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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Erie Boulevard Hydropower, L.P. Project No. 7321-018-New York

NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT

(December 19, 2005)

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's regulations, 18 CFR Part 380 (Order No. 486, 52 F.R. 47897), the Office of Energy Projects has reviewed the application for a subsequent license for the 1.0-megawatt Macomb Project, located on the Salmon River, in Franklin County, New York, and has prepared an Environmental Assessment (EA). In the EA, Commission staff analyze the potential environmental effects of relicensing the project and conclude that issuing a subsequent license for the project, with appropriate environmental measures, would not constitute a major federal action significantly affecting the quality of the human environment.

A copy of the EA is on file with the Commission and is available for public inspection. The EA may also be viewed on the Commission's website at http://www.ferc.gov using the "eLibrary" link. Enter the docket number excluding the last three digits in the docket number field to access documents. For assistance, contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll-free at 1-866-208-3676, or for TTY, (202) 502-8659.

You may also register online at http://www.ferc.gov/docs-filing/esubscription.asp to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

Any comments should be filed within 30 days from the issuance date of this notice, and should be addressed to the Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1-A, Washington, D.C. 20426. Please affix "Macomb Project No. 7321-018" to all comments. Comments may be filed electronically via Internet in lieu of paper. The Commission strongly encourages electronic filings. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's website under the "eFiling" link. For further information, contact Kristen Murphy at (202) 502-6236.

Magalie R. Salas
Secretary

PUBLIC

Environmental Assessment

Erie Boulevard Hydropower, L.P.
Macomb Project
Project No. 7321-018

ENVIRONMENTAL ASSESSMENT
FOR
NEW HYDROPOWER LICENSE

Macomb Project

FERC Project No. 7321-018

New York

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
888 First Street, NE
Washington, D.C. 20426

December 2005

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SUMMARY

Erie Boulevard Hydropower, L.P. (Erie Boulevard) filed an application for a subsequent license on November 26, 2004, to continue to operate and maintain the Macomb Project, located on the Salmon River in the Town of Malone, Franklin County, New York. The Macomb Project has a total installed capacity of 1,000 kilowatts (kW) and generates an average of 5,660,000 kilowatt-hours (kWh) annually. The project does not use or occupy any federal facilities or land.

Included in the application is the Macomb Project Settlement Agreement (Settlement), signed November 2, 2004. The Settlement describes measures and facilities recommended for inclusion in the project license by the signatories.

This Environmental Assessment (EA) analyzes the effects of the proposed action, the proposed action with additional staff-recommended measures, and a no-action alternative. Erie Boulevard proposes to continue to operate the project in a run-of-river mode with no capacity changes. In accordance with the Settlement, Erie Boulevard also proposes to limit daily impoundment fluctuations, maintain a minimum flow downstream from the powerhouse, continue to implement an Interim Sediment Management Plan, install appropriate spacing on the project trashrack for fish protection, install a fish stocking tube, develop a streamflow and water level monitoring plan, and develop a Historic Properties Management Plan (HPMP). The Settlement also includes provisions that are not intended for inclusion in the license; namely, Erie Boulevard proposes to enhance an existing boat launch on Town of Malone property adjacent to the Macomb impoundment, and develop a hiking trail and a parking area on Erie Boulevard property.

Based on our analysis, we recommend licensing the project as proposed by Erie Boulevard with some additional staff-recommended measures. Our recommended measures include or are based, in part, on recommendations made by the federal and state resource agencies. We recommend including the proposed boat launch enhancements and the proposed hiking trail and associated parking area in the license and within the project boundary. In addition, we recommend that Erie Boulevard conduct an archaeological survey prior to developing the proposed HPMP.

In section VI of the EA, we estimate the annual net benefits of operating and maintaining the project under the three alternatives identified above. Our analysis shows that the annual net benefit would be $37,780 for the proposed action, $37,030 for the proposed action with additional staff-recommended measures, and $56,560 for the no-action alternative.

On the basis of our independent analysis, we conclude that issuing a subsequent license for the project, as proposed by Erie Boulevard with the staff-recommended measures, would not be a major Federal action significantly affecting the quality of the

human environment.

ENVIRONMENTAL ASSESSMENT

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
Washington, D.C.

MACOMB PROJECT
FERC No. 7321-018, New York

I. APPLICATION

On November 26, 2004, Erie Boulevard Hydropower, L.P. (Erie Boulevard) filed an application with the Federal Energy Regulatory Commission (Commission) for a subsequent license for the 1,000-kilowatt (kW) Macomb Project (Project No. 7321-018). The Macomb Project is located on the Salmon River in the Town of Malone, Franklin County, New York (figures 1 and 2). Erie Boulevard estimates that the project produces an average annual energy generation of approximately 5,660 megawatt-hours (MWh). No new construction or increased capacity is proposed. The project does not occupy any federal land.

II. PURPOSE OF ACTION AND NEED FOR POWER

A. Purpose of Action

The Commission must decide whether to issue a subsequent license for the project, and what, if any, conditions should be placed in any license issued. Issuing a license would allow Erie Boulevard to continue generating electricity at the project, making electric power from a renewable resource available to the area. In this environmental assessment (EA), we assess the effects of continued project operation, alternatives to the proposed project, and a no-action alternative, and recommend conditions to become a part of any subsequent license issued. In deciding whether to issue a license for a hydroelectric project, the Commission must determine that the project will be best adapted to a comprehensive plan for improving or developing the waterway. In addition to the power and developmental purposes for which licenses are issued, the Commission must give equal consideration to the purposes of energy conservation; the protection of, mitigation of damage to, and enhancement of fish and wildlife (including related spawning grounds and habitat); the protection of recreational opportunities; and the preservation of other aspects of environmental quality.

Map
Page 2

Public access for the above information is available only through the Public Reference Room, or by e-mail at public.referenceroom@ferc.gov

Map
Page 3

Public access for the above information is available only through the Public Reference Room, or by e-mail at public.referenceroom@ferc.gov

B. Need for Power

To assess the need for project power, we reviewed Erie Boulevard's present and anticipated future use of project power, together with that of the operating region in which the project is located. The Macomb Project generates an average of 5,660 MWh annually. Erie Boulevard would continue to sell power through the New York Independent System Operator if issued a subsequent license for the project.

The Macomb Project is located in the Northeast Power Coordinating Council (NPCC) region of the North American Electric Reliability Council (NERC). According to NERC, a 1.0 percent annual growth rate is expected over the 2004-2013 period, with a summer peak demand growth rate of 1.2 percent in the New York area (NERC, 2004).

By producing hydroelectricity, the Macomb Project displaces the need for other power plants, primarily fossil-fuel facilities, to operate, thereby avoiding some power plant emissions and creating an environmental benefit. The present and future use of the Macomb Project power, its displacement of nonrenewable fossil-fired generation, and contribution to a resource diversified generation mix, support a finding that the power from the project would help meet both the short- and long-term need for power in the NPCC region.

III. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

1. Project Description

The existing project consists of: (1) a 106-foot-long, 32-foot-high concrete gravity overflow-type dam having a spillway crest elevation of 570.7 feet above mean sea level (msl); (2) a 38-foot-long, 25-foot-high intake structure along each bank; (3) two 6-foot-diameter, 60-foot-long, gated waste tubes (one along the north bank, and the other on the south side of the spillway); (4) a 14-acre reservoir with a net storage capacity of 14 acre-feet at the spillway crest elevation; (5) a 6.5-foot-diameter, 60-foot-long, gated penstock along the left (south) bank; (6) a powerhouse containing one 1,000-kW horizontal Francis turbine; and (8) appurtenant facilities.

The project boundary (figure 2) encloses the project reservoir up to elevation 570.7 feet msl, the facilities described above, an access easement and right-of-way on the east side of the reservoir, an access road on the south bank of the river, and the tailrace downstream of the project dam. Erie Boulevard estimates that the total average annual generation is approximately 5,660 MWh. No new capacity or construction is proposed.

The project has been operating for over 49 years under the existing license effective December 1, 1956, and during this time, Commission staff have conducted operational inspections focusing on the continued safety of the structures, identification of unauthorized modifications, efficiency and safety of operations, compliance with the terms of the license, and proper maintenance. As part of the relicensing process, Commission staff would evaluate the continued adequacy of the proposed project facilities under a new license. Special articles would be included in any license issued, as appropriate. Commission staff would continue to inspect the project during the new license term to assure continued adherence to Commission-approved plans and specifications, special license articles relating to construction (if any), operation and maintenance, and accepted engineering practices and procedures.

2. Current Project Operation

The current license requires that Erie Boulevard release a minimum flow of 125 cubic feet per second (cfs) from the project and that the headpond elevation be maintained at no lower than 569.7 MSL, which is one foot below the spillway crest. At flows greater than the hydraulic capacity of the unit (310 cfs), excess flow is passed over the spillway crest. At flows between 310 cfs and 125 cfs, flow is passed through the unit and the allowable drawdown is utilized as needed to facilitate generation and ensure provision of the 125-cfs base flow required by the current license. When inflow is below 125 cfs, flow is spilled and the pond elevation is maintained near the crest of the spillway. The generating unit is controlled by a Programmable Logic Controller (PLC), which adjusts the gate position according to inflow. When inflow decreases to a point where there is a 50 percent gate opening, the PLC control is shut off and the project is operated manually by the local traveling operator.

3. Proposed Operation and Environmental Measures

Relicensing the project under the terms of the Settlement is the proposed action in this EA. Section 1 of the Settlement provides an introduction of the parties[1] and definition of terms. Section 2 sets forth general agreements of the parties. Section 3 includes measures Erie Boulevard proposes to be included in any subsequent license issued for the project. Section 4 describes recreation enhancements that are included in the Settlement but are not proposed to be included in the license.

[1] In addition to Erie Boulevard, other signatories to the Settlement are American Rivers, American Whitewater, Franklin County, New York Rivers United, New York State Conservation Council, New York State Department of Environmental Conservation, New York State Council of Trout Unlimited, the Town of Malone, U.S. Fish and Wildlife Service (FWS), National Park Service, and the Village of Malone.

Under these sections of the Settlement, Erie Boulevard proposes to:

Section 2.9: develop a Historic Properties Management Plan.

Section 3.1: limit daily impoundment fluctuations to 0.25 foot as measured in a downward direction from the crest of dam (elevation of 570.7) when inflow exceeds 125 cfs,[2] and maintain the impoundment at or above the spillway crest when inflow is 125 cfs or less;

Section 3.2: maintain a baseflow of 125 cfs or inflow to the impoundment, whichever is less, from the project's tailrace;

Section 3.3: implement an Interim Sediment Management Plan[3];

Section 3.4: install seasonal trashrack overlays with 1.0-inch clear spacing on the existing trashracks or replace the existing trashracks with 1.0-inch clear spaced trashracks;

Section 3.5: install a fish stocking tube; and

Section 3.6: develop a streamflow and water level monitoring plan.

Erie also proposes the following recreational enhancements, included in the Settlement, but not intended for inclusion in the license:

Section 4.1: enhance an existing car top boat launch on Town of Malone property adjacent to the Macomb impoundment on Lower Park Street by providing signage and matting for the launch area; and

Section 4.2: develop a hiking trail and a parking area on Erie Boulevard-owned land north of the project.

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[2] Erie indicates that only drawdowns of 0.50 foot or greater below the spillway crest would be considered out of compliance.

[3] Erie Boulevard would implement an Interim Sediment Management Plan until finalization of the New York DEC's Salmon River Sediment Management Plan. If it is then necessary to change or update the sediment plan, Erie Boulevard would cooperate with the New York DEC in the development of a Final Sediment Management Plan, which would be included as a requirement of the water quality certification for the project. Erie Boulevard would implement the Final Sediment Management Plan upon approval by the Commission.

B. Proposed Action with Additional Staff-Recommended Measures

In addition to Erie Boulevard's proposed measures, we recommend that the recreational measures included in the settlement (enhancing the car top boat launch, and developing a hiking trail with parking) be included in the license and within the project boundary. We also recommend that an archaeological survey be conducted prior to the development of the proposed HPMP.

Proposed and recommended measures are discussed under the appropriate resource sections and summarized in section VII of the EA.

C. No-Action Alternative

Under the no-action alternative, the project would continue to operate under the terms and conditions of the existing license, and no new environmental protection, mitigation, or enhancement measures would be implemented. We use this alternative as the baseline environmental condition for comparison with other alternatives.

D. Alternatives Considered but Eliminated from Detailed Study

As part of the National Environmental Policy Act (NEPA) scoping process we considered, but have eliminated from detailed study, several alternatives to the proposed project because they are not reasonable in this case. These alternatives include: (1) issuing a non-power license; and (2) project retirement via partial or total project removal.

1. Non-power License

A non-power license is a temporary license that would be in effect until the licensee either surrenders the license or the Commission determines that another government agency will assume regulatory authority and supervision over the lands and facilities covered by the non-power license. No entity has recommended a non-power license, and there is no basis for concluding that the Macomb Project should no longer produce power. Therefore, issuing a non-power license is not a reasonable alternative to relicensing the Macomb Project.

2. Project Retirement

Project retirement could be accomplished with or without dam removal. Either alternative would require denial of the license application and surrender or termination of the existing license with appropriate conditions. No party has recommended project decommissioning. The project provides a viable, safe, and clean renewable source of

power to the region, provides recreational access to the Salmon River, and contributes to the local economy by providing a source of revenue to Erie Boulevard. Thus, project retirement is not a reasonable alternative to relicensing the project with appropriate enhancement measures.

IV. CONSULTATION AND COMPLIANCE

A. Agency Consultation and Interventions

The Commission's regulations require that applicants consult with appropriate state and federal agencies, tribes, and the public before filing a license application. This consultation is required to comply with the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, and other federal statutes. Pre-filing consultation must be complete and documented in accordance with Commission regulations.

B. Interventions

On January 12, 2005, the Commission issued a public notice accepting the application and soliciting motions to intervene. The filing deadline was March 14, 2005. Two entities filed motions to intervene; neither is in opposition.

Intervening Entity	Date Filed
New York State Department of Environmental Conservation	January 12, 2005
U.S. Department of the Interior (Interior)	February 9, 2005

C. Scoping

Before preparing this EA, we conducted scoping to determine the issues and alternatives that should be addressed. On February 1, 2005, we issued a Scoping Document and a notice soliciting comments on issues to be addressed in the EA. We distributed the Scoping Document to all entities on the project's mailing list and published the notice in local newspapers and in the Federal Register. The following entity filed comments:

Commenting Entity	Date Filed
Erie Boulevard	March 2, 2005

D. Comments and Recommendations

On March 28, 2005, the Commission issued a public notice stating the application was ready for environmental analysis and requesting final comments, recommendations, prescriptions, and terms and conditions. The filing deadline was May 27, 2005. The following entity filed comments:

Commenting Entity	Date Filed
Interior	May 20, 2005

Erie Boulevard did not file reply comments.

E. Compliance

1. Water Quality Certification

Under section 401(a)(1) of the Clean Water Act (CWA), license applicants must obtain either state certification that any discharge from a project would comply with applicable provisions of the CWA, or a waiver of certification by the appropriate state agency.

Erie Boulevard requested water quality certification from the New York State Department of Environmental Conservation (New York DEC) by letter dated May 9, 2005. New York DEC received Erie Boulevard's request for certification on May 10, 2005. New York DEC has not yet issued certification for the project.

2. Section 18 Fishway Prescription

Section 18 of the Federal Power Act (FPA) states that the Commission shall require the construction, operation, and maintenance, by a licensee of such fishways as may be prescribed by the Secretaries of the Interior and Commerce. In a letter filed May 20, 2005, Interior requested that the Commission reserve its authority to require fishways that it may prescribe in the future.

3. Endangered Species Act

Section 7 of the Endangered Species Act (ESA)[4] requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species. In a letter dated April 14, 2004, U.S. Fish and Wildlife Service (FWS) states that except for occasional transient individuals, no federally listed or

[4] 16 U.S.C. ' 1536(a)

proposed endangered or threatened species are known to exist in the project area, and no habitat in the project area is currently designated or proposed critical habitat. The FWS notes that no further ESA coordination or consultation is required.

4. Coastal Zone Management Act (CZMA)

The Coastal Zone Management Act (CZMA) of 1972, as amended, requires review of the project's consistency with the state's Coastal Management Program. The New York Department of State (New York DOS) is responsible for reviewing projects for consistency with the State's Coastal Management Program. By letter dated March 29, 2004, Devine Tarbell & Associates, Inc. requested, on behalf of Erie Boulevard, a determination from the New York DOS on the applicability of the state's coastal zone policies to the Macomb Project.

By letter dated April 2, 2004, the New York DOS stated that the Macomb Project is not subject to the consistency provisions of the New York State Coastal Management Program.

5. Section 10(j) Recommendations

Under section 10(j) of the FPA, each hydroelectric license issued by the Commission must include conditions based on recommendations provided by federal and state fish and wildlife agencies for the protection, mitigation, or enhancement of fish and wildlife resources affected by the project. The Commission is required to include these conditions unless it determines that they are inconsistent with the purposes and requirements of the FPA or other applicable law. Before rejecting or modifying an agency recommendation, the Commission is required to attempt to resolve any such inconsistency with the agency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agency. The following six 10(j) recommendations were timely filed by Interior on May 20, 2005:

Recommendation 1 – limit daily impoundment fluctuations to 0.5 foot as measured in a downward direction from the dam crest.

Recommendation 2 – maintain a base flow of 125 cfs (or inflow to the Macomb impoundment, whichever is less) from the project's tailrace.

Recommendation 3 – continue to implement the Interim Sediment Management Plan in place pursuant to the Settlement and work with the New York DEC in developing a Final Sediment Management Plan to be incorporated into the 401 Water Quality Certificate.

Recommendation 4 – install a physical barrier with a maximum 1-inch clear spacing at the location of the existing trashrack structure. This may consist of either seasonal

overlays or full trashrack replacement. Install this barrier within 8 years of license issuance, or when the existing trashrack needs replacing, whichever is sooner.

Recommendation 5 – install a fish stocking tube adjacent to the powerhouse for use by the New York DEC.

Recommendation 6 – develop a flow monitoring plan in consultation with the New York DEC and FWS within 6 months of license issuance. Include all gages and/or equipment to determine headpond elevations, monitor flow through the turbines, sluice gates, and spillways, and provide an appropriate means of independent verification of water levels.

Table 5 in Section VIII lists each of the recommendations subject to section 10(j) and whether the recommendations are recommended for adoption under the staff alternative. Recommendations that we consider outside the scope of section 10(j) have been considered under section 10(a) of the FPA. All recommendations are addressed in the specific resource sections of this EA.

V. ENVIRONMENTAL ANALYSIS

In this section, the general environmental setting in the project area and the scope of our cumulative effects analysis are described. An analysis of the environmental effects of the proposed action and action alternatives is also included. Sections are organized by resource area (aquatic, recreation, etc.). Under each resource area, historic and current conditions are first described. The existing condition is the baseline against which the environmental effects of the proposed action and alternatives are compared, including an assessment of the effects of proposed mitigation, protection and enhancement measures, and any potential cumulative effects of the proposed action and alternatives. Staff conclusions and recommended measures are discussed in section VII of the EA.

Unless noted otherwise, the sources of our information are the license application (Erie Boulevard, 2004) and additional information filed by Erie Boulevard (2004, and 2005).

A. General Description of the Area

The Macomb Project is located in the Town of Malone on the Salmon River, about 2.5 river miles north of the Village of Malone in Franklin County, New York. The Salmon River originates in the foothills of the Adirondack Mountains and flows northwest about 50 miles, draining into the St. Lawrence River near Dundee, Quebec. The project site is located at river mile 17.3, as measured from the U.S.-Canada border, and has a drainage area of approximately 183 square miles. The 14-acre project impoundment is known as Lamica Lake.

Three licensed hydro projects are located upstream of the Macomb Project. From upstream to downstream, these are Chasm Falls (P-7320), Ballard Project (P-3267), and the Whittlesey Project (P-10522). Of these, Erie Boulevard owns Chasm Falls. A fourth dam is further upstream and forms Mountain View Lake, which is privately owned and operated in the headwaters for recreation and represents the only significant water storage in the watershed. The nearest downstream dam is Fort Covington, located near the Canadian border.

B. Scope of Cumulative Effects Analysis

According to the Council on Environmental Quality's regulations for implementing NEPA (40 CFR, Section 1508.7), an action may cause cumulative impacts on the environment if its impacts overlap in time and/or space with the impacts of other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

Based on information in the application, agency and other stakeholder comments, and our preliminary analysis, we have identified fish and macroinvertebrate habitat as a resource that may be cumulatively affected by sediment management at the Macomb Project in combination with other hydroelectric projects in the basin and by naturally occurring sediment processes in the Salmon River Basin.

1. Geographic Scope

The geographic scope of the analysis defines the physical limits or boundaries of the proposed action's effect on the resources. For fish and macroinvertebrate habitat the scope of our analysis is the Salmon River Basin. We chose the above geographic boundary because the effects of sediment management at the project in combination with activities at other hydroelectric projects and the naturally occurring sediment processes in the basin are limited to this area.

2. Temporal Scope

The temporal scope of our cumulative effects analysis includes a discussion of past, present, and future actions and their effects on aquatic resources. Based on the potential subsequent license term, the temporal scope looks 30 to 50 years into the future, concentrating on the effects on the resources from reasonably foreseeable future actions. The historical discussion of past actions and effects is, by necessity, limited to the amount of available information for the resource. The quality and quantity of information diminishes as we analyze the resource further away in time from the present.

C. Proposed Action and Action Alternatives

Only the resources that would be affected, or about which comments have been received, are addressed in detail in this EA. Based on this, we have determined that water quality and quantity, aquatic, terrestrial, threatened and endangered species, recreation, cultural, and aesthetic resources may be affected by the proposed action and action alternatives. We have not identified any substantive issues related to geology and socioeconomics associated with the proposed action, and therefore, these resources are not assessed in the EA. Land use is addressed in the recreation and terrestrial sections.

1. Aquatic Resources

Affected Environment

Hydrologic information

Monthly and annual flow duration curves were developed for the project using the U.S. Geological Survey (USGS) gage number 04270000 located upstream of the Macomb Project and downstream of the Chasm Hydroelectric Project (FERC No. 7320) at Chasm Falls, New York for the period of record July 24, 1925, to September 30, 2002, and adjusted for drainage area. The largest daily average flow on the Salmon River near the Macomb Project was 3,280 cfs and occurred on April 1, 1998. The minimum average daily flow was 28 cfs and occurred on September 4, 1934. The minimum, average, and maximum daily flows for each month at the Chasm Falls gage are presented in table 1.

Table 1. Minimum, average, and maximum daily flows by month at the Chasm Falls USGS gage 04270000.

Month	Minimum daily flow (cfs)	Average daily flow (cfs)	Maximum daily flow (cfs)
January	96	269	2,537
February	86	234	1,678
March	105	380	4,131
April	137	762	4,547
May	125	464	2,814
June	78	285	2,343
July	53	219	1,650
August	58	204	2,135
September	39	220	1,456
October	72	269	1,885
November	64	303	2,690
December	105	281	1,525

Annual	39	324	4,547

Under the existing license, a minimum flow of 125 cfs, or inflow to the project reservoir, whichever is less, is required to be maintained downstream of the powerhouse.

Water quality standards

There are no consumptive uses of the Salmon River at the project. The Village of Malone obtains its water supply from Spring Brook, a tributary to the Salmon River, about 10 miles upstream from the project. The Malone wastewater treatment plant discharges into the Salmon River about 0.5 mile upstream of Lamica Lake and services over 6,000 residents of Malone and 5,000 people in three prisons located in Malone.

The water quality standard for the Salmon River within the vicinity of the Macomb Project is identified as Class C(t). Class C(t) waters are suitable for primary and secondary contact recreation,[5] fishing recreation, and fish propagation (including trout) and survival. For cold waters suitable for trout spawning, the dissolved oxygen (DO) concentration is to be maintained at not less than 7 milligrams per liter (mg/L) unless due to natural conditions. For trout waters, the minimum daily average is not be less than 6 mg/L, and at no time is the concentration to be less than 5 mg/L. For all waters, pH must not be less than 6.5 nor more than 8.5 and dissolved solids are to be kept as low as practicable but in no case greater than 500 mg/L.

Water quality data for the Salmon River is generally lacking. However, the results of an assessment of macroinvertebrates downstream of the project and a temperature study indicated that water quality at the project was good. On September 15, 2003, macroinvertebrates were sampled from one site approximately 4 miles downstream of the Macomb Project about 400 feet above the Flatrock Road bridge. The results of the macroinvertebrate assessment indicated that the Salmon River supports a diverse, abundant, and high-quality aquatic macroinvertebrate community which is reflective of overall high-quality habitat and water quality. Water quality parameters measured during the study generally met water quality standards and were as follows: water temperature, 21.4 degrees Celsius (˚C); specific conductivity, 172 micromhos; DO, 9.68 parts per million (109.7 percent saturation); and pH, 8.76.

Stream temperature data were collected upstream of the project impoundment, within the impoundment, at the powerhouse intake, and at two stations downstream from August 6, 2003, to September 15, 2003. These data were compared to data obtained for other years (1997, 1998, and 2000) and to data from nearby streams. Compared to the other sampling periods evaluated, the 2003 sampling period was considered relatively

[5] Other factors may limit the use for these purposes.

warm and dry. Mean stream temperatures were similar among all sites and ranged from 18.1˚C to 18.8˚C. Stream temperatures increased only slightly from the upstream site to the powerhouse intake then declined slightly at sites further downstream. Water temperatures during 2003 exhibited diurnal variations of about 2 to 5˚C, and for most of the time maximum temperatures remained below the thermal criteria (22.8 ˚C) considered best for survival of brown and rainbow trout. Maximum temperatures exceeding 22.8 ˚C were less common during 1997, 1998, and 2000 which were cooler and wetter periods compared to 2003. Mean temperatures for the Salmon River appeared to be intermediate to the values reported from the Deer and St. Regis rivers which also support fisheries for brown and rainbow trout.

Fisheries

Historically, the Salmon River supported runs of Atlantic salmon and possibly sturgeon. Upstream fish movement for most fishes is currently blocked at the dam at Fort Covington near the Canadian border. However, some American eel are able to migrate past the Fort Covington dam.

The Salmon River in the vicinity of the project is managed by the New York DEC as a coldwater fishery for primarily brown and rainbow trout although warmwater species are found in the river and project impoundment. Species collected during the most recent sampling downstream of the project in 1998 included brown trout, rainbow trout, white sucker, channel catfish, a variety of minnow species, and the catadromous American eel. Species collected during a 1995 sampling event upstream of the project included brown trout, brook trout, white sucker, and a number of minnow species. The project impoundment, Lamica Lake, is known to support bass, bullhead and a healthy population of brown and rainbow trout.

Environmental Impacts and Recommendations

a. Run-of-river operation and impoundment fluctuation limits

Under section 3.1 of the Settlement, the Macomb Project would be operated in a ROR mode at river flows of 125 cfs or less where flows through the turbine or over the spillway crest (elevation 570.7 feet USGS datum) would equal inflow to the project impoundment. At river flows greater than 125 cfs, Erie Boulevard would attempt to limit impoundment fluctuations to 0.25 foot below the spillway crest, however, only fluctuations below 0.5 foot would be considered reportable for compliance purposes. Water surface elevations higher than the spillway crest would be considered outside the normal impoundment fluctuation zone and would not factor into the drawdown limitation. On January 31 of each year, Erie Boulevard would submit an annual report to the signatories of the Settlement listing the dates for all fluctuations of 0.25-foot or greater below the spillway crest.

Interior's section 10(j) recommendation (number 1) for impoundment fluctuation limits is consistent with the Settlement provision described above. Interior also recommends, under section 10(a), that Erie Boulevard strive to limit daily impoundment drawdowns to 0.25 foot from the crest of the spillway.

Staff Analysis

Fish species that inhabit and spawn in near-shore areas of project impoundments can be susceptible to stranding as well as egg desiccation from project-related fluctuating water levels.

On May 13, 2004, Erie Boulevard performed an impoundment drawdown study to document any effects of the existing 1-foot fluctuation limit. Observations of the impoundment were made at drawdowns of 1 foot and 6 inches and at a level even with the dam crest. The study participants, including signatories to the Settlement, found that stranding of aquatic organisms was not a major problem due to the generally steep-sided nature of the impoundment's shoreline; however, they noted that the 6-inch drawdown had a less noticeable effect on riparian and shoreline resources.

Although impoundment effects on aquatic resources were not particularly evident during the drawdown study, operating in a ROR mode and limiting impoundment fluctuations as specified in the Settlement would reduce the chances of fish stranding and disruption of spawning habitat. Maintaining relatively stable impoundment levels would benefit aquatic vegetation beds near the shoreline, as well as fish and other aquatic organisms that rely on near-shore habitat for feeding, spawning, and cover. Erosion and resultant turbidity can also be reduced when impoundments are held relatively stable.

Fluctuating water levels in the downstream high-gradient tailwater reaches can also cause fish stranding, redd desiccation, and affect invertebrate populations. At river flows of 125 cfs or above, limiting the fluctuations of the impoundment to 0.25 foot would reduce the time that downstream habitats could be dewatered if the powerhouse were to trip off-line. The targeted limit for allowable impoundment fluctuations of 0.25 foot and the reportable limit of 0.5 foot would represent an improvement over the current 1-foot fluctuation limit at the project. At river flows of 125 cfs or less, ROR operation with the impoundment held at or above the spillway crest would further reduce the likelihood of downstream effects from a plant trip. Under this scenario, if the plant were to trip off-line, flows would almost immediately begin spilling over the dam crest. Under both scenarios, the high quality trout and macroinvertebrate habitat present in the Salmon River would be maintained.

b. Maintenance of baseflows

Section 3.2 of the Settlement specifies that Erie Boulevard will maintain a baseflow of 125 cfs, or the inflow to the Macomb impoundment, whichever is less, from the project tailrace. Interior's section 10(j) recommendation (number 2) for a baseflow release of 125 cfs in the tailrace of the Salmon River for the protection of aquatic resources is consistent with this Settlement provision.

Staff Analysis

The baseflow provision at the Macomb Project establishes the flow level that differentiates between ROR operation and limited storage operation. At flows of 125 cfs or less, the impoundment would be held at or above the spillway crest. Therefore, if the project should go off-line, downstream flows would be restored immediately by spill flows resulting in little if any effect to downstream aquatic habitats (see discussion above). The baseflow provision is most relevant for river flows above 125 cfs when the impoundment level is being held below the spillway crest. Under these operating conditions, the magnitude of the allowable impoundment fluctuation and the quantity of the baseflow downstream of the powerhouse would contribute to the effects of dewatering caused by the project tripping off-line. In the previous section, we found that reducing the allowable impoundment fluctuation from 1 foot to 0.5 foot (with a target of 0.25 foot) would maintain the high quality trout and macroinvertebrate habitat present in the Salmon River if the project were to trip off-line. The quantity of the baseflow also protects the downstream resource when flows are temporarily interrupted. The higher the baseflow, the longer a reach would remain watered during a flow interruption.

The results of a baseflow evaluation and macroinvertebrate study provide support for the 125-cfs baseflow provision. The baseflow evaluation was conducted on September 17, 2003. Study participants observed river conditions at a baseflow of 125 cfs at the powerhouse and three downstream locations including the public fishing access (about 0.4 mile downstream), Cargin Road bridge (about 1.7 miles downstream) and Flatrock Road bridge (about 3.7 miles downstream). Staff gages that marked the water surface elevation for a flow of 90 cfs were also provided so study participants could compare river conditions at the two flow levels. After observing the baseflow at 125 cfs, the study participants concluded that a baseflow of 125 cfs was adequate to protect the aquatic resources in the Salmon River downstream of the Macomb Project.

In addition, the results of the macroinvertebrate study (discussed above), indicated that the Salmon River supports a diverse, abundant, and high-quality aquatic macroinvertebrate community which reflects overall high-quality habitat and water quality. Macroinvertebrate populations are generally less mobile than fishes and serve as good indicators of effects due to dewatering. Because the macroinvertebrate population downstream of the project has developed under the current baseflow release and is indicative of a healthy ecosystem, continuation of the existing 125-cfs baseflow release at the project would protect aquatic resources in the Salmon River.

c. Flow and water level monitoring plan

Under section 3.6 of the Settlement, Erie Boulevard would develop, in consultation with the FWS and New York DEC, a stream flow and water level monitoring plan. The plan would include all gages and equipment necessary to monitor flow through the project's turbine, sluice gates, and spillway; to determine the project headpond elevation, as needed; and to provide an appropriate means of independent verification of water levels by the New York DEC and FWS. The Settlement further specifies that binary staff gages be provided at appropriate locations to permit independent verification of headpond water levels and that the staff gages should be visible to the public. Under the Settlement, Erie Boulevard would be responsible for maintaining records of impoundment levels and flows including those resulting from uncontrollable station outages and to provide the data to the above agencies upon request. Interior's section 10(j) recommendation (number 6) for a flow monitoring plan is consistent with this Settlement provision.

Staff Analysis

A plan to monitor impoundment levels and project flows developed in consultation with the relevant agencies as specified in section 3.6 of the Settlement and described above would minimize misunderstandings about operational compliance and ensure that aquatic resources at the project are protected. Establishing binary staff gages for impoundment water levels would provide a simple and quick method for verifying that the proper impoundment levels are being maintained. Under the plan, project records would be made available to the agencies upon request and monitoring data and locations would be accessible to authorized agency personnel thus providing further assurances that the project is operating in accordance with any license issued.

d. Sediment Management

Under section 3.3 of the Settlement, Erie Boulevard would continue to implement an Interim Sediment Management Plan, filed as an attachment to the Settlement. Upon any license issuance, Erie Boulevard would continue to implement the Interim Sediment Management Plan and cooperate with the New York DEC in the development of a final plan including how it would be incorporated into the water quality certification to be issued by New York DEC and ultimately, any Commission license. Interior's section 10(j) recommendation (number 3) for implementation of Erie Boulevard's Interim Sediment Management Plan and development of a final plan is consistent with this Settlement provision.

Staff Analysis

Due to the sandy nature of the Salmon River watershed, sediment levels can accumulate in impounded reaches. Mobilization of large amounts of sediment by project operations could affect aquatic resources and habitats. Excessive sedimentation can impair salmonid spawning success through impaired respiration and smothering of redds.

Erie Boulevard's Interim Sediment Management Plan addresses the three project-related activities—normal operations, impoundment drawdowns, and construction activities—having the potential to mobilize sediment within the project impoundment. Under the plan, Erie Boulevard would utilize the deep sluice gate located adjacent to the intake trashracks to route sediment downstream at flows in excess of 750 cfs.[6] At this flow, velocities are sufficient to ensure routing of the sediment through the river system. The Interim Sediment Management Plan also provides for monitoring selected cross sections of the river downstream of the project to determine if the sediment routing is having an effect on the movement of the river channel or depth of pools. The plan includes procedures for managing sediment during routine and inadvertent drawdowns as well as during any construction activities that might occur during the term of any subsequent license.

Having a sediment management plan in place at the project and implementing its provisions during routine operation, impoundment drawdowns, and during construction activities would help protect aquatic resources downstream of the project from the effects of catastrophic releases of sediment. The plan would be particularly useful at the Macomb Project because of the abundance of sediment in the Salmon River watershed and the high potential for sediment effects if the sediment load is not properly managed.

e. Fish protection

Section 3.4 of the Settlement provides for the replacement or modification of the existing trash rack with a trash rack with 1-inch clear spacing or a seasonal trash rack overlay with 1-inch clear spacing. The replacement or modification would take place within 8 years of license issuance or when the existing trash rack needs replacement, whichever occurs first. If Erie Boulevard chooses the seasonal overlay alternative, the seasons of use would be determined in consultation with the New York DEC and FWS.

Interior's section 10(j) recommendation (number 4) for fish protection measures is consistent with the Settlement provision described above. Interior also states that because the Salmon River is managed as a coldwater trout fishery, it is undesirable to allow passage of the warmwater species residing in Lamica Lake which may compete with the coldwater species downstream of the dam.

[6] Erie states that the sluice gate has the capacity to release as much as 625 cfs at river flows in excess of 725 cfs.

Staff Analysis

Fish that reside in the project's impoundments could be susceptible to impingement on the trash rack or entrainment through the project's turbine when the project is operating.

The New York DEC and FWS consider acceptable fish protection measures to include intake approach velocities less than 2 feet per second 1 foot upstream from the intake and trash rack spacing of no greater than 1 inch. The existing trash rack at the project has bar spacings of about 2.5 inches which can allow passage of most fish found in the project impoundment through the intake and subject them to turbine injury or mortality. The existing average approach velocity at the project intake is less than 0.5 foot per second (fps).

The proposed 1-inch clear spacing for the project's trash rack would prevent all but the smaller fish from passing through the intake structure and would be a significant improvement in fish protection over the existing trash rack. Based on the results of studies conducted by Lawler et al. (1991), we calculate that the 1-inch clear spacing would generally not allow passage of smallmouth bass greater than 9 inches in total length.[7] On the other hand, we calculate that a 2.5-inch spaced trash rack could allow passage of smallmouth bass greater than 21.9 inches, if any that large were to occur there.

In addition to entrainment effects, fish can become impinged on the bars of a trash rack if they are not able to overcome the approach velocity. As stated above, the average approach velocity in front of the project intake is less than 0.5 fps. To escape the influence of a trash rack, fish are capable of swimming at a burst speed, which is defined as a short, intense swimming effort generally sustainable for about 1 second or less (Bell, 1991). Beamish (1978) reports that most fish can burst at a speed equal to about 10 times their body length in centimeters per second.

To analyze whether or not impingement of gamefishes on the trash racks would occur at the project, we used the results of Beamish (1978) and coupled them with our calculation of the smallest gamefish that would be excluded by the 1-inch clear-spaced trash rack. The burst speed for 9-inch smallmouth bass is about 7.5 fps. Therefore, a 9-inch smallmouth bass would be expected to easily escape the 0.5-fps average intake velocity at the project and avoid becoming impinged on the trash rack. Bell (1991) also reported sustained swimming speeds of nearly 4 feet per second for white sucker, which is another commonly occurring species in the Saranac River and likely to occur in the

[7] Total length is defined as the distance from the furthest forward protruding portion of a fish's head to the tip of the furthest protruding tail fin ray.

impoundment. Therefore, white sucker should also be able to avoid impingement on the project trash rack.

In summary, the 1-inch spaced trash rack or seasonal overlay would significantly improve the level of fish protection currently available at the project. Based on the swimming speeds of fishes residing in the project impoundment and the existing average approach velocity at the project intake, most fishes would be able to avoid impingement. Although smaller fishes would be susceptible to entrainment, nothing in the record for the project suggests that entrainment and turbine mortality are having an adverse effect on fish populations in the project area.

f. Fish stocking tube

Section 3.5 of the Settlement provides for the installation of a fish stocking tube that would allow the New York DEC to stock fish directly into the project's tailrace. Under the Settlement, Erie Boulevard would be responsible for maintaining the stocking tube and the New York DEC would be responsible for all stocking activities. The New York DEC would be required to notify Erie Boulevard at least 5 days prior to any use of the stocking tube. Interior's section 10(j) recommendation (number 5) that Erie Boulevard install a fish stocking tube adjacent to the powerhouse for use by the New York DEC is consistent with this section of the Settlement.

Staff Analysis

The Salmon River is considered a very high quality trout fishery. Both naturally reproducing brook and brown trout are present and rainbow trout and brown trout are stocked to improve recreational opportunities. New York DEC currently stocks trout at five locations on the Salmon River in Franklin County.

A stocking tube as contemplated in the Settlement would have minimal requirements and would assist the New York DEC in its stocking efforts on the Salmon River. General criteria established by the New York DEC include providing a minimum pool depth of at least 1 foot of water for every 4 feet of vertical drop and a means of coupling the tube to the 6-inch-diameter flexible hose used by the stocking truck. The proposed stocking tube would consist of 10-inch polyvinyl chloride (PVC) pipe anchored to 3-foot by 3-foot by 1-foot concrete pads downstream of the powerhouse. The tube would be about 35 feet long and the fish would drop a total of about 40 feet into the 10-foot-deep tailrace pool. The design would, therefore, meet the general requirements established by the New York DEC and provide a convenient means of stocking trout into the reach of the Salmon River immediately downstream of the powerhouse. The tube would allow the New York DEC to stock trout in an area only 0.5 mile upstream from a fishing access site.

Cumulative Effects Analysis

The Salmon River is considered a high quality trout stream and macroinvertebrate populations are indicative of high quality aquatic habitat and good water quality. However, the sandy nature of the Salmon River creates the potential for significant effects to aquatic habitat if high quantities of sediment which can accumulate behind dams are released too quickly. Such was the case in 1997 at the Chasm Project No. 7320 located upstream of the Macomb Project when a large amount of sediment was released during maintenance activities. Therefore, implementation of Erie Boulevard's Interim Sediment Management Plan would contribute to the management of sediment within the Salmon River watershed and help protect aquatic resources downstream of the project from the effects of catastrophic releases of sediment during routine operation, impoundment drawdowns, and during any future construction activities. Operating the project under the terms of the Settlement including limiting impoundment fluctuations, operating in a ROR mode at flows below 125 cfs, and maintaining a 125-cfs baseflow would also help limit sediment mobilization and the potential for sedimentation effects on aquatic habitats. Overall, implementation of the Settlement's provisions would benefit management of sediment in the Salmon River Basin.

Unavoidable Adverse Impacts

Some juvenile or small fishes may be entrained through the project intake and suffer turbine-induced injury or mortality. This long-term effect is expected to be minor, given the significant improvement to fish protection expected from the Settlement's provision to replace the existing trash rack with a trash rack or seasonal overlay with 1-inch clear spacing.

2. Terrestrial Resources and Threatened and Endangered Species

Affected Environment

Lands immediately adjacent to the project consist primarily of residential and forested areas. Upstream of the project dam, the lands are generally residential or vacant along the banks of the Salmon River. There is an upland reclaimed landfill on river left at the head of the pond.

Much of the shore of the Macomb impoundment is dominated by trees with a fringe of herbaceous plants at the water's edge. Yellow birch, red and sugar maple, and American beech are the dominant overstory species, and black cherry, willow, northern white cedar, and elm are also present. Understory species include alder, winterberry, black willow, ferns, meadowsweet, and waterhound. These communities are generally complexes consisting of emergent areas interacting with the water edge to scrub-shrub and forested fringe wetlands.

Wetlands along the Salmon River are primarily confined to narrow bands immediately adjacent to the river, with slightly larger bands found in former river channels adjacent to the impoundment. Wetlands associated with the Macomb Project are relatively limited in size and abundance due to the steep-sided valley in which the project is located and the riverine and elongated nature of the impoundment. The National Wetland Inventory identifies one scrub/shrub and emergent marsh wetland at the impoundment, measuring 0.33 acre and located on the southwest corner of Lamica Lake. In response to a request from the settlement parties, Erie Boulevard conducted a wetlands study at the project's impoundment in June of 2004. The total acreage of wetlands observed in and around Lamica Lake was calculated to be 6.42 acres, which are located throughout six wetland areas. Most of these wetlands consist of emergent vegetation with grasses and sedges, with shrub and forested wetlands present at higher elevations.

Mammals found in the vicinity of the project include white-tailed deer, red and gray fox, shorttail and longtail weasel, mink, river otter, beaver, bobcat, striped skunk, raccoon, porcupine, gray and red squirrel, eastern chipmunk, woodchuck, muskrat, snowshoe hare, meadow vole, redback vole, deer mouse, white-footed mouse, woodland jumping mouse, starnose mole, and shorttail shrew. Wild turkey, red-tailed hawk, broad winged hawk, turkey vulture, American kestrel, barred owl, common nighthawk, green heron, great blue heron, and the New York State threatened upland sandpiper are found around the project along with a variety of songbirds, as listed in table E.4-2 of the license application. Likely reptile and amphibian species include the following: snapping turtle, painted turtle, northern water snake, northern ribbon snake, eastern garter snake, northern ringneck snake, eastern milk snake, red-spotted newt, spotted salamander, red-backed salamander, American toad, spring peeper, gray treefrog, green frog, bullfrog, pickerel frog, and wood frog.

The federally endangered Indiana bat (Myotis sodalis) and the federally threatened bald eagle (Haliaeetus leucocephalus) are the only federally listed species that occur in Franklin County. Except for transient individuals, however, no federally listed threatened or endangered species or their critical habitat are known to exist in the project area.

Environmental Impacts and Recommendations

Under section 3.1 of the Settlement, the Macomb Project would be operated in a ROR mode at river flows of 125 cfs or less where flows through the turbine or over the spillway crest (elevation 570.7 feet USGS datum) would equal inflow to the project impoundment. At river flows greater than 125 cfs, Erie Boulevard would attempt to limit impoundment fluctuations to 0.25 foot below the spillway crest, however, only fluctuations below 0.5 foot would be considered reportable for compliance purposes. Water surface elevations higher than the spillway crest would be considered outside the

normal impoundment fluctuation zone and would not factor in to the drawdown limitation. On January 31 of each year, Erie Boulevard would submit an annual report to the signatories of the Settlement listing the dates for all fluctuations of 0.25-foot or greater below the spillway crest.

Interior's section 10(j) recommendation (number 1) for impoundment fluctuation limits is consistent with the Settlement provision described above. Interior also recommends under section 10(a) that Erie Boulevard should strive to limit daily impoundment drawdowns to 0.25 feet from the crest of the spillway.

Staff Analysis

Impoundment fluctuations have the potential to affect shoreline vegetation at Lamica Lake. On May 13, 2004, Erie Boulevard performed an impoundment drawdown study to document any effects of the existing 1-foot fluctuation limit. Observations of the impoundment were made at drawdowns of 1 foot and 6 inches and at a level even with the dam crest. In addition, these drawdowns were related to a refill calculations table showing how long at different river flows the impoundment would take to refill. Based on the observations, the study participants, including signatories to the Settlement, determined that at a 1-foot drawdown a limited but noticeable amount of shoreline became exposed. The refill time was determined adequate in that the wetlands did not experience desiccation, nor did emergent marshes become overly exposed. However, the study participants concluded that a 1-foot drawdown was not as desirable as a 6-inch drawdown in that the smaller drawdown had a less noticeable effect on riparian and shoreline resources.

Though the June 2004 wetland survey focused solely on wetlands at the impoundment, the National Wetland Inventory map identifies riparian wetlands downstream of the project. At river flows of 125 cfs or above, limiting the fluctuations of the impoundment to 0.25 foot would reduce the time that downstream habitats could be dewatered if the powerhouse were to trip off-line. The targeted limit for allowable impoundment fluctuations of 0.25 foot and the reportable limit of 0.5 foot would represent a substantial improvement over the current 1-foot fluctuation limit experienced at the project. At river flows of 125 cfs or less, ROR operations would further reduce the likelihood of downstream effects due to a plant trip. Under this scenario, ROR operations would ensure that if the plant were to trip off-line, flows would almost immediately begin spilling over the dam crest. Under both scenarios, the riparian vegetation present in the Salmon River would be protected.

In summary, current project operation has a slightly negative effect on the stability of wetlands and other shoreline habitat due to the 1-foot pond fluctuations. Decreasing the amount of pond fluctuation to 0.5 foot, as proposed, would result in a slight improvement in the stability of these resources, which could benefit amphibians,

waterfowl, and other wildlife at the project that rely on shoreline vegetation for food and cover.

No land disturbing activities are proposed that would disturb potential eagle or bat foraging habitat or eagle perching habitat at the project, and no change has been proposed that would adversely affect eagle use of project waters. The proposed and recommended impoundment limitations and ROR operation could improve potential future foraging habitat by stabilizing the submergent and emergent vegetation that provides habitat for both fish and insects. However, since there are currently no listed species or their habitat at the project, we conclude that no federally listed threatened or endangered species or critical habitat would be affected by Erie Boulevard's proposed project operation and that no further consultation with FWS is required.

Unavoidable Adverse Impacts

None.

3. Recreation Resources

Affected Environment

The Macomb impoundment is a small and generally linear lake that measures 14 acres. There are no formal recreational facilities around the impoundment and, in most areas, public access is precluded by very steep terrain. However, Lower Park Street runs along the east side of the lake, and many local anglers fish from this area, which is the Town of Malone's property. The property includes an informal, undeveloped launch site for car top boats, which is also on Town of Malone property and outside of the project boundary. Additionally, Erie Boulevard allows anglers to fish from the grassy area on the south side of the dam upstream of the intake area and floating boat warning barriers. There is informal parking available along the facility's driveway. This access and parking is used by local anglers and is outside the project boundary.

The Salmon River in the vicinity of the Macomb Project is a very high quality trout stream. Both naturally reproducing brook and brown trout are present, and rainbow and brown trout are stocked to improve recreational opportunities. New York DEC currently stocks trout at five locations on the Salmon River in Franklin County. Fishing is the primary recreational resource at the project, and 17 miles of the Salmon River, extending both above and below the project, are designated as a "fishing stream with public access areas" (New York State Office of Parks, Recreation, and Historic Preservation, 1983). Fishing access downstream of the project occurs from bridge crossings and from nearby public right-of-ways at several locations. A fishing map distributed by Franklin County depicts four angler parking areas occurring over a reach extending 5 miles downstream of the Macomb dam (Franklin County Tourism, undated).

Environmental Impacts and Recommendations

a. Recreation Access

Erie Boulevard proposes to continue to allow informal fishing access on the lawn along the powerhouse driveway, as well as informal parking along the powerhouse driveway.

Section 4.1 of the Settlement specifies that Erie Boulevard agrees to enhance the existing informal car top boat launch on the Town of Malone property adjacent to the Macomb impoundment on Lower Park Street by providing signage and matting for the launch area. This site is to be maintained by the Town of Malone. This settlement provision is outside of the existing project boundary and the parties do not intend it for inclusion in any subsequent license.

Interior recommends under section 10(a) that Erie Boulevard should implement all of the recreational facilities described in section 4.0 of the Settlement by the dates required in the Settlement, provided that the measures are consistent with the license issued.

Staff Analysis

Fishing is the primary recreational resource on this reach of the Salmon River, and therefore access for fishing at the project and in the vicinity of the project is of special concern. Fishing access downstream of the project appears adequate, since at least four parking areas for anglers have been documented within the 5-mile reach downstream of the dam, and fishing access occurs at several locations.

Due to the steepness of the terrain, public access to the impoundment is restricted. Areas of Lower Park Street along the east side of the impoundment and the grassy area to the south of the dam upstream of the intake provide access at the impoundment that is otherwise rare. Anglers using either of these areas can park along Lower Park Street and along the powerhouse driveway, respectively. Since Erie Boulevard agrees to continue to allow fishing and parking on their property, and since the Lower Park Street fishing areas are located on Town of Malone property and are likely to remain available, angler access appears to be adequate at the project.

There is no formal boat launch at the project. The demand for this measure is unknown because, other than Interior, no entity filed recommendations or comments about the proposed boat launch enhancements. In prefiling consultation, however, both the New York DEC and the Adirondack Mountain Club (ADK) noted the importance of improving or creating car top access at the impoundment in their letters dated September

3, 2002 and October 28, 2002, respectively. The proposed enhancements at the undeveloped boat launch, or the development of a formal boat launch at another location at the impoundment, would likely increase the amount of users able to take advantage of this access at a lake where car top boat access does not otherwise exist. Signage would publicize the availability of the access, and surface matting would allow for greater ease in putting in and taking out car top boats. Expanding the project boundary to include the enhanced or new boat launch would ensure the continued maintenance of the site throughout any subsequent license term.

b. Proposed Recreation Trail

Section 4.2 of the Settlement specifies that Erie Boulevard agrees to develop a trail and parking area on Erie Boulevard's property immediately north of the project. Through a written agreement between Erie Boulevard and the Town of Malone, the Town would be responsible for maintenance of this site. The Settlement parties do not intend it for inclusion in any subsequent license.

Staff Analysis

The Village and Town of Malone, both parties to the Settlement, have an interest in developing a greenway or trail system between Malone and the St. Lawrence River. As depicted by the map in Attachment B-1 of the Settlement (figure 3), two proposed segments would work towards the goal of a trail system, since they would be integrated with existing trails and a right-of-way. One proposed segment (Trail Segment #1) is approximately 400 feet long and would connect existing trails and a parking lot to a right-of-way that follows a steep ridge along the north shore of the impoundment. This would allow hikers from northern existing trails to reach the right-of-way that is presumably available for hiking. Trail Segment #1 and the right-of-way may provide views of the project impoundment; both are outside of the project boundary.

A second proposed segment (Trail Segment #2) would begin at the right-of-way adjacent to the project dam and run approximately 500 feet west along the north side of the Salmon River, providing hikers with view points of the river. Due to the steepness of the terrain in this vicinity, portage around the dam and fishing access immediately downstream of the dam is not feasible; thus, this trail segment would provide recreation and view points in an area where other recreational opportunities are not available. It would also enable those hiking along the impoundment and right-of-way to continue hiking a small distance downstream. It appears that Trail Segment #2 ends after approximately 250 feet, but there is the potential that, in the future, a different entity could continue the trail system from this point. Trail Segment #2 would then serve as an important connector between trails around the impoundment and any downstream recreation facilities, such as hiking trails and angler access. Contrary to what is stated in Section E.6 of the license application, it appears that at least half of Trail Segment #2 is

located within the project boundary.

The map does not indicate where the proposed parking lot would be developed. If the 5-car parking lot labeled on Erie Boulevard's map currently exists, then it appears that parking facilities for the trail system may be adequate. If the labeled parking lot is not yet developed, then this proposed facility would benefit recreation at the project by providing the only formal parking facility for hikers. It appears that hikers would also be able to park along Lower Park Street or Sheers Road in order to access the right-of-way.

In summary, both proposed trail segments and the right-of way that connects them would create an approximately 1,700-foot-long trail that would provide recreation around the project impoundment and tailrace. Expanding the project boundary to include these facilities would ensure that they are maintained throughout the license term

c. Recreational Fisheries

As described in detail in section V.1, several provisions of the Settlement would serve to directly or indirectly benefit fish, and therefore fishing opportunities, in the project waters. These include the provisions for ROR operation and impoundment fluctuation limits (section 3.1), maintenance of baseflows (section 3.2), sediment management (section 3.3), fish protection measures (section 3.4), and installation of a fish stocking tube (section 3.5). Interior's 10(j) recommendations 1-5 are consistent with these Settlement provisions.

Staff Analysis

As described in detail in section V.1 of this EA, the Settlement provisions 3.1-3.4 and corresponding 10(j) recommendations 1-4 from Interior would benefit fishing resources at the project by protecting fish habitat at the project and preventing or decreasing the effects of stranding, dewatering in the case that the project trips offline, sediment releases, and impingement. These fish protection measures benefit trout productivity and therefore the quantity and quality of fishing opportunities at the project.

In addition, provision 3.5 of the Settlement and Interior's 10(j) recommendation 5 call for the provision of a fish stocking tube at the project's tailrace. Currently, there is limited access for a New York DEC fish stocking truck to access the reach below the dam. A fish stocking tube that allows for the New York DEC to stock trout into the project's tailrace would expand and improve the range of the recreational trout fishery by at least 1 mile below the dam, which is a public fishing area.

Unavoidable Adverse Impacts

None.

Map
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Public access for the above information is available only through the Public Reference Room, or by e-mail at public.referenceroom@ferc.gov

4. Cultural Resources

Affected Environment

Permanent occupation of the Macomb Project area began with the Woodland period, which dates from 1,000 BC to contact with Europeans. This period is characterized by the introduction of agriculture and village life. The Woodland period reached its culmination with the Iroquois, who lived in villages, carried on trade, and developed the concept of political organization and union.

No known Indian settlement sites occur in the area where the Macomb Project is located (Thomson 1977).

Properties eligible for the National Register of Historic Places

As part of a statewide survey, all pre-1940 hydroelectric projects in New York (including Macomb) were inventoried to determine their eligibility for the National Register (Duncan 1991). Macomb and the other hydroelectric projects owned by Erie Boulevard were further documented according to Historic American Engineering Record criteria.

The Macomb Project was constructed in 1904 by the Macomb Light and Power Company. The plant was extensively rebuilt in 1940-41. The current licensee, Erie Boulevard, acquired the project in 1999.

The New York State Office of Parks, Recreation and Historic Preservation (SHPO), by letter to Erie Boulevard dated November 4, 2004, determined that the Macomb Hydroelectric Project meets the criteria for inclusion in the National Register as an intact and representative example of turn-of-the century hydroelectric architecture and engineering, as upgraded around 1940. Contributing features include but are not limited to the powerhouse, dam, spillway, gateway, impoundment area and associated landscape features.

Environmental Impacts and Recommendations

In section 2.7 of the Settlement, Erie Boulevard proposes to develop an historic properties management plan (HPMP). The HPMP would be developed in consultation with the SHPO and the St. Regis Mohawk Tribe.

The SHPO reviewed Erie Boulevard's proposal and determined that the proposed action, including replacing the trash racks, would have no adverse effect on historic resources. SHPO's finding is made with the understanding that that a programmatic agreement and HPMP would be developed in consultation with the SHPO to provide for

the identification and protection of historic and archaeological resources during the project's license term (letter to Devine, Tarbell and Associates, Inc., Liverpool, New York, from James Warren, New York State Office of Parks, Recreation and Historic Preservation, Historic Preservation Program Analyst, New York Historic Preservation Field Services Bureau, Waterford, New York, dated November 4, 2004). In addition, the SHPO determined that the Macomb Hydroelectric Project's area of potential affect (APE) is archaeologically sensitive due to the presence of archaeological sites within or adjacent to the project.

Staff Analysis

Land within the project's APE could contain undiscovered buried intact prehistoric and historic deposits. However, surveys have not been undertaken to determine the presence of archaeological sites. Conducting surveys in the archaeologically sensitive areas identified by the SHPO would enable Erie Boulevard to collect the necessary information for the development of the HPMP.

We have reviewed the proposed action relative to potential effects on National Register-eligible properties. We agree with the SHPO's determination that the Macomb Project is eligible to be listed on the National Register. However, no historic properties would be affected by issuing a license to continue operating the Macomb Project because Erie Boulevard's proposal would not raise the impoundment level, nor is Erie Boulevard proposing any modification to the project's civil works other than replacing the trash racks. However, constructing the proposed recreation trail could disturb unidentified archaeological resources.

Executing a programmatic agreement between the SHPO and the Commission which would include a stipulation to prepare and implement an HPMP that includes guidelines for maintaining the project's facilities would adequately protect historic resources at the project.

Unavoidable Adverse Effects

None.

5. Aesthetic Resources

Affected Environment

The lands immediately adjacent to the project consist primarily of residential and forested areas. Upstream of the project dam, the lands are generally residential or vacant along the banks of the Salmon River. There is an upland reclaimed landfill on river left at the head of the pond.

Most of the project facilities are well screened or completely invisible from the public eye, mostly due to the steep cliffs associated with this project. Scenic intrusions and topographical alterations resulting from the original project construction have long since disappeared, and the project area has become integrated with the environmental and visual setting of the surrounding area.

Environmental Impacts and Recommendations

Under section 3.1 of the Settlement, the Macomb Project would be operated in such a way as to limit impoundment fluctuations to 0.25 foot below the spillway crest, though only fluctuations below 0.5 foot would be considered reportable for compliance purposes. This section further specifies that at river flows of 125 cfs or less the project would be operated in ROR mode, during which time flows through the turbine or over the spillway crest would equal inflow to the project.

Section 3.2 of the Settlement specifies that Erie Boulevard shall maintain a baseflow of 125 cfs, or the inflow to the Macomb impoundment, whichever is less, from the project tailrace.

Interior's section 10(j) recommendations (number 1) for impoundment fluctuation limits (number 1) and for a baseflow release (number 2) are consistent with the Settlement provisions described above. Interior also recommends under section 10(a) that Erie Boulevard should strive to limit daily impoundment drawdowns to 0.25 feet from the crest of the spillway.

Staff Analysis

Participants in the fluctuation study agreed that the proposed fluctuation in the impoundment would have a limited aesthetic effect during times when it is utilized. The proposed decrease from the currently allowed drawdown of 1 foot to 0.5 foot with a target of 0.25 foot would provide a slight aesthetic benefit by exposing less shoreline.

In addition, provisions for fluctuation limits, baseflows, and for operation in ROR mode with the impoundment level kept near the crest when flows are 125 cfs or less all would benefit downstream aesthetics by maintaining riverine conditions and reducing the amount of dewatering that would occur in the case of a temporary interruption of flow.

Unavoidable Adverse Effects

None.

D. No-Action Alternative

Under the no-action alternative, the project would continue to operate under the terms and conditions of the existing license, and no new environmental protection, mitigation, or enhancement measures would be implemented.

VI. DEVELOPMENTAL ANALYSIS

In this section, we analyze the project's use of the Salmon River's available water resources to generate hydropower; estimate the economic benefits of the proposed project and alternatives; estimate the cost of various environmental measures; and estimate the effects of these measures on project operations.

A. Power and Economic Benefits of the Project

Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corporation, Publishing Paper Division*,[8] the Commission employs an analysis that uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

Our estimate of the energy and capacity value was developed from the most reasonable alternative generation available. We base our estimate of the comparable cost of energy generation on the fixed cost of a combined-cycle combustion turbine plant fueled by natural gas in the Middle Atlantic region of the United States. We estimate the energy cost based on information in Energy Information Administration (EIA), Annual Energy Outlook 2005.[9] Based on EIA information, the regional energy cost is 43.22 mills/kWh. We estimate the existing dependable capacity of the project is 0.65 megawatts (MW), and assume a capacity value of $96 per kilowatt-year. Under current conditions, the total energy and capacity cost is 54.24 mills/kWh.

This value is a reasonable estimate of total energy and capacity for measuring the economic benefits of project operation, and for the cost of replacing power for any alternative that would reduce project generation.

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[8] 72 FERC 61,027 (1995).

[9] See http://www.eia.doe.gov/oiaf/aeo/index.html.

For our economic analysis of the alternatives, we use the parameters, values (2005$), and sources shown in table 2.

Table 2. Staff parameters for economic analysis of the Macomb Project (Source: the staff).

Parameters	Values (2005$)	Sources
Period of analysis	30 years	Staff
Term of financing	20 years	Staff
Interest/cost of capital	8.0 percent	Staff
Escalation rate	0 percent	Staff
Federal tax rate	34 percent	Staff
Local tax rate	3.05 percent	Staff
Insurance rate	$0.25 percent of cost of construction	Staff
Net investment [1]	$1,063,800	Erie Boulevard
Operation and maintenance cost [2]	$100,000	Erie Boulevard
Energy and capacity value	54.24 mills/kWh	Staff

[1] This is the estimated book value of the project depreciated to 2005$, and the cost to file for relicense (see Erie Boulevard's response to additional information and license application).
[2] From Exhibit H of the license application.

1. Proposed Action

The proposed action includes operating the Macomb Project with Erie Boulevard's proposed environmental measures as shown in table 3.

Based on the parameters in table 2 and the cost of measures proposed by Erie Boulevard shown in table 3, we estimate that the annual cost of Erie Boulevard's proposed Macomb Project would be about $269,250 (47.57 mills/kWh). The annual power value would be $307,030 (54.24 mills/kWh) for the estimated annual generation of 5,660 MWh. The resulting annual net benefit would be $37,780 (6.67 mills/kWh).

2. Proposed Action with Additional Staff-Recommended Measures

In this section, we present the annual cost of the proposed action with additional

staff-recommended measures, including the car top boat launch and the recreational trail and parking area.

Based on the parameters in table 2 and the cost of measures shown in table 3, we estimate that the annual cost of Erie Boulevard's proposed Macomb Project with additional staff-recommended measures would be about $270,000 (47.70 mills/kWh). The annual power value would be $307,030 (54.24 mills/kWh) for the estimated annual generation of 5,660 MWh. The resulting annual net benefit would be $37,030 (6.54 mills/kWh).

Table 3. Summary of annual costs (2005$) of the proposed and recommended measures for the Macomb Project (Source: the staff).

Measures	Recommending Entity	Capital Cost	Operation and Maintenance Cost	Annual Cost
Limit impoundment fluctuations to 0.5 feet[a]	Applicant, Interior, Staff	0	0	0
Limit impoundment drawdown to 0.25 feet when inflow exceeds 125 cfs, and operate ROR when inflow is 125 cfs or less[a]	Applicant, Staff, Interior	0	0	0
Maintain 125 cfs base flow, or inflow, in the tailrace year-round	Applicant, Interior, Staff	0	0	0
Implement an interim sediment management plan	Applicant, Interior, Staff	20,000	10,000	8,100
Install seasonal overlays or replace trackracks	Applicant, Interior, Staff	57,000	5,000	7,590
Install a fish stocking tube	Applicant, Interior, Staff	8,000	500	930
Develop and implement a stream flow and water level monitoring plan	Applicant, Interior, Staff	10,000	500	1,080
Develop recreational facilities[b]	Applicant, Staff	10,000	0	750
Expand the project boundary to include the recreational facilities	Staff	0	0	0
Develop and implement an HPMP	Applicant, Staff	10,000	500	1,080
Conduct an archaeological	Staff	0	0	0

Measures	Recommending Entity	Capital Cost	Operation and Maintenance Cost	Annual Cost
survey[c]				
Implement the PA[c]	Staff	0	0	0

[a] This measure is similar to current project operation, therefore, annual cost will be minimal.
[b] Erie Boulevard proposes to enhance an existing car top boat launch, and construct a recreational trail and parking area, but not include these measures in the license.
[c] The cost to implement this measure is included in the cost to develop and implement the HPMP.

3. No-Action Alternative

Under the no-action alternative, Erie Boulevard would continue to operate the Macomb Project under the terms and conditions of the existing license, and no new environmental protection, mitigation, or enhancement measures would be implemented.

The estimated average annual generation of the Macomb Project is 5,660 MWh, providing an annual power value of about $307,030 (54.24 mills/kWh). The annual cost of the no-action alternative includes the carry cost of the project book value and operation and maintenance costs, and would be about $250,470 (44.25 mills/kWh). The resulting annual net benefit would be $56,560 (9.99 mills/kWh).

4. Cost of Environmental Measures and Economic Comparison of Alternatives

Table 4 presents a summary of the current annual net power benefits for Erie Boulevard's proposed action, the proposed action with additional staff-recommended measures, and the no-action alternative.

Table 4. Summary of annual net benefits of the alternatives for the Macomb Project (Source: the staff).

Parameter	No-Action Alternative	Proposed Action without recreation measures, as recommended by applicant	Proposed Action with recreation measures, as recommended by staff
Annual generation (MWh)	5,660	5,660	5,660
Installed capacity (MW)	1.0	1.0	1.0
Annual power value ($)	307,030	307,030	307,030

Parameter	No-Action Alternative	Proposed Action without recreation measures, as recommended by applicant	Proposed Action with recreation measures, as recommended by staff
Annual cost ($)	250,470	269,250	270,000
Annual net benefit ($)	56,560	37,780	37,030

5. Pollution Abatement

The Macomb Project would produce about 5,660 MWh of electricity annually. This amount of hydropower generation, when contrasted with the generation of an equal amount of energy by a fossil-fueled facility, avoids the emission of atmospheric pollutants. Assuming that the hydropower generation would be replaced by an equal amount of natural gas-fired generation, generating electrical power equivalent to what would be produced at the Macomb Project would require combustion of about 58 million cubic feet of natural gas annually. Removal of pollutants (N0x and S0x) from the emissions produced by burning fossil fuels to those levels presently achievable by state-of-the-art technology would cost about $2,800 annually.

VII. COMPREHENSIVE DEVELOPMENT AND RECOMMENDED ALTERNATIVE

Sections 4(e) and 10(a) of the FPA require the Commission to give equal consideration to all uses of the waterway on which a project is located. When we review a hydropower project, we consider the water quality, fish and wildlife, recreation, cultural, and other non-developmental values of the involved waterway equally with its electric energy and other developmental values. In deciding whether, and under what conditions a hydropower project should be licensed, the Commission must weigh the various economic and environmental tradeoffs involved in that decision. This section contains the basis for, and a summary of, our recommendations for relicensing the Macomb Project. We weigh the costs and benefits of our recommended alternative against other proposed measures.

A. Recommended Alternative

Based on our independent review and evaluation of the environmental and economic effects of the proposed action, the proposed action with staff-recommended measures, and no action, we recommend the proposed action with staff-recommended measures as the preferred alternative.

We recommend this alternative because: (1) issuing a subsequent license would allow Erie Boulevard to continue operating the project as a beneficial and dependable source of electric energy; (2) the project, with a total installed capacity of 1,000 kW, would eliminate the need for an equivalent amount of fossil-fuel-produced energy and capacity, which would help conserve these nonrenewable resources and limit atmospheric pollution; and (3) the recommended environmental measures would protect water quality, enhance fish and wildlife resources, and improve public use of project recreation resources.

Our recommended alternative includes the measures described in the Settlement, including the car top boat launch enhancements and the hiking trail and associated parking area. In addition, we recommend the project boundary be expanded to include the car top boat launch, hiking trail, and parking area. We also recommend that Erie Boulevard develop its proposed HPMP as part of a Programmatic Agreement developed by FERC staff and the SHPO, and that Erie Boulevard complete archaeological surveys prior to the development of the HPMP. The bases for staff-recommended measures are discussed below.

Run-of-river operation and impoundment fluctuation limits

Under the settlement, at river flows of 125 cfs or less, the project would be operated in a run-of-river mode where flows through the turbine or over the spillway crest would equal inflow to the project impoundment. At river flows greater than 125 cfs, Erie Boulevard would attempt to limit impoundment fluctuations to 0.25 foot below the spillway crest; however, only fluctuations greater than 0.5 foot below the spillway crest would be considered reportable for compliance purposes. Water surface elevations above the spillway crest would be considered outside the normal impoundment fluctuation zone and would not factor into the drawdown limitation. Erie Boulevard would submit an annual report to the signatories of the Settlement listing the dates for all fluctuations of 0.25-foot or greater below the spillway crest.

Maintaining relatively stable impoundment levels would benefit aquatic vegetation beds near the shoreline, as well as fish and other aquatic organisms that rely on near-shore habitat for feeding, spawning, and cover. Any erosion and resultant turbidity would also be reduced with the impoundment held at a relatively stable level. Also, limiting the allowable fluctuation of the impoundment would reduce the time that downstream habitats could be dewatered if the powerhouse were to trip off-line and would be an improvement over the current 1-foot fluctuation limit. Therefore, in order to maintain the high quality trout and macroinvertebrate habitat present in the Salmon River, we recommend that the license require the Settlement's measures for run-of-river operation and reservoir fluctuation limits. There would be minimal cost associated with these measures.

Maintenance of baseflows

Under the settlement, Erie Boulevard would maintain the current baseflow from the project tailrace of 125 cfs or inflow to the Macomb impoundment, whichever is less.

The 125-cfs baseflow would protect aquatic resources downstream of the Macomb Project in the event of a flow interruption due to the project tripping off-line. Macroinvertebrates are generally less mobile than fish and serve as good indicators of effects from dewatering. Therefore, because the existing macroinvertebrate population downstream of the project has developed under the current baseflow release and is indicative of a healthy ecosystem, continuing the existing 125-cfs baseflow release would protect aquatic resources in the Salmon River. Therefore, we recommend that Erie Boulevard continue to maintain a 125-cfs baseflow release. There would be a minimal cost associated with this measure.

Flow and water level monitoring plan

Under the settlement, Erie Boulevard would develop, in consultation with the FWS and New York DEC, a plan to monitor impoundment levels. A plan to monitor impoundment levels and project flows developed in consultation with the relevant agencies would minimize misunderstandings about operational compliance, helping to ensure that aquatic resources at the project are protected. Under the proposed plan, project records would be made available to the agencies upon request and monitoring data and locations would be accessible to authorized agency personnel thus providing further assurances that the project is operating in accordance with any license issued. Therefore, we recommend that the plan contemplated under the Settlement for project flows and water level monitoring be developed in consultation with the FWS and New York DEC at an estimated annual cost of $1,080.

Sediment management

Under the Settlement, Erie Boulevard would continue to implement its Interim Sediment Management Plan. Erie Boulevard would also coordinate with the New York DEC should a final plan be developed and if so, on how it would be incorporated into the water quality certification and license. Having a sediment management plan in place at the project and implementing its provisions during routine operation, impoundment drawdowns, and during any construction activities would help protect aquatic resources downstream of the project from the effects of significant releases of sediment. Continuing the Interim Sediment Management Plan is important because of the abundance of sediment in the Salmon River watershed and the high potential for sediment effects if the sediment load is not properly managed. Therefore, we recommend that the license include Erie Boulevard's Interim Sediment Management Plan at an annual cost of $8,100 and, if a final plan is developed, that the plan be filed with the

Commission for approval prior to implementation.

Fish protection

Erie Boulevard would replace or modify the existing trash rack at the project with a new trash rack or seasonal overlay with 1-inch clear spacing within 8 years of license issuance or when the existing trash rack needs replacement, whichever occurs first. A new trash rack or seasonal overlay with 1-inch clear spacing would significantly improve the level of fish protection currently available at the project. Based on the swimming speeds of fishes residing in the project impoundment and the existing approach velocities at the project intake, most fish would be able to avoid impingement with the new trash rack in place. Although smaller fish would still be susceptible to entrainment, nothing in the record for the project suggests that entrainment and turbine mortality are having an adverse effect on fish populations in the project area. Therefore, we recommend that the existing trash rack be replaced or modified with a trash rack or seasonal overlay with 1-inch clear spacing as specified in the Settlement at an annual cost of $7,590.

Fish stocking tube

Under the Settlement, Erie Boulevard would install a fish stocking tube to allow the New York DEC to stock fish directly into the project's tailrace. Erie Boulevard would be responsible for maintaining the tube and the New York DEC would be responsible for all stocking activities. The New York DEC would notify Erie Boulevard at least 5 days prior to any use of the stocking tube. The stocking tube would have minimal engineering requirements and provide a convenient means of stocking trout into the reach of the Salmon River immediately downstream of the powerhouse and above an established fishing access location. Therefore, we recommend that Erie Boulevard install and maintain the stocking tube as stipulated in the Settlement to enhance the trout resources and recreational opportunities of the Salmon River downstream of the project at an annual cost of $930.

Impoundment Car top Boat Launch Enhancements and Boundary Expansion

The Settlement specifies that Erie Boulevard would enhance an existing car top boat launch on Town of Malone property adjacent to the Macomb impoundment on Lower Park Street by providing signage and matting for the launch area. The site would be maintained by the Town of Malone. Interior recommends that Erie Boulevard implement all of the recreational measures described in the Settlement by the dates required in the Settlement, provided that the measures are consistent with the license issued.

Enhancing this access area should increase the amount of use at what is the only boating access area at the project impoundment. Although this provision was not

intended by the Settlement parties to be included in the license, we recommend including this access area as a project facility to ensure the site is maintained throughout the term of any license. Including the site in the license and in the project boundary would not affect the Town of Malone's ownership or ability to maintain the site. However, Erie Boulevard would need to acquire rights to maintain the site (through a lease or easement). Erie Boulevard could then contract with the Town of Malone to operate and maintain the site, so long as the contract provided Erie Boulevard the right to the operate and maintain the site. We estimate this cost of including the facility in the project to be $380 annually.

Recreational Trail

The Village and Town of Malone, both parties to the Settlement, have an interest in developing a greenway or trail system between Malone and the St. Lawrence River. Under the Settlement, Erie Boulevard would develop a trail and parking area on Erie Boulevard property immediately north of the project. Through a written agreement between Erie Boulevard and the Town of Malone, the Town of Malone would be responsible for maintaining this site.

As depicted by the map in Attachment B-1 of the Settlement (figure 3), two proposed trail segments would work towards the Village and Town of Malone's goal of an integrative trail system. One proposed segment (Trail Segment #1) is approximately 400 feet and would connect existing trails and a 5-car parking lot to a right-of-way that follows a steep ridge along the north shore of the impoundment.

A second proposed segment (Trail Segment #2) would begin at a right-of-way adjacent to the project dam, running approximately 500 feet west along the north side of the Salmon River and providing hikers with view points of the river. At least half of Trail Segment #2 appears to be located within the project boundary, contrary to what is stated in section E.6 of the license application.

Together, these segments and the right-of-way that connects them would form an approximately 1,700-foot-long hiking trail along the project impoundment and tailrace. Due to the steepness of the terrain in this vicinity, access to the northern shore of the impoundment, portage around the dam, and fishing access immediately downstream of the dam is not feasible; thus, this trail would provide recreational access to the project in an area where other access opportunities are not available

Hikers using the trail would likely be able to park informally along Lower Park Street and Sheers Road. It is unclear whether the 5-car parking lot depicted on Erie Boulevard's map is proposed or existing. If the parking area does not already exist, its development would be necessary to provide parking for hikers using the trail.

We recommend the development of Trail Segments #1 and #2, as well as the

development of a parking area, if the parking lot depicted on the map does not already exist. Although the proposed trail and parking lot were not intended by the Settlement parties to be included in the license, because the trail and parking lot would provide access to project land and water, they should be licensed as project facilities to ensure the sites are maintained throughout the license term. The project boundary, therefore, would need to be expanded to include the 5-car parking lot (whether it is proposed or existing), and the trail that would be created by both proposed trail segments, including the segment of the right-of-way that connects them.

As noted, Erie Boulevard intends to execute a written agreement with the Town of Malone such that the Town of Malone would be responsible for maintaining the proposed trail and parking area. Erie Boulevard's agreement with the Town would need to provide for Erie Boulevard's ultimate control over the operation and maintenance of the hiking trail and parking area if needed, as required under the license.

We estimate this cost of including the facilities in the project to be $370 annually.

Historic Properties Management Plan

Surveys have not been conducted to determine if undiscovered archaeological sites are present at the project. Thus, any planned activity (such as improving the car top boat launch area) or any future ground disturbing activity could adversely affect sites eligible for the National Register. Additionally, any modifications to the project facilities could affect their eligibility for the National Register. Therefore, we recommend implementing the provisions of a programmatic agreement that would be executed between the Commission and the New York State Historic Preservation Office to protect properties that may be affected by the project. The programmatic agreement would include a stipulation for the development and implementation of an HPMP.

The HPMP would include protection measures for historic properties identified as being affected or potentially affected by project operation. A survey would need to be completed in order to have the data necessary to develop the HPMP. With the execution of the programmatic agreement, the historic and archaeological resources at the project would continue to be adequately protected under the terms of a subsequent license. We estimate this cost to be $1,080 annually.

C. Conclusion

Based on our review of the agency and public comments filed on the project and our independent analysis pursuant to sections 4(e), 10(a)(1), and 10(a)(2) of the FPA, we conclude that licensing the Macomb Project, as proposed by Erie Boulevard with additional staff-recommended measures, would be best adapted to a plan for improving

or developing the Salmon River waterway.

VIII. RECOMMENDATIONS OF FISH AND WILDLIFE AGENCIES

Under the provisions of section 10(j) of the FPA, each hydroelectric license issued by the Commission shall include conditions based on recommendations provided by the federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife resources affected by the project.

Section 10(j) of the FPA states that whenever the Commission finds that any fish and wildlife agency recommendation is inconsistent with the purposes and the requirements of the FPA or other applicable law, the Commission and the agency shall attempt to resolve such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of the agency.

In a letter filed May 20, 2005, Interior filed 6 recommendations pursuant to section 10(j) of the FPA. Table 5 lists Interior's recommendations submitted subject to 10(j), and whether the recommendations are adopted under the staff alternative. Recommendations that we consider outside the scope of section 10(j) have been considered under section 10(a) of the FPA and are addressed in the specific resource sections and comprehensive development section of this document.

Table 5. Analysis of fish and wildlife agency recommendations for the Macomb Project (Source: the staff).

Recommendation	Agency	Within scope of section 10(j)?	Annual cost	Recommended Adopting?
1. Limit daily impoundment level fluctuations to 0.5 ft downward from spillway crest.	Interior	Yes	0	Yes
2. Maintain baseflow of 125 cfs	Interior	Yes	0	Yes
3. Implement Interim Sediment Management Plan	Interior	Yes	8,100	Yes
4. Install trash rack or seasonal overlay with 1-inch clear spacing	Interior	Yes	7,590	Yes

Recommendation	Agency	Within scope of section 10(j)?	Annual cost	Recommended Adopting?
5. Install fish stocking tube	Interior	Yes	930	Yes
6. Develop a flow monitoring plan	Interior	Yes	1,080	Yes

IX. CONSISTENCY WITH COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving waterways affected by the project. We identified and reviewed 7 comprehensive plans that address resources relevant to the Macomb Project.[10] No inconsistencies were found.

X. FINDING OF NO SIGNIFICANT IMPACT

If the Macomb Project is licensed as proposed with the additional staff-recommended measures, the project would continue to operate while providing

[10] (1) National Marine Fisheries Service. Atlantic Salmon – Amendment 1 to the New England Fishery Management Council's Fish Management Plan on Atlantic salmon (March 1988). October 1998.; (2) National Park Service. 1982. The nationwide rivers inventory. Department of the Interior, Washington, D.C. January 1982. 432 pp.; (3) New York State Department of Environmental Conservation. 1985. New York State Wild, Scenic, and Recreational River System Act. Albany, New York. March 1985. 22 pp.; (4) New York State Department of Environmental Conservation. 1986. Regulation for administration and management of the wild, scenic, and recreational rivers system in New York State excepting the Adirondack Park. Albany, New York. March 26, 1986. 27 pp.; (5) New York State Office of Parks, Recreation, and Historic Preservation. 1983. People, resources, recreation. Albany, New York. March 1983. 353 pp. and appendices.; (6) U.S. Fish and Wildlife Service. Canadian Wildlife Service. 1986. North American waterfowl management plan. Department of the Interior. Environment Canada. May 1986.; (7) U.S. Fish and Wildlife Service. Undated. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C. 11 pp.

enhancements to fish and wildlife resources, improvements to recreation facilities, and protection of cultural resources in the project area.

Based on our independent analysis, issuance of a license for the Macomb Project, as proposed with additional staff-recommended measures, would not constitute a major federal action significantly affecting the quality of the human environment.

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