

GREAT RIVER HYDRO, LLC
2 Killeen Street
N. Walpole, NH 03609

tel 802.299.5943

www.greatriverhydro.com

June 13, 2023

US Environmental Protection Agency

RE: NPDES General Draft Permit # NHG360000 for Hydroelectric Generating Facilities, Moore Facility

To whomever it may concern,

Enclosed please find the Notice of Intent (NOI) for Great River Hydro, LLC Moore hydroelectric generating facility located in Littleton, New Hampshire. Great River Hydro, LLC is seeking a National Pollutant Discharge Elimination System (NPDES) permit under the Hydroelectric Generating Facilities General Permit #NHG360000.

If you have any questions or need additional information, please contact me at (802) 299-5943 or at ksparks@greatriverhydro.com.

Sincerely,

Kari Sparks

Kari Sparks
Environmental Specialist

Enclosures: Notice of Intent for Comerford facility to be covered under NHG360000.

cc: New Hampshire Department of Environmental Services Water Division, Wastewater Engineering Bureau

Table of Contents

Request for General Permit Authorization to Discharge Wastewater Notice of Intent

Appendix A – Station Location Topographical Map

Appendix B – Designated Uses, Pollutants, TMDL Availability

Appendix C - Station Flow Schematic

Appendix D - Intake Velocity Demonstration of Compliance

Appendix E - ESA Eligibility for Species under Jurisdiction of USFWS

Appendix F - National Historic Property Act Eligibility

**Request for General Permit Authorization to Discharge Wastewater Notice of Intent (NOI) to be covered by
Hydroelectric Generating Facilities General Permit (HYDROGP) No. MAG360000 or NHG360000**

Indicate Applicable General Permit for Discharge(s): MAG360000 NHG360000

A. Facility Information

| | | |
|--|--|------------------------------------|
| 1. Facility Location | Name: Great River Hydro, LLC - Moore Station | |
| | Street: 2700 St. Johnsbury Road | |
| | City: Littleton | State: NH |
| | Zip: 03561 | SIC Code: 4911 |
| | Latitude: 44°20'10.58 N | Longitude: 71°52'30.87"W |
| | Type of Business: Hydroelectric Power Generation | |
| 2. Facility Mailing Address (if different from Location) | Street: 2 Killeen Street | |
| | City: North Walpole | State: NH |
| | Zip: 03609 | |
| 3. Facility Owner | Name: Great River Hydro, LLC | Email: ksparks@greatriverhydro.com |
| | Street: 2 Killeen Street | Telephone: 802-299-5943 |

| | | |
|--|--|---|
| | City: North Walpole | State: NH |
| | Contact Person: Kari Sparks | Zip: 03609 |
| 4. Facility Operator (if different from above) | Name: | Email: |
| | Street: | Telephone: |
| | City: | State: |
| | Zip: | |
| 5. Current Permit Status | Has prior HYDROGP coverage been granted for the discharge(s) listed in the NOI? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| | Permit number (if yes): NHG360004 | |
| | Is the facility covered under an Individual Permit? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| | Is there a pending NPDES application of file with EPA for the discharge(s)? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| | Date of Submittal (if yes): 10/1/2014 | Permit Number (if known): NHG360004 |
| | Attach a topographic map indicating the locations. of the facility and outfall(s) to the receiving water | <input checked="" type="checkbox"/> Map Attached |
| | Number of turbines: 4 | |
| | Combined turbine discharge (installed capacity) at: | Maximum capacity? 18,000 cfs Minimum capacity? 320 cfs |
| | Is this facility operated as a pump storage project? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

B. Discharge Information

| | | |
|----|---|--|
| 1. | Name of Receiving Water(s): Connecticut River | <input checked="" type="checkbox"/> Freshwater <input type="checkbox"/> Marine |
| 2. | Waterbody classification: <input type="checkbox"/> Class A <input checked="" type="checkbox"/> Class B <input type="checkbox"/> Class SA <input type="checkbox"/> Class SB | |
| 3. | Is the receiving water is listed in the State’s Integrated List of Waters (i.e., CWA Section 303(d))? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 4. | If the applicant answered yes to B.2, has the applicant identified the designated uses that are impaired, any pollutants indicated, and whether a final TMDL is available for any of the indicated pollutants in a separate attachment to the NOI? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. | Attach a line drawing or flow schematic showing water flow through the facility including location of intake(s), operations contributing to effluent flow, treatment units, outfalls, and receiving water(s). | <input checked="" type="checkbox"/> Line Drawing Attached |
| 6. | List each outfall (numbered sequentially) discharging effluent from the following categories and provide an estimate of the average monthly flow (in gallons per day) for each discharge type. See Parts 1.1 through 1.5 (for MA) or Parts 2.1 through 2.5 (for NH) for descriptions and permit conditions for each discharge type. | |
| | Equipment-related cooling water | Outfalls: 001 - Unit #1 Thrust and Lower Guide Bearing Cooling Water 002 - Unit #2 Thrust and Lower Guide Bearing Cooling Water 003 - Unit #3 Thrust and Lower Guide Bearing Cooling Water 004 - Unit #4 Thrust and Lower Guide Bearing Cooling Water 001- 208,800 gpd 002 - 208,800 003 - 208,800 004 -208,800 |
| | Equipment and floor drain water | Outfalls: 005 - Station Sump <= 360,000 gpd |
| | Maintenance-related water | Outfalls: None gpd |
| | Facility maintenance-related water during flood/high water events | Outfalls: 006 - Penstock Inspection Shafts-bypass pipe n/a gpd |
| | Equipment-related backwash strainer water | Outfalls: None gpd |

| | |
|---|---|
| 7. For each outfall listed above, provide the following information (attach additional sheets if necessary). Outfalls may be eligible for alternative pH effluent limits. See Parts 1.7.1. and 2.7.1 of the permit for additional information. Contact MassDEP or NHDES to determine the required information and protocol to request alternative pH effluent limits. | |
| Outfall No. 001 | Latitude: 44°20'10.51"N Longitude: 71°52'29.567"W |
| | Discharge is: <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal |
| | Maximum Daily Flow .208 MGD Average Monthly Flow .208 MGD |
| | Maximum Daily Temperature 90 °F Average Monthly Temperature 53 °F |
| | Maximum Daily Oil & Grease n/a mg/L Average Monthly Oil & Grease n/a mg/L |
| | Maximum Monthly pH 8.3 Minimum Monthly pH 6.5 s.u. s.u. |
| | Alternative pH limits requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No State approval attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Outfall No. 002 | Latitude: 44°20'10.242"N Longitude: 71°52'30.158"W |
| | Discharge is: <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal |
| | Maximum Daily Flow .208 MGD Average Monthly Flow .208 MGD |
| | Maximum Daily Temperature 90 °F Average Monthly Temperature 53 °F |
| | Maximum Daily Oil & Grease n/a mg/L Average Monthly Oil & Grease n/a mg/L |
| | Maximum Monthly pH 8.3 s.u. Minimum Monthly pH 6.5 s.u. |
| | Alternative pH limits requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No State approval attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

| | | |
|-----------------|--|--|
| Outfall No. 003 | Latitude: 44°20'9.966"N | Longitude: 71°52'30.693"W |
| | Discharge is: <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal | |
| | Maximum Daily Flow .208 MGD | Average Monthly Flow .208 MGD |
| | Maximum Daily Temperature 90 °F | Average Monthly Temperature 53 °F |
| | Maximum Daily Oil & Grease n/a mg/L | Average Monthly Oil & Grease n/a mg/L |
| | Maximum Monthly pH 8.3 s.u. | Minimum Monthly pH 6.5 s.u. |
| | Alternative pH limits requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | State approval attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Outfall No. 004 | Latitude: 44°20'9.725"N | Longitude: 71°52'31.189"W |
| | Discharge is: <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal | |
| | Maximum Daily Flow .208 MGD | Average Monthly Flow .208 MGD |
| | Maximum Daily Temperature 90 °F | Average Monthly Temperature 53 °F |
| | Maximum Daily Oil & Grease n/a mg/L | Average Monthly Oil & Grease n/a mg/L |
| | Maximum Monthly pH 8.3 s.u. | Minimum Monthly pH 6.5 s.u. |
| | Alternative pH limits requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | State approval attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

| | | |
|-----------------|--|--|
| Outfall No. 005 | Latitude: 44°20'9.272"N | Longitude: 71°52'31.674"W |
| | Discharge is: <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal | |
| | Maximum Daily Flow .360 MGD | Average Monthly Flow .360 MGD |
| | Maximum Daily Temperature 90 °F | Average Monthly Temperature 52 °F |
| | Maximum Daily Oil & Grease 15 mg/L | Average Monthly Oil & Grease <5 mg/L |
| | Maximum Monthly pH 8.3 s.u. | Minimum Monthly pH 6.5 s.u. |
| | Alternative pH limits requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | State approval attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

| | | | |
|-----------------|--|---|--|
| Outfall No. 006 | Latitude: 44°20'9.746"N | Longitude: 71°52'30.988"W | |
| | Discharge is: <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Seasonal | | |
| | Maximum Daily Flow MGD | Average Monthly Flow MGD | n/a |
| | Maximum Daily Temperature n/a °F | Average Monthly Temperature n/a °F | |
| | Maximum Daily Oil & Grease mg/L | Average Monthly Oil & Grease mg/L | n/a |
| | Maximum Monthly pH s.u. | Minimum Monthly pH s.u. | n/a |
| | Alternative pH limits requested? No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | State approval attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

C. Best Technology Available for Cooling Water Intake Structures

| | |
|--|---|
| Facilities that checked "equipment-related cooling" as one of the discharges in Part B. of this NOI are subject to the following requirements. | |
| 1. Does the facility intake water for cooling purposes subject to the BTA Requirements at Part 4 of the HYDROGP? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, skip to Part D of this NOI. |
| 2. If yes, indicate which technology employed to comply with the general BTA requirements at Part 4.2.b of the HYDROGP: | |
| <input type="checkbox"/> An existing technology (e.g., a physical or behavioral barrier, spillway, or guidance device) that directs fish towards a downstream passage that minimizes exposure to the CWIS. Has the applicant attached a narrative description of the barrier to demonstrate that the downstream fish passage effectively transports live fish in a manner that minimizes the likelihood of becoming impinged or entrained at the cooling water intake? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| <input checked="" type="checkbox"/> An effective intake velocity at the point of cooling water withdrawal, or alternatively, at the point where cooling water enters the penstock (for intakes located within the penstock), not to exceed 0.5 fps. Has the applicant attached a demonstration of compliance with this intake velocity through observation of live fish in the intake or calculation based on the maximum intake volume and minimum bypass flow? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

| | |
|---|--------------------------------------|
| <input type="checkbox"/> For cooling water withdrawn directly from the source waterbody (<i>i.e.</i> , not from within the penstock), a physical screen or other barrier technology with a mesh size no greater than ½-inch) that minimizes the potential for adult and juvenile fish to become entrapped in the CWIS. Has the applicant attached a description of the technology? <input type="checkbox"/> Yes <input type="checkbox"/> No If the mesh size of the screen is greater than ½-inch has the applicant demonstrated that the calculated intake velocity is less than 0.5 fps based on the screen dimensions, maximum intake volume, and source water 7Q10 low flow? | |
| 3. If the answer to question C.1 is yes, in addition to complying with one of the criteria above, the applicant must submit the following information: | |
| Maximum daily volume of cooling water withdrawn during previous five (5) years: | 835,200 gpd |
| Maximum monthly average volume of cooling water withdrawn during the previous five (5) years: | 835,200 gpd |
| Maximum daily and average monthly volume of water used exclusively for cooling: | Max: 835,200 gpd Avg: 835,200 gpd |
| Maximum daily and average monthly volume of water used for another process before or after being used for cooling: | Max: 0 gpd Avg: 0 gpd |
| Has the applicant attached a narrative description explaining how cooling water is reused? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Volume of total intake water withdrawn and used in facility as a percentage of: Installed turbine capacity .00718 % Average daily flow through penstock .044 % Minimum flow through penstock .101 % | |
| Source water annual mean flow (<i>e.g.</i> , available from USGS, MassDEP, or NHDES): | 2,740 cfs |
| Source water 7-day mean low flow with 10-year recurrence interval (7Q10): | Not available from USGS cfs |
| Volume of total intake water withdrawn and used in facility as a percentage of: Source water mean annual flow .047% cfs Source water 7Q10 flow Not available from USGS cfs | |

D. Chemical Additives

| | | | |
|--|--|---|--|
| 1. | Does the facility use or plan to use non-toxic chemicals for pH adjustment? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 2. | Does the facility use or plan to use chemicals for anti-freeze purposes? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| 3. | If the answer to D.2 is yes, provide the following for EACH chemical additive used for anti-freeze: | | |
| Chemical Name and Manufacturer: | | | |
| Maximum Dosage Concentration Used: | | Average Dosage Concentration Used: | |
| Maximum Concentration in Discharge: mg/L | | Average Concentration in Discharge: mg/L | |
| Material Safety Data Sheet (MSDS) or other toxicity documentation for each chemical attached? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |

E. Endangered Species Act Certification

| | |
|---|--|
| Appendix 2 to the HYDROGP explains the certification requirements related to threatened and endangered species and designated critical habitat. Indicate under which criteria the discharge is eligible for coverage under the HYDROGP: | |
| 1. ESA eligibility for species under jurisdiction of USFWS | <input checked="" type="checkbox"/> Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area.” See Appendix 2, Part B for documentation requirements. Documentation attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| | <input type="checkbox"/> Criterion B: Formal or informal consultation with the USFWS under Section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat. Has the operator completed consultation with USFWS and attached documentation? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, is consultation underway? <input type="checkbox"/> Yes <input type="checkbox"/> No |

| | |
|---|--|
| | <input type="checkbox"/> Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and designated critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered species or designated critical habitat under the jurisdiction of the USFWS. Has the applicant attached documentation of the “no effect” finding? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 2. ESA eligibility for species under jurisdiction of NMFS | <p>Is the facility located on: the Connecticut River between the Massachusetts/Connecticut state line and Turners Falls, MA; the Taunton River; the Merrimack River between Lawrence, MA and the Atlantic Ocean; the Piscataqua River including the Salmon Falls and Coheco Rivers; or a marine water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If yes, was the applicant authorized to discharge from the facility under the 2009 HYDROGP? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If the discharge is to one of the named rivers above or to a marine water <i>and</i> the facility was not previously covered under the 2009 HYDROGP, has there been any previous formal or informal consultation with NMFS? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Documentation of consultation attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> |

F. National Historic Properties Act Eligibility

| |
|---|
| 1. Indicate under which criterion the discharge(s) is eligible for covered under the HYDROGP: |
| <input type="checkbox"/> Criterion A: No historic properties are present. |
| <input checked="" type="checkbox"/> Criterion B: Historic properties are present. The discharges and related activities do not have the potential to impact historic properties. |
| <input type="checkbox"/> Criterion C: Historic properties are present. The discharges and related activities have the potential to impact or adversely impact historic properties. |

| | |
|----|---|
| 2. | Has the applicant attached supporting documentation for NHPA eligibility described in Appendix 3, Part C of the HYDROGP? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. | Does supporting documentation include a written agreement from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or other tribal representative that outlines measures the operation will carry out to mitigate or prevent any adverse effects on historic properties? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

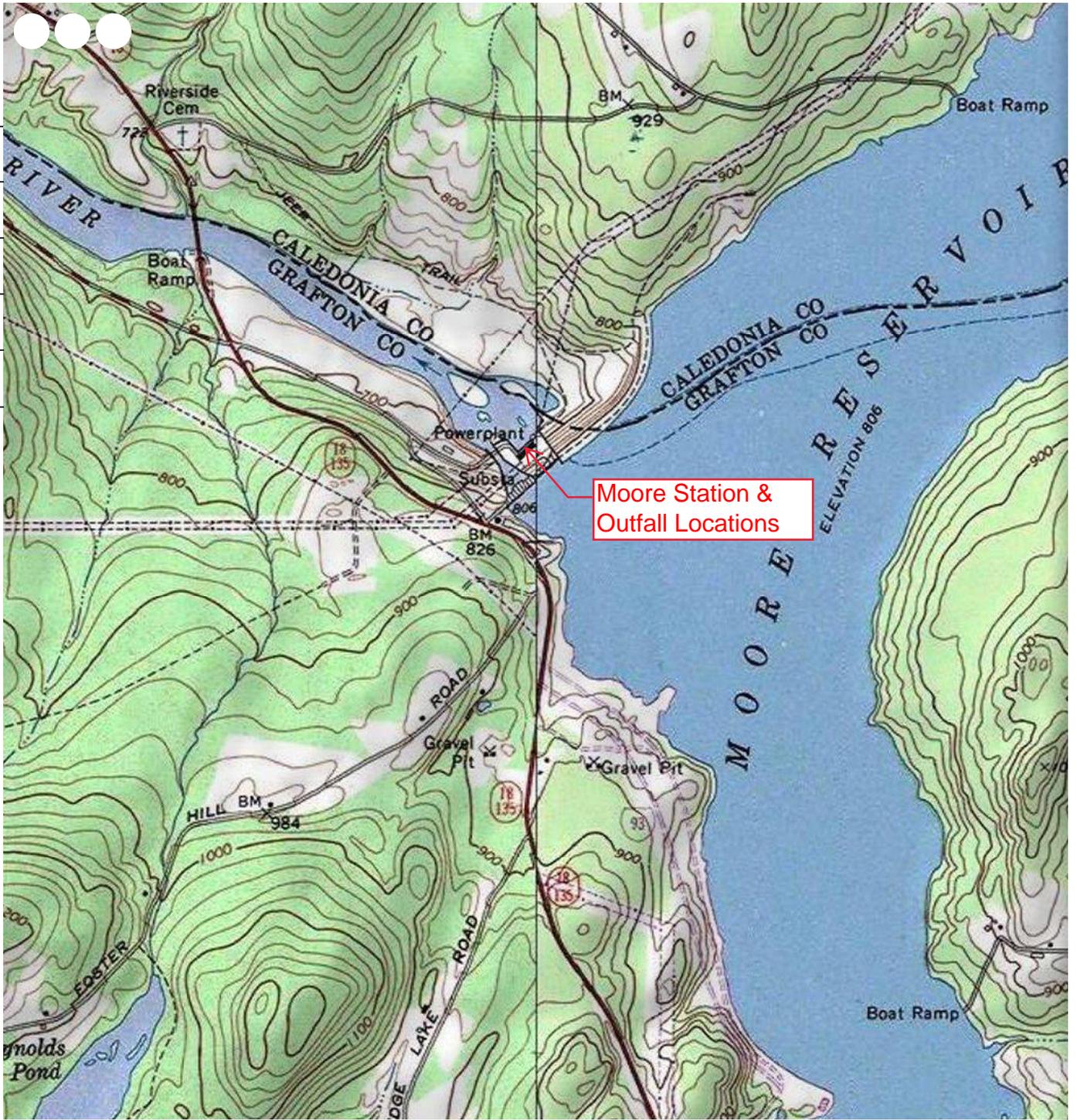
G. Supplemental Information

| |
|--|
| Please provide any supplemental information, including antidegradation review information applicable to new or increased discharges. Attach any certifications required by the HYDROGP. Supplemental information attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|--|

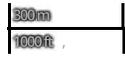
H. Signature Requirements

| | | |
|----|---|---|
| 1. | The NOI must be signed by the operator in accordance with the signatory requirements of 40 C.F.R. § 122.22, including the following certification: | |
| | <i>I certify under penalty of law that no chemical additives are used in the discharges to be authorized under this General Permit except for those used for pH adjustment or anti-freeze purposes and that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i> | |
| 2. | Notification provided to the appropriate State, including a copy of this NOI, if required? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| | Signature: | Date: 6/13/2023 |
| | Print Name and Title: Kari Sparks, Environmental Compliance Specialist | |

Appendix A: Station Location - Topographical Map



Moore Station & Outfall Locations



Lat: 44° 20' 48" N Long: 71° 51' 59" W

Scale 1:118,056
Map Records: 6
Rain showers 11Rely, 61" near Bannet, VT.

Appendix B – Designated Uses, Pollutants, TMDL Availability

Appendix B:

Receiving water designated uses that are impaired, pollutants and TMDL availability.

Connecticut River:

According to pages 80 and 81 of the most recent 2016 List of Threatened or Impaired Waters that Require a Total Daily Maximum Load (TMDL) report, dated November 30, 2017; the Connecticut River in locations of Littleton, NH (Moore Station) and Monroe, NH (Comerford and McIndoes Station) are listed as having pH impairments that not threatened with a low TMDL Priority. Both impairment sources are unknown. New Hampshire DES has categorized these impairments as a level 5-M. Designated uses for both locations are aquatic life. Refer to the next pages for a copy of this report pertaining to Littleton, NH and Monroe, NH. There are no available TMDL reports for either location.

2016 LIST OF THREATENED OR IMPAIRED WATERS THAT REQUIRE A TMDL

(i.e., Category 5 Impairments - this represents the Section 303(d) List)
(Excluding Fish/Shellfish Consumption Advisories due to Mercury - see Note 3)

November 30, 2017

Page 80 of 91

R-WD-17-09, App 1

Notes:

1. See the Consolidated Assessment and Listing Methodology (CALM) for definitions and details regarding how this list was developed.
2. This list is sorted by Waterbody Type and then Assessment Unit ID.
3. By this note, all marine surface waters in New Hampshire are also included on this list due to statewide fish/shellfish consumption advisories issued because of mercury levels in fish/shellfish tissue. To keep the size of this list manageable, mercury impairment for fish/shellfish consumption are not shown below.
4. TMDL stands for Total Maximum Daily Load study. TMDL schedules are subject to change as funding and resources become available.
5. Waters presented on this list may also be threatened or impaired by other pollutants or nonpollutants that do not require a TMDL.

| Assessment Unit ID | Water Name | Primary Town | Water Size | Size Unit | Use Desc | Impairment Name | DES Category | Threatened | TMDL Priority | Source Name |
|--------------------|---|-------------------|------------|-----------|--------------|---------------------------------|--------------|------------|---------------|----------------|
| NHRIV801010203-07 | Connecticut River | Clarksville | 4.604 | Miles | Aquatic Life | Lead | 5-P | N | Low | Source Unknown |
| | | | | | | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010303-02 | Halls Stream | Pittsburg | 13.734 | Miles | Aquatic Life | Lead | 5-M | N | Low | Source Unknown |
| NHRIV801010305-01 | Connecticut River | Stewartstown | 1.830 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010404-02 | Connecticut River | Columbia | 8.900 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010405-01 | Cone Brook | Columbia | 11.144 | Miles | Aquatic Life | Fishes Bioassessments (Streams) | 5-P | | Low | Source Unknown |
| NHRIV801010405-03 | Connecticut River | Columbia | 6.213 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010603-02 | Kimball Brook | Stratford | 1.705 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010704-03 | Phillips - W Br Phillips - Nelson - Watkinson - Wells Bks | Erving's Location | 19.702 | Miles | Aquatic Life | Aluminum | 5-P | N | Low | Source Unknown |
| NHRIV801010704-04 | Phillips Brook | Dummer | 19.195 | Miles | Aquatic Life | Aluminum | 5-P | N | Low | Source Unknown |
| | | | | | | pH | 5-M | | Low | Source Unknown |
| NHRIV801010707-13 | Upper Ammonoosuc River | Stark | 2.919 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010707-18 | Upper Ammonoosuc River | Northumberland | 1.944 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010801-01 | Israel River | Low And Burbank: | 29.685 | Miles | Aquatic Life | pH | 5-P | N | Low | Source Unknown |
| NHRIV801010803-02 | Israel River | Jefferson | 29.260 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010804-05 | Bunnell Brook | Lancaster | 24.002 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010805-04 | Burnside Brook | Northumberland | 11.781 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010805-06 | Otter Brook | Lancaster | 6.028 | Miles | Aquatic Life | Fishes Bioassessments (Streams) | 5-P | | Low | Source Unknown |
| | | | | | | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010806-06 | Israel River | Jefferson | 6.944 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010806-07 | Israel River | Lancaster | 3.089 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010806-09 | Israel River | Lancaster | 2.163 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010902-02 | Connecticut River | Northumberland | 3.989 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010902-03 | Connecticut River | Lancaster | 9.546 | Miles | Aquatic Life | Aluminum | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-M | N | Low | Source Unknown |
| NHRIV801010902-04 | Indian Brook | Lancaster | 4.269 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030101-02 | Unnamed Brook - From Forest Lake To Burns Pond | Whitefield | 5.487 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030102-08 | Johns River | Dalton | 2.955 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030102-13 | Johns River | Dalton | 4.326 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030201-01 | Cushman Brook | Dalton | 20.549 | Miles | Aquatic Life | Fishes Bioassessments (Streams) | 5-M | | Low | Source Unknown |
| NHRIV801030201-02 | Connecticut River | Dalton | 0.715 | Miles | Aquatic Life | Aluminum | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030203-01 | Connecticut River | Littleton | 1.113 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |

2016 LIST OF THREATENED OR IMPAIRED WATERS THAT REQUIRE A TMDL

(i.e., Category 5 Impairments - this represents the Section 303(d) List)
(Excluding Fish/Shellfish Consumption Advisories due to Mercury - see Note 3)

November 30, 2017

Page 81 of 91

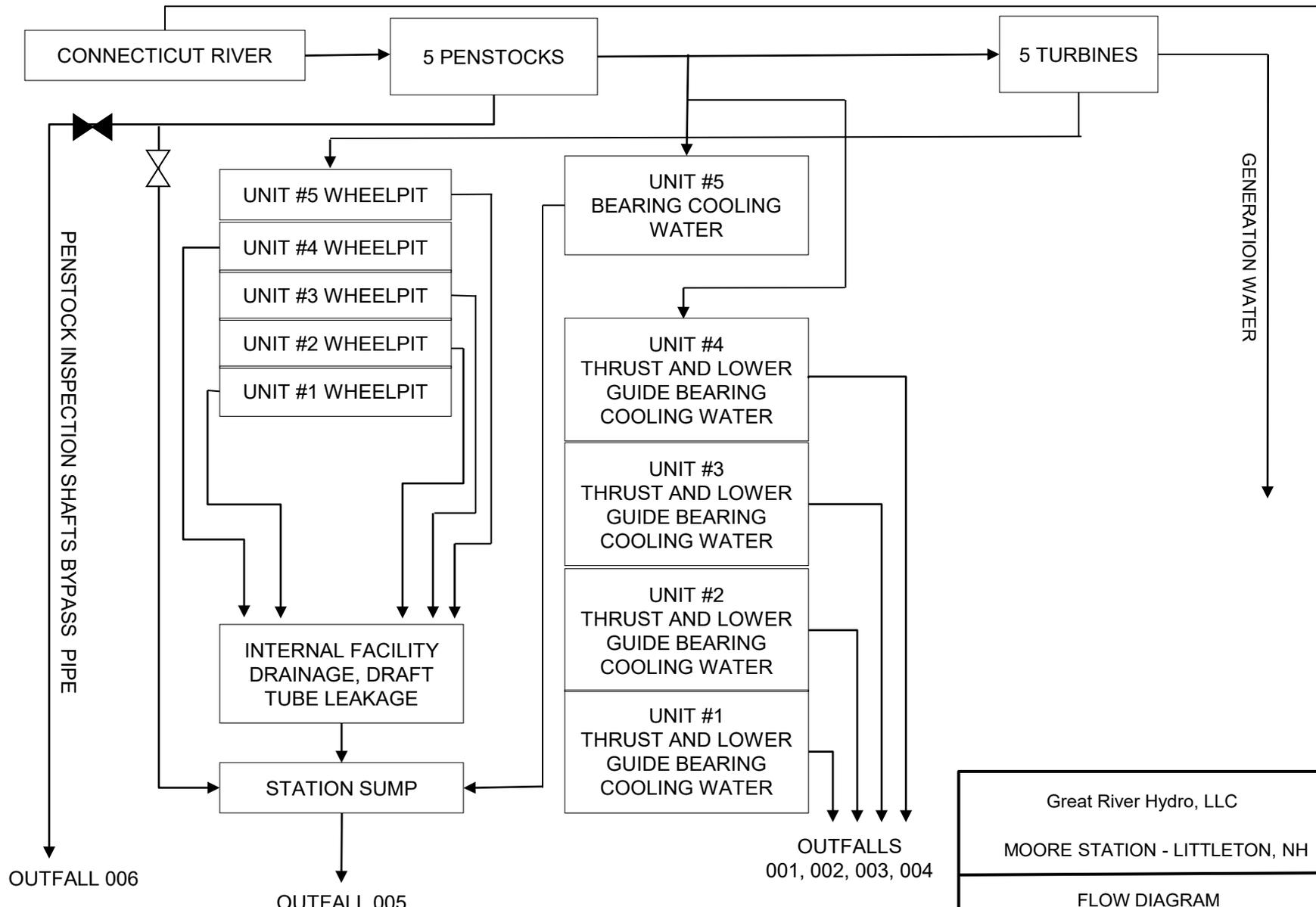
R-WD-17-09, App 1

Notes:

1. See the Consolidated Assessment and Listing Methodology (CALM) for definitions and details regarding how this list was developed.
2. This list is sorted by Waterbody Type and then Assessment Unit ID.
3. By this note, all marine surface waters in New Hampshire are also included on this list due to statewide fish/shellfish consumption advisories issued because of mercury levels in fish/shellfish tissue. To keep the size of this list manageable, mercury impairment for fish/shellfish consumption are not shown below.
4. TMDL stands for Total Maximum Daily Load study. TMDL schedules are subject to change as funding and resources become available.
5. Waters presented on this list may also be threatened or impaired by other pollutants or nonpollutants that do not require a TMDL.

| Assessment Unit ID | Water Name | Primary Town | Water Size | Size Unit | Use Desc | Impairment Name | DES Category | Threatened | TMDL Priority | Source Name |
|----------------------|--|-------------------|------------|-----------|--------------|--|--------------|------------|---------------|----------------|
| NHRIV801030205-02 | Connecticut River | Monroe | 1.738 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030302-01 | Beaver - Lafayette - Skookumchuck - Jordan Bks - And Tribs | Franconia | 14.106 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030401-01 | Ammonoosuc R - Jefferson - Clay - Franklin - Monroe Bks | Thompson And M | 27.657 | Miles | Aquatic Life | pH | 5-P | N | Low | Source Unknown |
| NHRIV801030401-03 | Sebosis Brook | Carroll | 12.701 | Miles | Aquatic Life | Aluminum | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030401-04 | Ammonoosuc River | Crawfords Purcha: | 2.992 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030401-05 | Halfway Brook - Dartmouth Brook - Unnamed Brook | Crawfords Purcha: | 15.887 | Miles | Aquatic Life | pH | 5-P | N | Low | Source Unknown |
| NHRIV801030401-09 | Unnamed Brook | Carroll | 5.642 | Miles | Aquatic Life | Dissolved oxygen saturation | 5-M | N | Low | Source Unknown |
| | | | | | | Oxygen, Dissolved | 5-P | N | Low | Source Unknown |
| | | | | | | pH | 5-P | N | Low | Source Unknown |
| NHRIV801030401-10 | Unnamed Brook | Carroll | 1.959 | Miles | Aquatic Life | Aluminum | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030402-04 | Ammonoosuc River | Carroll | 5.570 | Miles | Aquatic Life | Benthic-Macroinvertebrate Bioassessments (Streams) | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-P | N | Low | Source Unknown |
| NHRIV801030402-07-01 | Ammonoosuc River | Carroll | 8.119 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030402-07-02 | Twin Mt. Rec. Area Tuttle Brook | Carroll | 0.020 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030403-01 | Ammonoosuc River | Bethlehem | 1.626 | Miles | Aquatic Life | ALUMINUM | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-P | N | Low | Source Unknown |
| NHRIV801030403-03 | Ammonoosuc River | Bethlehem | 2.261 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030403-07 | Ammonoosuc River | Bethlehem | 4.262 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030403-09 | Baker Brook | Bethlehem | 9.391 | Miles | Aquatic Life | Fishes Bioassessments (Streams) | 5-P | N | Low | Source Unknown |
| NHRIV801030403-11 | Ammonoosuc River | Littleton | 3.460 | Miles | Aquatic Life | Aluminum | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030403-16 | Ammonoosuc River | Littleton | 4.900 | Miles | Aquatic Life | Aluminum | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-P | N | Low | Source Unknown |
| NHRIV801030503-07 | Ammonoosuc River | Landaff | 1.757 | Miles | Aquatic Life | pH | 5-M | N | Low | Source Unknown |
| NHRIV801030504-01 | Wild Ammo R -Clay-Stony-Black-Olesons-St ark Fls-Underhill Bks | Easton | 38.952 | Miles | Aquatic Life | Aluminum | 5-M | N | Low | Source Unknown |
| | | | | | | Lead | 5-M | N | Low | Source Unknown |
| | | | | | | pH | 5-P | N | Low | Source Unknown |

Appendix C: Station Flow Schematic



OUTFALL 006

OUTFALL 005

OUTFALLS
001, 002, 003, 004

Receiving Water: Connecticut River

 Normally Closed Valve
 Normally Open Valve

| |
|-------------------------------|
| Great River Hydro, LLC |
| MOORE STATION - LITTLETON, NH |
| FLOW DIAGRAM |
| Appendix C |
| DATE: June 8, 2023 |

Appendix D: Intake Velocity Demonstration of Compliance

Appendix D: Cooling Water Intake Velocity, Demonstration of Compliance

NOI Application Section C.2

Permit Threshold: <.5 fps (feet per second)

Moore Station – Cooling water intakes are located within the penstock.

Maximum Cooling Water Capacity = 208,000 GPD (gallons per day) (per unit)

Conversion Calculation: $\text{GPD}/646,300 = \text{fps}$

$208,800 \text{ GPD} / 646,300 = .32 \text{ fps (per unit)}$

Appendix E: ESA Eligibility for Species under Jurisdiction of
USFWS



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:
Project Code: 2023-0090864
Project Name: Moore Sation NPDES General Permit Application

June 07, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (Updated 4/12/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

<https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List
-

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

PROJECT SUMMARY

Project Code: 2023-0090864

Project Name: Moore Station NPDES General Permit Application

Project Type: Dam - Operations

Project Description: This project is for the continuation of a New Hampshire NPDES wastewater discharge permit from Moore Station's Hydroelectric power generation.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@44.336491949999996,-71.87524000673034,14z>



Counties: Grafton County, New Hampshire

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

| NAME | STATUS |
|--|------------|
| Canada Lynx <i>Lynx canadensis</i> Population: Wherever Found in Contiguous U.S. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652 | Threatened |
| Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 | Endangered |

INSECTS

| NAME | STATUS |
|--|-----------|
| Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Kari Sparks
Address: 152 Governor Hunt Road
Address Line 2: PO Box 155
City: Vernon
State: VT
Zip: 05354
Email: ksparks@greatriverhydro.com
Phone: 8022995943

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Environmental Protection Agency
Name: George Papadopoulos
Email: Papadopoulos.george@epa.gov
Phone: 6179181579

Appendix F: National Historic Property Act Eligibility

126 FERC ¶ 62,044
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

TransCanada Hydro Northeast, Inc.

Project No. 2077-065

ORDER MODIFYING AND APPROVING CULTURAL RESOURCES
MANAGEMENT PLAN

(Issued January 21, 2009)

1. On January 4, 2008, TransCanada Hydro Northeast, Inc (licensee) filed a Cultural Resources Management Plan (CRMP), pursuant to article 419 of the license for the Fifteen Mile Falls Hydroelectric Project.¹ The project consists of three developments located on the Connecticut River, near the Town of Littleton in Grafton County, New Hampshire, and Caledonia County, Vermont.

BACKGROUND

2. Article 419 requires the licensee to implement the Programmatic Agreement (PA), executed on February 6, 2002. The PA directs the licensee to file a CRMP, within one year of license issuance, for mitigating the project's effects on historic properties. The CRMP was also to be developed to ensure recreation enhancements pursuant to article 418 did not conflict with management of historic properties.

LICENSEE'S PLAN

3. The project Area of Potential Effect (APE) is defined as being conterminous with the currently delineated project boundary, including lands owned in fee simple by the licensee and where flowage rights are granted to the licensee. Three archeological studies have been conducted to date in the APE. The Fifteen Mile Falls Hydroelectric Project is identified as being eligible for the National Register of Historic Places with the three dams that make up the project and their associated structures contributing to its eligibility.

4. The CRMP addresses integration with other project license requirements, archeological area and site monitoring and management, and site identification and mapping. It contains provisions for mitigating unavoidable adverse impacts to historic properties and sites. The filed CRMP also addresses public interpretation, identification

¹ On April 8, 2002, the Commission issued an Order Issuing New License (99 FERC ¶ 62,025).

Project No. 2077-065

-2-

and treatment of presently unknown archeological sites and human remains, agency consultation, and dispute resolution. All work would immediately cease, and either the Vermont or the New Hampshire State Historic Preservation Officer (SHPO) would be contacted, if any previously-unidentified historic properties are discovered within the APE during ground-disturbing activities.

5. The PA requires the licensee to file with the Commission, in a filing separate from the CRMP, a land-use map of the project that depicts current and proposed land uses; locations and eligibility status of historic properties; the project boundaries; and, any areas currently surveyed. The map would also be updated as new data becomes available pursuant to any project-related activities covered under the PA. Any updates to the map would be submitted to the SHPOs within 30 days of the changes. The licensee states in its filing that a Geographic Information Systems (GIS) map is being developed to incorporate the required information layers. The map would be updated as new data on properties becomes available, but not more frequently than every 2 years pursuant to any project-related activities covered under the CRMP. Any updates will be filed with the Vermont and New Hampshire SHPOs, and the Commission as part of the required annual report.

6. The licensee proposes to file a bi-annual report detailing information associated with implementation of the CRMP with the Vermont and New Hampshire SHPOs. The licensee is reminded that the report detailing implementation information should be filed with the SHPO on an annual basis, as required by the PA for the project, unless the SHPO agrees to bi-annual reports.

CONSULTATION

7. The licensee states that the CRMP was developed in consultation with the SHPO, as required by the PA, and that all comments were incorporated into the submitted CRMP. By letter dated February 2, 2007, the draft CRMP was provided to both the Vermont and New Hampshire SHPOs. On April 3, 2007, a copy of the most up-to-date GIS map was furnished to the Vermont SHPO at their request. No further comments from the SHPO have been received.

8. By letter dated September 9, 2008, the Commission forwarded the CRMP to the Advisory Council on Historic Preservation (ACHP), as required by the PA. No comments from the ACHP were received.

DISCUSSION AND CONCLUSION

9. The CRMP takes into account the effects of project activities on historic properties and archeological sites within the project APE. It ensures no inadvertent alterations of National Register-qualifying characteristics take place during routine activities or project

Project No. 2077-065

-3-

maintenance outside of normal operation. Also identified are archeological areas and sites surveyed to date, management of the known sites, and actions that do not require SHPO consultation. The licensee should file the completed land-use map with the SHPOs and the Commission within 6 months of the date of approval of the CRMP to ensure the Commission and SHPOs have the most recent information. Any updates should be filed pursuant to provisions in the CRMP.

10. Commission staff concludes that the final CRMP meets the requirements of the PA and will adequately protect historic properties during the operation and maintenance of the project. The CRMP should be approved. Upon issuance of this order, the licensee should implement the CRMP. The Commission reserves the right to make changes to the CRMP based on the findings of the land-use map.

The Director orders:

(A) The Cultural Resources Management Plan for the Fifteen Mile Falls Hydroelectric Project, filed on January 4, 2008, is approved and made part of the license.

(B) The licensee shall file the completed land-use map, as detailed and required by Stipulation II C. of the Programmatic Agreement for the project, with the Commission, the Vermont State Historic Preservation Officer, and the New Hampshire State Historic Preservation Officer within 6 months from the date of the approval of the Cultural Resources Management Plan. The Commission reserves the right to require changes to the Cultural Resources Management Plan approved in paragraph (A) should the land-use map indicate a need.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F. R. §385.713.

Robert J. Fletcher, Chief
Land Resources Branch
Division of Hydropower
Administration and Compliance

Document Content(s)

19948169.DOC.....1