Chasm Hydroelectric Project

Certification Application to the Low Impact Hydropower Institute

FERC Project No. 7320

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INTRODUCTION

Erie Boulevard Hydropower, L.P. (Erie), a wholly owned subsidiary of Brookfield Renewable, is providing this application to the Low Impact Hydropower Institute (LIHI) for certification of the Chasm Hydroelectric Project. The Chasm Hydroelectric Project is located on the Salmon River near the Town of Malone in Franklin County. This facility is licensed with the Federal Energy Regulatory Commission (FERC) as the Chasm Hydroelectric Project (FERC No. 7320) (Chasm Project).

PART I. FACILITY DESCRIPTION

The key features of the Chasm Hydroelectric Project are described in Table 1.

Table I-1. Facility Description Information for the Chasm Hydroelectric Project.

Item	*Information Requests*	*Response (and references to further details)*
Name of the Facility	Facility name (use FERC project name if possible)	Chasm Project (FERC No. 7320)
Location	River name (USGS proper name)	Salmon River
	Watershed name	Salmon River Basin HUC-04150307
	Nearest town(s), county(ies), and state(s) to dam	Malone, Franklin County, New York
	River mile of dam above next major river	28.8
	Geographic latitude of dam	44.746
	Geographic longitude of dam	-74.223
Facility Owner	Application contact names	See Part V of LIHI certification application for more information
	Facility owner company and authorized owner representative name.	Erie Boulevard Hydropower, L.P. Daniel J. Maguire
	FERC licensee company name (if different from owner)	Same as above
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates, or date of exemption	FERC Project Number 7320 New license issued November 10, 2015 The Chasm Hydroelectric Project Settlement Agreement was dated April 13, 2015 and filed with FERC on April 30, 2015. License expires on October 31, 2045.
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	License for Major Project (< 5 MW)
	Water Quality Certificate identifier, issuance date, and issuing agency name. Include information on amendments.	The Section 401 Water Quality Certificate was issued by the New York State Department of Environmental (NYSDEC) on May 19, 2015 and adopted into the FERC license. The NYSDEC DEC I.D. 5-1648-00084/00008.

	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories	November 10, 2015 Order Issuing New License: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14041744 July 30, 2015 Environmental Assessment: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13944522 May 19, 2015 Water Quality Certificate: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13880042 April 30, 2015 Offer of Settlement: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13862996
Powerhouse	Date of initial operation (past or future for pre-operational applications)	1913
	Total installed capacity (MW)	3.35 MW
	Average annual generation (MWh) and period of record used	Actual annual generation is filed with FERC each year. The average generation from 2013 to 2018 is 10,210 MWh.
	Mode of operation (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.)	The Chasm Project is operated in a run-of-river mode.
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	Generating Units: 3 Type: S. Morgan Smith horizontal Francis turbines Description: Units 1 and 2 = Design capacity of 1,756 HP at design head of 256 feet and a speed of 120 rpm Unit 3= Design capacity of 2,185 HP at design head of 256 feet and a speed of 120 rpm Maximum Capacity: Units 1 and 2 = 75 cfs (each) Unit 3 = 85 cfs Minimum Capacity: Units 1 and 2 = 65 cfs (efficient, each) Unit 3 = 70 cfs (efficient)

		Generators: Direct-connected, General Electric, 3-phase, 60-cycle, alternating current, synchronous generators. Nameplate rating: Units 1 and 2: 1.0 MW Unit 3: 1.35 MW Additional information: Units 1 and 2: 1.25 MVA, 0.8 PF, 2,200 volts, 75 amperes, and 514 rpm Unit 3: 1.5 MVA, , 0.9 PF, 2,200 volts 100 amperes, and 514 rpm
	Trashrack clear spacing (inches), for each trashrack	1.0 inch clear spacing
	Dates and types of major equipment upgrades	The major upgrades are listed as follows: 1957: New runner installed (unit 2) 1963: Turbine unit installed (unit 3) 1964: Civil works updates for new substation
	Dates, purpose, and type of any recent operational changes	There have been no recent operational changes at the Project.
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	There are no plans for any facility upgrades at the Project.
Dam or Diversion	Date of original construction and description and dates of subsequent dam or diversion structure modifications	1913 – original construction 1938 - Steel pipeline saddles installed 1955 – Tailrace retaining walls constructed 1992 – Replaced the riveted steel pipeline with a welded steel pipeline
	Dam or diversion structure height including separately, the height of any flashboards, inflatable dams, etc.	Dam Height: 24.8 feet Flashboards: 2 feet
	Spillway elevation and hydraulic capacity	Spillway Elevation:1,283.8 feet msl Hydraulic Capacity: 4,500 cfs at 1,288.6 feet msl (top on non-overflow structure)
	Tailwater elevation (provide normal range if available)	1018.1 feet msl (normal)

	Length and type of all penstocks and water conveyance structures between the impoundment and powerhouse	The pipeline from the intake to the turbines is a 7-foot-diameter welded steel pipeline approximately 3,355 feet in length and transitions to a 6-foot-diameter steel manifold pipeline just upstream of the powerhouse. The penstock is above ground for the first 100+ feet downstream of the intake, then buried thereafter.
	Dates and types of major infrastructure changes	The major improvements are listed as follows: 1955: Tailrace protection installed. 1992: Replaced the steel pipeline. 1997: Spillway stabilized with tendon anchors and rehabilitated the platform and intake structure
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	The purpose of the Chasm Project is for power production.
	Source water	Salmon River
	Receiving water and location of discharge	Salmon River at RM 27.9
Conduit	Date of conduit construction and primary purpose of conduit	Constructed in 1913 to convey water to the powerhouse
Impoundment and Watershed	Authorized maximum and minimum water surface elevations	1,285.8 ft maximum; 1,283.30 ft minimum
	Normal operating elevations and normal fluctuation range	1,285.8 ft maximum; 1,283.55 ft minimum
	Gross storage volume and surface area at full pool	Gross Volume: 74 acre-feet Surface Area: 22 acres
	Usable storage volume and surface area	Usable Volume: 5.5 acre-feet Surface Area: 22 acres
	Describe requirements related to impoundment inflow, outflow, up/down ramping and refill rate restrictions.	The Chasm Project operates with a 0.25-foot drawdown limit measured in a downward direction from top of crest or the 2-foot-high flashboards (when installed) when river flows exceed 85 cfs. Impoundment fluctuation is limited to 0.1-foot measured in a downward direction from top of crest or 2-foot-high crest control devise (when installed) when river flows are less than 85 cfs.

	Upstream dams by name, ownership and river mile. If FERC licensed or exempt, please provide FERC Project number of these dams. Indicate which upstream dams have downstream fish passage.	Mountain View Project, Mountain View Association, N/A, RM 35.8 * No dams on the Salmon River provide downstream fish passage.
	Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage	Ballard Mill Project, ECOsponsible, LLC, P-3267, RM 20.5 Whittelsey Project, Malone's Next Gen LLC, P-10522, RM 19.8 Macomb Hydroelectric Project, Erie Boulevard Hydropower, P-7321, RM 17.3 * No dams on the Salmon River provide upstream fish passage.
	Operating agreements with upstream or downstream facilities that affect water availability and facility operation	Not applicable
	Area of land (acres) and area of water (acres) inside FERC project boundary or under facility control.	The FERC project boundary covers 68.5 acres (40 acres of land and 28.5 acres of water).
Hydrologic Setting	Average annual flow at the dam, and period of record used	The approximately average monthly flow at the Chasm Hydroelectric Project based on flow data through 1987 though 2012 at the USGS gage 04270000 Salmon River at Chasm Falls, NY is 255 cfs.
	Average monthly flows and period of record used	The approximate average monthly flows at the Chasm Hydroelectric Project based on flow data through 1987 through 2012 at the USGS gage 04270000 Salmon River at Chasm Falls, NY are as follows: January – 243cfs February – 191 cfs March – 314 cfs April – 562 cfs May – 317 cfs June – 231 cfs July – 191 cfs August – 176 cfs September – 177 cfs October – 248 cfs November – 269 cfs December – 241 cfs

	Location and name of closest stream gauging stations above and below the facility	USGS Gage No. 04270000 Salmon River at Chasm Falls, NY (located downstream of the Chasm Hydroelectric Project)
	Watershed area at the dam (in square miles). Identify if this value is prorated and provide the basis for proration.	126 square miles Daily mean flow data for the Chasm Project was estimated by a linear proration of data from USGS Gage No. 04270000 Salmon River at Chasm Falls, NY. [1]
Designated Zones of Effect	Number of zones of effect	There are three zones of effect at the Chasm Hydroelectric Project (See Appendix A)
	Upstream and downstream locations by river miles	Zone 1: 28.8 to 30.3 Zone 2: 27.9 to 28.8 Zone 3: 27.6 to 27.9
	Type of waterbody (river, impoundment, by-passed reach, etc.)	Zone 1: Impoundment Zone 2: Bypassed Reach Zone 3: River
	Delimiting structures or features	Zone 1: From the head of the impoundment, downstream approximately 1.5 miles to the dam. Zone 2: Dam, downstream bypassed reach approximately 0.9 miles. Zone 3: Powerhouse, downstream approximately 0.3 miles (extent of Project boundary).
	Designated uses by state water quality agency	The NYSDEC has classified the portion of the Salmon River extending from Westville Center to the Project and upstream to the river's source as Class C waters with an accompanying standard (T) pertaining to trout waters. Link to NYSDEC Classification Codes: https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I06849fe0b5a111dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)

[1] Ries, K.G. and Friesz, P.J. 2000. Methods for Estimating Low-Flow Statistics for Massachusetts Streams. Water Resources Investigations Report 00-4135. U.S. Department of Interior. U.S. Geological Survey.

PART II. STANDARD MATRICES

The Chasm Hydroelectric Project has three zones of effect that are defined as: (1) Zone one, which extends from the head of the impoundment downstream approximately 1.5 miles to the Chasm dam, (2) Zone two, which extends from the Chasm dam, downstream along the bypassed reach approximately 0.9 miles, and (3) Zone three, which extends from the Chasm powerhouse, downstream approximately 0.3 miles.

The standards selected to satisfy the LIHI certification criteria in each of these zones are identified in the following tables.

Table II-1. LIHI Standards Selected for Zone of Effect No. 1

		Alternative Standards				
	Criterion	***1***	***2***	***3***	***4***	***Plus***
A	**Ecological Flow Regimes**	X				
B	**Water Quality**		X			
C	**Upstream Fish Passage**	X				
D	**Downstream Fish Passage**		X			
E	**Watershed and Shoreline Protection**	X				
F	**Threatened and Endangered Species Protection**			X		
G	**Cultural and Historic Resources Protection**		X			
H	**Recreational Resources**		X			

Table II-2. LIHI Standards Selected for Zone of Effect No. 2

		Alternative Standards				
	Criterion	***1***	***2***	***3***	***4***	***Plus***
A	**Ecological Flow Regimes**		X			
B	**Water Quality**		X			
C	**Upstream Fish Passage**	X				
D	**Downstream Fish Passage**		X			
E	**Watershed and Shoreline Protection**	X				
F	**Threatened and Endangered Species Protection**			X		
G	**Cultural and Historic Resources Protection**		X			
H	**Recreational Resources**		X			

Table II-3. LIHI Standards Selected for Zone of Effect No. 3

		Alternative Standards				
	Criterion	***1***	***2***	***3***	***4***	***Plus***
A	**Ecological Flow Regimes**		X			
B	**Water Quality**		X			
C	**Upstream Fish Passage**	X				
D	**Downstream Fish Passage**	X				
E	**Watershed and Shoreline Protection**	X				
F	**Threatened and Endangered Species Protection**			X		
G	**Cultural and Historic Resources Protection**		X			
H	**Recreational Resources**		X			

PART III. SUPPORTING INFORMATION

This section contains information that explains and justifies the standards selected to pass the LIHI certification criteria (see Part II for selections).

Information Required to Support Ecological Flows Standards.

III.A.1 Ecological Flows: Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
A	1	Not Applicable / De Minimis Effect: • Confirm the location of the powerhouse relative to dam/diversion structures and demonstrate that there are no bypassed reaches at the facility. • For run-of-river facilities, provide details on operations and demonstrate that flows, water levels, and operation are monitored to ensure such an operational mode is maintained. If deviations from required flows have occurred, discuss them and the measures taken to minimize reoccurrence. • In a conduit facility, identify the source waters, location of discharge points, and receiving waters for the conduit system within which the hydropower facility is located. This standard cannot be used for conduits that discharge to a natural waterbody. • For impoundment zones only, explain water management (e.g., fluctuations, ramping, refill rates) and how fish and wildlife habitat within the zone is evaluated and managed. NOTE: this is required information, but it will not be used to determine whether the Ecological Flows criterion has been satisfied. All impoundment zones can apply Criterion A-1 to pass this criterion.

Zone 1 of the Chasm Project is the head of the impoundment downstream approximately 1.5 miles to the Chasm dam, therefore there is no bypassed reach within this zone. The Chasm Project operates as run-of-river, with a maximum daily fluctuation limit of 0.25 feet when river flows are 85 cfs or greater, and 0.1 feet when river flows are less than 85 cfs. The normal impoundment fluctuation limit will be measured in the downward direction from the crest of spillway elevation of 1,283.8 feet or top of crest control device (e.g., the seasonal flashboards) elevation of 1,285.8 feet when installed. As provided in the Settlement Agreement, impoundment levels of 0.5 feet or greater below the spillway crest will be considered a violation of normal operation. The reduced reservoir fluctuation is implemented to support downstream habitat areas in the event of a potential unit trip during non-spill events.

According to the FERC Environmental Assessment (EA), reduced water level fluctuations in the Chasm impoundment protect wetland, riparian, and littoral habitat in the Project vicinity. In addition, the EA states that limiting fluctuation and maintaining near-crest water levels benefits aquatic resources in the event of a prolonged powerhouse outage.

The Chasm Project is in compliance with resource agency conditions issued regarding flow conditions. The FERC license, 2015 Settlement Offer, and Section 401 Water Quality Certificate (WQC) include the requirements for flow releases and water level control recommended by the New York State Department of Environmental Conservation (NYSDEC) and United States Fish and Wildlife Service (USFWS). The Settlement Agreement does not require the Licensee to monitor or test the effectiveness of any fish protection measures included in the agreement.

Article 401 of the license requires a Stream Flow and Water Level Monitoring Plan (SFWLMP), be developed to ensure compliance with impoundment fluctuations. The final SFWLMP was filed with FERC on November 9, 2017. On March 29, 2018, FERC issued an Order Modifying and Approving the SFWLMP.

License Article 401 Stream Flow and Water Level Monitoring Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14753473

Order Modifying and Approving Stream Flow and Water Level Monitoring Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14857662

All of the license and settlement requirements pertaining to flow conditions and impoundment levels have been implemented at the Chasm Project.

Erie remains in compliance with the established flow conditions and impoundment levels and maintains records of these conditions at the Project. In the event of a deviation from established minimum flows or impoundment levels, Erie files documentation with FERC detailing the reasons for the deviation.

III.A.2 Ecological Flows: Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
A	2	Agency Recommendation (see Appendix A for definitions): • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • •Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

Zone 2 of the Chasm Project is the bypassed reach downstream of the Chasm dam. The Chasm Project is in compliance with resource agency conditions issued regarding flow conditions. The FERC license, 2015 Settlement Offer, and Section 401 WQC include the requirements for flow releases and water level control recommended by the NYSDEC and USFWS.

The Base Flow and Bypass Flow Study (Study) using the Delphi Study approach was conducted during the relicensing of the Chasm Project to determine the appropriate minimum (bypass) flows. The 2015 FERC license (Article 404), 2015 Settlement Offer, and 401 WQC require Erie to release minimum flows, and to submit a Minimum Flow Release Plan (MFRP). On November 7, 2016, Erie submitted the MFRP, and it was approved by FERC on February 14, 2017. The MFRP provided that minimum flows be released to the bypassed reach via two taps in the Project's penstock.

According to the 2015 Settlement Agreement and Condition No. 10 of the NYSDEC WQC, the bypass flows must be monitored in accordance with the SFWLMP to evaluate flow in the bypassed reach. The minimum bypass flows incorporated into the 2015 FERC license and 2015 Settlement Agreement represented an effective compromise between water quality and habitat in the bypassed reach.

On March 29, 2018, FERC issued an Order Modifying and Approving Stream Flow and Water Level Monitoring Plan. The order approved the use of an additional pipeline tap (in the same pipeline as the existing tap) to provide the total minimum flow.

The FERC license requires the Licensee to provide 15 cfs to the bypassed reach year-round from the date of license issuance and then, within 48 months of license issuance, or by October 2, 2019 (whichever occurs later) implement the following minimum flow condition:

- Minimum (bypass) flows: Seasonal minimum flows of 15 cfs from May 1 through October 1, and 23 cfs from October 2 through April 30, will be provided in the bypassed reach and will be provided through two flow taps in the facility's penstock.

Base Flow and Bypass Flow Study:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13295944

Minimum Flow Release Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14393534

Order Approving Minimum Flow Release Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14492543

Stream Flow and Water Level Monitoring Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14753473

Order Modifying and Approving Stream Flow and Water Level Monitoring Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14857662

Erie remains in compliance with the established flow conditions and impoundment levels and maintains records of these conditions at the Project. In the event of a deviation from established minimum flows or impoundment levels, Erie files documentation with FERC detailing the reasons for the deviation.

III.A.3 Ecological Flows: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
A	2	Agency Recommendation (see Appendix A for definitions): • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

Zone 3 extends downstream 0.6 miles from the Chasm powerhouse. The Project is in compliance with resource agency conditions issued regarding flow conditions. The FERC license, 2015 Settlement Offer, and Section 401 WQC include the requirements for flow releases and water level control recommended by the NYSDEC and USFWS.

All of the license and settlement requirements pertaining to flow conditions and impoundment levels have been implemented at the Chasm Project.

The 2015 Settlement Offer and 401 WQC require Erie to provide a base flow of 70 cfs (or inflow to the impoundment, whichever is less) through the existing unit and minimum flow tap. The EA indicated that the existing base flow of 70 cfs fully meets all management goals for the downstream river reach.

Erie remains in compliance with the established flow conditions and impoundment levels and maintains records of these conditions at the Project. In the event of a deviation from established minimum flows or impoundment levels, Erie files documentation with FERC detailing the reasons for the deviation.

Information Required to Support Water Quality Standards.

III.B.1 Water Quality: Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
B	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

The Chasm Project is in compliance with all conditions issued pursuant to a Clean Water Act – Section 401 WQC. The Section 401 WQC is conditioned on compliance with the terms of the Settlement Agreement. The 401 WQC was issued on May 19, 2015 and adopted into the FERC license: (https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13880042). On-going water quality monitoring at the Project is not required as part of the WQC or FERC license.

Generally, any changes to the original WQC are necessitated by significant changes in or to the Project environment affecting the Conditions of the original WQC, which culminates in an amendment of the original WQC. This situation has not occurred for the Chasm Project WQC, and the original WQC, issued on May 19, 2015 is still in effect.

Additionally, the Applicant contacted the NYSDEC on January 3, 2019, regarding the current WQC status for the Project. The NYSDEC has yet to provide comments regarding the status of the WQC for the Project. A copy of the response letter will be forwarded to LIHI upon receipt. The consultation documentation regarding the 401 WQC is included in Appendix D.

Per review of the November 2016 Section 303(d) list for New York State, no impaired waters in the Project area or downstream reach are listed. A copy of the November 2016 Section 303(d) list for New York State can be viewed at https://www.dec.ny.gov/docs/water_pdf/303dListfinal2016.pdf.

The Salmon River in the vicinity of the Chasm impoundment and tailrace is classified by NYSDEC as Class C waters with an accompanying standard (T) pertaining to trout waters. The best usage of Class C waters is fishing, and they are also suitable for fish propagation and survival, as well as primary and secondary contact recreation, where such use is not limited by other factors.

III.B.2 Water Quality Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
B	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

See response above for Zone 1.

III.B.3 Water Quality: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
B	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

See response above for Zone 1.

Information Required to Support Upstream Fish Passage Standards.

III.C.1 Upstream Fish Passage: Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
C	1	Not Applicable / De Minimis Effect: • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. Typically, impoundment zones will qualify for this standard since once above a dam and in an impoundment, there is no facility barrier to further upstream movement. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

During the relicensing proceeding for the Chasm Project, neither the Department of Commerce nor the Department of Interior (Interior) prescribed anadromous or catadromous fish passage facilities for the Project.

Interior did, however, by letter dated July 14, 2014, request reservation of its authority to prescribe upstream and downstream fish passage devices in the future, which is provided in Article 402 of the 2015 FERC license. In their July 14, 2014 Section 18 Prescription letter, Interior stated the parties' desire was to maintain separate fisheries above and below the dam, therefore no fishways were required for upstream and downstream passage.

The Chasm dam was constructed at Chasm Falls, a natural hydraulic barrier that separates the Salmon River into distinct upstream and downstream fish habitats. Fisheries investigations indicated white sucker was the most abundant fish collected and was primarily collected in the impoundment. The impoundment also contained a few smallmouth bass and yellow perch. These studies also indicate a diverse and abundant fish community in the middle and lower bypassed reach that included both stocked and wild brook and brown trout. Non-sport fish discovered included longnose dace, cutlips minnow, blacknose dace, slimy sculpin, and creek chub. No resource agencies have requested that any upstream fish passage measures be implemented at the Chasm Project.

July 14, 2014 Interior (USFWS) Section 18 Prescription letter:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13593019

July 30, 2015 Environmental Assessment:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13944522

III.C.2 Upstream Fish Passage Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
C	1	Not Applicable / De Minimis Effect: • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. Typically, impoundment zones will qualify for this standard since once above a dam and in an impoundment, there is no facility barrier to further upstream movement. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

See response above for Zone 1.

III.C.3 Upstream Fish Passage: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
C	1	Not Applicable / De Minimis Effect: • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. Typically, impoundment zones will qualify for this standard since once above a dam and in an impoundment, there is no facility barrier to further upstream movement. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

See response above for Zone 1.

Information Required to Support Downstream Fish Passage Standards.

III.D.1 Downstream Fish Passage: Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
D	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

In their July 14, 2014 Section 18 Prescription letter, Interior stated the parties' desire was to maintain separate fisheries above and below the dam due to the natural hydraulic barrier of Chasm falls, therefore no fishways were required for upstream and downstream passage. There are no mandatory prescriptions (Section 18 or similar) for the passage of riverine fish at the Project.

Agency recommendations for fish entrainment protection at the Chasm Project are included Section 3.4 of the 2015 Settlement Offer and Appendix B of the FERC license. Erie maintains trashracks with 1-inch clear spacing on a year-round basis to exclude most adult game fish and other fish from potential entrainment into the Project's turbines. No other fish passage related measures were requested by any resource agencies for downstream fish passage at the Project.

Fisheries investigations completed prior to the 2015 FERC license indicated white sucker was the most abundant fish collected and was primarily collected in the impoundment. The impoundment also contained a few smallmouth bass and yellow perch. These studies also indicate a diverse and abundant fish community in the middle and lower bypassed reach that included both stocked and wild brook and brown trout. Non-sport fish discovered included longnose dace, cutlips minnow, blacknose dace, slimy sculpin, and creek chub. There are no fish passage monitoring associated with the impoundment of the Project.

July 14, 2014 Interior (USFWS) Section 18 Prescription letter:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13593019

III.D.2 Downstream Fish Passage: Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
D	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally protective). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Article 404 of the FERC license incorporates the requirements of the 2015 Settlement Offer for minimum flows in the bypassed reach, and requires Erie to file an MFRP.

The 2015 FERC license (Article 404), 2015 Settlement Offer, and 401 WQC require Erie to release minimum flows. On November 7, 2016, Erie submitted the MFRP, and it was approved

by FERC on February 14, 2017. The MFRP provided that minimum flows be released to the bypassed reach via two taps in the Project's penstock.

The Chasm Project bypass flows must be 15 cfs from May 1 through October 1, and 23 cfs from October 2 through April 30 (by October 2, 2019), using two taps in the Project's penstock.

Minimum Flow Release Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=1439353

Order Approving Minimum Flow Release Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14492543

Stream Flow and Water Level Monitoring Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14753473

III.D.3 Downstream Fish Passage: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
D	1	Not Applicable/De Minimis Effect • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). Typically, tailwater/downstream zones will qualify for this standard since below a dam and powerhouse there is no facility barrier to further downstream movement. Bypassed reach zones must demonstrate that flows in the reach are adequate to support safe, effective and timely downstream migration. • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

There are no downstream fish passage barriers or migratory fish management issues in Zone 3 because it is located below the dam and powerhouse, so there is no facility barrier to further downstream movement.

In their July 14, 2014 Section 18 Prescription letter, Interior stated the parties' desire was to maintain separate fisheries above and below the dam, therefore no fishways were required for downstream passage. Article 402 of the FERC license reserves the Interior's authority to

prescribe upstream and downstream fish passage devices in the future. There are no provisions for fish passage monitoring or effectiveness testing.

Settlement Offer
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13862996

Information Required to Support Shoreline and Watershed Protection Standards.

III.E.1 Shoreline and Watershed Protection Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
E	1	Not Applicable / De Minimis Effect: • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the FERC project or facility boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

The project is located in the Town of Malone, north of and outside of the Adirondack State Park boundary. Land use in the Project vicinity is characterized primarily by scattered residences, private recreation areas, summer camps, and forested land managed by the NYSDEC for forest production and recreation. These NYSDEC-managed lands include the Titusville Mountain State Forest, which is located adjacent to the Project's impoundment. Residential and commercial land use in the region is concentrated in and around the Village of Malone, downstream from the Project. The NYSDEC's Natural Heritage Program indicated that there are no records of significant natural communities or other significant habitats, on or in the immediate vicinity of the Chasm Project.

The FERC EA for the Project concluded that although activities such as logging in the upper watershed and agriculture in the lower watershed of the Salmon River accelerated erosion, the river is not currently considered impaired or threatened by the NYSDEC. There is no evidence that Project operation has contributed to existing shoreline erosion. Reduced water level fluctuations in the Chasm impoundment protect wetland, riparian, and littoral habitat in the Project vicinity. There is no shoreline management plan required for the Project.

III.E.2 Shoreline and Watershed Protection: Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
E	1	Not Applicable / De Minimis Effect: • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the FERC project or facility boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

See response above for Zone 1.

III.E.3 Shoreline and Watershed Protection: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
E	1	Not Applicable / De Minimis Effect: • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the FERC project or facility boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

See response above for Zone 1.

Information Required to Support Threatened and Endangered Species Standards.

III.F.1 Threatened and Endangered Species: Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
F	3	Recovery Planning and Action: • If listed species are present, document that the facility is in compliance with relevant conditions in the species recovery plans, incidental take permits or statements, biological opinions, habitat conservation plans, or similar government documents. • Document that any incidental take permits and/or biological opinions currently in effect were designed as long-term solutions for protection of listed species in the area.

Based on information received from the USFWS's New York Field Office on January 30, 2019, regarding a request for information on RTE species it appears that the northern long-eared bat (*Myotis septentrionalis*) may potentially occur within the Project area. There are no critical habitats located within the Chasm Project area.

During preparation of this application, Erie also consulted with NYSDEC's Natural Heritage Program for a list of threatened and endangered species that may occur in the vicinity of the Chasm Project. Pursuant to a letter dated January 29, 2019, NYSDEC indicated that there are no records of state listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of the Chasm Project.

The USFWS has not adopted a formal recovery plan for the northern long-eared bat. On January 14, 2016, the USFWS published the final 4(d) rule identifying prohibitions for the protection of northern long-eared bats. Operations of the Chasm Project, especially with regard to tree clearing from June 1 through July 31, adhere to the prohibitions outlined in the final 4(d) rule.

There are no specific requirements for threatened or endangered species protection in the FERC license or WQC for the Chasm Project.

The record of RTE consultation is included in Appendix E.

III.F.2 Threatened and Endangered Species: Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
F	3	Recovery Planning and Action: • If listed species are present, document that the facility is in compliance with relevant conditions in the species recovery plans, incidental take permits or statements, biological opinions, habitat conservation plans, or similar government documents. • Document that any incidental take permits and/or biological opinions currently in effect were designed as long-term solutions for protection of listed species in the area.

See response above for Zone 1.

III.F.3 Threatened and Endangered Species: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
F	3	Recovery Planning and Action: • If listed species are present, document that the facility is in compliance with relevant conditions in the species recovery plans, incidental take permits or statements, biological opinions, habitat conservation plans, or similar government documents. • Document that any incidental take permits and/or biological opinions currently in effect were designed as long-term solutions for protection of listed species in the area.

See response above for Zone 1.

Information Required to Support Cultural and Historic Resources Standards.

III.G.1 Cultural and Historic Resources: Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
G	2	Approved Plan: • Provide documentation of all approved state, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility. • Document that the facility is in compliance with all such plans.

In support of the 2015 relicensing of the Project, Erie conducted a Phase IA Literature Review and Archaeological Sensitivity Assessment (Phase IA Study). The Phase IA Study identified the Adirondack Pulp Mill Site, located along the Project's bypassed reach. The site consists of the remnants of a former saw mill that was later converted to a pulp mill. In order to protect the Adirondack Pulp Mill Site, the Licensee executed a Programmatic Agreement (PA) with FERC,

the Advisory Council on Historic Preservation, and the New York State Historic Preservation Officer (SHPO) in 2015.

Programmatic Agreement:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14022240

The facilities of the Chasm Project are in compliance with all requirements regarding cultural resource PM&E included in the 2015 FERC license. Article 407 of the 2015 license requires the Licensee to implement the PA, and the Historic Properties Management Plan (HPMP) filed on October 14, 2014, and approved in the 2015 license. Erie developed the HPMP in consultation with the SHPO, the St. Regis Mohawk Tribe, and the National Park Service.

Historic Properties Management Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13657711

III.G.2 Cultural and Historic Resources: Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
G	2	Approved Plan: • Provide documentation of all approved state, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility. • Document that the facility is in compliance with all such plans.

See response above for Zone 1.

III.G.3 Cultural and Historic Resources: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
G	2	Approved Plan: • Provide documentation of all approved state, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility. • Document that the facility is in compliance with all such plans.

See response above for Zone 1.

Information Required to Support Recreational Resources Standards.

III.H.1 Recreational Resources: Chasm Project Zone 1

Criterion	*Standard*	*Instructions*
H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

The Chasm Project is in compliance with recreational access, accommodation, and facilities' conditions in the FERC license.

The Licensee filed a Recreation Management Plan (RMP) to construct, operate, and maintain the existing Chasm Falls Recreation Area and the Informal Bypassed Reach Access Area for the Chasm Project on April 20, 2015 as Appendix A to the Settlement Agreement. FERC approved the RMP with issuance of the license.

According to the RMP, Erie planned to implement enhancements within 24 months of license issuance. Recreation enhancements were completed in fall 2018. Pursuant to Article 406 of the license, Erie must submit as-built drawings of the facilities to FERC within 90-days of completion. Erie is currently preparing as-built drawings for submittal to FERC for approval.

Final Recreation Management Plan:
https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13862996

III.H.2 Recreational Resources: Chasm Project Zone 2

Criterion	*Standard*	*Instructions*
H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

See response above for Zone 1.

III.H.3 Recreational Resources: Chasm Project Zone 3

Criterion	*Standard*	*Instructions*
H	2	Agency Recommendation: • Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations. • Document that the facility is in compliance with all such recommendations and plans.

See response above for Zone 1.

PART IV. SWORN STATEMENT AND WAIVER

As an Authorized Representative of Erie Boulevard Hydropower, L.P., the Undersigned attests that the material presented in the application is true and complete.

The Undersigned acknowledges that the primary goal of the Low Impact Hydropower Institute's certification program is public benefit, and that the LIHI Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions.

The Undersigned further acknowledges that if LIHI Certification of the applying facility is granted, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified®.

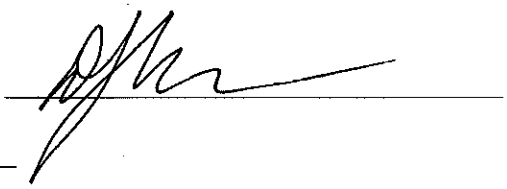
The Undersigned further agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications, from any consequences of disclosing or publishing any submitted certification application materials to the public, or on any other action pursuant to the Low Impact Hydropower Institute's certification program.

Company Name: Erie Boulevard Hydropower, L.P.

Authorized Representative

Name: Daniel J. Maguire

Title: Compliance Manager

Authorized Signature: 

Date: 4/10/19

PART V. CONTACTS

Table V-1. Complete contact information for Erie Boulevard Hydropower, L.P.

Project Owner:	
Name and Title	
Company	Erie Boulevard Hydropower, L.P., a subsidiary of Brookfield Renewable
Phone	
Email Address	
Mailing Address	200 Donald Lynch Boulevard, Marlborough, MA 01752
Project Operator (if different from Owner):	
Name and Title	
Company	
Phone	
Email Address	
Mailing Address	
Consulting Firm / Agent for LIHI Program (if different from above):	
Name and Title	
Company	
Phone	
Email Address	
Mailing Address	
Compliance Contact (responsible for LIHI Program requirements):	
Name and Title	Daniel J. Maguire, P.E., Compliance Manager
Company	Brookfield Renewable
Phone	315-267-1036
Email Address	Danny.Maguire@brookfieldrenewable.com
Mailing Address	184 Elm Street, Potsdam, NY 13676
Party responsible for accounts payable:	
Name and Title	
Company	Brookfield Renewable
Phone	
Email Address	AP@brookfieldrenewable.com
Mailing Address	41 Victoria, Gatineau, QC J8X 2A1
Name and Title	Sandeep Mascarenhas, Senior Analyst, Capacity & Ancillary Services Management
Company	Brookfield Renewable
Phone	819-561-2722 ext. 6743
Email Address	Sandeep.Mascarenhas@brookfieldrenewable.com
Mailing Address	41 Victoria, Gatineau, QC J8X 2A1

Table V-2. Complete contact information for current and relevant state, federal, provincial, and tribal resource agency contacts.

Agency Contact (Check area of responsibility: Flows _X_, Water Quality _X_, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation _X_):	
Agency Name	New York State Department of Environmental Conservation
Name and Title	Erin Burns, Permit Administrator
Phone	518-897-1234
Email address	
Mailing Address	P.O. Box 296, 1115 NYS Route 86, Ray Brook, NY 12977-0296

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. _X_, Cultural/Historic Resources __, Recreation __):	
Agency Name	New York State Department of Environmental Conservation
Name and Title	Nicholas Conrad, Information Resources Coordinator
Phone	518-402-8935
Email address	Nick.Conrad@dec.ny.gov
Mailing Address	625 Broadway, Albany, NY 12233-4757

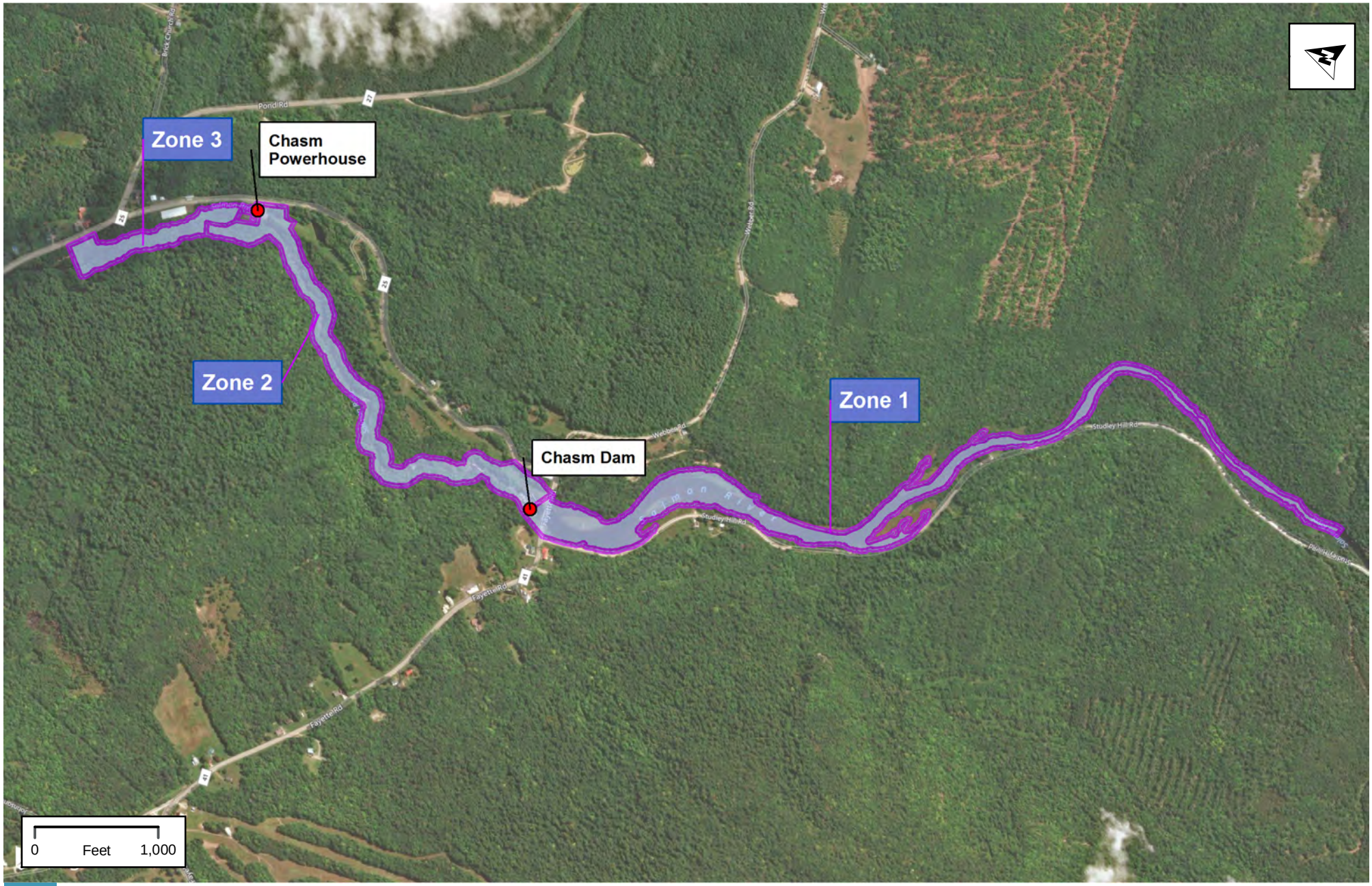
Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. _X_, Cultural/Historic Resources __, Recreation __):	
Agency Name	U.S. Fish and Wildlife Service
Name and Title	Robyn Niver, Endangered Species Biologist
Phone	607-753-9334
Email address	Robyn_Niver@fws.gov
Mailing Address	3817 Luker Road, Cortland, NY 13045

Agency Contact (Check area of responsibility: Flows_X_, Water Quality _X_, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. _X_, Cultural/Historic Resources __, Recreation __):	
Agency Name	U.S. Fish and Wildlife Service
Name and Title	Steve Patch
Phone	607-753-9334
Email address	Stephen_Patch@fws.gov
Mailing Address	3817 Luker Road, Cortland, NY 13045

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources _X_, Recreation __):	
Agency Name	New York State Division for Historic Preservation
Name and Title	Michael Lynch, Division Director
Phone	518-237-8643
Email address	Michael.Lynch@parks.ny.gov
Mailing Address	Peebles Island State Park, P.O. Box 189, Waterford, NY 12188-0189

APPENDIX A

ZONES OF EFFECT



Brookfield

LIHI Zone Boundary

ZONES OF EFFECT

CHASM DEVELOPMENT

FIGURE 1

PATH: C:\USERS\KAUSTIN\BROOKFIELD\CHASM_LIHI_UPDATES\CHASM ZONES OF EFFECT2.MXD - USER: KAUSTIN - DATE: 1/9/2019

APPENDIX B

PHOTOS OF KEY PROJECT FEATURES

APPENDIX B – PHOTOGRAPHS OF KEY PROJECT FEATURES

Spillway and intake structure

Spillway and intake structure

Bypassed Reach

Tailrace

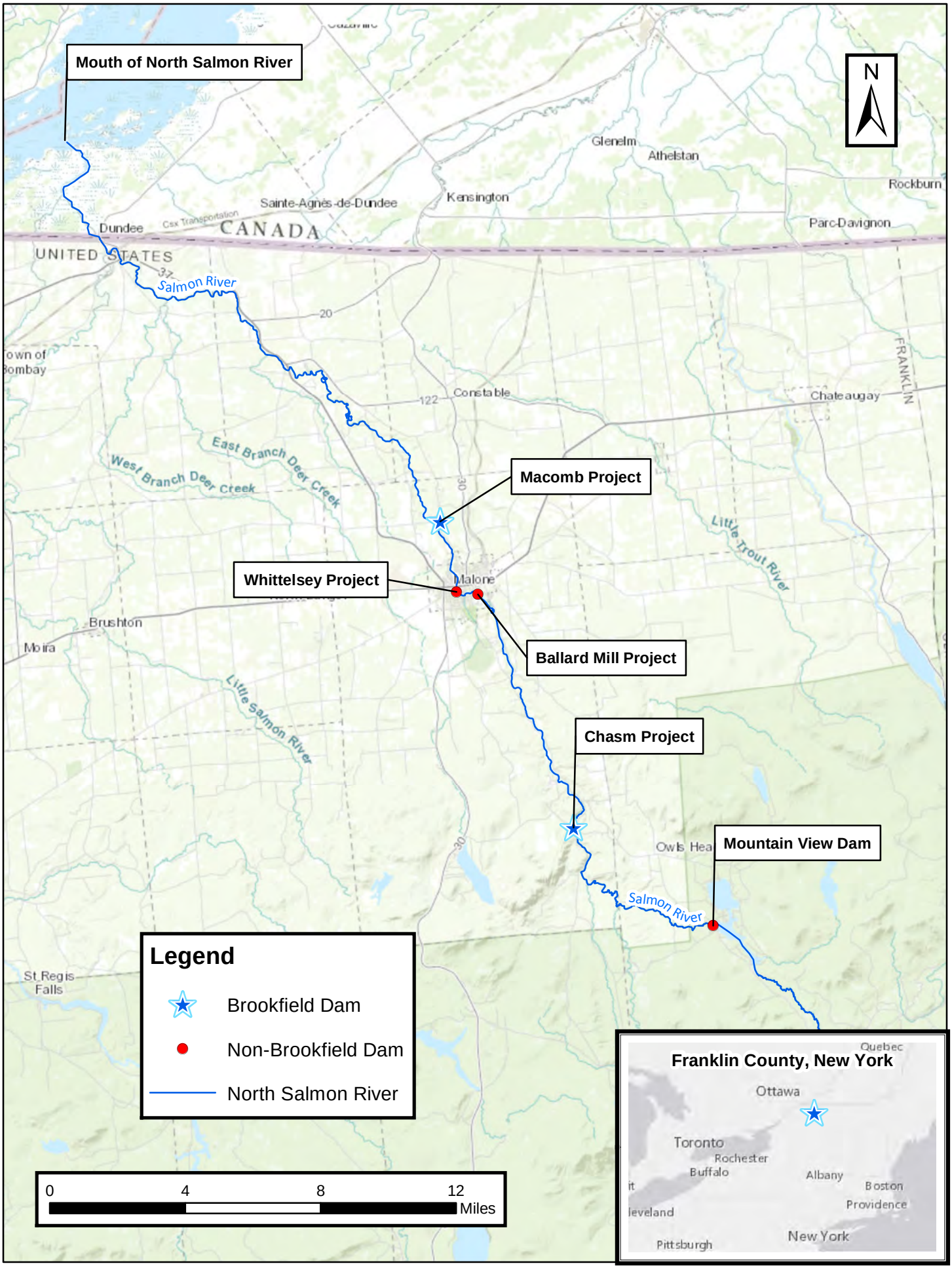
Turbine-Generator Unit 1

Turbine-Generator Unit 2

Turbine-Generator Unit 3

APPENDIX C

PROJECT MAPS AND AERIALS



Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

PROJECT LOCATION MAP

Chasm Hydroelectric Project FERC NO. 7320

Legend

Project Boundary

0 500 1,000 Feet

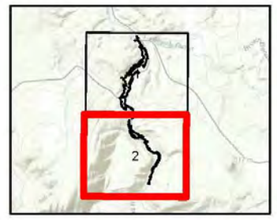
Brookfield

PROJECT LOCATION MAP

Chasm Hydroelectric Project FERC NO. 7320

Legend

Project Boundary



0 500 1,000 Feet

Brookfield


Powerhouse
Dam
N
Google earth

APPENDIX D

401 WATER QUALITY CERTIFICATION CONSULTATION

Brookfield

Brookfield Renewable
184 Elm Street
Potsdam, NY 13676

Tel 315.267.1020
www.brookfieldrenewable.com

Sent Electronically Only

January 3, 2019

Erin Burns
New York State Department of Environmental Conservation
P.O. Box 296
1115 NYS Route 86
Ray Brook, NY 12977-0296

Subject: **Chasm Hydroelectric Project (FERC No. 7320)**
Low Impact Hydropower Institute Certification
Water Quality Certificate Verification

Dear Ms. Burns:

Erie Boulevard Hydropower, L.P. (Erie) is applying for Low Impact Hydropower Institute (LIHI) certification for the Chasm Hydroelectric Project (FERC No. 7320). This Project is located on the Salmon River near the Town of Malone in Franklin County, New York.

Erie is requesting confirmation from the New York State Department of Environmental Conservation stating that the 401 Water Quality Certificate issued for the operation of the Chasm Hydroelectric Project on May 19, 2015 is still valid. Please provide this confirmation by reply to this letter via letter or email.

Erie respectfully requests a response within 30 days of the date of this letter. Thank you in advance for your assistance, and if you have any questions, please do not hesitate to contact me at (315) 267-1036 or by email at Danny.Maguire@brookfieldrenewable.com.

Sincerely,

Daniel Maguire, P.E.
Compliance Manager
North Atlantic Operations

APPENDIX E

RARE, THREATENED AND ENDANGERED SPECIES CONSULTATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
http://www.fws.gov/northeast/nyfo/es/section7.htm

In Reply Refer To: January 30, 2019
Consultation Code: 05E1NY00-2019-SLI-0735
Event Code: 05E1NY00-2019-E-02233
Project Name: Chasm Project

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

To Whom It May Concern:

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 (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. 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 feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/

eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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 York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
(607) 753-9334

Project Summary

Consultation Code: 05E1NY00-2019-SLI-0735

Event Code: 05E1NY00-2019-E-02233

Project Name: Chasm Project

Project Type: DAM

Project Description: The Chasm Hydroelectric Project is applying to the Low Impact Hydropower Institute (LIHI) for a certification of their project, and is looking for information regarding rare, threatened or endangered species that may occur in the project area. LIHI requires documentation of a finding of no negative effects or documentation that the facility is in compliance with relevant conditions in the species recovery plans.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.742925752783265N74.22103421086408W

Counties: Franklin, NY

Endangered Species Act Species

There is a total of 1 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 Fisheries[1], 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 Myotis septentrionalis No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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

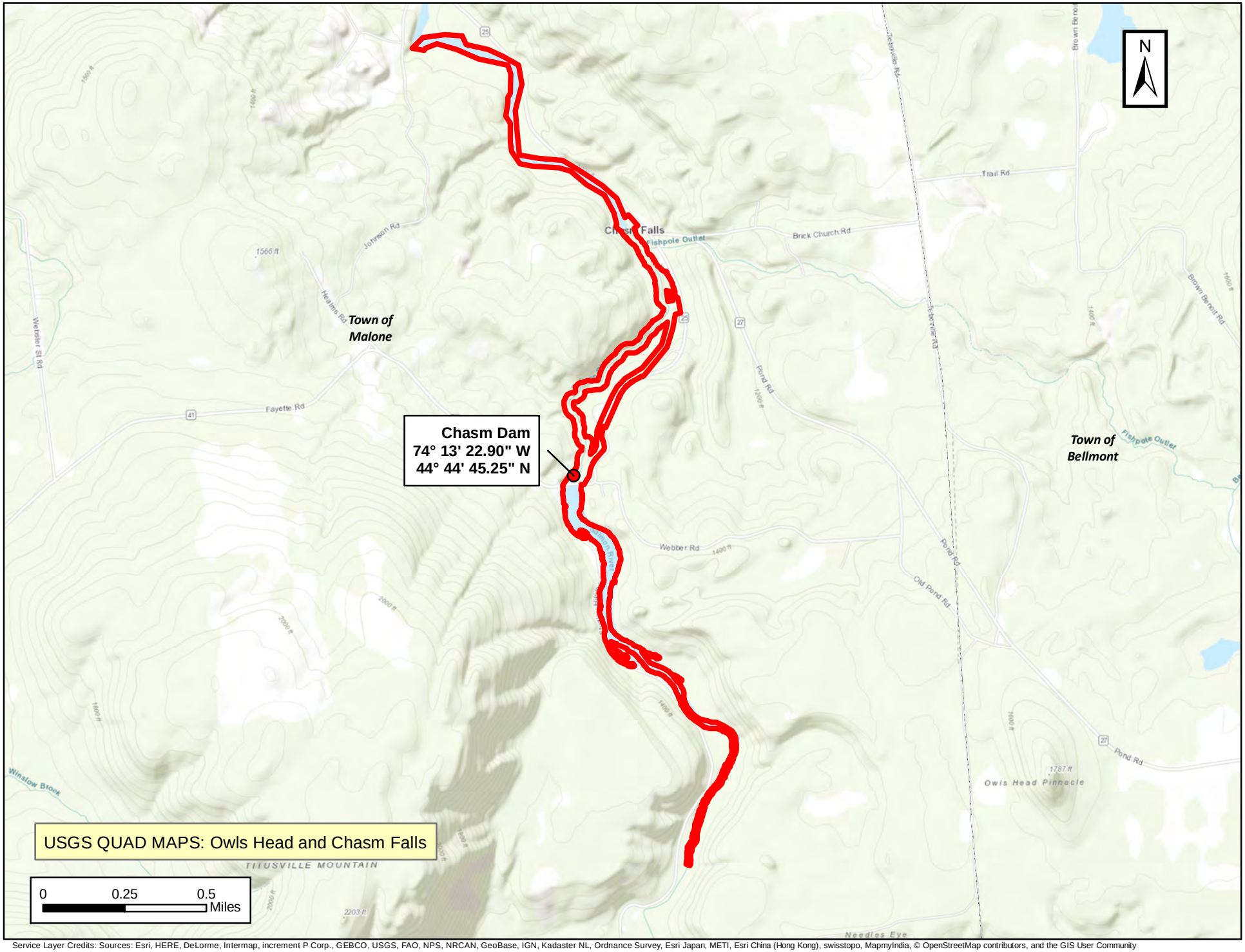
Caley, Katherine

From: naturalheritage@nynhp.org
Sent: Thursday, January 03, 2019 6:14 PM
To: Caley, Katherine
Subject: Confirmation of your submitted request to New York Natural Heritage

Submission ID: 2902
Submitted on Thursday, January 3, 2019 - 18:13 Submitted values are:

Company, Organization, or Agency: HDR, Inc.
Requestor Name: Katherine Caley
Requestor Address (Street/PO Box): 1304 Buckley Road, Suite 202 Requestor City: Syracuse Requestor State: New York Requestor Zip Code: 13212 Requestor Telephone #: 315-414-2213 Requestor Email: katherine.caley@hdrinc.com Project Type: hydroelectric facility/project Project Name: Chasm LIHI Consultation Project Applicant: Erie Boulevard Hydropower, LLC Project County: Franklin Town (Franklin County): Malone Project Summary:
Erie is presently working with the Low Impact Hydropower Institute (LIHI) to certify the Chasm Hydroelectric Project (FERC No. 7320) as a low impact project. In preparing the application for LIHI certification, Erie must update or confirm consultation with resource agencies with respect to the presence of threatened or endangered species within the vicinity of the hydroelectric development. Per the request from LIHI, Erie respectfully requests information on the presence of threatened or endangered species within the vicinity of the above-listed projects.

As a matter of background, the license from the Federal Energy Regulatory Commission (FERC) was issued for this Project on November 10, 2015. Project operations and environmental protection measures at this Project have been largely determined by a comprehensive Offer of Settlement that Erie developed in conjunction with the New York State Department of Environmental Conservation and other entities in 2015. The licensing processes for this Project included consultation with resource agencies regarding threatened and endangered species.
Current Land Use: The site is currently developed for the primary purpose of hydroelectric energy production on the Salmon River.
Tax parcel number:
Latitude: 44.746
Longitude: -74.223
Street Address of Project:
Project Notes:



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

January 29, 2019

Katherine Caley
HDR, Inc.
1304 Buckley Road, Suite 202
Syracuse, NY 13212

Re: Chasm LIHI Consultation
County: Franklin Town/City: Malone

Dear Ms. Caley:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 5 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program