119 FERC ¶ 62,070
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Erie Boulevard Hydropower, L.P. Project No. 2482-068

ORDER AMENDING LICENSE AND REVISING ANNUAL CHARGES

(Issued April 24, 2007)

On June 8, 2006, Erie Boulevard Hydropower, L.P. (Erie), licensee for the Hudson River Hydroelectric Project, FERC No. 2482, filed an application to amend its license to reflect upgrades and new turbines, which would increase the total installed capacity by 10.66 megawatts (MW), from 73.2 to 83.86 MW. The Hudson River Project consists of the Sherman Island and Spier Falls developments, and is located on the Hudson River, in Saratoga and Warren Counties, New York.

BACKGROUND

A new license was issued on September 25, 2002.[1]

The Spier Falls development includes: (1) three concrete gravity dams measuring 52, 553, and 306 feet in length with spillways and a maximum height of 145 feet; (2) a reservoir with a 638-acre surface area; (3) a forebay canal; (4) two intake structures; (5) two penstocks; and (6) a powerhouse containing two turbine/generators with rated capacities of 6.8 MW and 37.6 MW, respectively. There is no bypassed reach. Water is discharged from the powerhouse directly into the backwater of the Sherman Island reservoir.

The Sherman Island Development includes: (1) a 1,533-foot-long buttressed and gravity dam with a spillway and with a maximum height of 38 feet at the spillway section and 67 feet at the non-overflow section; (2) a reservoir with a 305 acre surface area; (3) a forebay; (4) an intake structure with a power canal and 15 penstocks; and (5) a powerhouse with four turbine/generators with installed capacities of 7,200 kW each. There is a 4,000-foot-long bypassed reach between the dam and the powerhouse. Water from the powerhouse is discharged directly into the backwater of the Feeder Dam reservoir.

[1] *See* Erie Boulevard, Order Issuing New License, 100 FERC ¶ 61,317 (2002).

PROPOSED AMENDMENT

Erie is proposing to amend its license to add capacity at the project to generate an estimated additional 27,702 megawatt hours (MWh) of electricity annually, and to qualify for renewable energy production incentive (Energy Policy Act of 2005 § 2002). To the Sherman Island development, Erie is proposing to: (1) replace the unit 4 Francis turbine runner in the existing powerhouse to increase turbine horse power output to match and maintain the existing generator capacity at 7.2 megawatts (MW); (2) install a new mixed flow propeller and associated generator in the unused No. 1 bay of the existing powerhouse for a generating capacity of 9.5 MW; and (3) construct a new concrete powerhouse at the existing dam, measuring about 30 feet long by 20 feet wide, with an average height of 33.5 feet from operating floor to contain a new minimum flow unit 6 at the dam with a generating capacity of 1.2 MW. The total proposed incremental increase in use of river flow would be approximately 2,274 cfs or 14.8 percent. The proposed changes would increase the total generating capacity of the Sherman Island Development from 28.8 to 39.46 MW.

Installation of the new unit 6 minimum flow turbine would require construction activities in the area just downstream of the non-overflow section of the Sherman Island dam. Erie proposes that construction activities would include the placement of a cofferdam and access road, construction of a small new powerhouse, and tailrace excavation. Erie proposes that the installation of the new unit 1 and the upgrade of unit 4 would take place entirely within the existing powerhouse. In addition, Erie proposes to seal off the new units from the river and to dewater their respective bays during installation.

Erie is also proposing to accelerate the implementation of the 1-inch trashracks and 25-cfs fish movement flow at the upstream Spier Falls Development from 2010 to 2008.

Finally, to mitigate the effects of its amendment, Erie proposes to implement a soil erosion plan, a revised water level and flow monitoring plan, and to increase the minimum flow.

In accordance with § 4.38(a) of the Commission's regulations, Erie consulted with the appropriate resource agencies before filing the amendment application. In addition, Erie solicited comments from the signatories to the Upper Hudson-Sacandaga River Offer of Settlement, issued on September 25, 2002.[2]

[2] *See*, Order Approving Offer Of Settlement, 100 FERC ¶ 61,321 (2002). New York State Department of Environmental Conservation, Adirondack Park Agency, US Department of the Interior, Adirondack Board Sailing Club, Adirondack Council, Adirondack Mountain Club, Adirondack River Outfitters, Inc, American Rivers,

On July 5, 2006, the Commission issued a public notice of the amendment application. The notice set August 7, 2006, as the deadline for filing protests and motions to intervene. Timely motions to intervene were filed by New York State Department of Environmental Conservation (NYSDEC), United States Department of the Interior (FWS), Adirondack Mountain Club (ADK), Indeck-Corinth, LLC (Corinth), and jointly, Fourth Branch Associates and Adirondack Hydro Development Corporation (Downstream Licensees). None of the intervenors oppose the amendment.

Staff considered all of the comments filed on the draft EA in preparing the final EA, which is attached to this order.

STATUTORY REQUIREMENTS

A. Water Quality Certification

Under section 401(a)(1) of the Clean Water Act (CWA),[3] the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.[4]

On September 29, 2006, the NYSDEC amended its February 5, 2002 certification as it relates to the licensee's proposed changes to the Hudson River Project. The amended measures include sediment and erosion control as well as pollution control during the proposed construction activities, and fish protection measures for the minimum flow unit. The certification amendment is included in Appendix A of this order.

American Whitewater, Association for the Protection of the Adirondacks, EPCOR, Feeder Canal Alliance, Fulton County, Great Sacandaga Lake Association, Great Sacandaga Lake Fisheries Federation, Great Sacandaga Lake Marinas, Hudson River Rafting Co., Hudson River/Black River Regulating District, National Park Service, United States Department of the Interior Fish and Wildlife Service, New York Rivers United, New York State Conservation Council, United States Environmental Protection Agency, National Marine Fisheries Service, US Army Corps of Engineers, National Audubon Society, New York State Office of Parks, Recreation and Historic Preservation, Trout Unlimited, Sacandaga Outdoor Center, Saratoga County, Town of Hadley, and W.I.L.D.W.A.T.E.R.S, among others.

[3] 33 U.S.C. § 1341(a)(1) (2000).

[4] 33 U.S.C. § 1341(d) (2000).

B. Section 18 Fishway Prescriptions

Section 18 of the FPA (16 U.S.C. § 811) states that the Commission shall require the construction, operation and maintenance by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. Interior's authority to prescribe fishways was reserved in Article 408 of the license. No fishway has been prescribed.

C. Essential Fish Habitat

The Fishery Conservation and Management Act (16 U.S.C. 1801) requires federal agencies to promote the protection of essential fish habitat in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. Essential fish habitat includes those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity. Essential fish habitat is protected at the project by license article 401, which requires the licensee to monitor minimum flows and reservoir elevations at the Sherman Island development.

D. Threatened and Endangered Species

Section 7(a) (2) of the Endangered Species Act of 1973 (16 U.S.C. § 1536(a)) requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of federally listed threatened or endangered species, or result in the destruction or adverse modification of their designated critical habitat. By letter filed December 15, 2006, the FWS stated that no Karner blue butterflies or potential habitat were identified in the project area. It further stated that no other federally listed or proposed endangered or threatened species under its jurisdiction are known to exist in the project action area.

E. National Historic Preservation Act

Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 (f)) requires consultation with the State Historic Preservation Officer (SHPO) regarding the status and potential impacts to culturally and historically significant properties.

The licensee currently has a Programmatic Agreement[5] and an approved Cultural Resources Management Plan (CRMP).[6] Prior to initiating construction activities, the

[5] The Programmatic Agreement was executed on July 19, 1996, and amended on May 31, 2002, between the Commission, the New York State Historic Preservation Officer, and the Advisory Council on Historic Preservation.

[6] *See* 111 FERC ¶ 62,250 (June 3, 2005).

licensee proposes to perform the requisite consultation with the SHPO, the Bureau of Indian Affairs and the St. Regis Mohawk Tribe pursuant to Section 4.3 of the CRMP regarding aspects of the upgrade that fall outside of the compendium of categorical exclusions.

F. Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j)(1) of the FPA (16 USC §803(j)(1)) requires the Commission, to include conditions based on the recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. § 661, *et seq.*) for the protection and enhancement of fish and wildlife and their habitat affected by the project. The recommendations of the fish and wildlife agencies for the Hudson River Project are reflected in the September 29, 2006, revised water quality certification issued by the NYSDEC. In response to our public notice, Interior commented that it participated in consultation with the licensee and other parties during the development of the amendment application. The recommended mitigation measures became conditions of the revised water quality certification, which will become part of the license. Interior stated that it has no objection to the issuance of an amendment to the license provided all of the recommended mitigation measures are incorporated into the license. Staff concurs with these recommendations.

J. Comprehensive Plans

Section 10(a)(2)(A) of the FPA (16 U.S.C. § 803(a)(2)) requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Federal and state agencies filed 29 qualifying comprehensive plans, of which we identified three federal and six state comprehensive plans that are applicable. Federal and state agencies filed 29 qualifying comprehensive plans, of which we identified three federal and six state comprehensive plans that are applicable. We did not find any inconsistencies with the amendment application and the applicable comprehensive plans.

CORINTH

In its August 4, 2006 comments, Corinth[7] states that the proposed changes could adversely affect its project operations. Corinth owns and operates a 131.5 MW gas-fired generating facility located about 5 miles upstream of the Spier Falls Dam. Its operations depend on the ability to draw water from the Hudson River in order to operate and cool the plant. The cooling water is taken through an intake pipe located about 10 feet below the surface of the Hudson River upstream of Spier Falls reservoir. A drawdown of 9 feet

[7] Corinth was not a signatory to the Upper Hudson-Sacandaga River Offer of Settlement.

at the Spier Falls Dam would severely impact the operations at Corinth's Plant. Corinth expressed concerns that any action that would cause the drawdown of the Spier Falls reservoir below 428.85 feet above mean sea level would affect Corinth's ability to withdraw water from the river to cool their gas-fired power generating facility. Corinth requests that the Commission consider adding a condition to Erie's license to protect its ability to withdraw water.

Corinth's concern is associated with the Spier Falls Dam,[8] and this amendment pertains to the Sherman Island Development which is 3 miles downstream of the Spier Falls Development and 8 miles downstream of Corinth's gas fired facility. Erie's proposal involves no changes in the reservoir levels at Sherman Island and no changes in the Hudson River project's operation, which will continue to operate as a peaking facility (not run-of-river). Construction of the proposed powerhouse for the minimum flow unit and installation of the additional turbines at the existing powerhouse will occur only at the Sherman Island dam and reservoir, of which the normal water surface elevation is 353.3 feet NGVD. The reservoir elevation at the upstream Spier Falls development will not be affected by this proposed action because the headpond of the Sherman Island Dam is the tailrace of the Spier Falls development, and the construction work would be done at the toe of the Sherman Island Dam. Corinth's ability to withdraw cooling water and generate power will not be affected. The Commission will not entertain inclusion of conditions that are unrelated to the proposed application. Therefore, there is no need, as a result of this amendment, to include a condition restricting the drawdown of the Spier Falls reservoir.

FOURTH BRANCH AND ADIRONDACK HYDRO

In their Motion to Intervene and Protest, filed August 7, 2006, Fourth Branch and Adirondack commented that the proposed amendment would adversely affect the operations at their respective projects, or would impair their ability to comply with their minimum flow and other license obligations. In addition, they stated that they were not included on the service list or the settlement agreement, and were not properly consulted regarding the proposed amendment.

In its August 21, 2006 response, Erie stated that Fourth Branch's and Adirondack's requests for further consultation is unnecessary because the amendment proposal will not change the overall existing operating regime and provision of base flow at Erie's downstream Feeder Dam Project (FERC No. 2554) located 7 miles downstream

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[8] By letter dated July 21, 2006 the licensee proposed plans to address Part 12 D report and performing activities that may require a 9-foot draw down at the Spier Falls impoundment to elevation 427.8 feet.

of the Spier Falls Development.

The proposed license amendment application would increase the total hydraulic capacity of the Sherman Island development from 6,390 cfs to 8,914 cfs (an increase of 2,524 cfs). However, the proposed increase in the hydraulic capacity of the project is non-consumptive; the additional hydraulic capacity would only be used as flows in the river are available. The proposed changes will not alter the existing operational regime authorized in the new license. Additionally, the proposed amendment will not change the existing operating regime and provision of baseflow at the downstream Feeder Dam project.

During construction of the minimum flow unit 6 powerhouse, the licensee proposes to release the required minimum flow via the pneumatic flashboards on the south end of the dam. After the minimum flow unit is installed, the licensee proposes to release minimum flows through the turbine increasing the release from 250 cfs to 314 cfs (an increase of 64 cfs or 26 percent). With an increase in discharge through the minimum flow turbine, a corresponding decrease in flow would occur at the Sherman Island powerhouse to ensure that the total amount of water passing through the project remains compliant with the operating requirements.

Construction of the proposed powerhouse for the addition of a minimum flow turbine will require the installation of a cellular cofferdam with a height of 360.35 feet placed directly in front of the Sherman Island dam. In addition, a sheet pile cofferdam would surround the immediate construction area of the new powerhouse to provide a temporarily dry work area.

The proposed license amendment will not impact downstream projects. Fourth Branch Associates, licensee for the Mechanicville Project (FERC No. 6032), and Adirondack Hydro, licensee for the Northumberland (FERC No. 4244) and Waterford (FERC No. 10648) projects commented that the proposed amendment will decrease the amount of flow available to them for production. The licensee's project operation will continue as previously approved and therefore, will not affect the Mechanicville Project located 44 miles downstream, the Northumberland project located 24 miles downstream or the Waterford Project located 48 miles downstream. In addition, the Northumberland and Waterford projects were not constructed and were terminated by an order issued August 18, 2006.[9]

OTHER ISSUES

The EA evaluates the environmental effects of the proposal and identifies environmental issues in relation to erosion, aquatic resources and habitats and stream

[9] *See* Order Terminating Licenses, 116 FERC ¶ 62,143 (August 18, 2006).

flows. In order to mitigate or reduce these impacts, or to monitor potential impacts, staff recommendations are included as conditions in this order, which are discussed below.

Erosion

The EA states that approval of the proposed action may cause only short-term, minor impacts to geology, soils and vegetation during the construction of the new minimum flow powerhouse. These impacts may include increased soil erosion and compaction and the removal of vegetation in the laydown and road access areas. Additionally, construction activities such as placement of a coffer dam, tailrace excavation, and the operation of heavy equipment necessary for constructing the minimum flow powerhouse could cause minor, short-term impacts to water quality through increased sedimentation. Both the water quality certification and the standard license article 19, require the licensee to employ erosion and sediment control measures during the proposed construction activities and to re-vegetate any disturbed lands after construction is complete. The licensee is required to submit an erosion and sediment control plan, for Commission approval, prior to commencing construction activities to ensure the protection of geology, soils, vegetation and water quality, during construction of the new minimum flow powerhouse, as directed in paragraph (K) of this order. Implementation of the Commission approved erosion and sediment control plan should minimize any adverse impacts to water quality and aquatic resources.

Aquatic Resources and Habitats

The EA indicates that the proposed runner upgrades and installation of new turbines in the Sherman Island powerhouse may cause minor, short-term impacts to aquatic resources and habitats. The placement of a coffer dam and the tailrace excavation necessary for constructing the minimum flow powerhouse may cause a temporary loss of habitat and increased disturbance to aquatic resources. In addition, the movement of fish through the project would be inhibited during construction and after the additional turbines have been installed. During construction, the licensee proposes to continue to fulfill the requirements of license article 404 for fish protection and downstream movement and article 405 for minimum flows, as discussed in section 5.1.6 of the EA. Many measures to mitigate impacts to fish, after the turbines have been installed, have been incorporated in the September 29, 2006, revised water quality certification. The continuation of fish protection and minimum flows during construction, the installation of trash racks and the minimization of approach velocities at the intakes should help to protect the diverse assemblage of fish found at the project.

Stream Flows

Due to the proposed addition of new turbines and runner upgrades, the increase in minimum flows and the changes in the distribution of the minimum flow between the two

bypass channels, the licensee has proposed to file a revised Streamflow and Water Level Monitoring Plan, under license article 401, upon completion of the proposed actions and after consultation with the resource agencies. The licensee proposes to modify the plan to: a) identify the minimum flow unit as the primary means of providing the 314 cfs instream flow; b) ensure that a desired distribution of the 314 cfs between the north and south is achieved when provided via the minimum flow unit; and c) ensure that this distribution and/or minimum flow rates in each channel are functionally maintained whether provided via the minimum flow unit or via pneumatic flashboards. We recommend that the revised plan be filed with the Commission, for approval, within 18 months of commencing operation of the new turbines or by July 1, 2008, whichever comes first, as directed in paragraph (M) of this order.

In order to determine the appropriate distribution of the minimum flow between the north and south bypass channels, the licensee should file, for Commission approval, a report showing the results of the minimum flow bypass verification analysis, as directed in paragraph (O) of this order. The report should be filed with the Commission within 18 months of the in-service date of the minimum flow unit or by July 1, 2008, whichever comes first. The licensee should consult with the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service and should allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the report with the Commission. Based on the report, changes may be required to the submerged weir dividing the minimum flow release between the north and south bypass channels. Thus, the Commission should reserve its authority to require that the licensee file a revised Minimum Flow Release Structure Plan under license article 405(d), for Commission approval.

ADMINISTRATIVE CONDITIONS

Installed Capacity and Annual Charges

In the filing, Erie provided the existing and proposed installed and hydraulic capacities of the units, as shown in Table 2.

Table 2

Units	**Existing Installed Capacity (MW)**	**Proposed Installed Capacity (MW)**	**Existing Hydraulic (cfs)**	**Proposed Hydraulic Capacity (cfs)**
New 1	0	9.5	0	2,000
2	7.2	7.2	1,650	1,650
3	7.2	7.2	1,650	1,650

Units	Existing Installed Capacity (MW)	Proposed Installed Capacity (MW)	Existing Hydraulic (cfs)	Proposed Hydraulic Capacity (cfs)
4 New runner	7.2	7.2	1,440	1,650
5	7.2	7.2	1,650	1,650
New 6	0	1.16	0	314
Total	28.8	39.46	6,390	8,914

The new unit 1 to be installed in the unused No. 1 bay at the existing powerhouse will have an installed capacity of 9.5 MW, and a hydraulic capacity of 2,000 cfs. The upgrade of the runner unit 4 in the existing powerhouse will increase the turbine output, but would maintain the existing generator capacity at 7.2 MW. The hydraulic capacity will increase by 210 cfs, from 1,440 cfs to 1,650 cfs. Therefore, at the existing powerhouse, the total turbine discharge will increase by 2,210 cfs. There are no proposed changes to units 2, 3 and 5, which would remain at the authorized capacity of 7.2 MW each, with an associated hydraulic capacity of 1,650 cfs each. The new powerhouse at the dam will contain a new 1.16-MW (unit 6) minimum flow unit with a hydraulic capability of 314 cfs. The total installed capacity of the Sherman Island Development will increase from 28.8 MW to 39.46 MW, and the combined hydraulic capacity will increase from 6,390 cfs to 8,914 cfs. The proposed changes will result in an additional 2,524 cfs going through the project turbines. However, since 250 cfs of the 314 cfs that would pass through the minimum flow unit is presently provided through the pneumatic flashboards, the total incremental increase in use of river flow is about 2,274 cfs. This increase in hydraulic capacity will not change the overall existing operational regime authorized in the new license, nor will it change the existing operating regime and provision of baseflow at the downstream Feeder Dam Project.

This order will approve the changes proposed by Erie, and revises the authorized installed capacity of the Hudson River Project from 73.2 MW to 83.86 MW. Therefore, we are revising Article 201 of the license regarding annual charges for the purpose of reimbursement to the United States for the costs of administration of Part I of the Federal Power Act (FPA). In accordance with 18 CFR §11.1(c)(5), the annual charges for the project will be based on an installed capacity of 83.86 MW, effective on the date of commencement of construction of the proposed capacity, as directed in paragraph (E) of this order. As such, we are requiring the licensee to report the date of commencement of construction of the proposed units, within 30 days of such date; we will use the commencement date to further revise the annual charges under Article 201, as directed in paragraph (G) of this order.

Construction Schedule

We are requiring the licensee to file a schedule for Commission approval for its construction of the new powerhouse and new units as directed in ordering paragraph (F) of this order.

Revised Exhibits

Erie filed with the application a revised Exhibit A – Project Description, describing the project features, including the changes in the Sherman Island Development and proposed powerhouse. The revised Exhibit A conforms to the Commission's rules and regulations and is approved by this order, as directed in paragraph (C) of this order. This order will revise the project description in the license to reflect the proposed changes to the project, as directed in paragraph (D) of this order.

On June 9, 2006, Erie included four revised Exhibit F drawings for approval with the Commission. The revised Exhibit F drawings reflect the proposed changes to the project, conform to the Commission's rules and regulations, and are approved by this order, as directed in paragraph (H) of this order. Erie is required to file aperture cards of the approved drawings, as directed in paragraph (I) of this order. In the filing, Erie indicates that the proposed upgrades will not change the current Exhibit G drawings. Therefore, no revised Exhibit G drawings were filed with the application. We are requiring the licensee to coordinate with the Commission's New York Regional Office (NYRO) for the construction work, as directed in paragraph (J) of this order. In addition, this order requires the licensee to submit, after completion of construction, revised Exhibits A and F, as needed, describing and showing the characteristics of the as-built conditions of the powerhouse and generating units, as directed in paragraph (L) of this order.

SUMMARY

Erie's proposal would increase the project's existing installed capacity from 73.2 MW to 83.86 MW, and its annual generation from 139,944 megawatt-hours (MWh) to 167,646 MWh, or an increase of 27,702 MWh of renewable electricity annually. For the reasons stated above, we conclude that issuance of this order, may cause only short-term, minor impacts to geology, soils and vegetation during the construction of the new minimum flow powerhouse. Additionally, construction activities such as placement of a cofferdam, tailrace excavation, and the operation of heavy equipment necessary for constructing the minimum flow powerhouse could cause minor, short-term impacts to water quality through increased sedimentation. Based on the EA, we conclude that approval of the proposed action would not constitute a major federal action significantly affecting the quality of the human environment.

The Director orders:

(A) The license for the Hudson River Hydroelectric Project No. 2482 is amended as provided by this order, effective the first day of the month in which this order is issued.

(B) The licensee's request to amend the license to increase the installed capacity of the Sherman Island Development by replacing the turbine runner (Unit 4), and to install a new unit in the empty bay (Unit 1) in the existing powerhouse, and to construct a new minimum flow turbine (Unit 6) and associated powerhouse, penstock and tailrace at the dam, as described in the amendment application filed on June 8, 2006, is approved.

(C) The Exhibit A, entitled General Project Description, filed with the application on June 8, 2006, is approved and made part of the license.

(D) Ordering paragraph B(2) of the license is revised, in part, as follows:

Sherman Island:"…..(i) a powerhouse containing four existing 7.2-MW generating units and a new (Unit 1) 9.5-MW unit; (j) a new proposed powerhouse located downstream of the dam that would contain a new 1.16-MW minimum flow unit; (k) a new penstock measuring about 200 feet long and 7 feet in diameter that conveys flows to the new powerhouse; (l) a new intake that would be equipped with ¾-inch clear spaced trashracks; (m) a new excavated tailrace about 12 feet wide by 50 feet long out into the pooled area of the bypassed reach below the existing dam and new powerhouse; and (n) appurtenant facilities".

(E) Article 201 of the license is amended to read:

For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable annual charge as determined by the Commission in accordance with the provisions of its regulations in effect from time to time. The authorized installed capacity for that purpose is 83.86 MW, effective on the date of commencement of construction of the proposed capacity.

(F) Within 6 months of the issuance date of this order, the licensee shall file for Commission approval a revised schedule for construction of the proposed addition to the project. The licensee must coordinate its proposed work with the Commission's New York Regional Office.

(G) The licensee must report the date of commencement of construction of the proposed generating units, within 30 days from such date. This information will be used to further revise the annual charges under Article 201 of the license.

(H) The following revised Exhibit F drawings, filed on June 9, 2006, conform to the Commission's rules and regulations, and are approved and made a part of the license. The superseded drawings are eliminated from the license.

EXHIBIT No.	FERC DRAWING No.	DRAWING TITLE	SUPERSEDED DRAWING No.
F-3	2482-1016	Sherman Island Development General Plan and Details of Headrace	2482-1013
F-4	2482-1017	Sherman Island Development Plan, Elevation and Sections Spillway and Dam	2482-1014
F-5	2482-1018	Sherman Island Development Plan, Elevation and Sections Intake and Powerhouse	2482-1009
F-6	2482-1019	Sherman Island Development Spillway Rubber Dam & Sections, Minimum Flow Section	2482-1015

(I) Within 45 days of the date of issuance of this order, the licensee shall file the approved exhibit drawings in aperture card and electronic file formats.

a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Drawing Number (i.e., P-2482-1016 through 2482-1019) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (i.e., F-3 through F-6), Drawing Title, and date of this order shall be typed on the upper left corner of each aperture card. See Figure 1.

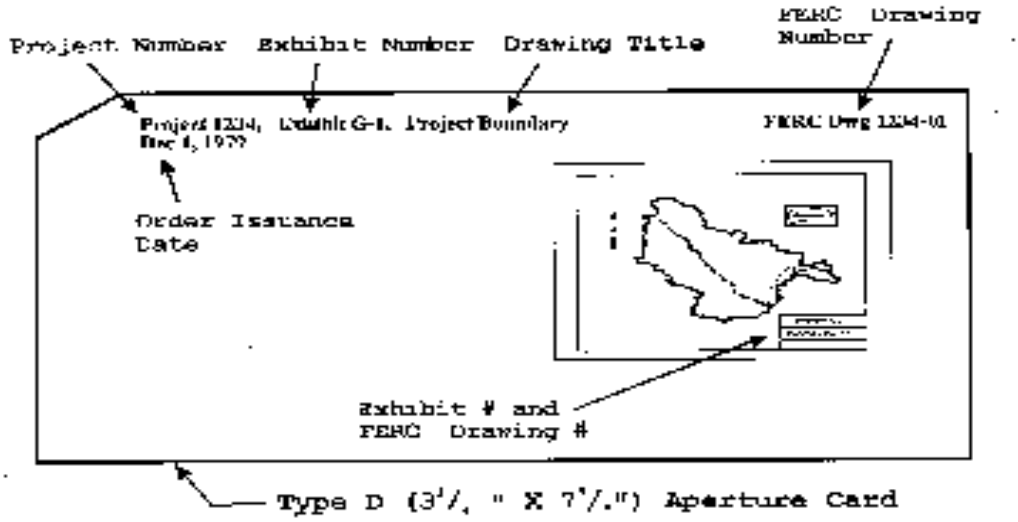

Figure 1 Sample Aperture Card Format

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office.

The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections New York Regional Office. Exhibit F drawings must be identified as **(CEII) material under 18 CFR § 388.113(c).** Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this order, and file extension in the following format [P- 2482-1016, F-3, Sherman Island Development General Plan and Details of Headrace, MM-DD-2006.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file
FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4
RESOLUTION – 300 dpi desired, (200 dpi min.)
DRAWING SIZE FORMAT – 24" X 36" (min), 28" X 40" (max)
FILE SIZE – less than 1 MB desired

(J) The licensee shall, at least 60 days prior to the start of construction, submit one copy to the Commission's New York Regional Director and two copies to the Commission (one of these shall be courtesy copy to the Director, Division of Dam Safety and Inspections), of the final contract drawings and specifications for the proposed work including design and construction of the cofferdam. The Commission may require changes in the plans and specifications to assure a safe and adequate project. If the licensee plans substantial changes to location, size, type, or purpose of the proposed work, the plans and specifications must be accompanied by revised Exhibit F and G

drawings, as necessary.

(K) The licensee shall, at least 60 days prior to the start of construction, submit one copy to the Commission's New York Regional Director and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of the Quality Control and Inspection Program (QCIP) for the Commission's review and approval. The QCIP shall include a sediment and erosion control plan for construction activities. The sediment and erosion control plan at a minimum shall include the following:

(1) a description of the actual site conditions;

(2) a detailed description of measures proposed to control erosion, to prevent slope instability and minimize the quantity of sediments resulting from project construction; and

(3) a specific implementation schedule and the details for any monitoring and site maintenance during project construction.

The licensee shall prepare the plan after consultation with the New York State Department of Environmental Conservation and the US Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation, copies of any comments and recommendations on the plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment before filing the plan with the Commission. If the licensee does not adopt an agency recommendation, the filing shall include the licensee's reasons, based on project specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing activities shall begin until the licensee is notified by the NYRO that the plan has been approved.

(L) Within 90 days from completion of construction of the project and installation of the units, the licensee must submit as-built exhibits A, and F, as needed, describing and showing the characteristics of the as-built conditions of the units.

(M) Within 18 months of commencing operation of the new turbines at the Sherman Island development or by July 1, 2008, whichever comes first, the licensee shall file a revised Streamflow and Water Level Monitoring Plan under license article 401, for Commission approval.

The licensee shall consult with the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service and shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

(N) Upon commencing operation of the minimum flow turbine, license article 405 (b) is amended to read:

(b) "The licensee shall release 314 cubic feet per second (cfs) through the minimum flow turbine. Whenever the minimum flow unit is out of service or is releasing less than 314 cfs, the licensee shall utilize the pneumatic flashboards system to ensure the required minimum flows are released into the bypass reach."

(O) In order to determine the appropriate distribution of the minimum flow between the north and south bypassed channels, the licensee shall file, for Commission approval, a report showing the results of the minimum flow bypass verification analysis. The report shall be filed with the Commission within 18 months of the in-service date of the minimum flow unit or by July 1, 2008, whichever comes first. The licensee shall consult with the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service and shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the report with the Commission. The licensee shall include with the report documentation of agency consultation, copies of comments and recommendations on the completed report after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the report. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information. Based on the report, the Commission reserves the authority to require that the licensee file a revised Minimum Flow Release Structure Plan under license article 405(d), for Commission approval.

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

William Guey-Lee
Chief, Engineering and Jurisdiction Branch
Division of Hydropower Administration
and Compliance

Brookfield Power

New York Operations
Greenfield Parkway, Suite 201
Liverpool, NY 13088

Tel (315) 413-2700 225
Fax (315) 461 -B577
www.brookfieldpower.com

Via Express Mail

October 4, 2006

Hon. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: **Hudson River Project FERC Project No. 2482**
Application For Non-Capacity License Amendment
Submittal of Section 401 Water Quality Certificate

Dear Secretary Salas:

By letter dated June 7, 2006, Erie Boulevard Hydropower, L.P. (Erie) filed with the Commission a non-capacity amendment to the license for the Hudson River Project (FERC No. 2482). As part of that filing Erie indicated that New York State Department of Environmental Conservation (NYSDEC) water quality certification (WQC) for the proposed amendment would be required. Accordingly, Erie submitted its application to the NYSDEC requesting 401 water quality certification on June 7, 2006 concurrent with the filing of the amendment application with the Commission. Erie filed the requisite proof of NYSDEC's receipt of the 401 application by letter dated June 20, 2006. This letter is in follow up to those prior submittals, and accordingly, please find enclosed a copy of the September 29, 2(106 WQC pertaining to the subject license amendment application. Erie respectfully requests that the Commission proceed to issue Erie's requested license amendment and if there are any questions regarding this submittal, please do not hesitate to contact the undersigned at (315) 413-2792.

Very truly yours,

David W. Culligan, P.E.
Licensing Coordinator

Enclosure

cc: Attached Distribution List
M. Fayyad, FERC
T. Hall, NYSDEC
S. Hirscbey, Erie
T. Uncher, Erie
J. Sabattis, KA
W. Madden, Winston and Strewn

SHERMAN ISLAND AMENDMENT
DISTRIBTUION LIST

MR. NEIL HANNON
ADIRONDACK BOARI)~A/LING CLUB
302 STONE CHURCH ROAD
BALLSTON SPA, NY 12020

MR. JOHN DAVIS
ADIRONDACK COUNCIL
103 HAND AVENUE SUITE 3
PO BOX D-2
ELIZABETHTOWN, NY 12932

MS. BETTY LOU BAILEY
ADIRONDACK MOUNTAIN CLUB
4029 GEORGETOWN SQUARE
SCHENECTADY NY 12303

MS. JACQUELINE BAVE
ADIRONDACK MOUNTAIN CLUB
GLENN FALLS CHAPTER
PO BOX2314
GLENS FALLS, NY 12801

MS. JENNIFER CARLO
ADIRONDACK PARK AGENCY
1133 NYS ROUTE 86
PO BOX 99
RAY BROOK, NY 12977

MR. GARY STAAB
ADIRONDACK RIVER OUTFITTERS, INCORPORATED
PO BOX 649
OLD FORGE. NY 13420

MS. ROBBIN MARKS
AMERICAN RIVERS
1025 VERMONT AVENUE NW SUITE 720
WASHINGTON, DC 20005

MR. KEVIN COLBURN
AMERICAN WHITEWATER
328 NORTH WASHINGTON STREET
MOSCOW, ID 83843

MR. DAVID GIBSON
ASSOCIATION FOR THE PROTECTION OF THE ADIRONDACKS
897 ST. DAVIDS LANE
NISKAYUNA, NY 12309

MR. STEVE KONISKY
EPCOR
1902 RIVER ROAD
CASTLETON, NY 12033

MR. CHRISTOPHER REED
FEEDER CANAL ALLIANCE
PO BOX 2414
GLENS FALLS, NY 12801

MR. PASQUALE O'LUCCI
FULTON COUNTY BOARD OF SUPERVISORS
COUNTY OFFICE BUILDING
223 WEST MAIN STREET ROOM 205
JOHNSTOWN, NY 12095

MR. JAMES MRAZ
FULTON COUNTY PLANNING DEPARTMENT
1 EAST MONTGOMERY STREET
JOHNSTOWN, NY 12095

MR. PETER BYRON
GREAT SACANDAGA LAKE ASSOCIATION
BOX 900
NORTHVILLE, NY 12134

MR. RANDY GARDINIER
GREAT SACANDAGA LAKE FISHERIES FEDERATION
PO BOX 991
NORTHVILLE. NY 12134

MR. WALTER RYAN GREAT SACANDAGA LAKE
MARINAS C/O RYAN'S LAKESIDE MARINE PO BOX YY
MAYFIELD, NY 12117

MR. PAT CUNNINGHAM
HUDSON RIVER RAFTING COMPANY
PO BOX 47
NORTH CREEK, NY 12853

MR. ROBERT S. FOLTAN
HUDSON RIVER/BLACK RIVER
REGULATING DISTRICT
350 NORTHERN BLVD.
ALBANY, NY 12204

MR. GLENN LAFAVE
HUDSON RIVER/BLACK RIVER REGULATING DISTRICT
BLACK RIVER OFFICE
145 CLINTON STREET SUITE 102
WATERTOWN, NY 13601

SHERMAN ISLAND AMENDMENT
DISTRIBTUION LIST

MR. DAVID J. MILLER
NATIONAL AUDUBON SOCIETY
200 TRILLIUM LANE
ALBANY, NY 12203

MR., MIKE MURPHY
NATIONAL GRID
300 ERIE BLVD WEST
SYRACUSE, NY 13202

MR. MIKE LUDWIG
NATIONAL MARINE FISHERIES SERVICE
HABITAT & PROTECTION RESOURCE DIVISION
212 ROGERS AVENUE
MILFORD, CT 06460

DR. DUNCAN E. HAY PH. D.
NATIONAL PARK SERVICE
15 STATE STREET 10TH FLOOR
BOSTON, MA 02109

MR. BRUCE CARPENTER
NEW YORK RIVERS UNITED
PO BOX 1460
ROME, NY 13442-1460

MR. RAYMOND W. COONRAD
NYS CONSERVATION COUNCIL
3119 SIXTH AVENUE
TROY, NY 12180

HAROLD PALMER
NEW YORK STATE CONSERVATION COUNCIL
8 EAST MAIN STREET
ILION, NY 13357-1899

MR. WILLIAM LITTLE
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
625 BROADWAY
ALBANY, NY 12233

MR. MARK WOYTHAL
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVA'IION
625 BROADWAY
ALBANY, NY 12233-4756

HON. BERNADETTE CASTRO
NYS OFFICE OF PARKS, RECREATION, & HISTORIC
PRESERVATION
EMPIRE STATE PLAZA AGENCY BLDG I
ALBANY, NY 12238

MR. JOHN DUNCAN
SACANDAGA OUTDOOR CENTER
1 WHITEWATER WAY
HADLEY, NY 12835

MS. MARY ANN JOHNSON
SARATOGA COUNTY BOARD OF SUPERVISORS
40 MCMASTER STREET
BALLSTON SPA, NY 12020

MR. JEFF TROTTIER
TOWN OF HADLEY
4 STONEY CREEK ROAD
PO BOX 323
HADLEY, NY 12835

MR. GEORGE SCHMIDT
TROUT UNLIMITED
1528 DORWALDT BOULEVARD
NISKAYUNA, NY 12309

MR. JOSEPH J. SEEBODE
UNITED STATES ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
JACOB JAVITS FEDERAL BUILDING ROOM 1937
NEW YORK, NY 10278

BUREAU OF LAND MANAGEMENT
UNITED STATES DEPARTMENT OF THE INTERIOR
1849 C STREET NW INTERIOR BUILDING
WASHINGTON, DC 20240

MS. GRACE MUSUMECI
UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY REGION I1
290 BROADWAY
NEW YORK, NY 100O7

MR. STEVE PATCH
UNITED STATES FISH AND WILDLIFE SERVICE
3817 LUKER RD
CORTLAND, NY 13045

MR. DOUGLAS AZERT
W.I.L.D.W.A.T.E.R.S.
1123 ROUTE 28 THE GLEN
WARRENSBURG, NY 12885

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 5
232 Golf Course Road - P.O. Box 220, Warrensburg. New York 12885-0220
Phone: (518)623-1281 • **FAX:** (518)623-3603
Website: www.dec.state.ny.us

September 29, 2006

Dave Culligan, P.E.
Erie Boulevard Hydropower LP
225 Greenfield Parkway Suite 201
Liverpool, NY 13088

RE: MODIFICATION OF WATER QUALITY CERTIFICATE - Hudson River Project
DEC Permit #5-9905-00048/00001
FERC Project # 2482
Saratoga and Warren Counties

Dear Mr. Culligan:

Enclosed is a modification of the Water Quality Certification for the above project. The modification addresses project changes associated with Erie's request for a Federal Energy Regulatory Commission (FERC) license amendment.

Questions regarding the terms of the permit should he directed to the Environmental Permits Office at (518) 623-1281. Should your plans change, please contact this office to determine whether additional modifications of the permit are required.

This modification is an amendment to the original Water Quality Certificate and as such is hereby incorporated into the original permit.

Sincerely,

Thomas Hall
Regional Permit Administrator

Enclosures
cc: B. Bailey, ADK
USFWS - Cortland Office
M. Woythal, DEC
B. Little, DEC
ecc: Lt. Eilithorpe

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Facility DEC ID 5-99054-00048

PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:	**Facility**:
ERIE BOULEVARD HYDROPOWER LP 225 GREENFIELD PKWY STE 201 LIVERPOOL, NY 13088 (315) 413-2700	HUDSON RIVER PROJECT SPIER FALLS AND SHERMAN ISLAND HYDRO FACILITIES LOCATED ON THE HUDSON RIVER QUEENSBURY, NY 12801

Facility Location: in SEVERAL COUNTIES in THIS REGION
Facility Principal Reference Point: NYTM-E: NYTM-N:
Latitude: Longitude:

Project Location: SPIER FALLS AND SHERMAN ISLAND HYDRO FACILITIES LOCATED ON HUDSON RIVER
Authorized Activity: Work associated with Erie's request to increase the installed capacity of the Sherman Island Development by: replacing the turbine runner in the existing powerhouse, installing a new turbine in the empty Unit 1 bay in the existing powerhouse, and constructing a new minimum flow turbine (Unit 6) and associated powerhouse, penstock and tailrace at the dam. At the upstream Spier Falls Development, Erie will also install one-inch clear spaced trashracks. This modification authorizes the project to use an additional 2,274 cfs for generation. Spillage will be reduced by an equivalent volume of water. The minimum flow release will increase from 250 cfs to 314 cfs, outside the walleye spawning period. This period is defined in the Water Quality Certificate for the Hudson River Project. In total the proposed upgrade would increase the project's generating capacity from 28.8 MW to 39.6 MW.

The Water Quality Certificate issued by NYS DEC for the Hudson River Project in February, 2002 remains in full force and effect, except as revised by this modification.

Permit Authorizations

Water Quality Certification **-Under Section 401** -Clean Water **Act**

Permit ID 5-9905-00048/00001

New Permit	Effective Date: 2/5/2002	Expiration Date: No Exp. Date
Modification # 2	Effective Date: 9/29/2006	Expiration Date: No Exp. Date

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator. THOMAS W HALL, Regional Permit Administrator
Address: NYSDEC REGION 5 WARRENSBURG SUB-OFFICE
232 GOLF COURSE RD
PO BOX 220
WARRENSBURG, NY 12885 -0220

Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: WATER QUALITY CERTIFICATION

1. Conformance With Plans All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by Kleinschmidt, dated June, 2006 and are hereby made a part of this permit

2. Post Sign and Permit The enclosed permit and permit sign must be conspicuously posted in a publicly accessible location at the project site. They must be visible, legible and protected from the elements at all times.

3. Project Supervision The permittee is responsible for supervising this project, and shall ensure that all necessary measures are employed to prevent environmental degradation and to ensure successful mitigation.

4. Precautions Against Contamination of Waters All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project

5. No Interference with Navigation There shall be no unreasonable interference with navigation by the work herein authorized.

6. Concrete Leachate During construction, no wet or fresh concrete or leachate shall be allowed to escape into any wetlands or waters of New York State, nor shall washings from ready-mixed concrete trucks, mixers, or other devices be allowed to enter any wetland or waters. Only watertight or waterproof forms shall be used. Wet concrete shall not be poured to displace water within the forms.

7. Maintain Flow of Water Sufficient flow of water shall be maintained at all times to sustain aquatic life downstream. At no time shall more than one half the stream be blocked off.

8. Temporary Diversion Channel The temporary diversion channel shall be constructed with clean stone or stream bed material. Upon project completion the diversion must be immediately removed and the stream restored to its original condition.

9. Water Diversion Around Work Site To protect water quality downstream of the project, all water must be passed around the construction site by a gravity pipe or by active pumping. If pumped, the pump discharge must be directed against a solid object (concrete slab, stone or steel container) to prevent erosion of the bed and/or banks of the water body.

8. **No Equipment in the Water** Heavy equipment operation in the water is prohibited. With backhoes and similar heavy equipment, the bucket may enter the water.

9. Mitigation The following Environmental Enhancements are hereby incorporated into this authorization:

<u>Sherman Island Development</u>

- 3/4 inch clear-spaced trashracks will be included on the intake to the Minimum Flow Unit. This fish protection feature must be installed prior to operating the Unit.

- An air bubbler system will be installed on the Minimum Flow Unit. The air bubbler system will function to prevent debris from accumulating on the trashrack and will be installed prior to operating the Minimum Flow Unit.

- The minimum flow release to the bypass channel will increase from 250 cubic feet per second (cfs) to 314 cfs outside the walleye spawning season as this period is defined in the Water Quality Certificate for the Hudson River Project. This enhancement will occur coincident with commencing operation of the Minimum Flow Unit. The minimum flow release to the bypass channel during the walleye spawning period, is established by the Water Quality Certificate for the Hudson River Project that was issued in February 2002 and is unchanged by this modification.

- Operation of the Unit and the pneumatic crest gates will be integrated to ensure the minimum flow release is not interrupted in the event of a power outage. This enhancement will be implemented coincident with commencing operation of the Minimum Flow Unit.

- Within 18 months of the Minimum Flow Unit commencing operation, Erie will complete all work associated with modifications in the bypass channel to appropriately allocate bypass flows between the North and South channels. All work must be done in conformance with a mutually agreeable plan prepared by Erie in consultation with NYS DEC and the US Fish & Wildlife Service.

Spier Falls Development

- The schedule for adding fish protection measures (I inch clear-spaced trashracks) and fish movement flows (25 cfs) contained in the 2002 Water Quality Certificate for the Project will be accelerated such that implementation will occur in 2008 instead of 2010.

12. Prior Approval of Changes Any substantial deviation from the approved construction plans and specifications must be approved by the department prior to implementation. All deviations from the approved plans must be indicated in the 'as-built' drawings.

13. Notify DEC of Commencement of Work and Completion of Work The permittee shall notify the department at least seven days prior to project commencement and within seven days of project completion. Each notification is to be made by calling Thomas W. Hall at telephone number 518-623- 1281 during the department's normal business hours (8:30 am to 4:45 pm), and providing the name of the permittee and the Permit ID(s) as listed in the Permit Authorization section of this permit.

14. Turbid Discharges Visibly turbid discharges from land clearing, grading or excavation activities, or de-watering operations shall not enter the stream, navigable water, or wetland. Prior to entry into stream, navigable water or wetland, any such discharge shall be:

a. retained in an appropriately maintained upland settling basin;

b. filtered through crashed stone, sand, straw bales, silt screening (maximum opening size of U.S. Sieve Number 20), etc.; or,

c. directed to a grassy upland area a sufficient distance from the stream to prevent change in turbidity of the receiving water.

15. No Turbidity from Dewatering No turbid water resulting from dewatering operations shall be discharged directly to or allowed to enter the Hudson River or its tributaries. Such water shall be pumped to settling basins or to an upland vegetated area prior to any discharge to the Hudson River or its tributaries. All other necessary measures shall be implemented to prevent any visible increase in turbidity or sedimentation downstream of the work site.

16. Sandbags Sandbags shall be of the filter fabric type, double bagged and individually tied to prevent sand leakage. They shall be placed and removed manually to prevent spillage. Only clean sand, free of debris, silt, free particles, or other foreign substances shall be used to fill the bags. All bags shall be filled at an upland site where spillage will not enter the water, and all sand stored on-site shall be surrounded by straw bales or covered with a tarp to prevent erosion of the sand into the water.

17. **Even Dredging** Any material dredged in the conduct of the work herein permitted shall be removed evenly, without leaving large refuse piles, ridges across or along the bed of a waterway or floodplain, deposits within any regulatory, floodway, or deep holes that may have a tendency to cause damage to navigable channels or to the banks of a waterway.

18. State May Order Removal or Alteration of Work If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

19. State Not Liable for Damage The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

20. State May Require Site Restoration If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS I

1. Water Quality Certification The NYS Department of Environmental Conservation hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301,302, 303, 306 and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.

GENERAL CONDITIONS -Apply to ALL Authorized Permits:

1. Facility Inspection by The Department The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. Applications For Permit Renewals, Modifications or Transfers The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC REGION 5 WARRENSBURG SUB-OFFICE
232 GOLF COURSE RD
PO BOX 220
WARRENSBURG, NY 12885 -0220

4. Submission of Renewal Application The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Water Quality Certification.

5. Permit Modifications, Suspensions and Revocations by the Department The Department reserves the right to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a. materially false or inaccurate statements in the permit application or supporting papers;

b. failure by the permittee to comply with any terms or conditions of the permit;

c. exceeding the scope of the project as described in the permit application;

d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;

e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification The permittee, excepting state or federal agencies, expressly agrees to indenmify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of- way that may he required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

ENVIRONMENTAL ASSESSMENT

Application for Non-Capacity Amendment of License
Erie Boulevard Hydropower, L.P.
Saratoga and Warren Counties, New York

Hudson River Hydropower Project
FERC Project No. 2482-068

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
Washington, D.C.

April 2007

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ENVIRONMENTAL ASSESSMENT

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF HYDROPOWER ADMINISTRATION AND COMPLIANCE

Project Name: Hudson River Hydropower Project
FERC Project No. 2482-068

1.0. APPLICATION

Application Type:	Amendment of License
Date Filed:	June 8, 2006
Licensee:	Erie Boulevard Hydropower, L.C,
Water Body:	Hudson River
Nearest Towns:	Moreau and Queensbury
County and State:	Saratoga and Warren Counties, New York

2.0 PURPOSE AND NEED FOR ACTION

On June 8, 2006, Erie Boulevard Hydropower, LP (licensee), submitted an application to amend its license for the Hudson River Project, FERC No. 2482, to reflect upgrades and new turbines at the Sherman Island development which would increase total project installed capacity by 10.66 megawatts (MW). The licensee proposes to increase the installed capacity of the Sherman Island development by replacing the turbine runner of unit 4 in the powerhouse, adding a minimum flow turbine at the dam and installing a new turbine in the empty unit 1 bay in the powerhouse. The amount of water to be utilized for power generation will increase by 2,524 cubic feet per seconds (cfs) from 6,390 cfs to 8,914 cfs, however 250 cfs would be provided through flow unit. Additionally, the licensee proposes to accelerate implementation of the l-inch trash racks and fish movement flow at the Spier Falls development from 2010 to 2008.

The purpose of the proposed amendment is to add capacity at the project to generate an estimated additional 27,702 megawatt hours (MWh) of renewable electricity annually, and to qualify for renewable energy production incentive (Energy Policy Act of 2005 § 202).

3.0 PROPOSED ACTION AND ALTERNATIVES

3.1. Project Location and Description

The Hudson River Project is located in the counties of Warren and Saratoga, New York, and near the towns of Moreau, Corinth, Lake Luzerne, and Queensbury (See Fig. 1). It consists of two developments on the Hudson River south of its confluence with the Sacandaga River, the Spier Falls development at River Mile (RM) 212 and the Sherman Island development at RM 209 (See Fig. 2). Spier Falls and Sherman Island are operated in a peaking mode in tandem.

The Spier Falls development includes: (a) a 638-acre impoundment with a normal maximum water surface elevation of 436.8 feet National Geodetic Vertical Datum (NGVD); (b) three nonoverflow concrete gravity dam segments (52 ft, 553 ft, and 306 ft in length) with a maximum height of 145 ft; (c) an 810-foot-long spillway up to 70 feet in height; (d) a 540-foot-long, 120-foot-wide (average), 40-foot-deep (average) forebay canal; (e) two intake structures; one (Unit 8), covering two areas of 16-foot-wide by 35.5-foot-high and two penstocks with openings controlled by 14-foot-wide and 15-foot-high electric motor operated steel gates; and another (Unit 9), covering four areas 14.75 feet wide by 42.75 feet high and eight penstocks (four of which are sealed) with openings controlled by 12-foot-wide and 17.5-foot-high electric motor-operated steel gates; (f) two conjoined powerhouses containing Unit 8 with one 6.8 MW installed capacity, vertical Francis turbine and Unit 9 with one 37.6 MW installed capacity, vertical Francis turbine, and (g) appurtenant equipment and controls. There are no transmission lines or transmission facilities included in the existing development.

The Sherman Island development includes: (a) a 305-acre impoundment with a normal maximum water surface elevation of 353.3 feet NGVD; (b) a 1,533-foot-long, 67-foot-high (maximum) buttressed and gravity non-overflow dam; (c) a spillway topped with 3.7-foot and 5.7-foot-high wooden flashboards; (d) an 133-foot-long, 42-foot-high (maximum) concrete wingwall; (e) a 340-foot-long, 100-foot-wide, 39-foot-deep (maximum) forebay; (f) a trapezoidal-shaped, 3,100-foot-long by 32-foot-wide bottom width, 120-foot-wide top width, 29-foot-deep (average) power canal conveying water to the intake; (g) a 122.5-foot-long, 40-foot-wide, 42-foot-high concrete gate; (h) 15 penstocks (three of which are sealed) 200 feet long, and 10.7 feet wide and ten feet high; (i) a powerhouse containing four 7.2-MW vertical Francis turbines and generating units; (j) a 209-foot-long tailrace; and (k) appurtenant equipment and controls. There are no transmission facilities or lines included in the existing development.

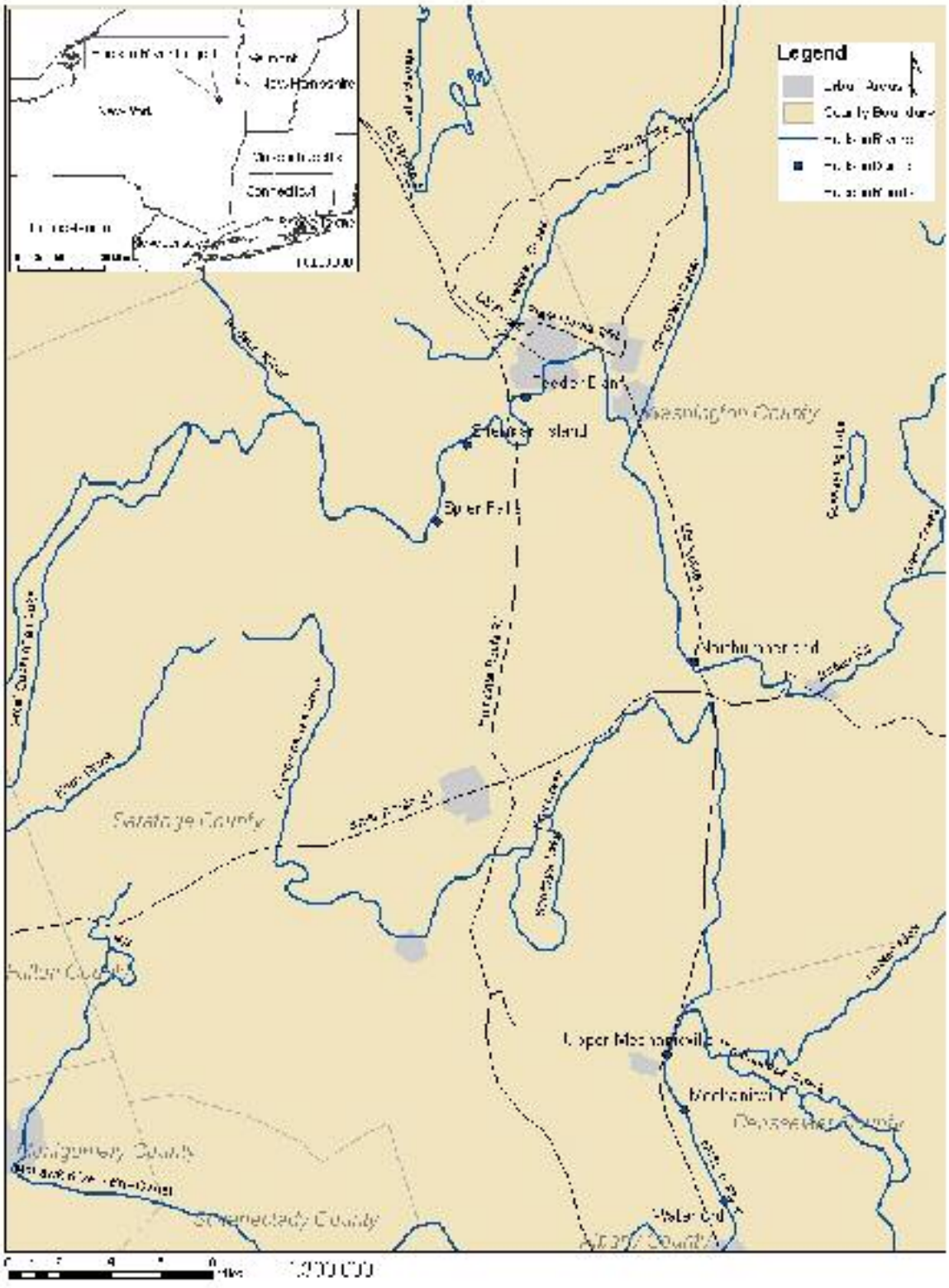

Figure 1. Location of the Hudson River Project and Developments (source: Staff).

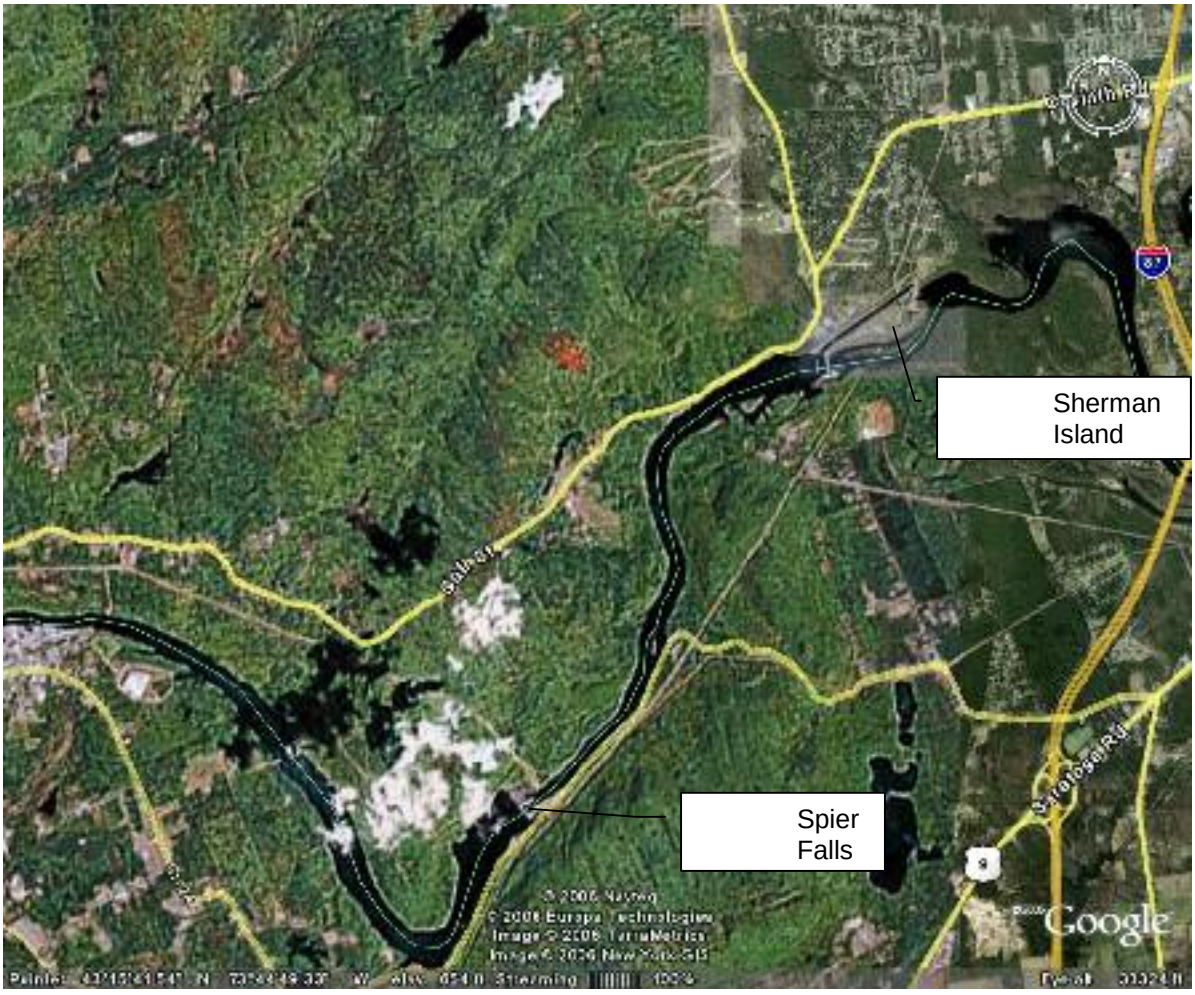

Figure 2. Location of the two developments at the Hudson River Project. (source: Google Earth)

3.2 Proposed Action

The licensee proposes to make the following changes to the Sherman Island development: (1) replacement of the unit 4 runner in the existing powerhouse to increase turbine horse power output to match and maintain the existing generator capacity at 7.2 MW and to increase hydraulic capacity from 1,440 cfs to 1,650 cfs; (2) install a new unit 1 turbine in the unused No. 1 bay of the existing powerhouse for a generating capacity of 9.5 MW and a hydraulic capability of 2,000 cfs; and (3) add a new minimum flow unit 6 at the dam with a generating capacity of 1.2 MW and a hydraulic capacity of 314 cfs. The total proposed incremental increase in use of river flow would be approximately 2,274 cfs or 14.8 percent. The proposed changes would increase the total generating capacity of the project from 28,800 kW to 39,460 kW.

The proposed installation of the new unit 6 minimum flow turbine would require construction activities in the area just downstream of the non-overflow section of the Sherman Island dam. The licensee proposes that construction activities would include the placement of a cofferdam and access road, construction of a small new powerhouse, and tailrace excavation.

The licensee proposes that the installation of the new unit 1 and the upgrade of unit 4 would take place entirely within the existing powerhouse. The licensee proposes to seal off the new units from the river and to dewater their respective bays during installation.

3.3 Action Alternative

No alternative actions have been identified.

3.4 No-Action Alternative

If the proposed action is not approved, generation would continue at the current licensed capacity and the additional annual generation of 27,702 MWh would not be realized.

4.0. CONSULTATION

4.1 Pre-filing Consultation

The licensee consulted with the resource agencies and interested parties, including all signatories to the Upper Hudson/Sacandaga Settlement[10] before filing their amendment application. The FWS and the NYSDEC commented that the licensee would need to address fish protection in connection with the proposed new minimum flow unit installation. The NYSDEC indicated that the licensee will need to amend its current 401 water quality certification (WQC). In addition, the licensee sought a waiver of the three stage consultation process prescribed in the Commission regulations.

The agencies suggested the following mitigation, protection and enhancement measures are as follows:

- The minimum flow unit no. 6 would have a maximum discharge capacity of 314 cfs resulting in a 64 cfs increase above the current 250 cfs non-walleye season minimum flow.

[10] *See* Order Approving Offer of Settlement, 100 FERC ¶ 61,321 (2002)

- Walleye season discharge would remain the same with the balance of flow delivered through the current pneumatic flashboard minimum flow discharge facilities.
- To maximize protection of fish from impingement, the trashrack structure should have a surface area designed to maintain approach velocities of 0.8 feet per second (fps), considerably less than 2.0 fps and should have ¾-inch clear spacing.
- Install l-inch trashracks and implement 25 cfs fish movement flow at Spier Falls in 2008 instead of 2010.
- Initiate consultation relative to revising the Article 405 Streamflow & Water Level Monitoring Plan immediately upon the in-service date of the minimum flow unit.
- Complete installation and verification of bypass flow splitter/diversion structures within 18 months of the in-service date of the minimum flow unit.

In addition, the agencies questioned whether the proposed license amendment modifications would have an impact on current Sherman Island impoundment levels and the base flow operating conditions at the Feeder Dam Project (FERC No. 2554) downstream. The licensee responded that the proposed amendment will cause no changes in project impoundment levels at Sherman Island and Feeder Dam base flows.

By letter dated May 19, 2006, the FWS stated that the licensee has adequately consulted with them regarding the proposed license amendment. FWS further stated that the proposed mitigation actions included in the revised amendment application should provide adequate protection from potential impacts to fish and wildlife resources.

By letter dated May 24, 2006, the NYSDEC stated that sufficient consultation has been conducted by the licensee. The NYSDEC stated that they fully support the licensee's license amendment application. By letter dated September 29, 2006, the NYSDEC issued a modified WQC for the project including the mitigation measures recommended by the agencies during pre-filing consultation. The details of the modified WQC are discussed in section 4.3.1 of this EA.

4.2 Comments and Intervention

On July 5, 2006, the Commission issued a public notice of the application for amendment of license soliciting comments, motions to intervene, and protests. The comment period ended August 7, 2006. The Commission received the following responses.

On July 11, 2006, NYSDEC filed, with the Commission, a motion to intervene.

By letter filed July 26, 2006, the U. S. Department of the Interior (Interior) stated

that it has no objection to the issuance of an amendment to this license provided all of the mitigation measures are incorporated into the license. These mitigation measures include: (1) increasing the minimum flow in the bypassed reach; (2) consulting with the FWS and NYSDEC regarding the proportion of flow to be distributed in each of the two bypass reach channels; (3) installing ¾ inch clear-spaced trash racks in front of the minimum low turbine; (4) extending the 1 inch clear-spaced trash racks at the main powerhouse to encompass the new unit; and (5) accelerating the implementation of the 1 inch clear-spaced trash racks and downstream fish movement facility at the Spier Falls powerhouse. On July 28, 2006, Interior filed a notice of intervention with the Commission.

On August 4, 2006, the ADK filed, with the Commission, a motion to intervene with comments. It stated that the increased flow from the proposed unit 6 minimum flow turbine might increase flow enough to allow canoeing and might decrease the portage distance around the Sherman Island Dam, benefiting persons with relatively heavy white-water canoes or kayaks.

Also on August 4, 2006, Indeck-Corinth, LLC filed, with the Commission, a motion to intervene with comments. It expressed concerns that any action that would cause the drawdown of the reservoir below 428.85 feet above mean sea level would affect their ability to withdraw water from the river to cool their gas-fired power generating facility. For this reason, Indeck-Corinth, LLC would like the Commission to consider adding a condition to the licensee's license to protect its operations.

On August 7, 2006, the Fourth Branch Associates and Adirondack Hydro Development Corporation filed, with the Commission, a motion to intervene and protest. They commented that the proposed amendment would adversely affect the operations at their respective projects, or would impair their ability to comply with their minimum flow and other license obligations. In addition, they comment that they are not included in the service list or the settlement agreement and were not properly consulted regarding the proposed amendment.

On August 21, 2006, the licensee filed, with the Commission, a response to motions to intervene and comment. The licensee commented that Indeck-Corinth, LLC's comments about drawdowns for part 12 repairs at the Sherman Island development are not relevant to the proposed amendment application. In regard to the comments of the Fourth Branch Associates and Adirondack Hydro Development Corporation, the licensee stated that the proposed amendment would not change in the existing operational regime stipulated in the new license and settlement agreement.

On August 31, 2006, Indeck-Corinth, LLC filed, with the Commission, a response to the licensee. It comments that it has not been able to work cooperatively with the licensee to reach a compromise regarding proposed drawdowns for repairs. Indeck-

Corinth, LLC states that it is not able to move its intake pipe from the Spier Falls reservoir. In addition, it states that the licensee failed to seek permission from the NYSDEC or the Commission to drawdown the reservoir.

On September 6, 2006, Indeck-Corinth, LLC filed, with the Commission, a motion to strike the licensee's response or request leave to answer the licensee's response. It comments that relocating its intake pipe is not a viable option; it is positioned to avoid discharge from the upstream sewage treatment plant and the downstream paper mill. It reaffirms that the proposed amendment would affect their project and further request that the Commission consider adding a condition to the licensee's license to protect its operations.

4.3 Statutory Requirements

4.3.1 Clean Water Act

Under section 401 of the Clean Water Act (CWA) (33 U.S.C. § 1341), the Commission may not issue a license for a hydroelectric project unless either the licensee obtains WQC from the certifying agency of the state in which the project discharge originates, or the certifying agency waives certification. Section 401(d) of the CWA provides that state certification shall become a condition of the project license.

On September 29, 2006, the NYSDEC amended its February 5, 2002 WQC as it relates to the licensee's proposed changes to the Hudson River Project. The amended measures include sediment and erosion control as well as pollution control during the proposed construction activities. The WQC amendment also includes the following mitigation measures to protect aquatic resources:

- 3/4 inch clear-spaced trashracks will be included on the intake to the minimum flow unit. This fish protection feature must be installed prior to operating the unit.

- An air bubbler system will be installed on the minimum flow unit. The air bubbler system will function to prevent debris from accumulating on the trashrack and will be installed prior to operating the minimum flow unit.

- The minimum flow release to the bypass channel will increase from 250 cfs to 314 cfs outside the walleye spawning season as this period is defined in the WQC for the Hudson River Project. This enhancement will occur coincident with commencing operation of the minimum flow unit. The minimum flow release to the bypass channel during the walleye spawning period is established by the WQC for the Hudson River Project that was issued in February 2002 and is unchanged by this modification.

- Operation of the minimum flow unit and the pneumatic crest gates will be integrated to ensure the minimum flow release is not interrupted in the event of a power outage. This enhancement will be implemented coincident with commencing operation of the minimum flow unit.

- Within 18 months of the minimum flow unit commencing operation, the licensee will complete all work associated with modifications in the bypass channel to appropriately allocate bypass flows between the north and south channels. All work must be done in conformance with a mutually agreeable plan prepared by the licensee in consultation with NYSDEC and the FWS.

- The schedule for adding fish protection measures (1-inch clear-spaced trashracks) and fish movement flows (25 cfs) contained in the 2002 WQC for the Speir Falls development will be accelerated such that implementation will occur in 2008 instead of 2010.

4.3.2 Endangered Species Act

Section 7(a) (2) of the Endangered Species Act of 1973 (16 U.S.C. § 1536(a)) requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of federally listed threatened or endangered species, or result in the destruction or adverse modification of their designated critical habitat.

On May 4, 2006, the licensee sent the FWS a letter requesting an update regarding the status of rare, threatened and endangered species in the vicinity of the project. By letter filed December 12, 2006, the FWS stated that they are aware that surveys were conducted at the project for the presence of the Karner blue butterfly in May and June of 2003 and that no butterflies or potential habitat were identified. It further stated that, except for the Karner blue butterfly and occasional transient individuals, no other federally listed or proposed endangered or threatened species under their jurisdiction are known to exist in the project action area.

4.3.3 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 (f)) requires consultation with the State Historic Preservation Officer (SHPO) regarding the status and potential impacts to culturally and historically significant properties.

The Hudson River Project area has been determined by the SHPO to be "archeologically sensitive" although no locational information concerning this sensitivity assessment has been provided. Two sites of historical note identified in the vicinity by the Saratoga County Planning Board include: 1) the site of a former bridge across the Hudson River near Folts Road built circa 1840; and 2) a Native American samp mortar

(rock outcropping used to grind corn). Although it was constructed in 1923, the Sherman Island development has not been evaluated for eligibility of listing in the National Register of Historic Places (NRHP) (FERC 2001).

The licensee currently has a Programmatic Agreement[11] and an approved Cultural Resources Management Plan (CRMP)[12]. Prior to initiating construction activities, the licensee proposes to perform the requisite consultation with the SHPO, the Bureau of Indian Affairs and the St. Regis Mohawk Tribe pursuant to Section 4.3 of the CRMP regarding aspects of the upgrade that fall outside of the compendium of categorical exclusions.

4.3.4 Essential Fish Habitat

The Fishery Conservation and Management Act (16 U.S.C. § 1801) requires federal agencies to promote the protection of essential fish habitat in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. Essential fish habitat includes those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity. Essential fish habitat is protected at the project by license article 401, which requires the licensee to monitor minimum flows and reservoir elevations at the Sherman Island development.

4.3.5 Fishway Prescriptions

Section 18 of the Federal Power Act (16 U.S.C. § 811) states that the Commission shall require a licensee to construct, operate and maintain such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. Consistent with Commission practice, Article 408 of the license includes the reservation of authority to require fish passage.

4.3.6 Recommendations of federal and state fish and wildlife agencies

Section 10(j)(1) of the FPA (16 U.S.C. § 803(j)(1)) requires the Commission, to include conditions based on the recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. § 661 *et seq.*) for the protection and enhancement of fish and wildlife and their habitat affected by the project. In response to our public notice, Interior commented that they participated

[11] The Programmatic Agreement was executed on July 19, 1996, and amended on May 31, 2002 between the Commission, the New York State Historic Preservation Officer, and the Advisory Council on Historic Preservation.

[12] *See* 111 FERC ¶ 62,250 (June 3, 2005)

in consultation with the licensee and other parties during the development of the amendment application. Their recommended mitigation measures became conditions of the September 29, 2006, modified WQC issued by the NYSDEC which will become part of the license. Interior stated that they have no objection to the issuance of an amendment to the license provided all of the recommended mitigation measures are incorporated into the license. Staff concurs with these recommendations.

4.3.7 Comprehensive Plans

Section 10(a)(2)(A) of the FPA (16 U.S.C. § 803(a)(2)) requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Federal and state agencies filed 29 qualifying comprehensive plans, of which we identified three federal and six state comprehensive plans that are applicable. We did not find any inconsistencies with the amendment application and the applicable comprehensive plans[13].

[13] (1) Fish and Wildlife and Canadian Wildlife Service, North American Waterfowl Management Plan: A Strategy for Cooperation, U.S. Department of the Interior and Environment Canada, Washington, D.C., 1986; (2) Fish and Wildlife: Fisheries USA: The Recreational Fisheries Policy of the U.S. Fish and Wildlife Service, Washington, D.C., undated; (3) Adirondack Park Agency, Adirondack Park State Land Master Plan, Ray Brook, New York, January 1985; (4) Adirondack Park Agency, New York State wild, scenic, and recreational rivers system field investigation summaries, Albany, New York, 21 reports, undated; (5) New York State Wild, Scenic, and Recreational River System Act, Albany, New York, March 1985; (6) New York State Executive Law, Article 27 - Adirondack Park Agency Act, Albany, New York, July 1, 1981; (7) New York Department of Environmental Conservation, Regulation for Administration and Management of the Wild, Scenic, and Recreational River Systems in New York State excepting Adirondack Park, Albany, New York, March 26, 1986; (8) New York State Parks, Recreation, and Historic Preservation, State Comprehensive Outdoor Recreation Plan, 1994; (9) New York State Department of Environmental Conservation. 1979. Hudson River Basin Water and Related Land Resources; Level B Study Report and Environmental Impact Statement. Albany, New York. September 1979; (10) New York State Office of Parks, Recreation, and Historic Preservation. 1983. People, Resources, Recreation. Albany, New York. March 1983; (11) State of New York Hudson River Regulating District. 1923. General Plan for the Regulation of the Flow of the Hudson River and Certain of its Tributaries. Albany, New York. June 7, electric service; (5) need for power; (6) transmission service; (7) cost effectiveness of plans; and (8) actions affecting the public.

5.0 AFFECTED ENVIRONMENT

5.1 Description of Project Area

The Sherman Island development is located about 5 miles south west of the City of Glens Falls and three miles downstream of the Spier Falls development. The general topography of the area is hilly with a combination of rolling hills and steep slopes and contains both the northern Adirondack Mountains and southern Appalachian forests. The scope of this environmental assessment is the general area of the Hudson River project specifically the areas outside the powerhouse where construction will take place (see fig. 3).

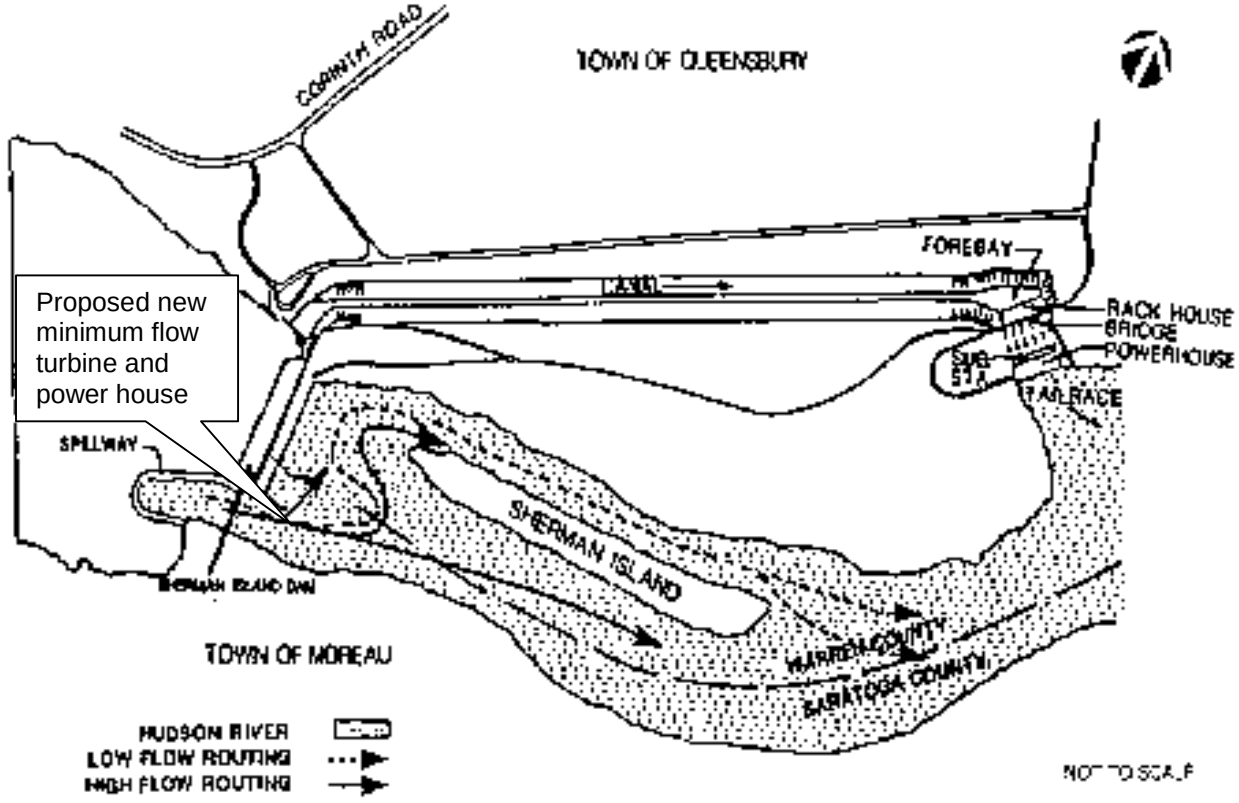

Figure 3. Sherman Island development and location of construction area. (source: FERC 2001)

5.1.1 Geology and Soils

The bedrock exposed on the banks at the Sherman Island site consists of a series of Precambrian metamorphosed sedimentary and igneous rocks, primarily strongly foliated granitic and syenitic gneisses. The spillway and both ends of the dam are

founded on bedrock; the majority of the non-overflow midsection of the dam is largely founded on compacted sand (Erie 2006).

5.1.2 Vegetation

The Hudson River Project occurs in the heavily forested Pine-Oak-Northern Hardwood Zone. Dominant conifers include red pine, white pine, scotch pine, and hemlock. Deciduous species common to the upland forests include beech, paper birch, sugar maple, and red and white oak. Common understory species consist of striped maple, lowbush blueberry, mapleleaf viburnum, honeysuckle, pink lady's slipper, wild lily-of-the-valley, starflower, partridgeberry, and immature canopy species. Successional lands such as abandoned fields and transmission line corridors exist in the vicinity of the Hudson River Project. Common species occurring within these include shade-intolerant species such as gray birch, quaking aspen, black cherry, staghorn sumac, sweetfern, dewberry, goldenrod, bracken fern, bush clover, St. Johns wort, tick trefoil, whorled loosestrife, and broom beardgrass (Erie 2006).

The Sherman Island impoundment has a diverse wetland assemblage including some forested wetland systems especially on the south side of the impoundment, just upstream of the dam at the current boat barrier anchor point. Emergent wetlands in the Sherman Island impoundment, the majority of which occur upstream of the boat launch and near the coves and islands on the south side of the impoundment, just upstream from the dam, are dominated by pondweed, common elodea, arrowhead, and waterlily. Dominant canopy species include red maple, ash, American elm, and yellow birch. Understory species include woody and herbaceous plants such as alder, witch hazel, silky dogwood, arrowwood, immature canopy species, skunk cabbage, jewel weed, horsetail, sensitive fern, and royal fern (Erie 2006).

5.1.3 Wildlife and Wildlife Habitat

The Hudson River Project provides habitat for a variety of wildlife, including red squirrel, fisher, deer mouse, southern boreal redback vole, northern flying squirrel, snowshoe hare, coyote, black bear, bobcat, white-tailed deer, red fox, raccoon, mink, and river otter. Reptile and amphibian use is restricted to species such as wood frog, redback salamander, American toad, northern dusky salamander, painted turtle, and snapping turtle. NYSDEC documented a deer wintering area above the south shore of the Sherman Island impoundment, beginning at the Spier Falls substation and following the transmission line northeasterly to the top of Palmertown Mountain. This area is designated a Significant Habitat unit by NYSDEC (Erie 2006).

5.1.4 Threatened and Endangered Species

According to the Final Multiple Project Environmental Impact Statement (FMEIS) developed for the Upper Hudson River projects, the FWS has stated by letter dated March 24, 2000, that the Karner blue butterfly (*Lycaeides melissa samuelis)*, a federally listed endangered species, may occur in the Hudson River projects area due to the presence of its host plant, blue lupine (*Lupinus perennis*) (FERC 2001). Blue lupine has been observed within the transmission line corridors in the project area. By letter dated November 14, 2003, the FWS concurred that the Hudson River Project was not likely to adversely affect the Karner Blue Butterfly and that no biological assessment or further coordination or consultation under the Endangered Species Act was required.

Pursuant to license article 407, the licensee filed the Final Karner Blue Butterfly/Blue Lupine Survey Results on February 12, 2004. On May 4, 2006 the licensee sent the FWS a letter requesting an update regarding the status of rare, threatened and endangered species in the vicinity of the project. By letter filed December 19, 2006, the FWS stated that they are aware that surveys were conducted at the project for the presence of the Karner blue butterfly in May and June of 2003 and that no butterflies or potential habitat were identified. They further stated that, except for the Karner blue butterfly and occasional transient individuals, no other federally listed or proposed endangered or threatened species under their jurisdiction are known to exist in the project action area.

5.1.5 Water Quantity and Quality

Over a 54-year period of record (1931 to 1985) the average daily flow at the Sherman Island development ranged from a minimum of 321 cfs to a maximum of 40,577 cfs with a daily mean of 5,130 cfs. The total hydraulic capacity of all four turbines at the Sherman Island development is 6,390 cfs.

The Hudson River, within the project area, is used as a primary water source by the Town of Queensbury. Seventy percent of the town population receives water through the Queensbury Water Treatment Plant, which draws water directly from the Sherman Island reservoir. Current withdrawals from the project reservoir are about 5 million gallons per day (MGD) at peak summer demand. International Paper Company uses river water at its paper mill operation at Corinth at the upstream Spier Falls reservoir (FERC 2001). In addition, the Indeck-Corinth gas-fired power plant withdraws cooling water from the Spier Falls reservoir.

Generally, water quality in the Upper Hudson watershed is good. The source of the Hudson River is in the Adirondack Highlands yielding nutrient-poor, low alkalinity and low conductivity water, bearing little, if any, contaminants of human origin. The land use in the upper watershed is not intensive. There are some industrial and municipal

outfalls, but these are relatively small and of low enough density that any effects on water quality remain localized (FERC 2001).

According to the FMEIS, the area below the Spier Falls dam to the Sherman Island dam, the Hudson River waters are designated Class A and considered suitable for drinking water supply. From the Sherman Island dam downstream to Feeder dam, the Hudson River is classified a Class B. All water quality parameters measured at Corinth (upstream) and influenced by the Hudson River Project operation are well within the ranges for respective state water quality standards (FERC 2001).

5.1.6 Aquatic Fauna and Habitat

The Sherman Island development provides habitat for diverse aquatic fauna. Fisheries surveys conducted for the previous licensee 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 (FERC 2001).

Walleye spawning surveys conducted in 1989 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 (FERC 2001).

Fisheries surveys conducted in 1984 in the 4,000-foot-long Sherman Island bypass reach resulted in the collection of 13 species, dominated by rock bass, smallmouth bass, yellow perch, longnose dace, pumpkinseed, and walleye. Spawning surveys conducted in 1989 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 (FERC 2001).

To ensure compliance with streamflow and water level monitoring requirements at the dam, the licensee uses remote gauging equipment to record the headpond elevation at the Sherman Island development every minute. An hourly average elevation is recorded to the nearest 0.1 foot. Logic has been programmed into the control system whereby the system uses headpond and inclinometer data in conjunction with discharge rating relationships to continually adjust the crest elevation of the pneumatic flashboards to ensure spillage of the required bypass flow for the conditions that exist (see table 1). Impoundment fluctuation limits at the Sherman Island development are 1.0 foot during the walleye spawning season for an elevation of 353.3 to 352.3 feet National Geodetic

Vertical Datum (NGVD) and 2.0 feet for the remainder of the year for an elevation of 353.3 to 351.3 feet NGVD.

To afford a route of downstream movement for fish, the licensee is required to discharge a continuous flow from the dam of 250 cfs via pneumatic flashboards. That portion of the spillway equipped with pneumatic flashboards consists of two distinct sections; a 287-foot-long section having a permanent crest elevation of 349.6 feet NGVD, and an 8l-foot-long section having a permanent crest elevation of 347.6 feet NGVD. Each has been equipped with pneumatic flashboards whose height varies by the 2-foot difference in permanent crest elevation, and each has a crest elevation of 353.3 feet NGVD, which equals the crest elevation of the remaining wooden flashboard section.

Table 1. Sherman Island Bypass Flow Release

Annual Start Date	Annual End Date	Bypass Flow (cfs)
January 1	Start of Walleye spawning season	250
Start of Walleye spawning season	End of Walleye spawning season	675
End of Walleye spawning season	December 31	250

* Walleye spawning season begins when water temperature reaches 4 degrees Celsius (39.4 degrees Fahrenheit) for four consecutive days after March 15 each year. Walleye spawning season ends 30 days after water temperature reaches 20 degrees Celsius (68 degrees Fahrenheit) for four consecutive days

The Sherman Island bypass reach contains an island forming a north and south channel. To ensure fish passage in both channels when releasing the 250 cfs bypass flow, the licensee is required to distribute 100 cfs to the north channel and 150 cfs to the south channel. A specific distribution is not required when releasing the 675 cfs seasonal walleye spawning flow. To achieve the desired distribution, a diversion structure constructed within the south channel reduces the amount of flow conveyed to the north channel. This diversion structure is an extension of the land downstream of the training wall which separates the area below the spillway from the area below the main dam.

To afford a route of downstream movement for fish at the powerhouse, the licensee is required to discharge a continuous flow of 25 cfs via the ice sluiceway. On August 21, 2006, the licensee filed a plan for fish protection and downstream movement at the powerhouse. The modified plan, approved on September 07, 2006, consists of the installation of full trash rack overlays with a maximum clear spacing of 1-inch and sluiceway modifications to for the downstream movement of fish. The licensee's approved plan for fish protection measures at Sherman Island states that it will complete installation trash rack overlays by December 31, 2006.

5.1.7 Historic Properties

No archeological resources within or in the vicinity of the Hudson River Project have been formally recorded in the files of the SHPO. The Saratoga County Planning Board has 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 (Erie 2006).

5.1.8 Land Use and Recreational Resources

Rugged and mountainous terrain dominates the visual character of the Adirondack region. Numerous peaks rise to elevations of 3,000 to 5,300 feet NGVD surrounded by undeveloped woodlands with small cities and hamlets located in the valleys. Steep, forested banks characterize the shorelines at both developments. Unobstructed views of the river are limited to a segment of Spier Falls Road east of the Spier Falls dam and from the public boat launch areas on each impoundment. There are no officially designated scenic highways near the Hudson River Project area (Erie 2006).

As required by license article 406, the licensee maintains the Sherman Island boat launch area located upstream of the dam on the south shore of the impoundment, in Moreau. This facility, which is accessed from Spier Falls Road, includes a gravel parking area for 9 vehicles, a gravel boat launch, and picnic tables. The area is available for day-use only. Recreational fishing undoubtedly occurs on the Sherman Island impoundment and may occur, to a limited extent, in the bypassed reach and tailrace. No information on the nature of angler use of Sherman Island waters is available (Erie 2006).

6.0 ANALYSIS OF ENVIRONMENTAL IMPACTS

6.1 Proposed Action

6.1.1. Geology and Soils

We anticipate only minor, short-term impacts to geology and soils in the immediate work area resulting from construction activities during installation of a new unit 6 powerhouse. The licensee would be required to comply with the terms of the WQC including erosion and sediment control and revegetation measures on all disturbed ground areas. Furthermore, the licensee's responsibility to implement soil and erosion control measures for ground disturbing activities per standard license article 19 would

provide an additional measure of protection for geology and soil resources by helping to reduce sedimentation and erosion.

6.1.2. Vegetation

The proposed construction of the unit 6 minimum flow powerhouse would result in minor, short-term impacts to the vegetation in the vicinity of the dam. The licensee reports that the area of the proposed construction is already disturbed with little vegetation. The licensee would be required to comply with the terms of the WQC including erosion and sediment control and revegetation measures on all disturbed ground areas. Furthermore, the licensee's responsibility to implement soil and erosion control measures for ground disturbing activities per standard article 19 under the license would provide an additional measure of protection for vegetation by helping to reduce erosion and by replacing vegetation that might be removed during construction.

6.1.3. Wildlife and Wildlife Habitat

Access to all construction areas for the proposed action will occur through existing roadways. Access to the powerhouse for installation of unit 1 and the new runner for unit 4 is over existing roadways, and there is ample laydown space adjacent to the powerhouse. Similarly, there is an existing access road to the new unit no. 6 minimum flow turbine at the dam, and laydown areas adjacent to the existing canal headgate strutting. The licensee proposes that continued compliance with the restrictions on impoundment fluctuations under article 403 during the term of the new license would avoid impacts to shoreline wildlife habitat. Impacts to the wildlife that may occur due to the proposed construction would be from noise and construction traffic and are expected to be minimal and short-term.

6.1.4. Threatened and Endangered Species

The proposed replacement of unit 4 and the installation of unit 1 both occur entirely within the existing powerhouse and therefore, would not impact any potentially-existing habitat for Karner blue butterfly. Construction of the proposed unit 6 minimum flow turbine would result in minimal, short-term disturbances to the land in the vicinity of the dam. However, this area has been previously surveyed for Karner blue butterfly and its host plant, blue lupine. Both species and host plant were absent during all surveys conducted in compliance with license article 407. In addition, the proposed action area is not currently vegetated and thus, is unlikely to provide suitable habitat for either species.

By letter filed December 19, 2006, the FWS stated that, except for the Karner blue butterfly and occasional transient individuals, no other federally listed or proposed endangered or threatened species under their jurisdiction are known to exist in the project

action area. Therefore, staff has determined that the proposed action would have no affect on threatened or endangered species or any designated critical habitat.

6.1.5. Water Quantity and Quality

The proposed license amendment application would increase the total hydraulic capacity of the Sherman Island development from 6,390 cfs to 8,914 cfs (an increase of 2,524 cfs). However the proposed increase in the hydraulic capacity of the project is non-consumptive; the additional hydraulic capacity would only be used as flows in the river are available. The proposed changes will not alter the existing operational regime authorized in the new license. Additionally, the proposed amendment will not change the existing operating regime and provision of baseflow at the downstream Feeder Dam project (FERC No. 2554).

During construction of the minimum flow unit 6 powerhouse, the licensee proposes to continue to release the required minimum flow via the pneumatic flashboards on the south end of the dam. After the minimum flow unit is installed, the licensee proposes to release minimum flows through the turbine increasing the release from 250 cfs to 314 cfs (an increase of 64 cfs or 26 percent). With an increase in discharge through the minimum flow turbine, a corresponding decrease in flow would occur at the Sherman Island powerhouse to ensure that the total amount of water passing through the project remains compliant with the operating requirements.

Construction of the proposed powerhouse for the addition of a minimum flow turbine will require the installation of a sheet pile cofferdam surrounding the immediate construction area of the new powerhouse to provide a dry work area. The cofferdam would be removed after construction is complete.

The proposed license amendment will not impact downstream projects. Fourth Branch Associates, licensee for the Mechanicville Project (FERC No. 6032) and Adirondack Hydro, licensee for the Northumberland (FERC No. 4244) and Waterford (FERC No.10648) projects commented that the proposed amendment will decrease the amount of flow available to them for production. The licensee's project operation will continue as previously approved and therefore will not affect the Mechanicville Project located 44 miles downstream, the Northumberland project located 24 miles downstream or the Waterford Project located 48 miles downstream. In addition, the Northumberland and Waterford Projects were not constructed and were terminated by order issued August 18, 2006.[14]

The proposed license amendment will not impact upstream users of the Hudson River. Indeck-Corinth, LLC (Corinth) operates a 131.5-MW gas-fired power plant

[14] *See* Order Terminating Licenses, 116 FERC ¶ 62,143 (2006).

located 5 miles upstream of the Spier Falls development and has expressed concern that the proposed action will impact their ability to generate power. Corinth withdraws cooling water from the Hudson River at 427 feet above mean sea level and has done so for the past 12 years. Corinth commented that if the reservoir at the Spier Falls development is lowered more that 8 feet (to 428.85 feet), they would be unable to withdraw cooling water necessary for their plant operations. Construction of the proposed powerhouse for the addition of a minimum flow turbine and installation of the additional turbines at the current powerhouse will occur at the downstream Sherman Island development. The reservoir at the upstream Spier Falls dam will not be affected by the proposed action and thus will not impact Cornith's ability to generate power.

There will be no impacts to water quantity as a result of the proposed license amendment. There may be short-term, minor impacts to water quality due to construction activities, but these will be significantly lessened with the implementation of a sediment and erosion control plan, and the requirements imposed by the revised September 29, 2006 WQC.

6.1.6. Aquatic Fauna and Habitat

During construction of the unit 6 powerhouse, the placement of a cofferdam and the tailrace excavation would cause a temporary loss of habitat and disturbance to aquatic resources. In addition, the movement of fish through the project could be inhibited during construction and after the additional turbines have been installed. During construction, the licensee proposes to continue to fulfill the requirements of license article 404 for fish protection and downstream movement and article 405 for minimum flows, as discussed in section 5.1.6 of this EA.

Several measures to mitigate impacts to fish have been incorporated in the September 29, 2006, revised certification. These include the installation of ¾-inch, clear-spaced trash racks on the intake to the minimum flow unit 6 prior to operating the unit and the installation of an air bubbler system to prevent debris from accumulating on the trashrack. In addition, the licensee must consult with the FWS and NYSDEC regarding the proportion of flow to be released in each of the two bypass reach channels, after the minimum flow unit has been installed. Finally, the schedule for adding fish protection measures (1-inch, clear-spaced trashracks) and fish movement flows (25 cfs) contained in the 2002 WQC for the Spier Falls development will be accelerated such that implementation will occur in 2008 instead of 2010. During walleye spawning season, the licensee proposes to utilize the pneumatic flashboard system to release the balance of the flow necessary to provide the required 675 cfs bypass flow.

The agencies have recommended that the approach velocity of the trashracks not exceed 2.0 fps. The licensee has estimated that the current approach velocity at existing full station discharge (6,390 cfs) just upstream of the existing trash racks is 1.6 fps. After

the proposed installation of the new unit 1 and unit 4 upgrades, the approach velocity is estimated to be 1.72 fps. The approach velocity of the minimum flow unit is estimated to be 0.8 fps. These approach velocities are below 2.0 fps and therefore, suitable for the project's fish species to avoid the intake areas using burst energy.

The continuation of fish protection and minimum flows during construction, the installation of trash racks and the minimization of approach velocities at the intakes should help to protect the diverse assemblage of fish found at the project. We expect only short-term, minor impacts to fish during construction of the power house for unit 6.

6.1.7. Historic Properties

The licensee proposes to implement the applicable provisions of the CRMP relating to construction activities at the project. By following the requirements of the CRMP prior to, and during construction activities, the licensee would provide appropriate protection to the characteristics of the Sherman Island development that would potentially make it eligible for listing in the NRHP or which may have cultural significance. There will be no impact to historic properties as a result of the proposed license amendment.

6.1.8. Land Use and Recreation

The proposed cofferdam, access road, new powerhouse, and tailrace excavation will not have any adverse effect on the Sherman Island boat launch and picnic area maintained by the licensee. Recreational fishing that may occur in the tailrace area could be temporarily displaced during construction; however, angler use, if it occurs, should return to pre-construction levels after the proposed project is complete. Canoeing recreation at the project may be improved by the proposed project since the resulting increased flow could potentially decrease the portage distance around the Sherman Island Dam. No other impacts to land use or recreation in the project area will result from the proposed action.

6.2 No-Action Alternative

If the proposed license amendment were denied, the licensee would not realize the increase in power production at the Sherman Island development. In addition, the minor, short-term impacts to soils, vegetation, water quantity and quality, or aquatic fauna and habitat would not occur. Lastly, the proposed increases in minimum flow released into the bypass would not occur.

6.3 Cumulative Impacts

Secondary impacts are those that are indirectly caused by or result from an activity and are reasonably foreseeable. They may occur later in time than the activity and be

removed in terms of distance. According to the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act, an action may cause cumulative impacts on the environment if its impacts overlap in space and/or time with the impacts of the other past, present, or reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions. We have identified no secondary or cumulative impacts associated with the licensee's proposal.

7.0 CONCLUSIONS AND RECOMMENDATIONS

We have evaluated the environmental effects of the proposed action and the no-action alternative and summarized them in Table 2 below. Analysis in this environmental assessment indicates that approval of the proposed action would have only minor, short-term environmental impacts at the Hudson River Project, the Sherman Island reservoir or the area immediately surrounding the Sherman Island development.

Table 2. Environmental effects of proposed action and no-action alternative

RESOURCE OR ISSUE	IMPACT RATING					
	Proposed Action			No-Action Alternative		
Geology and Soils	**1**	**A**	**S**	**-**	**NI**	**-**
Vegetation	**1**	**A**	**S**	**-**	**NI**	**-**
Wildlife and Wildlife Habitat	**-**	**NI**	**-**	**-**	**NI**	**-**
Endangered and Threatened Species	**-**	**NI**	**-**	**-**	**NI**	**-**
Water Quantity and Quality	**1**	**A**	**S**	**-**	**NI**	**-**
Aquatic Fauna and Resources	**1**	**A**	**S**	**-**	**NI**	**-**
Historic Properties	**-**	**NI**	**-**	**-**	**NI**	**-**
Land Use and Recreation	**1**	**A**	**S**	**-**	**NI**	**-**
1 – Minor, 2 – Moderate, 3 – Major; A – Adverse, B – Beneficial, NI - No Impact; S – Short Term, L – Long Term, I – Intermittent						

Approval of the proposed action should cause only short-term, minor impacts to geology, soils and vegetation during the construction of the new minimum flow powerhouse. These impacts may include increased soil erosion and compaction and the removal of vegetation in the laydown and road access areas. In addition, construction activities such as placement of a coffer dam, tailrace excavation, and the operation of heavy equipment necessary for constructing the minimum flow powerhouse could cause minor, short-term impacts to water quality through increased sedimentation. Both the WQC and the standard license article 19, require the licensee to employ erosion and sediment control measures during the proposed construction activities and to re-vegetate any disturbed lands after construction is complete. The licensee has proposed to submit an erosion and sediment control plan, for Commission approval, prior to commencing

construction activities to ensure the protection of geology, soils, vegetation and water quality, during construction of the new minimum flow powerhouse.

The proposed action would have no impact to wildlife and wildlife habitat or any federally-listed species identified by the U.S. Fish and Wildlife Service.

The placement of a coffer dam and the tailrace excavation necessary for constructing the minimum flow powerhouse may cause a temporary loss of habitat and increased disturbance to aquatic resources. Additionally, the proposed runner upgrades and installation of new turbines in the Sherman Island powerhouse may cause minor, short-term impacts to aquatic resources; the movement of fish through the project would be inhibited during construction and after the additional turbines have been installed. During construction, the licensee proposes to continue to fulfill the requirements of license article 404 for fish protection and downstream movement and article 405 for minimum flows, as discussed in section 5.1.6 of the EA. Several measures to mitigate impacts to fish after the turbines have been installed, have been incorporated in the September 29, 2006, revised WQC. The continuation of fish protection and minimum flows during construction, the installation of trash racks and the minimization of approach velocities at the intakes should help to protect the diverse assemblage of fish found at the project.

Due to the proposed addition of new turbines and runner upgrades, the increase in minimum flows and the changes in the distribution of the minimum flow between the two bypass channels, the licensee has proposed to file a revised Streamflow and Water Level Monitoring Plan, under license article 401, upon completion of the proposed actions and after consultation with the resource agencies. The licensee proposes to modify the plan to: a) identify the minimum flow unit as the primary means of providing the 314 cfs instream flow; b) ensure that a desired distribution of the 314 cfs between the north and south is achieved when provided via the minimum flow unit; and c) ensure that this distribution and/or minimum flow rates in each channel are functionally maintained whether provided via the minimum flow unit or via pneumatic flashboards. We recommend that the revised plan be filed with the Commission, for approval, within 18 months of commencing operation of the new turbines or by July 1, 2008, whichever comes first.

In order to determine the appropriate distribution of the minimum flow between the north and south bypass channels, the licensee should file, for Commissions approval, a report showing the results of the minimum flow bypass verification analysis. The report should be filed with the Commission within 18 months of the in-service date of the minimum flow unit or by July 1, 2008, whichever comes first. The licensee should consult with the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service and should allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the report with the Commission.

Based on the report, changes may be required to the submerged weir dividing the minimum flow release between the north and south bypass channels. Thus, the Commission should reserve its authority to require that the licensee file a revised Minimum Flow Release Structure Plan under license article 405(d), for Commission approval.

Based on review of the licensee amendment request and the comments of the SHPO and Tribes, it is concluded that approval of the proposed action would have no impacts to cultural resources. If the licensee's plan is approved, we recommend that the licensee be required to cease construction activities immediately and consult with SHPO and Tribes should any archeological or historical artifacts be discovered during construction. Further, the proposed action would not have any long-term negative impact to recreation, land use or aesthetic resources, although installation of the minimum flow turbine could cause minor short-term negative impacts to boating and fishing or aesthetics through localized visual disturbance and noise.

Finally, approval of the proposed action would not produce or significantly add to any existing secondary or cumulative environmental impacts. Based on the above assessment, we conclude that approve of the proposed action would not constitute a major federal action significantly affecting the quality of the human environment.

8.0 REFERENCES

Erie (Erie Boulevard Hydropower, Limited Partnership). 2004. Final Karner Blue Butterfly/Blue Lupine Survey results for the Hudson River Project, filed on January 21, 2004.

Erie (Erie Boulevard Hydropower, Limited Partnership). 2006. Application for Amendment of License: Sherman Island Development.

FERC (Federal Energy Regulatory Commission). 2001. Final Multiple Project Environmental Impact Statement, Projects Nos. 2318-002, 2047-004, 2482-014, and 2554-003, November, 2001.

9.0 PREPARERS

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