



NPDES PERMIT

issued to

Permittee:

Town of South Windsor
1540 Sullivan Avenue
South Windsor, CT 06074

Facility Address:

South Windsor WPCF
1 Vibert Road
South Windsor, CT 06074

Permit ID: CT0100510

Design Flow Rate: 3.75MGD

Effective Date: DRAFT

Receiving Waters: Connecticut River

Permit Expires:

SECTION 1: GENERAL PROVISIONS

- (A) This permit is reissued by the Connecticut Department of Energy and Environmental Protection (“Department”) in accordance with Section 22a-430 in Chapter 446k of the Connecticut General Statutes (CGS) and the Regulations of Connecticut State Agencies (RCSA) adopted thereunder, as amended, and Section 402(b) of the Clean Water Act, as amended, 33 U.S.C. 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 (the “State”) to administer a National Pollutant Discharge Elimination System (NPDES) permit program.
- (B) The Town of South Windsor (the “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 subsections (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), (k)(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 Sections 22a-416-1 through 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, in accordance with Section 22a-6f of the CGS, 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 and 22a-424a of the CGS and Sections 22a-430-3(a) and 22a-430-6(b) 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 a "Limit" column on any monitoring table in Attachment 1 means that a limit is not specified but a value must be reported on the DMR, MOR, and/or the ATMR.

"**ATMR**" means Aquatic Toxicity Monitoring Report.

"**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.

"**Biweekly**" 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**" 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.

"**Connecticut Water Quality Standards**" means the regulations adopted under Sections 22a-426-1 through 22a-426-9 of the RCSA, as amended.

"**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**" 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.

"**DMR**" means Discharge Monitoring Report.

"**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.

"**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.

"MGD" means million gallons per day.

"MOR" means Monthly Operating Report.

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

"NAR" means Nutrient Analysis Report submitted pursuant to the General Permit for Nitrogen Discharges.

"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 in 100% undiluted effluent at a CTC of 100%.

"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 continuous monitoring and recording pH or ultraviolet (UV) light meters, Range During Sampling means the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

"µg/l" means micrograms per liter.

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

"Zone of Influence" means the spatial area or volume of receiving water flow within which some degradation of water quality or use impairment is anticipated to occur as a result of a discharge.

SECTION 3: COMMISSIONER'S DECISION

- (A) The Commissioner of Energy and Environmental Protection ("Commissioner") has issued a final decision and found that 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 #202307986 for permit reissuance received on October 30, 2023 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 their 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 the regulations adopted thereunder, as amended. The permit as reissued 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 sewage conveyed to its publicly owned treatment works (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 of the CGS (individual permit); (b) is authorized under Section 22a-430b

of the CGS (general permit); or (c) has been issued an emergency or temporary authorization by the Commissioner under Section 22a-6k of the CGS. All such non-domestic sewage 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 the Department via email to DEEP.MunicipalNPDES@ct.gov of said new discharge.
- (C)** The Permittee shall maintain a system of user charges or dedicated taxes or other fees 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 and dated March 1982, as amended. The Commissioner alone may authorize certain discharges which may not conform to the Model Sewer Ordinance.
- (E)** The Permittee shall ensure that the receiving water body conforms to the Connecticut Water Quality Standards outside of the Zone of Influence specifically assigned to this discharge. This discharge shall not cause or contain:
 - (1)** sludge deposits, solid refuse, floating solids, oils and grease, or scum, except as may result from a discharge from a wastewater treatment facility providing appropriate treatment and none exceeding levels necessary to protect and maintain all designated uses assigned to the classification of the receiving waters pursuant to the Connecticut Water Quality Standards Regulation (RCSA Section 22a-426);
 - (2)** color resulting in obvious discoloration of the surface water;
 - (3)** suspended and settleable solids in concentrations or combinations which would impair the designated uses, be aesthetically objectionable, significantly alter the physical or chemical composition of bottom sediments, and/or adversely impact organisms living in or on the bottom sediment;
 - (4)** silt or sand deposits other than of natural origin except as may result from normal road maintenance and construction activity provided all reasonable controls or best management practices are used in such activities and all designated uses are protected and maintained;
 - (5)** turbidity other than that of natural origin except as may result from a discharge from a wastewater treatment facility providing appropriate treatment, provided all reasonable controls are used to control turbidity and none exceeding levels necessary to protect and maintain all designated uses; or
 - (6)** odor that would impair the designated uses.
- (F)** No discharge from the permitted facility shall cause acute or chronic toxicity in the receiving water body outside of any Zone of Influence 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 ensure that no discharge of untreated wastewater will occur during a failure of a primary power source.
- (H)** The average monthly concentrations of 5-day Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS) in the Permittee's effluent shall not exceed 15% of the respective average monthly concentrations of BOD₅ and TSS in the influent.
- (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 Part 503 of Title 40 of the Code of Federal Regulations (40 CFR 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 planned changes to the Permittee's sludge use or disposal practice. A change in the Permittee's 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 their designee.
- (L) 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 on-site and upon request, the Permittee shall submit to the Commissioner a copy of that record.
- (M) 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.
- (N) Without prior written approval from the Commissioner, the Permittee shall not introduce any chemicals, virgin or otherwise, to the treatment process that were not identified in the permit application referenced in Section 3(A) of this permit, nor in any plans and specifications approved by the Department in accordance with Section 22a-430-3(i) of the RCSA.
- (O) The Permittee is hereby authorized to accept septage at the treatment facility.
- (P) 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 provide monitoring data of the performance of the treatment process in accordance with the Monthly Operating Report (MOR) form incorporated in this permit as Attachment 2.

SECTION 6: SAMPLE COLLECTION, HANDLING and ANALYTICAL TECHNIQUES

- (A) Chemical Analysis

- (1) All samples collected to determine compliance with effluent limitations and conditions established in this permit shall be handled and analyzed in accordance with methods approved under 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. Monitoring parameters which do not have approved methods of analysis defined in 40 CFR 136 or the RCSA shall be sampled and 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 the time of day when the peak hourly flow is normally experienced.
- (5) The term Minimum Level (ML) refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL). MLs may be obtained in several ways: They may be published in a method; they may be sample concentrations equivalent to the lowest acceptable calibration point used by the laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a lab, by a factor.

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	50 µg/l
Antimony, Total	10 µg/l
Arsenic, Total	5 µg/l
Beryllium, Total	1 µg/l
Cadmium, Total	0.5 µg/l
Chlorine, Total Residual	50 µg/l
Chromium, Total	5 µg/l
Chromium, Total Hexavalent	10 µg/l
Copper, Total	5 µg/l
Cyanide, Total	10 µg/l
Iron, Total	40 µg/l
Lead, Total	5 µg/l
Mercury, Total	0.05 µg/l
Nickel, Total	5 µg/l
Phosphorus, Total	0.10 mg/l
Selenium, Total	5 µg/l
Silver, Total	2 µg/l
Thallium, Total	5 µg/l
Zinc, Total	20 µg/l

(a) The Permittee shall comply with a Mercury Minimum Level of 0.05 ug/l, achievable with EPA Methods 245.7 and 1631E.

- (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.
- (9) It is a violation of this permit for a Permittee or their designated agent to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed.

(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 CaCO₃ 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%).

SECTION 7: RECORDING AND REPORTING REQUIREMENTS

- (A) The Permittee shall continue to report the results of chemical analyses and aquatic toxicity tests required by Sections 5 and 6 above and detailed in Attachment 1 below via electronic submission of Discharge Monitoring Reports (DMRs) to the Department using the NetDMR system. Any violation of the limitations specified in this permit shall be accompanied by a detailed explanation. DMRs shall be submitted via NetDMR monthly, no later than the fifteenth (15th) day of the month following the month in which the samples were collected.
- (1) For composite samples not collected by 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, LC₅₀ 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 (ATMR) forms and submitted to the Department via email to DEEP.WPCF@ct.gov by the 15th day of the month following the month in which the samples were collected. The subject line of the email shall include the name of the facility and the keyword "ATMR" to ensure proper routing.
- (C) The results of the process monitoring required in Section 5 of this permit shall be entered on the Monthly Operating Report (MOR) form, included herein as Attachment 2, and submitted to the Department via email to DEEP.WPCF@ct.gov by the 15th day of the month following the month in which the data and samples were collected. The subject line of the email shall include the name of the facility and the keyword "MOR" to ensure proper routing. The MOR report shall also be accompanied by a detailed explanation of any violations of the limitations specified in this permit.

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

- (A) If any Aquatic Toxicity sample analysis indicates toxicity, or that the test was invalid, an additional sample of the effluent shall be collected and tested for Aquatic Toxicity and associated chemical parameters as described above in Sections 5 and 6, and the results shall be reported to the Department via the ATMR form in accordance with Section 7(B) **within thirty (30) days** of the previous test. These test results shall also be reported on DMR report in accordance with 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 within a twelve month period indicate toxicity, the Permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and in accordance with Section 22a-430-3(j)(10)(c) of the RCSA, **within thirty (30) days**, shall submit a report to DEEP.WPCF@ct.gov for the review and approval of the Commissioner 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) 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, **within one (1) year** from the date such threshold was exceeded, develop and submit a report to DEEP.MunicipalNPDES@ct.gov for the review and approval of the Commissioner describing a plan to accommodate future increases in flow to the plant. Such a plan shall include a schedule for completing any recommended improvements and a plan for financing the improvements.
- (D) When the arithmetic mean of the average daily BOD₅ or TSS load into the POTW for the previous 180 days exceeds 90% of the design load rate, the Permittee shall, **within one (1) year** from the date such threshold was exceeded, develop and submit a report to DEEP.MunicipalNPDES@ct.gov for the review and approval of the Commissioner describing a plan to accommodate future increases in load to the plant. Such a plan shall include a schedule for completing any recommended improvements and a plan for financing the improvements.
- (E) Sewage Right-to-Know Bypass Reporting
- (1) Section 22a-430-3(k) of the RCSA shall apply in all instances of bypass including any unplanned bypass of secondary treatment, the treatment plant or any component of the sewage collection system and any planned bypass during required maintenance. The Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater Section and the Department of Public Health, Water Supply Section and Recreation Section shall be notified **within two (2) hours** of the Permittee learning of the event via online reporting in a format approved by the Commissioner. For any spill or permitted sewage bypass that reaches a water body or may come in contact with the general public, the Permittee shall notify the chief elected official (CEO) and the local public health official in the municipality where the spill occurred and the CEO and local public health official of any municipality that may be potentially impacted downstream **within two (2) hours** of the Permittee becoming aware of the spill. 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 Section **within five (5) 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.
- (2) If the online reporting system is nonfunctional for either bypass reporting requirement noted above, 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.
- (F) 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. In the case of any such noncompliance, the Permittee shall notify the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater Section in the same manner as in paragraph E(1) of this Section. 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 shall make the verbal report no later than 10:30 a.m. of the next business day after learning of the noncompliance.
- (G) Section 22a-430-3(j)(8) of the RCSA shall apply in all instances of monitoring equipment failures including, but not limited to, loss of refrigeration for an auto-sampler or lab refrigerator or loss of flow proportion sampling ability. In the event of such a failure, the Permittee shall notify the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater Section in the same manner as in paragraph E(1) of this Section. 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 shall make the verbal report no later than 10:30 am of the next business day after learning of the failure.
- (H) In addition to the reporting requirements contained in Section 22a-430-3(i), (j), and (k) of the RCSA, the

Permittee shall notify the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Water Planning and Management Division, Municipal Wastewater Section in the same manner as in paragraph E(1) of this 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: SEWERAGE SYSTEM O&M

- (A) No later than **February 15th of the year following the issuance of this permit**, the Permittee shall submit an updated Sewer Service Area (SSA) Map to the Department via email to DEEP.MunicipalNPDES@ct.gov. The SSA shall at a minimum clearly identify and delineate the following information as applicable:
- (1) areas currently connected to sanitary sewers;
 - (2) areas considered for future sanitary sewer service; and
 - (3) areas where sanitary sewer service will not be provided.
- (B) No later than **February 15th, annually**, the Permittee shall submit to the Department via email to DEEP.MunicipalNPDES@ct.gov, an updated listing of all wastewater treatment plant and collection system improvements (outside of routine maintenance) and all sewer extensions performed during the most recent calendar year. At a minimum the following information must be included in the submission:
- (1) the street name or nearest identifiable location to where the project was performed;
 - (2) the total linear feet of pipe replaced or repaired;
 - (3) the number of manholes repaired or replaced;
 - (4) a description of work performed at pump stations;
 - (5) a description of work performed at the treatment plant; and
 - (6) a project listing with proposed collection system and plant improvements for the following calendar year.

This permit is hereby issued on

Graham J. Stevens
Bureau Chief
Bureau of Water Protection and Land Reuse

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): 575 cfs						In-stream Waste Concentration (IWC): 1%				
PARAMETER	UNIT	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			REPORTING FORM	Minimum Level Analysis (See Section 6)
		Average Monthly Limit	Maximum Daily Limit	Sample Freq.	Sample Type	Instantaneous Limit or Required Range ¹	Sample Freq.	Sample Type		
Alkalinity	mg/l	NA	NA	NR	NA	-----	Monthly	Grab	MOR	
Biochemical Oxygen Demand, 5-day (BOD ₅) ²	mg/l	30	50	3/week	Daily Composite	NA	NR	NA	DMR/MOR	
Carbonaceous Biochemical Oxygen Demand, 5-day (CBOD ₅) ³	mg/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	DMR/MOR	
Enterococci ⁴ May 1 st – September 30 th	Colonies/ 100 ml	NA	NA	NR	NA	500	3/week	Grab	DMR/MOR	
Flow ⁵	MGD	-----	-----	Daily	Continuous (Metered)	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 ⁶	lbs/day	NA	-----	Monthly	Daily Composite	NA	NR	NA	DMR/MOR	
Oxygen, Dissolved	mg/l	NA	NA	NR	NA	-----	Workday	Grab	MOR	
pH	S.U.	NA	NA	NR	NA	6.0 – 9.0	Workday	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	-----	Workday	Grab	MOR	
Solids, Total Suspended (TSS) ²	mg/l	30	50	3/week	Daily Composite	NA	NA	NA	DMR/MOR	
Temperature	°F	NA	NA	NR	NA	-----	Workday	Grab	MOR	

Turbidity	NTU	NA	NA	NR	NA	-----	Workday	Grab	MOR	
UV Dose ⁷ May 1 st – September 30 th	mJ/cm ²	NA	NA	NR	NA	≥30.0	Lowest daily reading	Continuous	DMR/MOR	
UV Transmittance ⁷ May 1 st – September 30 th	%	NA	NA	NR	NA	-----	Lowest daily reading	Continuous	MOR	

TABLE A – CONDITIONS

Footnotes:

- ¹ The instantaneous limits in this column are maximum limits except for Dissolved Oxygen and UV Dose, which are minimum limits.
- ² The average weekly discharge limitation for BOD₅ and TSS shall be 1.5 times the Average Monthly Limit listed above.
- ³ CBOD₅ testing shall be performed on the same final effluent sample collected for one of the BOD₅ tests.
- ⁴ 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.
- ⁵ The Permittee shall report on the MOR the minimum instantaneous, maximum instantaneous, and total flow for each day of discharge, as well as the average daily flow for each sampling month. The Permittee shall report on the DMR the average daily flow and maximum daily flow for each sampling month.
- ⁶ For total nitrogen and total phosphorus load reporting in lbs/day, the mg/l concentration values from each sample should be converted using the following equation:

$$\text{Load (lbs/day)} = \text{Concentration (mg/l)} \times 8.34 \times \text{Total Flow on Day of Sampling (MGD)}$$
- ⁷ Ultraviolet disinfection shall be utilized from May 1st through September 30th. If continuous monitoring is indicated as the sample type, the Permittee shall report the lowest reading for each day of operation. Until completion of construction of the new ultraviolet disinfection system at this facility, the Permittee shall follow the current and active permit monitoring and reporting requirements. Upon completion of construction and the start of operation of the new ultraviolet disinfection system at the facility, the Permittee shall report these parameters as stipulated in this permit.

** The Facility is additionally undergoing infrastructure improvements for Odor Control measures. A new method of odor control via installation and wiring of carbon filters that pipe and treat air up from the gravity and sludge storage tanks will replace the existing odor control measure which pipes and treats air underground and through mulch. Designs for additional odor control measures are currently in progress for the Facility by an external consultant.

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): 575 cfs			In-stream Waste Concentration (IWC): 1%		
PARAMETER	UNIT	FLOW/TIME BASED MONITORING			REPORT FORM
		Average Monthly Minimum	Reporting Freq.	Sample Type	
Biochemical Oxygen Demand, 5-day (BOD ₅) Percent Removal ¹	% of Influent	85	Monthly	Calculated ²	DMR
Solids, Total Suspended (TSS) Percent Removal ¹	% of Influent	85	Monthly	Calculated ²	DMR
TABLE B – CONDITIONS					
Footnotes:					
¹ The average monthly concentrations of BOD ₅ and TSS in the POTW's final effluent shall not exceed 15% of the average monthly concentrations of BOD ₅ and TSS in the influent.					
² Calculated based on the average monthly concentrations of samples collected and analyzed in accordance with Tables A and E:					
$Removal\ efficiency\ (\%) = \frac{(Inf.\ BOD\ or\ TSS) - (Eff.\ BOD\ or\ TSS)}{Inf.\ BOD\ or\ TSS} \times 100$					

TABLE C

Discharge Serial Number (DSN): 001-1			Monitoring Location: T			
Wastewater Description: Final Effluent for Toxicity Testing						
Monitoring Location Description: Final Effluent						
Allocated Zone of Influence (ZOI): 575 cfs			In-stream Waste Concentration (IWC): 1%			
PARAMETER	UNIT	Daily Limit	Sampling Frequency	Sample Type	REPORTING FORM	Minimum Level Analysis See Section 6
Aluminum, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Antimony, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
NOAEL Static 48Hr Acute <i>D. pulex</i> ¹	% survival	-----	Quarterly	Daily Composite	ATMR/DMR	
NOAEL Static 48Hr Acute <i>P. promelas</i> ¹	% survival	-----	Quarterly	Daily Composite	ATMR/DMR	
Arsenic, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Beryllium, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Biochemical Oxygen Demand, 5-day (BOD ₅)	mg/l	-----	Quarterly	Daily Composite	ATMR/DMR	
Cadmium, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Chlorine, Total Residual	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Chromium, Hexavalent	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Chromium, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Copper, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Cyanide, Amenable	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	
Cyanide, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Iron, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Lead, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Mercury, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Nickel, Total	µg/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	
Phenols, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	
Phosphorus, Total	mg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Selenium, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Silver, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Suspended Solids, Total	mg/l	-----	Quarterly	Daily Composite	ATMR/DMR	
Thallium, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
Zinc, Total	µg/l	-----	Quarterly	Daily Composite	ATMR/DMR	*
TABLE C - CONDITIONS						
Footnotes:						
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.						

TABLE D

Discharge Serial Number: 001-1			Monitoring Location: N		
Wastewater Description: Aeration Unit					
Monitoring Location Description: Each Aeration Unit					
PARAMETER	UNIT	REPORTING FORMAT	INSTANTANEOUS MONITORNG		REPORTING FORM
			Sample Frequency	Sample Type	
Oxygen, Dissolved	mg/l	High & Low for each workday	2/Workday	Grab	MOR
Sludge Volume Index		Workday	Workday	Grab	MOR
Mixed Liquor Suspended Solids	mg/l	Workday	Workday	Grab	MOR

TABLE E

Discharge Serial Number: 001-1			Monitoring Location: G				
Wastewater Description: Raw Sewage Influent							
Monitoring Location Description: Influent							
PARAMETER	UNIT	DMR REPORTING FORMAT	FLOW/TIME BASED MONITORING		INSTANTANEOUS MONITORNG		REPORTING FORM
			Sample Frequency	Sample Type	Sample Frequency	Sample Type	
Biochemical Oxygen Demand, 5-day (BOD ₅)	mg/l	Monthly average	3/week	Daily Composite	NA	NA	DMR/MOR
Nitrogen, Ammonia (total as N)	mg/l	NA	Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Nitrate (total as N)	mg/l	NA	Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Nitrite (total as N)	mg/l	NA	Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Total Kjeldahl	mg/l	NA	Monthly	Daily Composite	NA	NA	MOR
Nitrogen, Total	mg/l	NA	Monthly	Daily Composite	NA	NA	MOR
Phosphate, Ortho	mg/l	NA	Monthly	Daily Composite	NA	NA	MOR
Phosphorus, Total	mg/l	NA	Monthly	Daily Composite	NA	NA	MOR
pH	S.U.	NA	NA	NA	Workday	Grab	MOR
Solids, Total Suspended (TSS)	mg/l	Monthly average	3/week	Daily Composite	NA	NA	DMR/MOR
Temperature	°F	NA	NA	NA	Workday	Grab	MOR

TABLE F

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

TABLE G

Discharge Serial Number: 001-1		Monitoring Location: SL		
Wastewater Description: Thickened Waste Activated Sludge				
Monitoring Location Description: Thickened Waste Activated Sludge				
PARAMETER	UNIT	INSTANTANEOUS MONITORING		REPORTING FORM
		Sample Frequency	Sample Type	
Arsenic, Total	mg/kg	Quarterly	Grab	DMR
Beryllium, Total	mg/kg	Quarterly	Grab	DMR
Cadmium, Total	mg/kg	Quarterly	Grab	DMR
Chromium, Total	mg/kg	Quarterly	Grab	DMR
Copper, Total	mg/kg	Quarterly	Grab	DMR
Lead, Total	mg/kg	Quarterly	Grab	DMR
Mercury, Total	mg/kg	Quarterly	Grab	DMR
Nickel, Total	mg/kg	Quarterly	Grab	DMR
pH	S.U.	Quarterly	Grab	DMR
Polychlorinated Biphenyls	mg/kg	Quarterly	Grab	DMR
Solids, Fixed	%	Quarterly	Grab	DMR
Solids, Total	%	Quarterly	Grab	DMR
Solids, Volatile	%	Quarterly	Grab	DMR
Zinc, Total	mg/kg	Quarterly	Grab	DMR
Testing for inorganic pollutants shall follow "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846 as updated and/or revised.				

TABLE H

Discharge Serial Number: 001-1		Monitoring Location: SC		
Wastewater Description: Thickened Waste Activated Sludge				
Monitoring Location Description: Thickened Primary Sludge				
PARAMETER	UNIT	INSTANTANEOUS MONITORING		REPORTING FORM
		Sample Frequency	Sample Type	
Arsenic, Total	mg/kg	Quarterly	Grab	DMR
Beryllium, Total	mg/kg	Quarterly	Grab	DMR
Cadmium, Total	mg/kg	Quarterly	Grab	DMR
Chromium, Total	mg/kg	Quarterly	Grab	DMR
Copper, Total	mg/kg	Quarterly	Grab	DMR
Lead, Total	mg/kg	Quarterly	Grab	DMR
Mercury, Total	mg/kg	Quarterly	Grab	DMR
Nickel, Total	mg/kg	Quarterly	Grab	DMR
Nitrogen, Ammonia*	mg/kg	Quarterly	Grab	DMR*
Nitrogen, Nitrate (total as N)*	mg/kg	Quarterly	Grab	DMR*
Nitrogen, Organic*	mg/kg	Quarterly	Grab	DMR*
Nitrogen, Nitrite (total as N)*	mg/kg	Quarterly	Grab	DMR*
Nitrogen, Total*	mg/kg	Quarterly	Grab	DMR*
pH*	S.U.	Quarterly	Grab	DMR*
Polychlorinated Biphenyls	mg/kg	Quarterly	Grab	DMR
Solids, Fixed	%	Quarterly	Grab	DMR
Solids, Total	%	Quarterly	Grab	DMR
Solids, Volatile	%	Quarterly	Grab	DMR
Zinc, Total	mg/kg	Quarterly	Grab	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 (MOR) FORM

DRAFT

DATA TRACKING AND TECHNICAL FACT SHEET

APPLICANT/PERMITTEE: Town of South Windsor

PERMIT #: CT0100510

APPLICATION #: 202307986

FACILITY ID: 132-001

<u>APPLICANT Contact Information</u>		<u>FACILITY Contact Information</u>	
Mailing Address:	1540 Sullivan Avenue South Windsor, CT 06074	Facility Address:	1 Vibert Road South Windsor, CT 06074
Contact Name:	Anthony Manfre	Contact Name:	Anthony Manfre
Phone Number:	(860)644-2511 ex. 2247	Phone Number:	(860)644-2511 ex. 2247
		DMR Contact Email Address:	anthony.manfre@southwindsor-ct.gov

PERMIT INFORMATION

DURATION

- 5 YEARS
- 10 YEARS
- 30 YEARS

TYPE

- NEW
- REISSUANCE
- MODIFICATION

OWNERSHIP

- PRIVATE
- FEDERAL
- STATE
- MUNICIPAL (town only)
- OTHER PUBLIC

CATEGORIZATION

- POINT
- NON-POINT; GIS # _____

NPDES

- NPDES MAJOR (**MA**)
- NPDES SIGNIFICANT MINOR or PRETREAT SIU (**SI**)
- NPDES or PRETREATMENT MINOR (**MI**)
- PRETREAT
- GROUND WATER (UIC)
- GROUND WATER (OTHER)

COMPLIANCE SCHEDULE

YES NO

- POLLUTION PREVENTION
- TREATMENT REQUIREMENT
- WATER QUALITY REQUIREMENT
- OTHER

AVERAGE MONTHLY FLOW (last 12 months): 2.92 MGD

OUTFALL LOCATION

Latitude: 41.82917

Longitude: -72.63556

USGS Quad Map Name: Hartford North 27

FOR NPDES DISCHARGES

Drainage Basin Code: 4000-00-6

Water Quality Classification Goal: SB

Water Body Segment: CT305b

NATURE OF BUSINESS GENERATING DISCHARGE

Municipal Sanitary Sewage Treatment

DEEP STAFF ENGINEER: Syed Bokhari

DATE DRAFTED: November 12, 2024

GENERAL COMMENTS

The Town of South Windsor operates a municipal water pollution control facility (the "Facility") located at 1 Vibert Road, South Windsor, CT 06074. The Facility is designed to treat and discharge up to 3.75 million gallons per day of effluent into the Connecticut River. The Facility currently utilizes secondary treatment with denitrification and seasonal ultraviolet (UV) light disinfection to treat effluent prior to being discharged. The Facility is undergoing an upgrade and replacement of its current UV disinfection system due to meeting its useful life. A new UV disinfection system is in the process of being installed at the Facility and will have new reporting requirements upon completion of construction and beginning of operation. The Facility is additionally undergoing infrastructure improvements for Odor Control measures. A new method of odor control via installation and wiring of carbon filters that pipe and treat air up from the gravity and sludge storage tanks will replace the existing odor control measure which pipes and treats air underground through mulch. Designs for additional odor control measures are currently in progress for the Facility by an external consultant.

Pursuant to Sec. 22a-430 of the Connecticut General Statutes (CGS), the Department of Energy and Environmental Protection (the "Department") has previously issued the Town of South Windsor a permit for the discharge from this Facility. Prior to expiration of that permit, the Town of South Windsor submitted an application to renew the permit. The Department has made a tentative determination to approve the renewal application and has prepared a draft permit consistent with that determination.

The most significant changes from the previous permit are as follows:

- In Section 6 of the permit, the Minimum Level (ML) for Mercury has been reduced to 0.05 µg/l (50 ng/l), which is quantifiable using EPA Methods 245.7 (minimum quantification level of 5.0 ng/l) and 1631E (minimum quantification level of 0.5 ng/l). The previous Mercury ML of 0.2 µg/l was not sufficiently sensitive to determine consistency with the human health/fish consumption water quality criteria of 0.051 µg/l for Class B and SB waters of the State.
- 5-day Carbonaceous Biochemical Oxygen Demand (CBOD₅) limits have been replaced with BOD₅ limits in Table A of the permit. CBOD₅ has been included as a monitoring-only parameter to be tested once per month. The CBOD data will be used by DEEP's water quality group to model water quality conditions in receiving streams. No limits are included since the water quality of the receiving water body is under evaluation and a TMDL has not been established.
- New instructions for the digital submission of documents have been included in Sections 7 & 8 of the permit.
- New operation and maintenance reporting requirements have been included as Section 9 of the permit.
- New reporting requirements have been included in Table A in the permit for Ultraviolet Disinfection. Upon completion of construction and the start of operation of a new ultraviolet disinfection system at the treatment facility, this parameter will be monitored continuously using the lowest daily reading of Dose and Transmittance during the disinfection season of May 1st to September 30th.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

This facility utilizes advanced secondary treatment to biologically remove BOD, TSS and nitrogen. Further treatment is completed via UV disinfection, and liquid sludge is transported to the Hartford MDC for incineration. The collection system extends approximately 170 miles and includes 11 pump stations.

COMPLIANCE HISTORY

Staff reviewed the Facility's discharge reports from the period between 8/31/2019 to 1/31/2024 which indicate no significant noncompliance.

PERMIT FEES

Discharge Code	DSN	Annual Fee
111000c	001-1	\$2,367.50

APPLICATION FEE PAID? NO YES, Date: October 30, 2023
PROCESSING FEE PAID? NO YES, Date: [DATE PROCESSING FEE PAID]
ANNUAL FEES PAID? NO YES, Date: September 17, 2023

RESOURCES USED TO DRAFT PERMIT

- Federal Effluent Limitation Guideline [40 CFR 133](#) – Secondary Treatment Regulation*
- Performance Standards*
- Federal Development Document*
- Department File Information*
- 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*

SPECIFIC REQUIREMENTS OR REVISIONS

The Department has reviewed the application for consistency with Connecticut's Water Quality Standards and has determined based on 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, water quality-based limits were not included in the permit at this time.

WATER QUALITY-BASED LIMIT CALCULATIONS

See attached

PUBLIC NOTICE

Date of Public Notice: [PUBLIC NOTICE DATE]

Date Permit Cleared Public Notice: [PUBLIC NOTICE END DATE]

Date Publication Fees Paid: [PUBLICATION FEES PAID DATE]

SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC NOTICE PERIOD AND THE DEPARTMENT'S RESPONSES

- The Department has received no written comments on the proposed action.
- Staff has reviewed the written comments and responded to the comments, no significant permit changes have been made.
- The Department has received, and Staff have reviewed written comments on the proposed action and made significant changes as follows: (DESCRIBE COMMENTS RECEIVED, DEEP'S RESPONSES, AND ANY CHANGES TO THE DRAFT PERMIT)

	A	B	C	D	E	F	G
1	WQB LIMITS:						
2							
3	Discharger: South Windsor WPCF				by: hamalsm, 4/30/2024, 15:53		
4	Receiving Water: Connecticut River		CURRENT CONDITIONS				
5	Design Flow:	3.750		Avg. Flow:	2.920	MGD	
6	Allocated ZOI:	572.00		Max. Flow:	3.990	MGD	
7	Samples/Month:	4		IWC:	1.00	%	
8							
9	WQB Limits - Freshwater						
10			AML	MDL	AML	MDL	LIMIT?
11	Compound	C.V.	ug/l	ug/l	kg/d	kg/d	ML?
12							
13	Aluminum	0.4	7.57E+03	1.27E+04	1.08E+02	1.80E+02	
14	Ammonia	0.9	5.58E+04	1.35E+05	7.92E+02	1.91E+03	
15	Antimony	0.1	1.83E+04	2.12E+04	2.60E+02	3.01E+02	
16	Arsenic	0.3	2.10E-02	3.15E-02	2.98E-04	4.47E-04	ML
17	Beryllium	0.0	3.59E+02	3.59E+02	5.09E+00	5.09E+00	
18	Cadmium	0.2	1.16E+01	1.54E+01	1.65E-01	2.19E-01	
19	Chlorine	0.6	6.12E+02	1.23E+03	8.69E+00	1.74E+01	
20	Chromium (hex)	0.2	1.02E+03	1.36E+03	1.45E+01	1.93E+01	
21	Chromium (tri)	0.0	4.18E+03	4.18E+03	5.94E+01	5.94E+01	
22	Copper	0.3	4.78E+02	7.17E+02	6.79E+00	1.02E+01	
23	Cyanide (amen)	0.0	5.18E+02	5.18E+02	7.36E+00	7.36E+00	
24	Lead	0.3	1.08E+02	1.62E+02	1.53E+00	2.30E+00	
25	Mercury	0.0	5.08E+00	5.08E+00	7.21E-02	7.21E-02	
26	Nickel	0.4	2.51E+03	4.21E+03	3.57E+01	5.98E+01	
27	Phenol	0.2	1.49E+04	1.97E+04	2.11E+02	2.80E+02	
28	Selenium	0.2	4.65E+02	6.17E+02	6.61E+00	8.76E+00	
29	Silver	0.7	4.71E+01	1.02E+02	6.69E-01	1.44E+00	
30	Thallium	0.3	4.78E+01	7.17E+01	6.79E-01	1.02E+00	
31	Zinc	0.3	4.32E+03	6.47E+03	6.13E+01	9.19E+01	
32							
33							
34							
35							
36	Current Conditions						
37			AMC	MMC	AMM	MMM	
38	Compound	# DETECTS	ug/l	ug/l	kg/d	kg/d	
39							
40	Aluminum	20	2.99E+01	4.70E+01	3.31E-01	7.10E-01	
41	Ammonia	20	3.40E+02	1.48E+03	3.76E+00	2.24E+01	
42	Antimony	0	3.10E+00	5.00E+00	3.43E-02	7.56E-02	
43	Arsenic	1	2.00E+00	4.00E+00	2.21E-02	6.05E-02	
44	Beryllium	0	1.00E+00	1.00E+00	1.11E-02	1.51E-02	
45	Cadmium	0	1.00E+00	1.00E+00	1.11E-02	1.51E-02	
46	Chlorine				0.00E+00		
47	Chromium (hex)	0	1.05E+01	2.00E+01	1.16E-01	3.02E-01	
48	Chromium (tri)	0	1.00E+00	1.00E+00	1.11E-02	1.51E-02	
49	Copper	19	9.50E+00	1.70E+01	1.05E-01	2.57E-01	
50	Cyanide (amen)	0	1.00E+01	1.00E+01	1.11E-01	1.51E-01	
51	Lead	5	1.20E+00	2.00E+00	1.33E-02	3.02E-02	
52	Mercury	0	2.00E-01	2.00E-01	2.21E-03	3.02E-03	
53	Nickel	16	3.50E+00	6.00E+00	3.87E-02	9.07E-02	
54	Phenol	2	1.58E+01	2.70E+01	1.75E-01	4.08E-01	
55	Selenium	0	5.30E+00	1.00E+01	5.86E-02	1.51E-01	
56	Silver	0	1.20E+00	5.00E+00	1.33E-02	7.56E-02	
57	Thallium	0	4.00E-01	5.00E-01	4.42E-03	7.56E-03	
58	Zinc	20	7.20E+01	1.02E+02	7.96E-01	1.54E+00	
59							

	A	B	C	D	E	F	G
60	Final WQB Limits						
61		<u>AML (kg/d)</u>	<u>MDL (kg/d)</u>				
62							
63							
64							
65	Interim WQB Limits						
66		<u>AML (kg/d)</u>	<u>MDL (kg/d)</u>				
67							
68							
69							
70	Minimum Levels						
71							
72	Arsenic	0.005 mg/L					
73							
74							
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Effluent Chemistry: South Windsor WPCF

Receiving Waterbody: Connecticut River

Allocated ZOI: 100:1 cfs

Database IWC: 1% (allocated)

as of Wednesday, March 6, 2024

Design Flow: 3.75 MGD

Avg. Monthly Flow (last 12 months): 2.92 MGD

Max. Monthly Flow (last 12 months): 3.99 MGD

Date	BOD	TSS	NH3	NO2	NO3	P	Al	Sb	As	Be	Cd	Cr6	Cr3	Cu	CNt	CNa	Fe	Pb	Hg	Ni	Phen	Se	Ag	Tl	Zn	
3/7/2019	6.00	4.40	0.17	0.197	0.82	1.8	45.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	11.0	<10.0	<10.0	58.0	< 1.0	< 0.2	2.0	<15.0	< 5.0	< 1.0	< 0.1	82.0	
6/13/2019	4.00	4.00	0.39	0.260	2.03	0.3	43.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	6.0	<10.0	<10.0	66.0	1.0	< 0.2	4.0	<15.0	< 5.0	< 1.0	< 0.5	68.0	
9/5/2019	5.00	6.60	0.38	0.113	2.85	2.7	33.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	7.0	<10.0	<10.0	98.0	< 1.0	< 0.2	3.0	<15.0	< 5.0	< 1.0	< 0.5	69.0	
12/5/2019	4.00	2.30	0.11	0.056	2.57	1.9	31.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	9.0	<10.0	<10.0	51.0	< 1.0	< 0.2	< 1.0	<15.0	< 5.0	< 1.0	< 0.1	96.0	
3/4/2020	4.00	2.60	0.16	0.143	1.95	1.4	38.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	6.0	<10.0	<10.0	94.0	< 1.0	< 0.2	3.0	19.0	< 5.0	< 1.0	< 0.5	74.0	
6/3/2020	3.00	2.70	0.52	0.109	2.25	1.2	32.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	8.0	<10.0	<10.0	52.0	< 1.0	< 0.2	3.0	<15.0	< 5.0	< 1.0	< 0.5	54.0	
9/3/2020	3.00	3.40	0.29	0.076	3.16	1.7	47.0	< 5.0	< 4.0	< 1.0	< 1.0	<10.0	< 1.0	9.0	<10.0	<10.0	76.0	< 2.0	< 0.2	3.0	<15.0	<10.0	< 1.0	< 0.5	74.0	
12/3/2020	4.00	4.30	0.20	0.068	3.21	3.1	37.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	14.0	<10.0	<10.0	80.0	< 1.0	< 0.2	4.0	<15.0	< 5.0	< 1.0	< 0.5	77.0	
3/4/2021	4.00	1.60	0.63	0.262	1.92	1.7	22.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	9.0	<10.0	<10.0	46.0	< 1.0	< 0.2	2.0	27.0	< 5.0	< 1.0	< 0.5	67.0	
6/3/2021	3.00	3.40	0.22	0.075	2.52	1.2	25.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	7.0	<10.0	<10.0	61.0	< 1.0	< 0.2	3.0	<15.0	< 5.0	< 1.0	< 0.5	87.0	
9/9/2021	3.00	4.00	0.18	0.037	2.06	1.4	33.0	< 3.0	< 0.2	< 1.0	< 0.1	<10.0	< 1.0	17.0	<10.0	<10.0	69.0	1.0	< 0.2	3.0	<15.0	< 5.0	< 1.0	< 0.5	53.0	
12/2/2021	4.00	4.30	0.16	0.032	2.41	0.9	0.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	10.0	<10.0	<10.0	64.0	2.0	< 0.2	6.0	<15.0	< 5.0	< 1.0	< 0.5	72.0	
3/3/2022	3.00	2.90	0.27	0.095	1.75	1.1	25.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	<15.0	<10.0	<10.0	59.0	< 1.0	< 0.2	6.0	<15.0	< 5.0	< 1.0	< 0.5	77.0	
6/2/2022	2.00	2.60	0.15	0.030	2.89	< 2.8	21.0	< 3.0	2.0	< 1.0	< 1.0	<10.0	< 1.0	12.0	<10.0	<10.0	67.0	2.0	< 0.2	3.0	<15.0	< 5.0	< 1.0	< 0.5	102.0	
9/8/2022	6.00	4.70	0.30	0.091	3.14	1.9	40.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	6.0	<10.0	<10.0	69.0	1.0	< 0.2	2.0	<15.0	< 5.0	< 1.0	< 0.5	6.0	
12/15/2022	3.00	4.00	0.18	0.036	2.89	2.3	23.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	7.0	<10.0	<10.0	74.0	< 1.0	< 0.2	3.0	<15.0	< 5.0	< 1.0	< 0.5	83.0	
3/2/2023	3.00	2.10	0.20	0.103	2.36	0.0	0.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	11.0	<10.0	<10.0	48.0	< 1.0	< 0.2	5.0	<15.0	< 5.0	< 5.0	< 0.5	71.0	
6/8/2023	4.00	2.90	0.46	0.085	2.54	1.0	43.0	< 3.0	< 2.0	< 1.0	< 1.0	<20.0	< 1.0	7.0	<10.0	<10.0	98.0	< 1.0	< 0.2	4.0	<15.0	< 5.0	< 1.0	< 0.5	72.0	
9/7/2023	3.00	2.80	0.29	0.093	3.38	2.9	32.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	9.0	<10.0	<10.0	60.0	< 1.0	< 0.2	6.0	<15.0	< 5.0	< 1.0	< 0.5	79.0	
12/7/2023	11.00	6.50	1.48	0.264	2.25	3.6	28.0	< 3.0	< 2.0	< 1.0	< 1.0	<10.0	< 1.0	10.0	<10.0	<10.0	85.0	< 1.0	< 0.2	3.0	<15.0	< 5.0	< 1.0	< 0.1	77.0	
	BOD	TSS	NH3	NO2	NO3	P	Al	Sb	As	Be	Cd	Cr6	Cr3	Cu	CNt	CNa	Fe	Pb	Hg	Ni	Phen	Se	Ag	Tl	Zn	
Count	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
# Detected	20	20	20	20	20	19	20	0	1	0	0	0	0	19	0	0	20	5	0	19	2	0	0	0	20	
Average	4.10	3.61	0.34	0.111	2.45	1.7	29.9	3.1	2.0	1.0	1.0	10.5	1.0	9.5	10.0	10.0	68.8	1.2	0.2	3.5	15.8	5.3	1.2	0.4	72.0	
Maximum	11.00	6.60	1.48	0.264	3.38	3.6	47.0	5.0	4.0	1.0	1.0	20.0	1.0	17.0	10.0	10.0	98.0	2.0	0.2	6.0	27.0	10.0	5.0	0.5	102.0	
CV	0.5	0.4	0.9	0.7	0.2	0.5	0.4	0.1	0.3	0.0	0.2	0.2	0.0	0.3	0.0	0.0	0.2	0.3	0.0	0.4	0.2	0.2	0.7	0.3	0.3	
Average Conductivity	1365.6																									
	Bold = mg/L						Non-Bold = ug/L																			



**Notice of Tentative Determination to Approve
NPDES Permit Renewal
Applicant: Town of South Windsor
Application No. 202307986
City/Town: Town of South Windsor**

The Commissioner of the Department of Energy and Environmental Protection (“Department” or “DEEP”) hereby gives notice that a tentative determination has been reached to approve the following application. The Commissioner also gives notice that a hearing may be held on this permit if the Commissioner determines that the public interest will best be served thereby or shall hold a hearing upon receipt of a petition as described below.

Application No.:	202307986
Applicant’s Name and Address:	Town of South Windsor, 1540 Sullivan Avenue, South Windsor, CT 06074
Contact Name/Phone/Email:	Anthony Manfre, (860)644-2511, Anthony.manfre@southwindsor-ct.gov
Type of Permit and Permit No.:	NPDES Renewal – CT0100510
Type of Facility:	Domestic Wastewater Treatment
Facility Location:	1 Vibert Road, South Windsor, CT 06074
Facility Design Capacity:	3.75 million gallons per day
Receiving Waters:	Connecticut River

COMMISSIONER’S FINDINGS/REGULATORY CONDITIONS

The applicant has previously received a permit from the Department authorizing the discharge of up to an annual average daily design flow of 3.75 million gallons per day of advanced treated municipal wastewaters to the Connecticut 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 the Town of South Windsor’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: aquatic toxicity, 5-day biochemical oxygen demand (BOD₅), dissolved oxygen, Enterococci, flow, pH, total suspended solids (TSS), ultraviolet light disinfection (dose).

INFORMATION REQUESTS/PUBLIC COMMENT

This application has been assigned No. 202307986; please use this number when corresponding with DEEP regarding this application. Interested persons may obtain a copy of the application from the applicant's contact noted above through appointment only. Electronic copies of the application and supporting documentation can be provided to interested persons via email. Any such requests for electronic documents may be directed to Syed Bokhari of the Municipal Wastewater group at 860-424-3107 or syed.bokhari@ct.gov.

Before making a final decision on this application, the Commissioner shall consider written comments on the application from interested persons. Written comments on the application should be directed to the staff person indicated above no later than thirty (30) days from the publication date of this notice. Written comments may also be submitted in paper form to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, located at 79 Elm Street, Hartford, CT 06106. In this submittal, please identify the name of the staff assigned to the application, the permit application number and your phone number and/or email address to facilitate responses to your comments. You may contact the staff person identified in this notice with any questions you may have.

PETITIONS FOR HEARING

The Commissioner may conduct a public hearing if the Commissioner determines that the public interest will best be served thereby or shall hold a hearing upon receipt of a petition signed by at least twenty-five persons. Petitions for a hearing shall be submitted within thirty (30) days from the date of publication of this public notice and should include the application number(s) noted above and also identify a contact person to receive notifications. Petitions may also identify a person who is authorized to engage in discussions regarding the application and, if resolution is reached, withdraw the petition.

The Office of Adjudications will accept electronically filed petitions for hearing in addition to those submitted by mail or hand delivered. Petitions with required signatures may be sent to deep.adjudications@ct.gov; those mailed or delivered should go to the DEEP Office of Adjudications, 79 Elm Street, Hartford, CT 06106. If the signed original petition is only in an electronic format, the petition must be submitted with a statement signed by the petitioner that the petition exists only in that form. Original petitions that were filed electronically must also be mailed or delivered to the Office of Adjudications within 10 days of electronic submittal.

All petitions must be received within the comment period noted above. If a hearing is held, timely notice of such hearing will be published in a newspaper of general circulation and posted on the DEEP website at <https://portal.ct.gov/deep/adjudications>.

/s/ Nisha Patel

Nisha Patel, P.E., Director
Water Planning and Management Division
Bureau of Water Protection and Land Reuse

Published in the Journal Inquirer on December 26, 2024

ADA PUBLICATION STATEMENT

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Please contact syed.bokhari@ct.gov if you are seeking a communication aid or service, have limited proficiency in English, or require some other accommodation. If you wish to file an ADA or Title VI discrimination complaint, you may submit your complaint to the DEEP Office of Diversity and Equity at (860) 418-5910 or via email at deep.accommodations@ct.gov. In order to facilitate efforts to provide an accommodation, please request all accommodations as soon as possible following notice of any agency hearing, meeting, program or event.