Oswego Falls Hydroelectric Project

Recertification Application to the Low Impact Hydropower Institute

LIHI #35A (FERC No. 5984)



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INTRODUCTION

Erie Boulevard Hydropower, L.P. (Erie)(Licensee), a wholly owned subsidiary of Brookfield Renewable, is providing this application to the Low Impact Hydropower Institute (LIHI) for recertification of the Oswego Falls Project (LIHI #35A) (Project), subsequent to a previous LIHI certification that expires December 7, 2017. The Oswego Falls Project consists of two hydroelectric developments along the Oswego River in Oswego County, New York. The Oswego Falls Project is licensed with the Federal Energy Regulatory Commission (FERC) as FERC No. 5984 and is comprised of two developments - Oswego Falls East Development and Oswego Falls West Development. There have been no material changes in the facility design or operation since the most recent LIHI review that was concluded on March 10, 2015. There also have been no material changes in the environmental conditions in the project vicinity since that most recent LIHI review. The only material changes that have occurred recently are in the revised LIHI certification criteria described in the 2016 version of LIHI's certification handbook.

Erie has reviewed the project descriptions for the Oswego Falls Project that is posted on the LIHI website and determined that they are an accurate representation of the subject project. The information provided in this recertification application provides an update to support a new LIHI certification.

PART I. FACILITY DESCRIPTION

The key features of the Oswego Falls Project are described in Tables 1 through 6. A description of the project can be found on the LIHI website at <u>http://lowimpacthydro.org/lihi-certificate-35a-oswego-falls-project-new-york/</u>.

| Information Type | Variable Description | Response(and reference to further details) | | | |
|-------------------------|--|--|--|--|--|
| Name of the Facility | Facility name (use FERC project name if possible) | Oswego Falls Project (FERC No. 5984) Oswego Falls East Development Oswego Falls West Development | | | |
| | River name (USGS proper name) | Oswego River | | | |
| | River basin name | Oswego River Basin | | | |
| | Nearest town, county, and state | Fulton, Oswego County, New York | | | |
| Location | River mile of dam above next major river | RM 12.3 | | | |
| | Geographic latitude | Oswego Falls East: -43.3147 N Oswego Falls West: - 43.3147 N | | | |
| | Geographic longitude | Oswego Falls East: -76.4158 W Oswego Falls West: -76.4158 W | | | |
| | Application contact names (IMPORTANT: you must also complete the Facilities Contact Form): | See Part V of the LIHI certification application for more information. | | | |
| | - Facility owner (individual and company names) | Erie Boulevard Hydropower, L.P. | | | |
| Facility Owner | - Operating affiliate (if different from owner) | Same as above. | | | |
| Owner | - Representative in LIHI certification | Daniel Daoust, Compliance Specialist Brookfield Renewable 33 West First Street South, Fulton, NY 13069 <u>Daniel.Daoust@brookfieldrenewable.com</u> 315-598-6131 | | | |
| | | FERC Project No. 5984 | | | |
| | FERC Project Number (e.g., P-xxxxx), issuance and expiration dates | The new FERC license was issued 3/15/1996, however, the FERC license was last amended 10/6/2009 (revised installed capacity). The FERC license expires 2/29/2036. | | | |
| Regulatory Status | FERC license type or special classification (e.g., "qualified conduit") | Major Project (>5 MW) | | | |
| Status | Water Quality Certificate identifier and issuance date, plus source agency name | Section 401 Water Quality Certificate (WQC) was waived by the New York State Department of Environmental Conservation (NYSDEC) in April 1987. Section 401 WQC was issued by NYSDEC for the Oswego Falls West Development on 8/25/2006 in support of the proposed turbine upgrades at the | | | |

Table I-1.Facility Description Information for the Recertification of the Oswego FallsHydropower Facility (LIHI #35A).

| | | development. | | | | |
|-------------------------------------|---|--|--|--|--|--|
| | | December 2, 2011 Order Amending License: https://elibrary.ferc.gov/idmws/common/open nat.asp?fileID=12795466 | | | | |
| | Hyperlinks to key electronic records on FERC | August 25, 2006 Order Amending License and Water Quality Certificate for Oswego Falls West Development: <u>https://elibrary.ferc.gov/idmws/common/open</u> <u>nat.asp?fileID=11128014</u> | | | | |
| | Commission Orders, WQC, ESA documents, etc.) | February 18, 2004 Oswego River and Oswego Falls Offer of Settlement: <u>https://elibrary.ferc.gov/idmws/common/open</u> <u>nat.asp?fileID=10073003</u> | | | | |
| | | March 15, 1996 Order Issuing License: https://elibrary.ferc.gov/idmws/common/open nat.asp?fileID=13716276 | | | | |
| | Date of initial operation (past or future for operational applications) | The Oswego Falls Project began operation in 1914. | | | | |
| | Total name-plate capacity (MW) | 7,360 MW (installed capacity). | | | | |
| | Average annual generation (MWh) | Average annual generation is approximately 33,780 MWh. | | | | |
| Power Plant Character- istics | | Oswego Falls East Development East powerhouse contains three vertical Francis-type turbine-generator units, with an authorized capacity of 1,500 kW each and a maximum hydraulic capacity of 1,410 cfs. Minimum (efficient) hydraulic capacity of 3,540 cfs. | | | | |
| | Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit | <i>Oswego Falls West Development</i> The West powerhouse contains four turbine- generator units (Units 4, 5, 6, and 7). Turbine units 4 and 5 have an authorized capacity of 930 kW each and a hydraulic capacity of 560 cfs. Minimum hydraulic capacity. Turbine units 6 and 7 each have an authorized capacity of 500 kW with a hydraulic capacity of 416 cfs. Minimum hydraulic capacity. Units 1, 2, and 3 are retired. | | | | |
| | Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.) | The Project is operated in a modified run-of- river mode operation, which allows for a 0.5- foot impoundment fluctuation. | | | | |
| | Dates and types of major equipment upgrades | In 2006, an additional 600 kW of increased power generation capacity was proposed at the | | | | |

| | Dates, purpose, and type of any recent operational changes | existing Oswego Falls West Development of the Oswego Falls Project. The increased capacity was to be achieved through the replacement of the existing Unit 3 with two vertical propeller units and replacement of the unit 3 horizontal generator with two new vertically-oriented generators. This project was completed in 2007. There have been no operational changes. The Project continues to operate as dictated under the current license. |
|---|---|--|
| | for any facility upgrades | I here are no proposed facility upgrades. |
| | Date of construction | Dam constructed in 1914. |
| | Spillway elevation and hydraulic capacity | The concrete gravity dam consists of a main ungated spillway section (crest elevation 351.8 feet equipped with a 1.5-foot-high pneumatic crest control system, an ungated side spillway |
| | | (crest elevation 354.0 feet), and a gated spillway equipped with six Taintor gates. |
| | Tailwater elevation | 338.8 feet |
| Character- | Length and type of all penstocks and water conveyance structures between reservoir and powerhouse | There are no penstocks at the Project. |
| istics of Dam, Diversion, or Conduit | Dates and types of major, generation-related infrastructure improvements | In 2006, an additional 600 kW of increased power generation capacity was proposed at the existing Oswego Falls West Development of the Oswego Falls Project. The increased capacity was to be achieved through the replacement of the existing Unit 3 with two vertical propeller units and replacement of the unit 3 horizontal generator with two new vertically-oriented generators. This project was completed in 2007. |
| | Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.) | Power |
| | Water source | Oswego River |
| | Water discharge location or facility | Oswego River |
| | Gross volume and surface area at full pool | 3,540 acre-feet; and 580 surface acres at normal maximum operating level (353.3 feet) |
| Characte- | Maximum water surface elevation (ft. MSL) | 353.3 feet |
| ristics of Reservoir and Watershed | Maximum and minimum volume and water surface elevations for designated power pool, if available | 353.3 feet |
| watershed | Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile | Phoenix Project (FERC No. 4113), Oswego Hydro Partners L.P., RM 21.1 |

| | Downstream dam(s) by name, ownership, FERC number (if applicable), and river mile | Granby Project (FERC No. 2837), Erie Boulevard Hydropower L.P., RM 11.6 | | | |
|----------------------------------|--|--|--|--|--|
| | Operating agreements with upstream or downstream reservoirs that affect water availability, if any, and facility operation | The Project operation is coordinated with the other Oswego River hydro developments on the Oswego River. | | | |
| | Area inside FERC project boundary, where appropriate | The 580 acre impoundment is entirely within the Project Boundary. | | | |
| | Average annual flow at the dam | 6,811 cfs (period 1/1/2012 – 12/31/2016) | | | |
| Hydrologic Setting | Average monthly flows | January $10,246$ cfsFebruary $8,204$ cfsMarch $7,859$ cfsApril $10,861$ cfsMay $6,953$ cfsJune $7,475$ cfsJuly $4,383$ cfsAugust $2,818$ cfsSeptember $1,861$ cfsOctober $4,497$ cfsNovember $5,741$ cfsDecember $10,823$ cfs | | | |
| | Location and name of relevant stream gauging stations above and below the facility | Below the Project: USGS 04249000 Oswego River at Lock 7, Oswego, NY Above the Project: None in vicinity. | | | |
| | Watershed area at the dam | 5,100 square miles | | | |
| | Number of zones of effect | Four | | | |
| | Upstream and downstream locations by river miles | Zone 1: 12.3 to 21.14 Zone 2: 12.3 to 12.16 Zone 3: 12.3 to 12.1 Zone 4: 12.3 to 12.08 | | | |
| Designated Zones of Effect | Type of waterbody (river, impoundment, by- passed reach, etc.) | Zone 1: Impoundment Zone 2: Bypass Reach Zone 3: Tailwater of Oswego Falls East Development Zone 4: Tailwater of Oswego Falls West Development | | | |
| | Delimiting structures | Zone 1: From upstream Phoenix Project to Oswego Falls spillway Zone 2: Oswego Falls spillway downstream to tailwater of Oswego Falls East and Oswego Falls West Developments Zone 3: Tailwater of Oswego Falls East Development Zone 4: Tailwater of Oswego Falls West Development | | | |
| | Designated uses by state water quality agency | area is classified by NYSDEC as non-trout | | | |

| | | Class B (From the Village of Phoenix to Lock 6) and C (from Lock 6 to the mouth of Lake Ontario) waters. For Class B waters, designated best usages are primary and secondary contact recreation and fishing; they are also suitable for fish propagation and survival. 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. |
|--------------------------------------|---|---|
| Additional Contact Information | Names, addresses, phone numbers, and e-mail for local state and federal resource agencies | See Part V for Contact Information |
| | Names, addresses, phone numbers, and e-mail for local non-governmental stakeholders | See Part V for Contact Information |
| Photographs and Maps | Photographs of key features of the facility and each of the designated zones of effect | See Appendix A for Photographs. Photographs also available in most recent FERC Environmental Inspection Report: <u>https://elibrary.ferc.gov/idmws/common/open</u> <u>nat.asp?fileID=12769898</u> |
| | Maps, aerial photos, and/or plan view diagrams of facility area and river basin | See Appendix B for Maps |

PART II. STANDARD MATRICES

There are four designated zones of effect for this application. Zone 1 is the impoundment, Zone 2 is the area below the spillway, Zone 3 is the Oswego Falls East Development tailrace, and Zone 4 is the Oswego Falls West tailrace. These locations are identified in the figure below. The standards selected to satisfy the LIHI certification criteria in these zones are identified in the following tables.

Oswego Falls Project Zones of Effect



Table II-1. LIHI Standards Selected for Zone of Effect No. 1 for the Oswego Falls Project

| | | Alternative Standards | | | | |
|---|---|-----------------------|---|---|---|------|
| | Criterion | 1 | 2 | 3 | 4 | Plus |
| Α | Ecological Flow Regimes | X | | | | |
| В | Water Quality | X | | | | |
| С | 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 | | | | |
| Η | Recreational Resources | | X | | | |

| | | | Alternative Standards | | | |
|---|--|---|-----------------------|---|---|------|
| | Criterion | 1 | 2 | 3 | 4 | Plus |
| Α | Ecological Flow Regimes | | X | | | |
| В | Water Quality | X | | | | |
| С | Upstream Fish Passage | | X | | | |
| D | Downstream Fish Passage | | X | | | |
| Е | Watershed and Shoreline Protection | X | | | | |
| F | Threatened and Endangered Species Protection | | X | | | |
| G | Cultural and Historic Resources Protection | X | | | | |
| Η | Recreational Resources | X | | | | |

Table II-2. LIHI Standards Selected for Zone of Effect No. 2 for the Oswego Falls Project

Table II-3. LIHI Standards Selected for Zone of Effect No. 3 for the Oswego Falls Project

| Alternativ | | | ative Sta | ndards | | |
|------------|---|---|-----------|--------|---|------|
| | Criterion | 1 | 2 | 3 | 4 | Plus |
| Α | Ecological Flow Regimes | X | | | | |
| В | Water Quality | X | | | | |
| С | 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 | | | | |
| Η | Recreational Resources | | X | | | |

Table II-4. LIHI Standards Selected for Zone of Effect No. 4 for the Oswego Falls Project

| | | Alternative Standards | | | | |
|---|--|-----------------------|---|---|---|------|
| | Criterion | 1 | 2 | 3 | 4 | Plus |
| Α | Ecological Flow Regimes | X | | | | |
| В | Water Quality | X | | | | |
| С | 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 | | | | |
| Η | 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 Flow Regimes

| III.A.1 Ecological Flows: | Oswego Falls Project Zone 1 |
|----------------------------------|------------------------------------|
|----------------------------------|------------------------------------|

| Criterion | Standard | Instructions |
|-----------|----------|--|
| A | 1 | <u>Not Applicable / De Minimis Effect:</u> Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility. If Run-of-River operation, provide details on how flows, water levels, and |
| | | operation are monitored to ensure such an operational mode is maintained. In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located. For impoundment zones only, explain how fish and wildlife habitat within the zone is evaluated and managed – <i>NOTE:</i> this is required information, but it will not be used to determine whether the Ecological Flows criterion has here satisfied. All impoundment zones are apply Griterion A. It is passed. |
| | | this criterion. |

- Zone 1, the Project impoundment, is upstream of the Oswego Falls West Development and Oswego Falls East Development.
- Project operation is coordinated with the other Oswego River hydro developments on the Oswego River. The Project uses its limited storage capabilities with a 0.5-foot impoundment fluctuation to generate power using a modified run-of-river (MROR) operation. Remote gaging equipment is in place to sample and record headpond elevations every minute. Measurements are recorded to the nearest 0.1 foot and are stored at Erie's North America System Control Center (NASCC) in Marlborough, MA. The monitoring system includes measures that alert the NASCC whether pond levels are decreasing or increasing, allowing Erie to make adjustments to pond levels by changing discharge or, if necessary, dispatch a traveling operator to the site. The Licensee maintains records documenting compliance with flow and impoundment level conditions.

Article 402 of the issued license required the development of a plan, in consultation with the Department of the Interior (DOI) and the New York State Department of Environmental Conservation (NYSDEC), to monitor the run-of-river operating mode required by Article 401. The plan was filed on February 26, 1997 and approved by FERC on December 15, 1997. The Run-of-River Monitoring Plan uses a combination of automatic generator control and direct adjustments of project operation by the NASCC. The automatic generator controller compiles and analyzes current flow and generation data for the project and calculates the outflow from the project. The NASCC monitors the impoundment elevation and adjusts project operations to maintain reservoir elevation within 0.3 to 0.4 feet of the top of the flashboards. An alarm sounds if the elevation falls

to 0.5 feet below the top of the flashboards.

FERC approval of Run-of-River Monitoring Plan associated with Article 402: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10801578

- Oswego Falls is not a conduit project; therefore this item is not applicable.
- Article 403 of the existing license required the Licensee to file a plan to eliminate seasonal water level fluctuations associated with flashboard collapse. This plan was required to address seasonal water level fluctuations that were believed to adversely affect fish and wildlife resources and Ox Creek wetlands. The Water Level Fluctuation Plan was filed on March 18, 2004 and approved by FERC on June 9, 2004. The Water Fluctuation Plan included installment of a pneumatic flashboard system; which resulted from settlement discussions. The settlement parties agreed that by installing a partial pneumatic flashboard system, the seasonal water fluctuations would be virtually eliminated. Construction of the pneumatic flashboard system was completed in 2004 and Exhibit F drawings depicting the as-built conditions were approved by FERC on August 8, 2005. The Licensee is currently operating with full use of the pneumatic flashboard system.

FERC approval of Water Level Fluctuation Plan associated with Article 403: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10166313.

III.A.2 Ecological Flows: Oswego Falls Project Zone 2

| А | 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 stringent). |
| | | • 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 is the area below the spillway.
- Article 404 of the current license states bypass flow for the Oswego Falls Project is 236 cfs or inflow, whichever is less. Of this total bypass flow, 70 cfs is released at the East Development and 166 is released through the No. 1 Tainter gate. Prior to relicensing, the bypass reach was periodically dewatered. Both NYSDEC and the U.S. Fish and Wildlife Service (USFWS) identified the protection and enhancement of the riffle habitat present in the bypass reach to be of critical concern. Riffle habitat typically provides for different

assemblage and higher density of aquatic invertebrates and critical habitat for some fish. NYSDEC and USFWS stated protecting and maintaining riffle habitat would support and increase riffle-dwelling organisms and increase the forage base. During relicensing, the Licensee conducted a modified Instream Flow Incremental Methodology (IFIM) of the bypass reach. The study analyzed two life stages of five different fish species representing predatory/sport fish and riffle-dependent prey fish. The Licensee simulated minimum flows ranging from 10 to 3,000 cfs. FERC then analyzed the costs and habitat importance. FERC concluded that discharge associated with downstream fish passage flows would provide a minimum flow to the dewatered section of the bypass reach, providing needed riffle habitat.

- The Licensee conducted a modified IFIM study of the bypass reach during relicensing of the Project. The study evaluated a potential habitat area of 67,200 sq. ft. located between the dam apron and the downstream impoundment. It analyzed two life stages of five different fish species representing predatory/sport fish and riffle dependent prey fish. The Licensee simulated minimum flows ranging from 10 to 3,000 cfs. The results of the study are analyzed in FERC's Environmental Analysis of the Oswego Falls Project here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13716276.
- The agreed upon bypass flow releases resulted in an increase of wetted area in the bypass reach immediately downstream of the dam. The flow releases provided riffle areas which in turn provided habitat for various life stages of smallmouth bass, riffle dwelling species, darters, and aquatic insects and spawning habitat for white sucker and walleye. The Offer of Settlement, in which these flows were further discussed, was agreed upon by Adirondack Mountain Club (ADK), the Licensee, Izaak Walton League, New York Rivers United (NYRU), New York State Conservation Council (NYSCC), NYSDEC, Trout Unlimited (TU), USFWS, and the National Park Service (NPS) in April 2003. These agencies agreed that the increase of wetted area in the bypass reach and protection of riffle habitat addressed the agencies management objectives. The Offer of Settlement is available here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10073003.
- The flows under Article 404, and agreed upon under the 2003 Settlement Offer, increases wetted area in the bypass reach immediately downstream of the dam. Additionally, the releases provide riffle areas providing habitat for various life stages of smallmouth bass, riffle dwelling species, darters, and aquatic insects and spawning habitat for white sucker and walleye.

| Criterion | Standard | Instructions |
|-----------|----------|--|
| А | 1 | Not Applicable / De Minimis Effect: |
| | | • Confirm the location of the powerhouse relative to other dam/diversion |
| | | structures to establish that there are no bypassed reaches at the facility. |
| | | • If Run-of-River operation, provide details on how flows, water levels, and |
| | | operation are monitored to ensure such an operational mode is maintained. |
| | | • In a conduit project, identify the water source and discharge points for the |
| | | conduit system within which the hydropower plant is located. |

III.A.3 Ecological Flows: Oswego Falls Project Zone 3

| Criterion | Standard | Instructions |
|-----------|----------|---|
| | | • For impoundment zones only, explain 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 3 is the tailrace area of the Oswego Falls East Development.
- The Project is operated in a modified ROR operation, which allows for a 0.5-foot impoundment fluctuation. Articles 401 and 402 address run-of-river operation. Article 401 requires the Licensee to operate the project in a modified ROR mode to protect fish and wildlife resources in the project area. Article 402 requires the Licensee to develop a plan to monitor run-of-river operation and include provisions to maintain the reservoir at or near the top of the flashboards. Modified ROR operations are discussed further in III.A.1. Additionally, Article 402 is discussed further in FERC's Order Modifying and Approving Run-of-River Monitoring Plan here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10801578.
- Oswego Falls is not a conduit project; therefore this item is not applicable.
- Zone 3 is not an impoundment zone; therefore this item is not applicable.

III.A.4 Ecological Flows: Oswego Falls Project Zone 4

| Criterion | Standard | Instructions |
|-----------|----------|---|
| А | 1 | Not Applicable / De Minimis Effect: |
| | | • Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility. |
| | | If Run-of-River operation, provide details on how flows, water levels, and operation are monitored to ensure such an operational mode is maintained. In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located. |
| | | • For impoundment zones only, explain how fish and wildlife habitat within the zone is evaluated and managed – <i>NOTE:</i> 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 4 is the tailrace area of the Oswego Falls West Development.
- The Project is operated in a modified ROR operation, which allows for a 0.5-foot impoundment fluctuation. Articles 401 and 402 address run-of-river operation. Article 401 requires the Licensee to operate the project in a modified ROR mode to protect fish and wildlife resources in the project area. Article 402 requires the Licensee to develop a plan to monitor run-of-river operation and include provisions to maintain the reservoir at or near the top of the flashboards. Modified ROR operations are discussed further in

III.A.1. The link to FERC's Order Modifying and Approving Run-of-River Monitoring Plan is in III.A.3.

• Zone 4 is not an impoundment zone; therefore this item is not applicable.

Information Required to Support Water Quality

III.B.1 Water Quality: Oswego Falls Project Zone 1

| Criterion | Standard | Instructions |
|-----------|----------|--|
| В | 1 | Not Applicable / De Minimis Effect: |
| | | If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. Explain rationale for why facility does not alter water quality characteristics below, around, and above the facility. |

• The Oswego Falls Project is located within a 2016 303(d) List of Impaired Waters Requiring a TMDL/Other strategy for Polychlorinated Biphenyls (PCBs) contaminated sediments. Listing is here: <u>http://www.dec.ny.gov/chemical/31290.html</u>. The cause of this impairment is not related to the Oswego Falls Project.

The Oswego River is subject to water quality programs beyond those required by the Clean Water Act and NYSDEC. The Oswego River Harbor (from the mouth at Lake Ontario to just below Dam No. 7 - Varick) was designated as one of the original 43 Areas of Concern under Annex 2 of the 1987 U.S.-Canada Great Lakes Water Quality Agreement. A Remedial Action Plan (RAP), administered by the U.S. EPA and implemented by NYSDEC was developed for the Oswego River/Harbor in 1987. Through stages 1 and 2 of the RAP, beneficial use impairments, as well as their causes and sources, and remedial actions were identified. The fourteen beneficial use impairment indicators were developed by the International Joint Commission in Annex 2. In the 1990 RAP Stage 1 document, four of these indicators were identified as impaired, including two-degradation of fish and wildlife populations and loss of fish and wildlife habitat-that were attributable to hydroelectric project operations. The beneficial use indicators for the Oswego River/Harbor Area of Concern have been resolved, and the Area of Concern has been delisted. As described in the 2006 Stage 3 Delisting document prepared by NYSDEC in consultation with the Oswego River Remedial Advisory Committee, in addition to other water quality and monitoring programs and studies, the FERC licenses and settlement for the Oswego River Projects have successfully restored river flow below Varick dam to address fish habitat and spawning conditions and are a key component of the delisting.

The Section 401 Water Quality Certificate (WQC) was waived by NYSDEC in April 1987. Section 401 WQC was issued by NYSDEC for the Oswego Falls West Development on August 25, 2006 in support of the proposed turbine upgrades at the development. Oswego Falls West Development Section 401 WQC: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=11119481.

• The Project operates in a modified ROR mode. Article 404 of the current license states bypass flow for the Oswego Falls Project is 236 cfs or inflow, whichever is less. Of this total bypass flow, 70 cfs is released at the East Development and 166 is released through the No. 1 Tainter gate. These flows enhance conditions for water quality as well as wildlife and recreational uses.

III.B.2 Water Quality: Oswego Falls Project Zone 2

| Criterion | Standard | Instructions |
|-----------|----------|--|
| В | 1 | Not Applicable / De Minimis Effect: |
| | | • If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. |
| | | • Explain rationale for why facility does not alter water quality characteristics below, around, and above the facility. |

- The Oswego Falls Project is located within a 2016 303(d) List of Impaired Waters Requiring a TMDL/Other strategy for Polychlorinated Biphenyls (PCBs) contaminated sediments. Listing is here: <u>http://www.dec.ny.gov/chemical/31290.html</u>. The cause of this impairment is not related to the Oswego Falls Project. Details are discussed further in Zone 1.
- The Project operates in a modified ROR mode. Article 404 of the current license states bypass flow for the Oswego Falls Project is 236 cfs or inflow, whichever is less. Of this total bypass flow, 70 cfs is released at the East Development and 166 is released through the No. 1 Tainter gate. These flows enhance conditions for water quality as well as wildlife and recreational uses.

III.B.3 Water Quality: Oswego Falls Project Zone 3

| Criterion | Standard | Instructions |
|-----------|----------|---|
| В | 1 | Not Applicable / De Minimis Effect: |
| | | • If facility is located on a Water Quality Limited river reach, provide an |
| | | agency letter stating that the facility is not a cause of such limitation. |
| | | • Explain rationale for why facility does not alter water quality characteristics |
| | | below, around, and above the facility. |

- The Oswego Falls Project is located within a 2016 303(d) List of Impaired Waters Requiring a TMDL/Other strategy for Polychlorinated Biphenyls (PCBs) contaminated sediments. Listing is here: <u>http://www.dec.ny.gov/chemical/31290.html</u>. The cause of this impairment is not related to the Oswego Falls Project. Details are discussed further in Zone 1.
- The Project operates in a modified ROR mode. Article 404 of the current license states bypass flow for the Oswego Falls Project is 236 cfs or inflow, whichever is less. Of this total bypass flow, 70 cfs is released at the East Development and 166 is released through the No. 1 Tainter gate. These flows enhance conditions for water quality as well as

wildlife and recreational uses.

III.B.4 Water Quality: Oswego Falls Project Zone 4

| Criterion | Standard | Instructions |
|-----------|----------|--|
| В | 1 | Not Applicable / De Minimis Effect: |
| | | If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. Explain rationale for why facility does not alter water quality characteristics below, around, and above the facility. |

- The Oswego Falls Project is located within a 2016 303(d) List of Impaired Waters Requiring a TMDL/Other strategy for Polychlorinated Biphenyls (PCBs) contaminated sediments. Listing is here: <u>http://www.dec.ny.gov/chemical/31290.html</u>. The cause of this impairment is not related to the Oswego Falls Project. Details are discussed further in III.B.1.
- The Project operates in a modified ROR mode. Article 404 of the current license states bypass flow for the Oswego Falls Project is 236 cfs or inflow, whichever is less. Of this total bypass flow, 70 cfs is released at the East Development and 166 is released through the No. 1 Tainter gate. These flows enhance conditions for water quality as well as wildlife and recreational uses.

Information Required to Support Upstream Fish Passage

III.C.1 Upstream Fish Passage: Oswego Falls Project Zone 1

| Criterion | Standard | Instructions |
|-----------|----------|---|
| С | 1 | Not Applicable / De Minimis Effect: |
| | | • Explain why the facility does not impose a barrier to upstream fish passage |
| | | in the designated zone. |
| | | • 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. |

• Zone 1 is the Oswego Falls Project impoundment therefore upstream fish passage is not an issue. Fish species known to occur in the Oswego River include walleye, northern pike, smallmouth bass, largemouth bass, Chinook salmon, coho salmon, rainbow trout (steelhead), brown trout, pumpkinseed sunfish, bluegill, yellow perch, white perch, black crappie, brown bullhead, channel catfish, freshwater drum, bowfin, common carp, alewives, round goby and gizzard shad.

| Criterion | Standard | Instructions |
|-----------|----------|--|
| С | 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 stringent). 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. |

III.C.2 Upstream Fish Passage: Oswego Falls Project Zone 2

- Zone 2 is the area below the spillway.
- The Licensee is required to provide "fish friendly" (to benefit resident and migratory fish) minimum flows of 70 cfs at the East Development through the existing sluice gate, and 166 cfs at the West Development through the tainter gate adjacent to the pneumatic flashboard section of the dam for fish passage. In response to the 2004 Offer of Settlement, an upstream eel conveyance system and seasonal fish protection measures were required (Article 404). The Licensee installed upstream eel passage facilities at the west end of the spillway (Article 405), which are currently being operated and maintained in compliance with the license requirements.

Article 406 of the 1996 license order for the Oswego Falls Project includes provisions for a plan for a selective upstream fish passage structure for Atlantic salmon or other species as required by the resource agencies. The Licensee submitted a plan for the requirements of Articles 404 and 406 to FERC on 8/13/2003, which was approved by FERC on 10/16/2003. Agency fish passage prescriptions for upstream and downstream passage of catadromous fish are also described in Section 3.5 of the Offer of Settlement. The Offer of Settlement: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10073003.

- The "fish friendly" (to benefit resident and migratory fish) minimum flows of 70 cfs at the East Development through the existing sluice gate, and 166 cfs at the West Development through the tainter gate adjacent to the pneumatic flashboard section of the dam for fish passage were identified through a modified IFIM study. The study is discussed in further detail in Zone 1.
- No specific fish passage monitoring or effectiveness studies were required; however, Article 402 requires the Licensee to monitor the modified ROR operations at the Project. Additionally, the eel conveyance system is installed seasonally from June 15 through September 15th annually.

| Criterion | Standard | Instructions |
|-----------|----------|---|
| С | 1 | Not Applicable / De Minimis Effect: |
| | | • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. |
| | | 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. |

III.C.3 Upstream Fish Passage: Oswego Falls Project Zone 3

• Zone 3 is the Oswego Falls East development tailwater area. The Licensee is required to provide "fish friendly" (to benefit resident and migratory fish) minimum flows of 70 cfs at the East Development through the existing sluice gate, and 166 cfs at the West Development through the tainter gate adjacent to the pneumatic flashboard section of the dam for fish passage. In response to the 2004 Offer of Settlement, an upstream eel conveyance system and seasonal fish protection measures were required (Article 404). The Licensee installed upstream eel passage facilities at the west end of the spillway (Article 405), which are currently being operated and maintained in compliance with the license requirements.

III.C.4 Upstream Fish Passage: Oswego Falls Project Zone 4

| Criterion | Standard | Instructions |
|-----------|----------|---|
| С | 1 | Not Applicable / De Minimis Effect: |
| | | • Explain why the facility does not impose a barrier to upstream fish passage |
| | | in the designated zone. |
| | | • 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. |

• Zone 4 is the Oswego Falls West development tailwater area. The Licensee is required to provide "fish friendly" (to benefit resident and migratory fish) minimum flows of 70 cfs at the East Development through the existing sluice gate, and 166 cfs at the West Development through the tainter gate adjacent to the pneumatic flashboard section of the dam for fish passage. In response to the 2004 Offer of Settlement, an upstream eel conveyance system and seasonal fish protection measures were required (Article 404). The Licensee installed upstream eel passage facilities at the west end of the spillway (Article 405), which are currently being operated and maintained in compliance with the license requirements.

Information Required to Support Downstream Fish Passage

III.D.1 Downstream Fish Passage: Oswego Falls Project Zone 1

| 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). 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. |

• Zone 1 is the Oswego Falls Project impoundment. Fish species known to occur in the Oswego River include walleye, northern pike, smallmouth bass, largemouth bass, Chinook salmon, coho salmon, rainbow trout (steelhead), brown trout, pumpkinseed sunfish, bluegill, yellow perch, white perch, black crappie, brown bullhead, channel catfish, freshwater drum, bowfin, common carp, alewives, round goby and gizzard shad.

III.D.2 Downstream Fish Passage: Oswego Falls 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 stringent). 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. |

• The 2004 Offer of Settlement required the Licensee to install fish protective measures at the Project including 1.0-inch clear-spaced trashrack overlays or 1.5-inch diameter perforated plates to be placed seasonally from May 1 or when flows permit safe installation (whichever is later) through November 30 or when the temperature of the river decreases to 7°C or less (whichever is sooner). The Licensee is required to provide "fish friendly" (to benefit resident and migratory fish) minimum flows of 70 cfs at the East Development through the existing sluice gate, and 166 cfs at the West Development through the tainter gate adjacent to the pneumatic flashboard section of the dam for fish

passage. The details of downstream fish protective measures are further described in the Offer of Settlement, here:

https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10073003.

- The Offer of Settlement required 1.0-inch spaced trashrack overlays or 1.5-inch diameter perforated plates to be placed seasonally. The protection measures and movement flows both physically deter larger fish and behaviorally deter smaller fish from entering the turbine intakes while simultaneously enhancing downstream fish friendly movement.
- No monitoring or effectiveness studies were required by the Offer of Settlement.

III.D.3 Downstream Fish Passage: Oswego Falls 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). 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. |

- The 2004 Offer of Settlement required the Licensee to install fish protective measures at the Project including 1.0-inch clear-spaced trashrack overlays or 1.5-inch diameter perforated plates to be placed seasonally from May 1 or when flows permit safe installation (whichever is later) through November 30 or when the temperature of the river decreases to 7°C or less (whichever is sooner).
- Fish species known to occur in the Oswego River include walleye, northern pike, smallmouth bass, largemouth bass, Chinook salmon, coho salmon, rainbow trout (steelhead), brown trout, pumpkinseed sunfish, bluegill, yellow perch, white perch, black crappie, brown bullhead, channel catfish, freshwater drum, bowfin, common carp, alewives, round goby and gizzard shad.

III.D.4 Downstream Fish Passage: Oswego Falls Project Zone 4

| 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., |

| Criterion | Standard | Instructions |
|-----------|----------|--|
| | | entrainment into hydropower turbines). 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. |

- The 2004 Offer of Settlement required the Licensee to install fish protective measures at the Project including 1.0-inch clear-spaced trashrack overlays or 1.5-inch diameter perforated plates to be placed seasonally from May 1 or when flows permit safe installation (whichever is later) through November 30 or when the temperature of the river decreases to 7°C or less (whichever is sooner).
- Fish species known to occur in the Oswego River include walleye, northern pike, smallmouth bass, largemouth bass, Chinook salmon, coho salmon, rainbow trout (steelhead), brown trout, pumpkinseed sunfish, bluegill, yellow perch, white perch, black crappie, brown bullhead, channel catfish, freshwater drum, bowfin, common carp, alewives, round goby and gizzard shad.

Information Required to Support Watershed and Shoreline Protection

IV.E.1 Shoreline and Watershed Protection Standards: Oswego Falls Project Zone 1

| Criterion | Standard | Instructions |
|-----------|----------|---|
| Е | 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 project boundary). |
| | | • Document that there have been no Shoreline Management Plans or similar |
| | | protection requirements for the facility. |

• The Oswego Falls Project is located in a high density residential, commercial and industrial area in the city of Fulton, immediately upstream of the New York State (NYS) Route 3 Bridge. The Oswego Falls impoundment reaches approximately 9.4 miles upstream from the dam and includes parts of the village of Phoenix and the towns of Volney and Schroeppel in Oswego County and Lysander in Onondaga County. The land becomes progressively more rural through the extent of the upstream impoundment. There are scattered residences and extensive fields and woodlands along the impoundment shoreline.

Land use in the area largely reflects the region's industrial history, as the Oswego River/Canal was originally used for commercial navigation. NYSCC currently operates the locks and dams to control summer lake levels for boating. Erie's Oswego Falls Project is located at an existing NYSCC dam and occupies limited areas and civil works.

• No Shoreline Management Plan or similar protection requirements exist for this facility.

IV.E.2 Shoreline and Watershed Protection Standards: Oswego Falls Project Zone 2

| Criterion | Standard | Instructions |
|-----------|----------|---|
| Е | 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 project boundary). |
| | | • Document that there have been no Shoreline Management Plans or similar |
| | | protection requirements for the facility. |

- Land use and land cover within the Project Boundary are described in Zone 1.
- No Shoreline Management Plan or similar protection requirements exist for this facility.

IV.E.3 Shoreline and Watershed Protection Standards: Oswego Falls Project Zone 3

| Criterion | Standard | Instructions |
|-----------|----------|---|
| Е | 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 project boundary). Document that there have been no Shoreline Management Plans or similar protection requirements for the facility. |

- Land use and land cover within the Project Boundary are described in Zone 1.
- No Shoreline Management Plan or similar protection requirements exist for this facility.

IV.E.4 Shoreline and Watershed Protection Standards: Oswego Falls Project Zone 4

| Criterion | Standard | Instructions |
|-----------|----------|---|
| Е | 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 project boundary). |
| | | • Document that there have been no Shoreline Management Plans or similar |
| | | protection requirements for the facility. |

- Land use and land cover within the Project Boundary are described in Zone 1.
- No Shoreline Management Plan or similar protection requirements exist for this facility.

Information Required to Support Threatened and Endangered Species Program

| Criterion | Standard | Instructions |
|-----------|----------|---|
| F | 2 | 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. |

V.F.1 Threatened and Endangered Species Program: Oswego Falls Project Zone 1

The Licensee consulted with the USFWS and NYSDEC regarding potential rare, threatened, and endangered (RTE) species within the Project (consultation documentation in Appendix D). USFWS identified the following species as potentially occurring within the Project: Indiana Bat (federally endangered), Northern Long-eared Bat (federally threatened), Bog Turtle (federally threatened), and eastern massasauga (federally threatened). The NYSDEC identified nesting bald eagles in the Town of Granby and the Town of Schroeppel. Additionally, NYSDEC identified Indiana Bat maternity roosts and non-winter capture locations in the Town of Volney and the Town of Schroeppel. No critical habitats were identified within the Project area.

Recovery actions identified in USFWS's Indiana Bat Draft Recovery Plan include hibernacula-related recovery actions and summer habitat management. Operations of the Oswego Falls Project at NYSCC's dam are consistent with this draft recovery plan, as minimal vegetation removal and land management is associated with this project.

According to the 2001 bog turtle recovery plan, the extant population in Oswego County represents the northern range of this species. Bog turtles inhabit a variety of wetland types but generally prefer small, open-canopy, herbaceous sedge meadows and fens bordered by more thickly vegetated and wooded areas, and their primary habitat includes seepage or spring-fed emergent wetlands associated with streams, often at or near the headwaters of streams or small tributaries. Because the Oswego Falls Project is located in relatively highly developed, open-river areas, bog turtles are not expected to be found in the immediate vicinity of the project. As described in the recovery plan, conservation efforts focus on habitat protection, especially arresting succession of open wetlands to wooded swamp and control of invasive plants.

Operations of the Oswego Falls Project according to the conditions of the 2004 Offer of Settlement is consistent with this recovery plan, as the modified run-of-river operating mode improves habitat—including wetland—conditions within the Project area.

The eastern massausaga is a small, thick-bodied snake that lives in wetlands and utilizes adjacent uplands. The eastern massasauga published the final rule in the Federal Register on September 30, 2016 that adds the eastern massasauga to the list of threatened species.

At this time, USFWS has decided that designating critical habitat is not prudent. Operations of the Oswego Falls Project according to the conditions of the 2004 Offer of Settlement may enhance habitat, as the modified run-of-river operating mode improves habitat—including wetland—conditions within the Project area.

V.F.2 Threatened and Endangered Species Program: Oswego Falls Project Zone 2

| Criterion | Standard | Instructions |
|-----------|----------|--|
| F | 2 | 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. |

• Zone 1 discusses the standard selection in greater detail. RTE consultation is included in Appendix D.

V.F.3 Threatened and Endangered Species Program: Oswego Falls Project Zone 3

| Criterion | Standard | Instructions |
|-----------|----------|--|
| F | 2 | 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. |

• Zone 1 discusses the standard selection in greater detail. RTE consultation is included in Appendix D.

V.F.4 Threatened and Endangered Species Program: Oswego Falls Project Zone 4

| Criterion | Standard | Instructions |
|-----------|----------|---|
| F | 2 | 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. |

• Zone 1 discusses the standard selection in greater detail. RTE consultation is included in Appendix D.

Information Required to Support Cultural and Historic Resources Protection

VI.D.1 Cultural and Historic Resources Protection: Oswego Falls Project Zone 1

| Criterion | Standard | Instructions |
|-----------|----------|---|
| G | 1 | Not Applicable / De Minimis Effect: |
| | | • Document that there are no cultural or historic resources located on facility |
| | | lands that can be affected by construction or operations of the facility. |
| | | • Document that the facility construction and operation have not in the past |
| | | adversely affected any cultural or historic resources that are present on |
| | | facility lands. |

There are no license requirements regarding cultural resource protection, mitigation, or • enhancement for the Oswego Falls Project. As described in the 1996 EA and license order for the Oswego Falls Project, in 1991 the New York State Historic Preservation Office (SHPO) issued a determination that continued operation of the Oswego Falls Project would have no effect on properties listed in or eligible for the National Register of Historic Places. The EA is available for reference here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13716276.

VI.D.2 Cultural and Historic Resources Protection: Oswego Falls Project Zone 2

| Criterion | Standard | Instructions |
|-----------|----------|---|
| G | 1 | Not Applicable / De Minimis Effect: |
| | | • Document that there are no cultural or historic resources located on facility |
| | | lands that can be affected by construction or operations of the facility. |
| | | • Document that the facility construction and operation have not in the past |
| | | adversely affected any cultural or historic resources that are present on |
| | | facility lands. |

There are no license requirements regarding cultural resource protection, mitigation, or • enhancement for the Oswego Falls Project. As described in the 1996 EA and license order for the Oswego Falls Project, in 1991 the New York State Historic Preservation Office (SHPO) issued a determination that continued operation of the Oswego Falls Project would have no effect on properties listed in or eligible for the National Register of Historic Places. The EA is available for reference here:

https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13716276.

| Criterion | Standard | Instructions |
|-----------|----------|---|
| G | 1 | Not Applicable / De Minimis Effect: |
| | | • Document that there are no cultural or historic resources located on facility |
| | | lands that can be affected by construction or operations of the facility. |
| | | • Document that the facility construction and operation have not in the past |
| | | adversely affected any cultural or historic resources that are present on |
| | | facility lands. |

VI.D.3 Cultural and Historic Resources Protection: Oswego Falls Project Zone 3

There are no license requirements regarding cultural resource protection, mitigation, or enhancement for the Oswego Falls Project. As described in the 1996 EA and license order for the Oswego Falls Project, in 1991 the New York State Historic Preservation Office (SHPO) issued a determination that continued operation of the Oswego Falls Project would have no effect on properties listed in or eligible for the National Register of Historic Places. The EA is available for reference here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13716276.

VI.D.4 Cultural and Historic Resources Protection: Oswego Falls Project Zone 4

| Criterion | Standard | Instructions |
|-----------|----------|--|
| G | 1 | Not Applicable / De Minimis Effect: |
| | | • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. |
| | | • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands. |

There are no license requirements regarding cultural resource protection, mitigation, or enhancement for the Oswego Falls Project. As described in the 1996 EA and license order for the Oswego Falls Project, in 1991 the New York State Historic Preservation Office (SHPO) issued a determination that continued operation of the Oswego Falls Project would have no effect on properties listed in or eligible for the National Register of Historic Places. The EA is available for reference here:

https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13716276.

Information Required to Support Recreational Resources

VII.H.1 Recreational Resources: Oswego Falls Project Zone 1

| Criterion | Standard | Instructions |
|-----------|----------|---|
| Н | 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 last FERC Environmental Inspection Report was completed in July 2011 at which time the Oswego Falls Project was in compliance with recreational access, accommodation, and facilities conditions in the FERC license. The Project continues to be in compliance. FERC 2011 Environmental Inspection Report here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12769898.

The Oswego River canal system receives intensive recreational boating use, and the locks and dams along the river are popular spots for shoreline fishing. NYSCC operates the Oswego River lock system seven days a week from 7 a.m. to 10 p.m. during peak navigation system (late May to early October) and reduced hours during the remainder of the season, and the locks provide boating access around the dams. The primary recreational activity within the Oswego River Projects' boundaries is fishing at Erie facilities or the day-use-oriented recreational facilities managed by the state or local municipalities that are found along the stretch of the Oswego River spanned by the Oswego River Projects.

The Oswego Falls Project license required construction and operation of a tailwater fishing access at the lower Lock 2 island below the Upper Fulton Dam (Article 408) and funding to the Village of Phoenix for a boat launch facility (Article 409).

By order dated April 2, 2002, FERC deleted Article 408 and determined that the requirements of Article 408 had been met through informal facilities improved and maintained by NYSCC as part of its Lock 2 facilities. Order here: <u>https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=9501320</u>.

FERC confirmed by letter dated May 17, 2004 that the requirements of Article 409 had been met through Niagara Mohawk's donation of \$7,500 and 2.3 acres of Lock Island prior to license issuance. Order here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10151966.

The Village of Phoenix boat launch facility has been completed and is operational. Public fishing and river viewing areas are also maintained at the Oswego Falls Project pursuant to License Article 410. These areas include the handicenned accessible unstream sides of

to License Article 410. These areas include the handicapped-accessible upstream sides of the island on which the East Development powerhouse is located as well as the shoreline upstream of the forebay at the West Development.

VII.H.2 Recreational Resources: Oswego Falls Project Zone 2

| Criterion | Standard | Instructions |
|-----------|----------|---|
| Н | 1 | Not Applicable / De Minimis Effect: |
| | | • Document that the facility does not occupy lands or waters to which public access can be granted and that the facility does not otherwise impact recreational opportunities in the facility area. |

• Zone 2 is the bypass reach therefore this item is not applicable. The Licensee is in compliance with recreational access, accommodation, and facilities conditions in the FERC license.

VII.H.3 Recreational Resources: Oswego Falls Project Zone 3

| Criterion | Standard | Instructions |
|-----------|----------|--|
| Н | 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 Project is subject to a number of recreation resource related articles. These are discussed in detail above in Zone 1. The last FERC Environmental Inspection Report was completed in July 2011 at which time the Oswego Falls Project was in compliance with recreational access, accommodation, and facilities conditions in the FERC license. The Project continues to be in compliance. FERC 2011 Environmental Inspection Report here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12769898.

VII.H.4 Recreational Resources: Oswego Falls Project Zone 4

| Criterion | Standard | Instructions |
|-----------|----------|--|
| Н | 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 Project is subject to a number of recreation resource related articles. These are discussed in detail above in Zone 1. The last FERC Environmental Inspection Report was completed in July 2011 at which time the Oswego Falls Project was in compliance with recreational access, accommodation, and facilities conditions in the FERC license. The Project continues to be in compliance. FERC 2011 Environmental Inspection Report here: https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=12769898.

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 certification of the applying facility is issued, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified.

The undersigned Applicant 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: Matthew Johnson Title: Director of Asset Management

Matt Johnson

State of New York County of Warren

On this, the <u>9</u><u>H</u> day of <u>October</u>, 2017, before me a notary public, the undersigned officer, personally appeared <u>Mathematication</u>, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained. In witness hereof, I hereunto set my hand and official seal.

Notary Public Bunda Schemechoin

BRENDA J SCHERMERHORN NOTARY PUBLIC, State of New York Reg. No. 01SC6169934 Qualified in Saratoga County My Commission Expires July 2, 2019

PART V. CONTACTS

| 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 Operato | r (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 Cor | ntact (responsible for LIHI Program requirements): | |
| Name and Title | Daniel Daoust, Compliance Specialist | |
| Company | Brookfield Renewable | |
| Phone | 315-598-6131 | |
| Email Address | Daniel.Daoust@brookfieldrenewable.com | |
| Mailing Address | 33 West First Street South, Fulton, NY 13069 | |
| Party responsible | le for accounts payable: | |
| 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 | |

FACILITY CONTACTS FORM

1. Applicant must identify the most current and relevant state, federal, provincial, and tribal resource agency contacts (copy and repeat the following table as needed).

| Agency Contact (Check area of responsibility: Flows_X_, Water Quality _X_, Fish/Wildlife | | | |
|--|---|--|--|
| Resources X_, V | Resources X_, Watersheds, T/E Spp, Cultural/Historic Resources, Recreation X_): | | |
| Agency Name | New York State Department of Environmental Conservation | | |
| Name and Title | Ian Blackburn | | |
| Phone | 607-753-3095 | | |
| Email address Ian.blackburn@dec.ny.gov | | | |
| Mailing Address 1285 Fisher Avenue, Cortland, NY 13045 | | | |

Oswego Falls Project Recertification Application

| Agency Contact (Check area of responsibility: Flows_, Water Quality _, Fish/Wildlife | | | |
|--|---|--|--|
| Resources, Wa | Resources, Watersheds, T/E SppX_, 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 <u>Nick.Conrad@dec.ny.gov</u> | | | |
| Mailing Address 625 Broadway, Albany, NY 12233-4757 | | | |

| Agency Contact | Agency Contact (Check area of responsibility: Flows_, Water Quality _, Fish/Wildlife | | |
|---|--|--|--|
| Resources, Wa | atersheds, T/E SppX_, 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_, Water Quality _, Fish/Wildlife | | | | |
|--|---|--|--|--|
| Resources, Wa | atersheds, 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 | | | |

APPENDICES

APPENDIX A

PHOTOS OF KEY PROJECT FEATURES



Figure 1. Downstream view of the Oswego Falls East (right) and Oswego Falls West (left) developments at Upper Fulton Dam/Lock 2.

APPENDIX B

PROJECT MAPS AND AERIALS







OSWEGO FALLS EAST AND WEST PROJECT BOUNDARIES



OSWEGO FALLS EAST AND WEST PROJECT BOUNDARIES



APPENDIX C

CONSULTATION REGARDING 401 WATER QUALITY CERTIFICATE

Brookfield

Brookfield Renewable Erie Boulevard Hydropower, L.P. 33 West 1st Street South Fulton, New York 13069 Tel 315.593.3118 Fax 315.598.4831 www.brookfieldrenewable.com

May 12, 2017

Mr. Ian Blackburn New York State Department of Environmental Conservation 615 Erie Boulevard West Syracuse, NY 13204

Subject: Oswego River Hydroelectric Projects (FERC Nos. 5984 & 2474) Low Impact Hydropower Institute Re-certification Water Quality Certificate Verification

Dear Mr. Blackburn:

Erie Boulevard Hydropower, L.P. (Erie) is applying for Low Impact Hydropower Institute (LIHI) re-certification for the Oswego Falls (FERC No. 5984) and Oswego River (FERC No. 2474) projects. These projects are comprised of five hydroelectric developments located at four dams along the Oswego River. From upstream to downstream, these developments are the Oswego Falls East and West, Fulton, Minetto, and Varick developments. The Oswego Falls East and West developments (River Mile [RM] 12.6 – Lock 2) and Fulton development (RM 11.6 – Lock 3) are located in the City of Fulton at the Upper Fulton dam and Lower Fulton dam, respectively. The Minetto Development (RM 1.4 – Lock 7) is located at the Varick dam in the City of Oswego. LIHI requires that the re-certification application include confirmation that the subject projects are in compliance with conditions issued pursuant to Clean Water Act Section 401 water quality certifications issued for the projects, and that the previously issued water quality certificates are still valid.

Erie is requesting confirmation from the New York State Department of Environmental Conservation stating that the 401 Water Quality Certificates issued for the operation of the Oswego River Projects on August 25, 2006 and October 4, 2004 are 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) 598-6131 or by email at <u>daniel.daoust@brookfieldrenewable.com</u>.

Sincerely,

G. Dami

Daniel Daoust North Atlantic Operations

cc: I. Borlang (Erie)

APPENDIX D

AGENCY CONSULTATION REGARDING RARE, THREATENED, AND ENDANGERED SPECIES

Brookfield Renewable Erie Boulevard Hydropower, L.P. 33 West 1st Street South Fulton, New York 13069 Tel 315.593.3118 Fax 315.598.4831 www.brookfieldrenewable.com

May 12, 2017

Mr. Nick Conrad New York State Department of Environmental Conservation New York Natural Heritage Program 625 Broadway, 5th Floor Albany, NY 12233-4757

Subject: Oswego River Hydroelectric Projects (FERC Nos. 5984 and 2474) Threatened and Endangered Species Consultation

Dear Mr. Conrad:

Erie Boulevard Hydropower, L.P. (Erie) is the owner, operator, and licensee of the Oswego Falls (FERC No. 5984) and Oswego River (FERC No. 2474) projects. These projects are comprised of five hydroelectric developments located at four dams along the Oswego River. From upstream to downstream, these developments are the Oswego Falls East and West, Fulton, Minetto, and Varick developments. The Oswego Falls East and West developments (River Mile [RM] 12.6 – Lock 2) and Fulton development (RM 11.6 – Lock 3) are located in the City of Fulton at the Upper Fulton dam and Lower Fulton dam, respectively. The Minetto Development is located in the Town of Minetto at the Minetto dam (RM 5.1 – Lock 5). The Varick Development (RM 1.4 – Lock 7) is located at the Varick dam in the City of Oswego.

As a matter of background, Federal Energy Regulatory Commission (FERC) licenses for the projects were issued according to the schedule below:

- Oswego Falls Project (Oswego Falls East and West developments) March 15, 1996
- Oswego River Project (Fulton, Minetto, and Varick developments) November 30, 2004

Project operations and environmental protection measures at these projects 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 2004. The licensing processes for these projects included consultation with resource agencies regarding threatened and endangered species.

Erie is presently working with the Low Impact Hydropower Institute (LIHI) to recertify the Oswego River developments as low impact projects. 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 projects.

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. The project location coordinates have been provided below, as well as on the enclosed maps.

Mr. Nick Conrad May 12, 2017 Page 2 of 2

- Oswego Falls East...... Latitude: 43.3147; Longitude: -76.4158
- Oswego Falls West Latitude: 43.3147; Longitude: -76.4158
- Fulton.....Latitude: 43.3241; Longitude: -76.4198
- Minetto.....Latitude: 43.4; Longitude: -76.4725
- Varick.....Latitude: 43.45; Longitude: -76.5042

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) 598-6131.

Sincerely,

G. Daous

Daniel Daoust North Atlantic Operations

Enclosure



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 I F: (518) 402-8925 www.dec.ny.gov

June 14, 2017

Daniel Daoust Brookfield Renewable Erie Boulevard Hydropower, L.P. 33 West 1st Street South Fulton, NY 13069

Re: Oswego River Hydroelectric Projects (FERC Nos. 5984 and 2474) County: Oswego Town/City: City Of Fulton, City Of Oswego, Granby, Lysander, Minetto, Schroeppel, Volney

Dear Mr. Daoust:

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

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

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.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the animals identified in the enclosed report may result in this project requiring additional review or permit conditions. 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 7 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.



Sincerely,

Nich Como

Nicholas Conrad Information Resources Coordinator New York Natural Heritage Program



Department of Environmental Conservation New York Natural Heritage Program



Report on State-listed Animals

The following state-listed animals have been documented within the Oswego River project boundaries or in their vicinities.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for the project, contact the Permits staff at the NYSDEC Region 7 Office. For information about potential impacts of the project on these species, and how to avoid, minimize, or mitigate any impacts, contact the Wildlife Manager or Fisheries Manager. A listing of Regional Offices is at http://www.dec.ny.gov/about/558.html.

| COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | FEDERAL LISTING | |
|--|--|--|---|-------|
| | | | | |
| Lake Sturgeon | Acipenser fulvescens | Threatened | | 923 |
| This stretch of the Oswego River Oswego River Significant Coasta information, see www.dos.ny.gov | is also part of state-significant waterfo I Fish and Wildlife Habitat, as designat /opd/programs/consistency/Habitats/G | owl winter concentration ed by the NYS Departmen reatLakes/Oswego_River. | area , and is part of the ht of State. For more pdf. | |
| | | | | |
| Bald Eagle Nesting | Haliaeetus leucocephalus | Threatened | | 14914 |
| - | | | | |
| | | | | |
| I. | | | | |
| | | | | |
| Indiana Bat Maternity roosts and non-winter capture loca | Myotis sodalis tions | Endangered | Endangered | 12153 |

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. 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.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.



United States Department of the Interior

FISH AND WILDLIFE SERVICE New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9349 Phone: (607) 753-9334 Fax: (607) 753-9699 http://www.fws.gov/northeast/nyfo/es/section7.htm



In Reply Refer To: Consultation Code: 05E1NY00-2017-SLI-3401 Event Code: 05E1NY00-2017-E-09741 Project Name: Oswego Falls East and West September 17, 2017

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 13045-9349 (607) 753-9334

Project Summary

| Consultation Code: | 05E1NY00-2017-SLI-3401 |
|----------------------|---|
| Event Code: | 05E1NY00-2017-E-09741 |
| Project Name: | Oswego Falls East and West |
| Project Type: | DAM |
| Project Description: | LIHI application- recertification. No changes at Project. |
| Project Location: | |

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.272697866117234N76.38964310836252W



Counties:

Onondaga, NY | Oswego, NY

Endangered Species Act Species

There is a total of 4 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. 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.

Mammals

| NAME | STATUS |
|--|------------|
| Indiana Bat <i>Myotis sodalis</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. | Endangered |
| Species profile: <u>https://ecos.fws.gov/ecp/species/5949</u> | |
| Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. | Threatened |
| Species profile: <u>https://ecos.fws.gov/ecp/species/9045</u> | |
| Reptiles | |
| NAME | STATUS |
| Bog Turtle <i>Clemmys muhlenbergii</i> Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/6962</u> Species survey guidelines: <u>https://ecos.fws.gov/ipac/guideline/survey/population/182/office/52410.pdf</u> | Threatened |
| Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/182/office/52410.pdf | |
| Eastern Massasauga (=rattlesnake) Sistrurus catenatus No critical habitat has been designated for this species. | Threatened |

Species profile: https://ecos.fws.gov/ecp/species/2202

Critical habitats

There are no critical habitats within your project area under this office's jurisdiction.