

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

Permittee:

Firstlight CT Housatonic LLC 143 West Street, Suite E New Milford, CT 06776 Location Address: Firstlight CT Housatonic LLC 1 Roosevelt Drive Monroe, Ct 06468

Permit ID: CT0030821

**Issuance Date:** 

Effective Date: 1<sup>st</sup> of month after issuance

<u>Permit Expires</u>: 5 years from effective

#### **SECTION 1: GENERAL PROVISIONS**

**Receiving Water Body**: Housatonic River

Receiving Water Body ID: CT6000-00-5+L4 01

- (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 Housatonic 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
- (1) 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.
- (I) The Permittee shall operate and maintain its collection and treatment system in accordance with its Operation and Maintenance Plan and with any approvals issued in accordance with RCSA Section 22a-430-3(i)(3).

#### **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.

"Quarterly", when used as a sampling frequency in this permit, means that sampling is required in the months of March, June, September, and December.

"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 202108464 for permit issuance received on July 23, 2021, 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. 202108464 and received by the Commissioner on July 23, 2021, 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 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 applicable.
- (D) This permit also contains a determination under Section 316(b) of the Federal Water Pollution Control Act, 33 U.S.C. § 1326(b) regarding cooling water intake structures and Conn. Gen. Stat. § 22a-430(a), and compliance with this permit is sufficient to assure the protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife in and on the receiving waters. Based on the evaluation detailed in the fact sheet, DEEP has determined that the facility employs BTA pursuant to 40 CFR § 125.90(b).
- (E) Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

#### 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 83 °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: D	Discharge Serial Number: DSN 001 Monitoring Location: 1								
Wastewater Description: No	n-contact cool	ing water fr	om Turbines 1-4						
Monitoring Location Descri	ption: Sample	port from n	on-contact coolin	g water converge	ence vessel				
Discharge is to: Housatonic	River				ZOI for te	mperature: <b>8,078,931 gph</b>			
	ARAMETER NET DMR UNITS CODE		FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING		
PARAMETER			Average Monthly Limit	Maximum Daily Limit Sample/Reporting Frequency <sup>2</sup>		Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency	Sample Type or measurement to be reported
Temperature	00011	F∘	NA	NA	NR	NA		Weekly	Grab
pH	00400	S.U.	NA	NA	NR	NA	6.8-8.5	Semi-Annually	Grab
Total Oil and Grease	00556	mg/l	NA	NA	NR	NA		Semi-Annually	Grab
Daily Flow	74076	gpd	NA	18,920	Daily/Semi- annually	Total Daily Flow <sup>1</sup>	NR	NR	NA

#### TABLE A FOOTNOTES AND REMARKS

Footnote:

<sup>1</sup> Total Daily Flow may be an estimation of the flow discharged from this DSN.

<sup>2</sup> The first entry in this column is the "Sample Frequency". If a "Reporting Frequency" does not follow this entry and the "Sample Frequency" is more frequent than monthly then the "Reporting Frequency" is monthly. If the "Sample frequency" is specified as monthly, or less frequent, then the "Reporting Frequency" is the same as the "Sample Frequency".

#### <u>Remark:</u>

1. Abbreviations used for units are as follows: mg/L means milligrams per liter, gpd means gallons per day, S.U. means standard units. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5(D) of this permit)

2. 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 Monitoring Location: 1 Wastewater Description: Emergency pump out water from Turbines 1 and 2 Monitoring Location Description: Turbine 1 and 2 emergency pump out discharge piping sampling port Discharge is to: Housatonic River FLOW/TIME BASED MONITORING INSTANTANEOUS MONITORING NET PARAMETER DMR UNITS Maximum Sample Type or Sample/ Average Instantaneous Sample Type or Sample/Reporting CODE Monthly Daily Measurement to be limit or required Reporting measurement to be Frequency<sup>2</sup> Limit Limit reported Frequency range reported Per Event/SemipН 00400 S.U. NA NA NR NA 6.8-8.5 Grab Annually Per Event/Semi-NR Total Oil and Grease 00556 mg/l NA NA NA Grab Annually Daily/Semi-Total Daily Flow<sup>1</sup> Flow 74076 NA 417,600 NR NR gpd NA annually TABLE C FOOTNOTES AND REMARKS Footnote:

<sup>1</sup> Total Daily Flow may be an estimation of flow discharged from this DSN.

<sup>2</sup> The first entry in this column is the "Sample Frequency". If a "Reporting Frequency" does not follow this entry and the "Sample Frequency" is more frequent than monthly then the "Reporting Frequency" is monthly. If the "Sample frequency" is specified as monthly, or less frequent, then the "Reporting Frequency" is the same as the "Sample Frequency".

#### <u>Remark:</u>

1. Abbreviations used for units are as follows: mg/L means milligrams per liter, gpd means gallons per day, S.U. means standard units. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5(D) of this permit)

2. 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 C				
Discharge Serial Number: D	DSN 003					Monito	oring Location: 1		
Wastewater Description: En	nergency pum	p out water	from Turbines 3	and 4					
Monitoring Location Descri	ption: Turbine	3 and 4 em	ergency pump or	ıt discharge pipin	g sampling port				
Discharge is to: Housatonic	e River								
	NET		FLOW/TIMF	FLOW/TIME BASED MONITORING			INSTANTANEOUS MONITORING		
PARAMETER	DMR CODE	UNITS	Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency	Sample Type or measurement to be reported
рН	00400	S.U.	NA	NA	NR	NA	6.8-8.5	Per Event/Semi- Annually	Grab
Total Oil and Grease	00556	mg/l	NA	NA	NR	NA		Per Event/Semi- Annually	Grab
Flow	74076	gpd	NA	417,600	Daily/Semi- annually	Total Daily Flow <sup>1</sup>	NR	NR	NA

#### Footnote:

#### TABLE D FOOTNOTES AND REMARKS

<sup>1</sup> Total Daily Flow may be an estimation of emergency pump out water discharged from this DSN.

 $^{2}$  The first entry in this column is the "Sample Frequency". If a "Reporting Frequency" does not follow this entry and the "Sample Frequency" is more frequent than monthly then the "Reporting Frequency" is monthly. If the "Sample frequency" is specified as monthly, or less frequent, then the "Reporting Frequency" is the same as the "Sample Frequency".

#### <u>Remark:</u>

1. Abbreviations used for units are as follows: mg/L means milligrams per liter, gpd means gallons per day, S.U. means standard units. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5(D) of this permit)

2. 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.

3. Sampling shall be representative of emergency pump out discharges and shall only occur when there is an emergency pump out event from Turbines 3 and 4. Turbine leakage shall be sampled in accordance with DSN 004.

Table D										
Discharge Serial Number: DSN 004 Monitoring Location: 1										
Wastewater Description: Le	Wastewater Description: Leakage from Turbine 4									
Monitoring Location Descri	Monitoring Location Description: Turbine 3 and 4 emergency pump out discharge piping sampling port									
Discharge is to: Housatonic	River									
	NET		FLOW/TIME	LOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING		
PARAMETER	DMR CODE	UNITS	Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency	Sample Type or measurement to be reported	
pH	00400	S.U.	NA	NA	NR	NA	6.8-8.5	Semi-Annually	Grab	
Total Oil and Grease	00556	mg/l	NA	NA	NR	NA		Semi-Annually	Grab	
Flow	74076	gpd	NA	12	Daily/Semi- annually	Total Daily Flow <sup>1</sup>	NR	NR	NA	

#### TABLE E FOOTNOTES AND REMARKS

#### Footnote:

<sup>1</sup> Total Daily Flow shall be an estimation of turbine leakage from Turbine 4 over 24 hours.

 $^{2}$  The first entry in this column is the "Sample Frequency". If a "Reporting Frequency" does not follow this entry and the "Sample Frequency" is more frequent than monthly then the "Reporting Frequency" is monthly. If the "Sample frequency" is specified as monthly, or less frequent, then the "Reporting Frequency" is the same as the "Sample Frequency".

#### <u>Remark:</u>

1. Abbreviations used for units are as follows: mg/L means milligrams per liter, gpd means gallons per day, S.U. means standard units. Other abbreviations are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5(D) of this permit)

2. 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.

3. Sampling shall be representative of turbine leakage and shall be conducted when there is no emergency pump out flow occurring from Turbines 3 and 4. Emergency pump out discharges from Turbines 3 and 4 shall be sampled in accordance with DSN 003.

					Table E				
Discharge Serial Number: DSN 005 Monitoring Location: 1									
Wastewater Description: Les	akage from Tu	rbines 1-3	through the tailra	ace					
Monitoring Location Descrip	ption: Samplin	g not Requi	red						
Discharge is to: Housatonic	River								
	NET		FLOW/TIME	E BASED MON	ITORING		INSTA	NTANEOUS MONI	TORING
PARAMETER DMR U. CODE		UNITS	Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample/ Reporting Frequency	Sample Type or measurement to be reported
Flow	74076	gpd	NA	36	Daily/Semi- annually	Total Daily Flow <sup>1</sup>	NR	NR	NA

#### TABLE F FOOTNOTES AND REMARKS

#### Footnote:

<sup>1</sup> Total Daily Flow shall be an estimation of turbine leakage from all turbine units over 24 hours. The total daily flow from each turbine shall be reported as an attachment to the DMR.

 $^{2}$  The first entry in this column is the "Sample Frequency". If a "Reporting Frequency" does not follow this entry and the "Sample Frequency" is more frequent than monthly then the "Reporting Frequency" is monthly. If the "Sample frequency" is specified as monthly, or less frequent, then the "Reporting Frequency" is the same as the "Sample Frequency".

#### <u>Remark:</u>

1. Abbreviations used for units are as follows: NA means Not Applicable; NR means Not Reportable (unless sampling is conducted relative to Section 5(D) of this permit)

2. 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.
- (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.
- (D) 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.
- (E) 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.
- (F) 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.
- (G) 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.
- (H) 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.
- (I) 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 Commissioner 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(C) 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 and ATMR, 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 sampling 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 whole effluent toxicity 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: <u>https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements</u>.
  - (3) Within five days of any notification of noncompliance in accordance with Sections 9(A)(a) through 9(A)(f) of this permit, the Permittee shall submit a follow-up report using the Commissioner's online Noncompliance Follow-up Report Form: <u>https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-assistance/notification-requirements</u>.

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 9(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 Followup Report Form. The Forms are available at the Commissioner's website, here: <u>https://portal.ct.gov/deep/water-regulating-and-discharges/industrial-wastewater/compliance-</u> <u>assistance/notification-requirements</u>.

(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

EMMA CIMINO DEPUTY COMMISSIONER DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

JP/ PB

## National Pollutant Discharge Elimination System Factsheet

## SECTION 1 FACILITY SUMMARY

APPLICANT	Firstlight CT Housatonic LI C
	Tristight CT Housatome LEC
PERMIT NO.	CT0030821
APPLICATION NO.	202108464
DATE APPLICATION RECEIVED	07/23/2021
LOCATION ADDRESS	1 Roosevelt Drive Monroe, CT 06468
FACILITY CONTACT	Daniel Timlake Office Phone: 860 350 3617 Email: <u>Daniel.timlake@firstlightpower.com</u>
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DMR CONTACT	Daniel Timlake Office Phone: 860 350 3617 Email: <u>Daniel.timlake@firstlightpower.com</u>
SECRETARY OF STATE BUSINESS ID	0607778
PERMIT TERM	5 Years
PERMIT CATEGORY	National Pollutant Discharge Elimination System ("NPDES") MINOR ("MI")
SIC & NAICS CODE(S)	4911
APPLICABLE EFFLUENT GUIDELINES	NA
PERMIT TYPE	Issuance
OWNERSHIP	Private
RECEIVING WATER	Housatonic River
WATERBODY SEGMENT ID'S	CT6000-00-5+L4_01
WATERBODY CLASSIFICATION	SB
DISCHARGE LOCATIONS	DSN 001 Latitude 41N 22' 56.75" Longitude 73W 10' 16.03" DSN 002 Latitude 41N 22' 57.26" Longitude 73W 10' 16.08" DSN 003 Latitude 41N 22' 57.62" Longitude 73W 10' 16.12" DSN 004 Latitude 41N 22' 56.90" Longitude 73W 10' 16.03" DSN 005 Latitude 41N 22' 57.30" Longitude 73W 10' 16.08"
COMPLIANCE SCHEDULE	N/A
DEEP STAFF ENGINEER	Patrick Bieger, Environmental Engineer Phone: 860 424 3805 Email: Patrick.bieger@ct.gov

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## **1.1 PERMIT FEES**

#### Application Fee:

Filing Fee	Invoice No.: DEP378666	Amount: \$1,300	Date Paid: 7/23/2021
Processing Fee	Invoice No.: DEP379577	Amount: \$3,925	Date Paid: 9/23/2021

#### Annual Fee:

	WASTEWATER CATEGORY (per RCSA sec. 22a-430-7)	FLOW CATEGORY	DSN	ANNUAL FEE (per RCSA sec. 22a-430-7 and CGS sec. 22a- 6f)
	Floor Drain Wastewater		DSN002, 003, 004, 005	\$0
	Non-Contact Cooling Water		DSN 001	\$775
TOTAL				\$775

## **1.2 APPLICATION SUBMITTAL INFORMATION**

On July 23, 2021, the Department of Energy and Environmental Protection ("DEEP") received an application (Application 202108464) from Firstlight CT Housatonic LLC ("the Permittee", "the Applicant", "the facility") in Monroe for the issuance of its NPDES permit. Consistent with the requirements of Section 22a-6g of the Connecticut General Statutes ("CGS"), the Permittee published a Notice of Permit Application in the Connecticut Post on July 8, 2021. On October 14, 2021, the application was determined to be timely and administratively sufficient.

The Permittee seeks authorization for the following in Application 202108464:

DSN	PROPOSED AVERAGE DAILY FLOW (gpd)	PROPOSED MAXIMUM DAILY FLOW (gpd)	PROPOSED WASTESTREAMS	TREATMENT TYPE	DISCHARGE TO
001	2,876	18,920	Non-contact cooling water from Turbines 1-4	N/A	Housatonic River
002	0	417,600	Emergency pump out water	N/A	Housatonic River
003	0	417,600	Emergency pump out water	N/A	Housatonic River
004	10	12	Turbine 4 leakage	N/A	Housatonic River
005	30	36	Turbine 1-3 leakage	N/A	Housatonic River

## **1.3 OTHER PERMITS**

The Permittee has permit coverage for other wastewater discharges under the following permitting mechanisms:

- Stormwater from construction activities on the site is permitted under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (GSN003823); and
- The non-contact cooling water discharge from the site was covered under the Comprehensive General Permit for Discharges to Surface Water and Groundwater (CTCSW0019). This coverage is automatically terminated with the issuance of this permit.

The Permittee also has a Diversion permit (60000-008-HYD-IM) that authorizes the withdrawal of water from the Stevenson Hydroelectric Station at Lake Zoar.

## **1.4 DESCRIPTION OF INDUSTRIAL PROCESS**

Firstlight CT Housatonic LLC is a business that performs hydroelectric generation. Wastewater is discharged to Housatonic River by way of DSNs 001-005 under this proposed permit.

## **1.5 FACILITY DESCRIPTION**

The Applicant's facility is a Federal Energy Regulatory Commission ("FERC") licensed hydroelectric generation plant located at the southernmost edge of Lake Zoar, at the junction of Route 34 and the Housatonic River in Monroe. The facility is a dispatchable facility and is scheduled by the electricity market to run for the majority of operating hours. The turbines were placed into operation in 1937. There has been no major construction or changes to the facility since 1937; however, supplemental modernization improvements have occurred on the turbines.

The facility consists of four water powered turbines. Each turbine has three waste streams, turbine leakage from the generator bearing gasket, non-contact cooling water, and emergency discharges collected in the sumps located around each turbine. Turbine leakage and non-contact cooling water are generated 24/7, with a manual shut off that is used when the facility is not generating electricity. Turbines 1-3 are identical water lubricated turbines, while Turbine 4 is an oil lubricated turbine. The oil is self-contained in the turbine and does not mix with any waters leaving the facility. The discharges from the facility enter the Housatonic River via three separate discharge locations. The first location is below the facility where turbine leakage flows down the turbines and discharges through the facility's tailrace. The second and third location are from discharge pipes on the eastern wall of the facility. These pipes discharge roughly 50 feet above the Housatonic River.

DSN 001 represents the confluence of all non-contact cooling water generated from Turbines 1-4, before it comingles with other wastewaters and discharges to the Housatonic River through the tailrace.

DSN 002 and 003 represent emergency pump out discharges. These activities should only occur if the facility floods or during other emergency events. Emergency pump out water from Turbines 1 and 2 are collected in dedicated sumps and commingle in a pipe that discharges on the east side of the building to the Housatonic River via DSN 002. Turbines 3 and 4 are collected in dedicated sumps and commingle in a pipe that also discharges on the east side of the building to the Housatonic River via DSN 003.

The routine leakage discharge from Turbine 4 is represented as DSN 004. The leakage collects in the sump of Turbine 4 and discharges via the Turbine 3 and 4 emergency pump out discharge pipe (DSN 003). The sampling location for DSN 003 and DSN 004 are the same. Compliance with the monitoring requirements for DSN 004 requires sampling to be completed when there is no flow from the emergency pump out system from Turbines 3 and 4.

Leakage from Turbines 1-3 drains beneath the turbines and is discharged via the tailrace. These discharges are represented as DSN 005. They discharge at a low volume (~12 gpd per turbine). There is no dedicated sample location since they drain directly into the tailrace. However, Turbines 1-3 are lubricated by water only and their leakage is not expected to contain oil and grease.

## **<u>1.6 FACILITY CHANGES</u>**

This is a new permit, hence there were no requested changes to the facility for this permit issuance.

## **1.7 TREATMENT SYSTEM DESCRIPTION**

The discharge consists of only turbine leakage made solely of river water. There is no treatment system at the facility.

## **1.8 COMPLIANCE HISTORY**

Is the Permittee subject to an ongoing enforcement action?  $\square$  Yes  $\square$ No

Consent Order Number WC5435 ("the order"), issued November 9, 2006, required the Permittee to investigate all discharges from hydroelectric facilities, including Stevenson Station, and submit discharge permit applications for all facilities with unpermitted wastewater discharges. DEEP received the report "Investigation and Remediation of Discharges at Ten Hydroelectric Stations" on June 6, 2008, an addendum "Investigation and Remediation of Discharges at Ten Hydroelectric Stations Addendum" required by Paragraph B.2.d of the order on November 2, 2009, and a subsequent report with an updated monitoring plan on March 29, 2024. DEEP issued an approval on May 2, 2024, indicating that the Permittee was in compliance with Paragraph B.2.d. of the order. The reports identified the discharges of turbine, non-contact cooling water, and building leakage from this facility.

## **1.9 GENERAL ISSUES RELATED TO THE APPLICATION**

## 1.9.1 FEDERALLY RECOGNIZED INDIAN LAND

As provided in the permit application, the site is not located on federally recognized Indian land.

## 1.9.2 COASTAL AREA/COASTAL BOUNDARY

The activity is not located within a coastal boundary as defined in CGS 22a-94(b).

## **1.9.3 ENDANGERED SPECIES**

As provided in the permit application, the site is located within an area identified as a habitat for endangered, threatened, or special concern species according to the 2020 *Federal Listed Species and Natural Communities Map*. The review determined that there would be no anticipated negative impacts to State-listed species resulting from the proposed activity at the Permittee's site.

## 1.9.4 AQUIFER PROTECTION AREAS

As provided in the permit application, the site is not located within a protected area identified on a Level A or B map.

## 1.9.5 CONSERVATION OR PRESERVATION RESTRICTION

As provided in the permit application, the property is not subject to a conservation or preservation restriction.

## 1.9.6 PUBLIC WATER SUPPLY WATERSHED

As provided in the permit application, the facility is not located within a public water supply watershed.

## SECTION 2 RECEIVING WATER BODY INFORMATION

The water classification of section CT6000-00-5+L4\_01 of the Housatonic River is SB. Class SB waters are designated for habitat for marine fish, other aquatic life, and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation. This segment of the Housatonic River is listed on the State's 305(b) list of impaired waters and is impaired for its designated use of recreation (final-2022-iwqr-appendix-a-1-connecticut-305b-assessment-results-for-rivers-and-streams.pdf). The causes of impairment are the presence of nutrients, algae, and chlorophyll-A.

This segment of the Housatonic River is also subject to A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound, December 2000 (<u>Total Maximum Daily Load for Long Island Sound (ct.gov</u>)). The discharge from this Permittee is characteristically similar to the Housatonic River and there are no chemical additions to the water during the hydroelectric generation process. Based on a review of the information provided in the application, the facility is not adding any additional pollutants or nutrients to the receiving stream.

## SECTION 3 PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

## **3.1 EFFLUENT GUIDELINES**

No categories found under the federal Effluent Limit Guidelines and Standards of Title 40 Code of Federal Regulations ("CFR") Chapter 1 Subchapter N match the description of wastewaters discharged by DSNs 001-004. The Steam Electric Power Generating Point Source Category under 40 CFR Part 423 was reviewed for applicability as the facility is a hydroelectric power plant. Under the applicability in 40 CFR Part 423.10, it was determined that this category applies to electricity resulting primarily from fossil-type fuels or nuclear fuel. The Applicant uses water turbines to generate electricity; therefore, this activity would not fall under 40 CFR Part 423. There is no applicable federal effluent limit guideline for the proposed discharges.

## **3.2 POLLUTANTS OF CONCERN**

The following pollutants are included as monitoring pollutants in the permit for the reasons noted below:

		<b>REASON FOR</b>	INCLUSION	
POLLUTANT	POLLUTANT WITH AN APPLICABLE TECHNOLOGY- BASED LIMIT	POLLUTANT WITH A WASTE LOAD ALLOCATION FROM A TMDL	POLLUTANT IDENTIFIED AS PRESENT IN THE EFFLUENT THROUGH SAMPLING	POLLUTANT OTHERWISE EXPECTED TO BE PRESENT IN THE EFFLUENT
рН			X	
Oil and Grease				Х
Temperature			Х	
Temperature Differential			Х	

## **3.3 BASIS FOR LIMITS**

Technology and water-quality based requirements are considered when developing permit limits. Technology-based effluent limits ("TBELs") represent the minimum level of control imposed under the Clean Water Act ("CWA"). Industry-specific technology-based limits are set forth in 40 CFR Sections 405 – 471 (EPA's Effluent Limitation Guidelines) and in RCSA Section 22a-430-4(s)(2). Water quality-based limits are designed to protect water quality and are determined using the procedures set forth in EPA's *Technical Support Document for Water Quality-Based Toxics Control*, 1991 ("TSD"). When both technology and water quality-based limits apply to a particular pollutant, the more stringent limit would apply. In addition, water quality-based limits are required when any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) is or may be discharged at a level that causes, has reasonable potential to cause, or contributes to an excursion above any water quality criteria. Numeric water quality criteria are found in RCSA Section 22a-429-9 of the *Connecticut Water Quality Standards* ("WQS").

## **<u>3.4 ZONE OF INFLUENCE</u>**

A zone of influence of 300 cubic feet per second (cfs) fs or 8,078,956 gallons per hour (gph) has been allocated to DSN 001 This is based on the turbines' minimum flow through flow rate required by the facility's FERC permit. The discharge of the non-contact cooling water from DSN 001 mixes with the 300 cfs of river water flowing through the facilities' draft tubes before discharging below the building and entering the Housatonic River.

## **3.5 RESONABLE POTENTIAL ANALYSIS**

Pursuant to CWA Section 301(b)(1)(C) and 40 CFR Section 122.44(d)(1), NPDES permits must contain any requirements in addition to TBELs that are necessary to achieve water quality standards established under Section 303 of the CWA. See also 33 United States Code ("USC") Section 1311(b)(1)(C). In addition, limitations "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality." 40 CFR Section 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. See 40 CFR Section 122.44(d)(1)(i).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain Water Quality Based Effluent Limits ("WQBELs") or require additional monitoring if there is insufficient data to develop a WQBEL for that pollutant. See 40 CFR Section 122.44(d)(1)(i).

Zinc, copper, and nitrate are present in the Housatonic River upstream of the facility and as a result also present in the discharge. A reasonable potential analysis was not conducted on these pollutants because the facility does not add these chemicals to its processes or wastewater, and the only source of these pollutants is the river water used as the facility's intake water.

Monitoring for pH, temperature, and oil and grease is included in the permit to further characterize the discharges.

Parameter	Value
7Q10	128 cfs
Temperature	40-78.6 deg. F.

## 3.6 WATERBODY AMBIENT CONDITIONS

## **3.7 TEMPERATURE**

The facility discharges non-contact cooling water; therefore, a reasonable potential analysis was conducted for the temperature discharge of DSN 001.

Section 22a-426-9(a)(1) of the WQS states there shall be no changes from natural conditions that would impair any existing or designated uses assigned to Class SB waters and, in no case exceed 83 degrees Fahrenheit (deg. F.), or in any case raise the temperature of surface water more than 4 deg. F. During the period including July, August, and September, the temperature of the receiving water shall not be raised more than 1.5 deg. F. Additionally, the allowable temperature increase resulting from discharges in the estuarine segments of the Housatonic River shall be consistent with the criteria for non-tidal segments.

The Permittee discharges into the estuarine segment of the Housatonic River and therefore will follow the non-tidal segment requirement, which does not include the 1.5 deg. F. restriction.

Based on the FERC regulation, Firstlight CT Housatonic LLC must maintain a flow of 300 cfs through the turbines when possible and the facility has to stop the generation of electricity if less than 400 cfs of water is flowing through the turbines. Non-contact cooing water will discharge when there is waterflow through the turbines but there will be minimal heat transfer at flows below 400 cfs as the turbine will not be generating heat. Therefore, there will be at least 300 cfs (8,078,956 gph) of water available for mixing when the facility is discharging cooling water. This flow has been defined as the zone of influence for the reasonable potential analysis.

A review of Housatonic River temperature data from United State Geological Survey ("USGS") from June 2022 to October 2022, showed the highest and lowest temperature to be 40 deg. F. and 78.6 deg. F., respectively (<u>http://waterdata.usgs.gov/ct/nwis/</u>). For the purpose of this analysis, 32 deg. F. was assumed to be the minimum temperature of the river during winter months.

The maximum recorded volume of non-contact cooling water discharged from this facility is 18,920 gpd. The maximum observed temperature of non-contact cooling water observed between July 2023 and October 2024 was 81 deg. F. This temperature is considered representative of the current commingled non-contact cooling water discharge, which were commingled in November 2023. A conservative assumption of a max discharge temperature of 100 deg. F. was used in the reasonable potential analysis. The Permittee has been able to meet this limit under the Comprehensive General Permit for Discharges to Surface Water and Ground Water.

The following mixing equation is used to determine if the maximum discharge temperatures have the potential to exceed 83 deg. F. and raise the receiving water by more than 4 deg. F.:

## Mixing equation

## $\mathbf{QT} = \mathbf{Q}_1 \mathbf{T}_1 + \mathbf{Q}_2 \mathbf{T}_2$

Where Q is the summation of the river flow rate and effluent flow rate,  $(Q = Q_1+Q_2)$ .

T is the river temperature after discharge in deg. F.

 $Q_1$  is the zone of influence in gph.

 $T_1$  is the temperature of the receiving stream prior to discharge in deg. F.

 $Q_2$  is the max effluent flow rate in gph.

 $T_2$  is the effluent temperature in deg. F.

	Q1	<b>T</b> <sub>1</sub>	Q2	<b>T</b> 2	Q	Т	Delta T
Winter	8,078,956	32	789	100	8,079,745	32.006	0.006
Summer	8,078,956	78.6	789	100	8,079,745	78.602	0.002

The results above show that the predicted temperature increase would be 0.006 deg. F. in the winter at the lowest receiving stream temperature and 0.002 deg. F. in the summer during the highest river temperature. This results in a maximum river temperature of 32.006 deg. F. and 78.602 deg. F., respectively. The calculated max receiving water temperature and delta T is consistent with WQS Section 22a-426-9(a)(1), which states that the discharge must not raise the temperature of the receiving stream more than 4 deg. F or exceed 83 deg. F. Therefore, the facility does not have reasonable potential to violate the WQS. The permit will contain a monitoring requirement for temperature to measure discharge temperature to evaluate compliance with the WQS.

## **3.8 WHOLE EFFLUENT TOXICITY**

The Permittee shall comply with effluent standards or prohibitions established by CWA Section 307(a) and RCSA Section 22a-430-4(l) and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, DEEP may require the Permittee to perform acute or chronic whole effluent toxicity testing. Toxicity is not expected in the effluent due to the characteristics of the discharged waters.

The wastewater is comprised of turbine leakage and non-contact cooling water. The source of the wastewater is intake water from Lake Zoar, located upstream of the discharge. No chemicals or other substances are added to the water while in the turbine or when used for cooling. Therefore, the water discharged from the turbines and the non-contact cooling water are characteristically similar to the Housatonic River.

## 3.9 WATER QUALITY BASED EFFLUENT LIMITATIONS (WQBELs)

The CWA and federal regulations require that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water. This is necessary when less stringent TBELs would interfere with the attainment or maintenance of water quality criteria in the receiving water. See CWA Section 301(b)(1)(C) and 40 CFR Section 122.44(d)(1),122.44(d)(5),125.84(e) and 125.94(i).

There is reasonable potential for the Permittee to exceed the water quality criteria for the maximum temperature allowed to be discharged into a class SB river. A limit of 83 deg. F. will

be included in the permit as an end of pipe limit. This limit will ensure the discharge does not exceed the water quality criteria for temperature

## 3.10 TECHNOLOGY BASED EFFLUENT LIMITATIONS

Technology-based treatment requirements represent the minimum level of control that must be imposed under CWA Section 301(b) and 402 to meet best practicable control technology currently available ("BPT") for conventional pollutants and some metals, best conventional control technology ("BCT") for conventional pollutants, and best available technology economically achievable ("BAT") for toxic and non-conventional pollutants. See 40 CFR Section 125 Subpart A and RCSA Section 22a-430-4(1)(4)(A).

Subpart A of 40 CFR Section 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated Effluent Limitation Guidelines ("ELGs") and case-by-case determinations of effluent limitations under CWA Section 402(a)(1). EPA promulgates New Source Performance Standards ("NSPS") under CWA Section 306 and 40 CFR Section 401.12. See also 40 CFR Section 122.2 (definition of "new source") and 122.29.

In the absence of published technology-based effluent guidelines, the permit writer is authorized under CWA Section 402(a)(1)(B) and RCSA Section 22a-430-4(m) to establish effluent limitations on a case-by-case basis using best professional judgment ("BPJ").

There are no federal TBELs for hydroelectric generation wastewaters.

## 3.11 COMPARISON OF LIMITS

After preparing and evaluating applicable TBELs and WQBELs, the most stringent limits are applied in the permit. Pollutants of concern that only require monitoring without limits with are not included in the below table. A summary of the calculations used in the reasonable potential analysis, or effluent limitations can be found in Section 3.5 of this factsheet.

PARAMETER	UNITS	LIMITS WATER QUALITY Water Quality Standards	
		AVERAGE MONTHLY LIMIT OR pH Minimum	MAXIMUM DAILY LIMIT OR pH Maximum
рН	S.U.	6.8	8.5

Sample Type	Sample Frequency	Parameter	Reason	
Grab Sample	Semi- annually	Oil and Grease	RCSA Sections 22a-430-4(1)(4)(A) and 22a-430-4(m)	
	2	pН	RCSA Section 22a-430-4(l)(4)(A) and 22a-430-4(m)	
	Weekly	Temperature	RCSA Section 22a-430-4(1)(4)(A) and 22a-430-4(m)	

## **3.12 SAMPLING FREQUENCY, TYPE, AND REPORTING**

## **3.13 OTHER PERMIT CONDITIONS**

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.

Flow reporting for all DSNs can be estimated and any calculations used for the estimation attached to the Permittee's DMRs.

Flows from DSN 005 are required to be broken up and reported by individual turbine flow and submitted as an attachment to the DMR.

#### **3.14 COMPLIANCE SCHEDULE**

The permit has a compliance schedule that follows the requirements found under 40 CFR Section 122.47 and RSCA Section 22a-430-4(l)(3).

Does the Permit contain a compliance schedule?

## **3.15 ANTIDEGRADATION**

Implementation of the Antidegradation Policy follows a tiered approach pursuant to the federal regulations (40 CFR Section 131.12) and consistent with the Connecticut Antidegradation Policy included in the Connecticut Water Quality Standards (Section 22a-426-8(b-f) of the Regulations of Connecticut State Agencies). Tier 1 Antidegradation review applies to all existing permitted discharge activities to all waters of the state. Tiers 1 and 2 Antidegradation reviews apply to new or increased discharges to high quality waters and wetlands, while Tiers 1 and 3 Antidegradation reviews apply to new or increased discharges to outstanding national resource waters.

This discharge is an existing discharge, and the Permittee does not propose an increase in volume or concentration of constituents. Therefore, only the Tier 1 Antidegradation Evaluation and Implementation Review was conducted to ensure that existing and designated uses of surface waters and the water quality necessary for their protection are maintained and preserved, consistent with Connecticut Water Quality Standards, RCSA Sec.22a-426-8(a)(1). This review involved:

- An evaluation of narrative and numeric water quality standards, criteria and associated policies.
- The discharge activity both independently and in the context of other dischargers in the affected waterbodies; and
- Consideration of any impairment listed pursuant to Section 303d of the federal Clean Water Act or any TMDL established for the waterbody.

The Applicant and its discharges have existed since 1937 with minor modifications to the turbine and the facility. The source water for the Applicant's facility is Lake Zoar upstream of the facility, and the Applicant does not add chemicals nor alter the water prior to it discharging back to the Housatonic River. DEEP has determined the discharges will not have a negative impact on the water quality of the Housatonic River.

DEEP has determined that the discharges and activities associated with this permit are consistent with the maintenance, restoration, and protection of the existing and designated uses of the Housatonic River.

## **3.16 ANTI-BACKSLIDING**

This is the first individual permit for the facility and its wastewater discharges; hence an antibacksliding evaluation was not performed.

## **3.17 CATEGORICAL DISCHARGE CONDITIONS**

There are no applicable federal or state categorical discharge regulations for these discharges.

## 3.18 COOLING WATER INTAKE STRUCTURE SECTION 316(B)

Section 316(b) of the Federal Water Pollution Control Act, U.S.C. Section 1326(b) states that "any standard established pursuant to Section 301 or 306 of this Act and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures ("CWIS") reflect the best technology available ("BTA"s) for minimizing adverse environmental impact".

The federal regulations establish requirements under Section 316(b) of the CWA for existing power generating facilities and existing manufacturing and industrial facilities with a cooling water intake structure having a design intake flow greater than 2 million gallons per day of water from waters of the United States and use at least 25 percent of the water they withdraw exclusively for cooling purposes. Section 125.92 defines "Cooling water intake structure" as "the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the United States. The cooling water intake structure extends from the point at which water is first withdrawn from waters of the United States up to and including the intake pumps."

Section 125.90(b), states "Cooling water intake structures not subject to requirements under Section 125.94 through 125.99 or subparts I or N of this part must meet requirements under Section 316(b) of the CWA established by the Director on a case-by-case, best professional judgment (BPJ) basis."

The August 15, 2014, 316(b) final rule applies to existing facilities that withdraw more than 2 MGD of water and uses at least 25% of the actual intake flow exclusively for cooling purposes. In July 2022, EPA published guidance to the Region and states in the Memorandum *Transmittal of the Revised Framework for Best Professional Judgment for Cooling Water intake Structures at Hydroelectric Facilities.* This document maintains EPA's interpretation that the 2014 rule's substantive provisions were not intended to apply to hydroelectric facilities and that instead CWIS at hydroelectric facilities are subject to site-specific requirements set on a BPJ basis pursuant to 40 CFR Section 125.90(b). The following factors are considered in establishing BTA on a BPJ basis in accordance with EPA's memo:

- 1. Volume of cooling water used relative to other power generation facilities and relative to total water use at the facility. The amount of cooling water used at the facility is comparable to the other hydroelectric facilities in Connecticut. The maximum water that could run through the facility is 3,993,000,000 gallons per day and the maximum flow of NCCW is 18,920 gallons per day. The percentage of cooling water used at the facility during maximum flow is 0.0000047%; assuming only 1% of the maximum flow through the facility the maximum percentage of cooling water used would only be 0.00047%.
- 2. *Cooling water withdrawn relative to waterbody flow.* The percentage of cooling water utilized would be approximately 3% of the river's 7Q10 flow.
- 3. *Location of the intake structure*. This facility has two cooling water intake structures each within the facility's powerhouse intake structure, which also houses the turbine penstocks.
- 4. *Technologies at the facility*. The facility's penstock includes trash racks to limit the flow of organisms and debris through the penstock. The trash racks are cleared when the pressure differential inhibits operations. The operating pressure ranges from 11-13 psi. Additionally, the NCCW is gravity fed to the turbines. The flow and pressure would be negligible compared to the flow and pressure through the penstock itself.

Based on this information, DEEP's BPJ concludes that this facility meets BTA pursuant to 40 CFR Section 125.90(b).

## **3.19 VARIANCES AND WAIVERS**

The facility did not request a variance or a waiver.

#### 3.20 E-REPORTING

The Permittee is required to electronically submit documents in accordance with 40 CFR Section 127.

# SECTION 4 SUMMARY OF NEW PERMIT CONDITIONS AND LIMITS FROM THE PREVIOUS PERMIT

This facility has not previously been regulated by a NPDES permit.

#### SECTION 5 PUBLIC PARTICIPATION PROCEDURES

#### 5.1 INFORMATION REQUESTS

The application has been assigned the following numbers by the Department of Energy and Environmental Protection. Please use these numbers when corresponding with this office regarding this application.

APPLICATION NO. 202108464 PERMIT ID NO. CT0030821

Interested persons may obtain copies of the application from Daniel Timlake Firstlight CT Housatonic, 143West Street, Suite E, New Milford, 06776.

The application is available for inspection by contacting Patrick Bieger at <u>Patrick.bieger@ct.gov</u>, at the Department of Energy and Environmental Protection, Bureau of Materials Management and Compliance Assurance, 79 Elm Street, Hartford, CT 06106-5127 from 8:30 - 4 :30, Monday through Friday.

Any interested person may request in writing that his or her name be put on a mailing list to receive notice of intent to issue any permit to discharge to the surface waters of the state. Such request may be for the entire state or any geographic area of the state and shall clearly state in writing the name and mailing address of the interested person and the area for which notices are requested.

## 5.2 PUBLIC COMMENT

Prior to making a final decision to approve or deny any application, the Commissioner shall consider written comments on the application from interested persons that are received within 30 days of this public notice. Written comments should be directed to Patrick Bieger, Environmental Engineer, Bureau of Materials Management and Compliance Assurance, Department of Energy Environmental Protection. 79 Elm Street. Hartford. CT 06106-5127 and or DEEP.IndustiralNPDESPublicComments@ct.gov and should indicate the permit ID No. CT0030821 in the subject line. The Commissioner may hold a public hearing prior to approving or denying an application if in the Commissioner's discretion the public interest will be best served thereby, and shall hold a hearing upon receipt of a petition signed by at least twenty five (25) persons. Notice of any public hearing shall be published at least thirty (30) days prior to the hearing.

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 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 thirty (30) days of electronic submittal. Additional information can be found at www.ct.gov/deep/adjudications.

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 (ADA). If you are seeking a communication aid or service, have limited proficiency in English, wish to file an ADA or Title VI discrimination complaint, or require some other accommodation, including equipment to facilitate virtual participation, please contact the DEEP Office of Diversity and Equity at 860-418-5910 or by email at deep.accommodations@ct.gov. Any person needing an accommodation for hearing impairment may call the State of Connecticut relay number - 711. In order to facilitate efforts to provide accommodation, please request all accommodations as soon as possible following notice of any agency hearing, meeting, program, or event.



#### NOTICE OF TENTATIVE DETERMINATION INTENT TO ISSUE A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR THE FOLLOWING DISCHARGES INTO THE WATERS OF THE STATE OF CONNECTICUT

#### **1.0 TENTATIVE DECISION**

The Commissioner of the Department of Energy and Environmental Protection hereby gives notice of a tentative determination to issue a permit based on an application and administrative record submitted by **Firstlight CT Housatonic LLC** ("the Applicant") under Section 22a-430 of the Connecticut General Statutes ("CGS") for a permit to discharge into the waters of the state.

In accordance with applicable federal and state law, the Commissioner has made a tentative determination that the discharge will not cause pollution of the waters of the state.

The Commissioner proposes to issue a permit for the discharge to the Housatonic River.

The proposed permit, if issued by the Commissioner, will require monitoring to demonstrate that the discharge will not cause pollution.

#### 2.0 APPLICANT'S PROPOSAL

Firstlight CT Housatonic LLC presently discharges 18,920 gallons per day of non-contact cooling water, 50 gallons of turbine leakage, and up to 835,200 gallons per day of emergency pump out water in case of a facility flood to the Housatonic River from hydroelectric generation operations at a hydroelectric generation facility.

The name and mailing address of the permit Applicant are: Firstlight CT Housatonic LLC 143 Est Street, Suite E, New Milford, CT 06776.

The activity take(s) place at: 1 Roosevelt Drive Monroe CT 06468 directly downstream from the Stevenson Station Dam.

#### **3.0 REGULATORY CONDITIONS**

3.1 Type of Treatment

DSN 001: No Treatment DSN 002: No Treatment DSN 003: No Treatment DSN 004: No Treatment DSN 005: No Treatment

#### 3.2 Effluent Limitations

This permit contains effluent limitations consistent with Case-by-Case Determination using the criteria of Best Professional Judgement and which will meet Water Quality Standards including the Anti-Degradation Policy and protect the water of the state from pollution when the permittee complies with all permit requirements.

In accordance with Section 22a-430-4(l) of the Regulations of Connecticut State Agencies the permit contains effluent limitations for pH.

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#### **4.0 COMMISSIONER'S AUTHORITY**

The Commissioner of the Department of Energy and Environmental Protection is authorized to approve or deny such permits pursuant to Section 402(b) of the Federal Water Pollution Control Act, as amended, 33 USC 1251, et. seq. and Section 22a-430 of the CGS and the Water Discharge Permit Regulations (Section 22a-430-3 and 4 of the RCSA).

#### **5.0 INFORMATION REQUESTS**

The application has been assigned the following numbers by the Department of Energy and Environmental Protection. Please use these numbers when corresponding with this office regarding this application.

APPLICATION NO. 202108464

#### PERMIT ID NO. CT0030821

Interested persons may obtain copies of the application from Daniel Timlake, Firstlight CT Housatonic LLC, 143 West Street, Suite E, New Milford, CT 06776, <u>Daniel.timlake@firstlightpower.com</u>, Phone No.: (860) 350-3617.

The application is available for inspection by contacting Patrick Bieger, Environmental Engineer, at 860-424-3805 or Patrick.bieger@ct.gov, at the Department of Energy and Environmental Protection, Bureau of Materials Management and Compliance Assurance, 79 Elm Street, Hartford, CT 061065127 from 8:30-4:30, Monday through Friday.

Any interested person may request in writing that his or her name be put on a mailing list to receive notice of intent to issue any permit to discharge to the surface waters of the state. Such request may be for the entire state or any geographic area of the state and shall clearly state in writing the name and mailing address of the interested person and the area for which notices are requested.

#### 6.0 PUBLIC COMMENT

Prior to making a final decision to approve or deny any application, the Commissioner shall consider written comments on the application from interested persons that are received within 30 days of this public notice. Written comments should be directed to Patrick Bieger Environmental Engineer, Bureau of Materials Management and Compliance Assurance, Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 061065127 or <u>DEEP.IndustrialNPDESPublicComments@ct.gov</u> and should indicate the Permit ID No. CT0030821 in the subject line. The Commissioner may hold a public hearing prior to approving or denying an application if in the Commissioner's discretion the public interest will be best served thereby, and shall hold a hearing upon receipt of a petition signed by at least twenty -five persons. Notice of any public hearing shall be published at least thirty (30) days prior to the hearing.

#### 7.0 PETITIONS FOR HEARING

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 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 or may be mailed or delivered to DEEP Office of Adjudications, 79 Elm Street, 3rd floor, Hartford, 06106-5127. If the signed original petition is only in an electronic format, the petitions that were filed 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 thirty (30) days of electronic submittal. Additional information can be found at www.ct.gov/deep/adjudications.

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Any person needing an accommodation for hearing impairment may call the State of Connecticut relay number -711. In order to facilitate efforts to provide accommodation, please request all accommodations as soon as possible following notice of any agency hearing, meeting, program, or event.

Audra Dickson, Director Water Permitting and Enforcement Division Bureau of Materials Management and Compliance Assurance Department of Energy and Environmental Protection

Dated: February 26, 2025