

Sherman Island Hydroelectric Development

Certification Application to the Low Impact Hydropower Institute

FERC Project No. 2482



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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 Sherman Island Development, license as part of the Hudson River Hydroelectric Project. The Sherman Island Development is located on the Hudson River in Saratoga and Warren Counties, New York. This facility is licensed with the Federal Energy Regulatory Commission (FERC) as the Hudson River Hydroelectric Project (FERC No. 2482) (Hudson River Project).

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PART I. FACILITY DESCRIPTION

The key features of the Sherman Island Development are described in Table 1.

Table I-1. Facility Description Information for the Sherman Island Development.

<i>Item</i>	<i>Information Requests</i>	<i>Response (and references to further details)</i>
Name of the Facility	Facility name (use FERC project name if possible)	Hudson River Project (FERC No. 2482) <i>Sherman Island Development</i>
Location	River name (USGS proper name)	Hudson River
	Watershed name	Hudson River Basin HUC-02020003
	Nearest town(s), county(ies), and state(s) to dam	Town of Moreau, Saratoga County, NY Town of Queensbury, Warren County, NY
	River mile of dam above next major river	209.4
	Geographic latitude of dam	43.277
	Geographic longitude of dam	-73.717
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 2482 New license issued September 25, 2002 The Hudson River Project Settlement Offer was dated March 27, 2000 and filed with FERC on April 12, 2000. License expires on August 31, 2042.
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	License for a Major Project
	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 February 5, 2002 (modified on September 29, 2006) and adopted into the FERC license. The NYSDEC DEC I.D. 5-9905-00048/00001.

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	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories	<p>September 25, 2002 Order Issuing License: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9567434</p> <p>March 27, 2000 Settlement Offer: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13624157</p> <p>The February 5, 2002 Water Quality Certificate: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8310660</p> <p>April 24, 2007 Order Amending License and Revising Annual Charges (including modified WQC): https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11317129</p> <p>The July 31, 2017 Environmental Inspection Report: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14665503</p>
Powerhouse	Date of initial operation (past or future for pre-operational applications)	The Sherman Island Development was constructed in 1923.
	Total installed capacity (MW)	39.46 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 167,813 MWh.
	Mode of operation (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.)	Erie currently operates the project in a pulsing mode as a reregulating project with seasonal fluctuations.
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	<p>Main Powerhouse Generating Units: 5</p> <p>Type: Vertical Francis</p> <p>Description: Five identical generating units a design capacity of 11,450 HP at design head of 66 feet and a speed of 150 rpm</p> <p>Maximum Capacity: 2,090 cfs (each) Minimum Capacity: 880 cfs (each)</p>

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		Min Flow Powerhouse Type: Flow Unit Description: One generating units with a design capacity of 1,675 HP at design head of 54.5 feet and a speed of 514 rpm Maximum Capacity: 314 cfs Minimum Capacity: 250 cfs
	Trashrack clear spacing (inches), for each trashrack	1.0 inch clear spacing
	Dates and types of major equipment upgrades	A minimum flow powerhouse was constructed in 2008 to provide the required base flow downstream of the Project.
	Dates, purpose, and type of any recent operational changes	There have been no regulatory facility upgrades.
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	A minimum flow powerhouse was constructed in 2008 to provide the required base flow downstream of the Project.
<i>Dam or Diversion</i>	Date of original construction and description and dates of subsequent dam or diversion structure modifications	1923 – original construction 1973 – Penstock No. 3 grouting repair 1986 - Substructure support slab rebuilt and step-up transformers replaced. 1992 – Dam rehabilitation program (slab replacement, canal buttress overlay, minimum flow unit intake construction) 1993 - Intake buttresses overlaid and new bridge deck constructed 1999 – Replacement of ice sluice 2005 - Penstock No.5 grouting repair
	Dam or diversion structure height including separately, the height of any flashboards, inflatable dams, etc.	Dam Height: 44 feet Flashboards: 3.7 feet (pneumatic and wooden) and 5.7 feet (pneumatic)
	Spillway elevation and hydraulic capacity	Spillway elevation: 347.6 ft – 349.6 ft (USGS Datum) Hydraulic capacity: 110,000 cfs at 360.35 feet (non-overflow section)
	Tailwater elevation (provide normal range if available)	284.1 to 282.1 (283.1 during spawning) when Feeder Dam flashboards are in place and 281.1 to 280.6 when the flashboards are out.

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	Length and type of all penstocks and water conveyance structures between the impoundment and powerhouse	Water is conveyed from the headwater pond through headgates and into the 3,100-foot-long power canal, then through a 340-foot-long to fifteen 177-foot-long penstocks of reinforced concrete to the units.
	Dates and types of major infrastructure changes	The major infrastructure improvements are as follows: 2008: Construction of minimum flow powerhouse. 2009: Installation of Unit 1 in the main powerhouse.
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	The purpose of the project is for power generation.
	Source water	Hudson River
	Receiving water and location of discharge	Hudson River at RM 209.4
Conduit	Date of conduit construction and primary purpose of conduit	Constructed in 1923 to convey water to the powerhouse.
Impoundment and Watershed	Authorized maximum and minimum water surface elevations	353.3 ft maximum; 351.3 ft minimum
	Normal operating elevations and normal fluctuation range	353.3 ft maximum; 351.3 ft minimum
	Gross storage volume and surface area at full pool	Gross volume: 9,150 acre-feet Surface area: 305 acres
	Usable storage volume and surface area	Usable Volume: 610 acre-feet Surface Area: 305 acres
	Describe requirements related to impoundment inflow, outflow, up/down ramping and refill rate restrictions.	The Sherman Island Development operates with a 1.0-foot impoundment fluctuation limit while river flows are within the operating range of the turbines. The impoundment fluctuation limit is reduced to 1-foot during the walleye spawning season (approximately mid- March through May or early June). Year-round minimum flows of 100 cfs and 150 cfs are to be provided to the North and South Channels, respectively, except during walleye spawning season. During walleye spawning

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		season the combined minimum flow for both channels increases to 675 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.	<p>Warren Curtis, Curtis Palmer Hydroelectric Company, P-2609, RM 218</p> <p>Palmer Falls, Curtis Palmer Hydroelectric Company, P-2609, RM 217</p> <p>Spier Falls Development, Erie Boulevard Hydropower, LLC, P-2482, RM 212</p> <p>* No upstream dams provide downstream fish passage.</p>
	Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage	<p>Feeder Dam, Erie Boulevard Hydropower, P-2554, RM 203</p> <p>Glens Falls Project/South Glens Falls Project, FH OPCO LLC/Boralex Operations, Inc., P-2385/P-5461, RM 201</p> <p>Hudson Falls, Boralex Operations, Inc. P-5276, RM 198</p> <p>Thompson Island, Albany Engineering Corporation , P-12741, RM 133</p> <p>Fort Miller, Fort Miller Associates, P-4226, RM 180</p> <p>Northumberland, Northumberland Hydro Partners L.P., P-4244, RM 175</p> <p>Stillwater, Stillwater Hydro Partners, P-4684, RM 165</p> <p>Upper Mechanicville, NYSEG, P-2934, RM 160</p> <p>Mechanicville, Albany Engineering Corporation, P-6032, RM 163</p> <p>Waterford, Albany Engineering Corporation, P-10648</p>

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		Green Island, Green Island Power Authority, P-13, RM 149 * No downstream dams provide upstream fish passage.
	Operating agreements with upstream or downstream facilities that affect water availability and facility operation	Great Sacandaga Lake (FERC P-12252) controls 1,055 square miles of the drainage area that contributes to the hydroelectric projects on the Hudson River, including the Sherman Island Development Discharges from the reservoir are regulated by the Hudson River Black River Regulating District (HRBRD).
	Area of land (acres) and area of water (acres) inside FERC project boundary or under facility control.	The FERC project boundary covers 620 acres (265 acres of land and 355 acres of water).
Hydrologic Setting	Average annual flow at the dam, and period of record used	The approximately average annual flow at the Sherman Island Development based on flow data through 2008 through 2019 at the USGS gage 01327750 Hudson River at Fort Edward, NY is 5,819 cfs.
	Average annual flow at the dam, and period of record used	The approximate average monthly flows at the Sherman Island Development based on flow data through 2008 through 2019 at the USGS gage 01327750 Hudson River at Fort Edward, NY are as follows: January – 6,189 cfs February – 5,125 cfs March – 6,213 cfs April – 10,477 cfs May – 7,430 cfs June – 5,887 cfs July – 4,330 cfs August – 3,463 cfs September – 3,069 cfs October – 4,538 cfs November – 6,471 cfs December – 6,657 cfs
	Location and name of closest stream gauging stations above and below the facility	Downstream: USGS Gage No. 01327750 Hudson River at Fort Edward, NY (located downstream of the Hudson Falls Hydroelectric Project), RM 196

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		Upstream: USGS Gage No 01318500 Hudson River at Hadley, NY (located immediately upstream of the Sacandaga River confluence with the Hudson River), RM 224
	Watershed area at the dam (in square miles). Identify if this value is prorated and provide the basis for proration.	2,785 square miles Daily mean flow data for the Sherman Island Development was estimated by a linear proration of data from USGS Gage No. 01327750 Hudson River at Fort Edward, NY. ¹
Designated Zones of Effect	Number of zones of effect	There are three zones of effect at the Sherman Island Development (See Appendix A).
	Upstream and downstream locations by river miles	Zone 1: 209.4 to 212.9 Zone 2: 208.6 to 209.4 Zone 3: 208.5 to 208.6
	Type of waterbody (river, impoundment, by-passed reach, etc.)	Zone 1: Impoundment Zone 2: Bypassed Reach Zone 3: Downstream
	Delimiting structures or features	Zone 1: From the head of the impoundment, downstream approximately 3.5 miles to the dam and rackhouse. Zone 2: From the spillway to the confluence with the tailrace. Zone 3: From the spillway, downstream approximately 0.1 miles to Feeder Dam Hydroelectric Project impoundment.
	Designated uses by state water quality agency	The NYSDEC has classified the portion of the Hudson River upstream of the Sherman Island Dam and Canal Headgate Structure as Class A water. The portion of the Hudson River downstream of the Sherman Dam as Class B waters.

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.

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		Link to NYSDEC Classification Codes: <u>https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I06849fe0b5a111dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)</u>
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PART II. STANDARD MATRICES

The Sherman Island Development has a total of four zones of effect that are defined as: (1) Zone one, which extends from the head of the Sherman Island impoundment at Spier Falls Development tailrace, downstream approximately 3.5 miles to the Sherman Island spillway and rackhouse, (2) Zone two, which extends from the Sherman Island spillway, downstream approximately 0.8 miles to the confluence with the Sherman Island tailrace, and (3) Zone three, which extends from the tailrace, downstream approximately 0.1 miles to the Feeder Dam Hydroelectric Project impoundment.

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
for the Sherman Island Development**

Criterion		Alternative Standards				
		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				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
for the Sherman Island Development**

Criterion		Alternative Standards				
		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				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
for the Sherman Island Development**

Criterion		<i>Alternative Standards</i>				
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Plus</i>
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				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).

SHERMAN ISLAND DEVELOPMENT

Information Required to Support Ecological Flows Standards.

III.A.1 Ecological Flows: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
A	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none">• 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 Sherman Island Development is the impoundment. As required by the Settlement Offer and License Article 403, the Sherman Island Development operates with a one foot daily impoundment fluctuation limit during walleye spawning (about March 15) until June 15 of each year. During the remainder of the year, daily impoundment fluctuations are to be limited to two feet.

License Article 403 also required Erie to install pneumatic flashboards on the straight section of the spillway near the non-overflow section of the Sherman Island Dam to facilitate pond level control to allow the 10-year flood to pass the dam without failing the remaining wooden flashboard sections.

Order Approving As-Built Exhibits (for flashboard system):

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10941856>

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Environmental Impact Statement:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8315170>

Great Sacandaga Lake (FERC P-12252) controls 1,055 square miles of the drainage area that contributes to the hydroelectric projects on the Hudson River, including the Sherman Island Development. Discharges from the reservoir are regulated by the Hudson River Black River Regulating District (HRBRD). The HRBRD allocated sufficient daily water volume releases from the Great Sacandaga Lake to meet minimum average daily flow requirements on the Hudson River. Typically, the reservoir is lowered in the fall and filled in the spring.

The Sherman Island Development is in compliance with resource agency conditions issued regarding flow conditions. The FERC license, Settlement Offer, and Section 401 Water Quality Certificate (WQC) include the requirements for flow releases and water level control recommended by the NYSDEC and United States Fish and Wildlife Service (USFWS).

Article 401 of the license requires a Stream Flow and Water Level Monitoring Plan (SFWLMP), be developed to ensure compliance with impoundment fluctuations and minimum flows. The licensee filed a SFWLMP on July 14, 2003, which was approved by the Commission on July 13, 2004. The licensee modified the Plan to include new information on staff gages, stream flow monitoring, and the feasibility of Internet-type posting of elevation and flow records. The Final SFWLMP was filed with FERC on May 2, 2005. On July 12, 2005 FERC issued an Order Modifying and Approving SFWLMP pursuant to Article 401 of the FERC license. As part of the SFWLMP, the licensee is required to monitor headpond elevations. The licensee installed and maintains hydro-acoustic sensors to monitor the impoundment.

On June 18, 2010, the licensee filed a revised SFWLMP to incorporate the manner in which the minimum flow released would be provided. The minimum flow is provided by a combination of 250 cfs discharge from the unit and approximately 65 cfs spill from pneumatic flashboards on the dam to meet the minimum flow requirement in the bypassed reach.

License Article 401 Compliance Stream Flow and Water Level Monitoring Plan:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10629173>

July 12, 2005 Order modifying and approving Streamflow and Water Level Monitoring Plan

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10661561>

Order approving revised Streamflow and Water Level Monitoring Plan

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12506086>

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.

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III.A.2 Ecological Flows: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
A	2	<p><u>Agency Recommendation (see Appendix A for definitions):</u></p> <ul style="list-style-type: none">• 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 Sherman Island Development is the bypassed reach. The Sherman Island Development is in compliance with resource agency conditions issued regarding base flow conditions. The FERC license, Settlement Offer, and Section 401 WQC include the requirements for flow releases and water level control recommended by the NYSDEC and USFWS.

License Article 405 and the Settlement Offer require Erie to maintain a minimum flow of 100 cfs in the North Channel and 150 in the South Channel of the Sherman Island Development. The year round minimum flows in the North and South Channels are increased during walleye spawning season so that the combined flows discharged into the North and South Channels are no less than 675 cfs. The bypass and tailrace of the Sherman Island Development have been identified as locally important walleye spawning area. The Environmental Impact Statement (EIS) for the Project states that the minimum flows are consistent with those recommended by USFWS to achieve agency goals of enhancing habitat conditions for walleye spawning, smallmouth bass, and other forage species. Additionally, as discussed in the EIS, as part of the last relicensing the Licensee performed a habitat enhancement study using Instream Flow Incremental Methodology (IFIM). IFIM results indicated these minimum flows provided large gains in habitat for forage species, and sufficient habitat gain for game species, smallmouth bass, and walleye. The IFIM study indicated overall that the flow releases enhanced habitat in the bypass reach and reduced the possibility of walleye egg stranding.

Environmental Impact Statement:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8315170>

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Article 401 of the license requires a SFWLMP be developed to ensure compliance with impoundment fluctuations and minimum flows. The licensee filed a SFWLMP on July 14, 2003, which was approved by the Commission on July 13, 2004. The licensee modified the Plan to include new information on staff gages, stream flow monitoring, and the feasibility of Internet-type posting of elevation and flow records. The Final SFWLMP was filed with FERC on May 2, 2005. On July 12, 2005 FERC issued an Order Modifying and Approving SFWLMP pursuant to Article 401 of the FERC license. As part of the SFWLMP, the licensee is required to monitor headpond elevations. The licensee installed and maintains hydro-acoustic sensors to monitor the impoundment.

On June 18, 2010, the licensee filed a revised SFWLMP to incorporate the manner in which the minimum flow released would be provided. The minimum flow is provided by a combination of 250 cfs discharge from the unit and approximately 65 cfs spill from pneumatic flashboards on the dam to meet the minimum flow requirement in the bypassed reach.

License Article 401 Compliance Stream Flow and Water Level Monitoring Plan:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10629173>

July 12, 2005 Order modifying and approving Streamflow and Water Level Monitoring Plan:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10661561>

Order approving revised Streamflow and Water Level Monitoring Plan:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12506086>

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: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
A	2	<p><u>Agency Recommendation (see Appendix A for definitions):</u></p> <ul style="list-style-type: none">• 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

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<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
		instream flow variations).

See response above for Zone 2.

Information Required to Support Water Quality Standards.

III.B.1 Water Quality: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
B	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none">• 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 portion of the Hudson River from Sherman Island Dam to Spier Falls is listed as an impaired in the November 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy for mercury contaminated sediments. Listing is here: <http://www.dec.ny.gov/chemical/31290.html>. The cause of this impairment is not related to the Sherman Island Development. 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 portion of the Hudson River upstream of the Sherman Island Dam and Canal Headgate Structure as Class A water. The portion of the Hudson River downstream of the Sherman Dam as Class B waters. The best usage for Class A waters is drinking water. The best usage of Class B waters is primary and secondary contact recreation and fishing, and they are also suitable for fish propagation and survival.

The Sherman Island Development 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 Offer. The WQC for the Project was issued February 5, 2002 (<https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=8306864>). On-going water quality monitoring at the Project is not required as part of the WQC or FERC license.

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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 Sherman Island Development WQC, and the original WQC, issued on February 5, 2002 (modified September 29, 2006) is still in effect.

Additionally, the Applicant contacted the NYSDEC on February 12, 2020, regarding the current WQC status for the Project. The NYSDEC responded on March 13, 2020 stating that the existing WQC is valid for the duration of the FERC license. The consultation documentation regarding the 401 WQC is included in Appendix D.

III.B.2 Water Quality: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
B	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• 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 portion of the Hudson River from Sherman Island Dam to Glens Falls Dam is listed as an impaired in the November 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy for PCB contaminated sediments. Listing is here: <http://www.dec.ny.gov/chemical/31290.html>. The cause of this impairment is not related to the Sherman Island Development. 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 portion of the Hudson River downstream of the Sherman Island Dam as Class B waters. The best usage of Class B waters is primary and secondary contact recreation and fishing, and they are also suitable for fish propagation and survival.

The Sherman Island Development 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 Offer. The WQC for the Project was issued February 5, 2002

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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 Hudson River Project WQC, and the original WQC, issued on February 5, 2002 (modified September 29, 2006) is still in effect.

Additionally, the Applicant contacted the NYSDEC on February 12, 2020, regarding the current WQC status for the Project. The NYSDEC responded on March 13, 2020 stating that the existing WQC is valid for the duration of the FERC license. The consultation documentation regarding the 401 WQC is included in Appendix D.

III.B.3 Water Quality: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
B	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none">• 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 above response for Zone 2.

Information Required to Support Upstream Fish Passage Standards.

III.C.1 Upstream Fish Passage: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
C	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none">• 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.

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		<ul style="list-style-type: none">• 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.
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There are no upstream fish passage barriers or migratory fish management issues in Zone 1 because it is an impoundment. There are no mandatory prescriptions (section 18 or similar) for the passage of riverine fish at the Development. In the Settlement Offer, the Department of the Interior (Interior) did request reservation of its authority to prescribe upstream and downstream fish passage devices in the future, which is provided in Article 408 of the 2002 FERC license.

According to background information included in Appendix A of the Settlement Offer, the Hudson River in the Sherman Island Development supports a naturally reproducing coolwater/warmwater fishery. Common game species include northern pike, brown trout, walleye, yellow perch, smallmouth bass, largemouth bass and rock bass. The project waters also support a number of forage fish and rough fish. There are no anadromous fish known in the project waters. American eel, a catadromous species, is present in the Hudson River.

According to the EIS, fisheries surveys conducted in 1984 in the Sherman Island impoundment resulted in the collection of nine species, dominated by smallmouth bass, rock bass, yellow perch, pumpkinseed, white sucker, bullhead, and walleye. Another survey conducted in 1989 found 14 species, with collections dominated by bluntnose minnow and pumpkinseed. Walleye spawning surveys at the headwater of the Sherman Island impoundment (at the base of the Spier Falls dam and tailrace) found that during the pre-spawning period, walleye aggregated below the Taintor gates, but fish moved into the tailrace once spills ended. Walleye appeared to spawn along the shoreline washed by the station discharge. A total of 149 walleye were captured or seen in the survey, suggesting that the spawning population was not large.

III.C.2 Upstream Fish Passage: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
C	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• 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.

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There are no mandatory prescriptions (section 18 or similar) for the passage of riverine fish at the Development. In the Settlement Offer, the Department of the Interior (Interior) did request reservation of its authority to prescribe upstream and downstream fish passage devices in the future, which is provided in Article 408 of the 2002 FERC license.

According to EIS, fisheries surveys conducted in 1984 in the Sherman Island bypassed reach resulted in the collection of 13 species, dominated by rock bass, smallmouth bass, yellow perch, longnose dace, pumpkinseed, and walleye. Spawning surveys documented that the bypassed reach was also used for spawning by walleye from the Feeder Dam impoundment. Other species that were observed in the bypassed reach during the walleye spawning surveys included numerous small smallmouth bass, two large (18 to 20 inch) rainbow trout, and two brown trout.

License Article 405 and the Settlement Offer require Erie to maintain a minimum flow will be of 100 cfs in the North Channel and 150 in the South Channel of the Sherman Island Development. The year round minimum flows in the North and South Channels are increased during walleye spawning season so that the combined flows discharged into the North and South Channels are no less than 675 cfs. According to Appendix A of the Settlement Offer, the provision of flows in the Sherman Island bypass are intended to benefit aquatic life and to facilitate walleye spawning in the spring.

Section 8 of the Settlement Offer requires Erie to contribute to the Fisheries Enhancement Fund. Erie contributes \$5,000 annually (or escalated at the rate of inflation) to the Fisheries Enhancement Fund, which may be used for any fishery related projects throughout New York State.

Annual Report of Fisheries Enhancement Fund:

<https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=15192462>

III.C.3 Upstream Fish Passage: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
C	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• 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.

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There are no mandatory prescriptions (section 18 or similar) for the passage of riverine fish at the Development. In the Settlement Offer, the Department of the Interior (Interior) did request reservation of its authority to prescribe upstream and downstream fish passage devices in the future, which is provided in Article 408 of the 2002 FERC license.

According to the EIS, fisheries surveys conducted in 1984 in the Feeder Dam impoundment resulted in the collection of 9 species, with collections dominated by smallmouth bass, yellow perch, pumpkinseed, rock bass, chain pickerel, and black bullhead. Another survey conducted in 1989 found 15 species, with collections dominated by fallfish, banded killifish, unidentified sunfish, yellow perch, smallmouth bass, and tessellated darters. No anadromous fish species are known to occur at the Development. Two American eel were sampled in the Feeder Dam impoundment in 1984.

Walleye spawning surveys conducted in 1989 at the headwater of the Feeder Dam impoundment (Sherman Island bypassed reach and tailrace) found that most spawning occurred in the Sherman Island tailrace, followed by the lower and upper ends of the Sherman Island bypassed reach. A total of 144 walleye were captured or seen in the survey, suggesting that the spawning population was not large.

Section 8 of the Settlement Offer requires Erie to contribute to the Fisheries Enhancement Fund. Erie contributes \$5,000 annually (or escalated at the rate of inflation) to the Fisheries Enhancement Fund, which may be used for any fishery related projects throughout New York State.

Annual Report of Fisheries Enhancement Fund:

<https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=15192462>

Information Required to Support Downstream Fish Passage Standards.

III.D.1 Downstream Fish Passage: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
D	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• 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.

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The Interior requested reservation of its authority to prescribe upstream and downstream fish passage devices in the future, which was granted in Article 408 of the license. Article 404 and the Settlement Offer require Erie to provide 25 cfs through modifications to the existing ice sluice located adjacent to the powerhouse as a route for downstream movements. In addition, Erie is required to maintain full trash racks overlays with maximum clear spacing of one inch to protect again fish entrainment.

According to background information included in Appendix A of the Settlement Offer, the Hudson River in the Sherman Island Development supports a naturally reproducing coolwater/warmwater fishery. Common game species include northern pike, brown trout, walleye, yellow perch, smallmouth bass, largemouth bass and rock bass. The project waters also support a number of forage fish and rough fish. There are no anadromous fish known in the project waters. American eel, a catadromous species, is present in the Hudson River.

According to the EIS, fisheries surveys conducted in 1984 in the Sherman Island impoundment resulted in the collection of nine species, dominated by smallmouth bass, rock bass, yellow perch, pumpkinseed, white sucker, bullhead, and walleye. Another survey conducted in 1989 found 14 species, with collections dominated by bluntnose minnow and pumpkinseed. Walleye spawning surveys at the headwater of the Sherman Island impoundment (at the base of the Spier Falls dam and tailrace) found that during the pre-spawning period, walleye aggregated below the Taintor gates, but fish moved into the tailrace once spills ended. Walleye appeared to spawn along the shoreline washed by the station discharge. A total of 149 walleye were captured or seen in the survey, suggesting that the spawning population was not large.

Settlement Offer:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13624157>

Environmental Impact Statement:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8315170>

As referenced in the EIS, an entrainment study conducted in 1994 resulted in a catch of 1,799 fish of 30 species, which was extrapolated into an annual estimate of 24,862 fish being entrained. The extrapolated data indicated that the most common entrained taxa were *Notropis* sp. (8,077), rock bass (6,151), pumpkinseed (1,940), rainbow smelt (1,662), yellow perch (1,191) and smallmouth bass (1,091). The total estimated annual turbine mortality was 5,494 fish. The estimated annual turbine mortality for commonly entrained taxa was: rock bass, 2,048 fish; *Notropis* sp., 1,453 fish; pumpkinseed, 351 fish; smallmouth bass, 262 fish; yellow perch, 214 fish, and rainbow smelt, 161 fish. Mortality rates for most species and size classes ranged from 6 to 38 percent.

To facilitate the downstream passage of fish, Article 404 of the 2002 License required the licensee to install full trash racks overlays with maximum clear spacing of one inch in 2006. To afford a route of downstream movement for fish, the licensee discharges a continuous flow of 25 cfs

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through modifications to the existing ice sluice, beginning at the time the trash rack overlays were installed in 2006. On September 7, 2006 FERC issued an Order Approving Fish Protection Measures for the Sherman Island Development to completed installation of full trash rack overlays with a maximum clear spacing of 1-inch and sluiceway modifications to discharge a continuous flow of 25 cfs for the downstream movement of fish. There are no agency provisions for downstream fish passage monitoring.

Order Approving Fish Protection Measures:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11128005>

Section 8 of the Settlement Offer requires Erie to contribute to the Fisheries Enhancement Fund. Erie contributes \$5,000 annually (or escalated at the rate of inflation) to the Fisheries Enhancement Fund, which may be used for any fishery related projects throughout New York State.

Annual Report of Fisheries Enhancement Fund:

<https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=15192462>

III.D.2 Downstream Fish Passage: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
D	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none">• 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 2. There are no mandatory prescriptions (section 18 or similar) for the passage of riverine fish at the Project. In the Settlement Offer, the Interior did request reservation of its authority to prescribe

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upstream and downstream fish passage devices in the future, which is provided in Article 408 of the 2002 FERC license.

According to the EIS, fisheries surveys conducted in 1984 in the Sherman Island bypassed reach resulted in the collection of 13 species, with collections dominated by rock bass, smallmouth bass, yellow perch, pumpkinseed, longnose dace, and walleye. No anadromous fish species are known to occur in Zone 2.

Walleye spawning surveys conducted in 1989 at the headwater of the Feeder Dam impoundment (Sherman Island bypassed reach and tailrace) found that most spawning occurred in the Sherman Island tailrace, followed by the lower and upper ends of the Sherman Island bypassed reach. A total of 144 walleye were captured or seen in the survey, suggesting that the spawning population was not large.

III.D.3 Downstream Fish Passage: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
D	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none">• 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. There are no mandatory prescriptions (section 18 or similar) for the passage of riverine fish at the Project. In the Settlement Offer, the Interior did request reservation of its authority to prescribe upstream and downstream fish passage devices in the future, which is provided in Article 408 of the 2002 FERC license.

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According to the EIS, fisheries surveys conducted in 1984 in Feeder Dam impoundment (Sherman Island tailrace) resulted in the collection of 9 species, with collections dominated by smallmouth bass, yellow perch, pumpkinseed, rock bass, chain pickerel, and black bullhead.

Walleye spawning surveys conducted in 1989 at the headwater of the Feeder Dam impoundment (Sherman Island bypassed reach and tailrace) found that most spawning occurred in the Sherman Island tailrace, followed by the lower and upper ends of the Sherman Island bypassed reach. A total of 144 walleye were captured or seen in the survey, suggesting that the spawning population was not large.

Information Required to Support Shoreline and Watershed Protection Standards.

III.E.1 Shoreline and Watershed Protection: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
E	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none">• 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.
E	PLUS	<u>Bonus Activities:</u> <ul style="list-style-type: none">• Provide documentation that the facility has a formal conservation plan protecting a buffer zone of 50% or more of the undeveloped shoreline that the facility owns around its reservoirs and river corridors.• In lieu of a formal conservation plan, provide documentation that the facility has established a watershed enhancement fund for ecological land management that will achieve the equivalent land protection value of an ecologically effective buffer zone of 50% or more around undeveloped shoreline.

The Sherman Island Development is located in the towns of Moreau and Queensbury, outside of the Adirondack State Park (ASP) boundary, and as such is not subject to ASP special land uses. Land uses in the vicinity include municipal water treatment, industrial, and residential, but the area is largely forested and undeveloped. This area is characterized as a transition zone from the ASP to the Hudson lowlands, thus is habitat for the same species but with a greater prevalence of pine species. The Sherman Island impoundment and tailrace shorelines are steep, forested, and undeveloped. In addition, the EIS concluded that the limited impoundment fluctuation levels required by the license reduce shoreline erosion and subsequent sedimentation and encourage the development of stabilizing vegetation. There is no Shoreline Management Plan for this development.

Environmental Impact Statement:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8315170>

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Section 8 of the Settlement Offer requires Erie to contribute \$10,000 annually (escalated at the rate of inflation) to the Hudson/Sacandaga River Enhancement Fund. The Sacandaga/Hudson River Enhancement Fund may be used within the Hudson River as defined from the confluence of the Sacandaga River downstream to Feeder Dam for ecosystem restoration, fish stocking, stewardship, or recreational resources. As reporting in the 2015 Enhancement Fund Report, the Sacandaga/Hudson River Enhancement Fund manager requested advance funding for years 2015 through 2020 to match a grant received through First Wilderness Heritage Trail.

2015 Annual Report of the Sacandaga/Hudson River Enhancement Fund:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13822513>

Settlement Offer:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13624157>

Article 410 of the Sherman Island (Hudson River Hydroelectric Project) license requires the licensee to file an annual report with FERC of contributions to the Sacandaga/Hudson River Enhancement Fund.

Annual Report of the Sacandaga/Hudson River Enhancement Fund:

<https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=15192462>

III.E.2 Shoreline and Watershed Protection: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
E	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none">• 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.
E	PLUS	<u>Bonus Activities:</u> <ul style="list-style-type: none">• Provide documentation that the facility has a formal conservation plan protecting a buffer zone of 50% or more of the undeveloped shoreline that the facility owns around its reservoirs and river corridors.• In lieu of a formal conservation plan, provide documentation that the facility has established a watershed enhancement fund for ecological land management that will achieve the equivalent land protection value of an ecologically effective buffer zone of 50% or more around undeveloped shoreline.

See response above for Zone 1.

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III.E.3 Shoreline and Watershed Protection: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
E	1	<u>Not Applicable / De Minimis Effect:</u> <ul style="list-style-type: none">• 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.
E	PLUS	<u>Bonus Activities:</u> <ul style="list-style-type: none">• Provide documentation that the facility has a formal conservation plan protecting a buffer zone of 50% or more of the undeveloped shoreline that the facility owns around its reservoirs and river corridors.• In lieu of a formal conservation plan, provide documentation that the facility has established a watershed enhancement fund for ecological land management that will achieve the equivalent land protection value of an ecologically effective buffer zone of 50% or more around undeveloped shoreline.

See response above for Zone 1.

Information Required to Support Threatened and Endangered Species Standards.

III.F.1 Threatened and Endangered Species: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
F	3	<u>Recovery Planning and Action:</u> <ul style="list-style-type: none">• 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 February 12, 2020, regarding a request for information on rare, threatened or endangered (RTE) species it appears that the Indiana Bat (*Myotis sodalist*) and Karner blue butterfly (*Lycæides melissa samuelis*) may potentially occur within the Project area. There are no critical habitats located within the Sherman Island Development area.

During preparation of this application, Erie also consulted with NYSDEC's Natural Heritage Program for an updated list of threatened and endangered species that may occur in the vicinity of the Sherman Island. By letter dated March 1, 2020, the NYSDEC indicated that the Extra-striped Snaketail (*Ophiogomphus anomalus*) and Pygmy Snaketail (*Ophiogomphus howei*), which are

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state-listed as species of special concern, have been documented at the southern end of the project site in the Town of Moreau.

The USFWS has adopted the following recovery plan for the Indiana bat that may be present in the vicinity of the Sherman Island Development:

U.S. Fish and Wildlife Service. 2007. Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 258 pp.

Recovery actions identified in USFWS's Indiana Bat Draft Recovery Plan include hibernacula related recovery actions and summer habitat management. No Indiana bat hibernacula, which typically include caves and mines, are known to exist in the immediate vicinity of the Sherman Island Development. Transient individuals, presumably in association with summer habitat, may however exist in the Project area. Operations of the Sherman Island are consistent with this draft recovery plan.

The USFWS has adopted the following recovery plan for the Karner blue butterfly that may be present in the vicinity of the Sherman Island Development:

U.S. Fish and Wildlife Service. 2003. Final Recovery Plan for the Karner Blue Butterfly (*Lycaeides melissa samuelis*). U.S. Fish and Wildlife Service, Fort Snelling, Minnesota. 273 pp.

Recovery actions identified in USFWS's Karner blue butterfly Recovery Plan include identification and monitoring of viable metapopulation. The Karner blue butterfly is known to be dependent on blue lupine (*Lupinus perennis*), its only known larval food plant. As required by Article 407, in 2003 the licensee conducted surveys for the presence of the endangered Karner blue butterfly (*Lycaeides melissa samuelis*) and blue lupine (*Lupinus perennis*). Blue lupine and Karner blue butterfly were not observed in the Project area.

Final Karner Blue Butterfly/Blue Lupine Survey Results

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10076058>

The NYSDEC has not adopted a formal recovery plan for the Extra-striped Snaketail or Pygmy Snaketail

There are no specific additional requirements for threatened or endangered species protection in the FERC license or WQC for the Sherman Island Development.

The record of RTE consultation is included in Appendix E.

III.F.2 Threatened and Endangered Species: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
F	3	<u>Recovery Planning and Action:</u>

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		<ul style="list-style-type: none">• 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.
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See response above for Zone 1.

III.F.3 Threatened and Endangered Species: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
F	3	<u>Recovery Planning and Action:</u> <ul style="list-style-type: none">• 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: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
G	2	<u>Approved Plan:</u> <ul style="list-style-type: none">• 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.

According to the 2007 Environmental Assessment, no archeological resources in the vicinity of the Hudson River Project have been formally recorded in the files of the SHPO. The Saratoga County Planning Board identified two “sites of historical note” in the vicinity: 1) the site of a former bridge across the Hudson River near Folts Road built ca. 1840 by the Clothier family; and 2) a Native American samp mortar (a rock outcropping used to grind corn). In a letter dated September 16, 1985, the SHPO did note that the vicinity of the Hudson River Project was “archeologically sensitive.” The letter provided no further information concerning this sensitivity assessment or the need to conduct archeological studies.

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Environmental Assessment (included in April 24, 2007 Order Amending License and Revising Annual Charges):

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11317129>

FERC Approved the Cultural Resources Management Plan (CRMP) on June 3, 2005. The licensee implements its Programmatic Agreement and CRMP to mitigate the effects of operations within the project's area of potential effect (APE), pursuant to license Article 409.

The licensee files an annual monitoring report on activities undertaken that may be subject to the CRMP. The annual historic properties monitoring report for 2019 was filed on September 20, 2019. The licensee appears to be in compliance with its requirements with regard to cultural resources.

Programmatic Agreement:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=8231177>

Order Approving CRMP:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10595712>

September 20, 2019 Annual HPMP Report

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15359889>

III.G.2 Cultural and Historic Resources: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
G	2	<u>Approved Plan:</u> <ul style="list-style-type: none">• 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 above response for Zone 1.

III.G.3 Cultural and Historic Resources: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
G	2	<u>Approved Plan:</u> <ul style="list-style-type: none">• 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 above response for Zone 1.

Sherman Island Development Certification Application

Information Required to Support Recreational Resources Standards.

III.H.1 Recreational Resources: Sherman Island Development Zone 1

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
H	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none">• 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.

Article 406 requires the licensee to permit public access across project lands to the shoreline of the Sherman Island Development and to file a plan and schedule for constructing recreational enhancements within six months from date of issuance of the license. Recreation enhancements included modifications to the Sherman Island boat launch, construction of a canoe portage around the Sherman Island dam, construction of two water access-only campsites on the Sherman Island impoundment, and construction of angler access to the Sherman Island bypassed reach. On November 18, 2003 FERC issued an Order Approving the Recreation Plan, which was submitted to FERC on May 1, 2003. The Sherman Island Development is in compliance with recreational access, accommodation, and facilities' conditions in the FERC license.

Sherman Island Recreation Plan:

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10468136>

Order Approving the Recreation Plan

<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9992439>

Erie permits free public access to the shoreline of the Sherman Island Development across Erie's lands where Project facilities, hazardous areas and existing leases, easements, and private ownership do not preclude access.

III.H.2 Recreational Resources: Sherman Island Development Zone 2

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
H	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none">• 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.

Sherman Island Development Certification Application

III.H.3 Recreational Resources: Sherman Island Development Zone 3

<i>Criterion</i>	<i>Standard</i>	<i>Instructions</i>
H	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none">• 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: _____



Digitally signed by Daniel J. Maguire
Date: 2020.06.09 15:59:33 -04'00'

Date: _____

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	399 Big Bay Road, Queensbury, NY 12804
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

Sherman Island Development Certification Application

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 <u> X </u> , Water Quality <u> X </u> , Fish/Wildlife Resources <u> X </u> , Watersheds <u> </u> , T/E Spp. <u> </u> , Cultural/Historic Resources <u> </u> , Recreation <u> X </u>):	
Agency Name	New York State Department of Environmental Conservation
Name and Title	Beth Magee, Environmental Analyst
Phone	518-623-1281
Email address	dep.r5@dec.ny.gov
Mailing Address	232 Golf Course Road, Warrensburg, NY 12885

Agency Contact (Check area of responsibility: Flows <u> </u> , Water Quality <u> </u> , Fish/Wildlife Resources <u> </u> , Watersheds <u> </u> , T/E Spp. <u> X </u> , Cultural/Historic Resources <u> </u> , Recreation <u> </u>):	
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

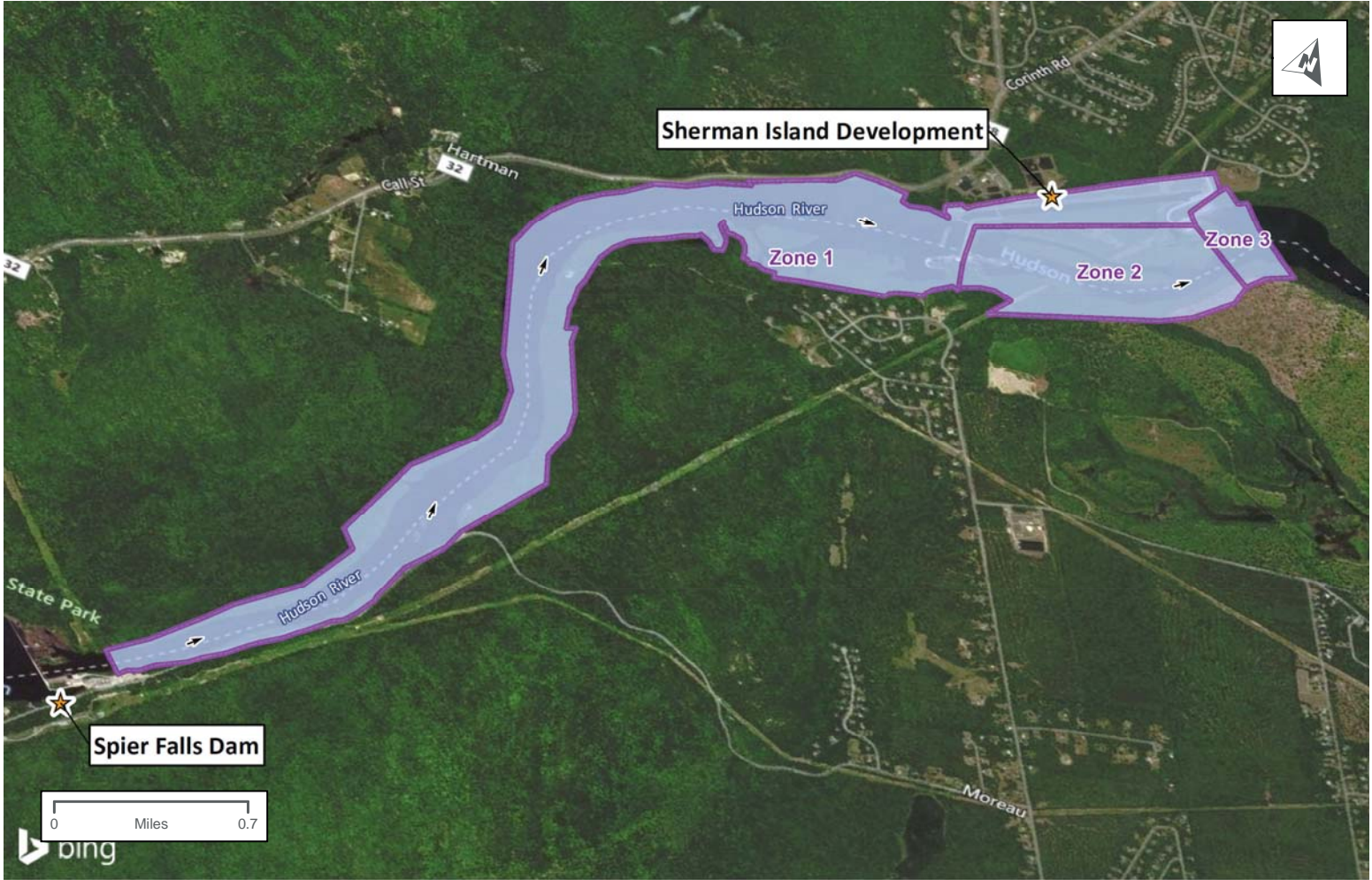
Agency Contact (Check area of responsibility: Flows <u> </u> , Water Quality <u> </u> , Fish/Wildlife Resources <u> </u> , Watersheds <u> </u> , T/E Spp. <u> X </u> , Cultural/Historic Resources <u> </u> , Recreation <u> </u>):	
Agency Name	U.S. Fish and Wildlife Service
Name and Title	Robyn Niver, Endangered 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 <u> X </u> , Water Quality <u> X </u> , Fish/Wildlife Resources <u> X </u> , Watersheds <u> </u> , T/E Spp. <u> X </u> , Cultural/Historic Resources <u> </u> , Recreation <u> </u>):	
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 <u> </u> , Water Quality <u> </u> , Fish/Wildlife Resources <u> </u> , Watersheds <u> </u> , T/E Spp. <u> </u> , Cultural/Historic Resources <u> X </u> , Recreation <u> </u>):	
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

SHERMAN ISLAND DEVELOPMENT ZONES OF EFFECT



↑ Flow Direction  Zones of Effect

ZONES OF EFFECT
SHERMAN ISLAND DEVELOPMENT

APPENDIX B
PHOTOS OF KEY PROJECT FEATURES

APPENDIX B – PHOTOGRAPHS OF KEY PROJECT FEATURES



Spillway



Bypass Reach and Minimum Flow Powerhouse



Sherman Island Boat Launch



Canal Headgate Structure



Power Canal and Intake Gate Structure



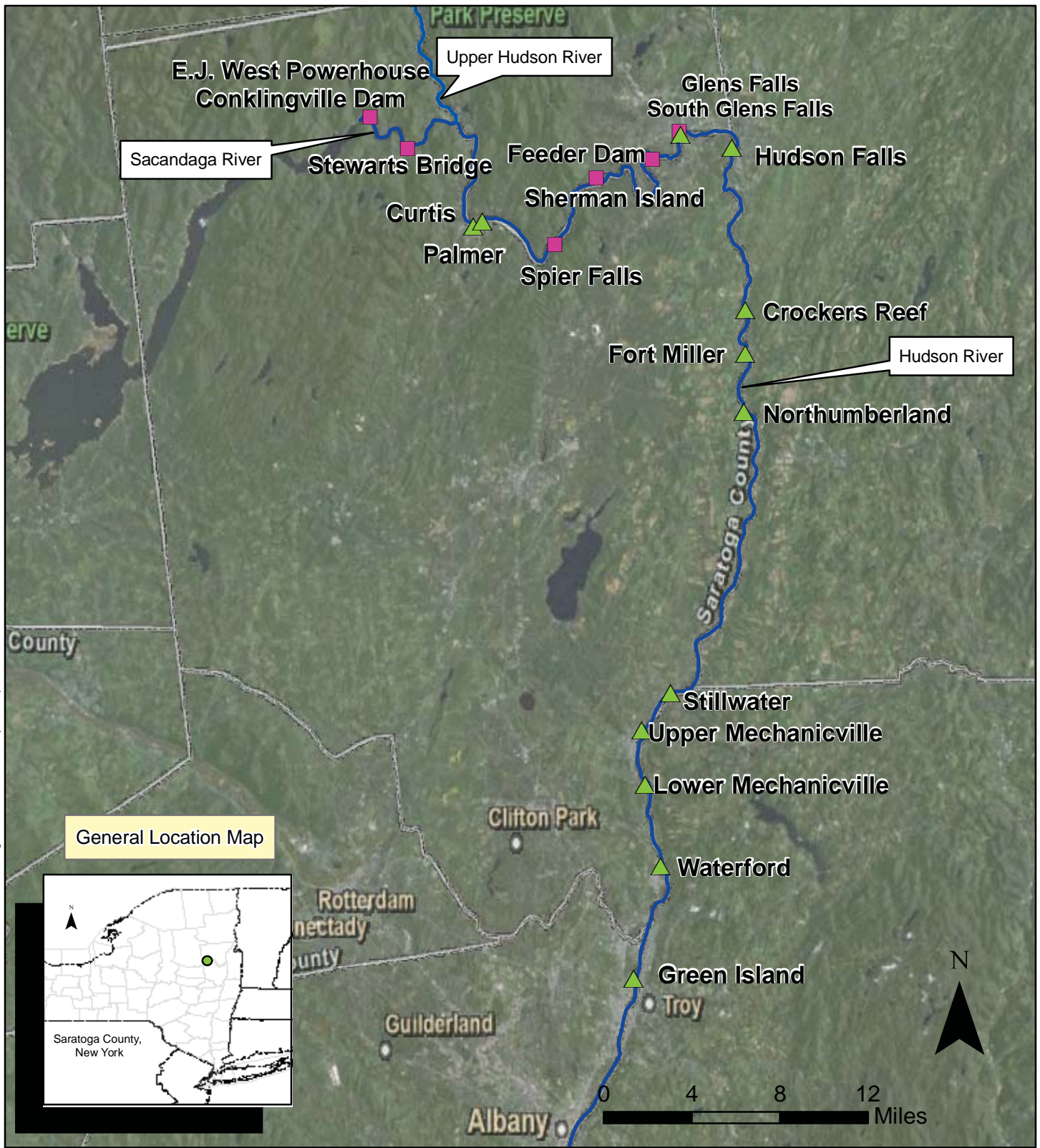
Unit 1



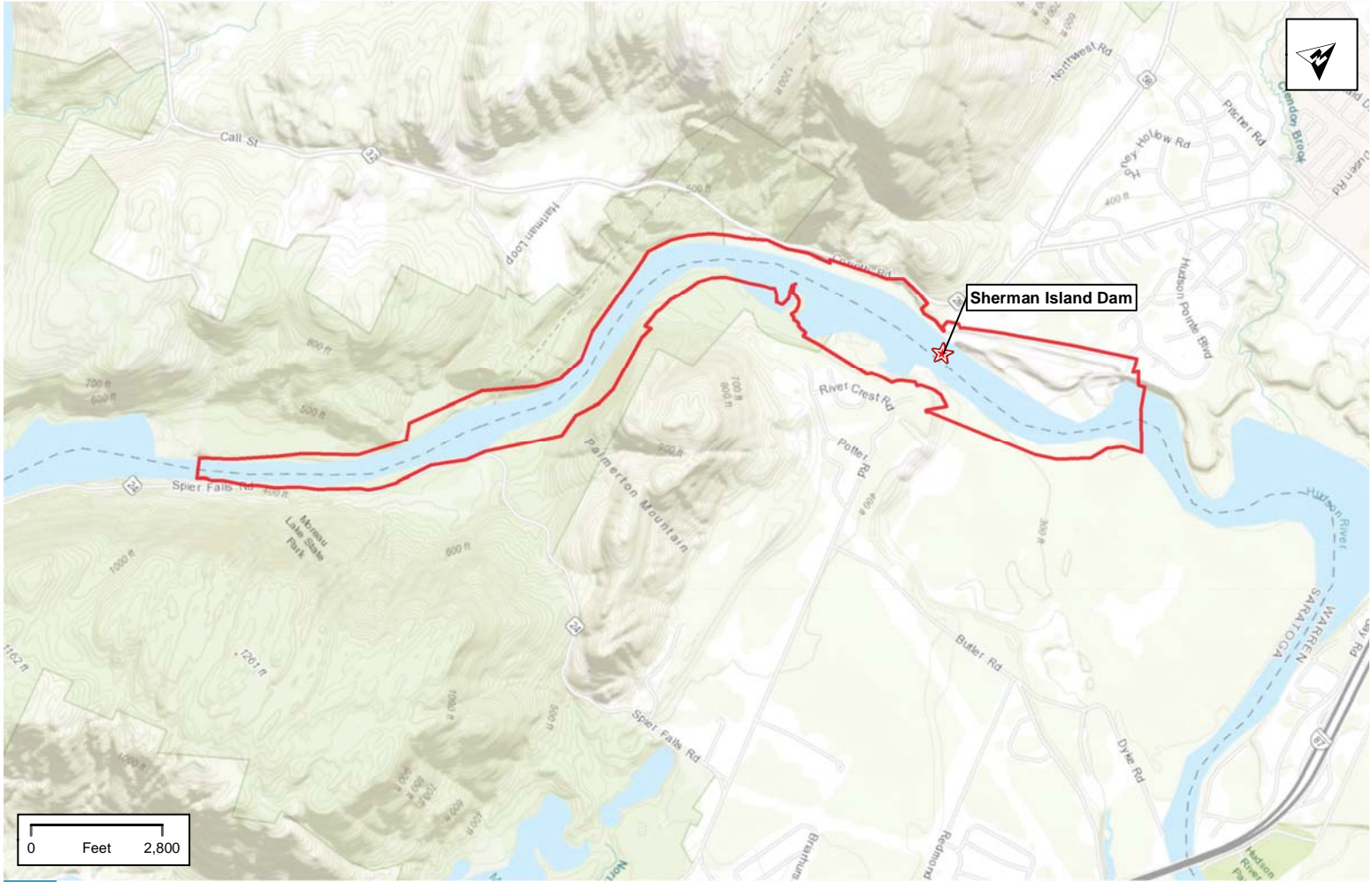
Example photograph of Units 2-5

APPENDIX C
PROJECT MAPS AND AERIALS

P:\Brookfield\NY\074.0174_EJ_West_Stewarts_Bridge_IGIS\MXD\ProjectMap_111209kab.mxd
 Thursday, January 20, 2011 2:28:05 PM

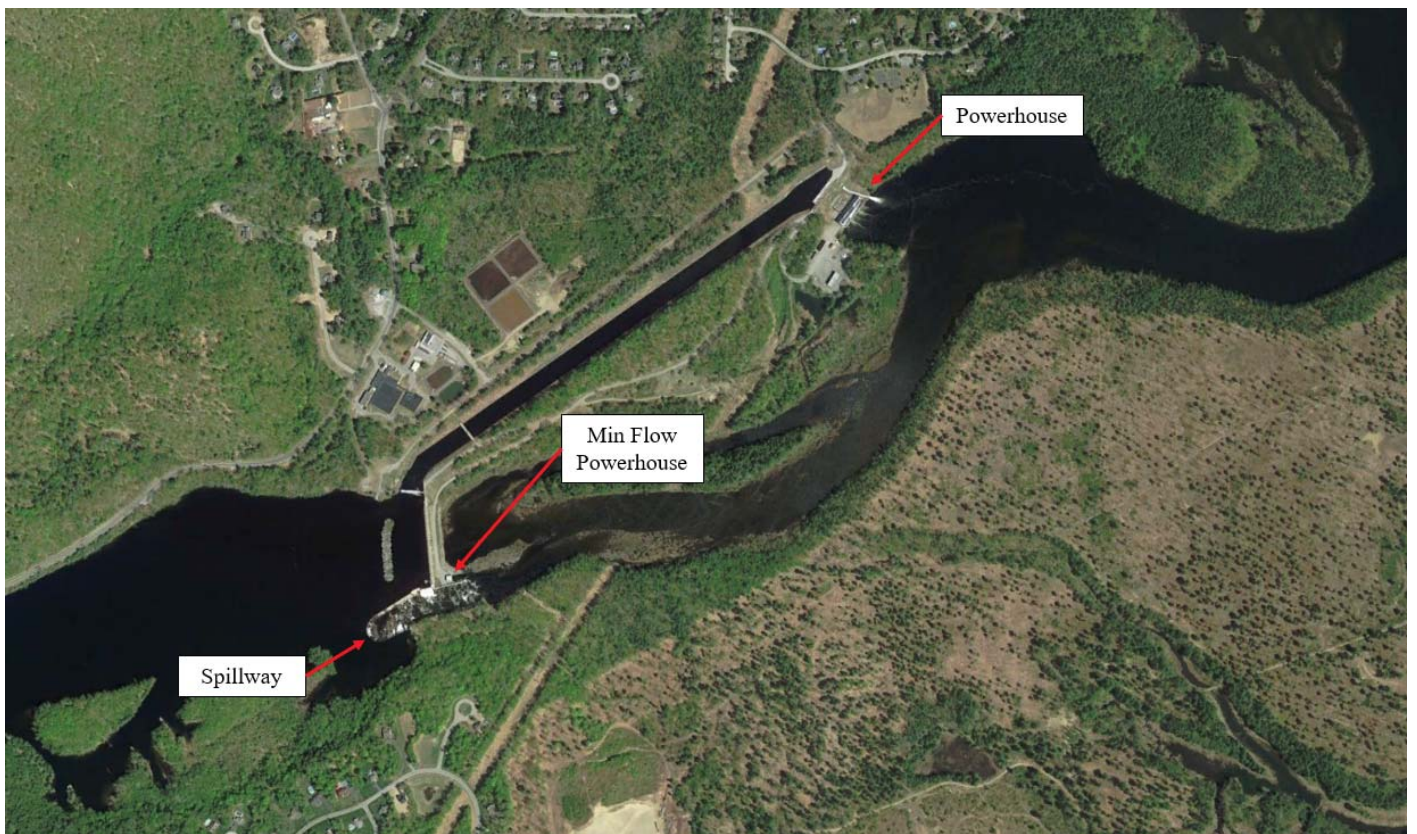


<p>Sacandaga and Hudson River Dam Locations</p> <p>DATA SOURCE: http://server.arcgisonline.com/ArcGIS/rest/services/ESRI_Imagery_World_2D/MapServer FILE LOCATION: P:\BROOKFIELD\074.174\GIS\MXD\PROJECTMAP_111209_kab</p>	<ul style="list-style-type: none"> ▲ Non-Brookfield Dam ■ Brookfield Dam — UpperHudson — River Center Line County Boundary 	<p style="text-align: center;">FIGURE 1</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 5px;">Brookfield Power</div> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">HDR</div> <div style="margin-right: 10px;"> </div> <div style="margin-right: 10px;">DTA</div> </div> </div> </div>



APPENDIX C – MAPS AND AERIAL PHOTOS OF FACILITY AREA AND RIVER BASIN

SHERMAN ISLAND HYDROELECTRIC DEVELOPMENT



APPENDIX D

401 WATER QUALITY CERTIFICATION CONSULTATION

February 12, 2020

Ms. Beth Magee
New York State Department of Environmental Conservation
232 Gold Course Road
Warrensburg, NY 12885-1172

Subject: **Stewarts Bridge Hydroelectric Project (FERC No. 2047)**
Low Impact Hydropower Institute Certification
Water Quality Certificate Verification

Dear Ms. Magee:

Erie Boulevard Hydropower, L.P. (Erie) is applying for Low Impact Hydropower Institute (LIHI) certification for the Stewarts Bridge Hydroelectric Project (FERC No. 2047). This Project is located on the Sacandaga River in the Town of Hadley, Saratoga 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 Stewarts Bridge Hydroelectric Project on March 25, 2001 (modified on December 14, 2011) is still valid. Please provide this confirmation by reply to this letter via letter or email.

Erie would appreciate 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

Caley, Katherine

From: Magee, Beth A (DEC) <beth.magee@dec.ny.gov>
Sent: Friday, March 13, 2020 2:11 PM
To: Caley, Katherine
Subject: Stewart's Bridge and Sherman Island Water Quality Certifications

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Katherine.

Thank you for contacting our office regarding the Water Quality Certifications for the referenced FERC licensed facilities. I reviewed our records and found the following information for each facility.

Stewart's Bridge

DEC Permit # 5-4136-00014/00007
WQC Issued: 5/25/01
Effective Date: 5/25/01
Expiration Date: N/A

Sherman Island

DEC Permit # 5-9905-00048/00001
WQC Issued: 2/5/02
Effective Date: 2/5/02
Expiration Date: N/A

As you will notice, neither of these WQCs has an expiration date which means that the WQC is valid for the term of the FERC license.

Please feel free to contact me with any further questions.

Beth A. Magee

Deputy Regional Permit Administrator, Division of Environmental Permits

New York State Department of Environmental Conservation

232 Golf Course Road, Warrensburg, NY 12885

P: (518) 623-1283 | F: (518) 623-3603 | beth.magee@dec.ny.gov

www.dec.ny.gov |  |  | 



APPENDIX E

RARE, THREATENED AND ENDANGERS 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:

February 12, 2020

Consultation Code: 05E1NY00-2020-SLI-1647

Event Code: 05E1NY00-2020-E-05004

Project Name: Sherman Island - Hudson River 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: 05E1NY00-2020-SLI-1647

Event Code: 05E1NY00-2020-E-05004

Project Name: Sherman Island - Hudson River Project

Project Type: DAM

Project Description: Brookfield Renewable is presently working with the Low Impact Hydropower Institute (LIHI) to certify the Sherman Island Development of the Hudson River (FERC No. 2482) as a low impact project. In preparing the application for LIHI certification, Brookfield 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, Brookfield 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 09-25-2002. Project operations and environmental protection measures at this Project have been largely determined by a comprehensive Offer of Settlement. The licensing processes for this Project included consultation with resource agencies regarding threatened and endangered species.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/43.273245875983356N73.71828176919745W>



Counties: Saratoga, NY | Warren, NY

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
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered

Insects

NAME	STATUS
Karner Blue Butterfly <i>Lycaeides melissa samuelis</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6656 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/420/office/52410.pdf	Endangered

Critical habitats

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

Caley, Katherine

From: naturalheritage@nynhp.org
Sent: Monday, February 17, 2020 7:57 AM
To: Caley, Katherine
Subject: Confirmation of your submitted request to New York Natural Heritage

Submission ID: 4152

Submitted on Monday, February 17, 2020 - 07:57 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: Sherman Island LIHI Application Project Applicant: Erie

Boulevard Hydropower Project County:

- Saratoga

- Warren

Town (Saratoga County): Moreau

Town (Warren County): City Of Glens Falls Project Summary:

Erie is presently working with the Low Impact Hydropower Institute (LIHI) to certify the Sherman Island Development, licensed as part of the Hudson River Hydroelectric Project (FERC No. 2482), 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 project.

As a matter of background, the license from the Federal Energy Regulatory Commission (FERC) was issued for this Project on September 25, 2002. 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 2002. 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 Hudson River.

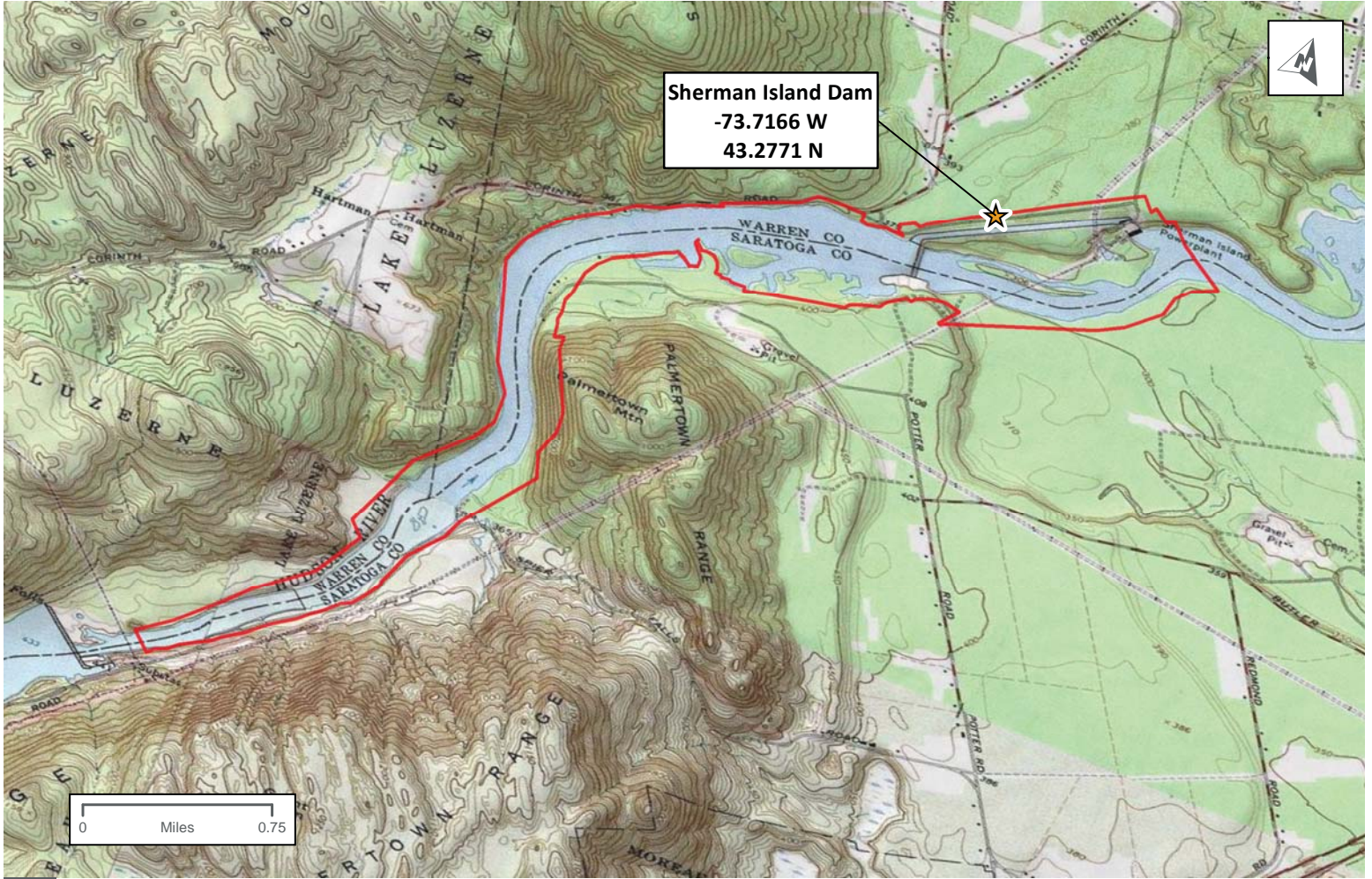
Tax parcel number:

Latitude: 43.2771

Longitude: -73.7166

Street Address of Project:

Project Notes:



SHERMAN ISLAND DEVELOPMENT
USGS QUADRANGLE(S): GLENS FALLS, CORINTH AND GANESVOORT

PATH: C:\USERS\KAUSTIN\DESKTOP\SHERMANMAP_DOCS\DRAFTMAP_LBHIAPP_USGS_SHERMANDAM.MXD - USER: KAUSTIN - DATE: 2/14/2020

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

March 1, 2020

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

Re: Sherman Island LIHI Application
County: Saratoga, Warren Town/City: Lake Luzerne, Moreau, Queensbury

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.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to 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 sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review. For further guidance, and 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, at dep.r5@dec.ny.gov.

Sincerely,



Heidi Krahling
Environmental Review Specialist
New York Natural Heritage Program