



**National Pollutant Discharge Elimination System Permit  
issued to**

**Permittee:**

Firstlight CT Hydro LLC  
111 South Bedford Street, Suite 103  
Burlington, MA 01803

**Location Address:**

Junction of Routes 169 and 97  
Taftville, CT 06380

**Permit ID:** CT0030815

**Receiving Water Body:** Shetucket River

**Issuance Date:**

**Receiving Water Body ID:** CT6900-00\_05

**Effective Date:**

**Permit Expires:**

**SECTION 1: GENERAL PROVISIONS**

- (A) This permit is issued 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 (“CWA”), 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 NPDES permit program.
- (B) **Firstlight CT Hydro LLC** (“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) and (4) and (l)(2) of Section 22a-430-3.

**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
- (m) Effluent Limitation Violations (Upsets)
- (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 Transfer
  - (p) Permit Revocation, Denial or Modification
  - (q) Variances
  - (s) Treatment Requirements
- (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 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 authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner of Energy and Environmental Protection (“Commissioner”). To request such approval, the Permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least thirty days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.
- (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.

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

“40 CFR” means Title 40 of the Code of Federal Regulations.

“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.

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

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

“Dilution Factor” means the inverse of the “Instream Waste Concentration”.

“DMR” means Discharge Monitoring Report.

“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” (“IWC%”) means the concentration (as a percent) of the effluent in the receiving water.

“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.

“No Observed Effect Concentration” (“NOEC”) means the highest concentration of an effluent or toxicant to which organisms are exposed in a life cycle or partial life-cycle test, that causes no observable adverse effects on the test organisms.

“Quarter” means the calendar quarter beginning at 12:00 AM on the first day of March, June, September, and December and ending at 12:00 AM on the first day of June, September, December, and March, respectively.

“Reporting Frequency” means the frequency at which monitoring results must be provided.

“Semiannual” when used as a sampling frequency in this permit, means sampling shall be conducted between April 1 and September 30 and October 1 and March 31. April through September data shall be reported on the September DMR. October through March data shall be reported on the March DMR.

### **SECTION 3: COMMISSIONER'S DECISION**

- (A) The Commissioner has issued a final determination and found that such discharge will not cause pollution of any of the waters of the state. The Commissioner’s decision is based on Application 202201758 for permit reissuance received on February 22, 2022, and the administrative record established in the processing of that application.
- (B) Upon the effective date of this permit and continuing until this permit expires or is modified or revoked, the Commissioner hereby authorizes the Permittee to discharge in accordance with the terms and conditions of this permit, the information provided in Application No. 202201758, received by the Commissioner on February 22, 2022, and all modifications and approvals issued by the Commissioner or the Commissioner’s authorized agent, for the discharge and/or activities authorized by, or associated with this permit.

- (C) 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 the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit.
- (D) The Commissioner reserves the right to make appropriate revisions to the permit 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 the CGS or regulations adopted thereunder which are then applicable.

#### **SECTION 4: GENERAL EFFLUENT LIMITATIONS**

- (A) The Permittee shall assure that the surface water affected by the subject discharge shall conform to the *Connecticut Water Quality Standards*.
- (B) No discharge shall contain, or cause in the receiving stream, a visible oil sheen or floating solids, or cause visible discoloration or foaming in the receiving stream.
- (C) No discharge shall cause acute or chronic toxicity in the receiving water body beyond any zone of influence specifically allocated to that discharge in this permit.
- (D) The temperature of any discharge shall not increase the temperature of the receiving stream above 85 °F, or in any case, raise the temperature of the receiving stream by more than 4 °F.

#### **SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- (A) The discharge is restricted by and shall be monitored in accordance with the following tables in this section. The wastewater discharge shall not exceed the effluent limitations in these tables and shall otherwise conform to the specific terms and conditions listed in the tables. The Permittee shall comply with the "Remarks" and "Footnotes" noted in the tables that follow. Such remarks and footnotes are enforceable like any other term or condition of this permit.
- (B) The wastewaters authorized/approved by this permit shall be collected, treated, and discharged in accordance with this permit and with any approvals issued by the Commissioner or his/her authorized agent for the discharges and activities authorized by or associated with this permit. Any wastewater discharges not expressly identified in these tables or otherwise approved to be discharged by this permit shall not be authorized by this permit.
- (C) All samples shall be comprised of only the wastewater described in these tables. Samples shall be collected prior to combination with receiving waters or wastewater of any other type, and after all approved treatment units, if applicable. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Collection of permit required effluent samples in any location other than the authorized location noted in this permit shall be a violation of this permit.
- (D) In cases where limits and sample type are specified but sampling is not required by this permit, the limits specified shall apply to all samples which may be collected and analyzed by the Department of Energy and Environmental Protection ("DEEP") personnel, the Permittee, or other parties.

**Table A**

Discharge Serial Number: **DSN 001-1** Monitoring Location: **1 (EXTERNAL OUTFALL)**  
 Wastewater Description: **Turbine Leakage from Turbine 4**  
 Monitoring Location Description: **Discharge pipe from the stuffing box of Turbine 4.**  
 Discharge is to: **Shetucket River** Outfall Location: **Latitude 41.571190 Longitude -72.047165**

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING		
			Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>1</sup>	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample/Reporting Frequency	Sample Type or Measurement to be Reported
Daily Flow	74076	gpd	NA	34,560	Daily/Semi-annually	Total Daily Flow <sup>2</sup>	NA	NR	NA
Oil and Grease, Total	00556	mg/l	NA	NA	NR	NA	----	Semi-annually	Grab
pH, Day of Sampling	00400	SU	NA	NA	NR	NA	6.5-8.0	Semi-annually	Grab

**TABLE A FOOTNOTES AND REMARKS**

**Footnotes:**

<sup>1</sup> The first entry in this column is the “Sample Frequency”. If a “Reporting Frequency” does not follow this entry, then the “Reporting Frequency” is monthly.

<sup>2</sup> Total Daily Flow may be an estimation of flow discharged from this DSN over 24 hours.

**Remarks:**

1. Abbreviations used for units are as follows: gpd means gallons per day; g/day means grams per day; mg/L means milligrams per liter; SU means Standard Units. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable.

2. If “---” is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.

3. Semi-annual monitoring shall be conducted between April 1 and September 30 and October 1 and March 31. April through September data shall be reported on the September DMR. October through March data shall be reported on the March DMR.

**Table B**

Discharge Serial Number: **DSN 002-1** Monitoring Location: **1 (EXTERNAL OUTFALL)**

Wastewater Description: **Turbine Leakage from Turbine 5**

Monitoring Location Description: **Discharge pipe from the stuffing box of Turbine 5.**

Discharge is to: **Shetucket River**

Outfall Location: **Latitude 41.571190 Longitude -72.047165**

PARAMETER	NET DMR CODE	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING		
			Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>1</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/Reporting Frequency	Sample Type or measurement to be reported
Daily Flow	74076	gpd	NA	34,560	Daily/Semi-annually	Total Daily Flow <sup>2</sup>	NA	NR	NA
Oil and Grease, Total	00556	mg/l	NA	NA	NR	NA	----	Semi-annually	Grab
pH, Day of Sampling	00400	SU	NA	NA	NR	NA	6.5-8.0	Semi-annually	Grab

**TABLE A FOOTNOTES AND REMARKS**

**Footnotes:**

<sup>1</sup> The first entry in this column is the “Sample Frequency”. If a “Reporting Frequency” does not follow this entry, then the “Reporting Frequency” is monthly.

<sup>2</sup> Total Daily Flow may be an estimation of flow discharged from this DSN over 24 hours.

**Remarks:**

1. Abbreviations used for units are as follows: gpd means gallons per day; g/day means grams per day; mg/L means milligrams per liter; SU means Standard Units. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable.

2. If “----” is noted in the limits column in the table, this means that a limit is not specified but a value must be reported on the DMR.

3. Semi-annual monitoring shall be conducted between April 1 and September 30 and October 1 and March 31. April through September data shall be reported on the September DMR. October through March data shall be reported on the march DMR.

## SECTION 6: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES

- (A) All samples shall be collected, handled, and analyzed in accordance with the methods approved under 40 CFR 136, unless another method is required under 40 CFR subchapter N or unless an alternative method has been approved in writing pursuant to 40 CFR 136.5. To determine compliance with limits and conditions established in this permit, monitoring must be performed using sufficiently-sensitive methods approved pursuant to 40 CFR 136 for the analysis of pollutants having approved methods under that part, unless a method is required under 40 CFR subchapter N or unless an alternative method has been approved in writing pursuant to 40 CFR 136.5. Monitoring parameters which do not have approved methods of analysis defined in 40 CFR 136 shall be collected, handled, and analyzed in accordance with the methods in Section 6(B), below.
- (B) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40 CFR 136, unless otherwise specified.
- (C) 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.
- (D) 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.
- (E) Analyses for which quantification was verified to be at or below an ML, and which indicate that a parameter was not detected, shall be reported as “less than non-detect” where ‘non-detect’ is the numerical value equivalent to the ML for that analysis. If the Permittee is required to submit its DMRs through the NetDMR system, the Permittee shall report the non-detect value consistent with the reporting requirements for NetDMR.
- (F) Results of analyses which indicate that a parameter was not present at a concentration greater than or equal to the ML specified for that analysis shall be considered equivalent to zero for purposes of determining compliance with effluent limitations or conditions specified in this permit.
- (G) It is a violation of this permit for a Permittee or his/her 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.
- (H) Analyses required under this permit shall be performed in accordance with CGS Section 19a-29a. An “environmental laboratory”, as that term is defined in the referenced section, that is performing analyses required by this permit, shall be registered and have certification acceptable to the Commissioner, as such registration and certification is necessary.

## SECTION 7: REPORTING REQUIREMENTS

- (A) The results of chemical analyses and any aquatic toxicity test required by this permit shall be submitted electronically using NetDMR. Monitoring results shall be reported at the monitoring frequency specified in this permit. Any monitoring required more frequently than monthly shall be reported on an attachment to the DMR, and any additional monitoring conducted in accordance with 40 CFR 136, or another method required for an industry-specific waste stream under 40 CFR subchapter N, or other methods approved by the Commissioner, shall also be included on the DMR, or as an attachment, if necessary, and the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit. All aquatic toxicity reports shall also be included as an attachment to the DMR. A report shall also be included with the DMR which includes a detailed explanation of any violations of the limitations specified. DMRs, attachments, and reports, shall continue to be submitted electronically in accordance with Section 8(E) below. However, if the DMRs, attachments, and reports are required to be submitted in hard copy form, they shall be received at this address by the last day of the month following the month in which samples are collected:

Bureau of Materials Management and Compliance Assurance  
Water Permitting and Enforcement Division (Attn: DMR Processing)  
Connecticut Department of Energy and Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127

- (B) If this permit requires monitoring of a discharge on a calendar basis (e.g., monthly, quarterly, etc.), but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR as scheduled, indicating "NO DISCHARGE". For those permittees whose required monitoring is discharge dependent (e.g., per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.

- (C) NetDMR Reporting Requirements:

The Permittee shall report electronically using NetDMR, a web-based tool that allows permittees to electronically submit DMRs and other required reports through a secure internet connection. The Permittee and/or the signatory authority shall electronically submit DMRs required under this permit to the Commissioner using NetDMR in satisfaction of the DMR submission requirements of Sections 5, 6, and 8 of this permit. All monitoring and monitoring records required under the permit, including any monitoring conducted more frequently than monthly or any additional monitoring conducted in accordance with 40 CFR 136, shall be submitted to the Commissioner as an electronic attachment to the DMR in NetDMR. The Permittee shall also electronically file any written report of noncompliance described in Section 8 of this permit as an attachment in NetDMR. DMRs shall be submitted electronically to the Commissioner no later than the last day of the month following the completed reporting period. NetDMR is accessed from: <http://www.epa.gov/netdmr>.

## SECTION 8: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

- (A) *Noncompliance Notifications:*

- (1) In accordance with Section 22a-430-3(j)(8), 22a-430-3(j)(11)(D), 22a-430-3(k)(4), and 22a-430-3(i)(3) of the RSCA, the Permittee shall notify the Commissioner of the following actual or anticipated noncompliance with the terms or conditions of this permit within two hours of becoming aware of the circumstances. All other actual or anticipated violations of the permit shall be reported to the Commissioner within 24 hours of becoming aware of the circumstances:

- (a) A noncompliance that is greater than two times an effluent limitation;



- (b) A noncompliance of any minimum or maximum daily limitation or excursion beyond a minimum or maximum daily range;
  - (c) Any condition that may endanger human health or the environment, including but not limited to noncompliance with WET limitations;
  - (d) Any condition that may endanger the operation of a POTW, including sludge handling and disposal;
  - (e) A failure or malfunction of monitoring equipment used to comply with the monitoring requirements of this permit;
  - (f) Any actual or potential bypass of the Permittee's collection system or treatment facilities; or
  - (g) Expansions or significant alterations of any wastewater collection, treatment facility, or its method of operation for the purpose of correcting or avoiding a permit violation.
- (2) Notifications shall be submitted via the Commissioner's online Noncompliance Notification Form: <https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements>.
- (3) Within five days of any notification of noncompliance in accordance with Sections 8(A)(a) through 8(A)(f) of this permit, the Permittee shall submit a follow-up report using the Commissioner's online Noncompliance Follow-up Report Form: <https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements>.
- The follow-up report shall contain, at a minimum, the following information: (i) A description of the noncompliance and its cause; (ii) the period of noncompliance, including exact dates and times; (iii) if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (iv) steps taken or planned to correct the noncompliance and reduce, eliminate and prevent recurrence of the noncompliance.
- (4) Within 30 days of any notification of facility modifications reported in accordance with Section 8(A)(g) of this permit, the Permittee shall submit a written follow-up report by submitting a "Facility and Wastewater Treatment System Modification Request for Determination" for the review and approval of the Commissioner. The report shall fully describe the changes made to the facility and reasons therefor.
- (5) Notification of an actual or anticipated noncompliance or facility modification does not stay any term or condition of this permit.
- (B) In accordance with Section 22a-430-3(j)(11)(E) of the RSCA, the Permittee shall notify the Commissioner within 72 hours and in writing within 30 days when he or she knows or has reason to believe that the concentration in the discharge of any substance listed in the application, or any toxic substance as listed in Appendix B or D of RSCA Section 22a-430-4, has exceeded or will exceed the highest of the following levels: (1) One hundred micrograms per liter; (2) Two hundred micrograms per liter for acrolein and acrylonitrile, five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony; (3) An alternative level specified by the Commissioner, provided such level shall not exceed the level which can be achieved by the Permittee's treatment system; or (4) A level two times the level specified in the Permittee's application.

72 hour initial notifications shall be submitted via the Commissioner's online Noncompliance Notification Form. 30 day follow-up reports shall be submitted via the Commissioner's online Noncompliance Follow-up Report Form. The Forms are available at the Commissioner's website, here: <https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements>.

- (C) In addition to any other written reporting requirements, the Permittee shall report any instances of noncompliance with this permit with its DMR. Such reporting shall be due no later than the last day of the month following the reporting period in which the noncompliant event occurred. The information provided in the DMR shall include, at a minimum: the type of violation, the duration of the violation, the cause of the violation, and any corrective action(s) or preventative measure(s) taken to address the violation.

This permit is hereby issued on:

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Emma Cimino  
Deputy Commissioner  
Department of Energy and Environmental Protection

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