

June 13, 2023

SENT VIA EMAIL

Hydro.GeneralPermit@epa.gov

Re: **Northfield Mountain LLC
Northfield Mountain Pumped Storage Project
Northfield, Massachusetts
Hydroelectric Generating Facilities General Permit**

Dear Sir or Madam:

FirstLight Power Service LLC (FirstLight), as an agent for Northfield Mountain LLC, is seeking coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Hydroelectric Generating Facilities (HYDRO GP) for the Northfield Mountain Pumped Storage Project (Northfield Mountain) in Northfield, Massachusetts.

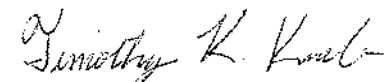
Please find attached the following documents supporting this submittal:

- Notice of Intent
- Supplemental Outfall Attachment
- Site Figures and Flow Diagram
- Cooling Water Information
- Endangered Species Submittal (Response Pending)
- Historic Places Listing
- Impaired Waters Listing

If you have any questions regarding this facility or the enclosed application package, please contact me at (413) 875-1607. Thank you for your attention with this matter.

Very truly yours,

TIGHE & BOND, INC.



Timothy Kucab, CHMM
Project Manager

Copy: Patty Goclowski, FirstLight (via email)



Tighe&Bond

SECTION 1

Section 1
Notice of Intent

II. Suggested Format for the HYDRO General Permit Notice of Intent (NOI):

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:	
	Street:	
	City:	State:
	Zip:	SIC Code:
	Latitude:	Longitude:
	Type of Business:	
2. Facility Mailing Address (if different from Location)	Street:	
	City:	State:
	Zip:	
3. Facility Owner	Name:	Email:
	Street:	Telephone:

	City:	State:		
	Contact Person:	Zip:		
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 type="checkbox"/> Yes	<input type="checkbox"/> No
	Permit number (if yes):			
	Is the facility covered under an Individual Permit?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Is there a pending NPDES application of file with EPA for the discharge(s)?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Date of Submittal (if yes):		Permit Number (if known):	
	Attach a topographic map indicating the locations. of the facility and outfall(s) to the receiving water		<input type="checkbox"/> Map Attached	
	Number of turbines:			
	Combined turbine discharge (installed capacity) at:		Maximum capacity?	cfs
			Minimum capacity?	cfs
Is this facility operated as a pump storage project?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	

B. Discharge Information

1. Name of Receiving Water(s):		<input type="checkbox"/> Freshwater <input type="checkbox"/> Marine
2. Waterbody classification: <input type="checkbox"/> Class A <input 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 type="checkbox"/> Yes <input type="checkbox"/> No
4. If the applicant answered yes to B.3, 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 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 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:	gpd
Equipment and floor drain water	Outfalls:	gpd
Maintenance-related water	Outfalls:	gpd
Facility maintenance-related water during flood/high water events	Outfalls:	gpd
Equipment-related backwash strainer water	Outfalls:	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.	Latitude:	Longitude:		
	Discharge is: <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal			
	Maximum Daily Flow	MGD	Average Monthly Flow	MGD
	Maximum Daily Temperature	°F	Average Monthly Temperature	°F
	Maximum Daily Oil & Grease	mg/L	Average Monthly Oil & Grease	mg/L
	Maximum Monthly pH	s.u.	Minimum Monthly pH	s.u.
	Alternative pH limits requested? <input type="checkbox"/> Yes <input type="checkbox"/> No		State approval attached? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Outfall No.	Latitude:	Longitude:		
	Discharge is: <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal			
	Maximum Daily Flow	MGD	Average Monthly Flow	MGD
	Maximum Daily Temperature	°F	Average Monthly Temperature	°F
	Maximum Daily Oil & Grease	mg/L	Average Monthly Oil & Grease	mg/L
	Maximum Monthly pH	s.u.	Minimum Monthly pH	s.u.
	Alternative pH limits requested? <input type="checkbox"/> Yes <input type="checkbox"/> No		State approval attached? <input type="checkbox"/> Yes <input type="checkbox"/> No	

* Not Available - Sampling for parameter not previously required.

Outfall No.	Latitude:	Longitude:		
	Discharge is: <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent <input type="checkbox"/> Seasonal			
	Maximum Daily Flow	MGD	Average Monthly Flow	MGD
	Maximum Daily Temperature	°F	Average Monthly Temperature	°F
	Maximum Daily Oil & Grease	mg/L	Average Monthly Oil & Grease	mg/L
	Maximum Monthly pH	s.u.	Minimum Monthly pH	s.u.
	Alternative pH limits requested? <input type="checkbox"/> Yes <input type="checkbox"/> No		State approval attached? <input type="checkbox"/> Yes <input 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 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 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 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? <input type="checkbox"/> Yes <input type="checkbox"/> No	
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:	gpd
Maximum monthly average volume of cooling water withdrawn during the previous five (5) years:	gpd
Maximum daily and average monthly volume of water used exclusively for cooling: Max:	gpd Avg: gpd
Maximum daily and average monthly volume of water used for another process before or after being used for cooling:	Max: gpd Avg: gpd
Has the applicant attached a narrative description explaining how cooling water is reused? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Volume of total intake water withdrawn and used in facility as a percentage of:	
Installed turbine capacity	% Average daily flow through penstock %
Minimum flow through penstock	% *Intake water required when plant is off line and there is no flow through the penstock.
Source water annual mean flow (<i>e.g.</i> , available from USGS, MassDEP, or NHDES):	cfs
Source water 7-day mean low flow with 10-year recurrence interval (7Q10):	cfs
Volume of total intake water withdrawn and used in facility as a percentage of:	
Source water mean annual flow	%
Source water 7Q10 flow	%

Please note, the total cooling water volumes during both pumping for storage and generating have been included. However, flows through the penstock only include generating volumes (*i.e.* from the Upper Reservoir to the Connecticut River).

D. Chemical Additives

1. Does the facility use or plan to use non-toxic chemicals for pH adjustment?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Does the facility use or plan to use chemicals for anti-freeze purposes?	<input type="checkbox"/> Yes <input 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 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 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	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 Cocheco Rivers; or a marine water? <input type="checkbox"/> Yes <input type="checkbox"/> No
	If yes, was the applicant authorized to discharge from the facility under the 2009 HYDROGP? <input type="checkbox"/> Yes <input type="checkbox"/> No
	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 Documentation of consultation attached? <input type="checkbox"/> Yes <input type="checkbox"/> No

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 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 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? Yes No

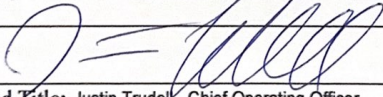
G. Supplemental Information

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? Yes 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 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.

2. Notification provided to the appropriate State, including a copy of this NOI, if required?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Signature: 	Date: June 12, 2023
Print Name and Title: Justin Trudell - Chief Operating Officer	

Tighe&Bond

SECTION 2

Section 2
Supplemental Outfall Information

Additional Outfall Description

Outfalls DSN-001

Outfall DSN-001 discharges from the station sump to the Connecticut River. The station sump captures floor drain discharge from throughout the facility. Most of the floor drains are directed through an oil/water separator prior to discharge to the sump. Several floor drains that are unlikely to come in contact with oil in the facility discharge directly to the sump.

Outfalls DSN-002

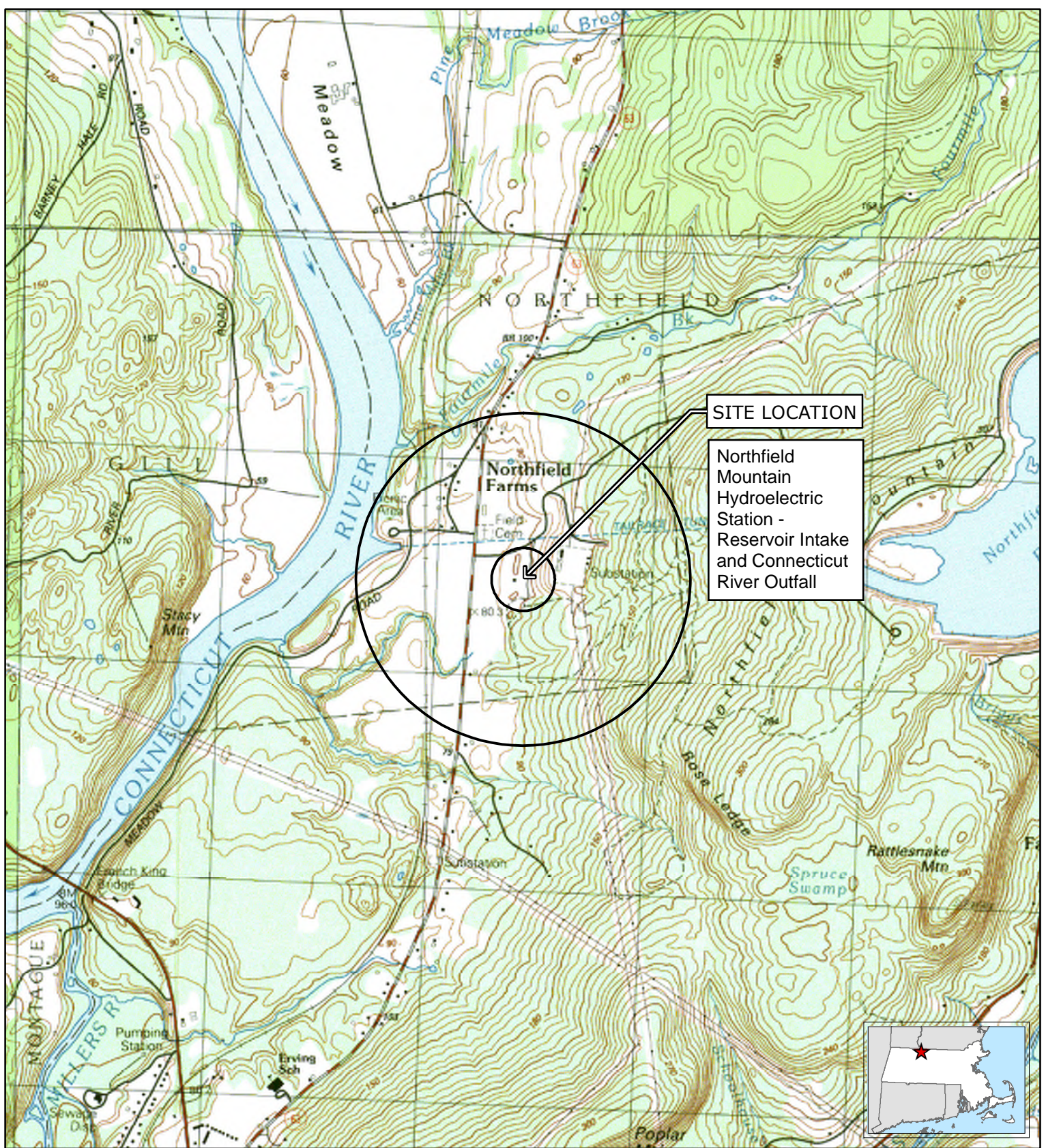
Outfall DSN-002 discharges Non-Contact Cooling Water (NCCW) to the Connecticut River. The site is provided with two cooling water systems. One system provides cooling water for Units No. 1 and 2, while the second system provides cooling water for Units No. 3 and 4. These cooling water flows co-mingle in the surge gallery before discharging to the Connecticut River. As the flows through the cooling water systems are expected to be substantially identical, compliance samples are collected from one of the two system taps.

Tighe&Bond

SECTION 3

Section 3

Site Figures and Flow Diagrams



SITE LOCATION

Northfield Mountain Hydroelectric Station - Reservoir Intake and Connecticut River Outfall

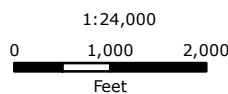
**FIGURE 1
SITE LOCATION**

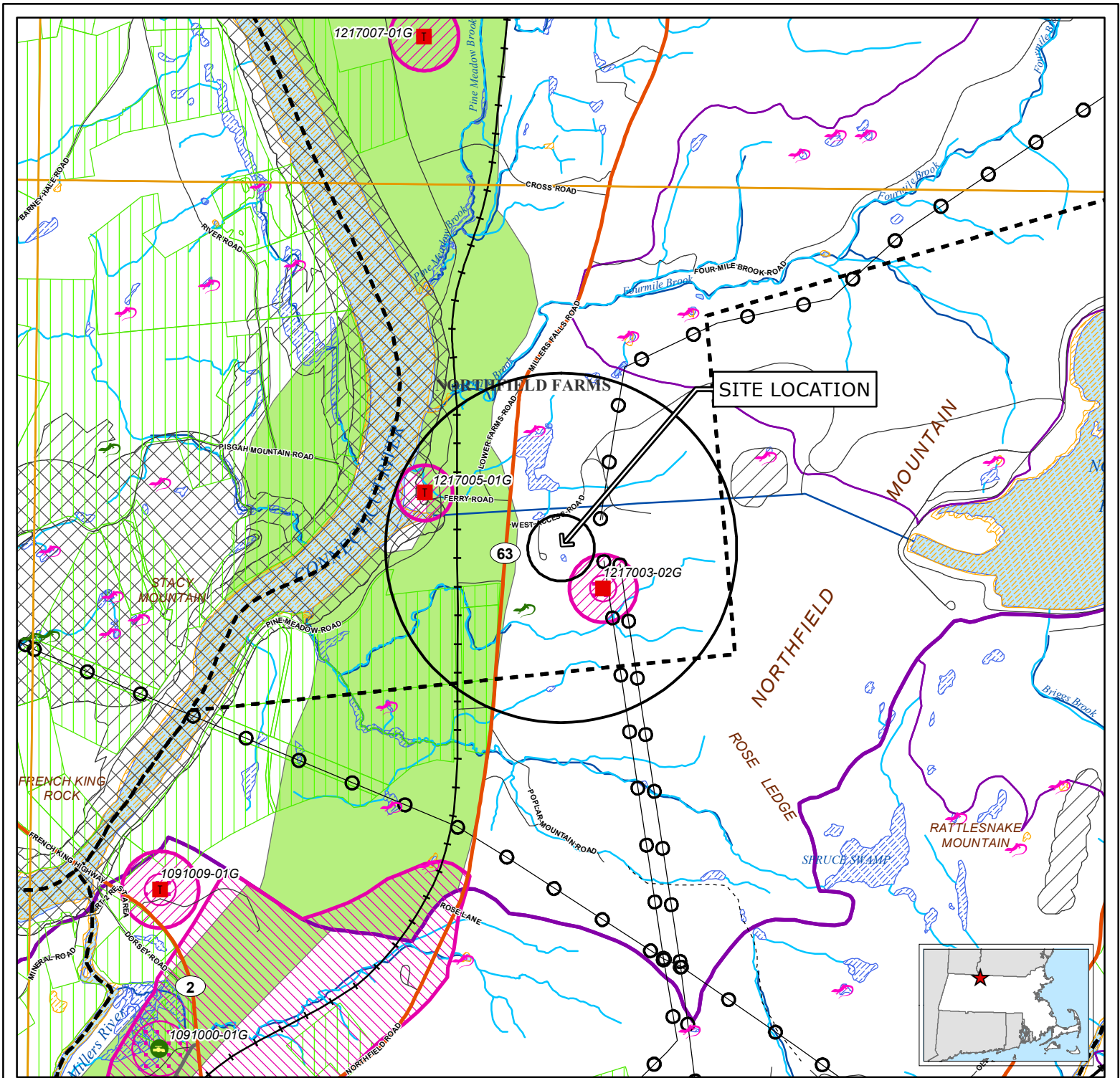
Northfield Mountain Pumped Storage Project
99 Millers Falls Road
Northfield, Massachusetts

May 2023



Based on USGS Topographic Map for Millers Falls, MA Revised 1990. Contour Equals 6-Meters. [Site Quad] Northfield, MA Revised 1990. Contour Equals 6-Meters. Circles indicate 500-foot and half-mile radii





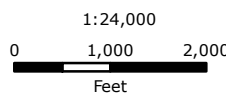
Legend

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> NHESP Certified Vernal Pools NHESP Potential Vernal Pools Non-Landfill Solid Waste Sites Proposed Well Emergency Surface Water Community Public Water Supply - Surface Water Community Public Water Supply - Groundwater Non-Community Non-Transient Public Water Supply Non-Community Transient Public Water Supply Limited Access Highway Multi-Lane Highway, NOT Limited Access Other Numbered Route Major Road - Arterials and Collectors Minor Street or Road | <ul style="list-style-type: none"> Aqueducts Hydrologic Connections Stream/Intermittent Stream Powerline Pipeline Track or Trail Trains Public Surface Water Supply Protection Area (Zone A) DEP Approved Wellhead Protection Area (Zone I) DEP Approved Wellhead Protection Area (Zone II) DEP Interim Wellhead Protection Area (IWPA) Protected and Recreational Open Space Solid Waste Landfill Area of Critical Environmental Concern (ACEC) NHESP Priority Habitats for Rare Species NHESP Estimated Habitats for Rare Wildlife EPA Designated Sole Source Aquifer Major Drainage Basin Sub Drainage Basin | <ul style="list-style-type: none"> MassDEP Open Water MassDEP Inland Wetlands MassDEP Coastal Wetlands MassDEP Not Interpreted Wetlands Public Surface Water Supply (PSWS) Water Bodies Non-Potential Drinking Water Source Area - High Yield Non-Potential Drinking Water Source Area - Medium Yield Potentially Productive Medium Yield Aquifer Potentially Productive High Yield Aquifer County Boundary Municipal Boundary USGS Quadrangle Sheet Boundary |
|---|---|---|

FIGURE 2 PRIORITY RESOURCES

Northfield Mountain
Pumped Storage Project
99 Millers Falls Road
Northfield, Massachusetts

Data source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology
Circles indicate 500-foot and half-mile radii.
Data valid as of May 2023.



May 2023

Tighe & Bond

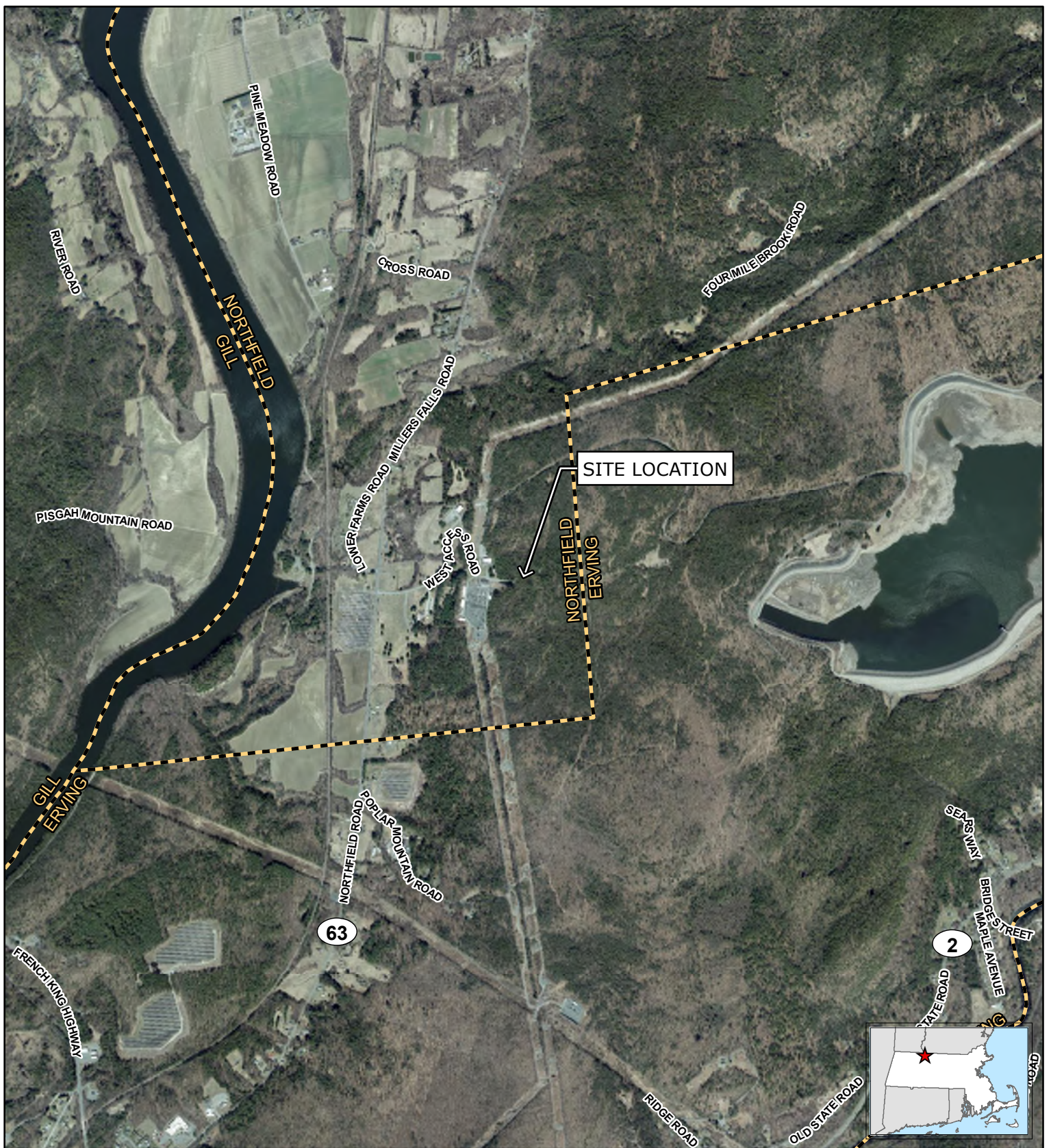


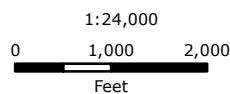
FIGURE 3
ORTHOPHOTOGRAPH

Northfield Mountain
Pumped Storage Project
99 Millers Falls Road
Northfield, Massachusetts

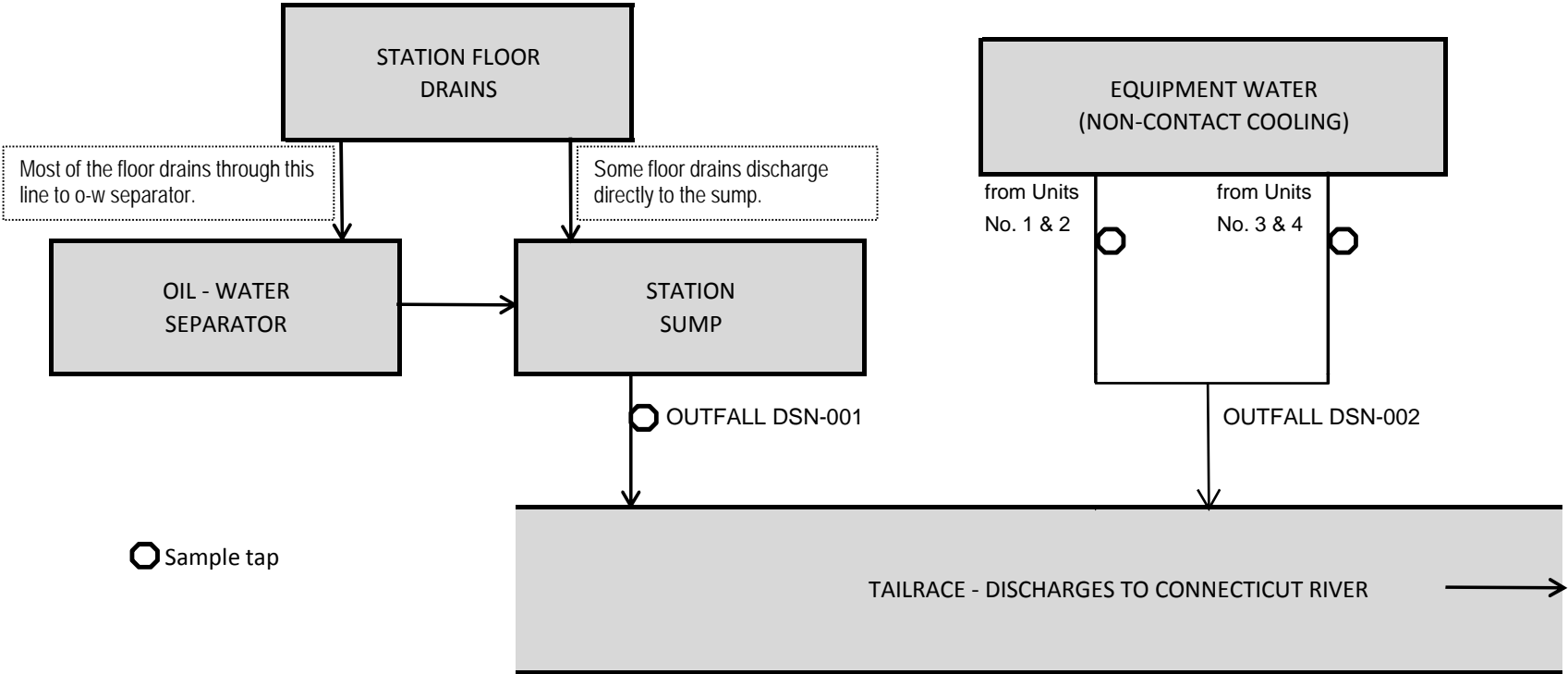
June 2023

Tighe & Bond

Based on MassGIS Color Orthophotography (2021)



NORTHFIELD MOUNTAIN STATION - Partial diagram of NPDES discharges from station.



Tighe&Bond

SECTION 4

Section 4
Cooling Water Information

Cooling Water Intake Structure

Best Technology Available

Northfield Mountain intends to comply with the Cooling Water Intake Structure (CWIS) Best Technology Available (BTA) requirements of the HYDRO GP, via a combination of Section 4.2(b)(i) and (iv). Specifically:

i. An existing exclusion, diversion, or guidance device (e.g., a physical or behavioral barrier or spillway) that provides fish downstream passage and minimizes exposure to a CWIS. The permittee must describe any technology or combination of technologies implemented for fish protection in the NOI and provide sufficient information to demonstrate that the downstream fish passage effectively transports live fish in a manner that minimizes the likelihood of becoming impinged at the cooling water intake; and

iv. ...Permittees may also submit a biological evaluation or other studies completed during Federal Energy Regulatory Commission (FERC) licensing or otherwise with the assistance of state or federal agencies that demonstrate that the impacts from impingement are minimized.

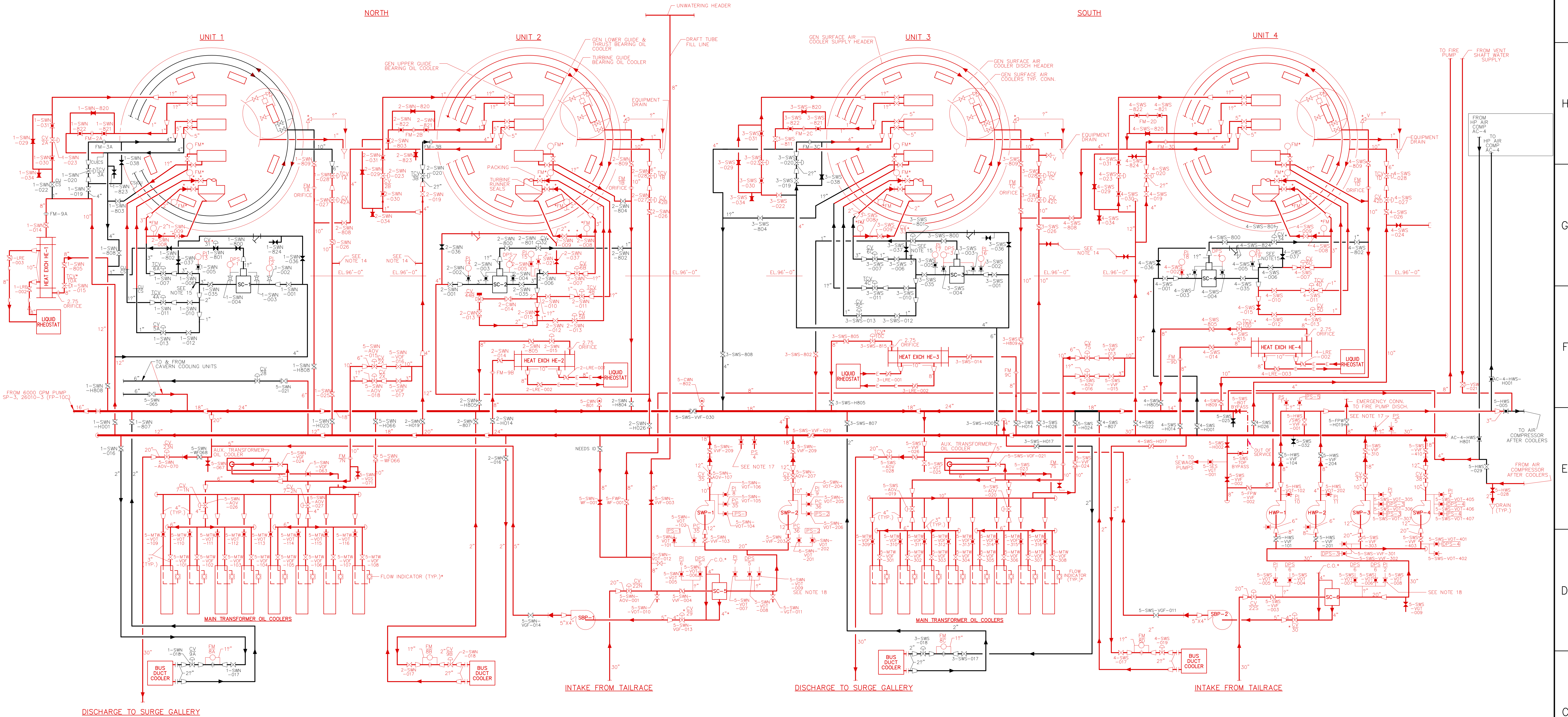
Northfield Mountain is a pumped-storage facility located on the Connecticut River, that uses the Turners Falls Impoundment as its lower reservoir. The tailrace is located approximately 5.2 miles upstream of the Turners Falls Dam. Northfield Mountain consists of the upper reservoir, multiple dams, 3 dikes, an intake structure, pressure shaft, underground powerhouse, and trash racks at both the tailrace tunnel and the upper reservoir penstock. To prevent debris from entering the system from either the river or upper reservoir (depending on the flow of water through the plant) trash racks are provided. Notably, the tailrace tunnel (which serves as the influent to the facility from the Turners Falls Impoundment during pumping) includes a trapezoidal trashrack opening with a top width of 99'-6", a bottom width of 74'4", and a depth of 48'-0", resulting in a gross area opening of 4,400 ft². The bar thickness is 0.75 inches, with a clearspacing of 6 inches.

Please be advised that this facility is currently undergoing Federal Energy Regulatory Commission (FERC) relicensing. As part of relicensing, a variety of measures to protect aquatic species and environmental flows have been proposed, and corresponding studies performed.

At present, Northfield Mountain has conducted numerous aquatic species studies as part of the relicensing process for its FERC Licenses No. 18. Each of these studies can be found at FirstLight Power's Relicensing Website (<https://www.northfield-relicensing.com/>). These studies include:

- 3.3.2 Upstream and Downstream Adult Shad Fish Passage Study
- 3.3.3 Downstream Passage of Juvenile Shad
- 3.3.5 Downstream Passage of American Eel
- 3.3.7 Entrainment Study
- 3.3.9 Hydraulic modeling of the Northfield Tailrace under pumping and generating
- 3.3.14 Aquatic Habitat Mapping of the Turners Falls Impoundment
- 3.3.15 Sea Lamprey Spawning

As a result of these studies (and others), in 2023, FirstLight Power has committed to the installation of a seasonal barrier net to safely pass migratory aquatic species past Northfield Mountain, including the cooling water intake structures and turbines.



LEGEND

- GATE VALVE
- GLOBE VALVE
- CHECK VALVE
- BUTTERFLY VALVE
- CONTROL VALVE
- RELIEF VALVE
- ELECTROLITE
- REDUCER
- RESTRICTING ORIFICE
- FLOW INDICATOR
- VALVE NORMALLY CLOSED
- AIR CYLINDER OPERATED 3-WAY BALL VALVE
- SCREWED ENDS
- TCV - TEMPERATURE CONTROL VALVE
- DPS - DIFFERENTIAL PRESSURE SWITCH
- PS
- PI
- PRESSURE GAGE
- CV
- FM
- * FURNISHED BY EQUIPMENT MFR.
- [PS-1] SEE NOTE 16

NOTES

1. FOR SERVICE WATER SYSTEM-1 SEE 21002-1 (FP-2A).
2. FOR SERVICE WATER SYSTEM-2 SEE 21002-2 (FP-2B).
3. FOR SERVICE WATER SYSTEM-3 SEE 21002-3 (FP-2C).
4. FOR SERVICE WATER SYSTEM-4 SEE 21002-4 (FP-2D).
5. FOR SERVICE WATER SYSTEM-5 SEE 21002-5 (FP-2E).
6. FOR SERVICE WATER SYSTEM-6 SEE 21002-6 (FP-2F).
7. FOR EQUIPMENT LOCATION-1 SEE 27008-1 (FP-8A).
8. FOR EQUIPMENT LOCATION-2 SEE 27008-2 (FP-8B).
9. FOR UNWATERING LINES-POWERHOUSE-1 20001-1 (FP-1A).
10. FOR INSTRUMENTS & CONTROLS SEE 28007-1 (FP-7A).
11. FOR DRAINAGE SEE 24001 SERISE (FB-1 SERISE).
12. PIPING BY PURCHASER TERMINATES AT INSIDE WALL OF BARREL OF GENERATOR/MOTOR & OUTSIDE WALL OF TURBINE PIT.
13. ORIFICE SIZES TO BE VERIFIED IN FIELD TEST
14. " GEN. COOLING WATER PRESS. CONNECT TO 82D ON PIPE TERMINAL STRIP OF ASSOCIATED ACTUATOR
15. " TURBINE COOLING WATER PRESS. CONNECT TO 82F ON PIPE TERMINAL STRIP OF ASSOCIATED ACTUATOR
16. AUTOCON MARK NO SERVICE WATER PUMP CONTROL
17. TO SERVICE WATER PUMP CONT. CABINET SHUT OFF FOUR
18. TO SERVICE WATER PUMP CONT. CABINET SHUT OFF THREE
19. NUMBER & LOCATION OF PIPING VENTS & DRAINS TO BE DETERMINED IN THE FIELD.

NOTES

1. PIPING AND EQUIPMENT IN RED ARE ORIGINAL INSTALLATION.
2. PIPING AND EQUIPMENT IN BLACK HAVE BEEN REPLACED.

CHECK PRINT

REVISIONS DURING CONSTRUCTION		P.A. NO.	
FOR FIRSTLIGHT HYDRO GENERATING Co.			
TITLE NORTHFIELD MOUNTAIN PUMPED STORAGE PROJECT			
SERVICE WATER SYSTEM PIPING REPLACEMENT TRACKING DIAGRAM			
NORTHFIELD, MASSACHUSETTS			
BY S.J.MARTIN	CHKD. CM	APP. MWK	APP.
DATE 11-9-04	DATE 11-9-04	DATE 11-9-04	DATE
SCALE NONE	DWG. NO.	39101-26010 SH.1C	

THIS DRAWING REDRAWN FROM SAME NUSCO# REV 7

NO.	DATE	REVISIONS	BY	CHK	APP	APP

J
H
G
F
E
D
C
B

Tighe&Bond

SECTION 5

Section 5

Endangered Species Submittal (Response Pending)

May 4, 2023

*****SENT VIA EMAIL*****

Melissa Grader
Fish and Wildlife Biologist
Migratory Fish/Hydropower Program
U.S. Fish and Wildlife Service/New England Field Office
103 East Plumtree Road, Sunderland, MA 01375
melissa_grader@fws.gov

Re: **Northfield Mountain LLC
Northfield Mountain Pumped Storage Project
Northfield, Massachusetts
Hydroelectric Generating Facilities General Permit**

Dear Ms. Grader:

FirstLight Power Service LLC (FirstLight), as an agent for Northfield Mountain LLC, is seeking coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Hydroelectric Generating Facilities (HYDRO GP) for the Northfield Mountain Pumped Storage Project (Northfield Mountain) in Northfield, Massachusetts.

This facility is a 1,168 MW electric power generating plant with four turbine generating units in the main powerhouse. The maximum flow through the turbines is 20,000 cubic feet per second. Northfield Mountain is a pumped-storage facility located on the Connecticut River, that uses the Turners Falls Impoundment as its lower reservoir. The tailrace is located approximately 5.2 miles upstream of the Turners Falls Dam. Northfield Mountain consists of the upper reservoir, multiple dams, 3 dikes, an intake structure, pressure shaft, underground powerhouse, and trash racks at both the tailrace tunnel and the upper reservoir penstock. To prevent debris from entering the system from either the river or upper reservoir (depending on the flow of water through the plant), trash racks have metal rods with 5 inch spacing. Additionally, the service / cooling water flows are pulled directly from the penstock, with a small fraction of the total flow being drawn into the plant for service purposes. This facility has been operating in a substantially identical manner for decades and has quarterly wastewater discharge testing data available for review upon request.

Wastewater at the facility is discharged via 3 Outfalls:

- One Outfall: Floor and associated drains
- Two Outfalls: Service water, primarily non-contact cooling water

Additional and more detailed site information is available for your review at FirstLight's Federal Energy Regulatory Commission (FERC) relicensing public web portal (<https://www.northfield-relicensing.com/>).

As part of this process, the USFW IPaC System, as well as the NMFS EFH Mapper were reviewed. A summary of the species in the action area of the facility are presented in the list below:



USFWS

- Northern Long Eared Bat (Endangered)
- Monarch Butterfly (Candidate)

NMFS

- None

In addition to the mapping tools mentioned above, attached to this email is a NE Consistency Letter for the Northern Long Eared Bat identifying our No Effect Determination. Furthermore, we do not believe the minimal wastewater discharge directly into the Connecticut River will pose a risk to the Monarch Butterfly, with a typical habitat of prairies, meadows, grasslands and along roadsides.

We are reaching out to seek written concurrence on our finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat. We have arrived at this conclusion based upon the information provided in this correspondence.

Lastly, as noted in the HYDRO GP, there is the potential for discharges of oil and grease, slightly elevated temperatures, or pH levels different from ambient associated with the wastewaters authorized by this permit. However, relative to the overall flow of water through this facility, the HYDROGP wastewater flows make up less than 1% of the total flow discharged from the plant. Therefore, there are no expected adverse effects associated with the HYDROGP wastewaters specifically.

If you have any questions regarding this facility or the enclosed report, please contact me at (413) 875-1607. Thank you for your attention in this matter.

Very truly yours,

TIGHE & BOND, INC.



Timothy Kucab, CHMM
Project Manager

Enclosures

- USFW IPaC System Endangered Species Package
- USFW IPaC System NE Consistency Letter
- NOAA/NMFS EFH Mapper (2)



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:

March 22, 2023

Project Code: 2023-0058623

Project Name: Hydroelectric Station at 99 Millers Falls Rd Northfield MA

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 3/8/2023 - 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 3/8/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule will go into effect on **March 31, 2023**. After that date, the current 4(d) rule for NLEB will be invalid, and the 4(d) determination key will no longer be available. New compliance tools will be available in March 2023, and information will be posted in this section on our website and on the northern long-eared bat species page, so please check this site often for updates.

Depending on the type of effects a project has on NLEB, 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 may result in incidental take of NLEB after the new listing goes into effect, this will need to be addressed in an updated consultation that includes an Incidental Take Statement. Many of these situations will be addressed through the new compliance tools. If your project may require re-initiation of consultation, please wait for information on the new tools to appear on this site or contact our office for additional guidance.

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: 2023-0058623

Project Name: Hydroelectric Station at 99 Millers Falls Rd Northfield MA

Project Type: Wastewater Discharge

Project Description: Wastewater Permit Renewal

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.609863849999996,-72.47476235835143,14z>



Counties: Franklin County, Massachusetts

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 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
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	Threatened

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.

IPAC USER CONTACT INFORMATION

Agency: Tighe&Bond
Name: Holly Creigle
Address: 53 Southampton Road
City: Westfield
State: MA
Zip: 01085
Email: hcreigle@tighebond.com
Phone: 4136428688



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:

May 03, 2023

Project code: 2023-0058623

Project Name: Hydroelectric Station at 99 Millers Falls Rd Northfield MA

Federal Nexus: yes

Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Hydroelectric Station at 99 Millers Falls Rd Northfield MA'

Dear Holly Creigle:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on May 03, 2023, for 'Hydroelectric Station at 99 Millers Falls Rd Northfield MA' (here forward, Project). This project has been assigned Project Code 2023-0058623 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter.

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may

include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2023-0058623 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Hydroelectric Station at 99 Millers Falls Rd Northfield MA

2. Description

The following description was provided for the project 'Hydroelectric Station at 99 Millers Falls Rd Northfield MA':

Wastewater Permit Renewal

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.609863849999996,-72.47476235835143,14z>



DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (*Myotis septentrionalis*). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Do you have post-white nose syndrome occurrence data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed acoustic detections. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

Yes

8. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

PROJECT QUESTIONNAIRE

Will all project activities be completed by April 1, 2024?

Yes

IPAC USER CONTACT INFORMATION

Agency: Tighe&Bond
Name: Holly Creigle
Address: 53 Southampton Road
City: Westfield
State: MA
Zip: 01085
Email: hcreigle@tighebond.com
Phone: 4136428688

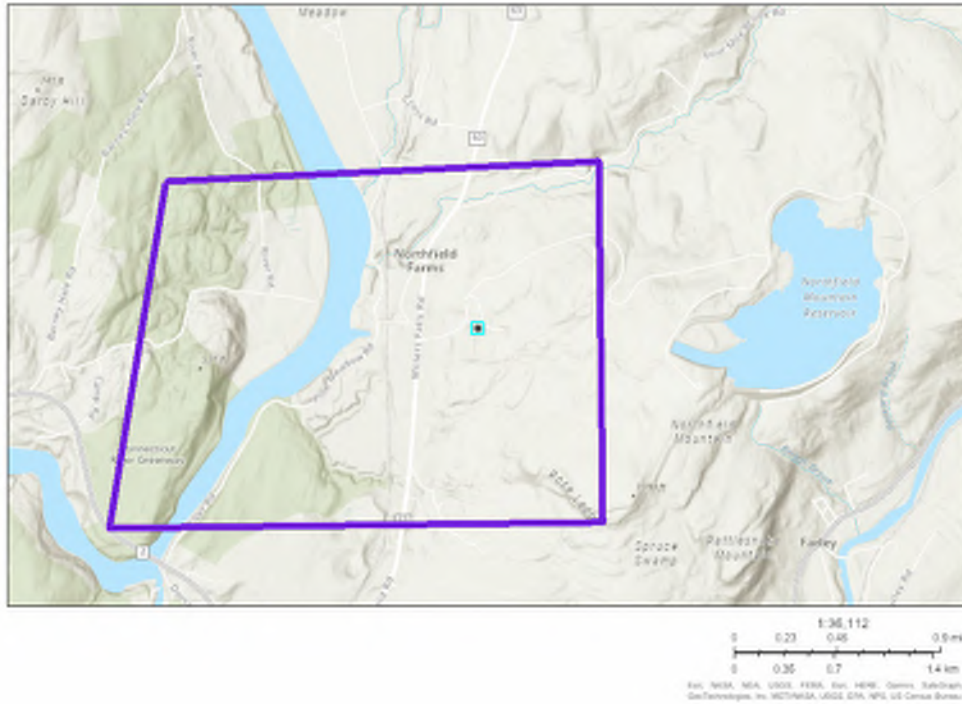


Critical Habitat Report 99 Millers Falls Road, Northfield MA

Area of Interest (AOI) Information

Length : 11.49 km

Mar 22 2023 10:31:08 Eastern Daylight Time



Summary

Name	Count	Area(km ²)	Length(m)
All Critical Habitat Polyline	0	N/A	N/A
All Critical Habitat Polygon	0	N/A	N/A

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	0	N/A	N/A
Shortnose Sturgeon	0	N/A	N/A
Atlantic Salmon	0	N/A	N/A
Sea Turtles	0	N/A	N/A
Atlantic Large Whales	0	N/A	N/A
In or Near Critical Habitat	0	N/A	N/A

Tighe&Bond

SECTION 6

Section 6
Historic Places Listings

National Register of Historic Places
(01.19.2023)

Reference	Property Name	Status	Request Type	Restricted Address	Category of Proper	State	County	City	Street & Number
_91000598	Alexander, Simeon, Jr. House	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Franklin	Northfield	Millers Falls Rd. S of Pine Meadow Rd.
_81000106	King Philip's Hill	Listed	Single	TRUE	SITE	MASSACHUSETTS	Franklin	Northfield	Address Restricted
_0400122C	Northfield Center Cemetery	Listed	Single	FALSE	SITE	MASSACHUSETTS	Franklin	Northfield	W terminus of Parker Ave.
_82004965	Northfield Main Street Historic District	Listed	Single	FALSE	DISTRICT	MASSACHUSETTS	Franklin	Northfield	Full length of Main St. from Millers Brook to Pauchaug Brook
_02000156	Pine Street School	Listed	Single	FALSE	BUILDING	MASSACHUSETTS	Franklin	Northfield	13 Pine St.
_10000306	Gill Center Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Franklin	Gill	Center, Main, Cross, Boyle, River, & Lyons Hill Rds.
_10000161	Riverside Village Historic District	Listed	Single	FALSE	district	MASSACHUSETTS	Franklin	Gill	0-77 French King Hwy., 0-61 Riverview Dr., 1-9 Grove, 2-9 Myrtle, 8 Mead

National Register of Historic Places
(01.19.2023)

External Link	Federal	Level of	Level of	Level of	Level of	Level of	Listed Date	Name of NHL Desig Other Nat Park Name	Status Date	Area of Significance
https://catalog.archives.gov/id/63795095	False	True	False	False	False	False	5/28/1991	Alexander--Klablick House	5/28/1991	ART; EXPLORATION/SETTLEMENT; ARCHITECTURE
	False	True	False	False	False	False	12/16/1981		12/16/1981	COMMUNITY PLANNING AND DEVELOPMENT; AGRICULTURE; ENGINEERING; EXPLORATION/SETTLEMENT; ARCHITECTURE
https://catalog.archives.gov/id/63795137	False	True	False	False	False	False	11/13/2004		11/13/2004	COMMUNITY PLANNING AND DEVELOPMENT; ART; SOCIAL HISTORY
https://catalog.archives.gov/id/63795081	False	True	False	False	False	False	7/8/1982		7/8/1982	EXPLORATION/SETTLEMENT; ARCHITECTURE
https://catalog.archives.gov/id/63795141	False	True	False	False	False	False	3/13/2002	East Northfield School	3/13/2002	EDUCATION; ARCHITECTURE; COMMUNITY PLANNING AND DEVELOPMENT
	False	True	False	False	False	False	11/5/2018		11/5/2018	
Low, 2-23 Oak, 1-4 Pine & 3-32 Walnut Sts.	False	True	False	False	False	False	9/18/2017			

Tighe&Bond

SECTION 7

Section 7
Impaired Waters Listing

**Category 5 waters listed alphabetically by major watershed
The 303(d) List – “Waters requiring a TMDL”**

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
Connecticut						
Arcadia Lake	MA34005	Belchertown.	32.00	Acres	(Fanwort*) (Non-Native Aquatic Plants*) Nutrient/Eutrophication Biological Indicators	
Atkins Reservoir	MA34006	Shutesbury/Amherst.	46.00	Acres	Mercury in Fish Tissue	
Bachelor Brook	MA34-07	Outlet Forge Pond, Granby to mouth at confluence with Connecticut River, South Hadley (through former 2006 segments: Aldrich Lake [East Basin] MA34002 and Aldrich Lake [West Basin] MA34106).	11.50	Miles	(Water Chestnut*) Escherichia Coli (E. Coli)	
Barton Cove	MA34122	Gill (cove of Connecticut River upstream of Turners Falls dams (NATID: MA00848 and MA00849)).	160.00	Acres	(Curly-leaf Pondweed*) (Eurasian Water Milfoil, Myriophyllum Spicatum*) (Fanwort*) (Water Chestnut*) Escherichia Coli (E. Coli) PCBs in Fish Tissue	
Bloody Brook	MA34-36	Headwaters, perennial portion, from the railroad tracks north of North Main Street, Deerfield to mouth at confluence with Mill River, Whately.	3.70	Miles	Dissolved Oxygen Escherichia Coli (E. Coli) Phosphorus, Total Turbidity	
Buttery Brook	MA34-42	Headwaters (perennial portion), west of Haig Avenue, South Hadley to mouth at confluence with the Connecticut River, South Hadley (interrupted urban, approximately 1200 feet culverted).	1.60	Miles	Escherichia Coli (E. Coli)	
Connecticut River	MA34-01	New Hampshire/Massachusetts state line, Northfield to Route 10 bridge, Northfield.	3.50	Miles	(Alteration in stream-side or littoral vegetative covers*) (Flow Regime Modification*) PCBs in Fish Tissue	
Connecticut River	MA34-02	Route 10 bridge, Northfield to Turners Falls dams (NATID: MA00848 and MA00849), Gill/Montague (excluding the delineated segment; Barton Cove MA34019).	11.40	Miles	(Alteration in stream-side or littoral vegetative covers*) (Flow Regime Modification*) (Water Chestnut*) PCBs in Fish Tissue	
Connecticut River	MA34-03	Turners Falls dams (NATID: MA00848 and MA00849), Gill/Montague to confluence with Deerfield River, Greenfield/Deerfield.	3.70	Miles	(Dewatering*) (Flow Regime Modification*) Escherichia Coli (E. Coli) PCBs in Fish Tissue Total Suspended Solids (TSS)	

