average Monthly Limit listed above.

E The limits for Total Phosphorus (A) in footnotes 3 and 4 are separate and independent requirements; each is enforceable independent of the other.

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): 10.8 cfs			In-stream Waste Concentration (IWC): 51.5 %		
PARAMETER	Units	FLOW/TIME BASED MONITORING			REPORT FORM
		Average Monthly Minimum	Sample Freq.	Sample type	
Carbonaceous Biochemical Oxygen Demand (5 day) Percent Removal ¹	% of Influent	85	3/Week	Calculated ²	DMR/MOR
Solids, Total Suspended Percent Removal ¹	% of Influent	85	3/Week	Calculated ²	DMR/MOR
TABLE B – CONDITIONS					
Footnotes:					
¹ The discharge shall not exceed 15% of the average monthly influent CBOD ₅ and suspended solids (Table E, Monitoring Location G).					
² Calculated based on the average monthly results described in Table A. Removal efficiency = ((Inf. (BOD or TSS) – Eff. (BOD or TSS)) / Inf. (BOD or TSS)) X 100					

TABLE C

Discharge Serial Number (DSN): 001-1			Monitoring Location: T			
Wastewater Description: Sanitary Sewage						
Monitoring Location Description: Final Effluent						
Allocated Zone of Influence (ZOI): 10.8 cfs			In-stream Waste Concentration (IWC): 51.5 %			
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	*
Antimony, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
NOAEL Static 48Hr Acute D. Pulex ¹ NOAEL=100%	% survival	≥90%	Quarterly	Daily Composite	ATMR/DMR	
NOAEL Static 48Hr Acute Pimephales ¹ NOAEL=100%	% survival	≥90%	Quarterly	Daily Composite	ATMR/DMR	
Arsenic, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Beryllium, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
BOD ₅	mg/l	-----	Quarterly	Daily Composite	ATMR	
Cadmium, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Chromium, Hexavalent	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Chromium, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Chlorine, Total Residual	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Copper, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Cyanide, Amenable	mg/l	-----	Quarterly	Daily Composite	ATMR	
Cyanide, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Iron, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Lead, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Mercury, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Nickel, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Nitrogen, Ammonia (total as N)	mg/l	-----	Quarterly	Daily Composite	ATMR	
Nitrogen, Nitrate, (total as N)	mg/l	-----	Quarterly	Daily Composite	ATMR	
Nitrogen, Nitrite, (total as N)	mg/l	-----	Quarterly	Daily Composite	ATMR	
Phosphorus, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	
Phenols, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	
Selenium, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Silver, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Suspended Solids, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	
Thallium, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
Zinc, Total	mg/l	-----	Quarterly	Daily Composite	ATMR	*
TABLE C - CONDITIONS						
Remarks: ¹ The results of the Toxicity Tests are recorded in % survival. The permittee shall report <u>% survival</u> 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	2/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	
Carbonaceous Biochemical Oxygen Demand (5 day)	mg/l	Monthly average	3/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	3/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
Carbonaceous 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 at draw off			
PARAMETER	INSTANTANEOUS MONITORING		REPORTING FORM
	Units	Grab Sample Freq.	
Arsenic, Total	mg/kg	Monthly	DMR
Beryllium, Total	mg/kg	Monthly	DMR
Cadmium, Total	mg/kg	Monthly	DMR
Chromium, Total	mg/kg	Monthly	DMR
Copper, Total	mg/kg	Monthly	DMR
Lead, Total	mg/kg	Monthly	DMR
Mercury, Total	mg/kg	Monthly	DMR
Nickel, Total	mg/kg	Monthly	DMR
Nitrogen, Ammonia *	mg/kg	Monthly	DMR*
Nitrogen, Nitrate (total as N) *	mg/kg	Monthly	DMR*
Nitrogen, Organic *	mg/kg	Monthly	DMR*
Nitrogen, Nitrite (total as N) *	mg/kg	Monthly	DMR*
Nitrogen, Total *	mg/kg	Monthly	DMR*
pH *	S.U.	Monthly	DMR*
Polychlorinated Biphenyls	mg/kg	Monthly	DMR
Solids, Fixed	%	Monthly	DMR
Solids, Total	%	Monthly	DMR
Solids, Volatile	%	Monthly	DMR
Zinc, Total	mg/kg	Monthly	DMR
<p>(*) required for composting or land application only</p> <p>Testing for inorganic pollutants shall follow “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods”, EPA Publication SW-846 as updated and/or revised.</p>			

TABLE H

Discharge Serial Number: 001-1	Monitoring Location: L		
Wastewater Description: Digested sludge			
Monitoring Location Description: Each Anaerobic Digestion Unit			
PARAMETER	INSTANTANEOUS MONITORING		REPORTING FORM
	Sample Frequency	Sample Type	
Temperature	Weekly	Grab	MOR
Alkalinity	Weekly	Grab	MOR
Volatile Acids	Weekly	Grab	MOR
pH	Weekly	Grab	MOR

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: Town of Southington

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT No.: CT0100536 APPLICATION #: 200901266 FACILITY ID. 131-001

Table with 2 columns: Mailing Address and Location Address. Includes fields for Street, City, State, Zip, Contact Name, and Phone No.

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 [X] NO []
POLLUTION PREVENTION [] TREATMENT REQUIREMENT []
WATER QUALITY REQUIREMENT [X] OTHER []

OWNERSHIP CODE

Private [] Federal [] State [] Municipal (town only) [X] Other public []

DEP STAFF ENGINEER Stacy Pappano/Rowland Denny

PERMIT FEES

Table with 3 columns: Discharge Code, DSN Number, Annual Fee. Row 1: 111000e, 001-1, \$2,807.50

FOR NPDES DISCHARGES

Drainage Basin Code: 5200 Water Quality Classification: B
Segment: Quinnipiac River: 5200-00-3 R1

NATURE OF BUSINESS GENERATING DISCHARGE

Municipal Sanitary Sewage Treatment

PROCESS AND TREATMENT DESCRIPTION (by DSN)

Advanced biological treatment, denitrification effluent filters, and seasonal UV disinfection

RESOURCES USED TO DRAFT PERMIT

- [X] Federal Effluent Limitation Guideline 40CFR 133 Secondary Treatment Category
[] Performance Standards
[] Federal Development Document name of category
[] Department File Information
[X] Connecticut Water Quality Standards

- Anti-degradation Policy*
- Coastal Management Consistency Review Form*
- Other - Explain*

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

- Secondary Treatment (Section 22a-430-4(r) of the Regulations of Connecticut State Agencies)*
- Case-by-Case Determination (See Other Comments)*
- In order to meet in-stream water quality (See General Comments)*
- Anti-degradation policy*

GENERAL COMMENTS

The Town of Southington (“Southington”) operates a municipal water pollution control facility (“the facility”) located at 999 Meriden Waterbury Turnpike, Plantsville. The facility is designed to treat and discharge up to 7.4 million gallons a day of effluent into the Quinnipiac River. The facility currently uses advanced biological treatment, denitrification effluent filters and seasonal UV disinfection to treat effluent before being discharged. Pursuant to Conn. Gen. Stat. § 22a-430, the Department of Energy and Environmental Protection has issued Southington a permit for the discharge from this facility. Southington has submitted an application to renew its permit. The Department has made a tentative determination to approve Southington’s application and has prepared a draft permit consistent with that determination.

The most significant changes from the current permit are the decrease in the frequency of copper monitoring due to reduced levels in the discharge and the addition of limits on total phosphorus along with a compliance schedule for implementation of improvements to meet those new limits.

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). Southington 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 for all but ammonia and total phosphorus. Therefore, water quality based limits for ammonia and total phosphorus were included in the permit. The permit includes revised bacteria monitoring requirements (e.g. fecal coliform and e. coli), and Aluminum and Iron monitoring to be consistent with the most recent CT Water Quality Standards.

Southington began operation of a newly constructed effluent nitrogen removal filter in September of 2009. Six years of weekly monitoring data provided during the permit renewal process has shown that since the operation of the effluent nitrogen removal filter began, a fifty percent decrease in maximum copper concentrations has occurred. With this data it has been determined that there is a low probability of exceeding water quality limits for copper. As such, the draft permit proposes to change the monitoring requirements for copper, from the existing weekly monitoring to quarterly monitoring.

A compliance schedule has been included in the draft permit for the reduction of phosphorus:

Currently, the facility discharges into a portion of the Quinnipiac River that has been identified on Connecticut’s List of Waters Not Meeting Water Quality Standards. Nutrient enrichment is a contributing cause of the impairment to this portion of the Quinnipiac River. To address this impairment, the Department of Energy and Environmental Protection (“the Department”) developed an interim nutrient management strategy for freshwater non-tidal streams. The strategy focuses on phosphorus, since phosphorus is the primary limiting nutrient in freshwater systems. The draft permit includes a compliance schedule that will reduce phosphorus in the effluent from the facility in two steps. The initial step, beginning in 2013, is for Southington to meet a limit applicable during April through and including October. The limit, calculated over the season, is 0.7 mg/l per month and in addition, during this season, Southington’s average monthly discharge cannot exceed 0.7 mg/l for two consecutive months. This approach targets the critical ‘growing’ season (April through October) when phosphorus is more likely to be taken up by sediment and biomass because of low flow and warmer conditions. During winter months aquatic plants are dormant and flows

are higher providing constant flushing of phosphorus through aquatic systems with a less likely chance that it will settle out into the sediment. In addition to its current treatment processes, the Department anticipates that Southington will employ chemical treatment to meet this initial limit. The second step provides Southington nine years to plan, design and construct additional facility improvements to meet a more stringent water quality standard based limit discussed below.

This compliance schedule should provide significant environmental benefits. Currently, the facility has no limit on phosphorus in its effluent. As such, the initial technology-based limit noted above, will result in a meaningful reduction in the amount of phosphorus being discharged into the Quinnipiac River by the facility. Providing this level of phosphorus removal now and allowing an extended schedule to meet a more stringent water quality standards based limits provides an environmental benefit significantly above that had the Department not imposed any interim limit and required the more stringent limit to be met within one permit cycle.

This environmental benefit will also be achieved in a timely manner. Southington is part of a coalition of towns that have reached agreement on a schedule that will result in environmental improvements. The benefits of this agreement mean that real reductions in the amount of phosphorus discharged into the Quinnipiac River will not be delayed by administrative hearings and possibly other legal action.

The Department also notes that the proposed compliance schedule is site specific; it is based upon and limited to the particular circumstances present in this situation. It is not, and is not intended to be, a blueprint for any other facility. Rather, the Department will assess the need for and propose the use of a compliance schedule based on the particular circumstances of each situation. In this situation, for reasons discussed in this fact sheet, the proposed compliance schedule is warranted.

The lower water quality standard based limits for phosphorus was calculated in the following manner:

A nutrient watershed analysis was conducted for the Quinnipiac River watershed that indicated significant phosphorus loading contributions from certain water pollution control facilities ("WPCF") and one industrial facility that discharge into the river. The facilities include the Cheshire WPCF, Meriden WPCF, Southington WPCF, Wallingford WPCF and Cytec Industries. The seasonal (April 1st through October 31st) nutrient loading from each facility discharging to the watershed was reduced to achieve an enrichment factor ("EF") of 8.4 or lower throughout the river. An EF is representative of the amount of anthropogenic phosphorus loading to river and streams. It is calculated by dividing the current total seasonal phosphorus load by a modeled total phosphorus load under complete forested conditions at a particular point along the river. The goal of an 8.4 enrichment factor represents a threshold at which a significant change is seen in the algal communities indicating highly enriched conditions and impacts to aquatic life uses.

The current enrichment factor at the Southington WPCF is 30.8. The final proposed seasonal load allocation for Southington to achieve an EF of 8.4 is 7.53 lbs/day. This load equates to a proposed treatment performance limit of 0.20 mg/L multiplied by the current seasonal average flow of 4.53 MGD. Southington expressed an interest in going to 0.10 mg/l so that they would be able to fully utilize their design capacity. Their request has been incorporated into this permit.

This limit is consistent with the narrative policy statements in the CT WQS (Paragraph 19, page 6 and SURFACE WATER CLASSIFICATIONS AND CRITERIA, CLASS B DESIGNATED USES AND CRITERIA, page 12) and where the facility discharges its effluent is expected to result in the attainment and maintenance of all designated uses for that portion of the Quinnipiac River. If the Department develops numeric criteria in the future, or it is found that the current limit is not sufficient to achieve designated uses, the facility may need to meet a more stringent limit.

Translating the average performance level of 7.53 lbs/day into enforceable permit limits requires consideration of effluent variability and frequency of monitoring in order to comply with federal permitting regulations. The procedure used is as follows:

1. Consider the permit performance level (0.10 mg/L) to be equivalent to the Long Term Average (LTA)
2. Calculate the Maximum Daily Limit by multiplying the LTA by the 99th percentile LTA Multiplier appearing in Table 5-2 of the Technical Support Document (page 103 of EPA/505/2-90-001) corresponding to a Co-efficient of Variation (CV) of 0.6% to account for effluent variability:

$$\text{Maximum Daily Limit: } 0.10 \text{ mg/L} * 3.11 = 0.311 \text{ mg/L}$$

3. Calculate the Average Monthly Limit by multiplying the LTA by the 95th percentile LTA Multiplier appearing in Table 5-2 of the Technical Support Document corresponding to a CV of 0.6% to account for effluent variability and either n=4 samples/month or n=10 samples/month as appropriate for the facility to account for the precision of estimating the true monthly average based on an average for the days the effluent was sampled:

$$\text{Average Monthly Limit} = 0.10 \text{ mg/l} * 1.55 = 0.16 \text{ mg/l}$$

Summary of Limits for Southington WPCF

Average Daily Load = 7.53 lbs/day

Total Seasonal Load = 7.53 lbs/day * 214 Days/Season) = 1611.42 lbs

Maximum Daily Limit = 0.31 mg/L

Average Monthly Limit = 0.16 mg/L

With respect to the foregoing summary of limits, it should be noted that compliance with the Maximum Daily Limit or the Average Monthly Limit during the time the seasonal load limit is calculated will not ensure compliance with the Total Seasonal Load limit. For example, if the Permittee discharged phosphorus at the maximum permitted by either the Maximum Daily Limit or the Average Monthly Limit throughout the time that the seasonal load is calculated, the Permittee would exceed the Total Seasonal Load limit. For this reason, the Permittee must monitor compliance with the Total Seasonal Load limit independent of its compliance with the Maximum Daily Limit and the Average Monthly Limit.

WATER QUALITY LIMIT CALCULATIONS

See attached



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**Notice of Tentative Determination to Approve
NPDES Permit Renewal
Applicant: Town of Southington
Application No. 200901266
City/Town: Southington**

The Commissioner of Energy and Environmental Protection hereby gives notice that a tentative determination has been made to approve the following application submitted under Section 22a-430 of the Connecticut General Statutes to renew a permit to discharge treated effluent into the waters of the state.

Applicant's Name and Address: Town of Southington, 75 Main Street, Southington, CT 06489
Contact Name and Phone No.: John DeGioia: 860-628-8530
Type of Permit and #: NPDES – CT0100536
Type of Facility: Domestic wastewater treatment
Facility Location: 999 Meriden Waterbury Turnpike, Plantsville, CT 06479
Facility design capacity: 7.4 million gallons per day

PROPOSED ACTIVITY/FACILITY

The applicant has previously received a permit from the Department of Energy and Environmental Protection ("Department") authorizing the discharge of up to an annual average daily design flow of 7.4 million gallons a day of advanced treated municipal wastewaters to the Quinnipiac River. The applicant has submitted an application to renew its existing permit. This renewal application is the subject of this notice.

THE DRAFT PERMIT

The Department has prepared a draft permit consistent with the tentative determination to approve Southington's renewal application. This draft is available on the public participation section of the Department's website. In accordance with Sections 22a-430-4(l) and 22a-430-4(r) of the Regulations of Connecticut State Agencies (RCSA), the draft permit contains effluent limitations that meet Connecticut's Water Quality Standards for the following: Ammonia, Aquatic Toxicity, Carbonaceous Biochemical Oxygen Demand (5 day), dissolved oxygen, Escherichia coli, flow, pH, total suspended solids, and Ultraviolet light disinfection (dose).

The draft permit contains an enforceable compliance schedule which requires the applicant to reduce total phosphorus from the discharge and treatment system upgrades to meet new effluent limitations for total phosphorus and to meet new effluent limitations for Escherichia coli.

INFORMATION REQUESTS/PUBLIC COMMENT

Interested persons may obtain a copy of the application from the applicant's contact noted above. The application and supporting documentation are also available for inspection at the Department of Energy and Environmental Protection, Water Protection and Land Reuse, 79 Elm Street, Hartford, CT from 8:00 am to 4:30 pm and at other times by appointment. Questions may be directed to Stacy Pappano of the Municipal Facilities Section at (860) 424-3018.

All interested persons are invited to express their views on the tentative determination concerning this application. Written comments on the application should be directed to Stacy Pappano, Planning and Standards Division, Water Protection and Land Reuse Bureau, Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127, no later than thirty (30) days from the publication date of this notice. Comments regarding this application may be submitted via electronic mail to: stacy.pappano@ct.gov.

PETITIONS FOR HEARING

The Commissioner may hold a public hearing prior to approving or denying an application if in the Commissioner's discretion the public interest will be best served thereby and shall hold a hearing upon the receipt of a petition signed by at least twenty-five persons. Any petition for a hearing should include the application number noted above and also identify a contact person to receive notifications. A petition may also identify a person who is authorized to engage in discussions regarding the application and, if resolution is reached, withdraw the petition. Original petitions must be *mailed or delivered* within the comment period noted above to: DEEP Office of Adjudications, 79 Elm Street, 3rd floor, Hartford, 06106-5127. Petitions cannot be sent by fax or email. For additional information go to www.ct.gov/deep/adjudications. If a hearing is held, notice of such hearing will be published at least thirty days before any hearing is held.

Dated: 2/1/2013

Denise Ruzicka, P.E.
Director
Planning and Standards Division
Bureau of Water Protection and Land Reuse

The Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer. Persons with a disability who may need information in an alternative format should contact the ADA Coordinator at 860-424-3194 or at DEEP.HRmed@CT.Gov. Persons who are limited English proficient who may need information in another language should contact the Title VI Coordinator at (860) 424-3035 or at DEEP.aoffice@ct.gov. Persons who are hearing impaired should call the State of Connecticut relay number 711. Discrimination complaints should be filed with the Title VI Coordinator.