Low-Impact Hydropower Institute Certification Application

Upper LaChute Hydroelectric Project –
(FERC No. 5760)
Lower LaChute Hydroelectric Project –
(FERC No. 5762)

Prepared for:

LaChute Hydro Company, LLC

Prepared by:
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May 2021

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ACRONYMS

C	
cfs	cubic feet per second
F	
FERC	Federal Energy Regulatory Commission
ft	Foot/Feet
G	
GW	gigawatt
GWh	gigawatt hour
I	
IPaC	Information for Planning and Consultation
K	
kV	kilovolt
KW	kilowatt
L	
LIHI	Low Impact Hydroelectric Institute
M	
msl	mean sea level
MW	megawatt
Mwh	megawatt hour
N	
NYSDEC	New York State Department of Environmental Conservation
NYERM	New York Environmental Resources Mapper
R	
ROR	Run-of-river
RM	River Mile
S	
SHPO	State Historic Preservation Office
sq mi	Square Mile
U	
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

V

VTDFW	Vermont Department of Fish and Wildlife

W

WQC	Water Quality Certificate

Z

ZOE	Zone of Effect

1.0 FACILITY DESCRIPTION

1.1 Project Description

1.1.1 Project Overview

The Upper LaChute Hydroelectric Project (Upper LaChute or Upper Project) and the Lower LaChute Hydroelectric Project (Lower LaChute or Lower Project) are both located on the LaChute River in New York and are owned and operated by LaChute Hydro Company, LLC, a subsidiary of Central River Powers LLC (Figure 1.1). The Upper LaChute project (FERC No. 5760) and the Lower LaChute project (FERC No. 5762) are both exempt from licensing by the Federal Energy Regulatory Commission (FERC).

1.1.2 Upper LaChute

The Upper LaChute Project consists of three dams, Mill A dam (Photo 1.1), Mill B dam (Photo 1.4) and Mill C dam (Photo 1.5). Upper LaChute utilizes the waters of Lake George, a 44 square mile (sq-mi) recreational lake in upstate New York, as the headwaters for the project. The releases from Lake George are set by New York State statutes and guidelines and regulated by the New York State Department of Environmental Conservation (NYSDEC) (FERC 2004). Flows from Lake George are conveyed 2,300-feet (ft) downstream by a steel penstock 9-ft in diameter to a powerhouse located near Mill C. The powerhouse has a single turbine-generator unit rated at 4,900 kilowatts (kW).

1.1.3 Lower LaChute

The Lower LaChute Project is located on the LaChute River in the Village of Ticonderoga, Essex County, New York. The river carries flow from Lake George to Lake Champlain and is approximately 2.5 miles long. The Lower Project uses the headwater formed by the Mill D dam on the river. The dam is the fourth in a series of six dams along the river and is located about 4,100 feet downstream of Lake George Outlet dam (Upper LaChute Mill A), the control structure for the water surface level of Lake George through releases into the LaChute River. The Lower Project uses flows from the Lake George Outlet and flows from Trout Brook. The Lower LaChute Project operates as run-of-river and has a headpond with 2.3 acres of surface area with negligible storage. Flows from the D-Mill dam (Photo 1.6) are conveyed by a 9-foot diameter penstock to the powerhouse, located below the falls at Mill F dam (Photo 1.7). The powerhouse has a single turbine-generator unit rated at

3,600 kW. The Lower Project is accessible from Interstate 87, State Route 9N and local streets (FERC 2001).

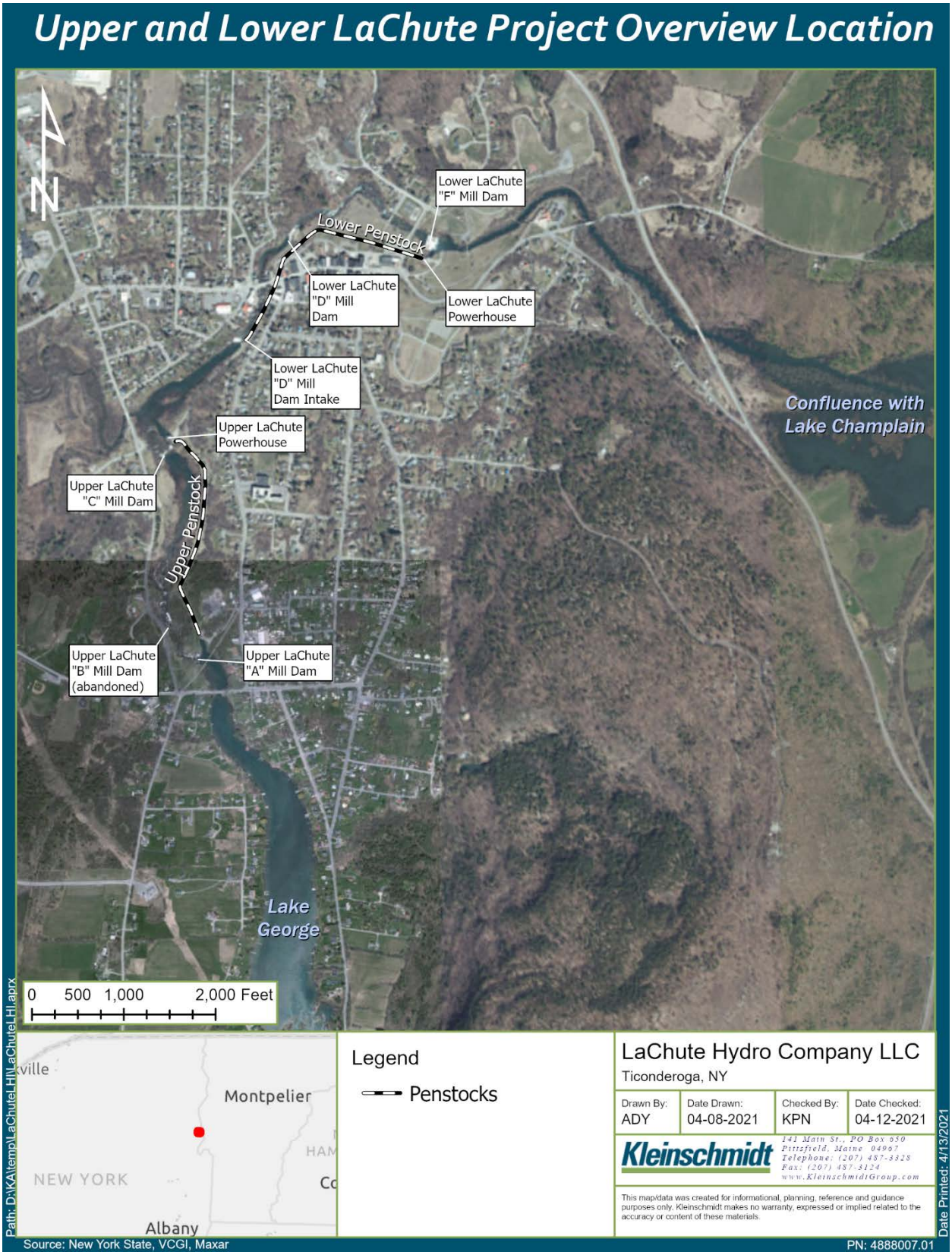

Figure 1.1 Overview of Upper and Lower LaChute Projects' Location

Photo 1.1 Upper LaChute Bypassed Reach Below Mill A

Photo 1.2 Upper LaChute Intake

Photo 1.3 Upper LaChute Intake and Fish Bypass

Photo 1.4 Water Flow through Mill B Dam in the Upper LaChute Bypassed Reach. (Photo from Google Earth)

Photo 1.5 Upper LaChute Mill C from Upstream

Photo 1.6 Intake structure the Lower LaChute Mill D Dam

Photo 1.7 Lower LaChute powerhouse and Mill F Falls

1.2 Facility Information Table for Multiple Facilities – Upper and Lower LaChute

Table 1.1 Facility Information Table

Item	***Information Requested***	***Response***	
		Upper LaChute	***Lower LaChute***
Name of the Facility	Facility name (use FERC project name or other legal name)	Upper LaChute Project	Lower LaChute Project
Reason for applying for LIHI Certification	1. To participate in state RPS program- (specify the state and the total MW/MWh associated with that participation (value and % of facility total MW/MWh)	To participate in the voluntary REC market.	
	2. To participate in voluntary REC market (e.g., Green-e)		
	3. To satisfy a direct energy buyer's purchasing requirement		
	4. To satisfy the facility's own corporate sustainability goals		
	5. For the facility's corporate marketing purposes		
	6. Other (describe)		
	If applicable, amount of annual generation (MWh and % of total generation) for which RECs are currently received or are expected to be received upon LIHI Certification		
Location	River name (USGS proper name)	LaChute River	

Item	Information Requested	Response	
		Upper LaChute	Lower LaChute
	Watershed name - Select region, click on the area of interest until the 8-digit HUC number appears. Then identify watershed name and HUC-8 number from the map at: https://water.usgs.gov/wsc/map_index.html	HUC- 02010001 – Lake George	
	Nearest town(s), county(ies), and state(s) to dam	Ticonderoga, Essex County, New York State	
	River mile of dam above mouth	Approx. 2.53 RM to Mill A Approx. 2.07 RM to Mill B Approx. 1.74 RM to Mill C	Approx. 1.48 RM to Mill D Approx. 1.12 RM to Mill F
	Geographic latitude and longitude of dam	Upper LaChute Mill A: 43°50'14.18"N, 73°25'48.77"W	Lower LaChute Mill D: 43°50'58.72"N, 73°25'34.62"W
		Upper LaChute Mill B: 43°50'35.83"N, 73°25'53.58"W	Lower LaChute Mill F: 43°50'58.40"N, 73°25'14.26"W
		Upper LaChute Mill C: 43°50'47.97"N, 73°25'42.54"W	N/A
Facility Owner	Application contact names (Complete the Contact Form in Section B-4 also)	See Section 5.0	
	Facility owner company and authorized owner representative name.	LaChute Hydro Company, LLC	

Item	Information Requested	Response	
		Upper LaChute	Lower LaChute
	For recertifications: If ownership has changed since last certification, provide the effective date of the change.	N/A	
	FERC licensee company name (if different from owner)	LaChute Hydro Company, LLC (A Subsidiary of Central Rivers Power, LLC)	
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates, or date of exemption	P-5760 Exemption issued November 15, 1984 Transferred to LaChute Hydro on May 19, 2015	P-5762 Exemption issued November 15, 1984 Transferred to LaChute Hydro on May 19, 2015
	FERC license type (major, minor, exemption) or special classification (e.g., "qualified conduit", "non-jurisdictional")	Exemption	
	Water Quality Certificate identifier, issuance date, and issuing agency name. Include information on amendments. Include links or copies.	Permit No. 52-86-0015 August 11, 1986 New York State Department of Environmental Conservation	Permit No. 52-86-0016 August 11, 1986 New York State Department of Environmental Conservation
	Hyperlinks to key electronic records on FERC e-library website or other publicly accessible data repositories	Upper LaChute 2004 Environmental Inspection Report 2018 Section 303(d) List	Lower LaChute 2001 Environmental and Public Use Inspection 2018 Section 303(d) List

Item	*Information Requested*	*Response*	
		Upper LaChute	***Lower LaChute***
Powerhouse	Date of initial operation (past or future for pre-operational applications)	1987	1987
	Total installed capacity (MW)	4,900 kW	3,600 kW
	For recertifications: Indicate if installed capacity has changed since last certification	N/A	N/A
	Average annual generation (MWh) and period of record used	19,000 from 2000-2017	13,800 from 2000-20117
	For recertifications: Indicate if average annual generation has changed since last certification	N/A	N/A
	Mode of operation (run-of-river, peaking, pulsing, seasonal storage, diversion, etc.)	The Upper LaChute Project is operated based on the NYSDEC, Division of Fish and Wildlife, which requires the exemptee to operate in a run-of-river mode with instantaneous outflow equal to instantaneous outflow consistent with maintenance of the Lake George water elevation between 318.43 feet and 319.93 feet from June 1 to November 30.	The Lower LaChute Project is dependent on the operations of the Upper LaChute Project. There is a continuous minimum flow of 30 cfs.

Item	*Information Requested*	*Response*	
		Upper LaChute	***Lower LaChute***
	For recertifications: Indicate if mode of operation has changed since last certification	N/A	
	Number, type, and size of turbine/generators, including maximum and minimum hydraulic capacity and maximum and minimum output of each turbine and generator unit	850 cfs maximum hydraulic capacity; minimum unknown; 4,900-kW turbine operating head of 124.8 ft.	850 cfs maximum hydraulic capacity; minimum unknown; 3,600-kW rated turbine operating under a design head of 88 ft.
	Trashrack clear spacing (inches) for each trashrack	Angled 1-inch clear spacing	
	Approach water velocity (ft/s) at each intake if known	Not known.	
	Dates and types of major equipment upgrades	There have been no major updates to equipment.	
	For recertifications: Indicate only those since last certification	N/A	
	Dates, purpose, and type of any recent operational changes	There have not been any operational changes. The project operates based on requirements put forth by the NYSDEC.	There have not been any operational changes. The project operates based on flows that come from the Upper LaChute Project, which is regulated by the NYSDEC.
	For recertifications: Indicate only those since last certification	N/A	

Item	Information Requested	Response	
		Upper LaChute	Lower LaChute
	Plans, authorization, and regulatory activities for any facility upgrades or license or exemption amendments	There are no plans for operation or facility changes at this time.	
Dam or Diversion	Date of original dam or diversion construction and description and dates of subsequent dam or diversion structure modifications	Original construction dates unknown but historical information suggests mid-1800s. Upper_Falls_Industry.pdf (lcbp-089519.s3.us-east-2.amazonaws.com) The_Power_of_Water.pdf (lcbp-089519.s3.us-east-2.amazonaws.com)	
	Dam or diversion structure length, height including separately the height of any flashboards, inflatable dams, etc. and describe seasonal operation of flashboards and the like	Mill A Dam (provides water to upper powerhouse): 7-ft high – 114 ft long with a main central spillway of 58 ft long, 3 aluminum slide gates	Mill Dam D (provides water to lower powerhouse): 12-ft height, 250-ft long with a spillway section 170-ft long, six hand operated wooden gates
	Spillway maximum hydraulic capacity	4,250 cfs	4,700 cfs
	Length and type of each penstock and water conveyance structure between the impoundment and powerhouse	24 by 23-ft intake structure Steel penstock 9-ft diameter underground for 600 ft from the intake structure then supported for 1,700 ft by ring girders Reinforced concrete powerhouse 20 by 37 ft	112-ft long intake structure at the east end of the dam Steel penstock 9-ft diameter above ground for 2,400 ft and buried for 600 ft Concrete reinforced powerhouse, 20 by 37 feet located in the Village of Ticonderoga Bicentennial Park

Item	Information Requested	Response	
		Upper LaChute	***Lower LaChute***
		115-kV transmission line 5,750-ft long	A substation next to the powerhouse with a an existing 115-kV transmission line 2,00 ft long
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Hydropower	
Conduit Facilities Only	Date of conduit construction and primary purpose of conduit	These are not conduit projects.	
	Source water	N/A	N/A
	Receiving water and location of discharge	N/A	N/A
Impoundment and Watershed	Authorized maximum and minimum impoundment water surface elevations	Maximum water surface elevation of 319.93 feet above msl and a minimum water surface elevation 313.43 feet above msl from June 1 to December 1.	N/A Run-of-River
	For recertifications: Indicate if these values have changed since last certification	N/A	
	Normal operating elevations and normal fluctuation range	Lake George is allowed a maximum water surface elevation of 319.93 feet above msl and a minimum water	Lower LaChute is dependent on the flows from Upper LaChute. There is a continuous minimum

Item	*Information Requested*	*Response*	
		Upper LaChute	***Lower LaChute***
		surface elevation of 2.5 feet below 313.43 feet above msl from June 1 to December 1.	flow requirement of 30 cfs through the bypassed reaches.
	For recertifications: Indicate if these values have changed since last certification	N/A	
	Gross storage volume and surface area at full pool	No Storage – run-of-river project.	
	For recertifications: Indicate if these values have changed since last certification	N/A	
	Usable storage volume and surface area	Usable storage of 42,240 acres (Lake George)	2.3 acres impoundment with negligible storage
	For recertifications: Indicate if these values have changed since last certification	N/A	
	Describe requirements related to impoundment inflow and outflow, elevation restrictions (e.g., fluctuation limits, seasonality) up/down ramping and refill rate restrictions.	See section 3.0	

<table>
<tr><th rowspan="2">Item</th><th rowspan="2">Information Requested</th><th colspan="2">Response</th></tr>
<tr><th>Upper LaChute</th><th>Lower LaChute</th></tr>
<tr><td rowspan="4"></td><td>Upstream dams by name, ownership and river mile. If FERC licensed or exempt, please provide FERC Project number of these dams. Indicate which upstream dams have downstream fish passage.</td><td>No dams upstream.</td><td>Upper LaChute is upstream.
FERC P-5760, FERC exempt.
Downstream passage provided.</td></tr>
<tr><td>Downstream dams by name, ownership, river mile and FERC number if FERC licensed or exempt. Indicate which downstream dams have upstream fish passage</td><td>Lower LaChute
FERC P-5762, FERC Exempt
Downstream passage provided.</td><td>Lower LaChute is the last dam on the LaChute River. The waters then flow to the Lake Champlain.</td></tr>
<tr><td>Operating agreements with upstream or downstream facilities that affect water availability and facility operation</td><td colspan="2">The Upper LaChute impoundment, Lake George, is operated by the NYSDEC. LaChute Hydro Company has an agreement with the NYSDEC on operations. These agreements and guidelines can be found in Section 3.1.</td></tr>
<tr><td>Area of land (acres) and area of water (acres) inside FERC project boundary or under facility control. Indicate locations and acres of flowage rights versus fee-owned property.</td><td colspan="2">The land and water area for both the Upper and Lower LaChute Projects are:

<table><tr><td>Land Area (acres)</td><td>494 (This includes islands)</td></tr><tr><td>Water Area (acres)</td><td>29,055</td></tr></table></td></tr>
<tr><td>Hydrologic Setting</td><td>Average annual flow at the dam, and period of record used</td><td colspan="2">76.9 cfs</td></tr>
</table>

<table>
<tr><th rowspan="2">Item</th><th rowspan="2">Information Requested</th><th colspan="2">Response</th></tr>
<tr><th>Upper LaChute</th><th>Lower LaChute</th></tr>
<tr><td rowspan="2"></td><td></td><td colspan="2">Average annual flow calculated from May 2018 to May 2019. USGS Gage 04279000 LaChute at Ticonderoga NY (Discontinued in 2019).</td></tr>
<tr><td>Average monthly flows and period of record used</td><td colspan="2">Average monthly flow from April 2018 to October 2019. USGS Gage 04279000 LaChute at Ticonderoga NY (Discontinued in 2019).

<table>
<tr><th>Month</th><th>Average Flow (cfs)</th></tr>
<tr><td>Jan</td><td>50.56</td></tr>
<tr><td>Feb</td><td>86.04</td></tr>
<tr><td>Mar</td><td>48.24</td></tr>
<tr><td>Apr</td><td>218.33</td></tr>
<tr><td>May</td><td>101.43</td></tr>
<tr><td>Jun</td><td>77.71</td></tr>
<tr><td>Jul</td><td>48.35</td></tr>
<tr><td>Aug</td><td>50.44</td></tr>
<tr><td>Sep</td><td>54.87</td></tr>
<tr><td>Oct</td><td>55.16</td></tr>
<tr><td>Nov</td><td>99.43</td></tr>
<tr><td>Dec</td><td>118.51</td></tr>
</table></td></tr>
</table>

Item	Information Requested	Response	
		Upper LaChute	Lower LaChute
	Location and name of closest stream gaging stations above and below the facility	No stream gage in the area, Station USGS 04279000 LaChute at Ticonderoga NY was discontinued in October 2019. The closest gage is in Lake George upstream of the Project: Site Number: 04278000 Site Name: LAKE GEORGE AT ROGERS ROCK NY Site Type: Lake Agency: USGS	
	Watershed area at the dam (in square miles). Identify if this value is prorated from gage locations and provide the basis for proration calculation.	233 sq. mi	
	Other facility specific hydrologic information (e.g., average hydrograph)	N/A	
Designated Zones of Effect	Numbers and names of each zone of effect (e.g., Zone 1: Impoundment)	Zone 1. Upper LaChute Impoundment Zone 2. Upper LaChute bypassed reach	Zone 3. Lower LaChute lower bypassed reach Zone 4. Lower LaChute Tailwater
	River mile of upstream and downstream limits of each zone of effect (e.g., Zone 1 Impoundment: RM 6.3 - 5.1)	Zone 1 Lake George to Approx. RM 2.53 (Mill A) Zone 2 RM 2.53 to RM 1.48 (Mill D).	Zone 3 RM 1.48 to RM 1.12 (Mill F) Zone 4 RM 1.12 to confluence with Lake Champlain

Item	Information Requested	Response	
		Upper LaChute	Lower LaChute
Pre-Operational Facilities Only			
Expected operational date	Date generation is expected to begin	N/A	
Dam, diversion structure or conduit modification	Description of modifications made to a pre-existing conduit, dam or diversion structure needed to accommodate facility generation. This includes installation of flashboards or raising the flashboard height.	N/A	
	Date the modification is expected to be completed	N/A	
Change in water flow regime	Description of any change in impoundment levels, water flows or operations required for new generation	N/A	

2.0 STANDARDS MATRICES

2.1 Multiple ZOEs

See Table 2.1 below:

Table 2.1 Multiple ZOEs

ZOE No.	ZOE Name	Approx. River Mile (RM) at upper and lower extent of Zone	Criterion							
			A	B	C	D	E	F	G	H
			Ecological Flows	Water Quality	Upstream Fish Passage	Downstream Fish Passage	Shoreline and Watershed Protection	Threatened and Endangered Species	Cultural and Historic Resources	Recreational Resources
1	Upper LaChute Impoundment	Lake George to 2.53 RM	2	2	1	1	1	2	1	3
2	Upper LaChute Bypassed Reach	2.53 RM to 1.48 RM	2	2	1	1	1	2	1	3
3	Lower LaChute Lower Bypassed Reach	1.48 RM to 1.12 RM	2	2	1	1	1	2	1	3
4	Lower LaChute Tailwater	1.12 RM to confluence with Lake Champlain	2	2	1	1	1	2	1	3

2.1.1 Designated Zones of Effect

Upper LaChute:

Zone 1 is the Upper LaChute Impoundment, defined as the Lake George Impoundment to the Upper LaChute Mill A dam and intake.

Zone 2 is the Upper LaChute Bypassed Reach, defined as Mill A dam to Mill D dam.

Lower LaChute:

Zone 3 is Lower LaChute Lower Bypassed Reach, defined as Mill D dam to Mill F dam.

Zone 4 is Lower LaChute Tailwater, defined as Mill F dam to the confluence with Lake Champlain.

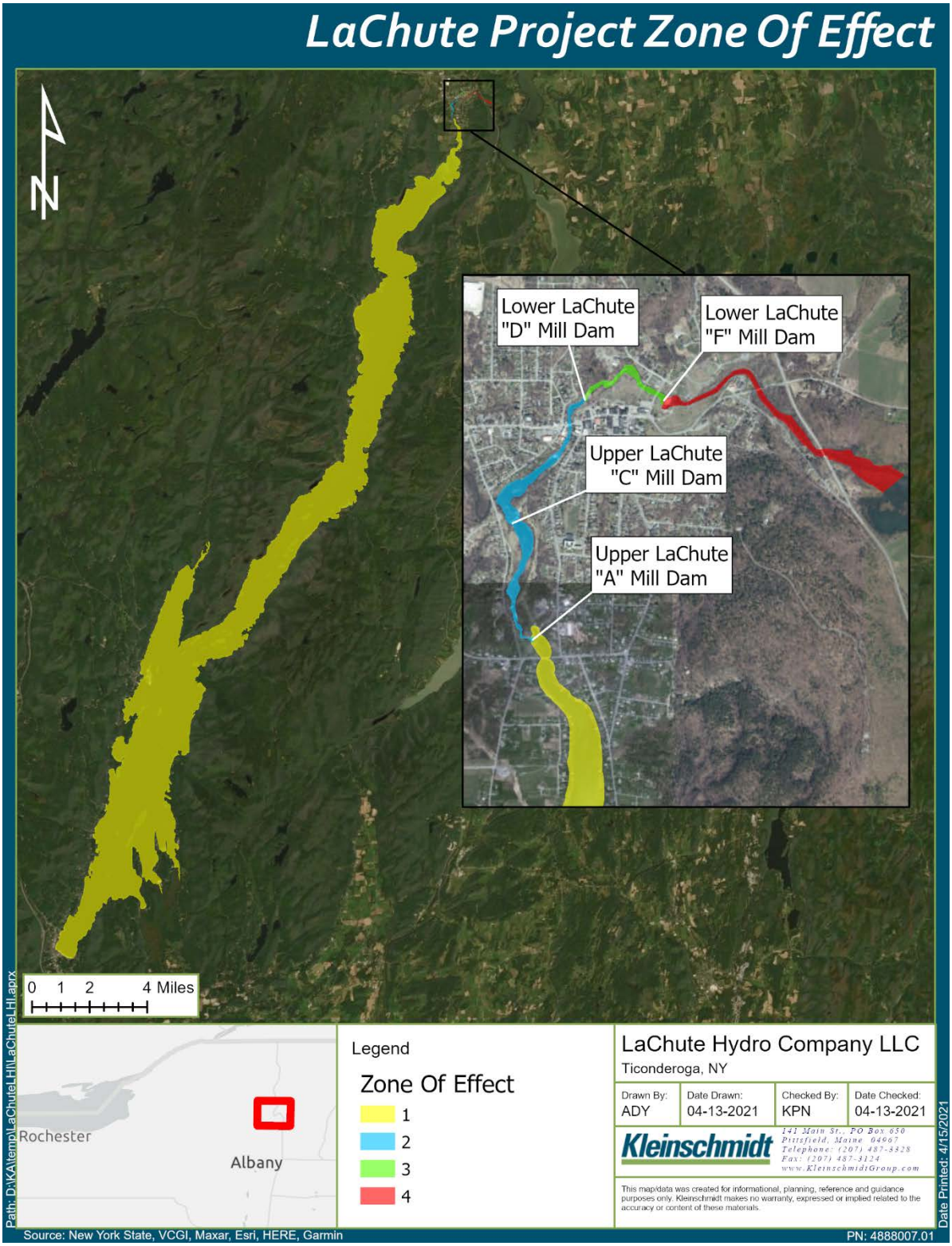

Figure 2.1 Upper and Lower LaChute Zones of Effect

3.0 SUPPORTING INFORMATION

3.1 Ecological Flows Standards

3.1.1 All ZOEs

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

Background

Guidelines for operating Lake George are summarized from the NYSDEC, Lake George Dam Operating Guidelines 1992 and the NYSDEC bypassed sections minimum flow letter dated April 2, 1996 (Attachment D).

Law §38 Navigation Law

The law regulating the water surface of Lake George, dated March 27, 1957, provides a maximum water surface elevation of 319.93-ft above mean sea level (msl) (4.00 ft

above the datum elevation gage 315.93 ft msl[1]) through the year, and a minimum water surface elevation of 313.43 ft msl (2.5 ft below datum elevation gage 315.93 ft msl) from June 1 to December 1, with due allowance for natural fluctuations or emergencies. In addition, the water surface elevation between June 1 and September 30 is an average of 316.43 ft msl (3.5 ft above datum elevation gage 315.93 ft msl). The law further states that if the level of the lake raises above 319.93 ft msl that all gates shall be opened and that if the level of the lake drops below 313.43 ft msl from June 1 to December 1, no water shall be withdrawn from the lake for the purpose of generating power.

Operating requirements for Upper LaChute

1. In the event the lake rises above 319.93 ft msl, all gates shall be opened and, if operable, the hydroelectric facility having an intake structure at the outlet dam will be operated to full capacity, such discharges to be reduced in the event they cause safety problems or unusual flooding downstream.
2. In the event that Lake reaches or goes below a level of 313.43 ft msl, there shall be no water withdrawn from the Lake other than the minimum flows described below.
3. A minimum flow of 30 cubic feet per second (cfs) shall always be maintained in the LaChute River for water quality purposes, irrespective of hydrological conditions.
4. The Operator of the flows into the LaChute River must notify the Village of Ticonderoga of impending increase in flow at least 4 hours prior to making changes in station discharges or gate openings at the outlet dam.

Minimum Target Elevations

Fluctuations above the minimum target elevations will occur in response to hydrological conditions. The charts in Attachment C set the minimum target lake elevations which are subject to refinement as set forth in the guidelines.

Operating Guidelines for Upper LaChute

In addition to the foregoing legal and operating requirements, the outflow from Lake George shall be regulated in the following manner:

[1] Station USGS 04279000 LaChute at Ticonderoga NY was discontinued in October 2019.

1. On January 1 the lake level should not be below 319.03 ft msl (3.1 ft above gage) when it can gradually be brought down to a low of 313.33 ft msl (2.6 feet below gage) on March 1 to provide storage for spring runoff.
2. Snow surveys are made at seven specified snow courses in the watershed in January, February, March and April, if necessary. Based on this information, after January 1st, regulate discharges to provide storage for calculated spring runoff, and to the extent possible, to prevent the lake level from exceeding 319.93 ft msl.
3. By May 15th, the level of the Lake should be at a maximum of 319.93 ft msl to assure desired levels during the navigation season, June through November. Desired average lake level during the navigation season is 316.43± so by having the level high on May 15 there is some allowance for evaporation. To the extent possible, the lake level should not be allowed to fall below 319.73 ft msl (3.8 ft above gage elevation) on June 1, 316.43 ft msl (3.5 ft above gage elevation) by October 1, nor below 319.23 ft msl (3.3 ft above gage elevation) by December 1.
4. From July through September, the usual condition is for the lake level to drop steadily due to evaporation, even with no withdrawals from the lake other than the 30 cfs minimum flow. Precipitation during October and November normally recharges the lake, and to the extent possible lake level should average 319.33 ft msl (3.4 ft above gage elevation) during this period to facilitate the activity of removing boats from the lake.
5. The normally cold months of December and January are critical for homeowners who draw their water from the lake. If conditions warrant a winter drawdown towards 318.53 ft msl (2.6 ft below gage elevation), the lake level will be maintained above 3.0 ft until the lake is frozen during this period to provide adequate water depth over water intake lines to prevent their freezing. By January 20th, the lake is usually frozen and has an insulating layer of snow to protect these water intake lines.

The guidelines are reviewed annually by the NYSDEC and the Operator of the flows into the LaChute River when the Operator is not the NYSDEC.

Bypassed Reach Minimum Flows

A continuous minimum flow is required in the bypassed reach sections. Bypass flows for the Upper Project can be estimated at the Mill C Dam (the breached dam immediately upstream of the upper powerhouse). A rectangular notch in the "C" Mill Dam is sized to pass the 30 cfs minimum flow.

During the fall salmon trapping season, the 30 cfs can be split, 20 cfs through the fish bypass plus 10 cfs through one of the gates at the Lake George Dam. At other times the full 30 cfs is released through the fish bypass. The different procedures are due to increased turbulence when the trap device is installed, 30 cfs causes excessive turbulence and fish and occasionally aquatic mammals may become impinged on the trapping device.

Bypass flows for the Lower LaChute Project are monitored at the "D" Mill Dam (the dam that includes the intake for the lower project). A minimum of 30 cfs is spilled at the dam when the staff gauge at that site reads 100 or greater. Similar to the "C" Mill site, the notches in the "D" Mill Dam should be full at their upstream ends when 30 cfs is being spilled.

The New York State Department of Environmental Conservation (NYSDEC) Permit #52-86-0016 (Upper LaChute Project) and #52-86-0015 (Lower LaChute Project) require the continuous minimum flow of 30 cfs to be provided in the bypassed reaches of the LaChute River. Monitoring of this it at "C" Mill Dam and "D" Mill Dam.

3.1.2 Compliance

Annual certifications of minimum flow compliance were reported to FERC 1990s up to 2013. In a July 1, 2013 letter from FERC (Accession No. 20130701-3027), FERC determined that under the existing exemptions and subsequent amendment orders, there are no exemption requirement for filing annual statements; therefore, discontinuing that practice for both Projects.

FERC did remind LaChute Hydro that it is the exemptee's responsibility to ensure compliance with all exemption requirements. If, in the event of a deviation from one (or more) of the exemption requirements, you should file a report with the Commission within 30 days of the date the data become available indicating a deviation. The report should describe the cause, duration, and immediate actions taken to correct the deviation. The report should also include a description of any adverse environmental impacts that resulted from the incident and any long-term (non-immediate) actions that you plan to take to ensure future compliance.

Based on the FERC eLibrary data base there have not been any deviations/non-compliance issues since the 2013 letter was issued.

3.2 Water Quality Standards

3.2.1 All ZOEs

CRITERION	STANDARD	INSTRUCTIONS
B	2	Agency Recommendation: • Provide a copy of the most recent Water Quality Certificate and any subsequent amendments, including the date(s) of issuance. If more than 10 years old, provide documentation that the certification terms and conditions remain valid and in effect for the facility (e.g., a letter from the agency). • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to water quality and any agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

The most recent Water Quality Certificate (WQC) for both the Upper and Lower Projects are from 1986 for construction on the projects (Attachment D). There are no updated WQC for either Project. Water quality is maintained through Lake George water surface elevation management and minimum flows that were determined by NYDEC in 1992 Lake George Dam Operating Guidelines. In 2013, FERC no longer required annual statements of compliance with these guidelines and only required reporting deviations. There have been no identified deviations of the license exemption requirements.

3.2.1.1 Upper LaChute Impoundment ZOE

Lake George is classified as Class AA-S(TS) by New York State (NYSDEC 2020c). The best uses for these types of classification includes drinking water, culinary or food processing purposes, primary or secondary contact recreation and fishing. These waters are suitable for fish, shellfish, wildlife propagation and survival. Class AA-S waters are free of floating solids often associated with industrial wastes, sewage waste or other wastes. This means no discharge of these wastes into the body of water are permitted. No alteration of flow that impairs the water for their best uses are allowed. No turbidity that causes a substantial visible change to natural conditions is allowed.

Additionally, no phosphorous and nitrogen in amounts that result in algae growth, weeds or slimes that impair the water for their best uses are allowed (NYSDEC 2020a). Since Lake George is classified as Class AA-S(TS), the "TS" indicates trout populations are supported and may support trout spawning (NYSDEC 2021a).

Lake George is listed on the 2018 Section 303(d) List for silt and sediment pollution from Urban and Storm runoff, and erosion which was documented in 2002. The Lake George Watershed Association performs a variety of projects around the Lake to help prevent polluted stormwater, including sediment, silt, nutrient, and salt from entering the Lake (Lake George Watershed Association 2021).

The LaChute Hydro facilities operate to maintain Lake George water surface elevations. No pulsing occurs at this facility, reducing the amount of water fluctuation in the Lake and reducing the amount of shoreline erosion that can occur with this practice. The Projects and associated lands are downstream of Lake George, and therefore other Project related activities and land do not contribute to any pollution in Lake George.

3.2.1.2 Upper and Lower LaChute Bypassed Reach ZOE

The Upper and Lower LaChute Bypassed reaches starting from the Lake George Outlet (Mill A) to Mill F is classified as Class C(TS) (NYSDEC 2020c). Class C fresh surface waters are best used for fishing. Waters with this classification are suitable for fish, shellfish and wildlife propagation, along with primary and secondary contact recreation (NYSDEC 2020b). Since this section of the LaChute River is classified as Class C(TS), the "TS" indicates trout populations are supported and may support trout spawning (NYSDEC 2021a).

The LaChute Hydro facilities operate based on NYSDEC recommendations for minimum (30 cfs) and maximum (1,380 cfs) flows in the downstream and bypass reaches to provide appropriate habitat for fish and wildlife. Additionally, downstream passage is provided for resident fish in Lake George, including trout.

3.2.1.3 Lower LaChute Tailwater ZOE

The Lower LaChute Tailwater starting from Mill F to Lake Champlain is classified as Class C. Class C fresh surface waters are best used for fishing. Waters with this

classification are suitable for fish, shellfish and wildlife propagation, along with primary and secondary contact recreation (NYSDEC 2020b).

The Lower LaChute operates as run-of-river and therefore has the same minimum and maximum flows that are required upstream. This provides appropriate habitat for fish and wildlife.

3.2.2 Compliance

There have been no compliance issues for either the Upper or Lower LaChute Projects.

Water Quality Standards Conclusion

The Upper and Lower LaChute Project operations do not impact the water quality in Lake George or the LaChute River. Lake George water levels are maintained to prevent alteration of flows that would impair the Lake for its best uses, as required for the Class AA-S(TS) classification prescribed to Lake George. Minimum and maximum flows are maintained downstream of each Project which provides suitable habitat for fish and wildlife, along with recreational activities, as required by the Class C classification prescribed to the LaChute River.

3.3 Upstream Fish Passage Standards

3.3.1 All ZOEs

CRITERION	*STANDARD*	*INSTRUCTIONS*
C	1	Not Applicable/ De Minimis Effect: • Explain why the facility does not impose a barrier to upstream fish passage in the designated zone. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

The LaChute River is approximately 3.5 miles long and drops 230-ft in elevation from Lake George to Lake Champlain. Along this river, there are a variety of natural cascades and falls that could make natural fish passage upstream difficult, or impossible for some species. Fishes in New York that rely on upstream or downstream migration as part of their lifecycles includes; American Shad (*Alosa sapidissima*), Blueback Herring (*Alosa aestivalis*), Alewife (*Alosa pseudoharengus*), American Eel (Anguilla rostrata), Lake Sturgeon (*Acipenser fulvescens*), Shortnose Sturgeon (*Acipenser brevirostrum*), Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchu*), Striped Bass (*Morone saxatilis*), Atlantic Salmon (*Salmo salar*) and Sea Lamprey (*Petromyzon marinus*) (Carlson et. al. 2016). American Shad, Shortnose Sturgeon, Atlantic sturgeon, and Striped Bass are not historically or currently found within the Lake Champlain Basin. Lake Sturgeon are found in Lake Champlain but there are no historic records of these fish being found in Lake George or the LaChute River (Carlson et. al. 2016). See Table 3.1 for a complete list of fish species that are likely to occur within Lake George or the LaChute River.

Atlantic Salmon are found in Lake George but are not believed to be native and populations are maintained for anglers through stocking. Spawning in the tributaries to Lake George is difficult for these fish due to the steep terrain (Lake George Association 2021). As part of condition 25h Fisheries Management in the Water Quality Certificate for both the Upper and Lower LaChute Projects, LaChute Hydro annually pays approximately $1,800 to the Essex County Fish Hatchery to support fish stocking efforts. Stocking efforts from 2011 to 2019 can be found in Table 3.2.

American Eels were recorded in Lake George in 1817 but are rare or absent in the Lake now (Carlson et. al. 2016). While once common in Lake Champlain, their population has declined. Stocking efforts and fish passage into Lake Champlain has caused slight increases in population numbers, but there is not enough to rebuild an American Eel Stock in Lake Champlain (Staats, N. 2017). It is unlikely eels would be attempting migration into Lake George due to the low populations in Lake Champlain. This species is identified as a High Priority species of Greatest Conservation Need in New York (Carlson et. al. 2016). However, migrating into Lake George is not necessary to complete their life cycle due to available habitat in Lake Champlain for adults and spawning occurring in the Sargasso Sea.

Blueback Herring have been documented near the LaChute River in Lake Champlain since 1976, this species is not native to the area and if populations became established, they could impact the recovery of Great Lake species like (Cisco (*Coregonus artedi*) and Lake Trout (Fuller et al. 2021). Alewife is also an exotic species to Lake Champlain and competes for native food resources with smelt and juvenile walleye (*Sander vitreus*), salmon, and trout species. Additionally, alewives impact trout and salmon reproduction through an enzyme released when eaten, which prevents Trout and Salmon from producing a vitamin necessary for egg production (VTDFW 2021). While upstream passage for these species are needed in other areas in New York where they are native, it is not necessary in the LaChute River and could impact the Lake Trout populations in Lake George (Fuller et al. 2021).

Sea Lamprey are considered an invasive species that have ecological and economic impacts within the Lake Champlain Basin. Lake Trout and Salmon populations are specifically vulnerable to Sea Lamprey wounds and have seen impacts on their populations due to this lamprey. The NYSDEC, the Vermont Department of Fish and Wildlife (VTDFW) and the United States Fish and Wildlife Service (USFWS) have formed a cooperative to control and reduce Sea Lamprey populations. Controls include physical barriers and applying Lampricide in tributaries to Lake Champlain (New York Invasive Species Information 2019).

In 2013, members of the Lake Champlain Fisheries Technical Committee sampled the LaChute River and found 33 larval Silver Lampreys (*Ichthyomyzon unicuspis*), and many young-of-year Silver Lamprey but no larval Sea Lamprey (*Petromyzon marinus*). Silver Lamprey are native to the region and do not impact fisheries resources. One

Sea Lamprey was collected approximately 14 miles north in Mackenzie Brook in Port Henry, NY. Putnam Creek in Crown point, approximately 7 miles north of the LaChute is treated with Lampricide (Fisheries Technical Committee 2013).

Lake Trout are stocked and an important resource to Lake George. Accidental introduction of Sea Lamprey to Lake George would have detrimental impacts to the ecological and recreational resources. Upstream passage facilities would increase the risk of introducing Sea Lamprey to Lake George.

Table 3.1 Fish Species Known to Occur in Lake George or the LaChute Area (Sources: Carlson et al 2016 and Fisheries Technical Committee 2013)

Common Name	Scientific Name
Atlantic Salmon	*Salmo salar*
Banded Killifish	*Fundulus diaphanus*
Black Crappie	*Pomoxis nigromaculatus*
Blackchin Shiner	*Notropis heterodon*
Bluegill	*Lepomis macrochirus*
Bluntnose Minnow	*Pimephales notatus*
Bridle Shiner	*Notropis bifrenatus*
Brook Stickleback	*Culaea inconstans*
Brook Trout	*Salvelinus fontinalis*
Brown Bullhead	*Ameiurus nebulosus*
Brown Trout	*Salmo trutta*
Central Mudminnow	*Umbra limi*
Chain Pickerel	*Esox niger*
Cisco	*Coregonus artedi*
Common Carp	*Cyprinus carpio*
Common Shiner	*Luxilus cornutus*
Creek Chub	*Semotilus atromaculatus*
Eastern Blacknose Dace	*Rhinichthys atratulus*
Fallfish	*Semotilus corporalis*
Fathead Minnow	*Pimephales promelas*
Golden Shiner	*Notemigonus crysoleucas*
Lake Chub	*Couesius plumbeus*
Lake Trout	*Salvelinus namaycush*
Largemouth Bass	*Micropterus salmoides*
Longnose Dace	*Rhinichthys cataractae*
Northern Pike	*Esox lucius*

Common Name	Scientific Name
Northern Redbelly Dace	*Chrosomus eos*
Pumpkinseed	*Lepomis gibbosus*
Rainbow Smelt	*Osmerus mordax*
Rainbow Trout	*Oncorhynchus mykiss*
Redbreast Sunfish	*Lepomis auritus*
Rock Bass	*Ambloplites rupestris*
Slimy Sculpin	*Cottus cognatus*
Smallmouth Bass	*Micropterus dolomieu*
Spotfin Shiner	*Cyprinella spiloptera*
Spottail Shiner	*Notropis hudsonius*
Stonecat	*Noturus flavus*
Tessellated Darter	*Etheostoma olmstedi*
Trout-perch	*Percopsis omiscomaycus*
Walleye	*Sander vitreus*
White Sucker	*Catostomus commersonii*
Yellow Bullhead	*Ameiurus natalis*
Yellow Perch	*Perca flavescens*

Table 3.2 Lake George Fish Stocking from 2011 to 2019 by the NYSDEC (Source: NYSDEC 2020d)

Year	Location	Town	Month	No. of Fish	Species	Size (in)
2011	Lake George	Bolton, Hague	June	17,000	Landlocked Salmon	6.0
2011	Lake George	Bolton, Hague	June	17,000	Landlocked Salmon	6.5
2011	Lake George (Green Island)	Bolton	October	1,483	Landlocked Salmon	5.0
2011	Lake George (Hague Pier)	Hague	October	1,483	Landlocked Salmon	5.0
2012	Lake George	Bolton, Hague	June	17,000	Landlocked Salmon	7.0
2012	Lake George	Bolton, Hague	May	17,000	Landlocked Salmon	7.1
2012	Lake George (Green Island)	Bolton	October	1,500	Landlocked Salmon	9.1
2012	Lake George (Hague Pier)	Hague	October	1,500	Landlocked Salmon	9.1
2013	Lake George	Bolton, Hague	May	17,000	Landlocked Salmon	7.0

Year	Location	Town	Month	No. of Fish	Species	Size (in)
2013	Lake George	Bolton, Hague	May	17,000	Landlocked Salmon	7.0
2013	Lake George	Hague	October	740	Landlocked Salmon	10.0
2013	Lake George	Hague	October	741	Landlocked Salmon	10.0
2013	Lake George	Lake George	October	1,482	Landlocked Salmon	10.0
2014	Lake George	Bolton, Hague	June	3,000	Landlocked Salmon	7.7
2014	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	6.8
2014	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.1
2014	Lake George	Hague	October	750	Landlocked Salmon	10.4
2014	Lake George	Hague	October	750	Landlocked Salmon	10.4
2014	Lake George	Lake George	October	1,500	Landlocked Salmon	10.4
2015	Lake George	Bolton, Hague	July	5,000	Rainbow Trout	3.4
2015	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.0
2015	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.0
2015	Lake George	Lake George	May	500	Rainbow Trout	9.0
2015	Lake George	Hague	October	10,000	Brook Trout	4.3
2015	Lake George	Lake George	October	10,000	Brook Trout	4.6
2015	Lake George	Hague	October	750	Landlocked Salmon	10.1
2015	Lake George	Hague	October	750	Landlocked Salmon	10.1
2015	Lake George	Lake George	October	1,500	Landlocked Salmon	10.1
2015	Lake George	Hague	September	1,458	Rainbow Trout	4.0
2016	Lake George	Bolton, Hague	July	24,000	Rainbow Trout	4.0
2016	Lake George	Lake George Village	June	4,000	Rainbow Trout	-

Year	Location	Town	Month	No. of Fish	Species	Size (in)
2016	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.3
2016	Lake George	Bolton, Hague	May	3,120	Landlocked Salmon	7.7
2016	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.9
2016	Lake George (Hague Pier)	Hague	October	750	Landlocked Salmon	10.0
2016	Lake George (Rodgers Rock)	Hague	October	750	Landlocked Salmon	10.0
2016	Lake George (Million Dollar Beach)	Lake George	October	1,500	Landlocked Salmon	10.0
2017	Lake George	Bolton, Hague	June	3,000	Landlocked Salmon	7.5
2017	Lake George	Bolton, Hague	May	4,000	Landlocked Salmon	7.0
2017	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.0
2017	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.0
2017	Lake George	Hague	May	340	Rainbow Trout	9.0
2017	Lake George	Hague	October	1,500	Landlocked Salmon	10.0
2017	Lake George	Lake George	October	1,500	Landlocked Salmon	10.0
2018	Lake George	Hague	June	15,000	Rainbow Trout	3.9
2018	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.0
2018	Lake George	Bolton, Hague	May	15,000	Landlocked Salmon	7.0
2018	Lake George	Bolton, Hague	October	15,000	Rainbow Trout	5.7
2018	Lake George (Rodgers Rock)	Hague	October	1,500	Landlocked Salmon	9.9
2018	Lake George (Hearthstone)	Lake George	October	1,500	Landlocked Salmon	9.9
2019	Lake George	Horicon	June	3,000	Rainbow Trout	8.8
2019	Lake George	Bolton, Hague	May	1,600	Landlocked Salmon	7.1

Year	Location	Town	Month	No. of Fish	Species	Size (in)
2019	Lake George	Bolton, Hague	May	4,264	Landlocked Salmon	7.5
2019	Lake George	Bolton, Hague	May	1,500	Landlocked Salmon	7.5
2019	Lake George	-	May	346	Landlocked Salmon	12.0
2019	Lake George	-	November	20,000	Landlocked Salmon	6.4
2019	Lake George	-	October	1,850	Brook Trout	4.0
2019	Lake George	-	October	1,901	Rainbow Trout	4.0
2019	Lake George (Hague Pier)	Hague	October	1,500	Landlocked Salmon	11.1
2019	Lake George (Hearthstone)	Lake George	October	1,500	Landlocked Salmon	11.1

3.3.2 Compliance

There is no required upstream passage at the Upper or Lower LaChute Hydroelectric Facilities and therefore no compliance issues.

Upstream Passage Conclusion

Upstream Fish passage is not necessary at the LaChute Hydroelectric Facility based on fish distribution data and the lack of native migratory fish species in the vicinity. Upstream passage could also introduce non-native fish, and potentially invasive species, that could impact the existing fishery in Lake George. This could have severe consequences on the ecology of the lake as well as the recreational resources that the economy in this area thrives on (see section 3.8 for recreational resources).

3.4 Downstream Fish Passage Standards

3.4.1 All ZOEs

CRITERION	*STANDARD*	*INSTRUCTIONS*
D	1	<u>Not Applicable/ De Minimis Effect:</u> • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g. entrainment into hydropower turbines). • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

3.4.1.1 Upper LaChute Impoundment ZOE

Fishes in Lake George are able to pass through a downstream bypass at the Upper LaChute Dam (Photo 3.1). The bypass is a buried pipe with underground sluice that carries fishes from the Upper Project intake to the bypass reach just after Mill A. Within the conveyance there is a concrete bay enabling fish trapping when necessary. In 2002, the NYSDEC gave LaChute Hydro permission to end trapping at the project due to a variety of negative effects on fish and wildlife, which included mortalities of mammals and fishes in the trap (Attachment D). Each fall, trapping deferment at the project is revisited with the NYSDEC, but no trapping has occurred at the project since 2002. In addition to providing a downstream passage route, the Upper LaChute Facilities Mill A has angled trash racks with 1-inch clear spacing on the intake structure to prevent fish entrainment.

Photo 3.1 Upper LaChute Intake and Fish Bypass

3.4.1.2 Upper LaChute Bypassed Reach ZOE

Initial fish passage from Lake George is passed through the downstream bypass pipe at Mill A. Downstream passage at Mill B is provided at the base of the dam, where water is directed due to the abandoned nature of the dam (Photo 3.2). Water flow in the bypassed reach provides appropriate habitat for fishes.

Photo 3.2 Water Flow through Mill B Dam in the Upper LaChute Bypassed Reach. (Photo from Google Earth)

3.4.1.3 Lower LaChute Lower Bypassed Reach ZOE

The Upper LaChute Mill D utilizes the minimum flow weir to provide fish downstream passage at the Project intake. Additionally, Mill D has angled trash racks with 1-inch clear spacing on the intake structures to prevent fish entrainment. Water flow in the bypassed reach provides appropriate habitat for fishes.

3.4.1.4 Lower LaChute Tailrace ZOE

Mill F is located on a natural cascading falls which does not specifically provide formal downstream passage at dam.

3.4.2 Compliance

The Upper and Lower LaChute Hydroelectric facilities are in compliance with the exemption agreements and communicate with state agencies for downstream passage requests and requirements.

Downstream Passage Conclusion

No fishes in Lake George require downstream passage in the LaChute River to complete their lifecycle (See section 3.3 Upstream Passage). However, the facilities allow resident fishes to move downstream. LaChute Hydro is in compliance with their downstream passage requirements and communicated with the NYSDEC each fall to determine if fish trapping is required.

3.5 Shoreline and Watershed Protection Standards

3.5.1 All ZOEs

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

The upper and Lower LaChute Projects are located within the HUC- 02010001 – Lake George watershed. The watershed at the dam is approximately 233 square miles. Figure 3.1 Shows that the extent of the watershed.

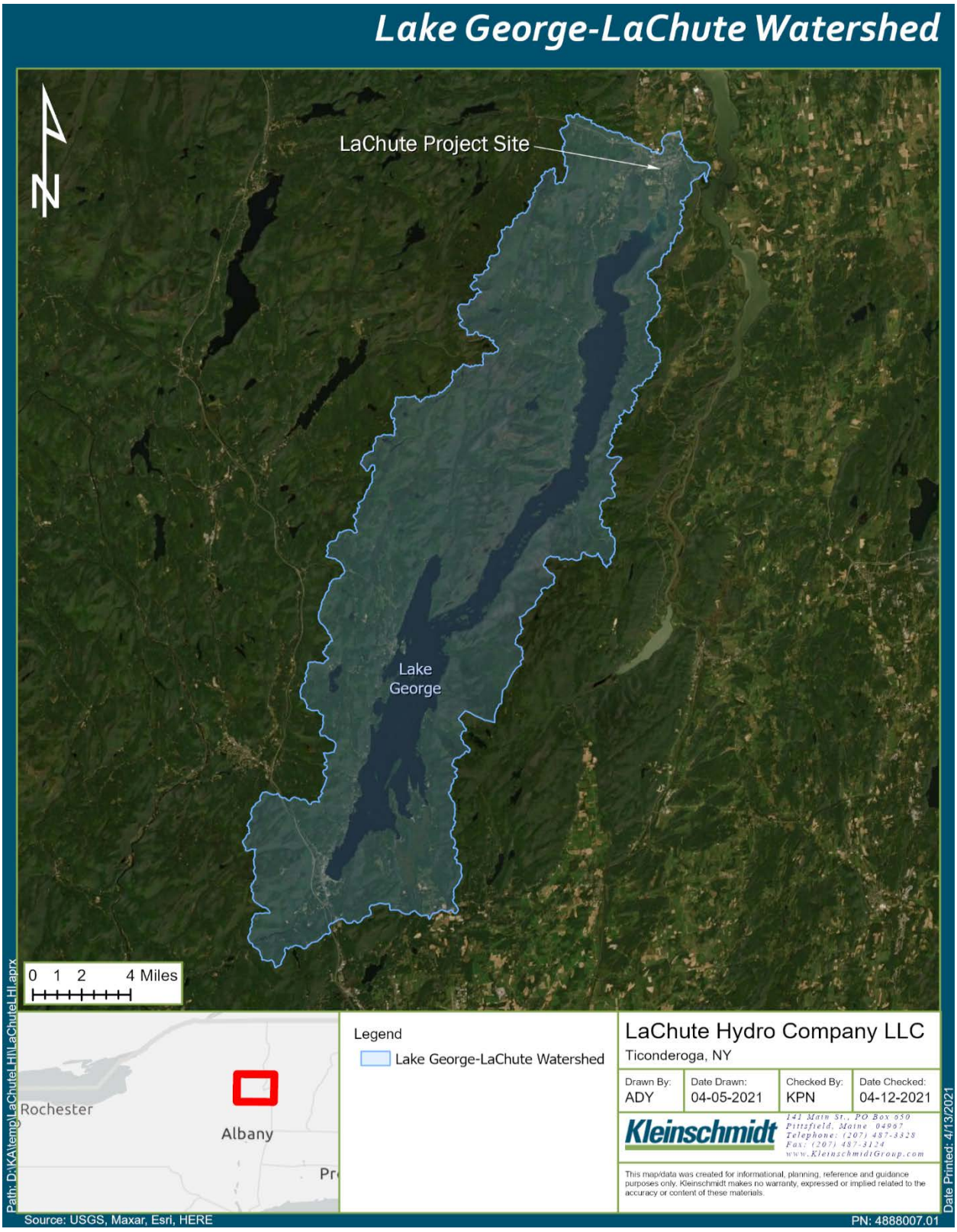

Figure 3.1 Lake George - LaChute Watershed

The current exemptions for both Upper and Lower LaChute do not require a shoreline management plan; however, there is an agreement that is implemented to control the flow regime that protects Lake George under operations and specific times of the year.

In general, the way that LaChute Hydro operates is based on the requirements put forth by the NYSDEC. LaChute Hydro keeps the Lake George impoundment at a maximum water surface elevation of 319.93 ft above mean sea level (msl) (4.00 ft above the datum elevation gage 315.93 ft msl) through the year, and a minimum water surface elevation of 313.43 ft msl (2.5 ft below datum elevation gage 315.93 ft msl) from June 1 to December 1, with due allowance for natural fluctuations or emergencies. In addition, the water surface elevation between June 1 and September 30 is to be an average of 316.43 ft msl (3.5 ft above datum elevation gage 315.93 ft msl). The law further states that if the level of the lake raises above 319.93 ft msl that all gates shall be opened and that if the level of the lake drops below 313.43 ft msl from June 1 to December 1, no water shall be withdrawn from the lake for the purpose of generating power. A complete description the operations can be found in Section 3.1. Littoral and riparian zones appear to be stable, with the controls set for the Lake George operation and times of year.

There is one documented invasive species in Lake George, the Asian clam. This species is not found in Lake Champlain. It is likely the species is isolated in Lake George. However, there are four invasive species in particular—variable-leafed milfoil, water chestnut, alewife and fishhook waterflea are documented in Lake Champlain (Adirondack Explorer 2019). The LaChute River is approximately 3.5 miles long and drops 230-feet in elevation from Lake George to Lake Champlain. Along this river, there are a variety of natural cascades and falls that could make natural passage upstream difficult, or impossible for some species. These invasive species have not been found in Lake George (Adirondack Explorer 2019). Due to the cascades and falls steep incline to the lake, it is highly unlikely that the species could move into Lake George by themselves; however, it is possible that the species could be transported to the lake by boaters and anglers. Boat launches at Lake George, Mossy Point on the lake's east side and Roger Rock on the west, have teams present during the day to inspect and, if need be, scrub incoming boats of invasives ((Adirondack Explorer 2019).

Project Developments land use, cover and ecologically significant lands are described below and shown in Figures 3.2 and 3.3.

3.5.1.1 Upper LaChute Impoundment and Bypassed Reach ZOEs

Lake George is surrounded by deciduous forests and evergreen forests for a majority of the riverbank. Sprinkled around the banks also include residential and commercial properties and maintained areas of grass.

The bypassed reach is located between developed lands. The stretch between Mill A and Mill C has deciduous trees along the riverbanks and transitions into maintained lawns and fields. From Mill C to Mill D the lands become more and more developed with residential and commercial properties.

Wetlands in the Upper LaChute Project vicinity are made up of lake (Lake George), tributaries, ponds, and freshwater wetlands. The entirety of Lake George is identified as lake; from Mill A dam to Mill C Dam is identified as pond (Photo 3.3); Mill C dam to Mill D dam is also pond, with a forested wetland island (NLCD 2016).

Photo 3.3 Upper LaChute Mill C Impoundment

3.5.1.2 Lower LaChute Lower Bypassed and Tailrace ZOE

The Lower LaChute bypassed reach down to the tailrace is located between developed lands. The stretch between Mill D and Mill F, has deciduous trees along the riverbanks and transitions into maintained lawns and fields. From Mill F to the confluence the lands become more and more forested and transition into wetlands and Lake Champlain. Vegetation along the project area is limited to second growth hardwood and pioneer species. Soils in the area of the Village of Ticonderoga are gently sloping and contain deposits of calcareous clays (FERC 2001).

Wetlands in the Lower LaChute Project vicinity are made up tributaries, ponds, and freshwater wetlands. From Mill D dam to Mill F dam is identified as pond; Mill F dam to the crossing of Mountain Road is identified as pond; From the mountain Road crossing down to the confluence is a mix of forested wetlands, emergent wetlands, and lake (NLCD 2016).

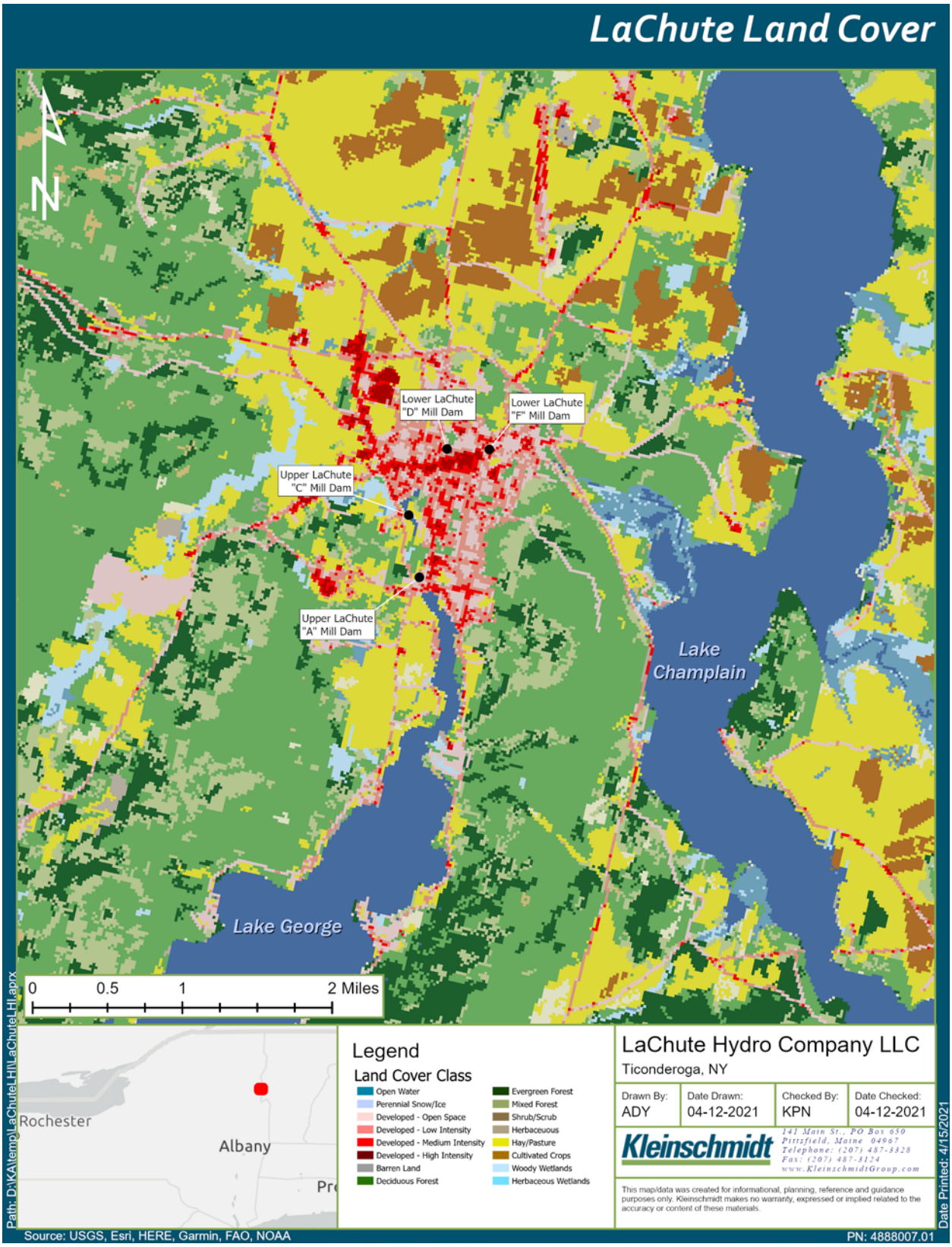

Figure 3.2 Land Cover at Upper LaChute and Lower LaChute Project ZOEs

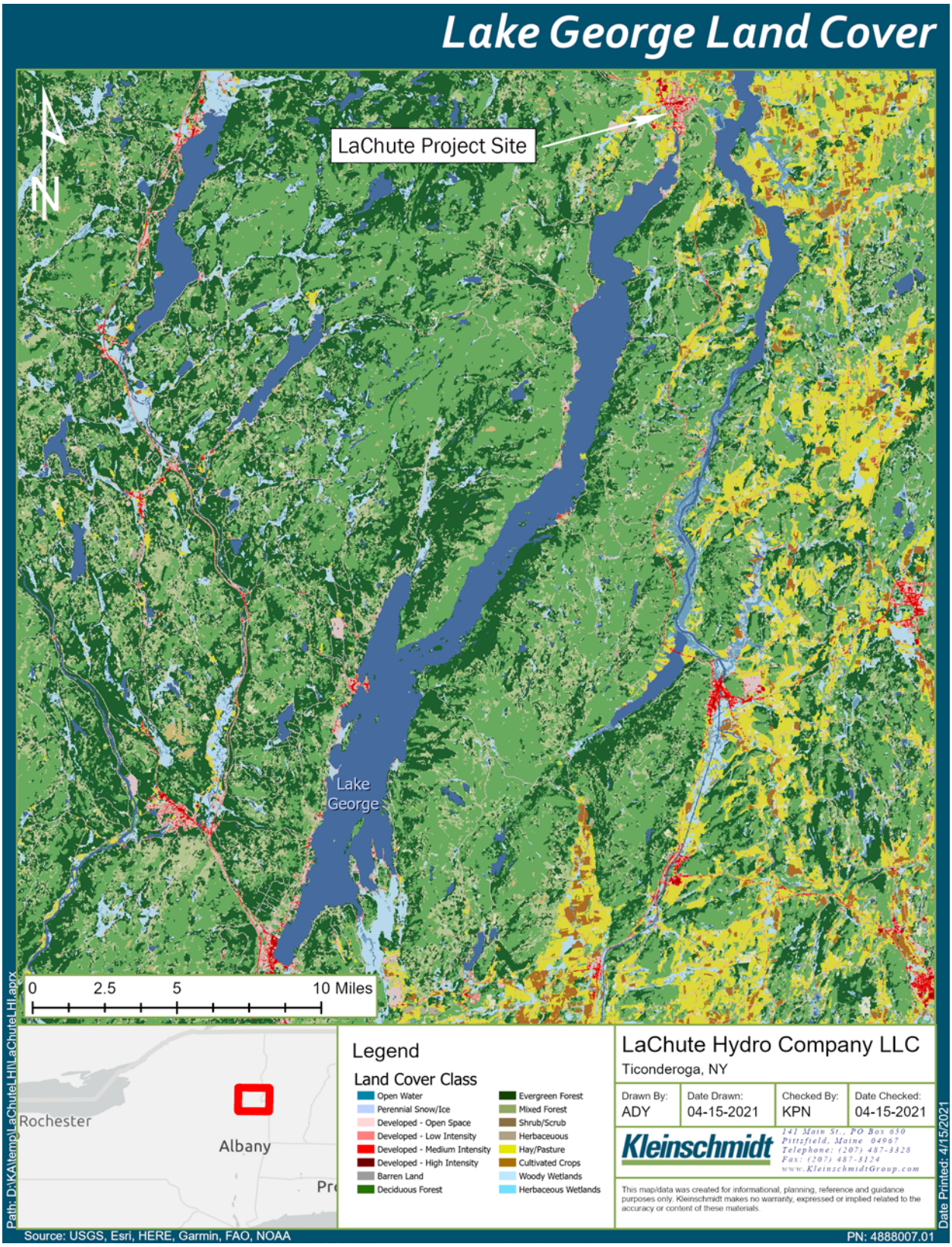

Figure 3.3 Land Cover at Lake George

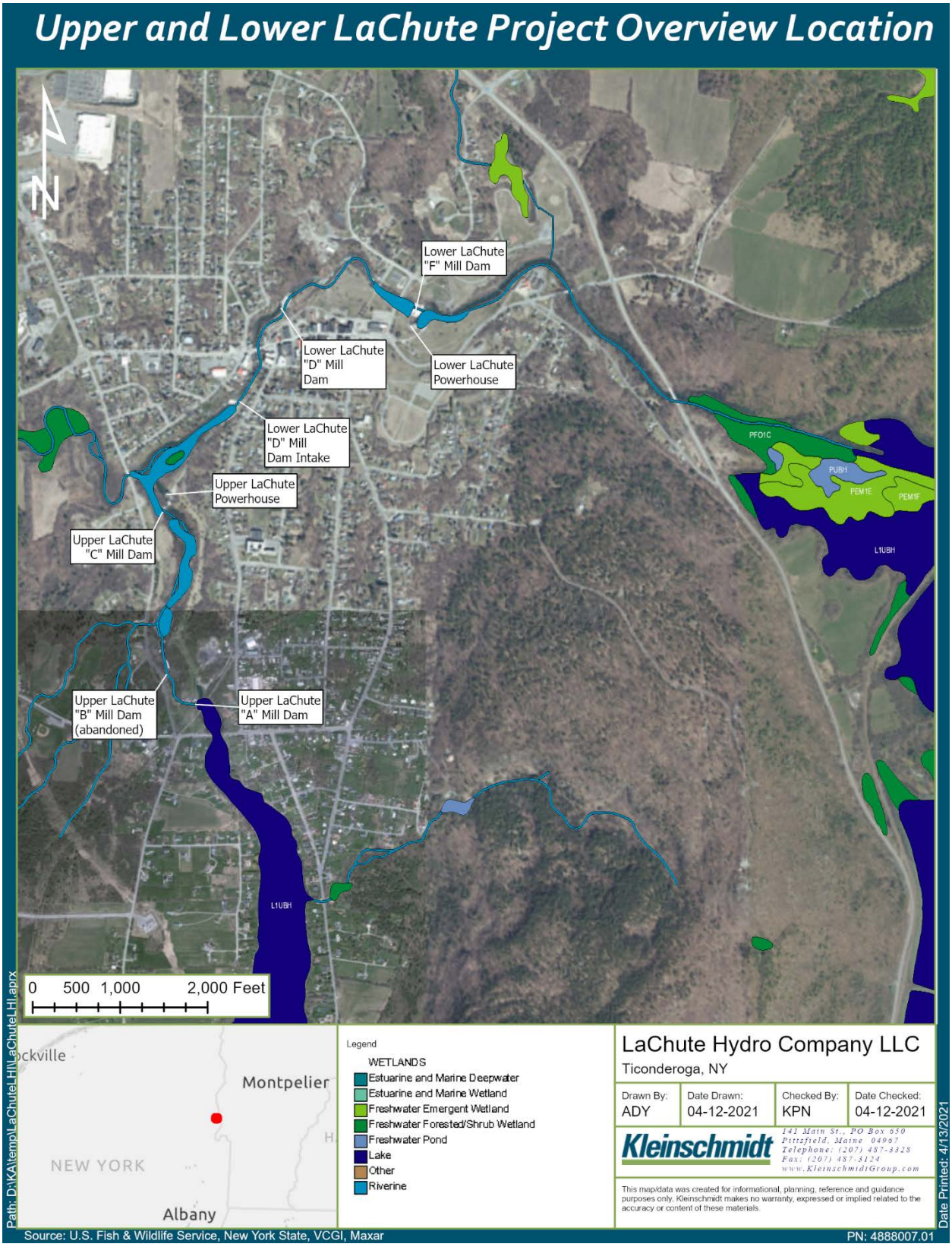

Figure 3.4 Wetland Mapping at the Upper LaChute and Lower LaChute Projects

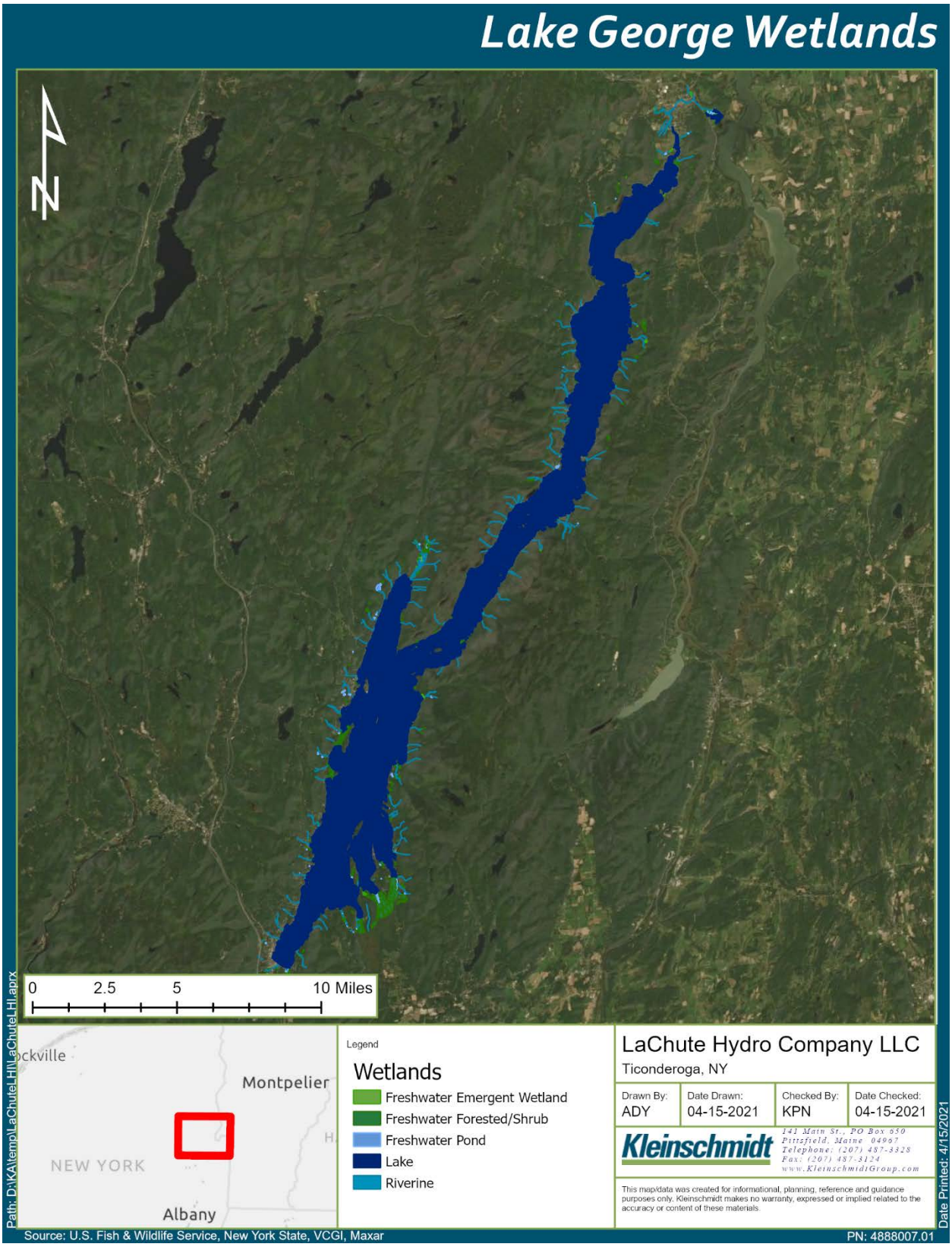

Figure 3.5 Wetland Mapping Lake George

3.5.2 Compliance

The current exemptions for both Upper and Lower LaChute do not require a shoreline management plan; however, there is an agreement that is implemented to control the flow regime that protects Lake George under operations and specific times of the year. LaChute Hydro has maintained compliance with the Lake George elevations, project operations, and flow requirements.

Shoreline and Watershed Protection Standards Conclusion

No official Shoreline Management Plan is required for the Upper and Lower LaChute Projects, protection of the shoreline occurs during operation required by the NYSDEC.

3.6 Threatened and Endangered Species Standards

3.6.1 All ZOEs

CRITERION	*STANDARD*	*INSTRUCTIONS*
F	2	Finding of No Negative Effects: • Identify all federal and state listed species that are or may be in the immediate facility area based on current data from the appropriate state and federal natural resource management agencies. • Provide documentation that there is no demonstrable negative effect of the facility on any listed species in the area from an appropriate natural resource management agency or provide documentation that habitat for the species does not exist within the ZOE or is not impacted by facility operations.

Mammals

Federally listed endangered and threatened species within the Projects' ZOEs were identified using the USFWS Information for Planning and Consultation (IPaC) website on April 16, 2021 (USFWS 2021a and USFWS 2021b). One federally listed endangered species, the Indiana Bat (*Myotis sodalist*) and one federally listed threatened species, the Northern Long-eared Bat (*Myotis septentrionalis),* may be found within the Project's vicinity (USFWS 2021). The State of New York lists the Indiana Bat as state endangered and the Northern Long-eared Bat as state threatened (NYSDEC 2021).

It is possible these bats feed within the Project boundaries, though no critical habitat is contained within Project boundaries for either species (USFWS 2021). The run-of-river to modified run-of-river operation of the Projects are not anticipated to negatively impact either of the bats that may transiently utilize the area.

A New York Environmental Resources Mapper (NYERM) was used on April 2, 2021 to review potential state rare, threatened, and endangered species with the potential to occur in the project's vicinities. The mapper does not identify exact locations, nor does it call out specific species names for state listed species; however, the mapper shows general information of listed species, such as there are state listed bat species, most likely the Northern Long-eared Bat, in the project vicinity. the mapper also stated that there is/are rare, threatened, or endangered plant species, and additional animal

species that could occur in the project vicinity. Additionally, the mapper did identify the Bridle Shiner (*Notropis bifrenatus*) (which is not a listed state species). .

There are records of the Bridle Shiner in the Lower LaChute tailwater out to the confluence with Lake Champlain (Carlson 2016). As stated above this species is not listed by the state of New York. Adults occur in ponds, lakes and sluggish mud-bottomed pools of creeks and small to medium rivers and are often found in vegetation (Breder & Rosen 1966). Based on the habitat needs, most of the Lower LaChute does not have the appropriate habitat, with the exception of the Lake Champlain confluence.

On April 2, 2021 a request was made to the NYSDEC for additional information on the species identified and how they may or may not be affected by the continued operation of the Projects. The NYSDEC has not provided information at this time.

Migratory Birds

Migratory birds within the Projects' ZOEs were identified using the USFWS IPaC website (USFWS 2021c). The Upper and Lower LaChute Projects potentially have thirteen (13) migratory birds, within the ZOEs. Bird species, federal status, state status and Development locations are summarized in Table 3.3.

Table 3.3 Species of Migratory Birds Found within the ZOE for Upper and Lower LaChute Projects

Common Name	Scientific Name	Federal Status	New York State Status
Bald Eagle	*Haliaeetus leucocephalus*	Non-BCC Vulnerable	Endangered
Black-billed Cuckoo	*Coccyzus erythropthalmus*	BCC Rangewide (CON)	Not Listed
Bobolink	*Dolichonyx oryzivorus*	BCC Rangewide (CON)	Not Listed
Canada Warbler	*Cardellina canadensis*	BCC Rangewide (CON)	Not Listed
Cape May Warbler	*Setophaga tigrina*	BCC Rangewide	Species of Greatest Conservation Need
Eastern Whip-poor-will	*Antrostomus vociferus*	BCC Rangewide (CON)	Endangered
Evening Grosbeak	*Coccothraustes vespertinus*	BCC Rangewide (CON)	Not Listed

Common Name	Scientific Name	Federal Status	New York State Status
Golden-winged Warbler	*Vermivora chrysoptera*	BCC Rangewide (CON)	Not Listed
Lesser Yellowlegs	*Tringa flavipes*	BCC Rangewide (CON)	Not Listed
Olive-sided Flycatcher	*Contopus cooperi*	BCC Rangewide	Species of Greatest Conservation Need
Prairie Warbler	*Dendroica discolor*	BCC Rangewide (CON)	Not Listed
Rusty Blackbird	*Euphagus carolinus*	BCC Rangewide (CON)	Endangered
Wood Thrush	*Hylocichla mustelina*	BCC Rangewide (CON)	Not Listed

Source: USFWS 2021c and NYSDEC 2021

Botanical

The NYERM shows five (5) Significant Natural Communities and nine (9) Natural Communities in the Vicinity of the Upper and Lower LaChute projects. It is not anticipated that the Project will impact these species with the continued operations.

On April 2, 2021 a request was made to NYSDEC for additional information on these communities and state rare, threatened, and endangered plant species, NYSDEC has not responded at this time.

Significant Natural Communities in Vicinity	Upper LaChute	Lower LaChute
Appalachian oak-hickory forest	X	X
Calcareous talus slope woodland	X	
Oligotrophic dimictic lake	X	
Deep emergent marsh		X
Limestone woodland		X

Natural Communities in the Vicinity	Upper LaChute	Lower LaChute
Appalachian oak-pin forest	X	
Calcareous cliff community	X	
Appalachian oak-hickory forest	X	X
Red Cedar rocky summit	X	
Oligotrophic dimictic lake	X	
Hemlock-northern hardwood forest	X	
Calcareous talus slope woodland	X	
Beech-maple mesic forest	X	
Limestone woodland		X

3.6.1.1 Invasive Species

There is one documented invasive species in Lake George, the Asian clam. This species is not found in Lake Champlain. It is likely the species is isolated in Lake George. However, there are four invasive species documented in Lake Champlain that could invade Lake George if not monitored, these species include; variable-leafed milfoil, water chestnut, alewife and fishhook (Adirondack Explorer 2019). The LaChute River is approximately 3.5 miles long and drops 230-feet in elevation from Lake George to Lake Champlain. Along this river, there are a variety of natural cascades and falls that could make natural passage upstream difficult, or impossible for some species (Adirondack Explorer 2019). Due to the cascades and falls steep incline to the lake, it is highly unlikely that the species could move into Lake George by themselves; however, it is possible that the species could be transported to the lake by boaters and fisherman. Boat launches at Lake George, Mossy Point on the lake's east side and Roger Rock on the west, have teams present during the day to inspect and, if needed, scrub incoming boats of invasives (Adirondack Explorer 2019).

3.6.1.2 All Upper and Lower LaChute ZOEs

Based on the April 2021 USFWS IPaC Report, the Northern Long-eared Bat and Indiana Bat have the potential to occur within the Upper and Lower LaChute Project areas (USFWS 2021). The Northern Long-eared Bat is federally listed as endangered while the Indiana Bat is listed as threatened. The State of New York lists the Indiana bat as state endangered and the northern long-eared bat as state threatened (NYSDEC 2021). No critical habitat was identified within any of the ZOEs in the IPac.

Thirteen (13) Migratory Birds were also identified to potentially occur in the Project areas (Table 3.3).

The NYERM shows five (5) Significant Natural Communities and nine (9) Natural Communities in the Vicinity of the Upper and Lower LaChute projects.

3.6.2 Compliance

The Upper and Lower LaChute projects have been in compliance with their FERC exemptions. It is not anticipated that the continued operations of the two projects would negatively impact Federal or State wildlife or plant species.

Threatened and Endangered Species Standards Conclusion

The Upper and Lower LaChute Projects have been operating in accordance with the FERC exemptions and have not had any incidental takes of any state or federally threatened or endangered species.

3.7 Cultural and Historic Resource Standards

3.7.1 All ZOEs

CRITERION	*STANDARD*	*INSTRUCTIONS*
G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility; or • Document that the facility construction and operation have not in the past, nor currently adversely affect any cultural or historic resources that are present on facility lands.

The Upper and Lower LaChute Projects operate in compliance with their respective exemptions and agreements with NYSDEC.

3.7.1.1 Upper LaChute Impoundment and Bypassed Reach ZOEs

New York State Historic Preservation Officer (SHPO) states that the Upper Project would have no adverse impacts on any historic cultural resources, letter for SHPO dated February 11, 1987 (FERC 2004).

3.7.1.2 Lower LaChute Lower Bypassed Reach and Tailrace ZOEs

The Exemptee designed and constructed the powerhouse in a manner that is in keeping with the historical nature of the Village of Ticonderoga. The powerhouse was designed and built to blend in with the historical architecture of the Village of Ticonderoga.

The SHPO, in a letter dated February 11, 1987, stated that the Lower Project will not have an adverse impact on historical and cultural resources in the area that are eligible for inclusion on the National Register of Historic Places (FERC 2001).

Summary for all ZOES

At this time, a cultural resource management plan is not required for either project.

3.7.2 Compliance

At this time, a cultural resource management plan is not required for either project. The New York SHPO stated that both Projects will not have an adverse impact on historical and cultural resources in the area that are eligible for inclusion on the National Register of Historic Places (FERC 2001).

3.8 Recreational Resources Standards

3.8.1 All ZOEs

CRITERION	*STANDARD*	*INSTRUCTIONS*
H	3	Assured Accessibility: • In lieu of existing agency recommendations and plans for recreational uses, document the facility's current and future commitment to accommodate reasonable requests from recreation interests for adequate public access for recreational use of lands and waters of the facility, including appropriate recreational water flows and levels, without fees or charges.

3.8.1.1 Regional Recreation

While the Upper and Lower LaChute Projects do not have any formal recreational facilities, the Adirondack Mountains and Lake George are popular recreational areas with many activities to offer. Recreational activities occur all year round and offer a variety of activities for families, adventurers and relaxing.

The Adirondack Park encompasses one-third of the total land area in New York State and contains a variety of landscapes including forests, farmlands, towns, villages, mountains, valleys, lakes, ponds, and rivers. The Adirondack Park is known for the wild landscape, old growth forests, wildflowers and a large variety of plant species. There is over 2,000 miles of footrails throughout the park for hiking and a canoe trail that travels 100 miles from Old Forge to the Saranac Lakes. There are 500 campsites and over 48 islands located on Lake George, Indian Lake and Saranac Lake. Additionally, the Adirondacks are rich in history with old forts, museums, and antique shops (NYSDEC 2021b). All along Lake George there are signs on the sides of the road marking important sites and monuments honoring fallen war heroes (Lake George 2021a).

The area around Lake George has a variety of unique activities and attractions tourist can choose from. Activities range from adventurous to family friendly and cultural. For the adventurers, tourists can choose from hiking, camping, boating, kayaking, mountain biking, horseback riding, parasailing, whitewater rafting, air balloon rides, skydiving, water sports, zorbing, zip lining, Tarzan swinging, aerial obstacle courses, adventure parks, aerial skateboarding, Six Flags, cliff jumping, scuba diving or a helicopter tour. There are also charters to choose from for boating, fishing and waters sports, or you can rent a boat or

kayak for the day. Winter activities include skiing, tubing, winter hiking, cross-country skiing, snow showing, or ice skating either indoors or outdoors on Mirror Lake, located in North Elba, NY, which is north of Lake George (Lake George 2021b).

Less adventurous activities include picnicking, golfing, mini golfing, spas, lazy river tubing, a cruise around Lake George, candle making, pumpkin picking, navigating a corn maze, or visiting the farmer's market or the horse racetrack in Saratoga. In addition to the many restaurants available, there are local breweries, distilleries, and wineries to visit. Some additional activities children may enjoy in the area include bowling, arcades, indoor playgrounds, laser tag, go-karting, rock wall climbing, paintball and even zombie hunting with the Adirondack Zombie Hunters in Queensbury, NY (Lake George 2021b).

In addition to all these opportunities, there are a variety of historical sites to visit including Fort Ticonderga, the Fort William Henry Museum, Battlefield Park, Frances G. Kinnear Museum of Local History, the Warrensburg Museum of Local History and the Saratoga National Historic Park. There is even a historic shipwreck, the Radeau, that you can visit via scuba diving or a submarine tour. Some natural areas worth visiting include the Ausable Chasm, Natural Stone Bridge and Caves Park as well as the Lake George Wild Forest (Lake George 2021b).

Lake George Wild Forest

Located in the southeastern portion of the Adirondack Park, the 72,508-acre Lake George Wild Forest provides numerous outdoor recreational opportunities. The Forest contains natural attractions such as Black Mountain, Shelving Rock, and Prospect Mountain and miles of marked trails to explore with easy public access. There are 63 designated tent sites for primitive camping as well as eight lean-tos. There are also 19 universally accessible sites in the Hudson River Special Management Area. In addition to hiking and camping, the Lake George Wild Forest offers opportunities for paddling, boating, biking, fishing, picnicking, snowmobiling, snowshoeing, cross-country skiing, horseback riding, hunting and trapping (NYSDEC 2021c).

3.8.1.2 Upper LaChute Impoundment ZOE

Lake George is located directly upstream of the Upper LaChute Dam in Essex and Warren Counties. The lake is approximately 32 miles long with a maximum depth of 187 ft and maximum width of 3 miles (NYSDEC 2021b). With 82 miles of shoreline, there is ample opportunity for recreational activities like fishing and swimming. There are five state

owned recreational areas with boat launches and various commercially owned areas. The NYSDEC stocks the lake annually with landlocked salmon. Lake George has a naturally reproducing population of Lake Trout, and Brook Trout can be found near the mouths of the main tributaries. Lake George also ranks among the top five bass fishing destinations in New York. Anglers also target black crappie and yellow perch while ice fishing in the winter months (NYSDEC 2021b). In addition to the state owned and operated activities, there are a variety of commercial recreational opportunities in the Lake George area and Adirondack region.

3.8.1.3 Upper and Lower LaChute Bypassed Reach ZOEs

While there are no formal recreational facilities within the Project Boundary, the La Chute River is used for a variety of recreational activities. The LaChute Project allows informal access to the river for fishing and maintains a boat barrier in Lake George for boater safety. The Upper LaChute Project provides parking and access to the Mill C Dam for angler fishing (Photo 3.2). The Project also maintains signs restricting swimming in the area for public safety, as well as other warning signs and sirens to protect the public from rapid changes in river flow (Photo 3.3 and Photo 3.4). The Lower LaChute Project provides a fishing platform that is handicap accessible that is concrete with hand railings and a dirt parking lot. There is also a drag rake installed at the Mill D Dam intake (Photo 3.5). Boating safety is important since American Whitewater has a 1.3 mile section of the LaChute listed on their site, starting from the end of the Trout Brook Tributary to Montcalm St near Bicentennial Park with a "II-V+" difficulty rating (American Whitewater 2016).

In the town of Ticonderoga, there is the Bicentennial Park, which offered picnic areas, riverfront views, ball fields, lighted walking paths, tennis courts and a small boat launch. In the winter, the park is known for lighted cross-country skiing, skating, snowshoeing and tobogganing (Lake Champlain Region 2021). Carillon Park is adjacent to the Bicentennial Park named after the French for where Fort Ticonderoga is now. Within the park there are several war memorials, cannons, a tablet celebrating the Knox Trail and a bench (Waymarking 2016).

Photo 3.4 Town of Ticonderoga Bicentennial Park

The River Walk Trail, located in Ticonderoga, follows the LaChute River starting at the Ticonderoga Heritage Museum, looping in Bicentennial Park, and ending the start of LaChute River and Lake George. Along this approximately 3 mile trail, there are 13 interpretive signs describing the history of the river and the variety of industries that utilized the power of the river (Figure 3.6). Additionally, between interpretive signs four and eight, there are fitness stations (Pride of Ticonderoga. 2020a).

Photo 3.5 View of the Angler Access Area at the Headpond of Mill C Dam

Photo 3.6 Warning Signs Posted at the Forebay of the Mill A Dam Adjacent to the Intake

Photo 3.7 Warning Signs in the Parking Area for Anglers

Photo 3.8 Intake at the Lower LaChute Mill D Dam

Figure 3.6 LaChute River Walk Interpretive Trail Map from the Pride of Ticonderoga (Pride of Ticonderoga. 2020b)

3.8.2 Compliance

The Upper LaChute Development operates the facilities under guidelines set by the NYSDEC to manage Lake George's water elevation levels appropriately. Operations do not impact the ability to recreate on Lake George. Additionally, a continuous flow through the bypass reaches are maintained, which provides stable flow for recreational activities and aesthetics. In 2004, FERC's Environmental Inspection Report confirmed compliance with all recreational requirements of the Project.

Lower LaChute has no recreational requirements and provides a minimum flow of 30 cfs downstream suitable for aesthetics and fish and wildlife. In 2001, an Environmental and Public Use Inspection confirmed the Lower Project was in compliance with all recreation requirements.

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5.0 CONTACTS FORMS

5.1 Applicant Contact Information

Project Owner:	
Name and Title	Matthew Stanley, VP & General Manager
Company	Central Rivers Power LLC
Phone	603-554-2656
Email Address	mstanley@centralriverspower.com
Mailing Address	670 N. Commercial St., Manchester, NH 03101
Consulting Firm / Agent for LIHI Program (if different from above):	
Name and Title	Kayla Hopkins, Regulatory Coordinator Karen Bishop, Scientist Associate
Company	Kleinschmidt Associates
Phone	207-416-1271 (Kayla) 860-581-5877 (Karen)
Email Address	Kayla.Hopkins@KleinschmidtGroup.com Karen.Bishop@KleinschmidtGroup.com
Mailing Address	P.O. Box 650, Pittsfield, ME 04967
Compliance Contact (responsible for LIHI Program requirements):	
Name and Title	Curt Mooney, Manager, Regulatory Compliance
Company	Central Rivers Power
Phone	603.744.0846
Email Address	cmooney@centralriverspower.com
Mailing Address	59 Ayers Island Road
Party responsible for accounts payable:	
Name and Title	Stacey Blair, AP Manager
Company	Central Rivers Power, LLC
Phone	978-604-0920
Email Address	accounting@centralriverspower.com
Mailing Address	670 N. Commercial St., Ste 204, Manchester, NH 03101 (do not mail – please email only)

5.2 State, Federal, Provincial, and Tribal Resource Agency Contacts

Agency Contact		***Area of Responsibility***
Agency Name	New York Natural Heritage Program	☐ Flows
Name and Title		☐ Water Quality
Phone	518.402.8935	☒ Fish/Wildlife
Email address	NaturalHeritage@dec.ny.gov	☐ Watershed
Mailing Address	656 Broadway, 5th floor Albany, NY 12233	☒ T & E Species ☐ Cultural/Historic ☐ Recreation

Agency Contact		***Area of Responsibility***
Agency Name	New York State Department of Environmental Conservation	☒ Flows ☒ Water Quality
Name and Title		☒ Fish/Wildlife
Phone		☒ Watershed
Email address		☐ T & E Species
Mailing Address		☐ Cultural/Historic ☐ Recreation

Agency Contact		***Area of Responsibility***
Agency Name	U.S. Fish and Wildlife Service	☐ Flows
Name and Title		☐ Water Quality
Phone		☒ Fish/Wildlife
Email address		☐ Watershed
Mailing Address		☒ T & E Species ☐ Cultural/Historic ☐ Recreation

Agency Contact		***Area of Responsibility***
Agency Name		☐ Flows
Name and Title		☐ Water Quality
Phone		☐ Fish/Wildlife
Email address		☐ Watershed
Mailing Address		☒ T & E Species ☐ Cultural/Historic ☐ Recreation

Agency Contact		***Area of Responsibility***
Agency Name		☐ Flows
Name and Title		☐ Water Quality
Phone		☐ Fish/Wildlife
Email address		☐ Watershed
Mailing Address		☐ T & E Species ☒ Cultural/Historic ☐ Recreation

Agency Contact		***Area of Responsibility***
Agency Name		☐ Flows
Name and Title		☐ Water Quality
Phone		☐ Fish/Wildlife
Email address		☐ Watershed
Mailing Address		☐ T & E Species ☒ Cultural/Historic ☐ Recreation

Agency Contact		***Area of Responsibility***
Agency Name		☐ Flows
Name and Title		☐ Water Quality
Phone		☒ Fish/Wildlife
Email address		☐ Watershed
Mailing Address		☒ T & E Species ☐ Cultural/Historic ☐ Recreation

6.0 SWORN STATEMENT

As an Authorized Representative of XXXXXXXX, the Undersigned attests that the material presented in the application is true and complete.

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

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

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

_____

[To be provided in finalized application]

Company Name:

Authorized Representative:

Name:

Title: _____

Authorized Signature: _____

Date: _____

7.0 ATTACHMENTS

ATTACHMENT A

AGENCY CONSULTATION

ATTACHMENT B

2021 USFWS INFORMATION FOR PLANNING AND CONSULTATIONS (IPAC)

United States Department of the Interior

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

In Reply Refer To: April 16, 2021
Consultation Code: 05E1NY00-2021-SLI-2300
Event Code: 05E1NY00-2021-E-07235
Project Name: Upper LaChute Hydroelectric Project (FERC exemption no. 5760)

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

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

energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

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

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

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NY00-2021-SLI-2300
Event Code: 05E1NY00-2021-E-07235
Project Name: Upper LaChute Hydroelectric Project (FERC exemption no. 5760)
Project Type: DAM
Project Description: Project applying to Low Impact Hydroelectric Institute for voluntary REM market. Project located in Ticonderoga, Essex County, New York State

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.6321203,-73.54145606390767,14z

Counties: Essex, Warren, and Washington counties, New York

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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

United States Department of the Interior

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

In Reply Refer To: April 16, 2021
Consultation Code: 05E1NY00-2021-SLI-2292
Event Code: 05E1NY00-2021-E-07212
Project Name: Lower LaChute Hydroelectric Project (FERC Exemption No. 5762)

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

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

energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

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

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

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NY00-2021-SLI-2292
Event Code: 05E1NY00-2021-E-07212
Project Name: Lower LaChute Hydroelectric Project (FERC Exemption No. 5762)
Project Type: DAM
Project Description: Project is applying for Low Impact Hydropower Institute application for voluntary REC market. Located on the LaChute River, Ticonderoga, Essex County, New York State.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.8458943,-73.40593310899027,14z

Counties: Essex County, New York

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Essex, Warren, and Washington counties, New York

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Indiana Bat Myotis sodalis Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE

TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black-billed Cuckoo Coccyzus erythropthalmus — Breeds May 15 to Oct 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9399

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cape May Warbler Setophaga tigrina — Breeds Jun 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Evening Grosbeak Coccothraustes vespertinus — Breeds May 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden-winged Warbler Vermivora chrysoptera — Breeds May 1 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8745

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird Euphagus carolinus — Breeds May 10 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

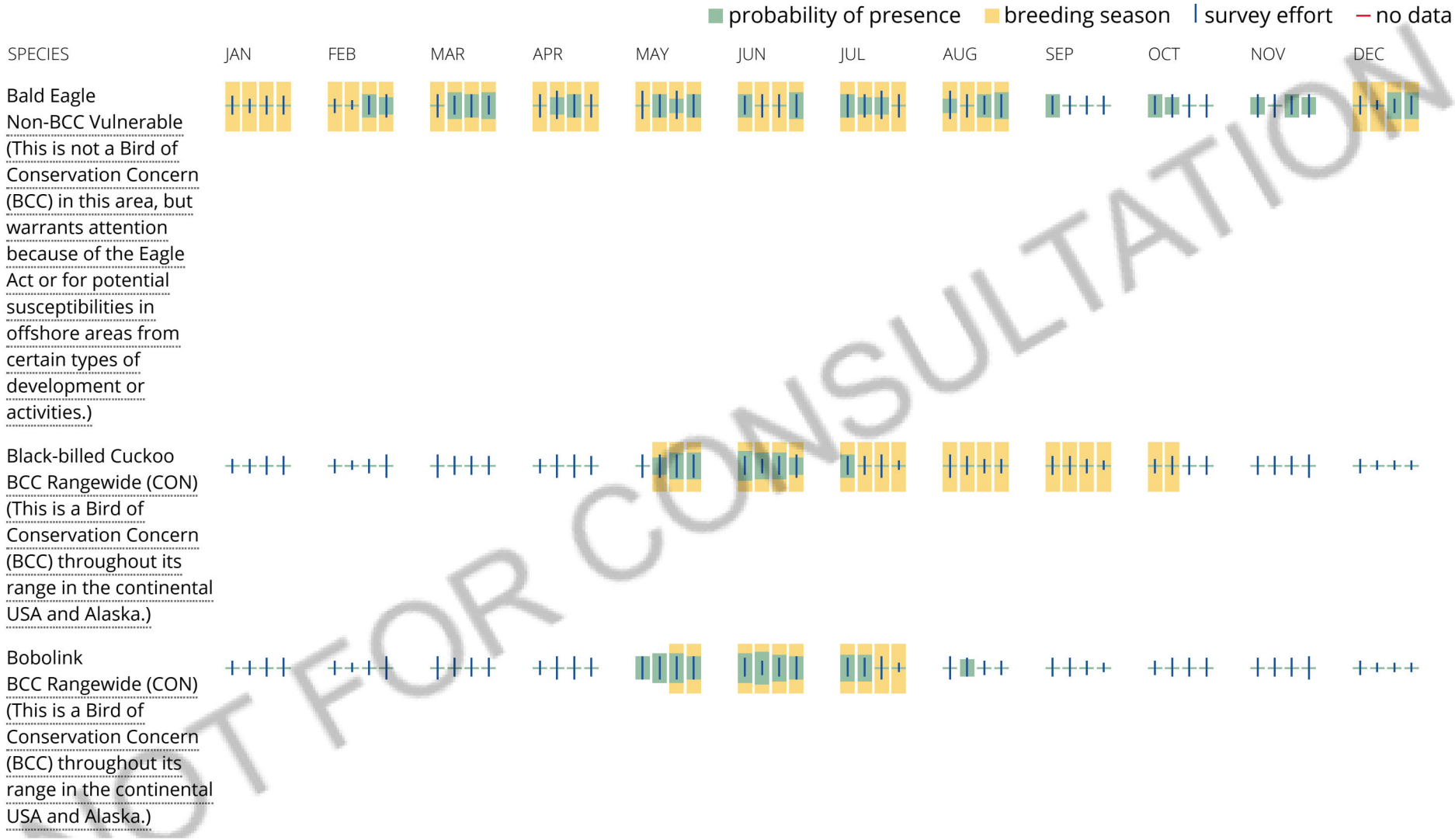
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

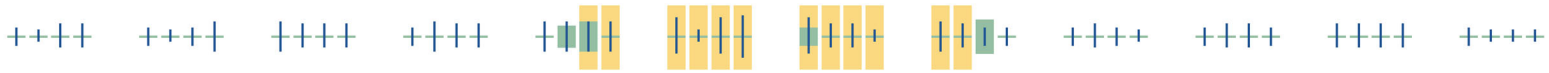
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

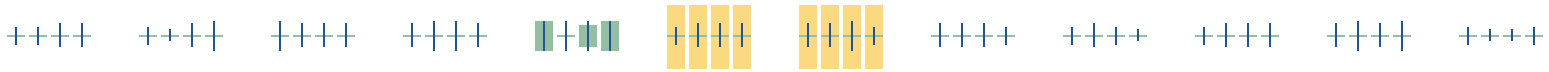
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



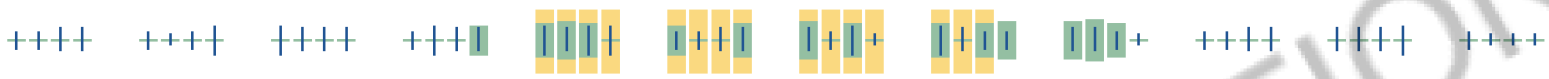
Canada Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Cape May Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

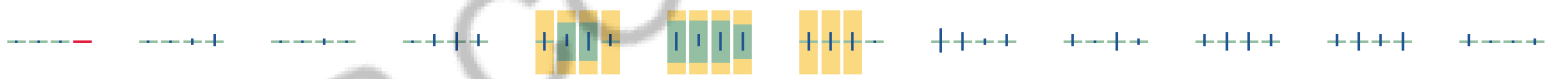


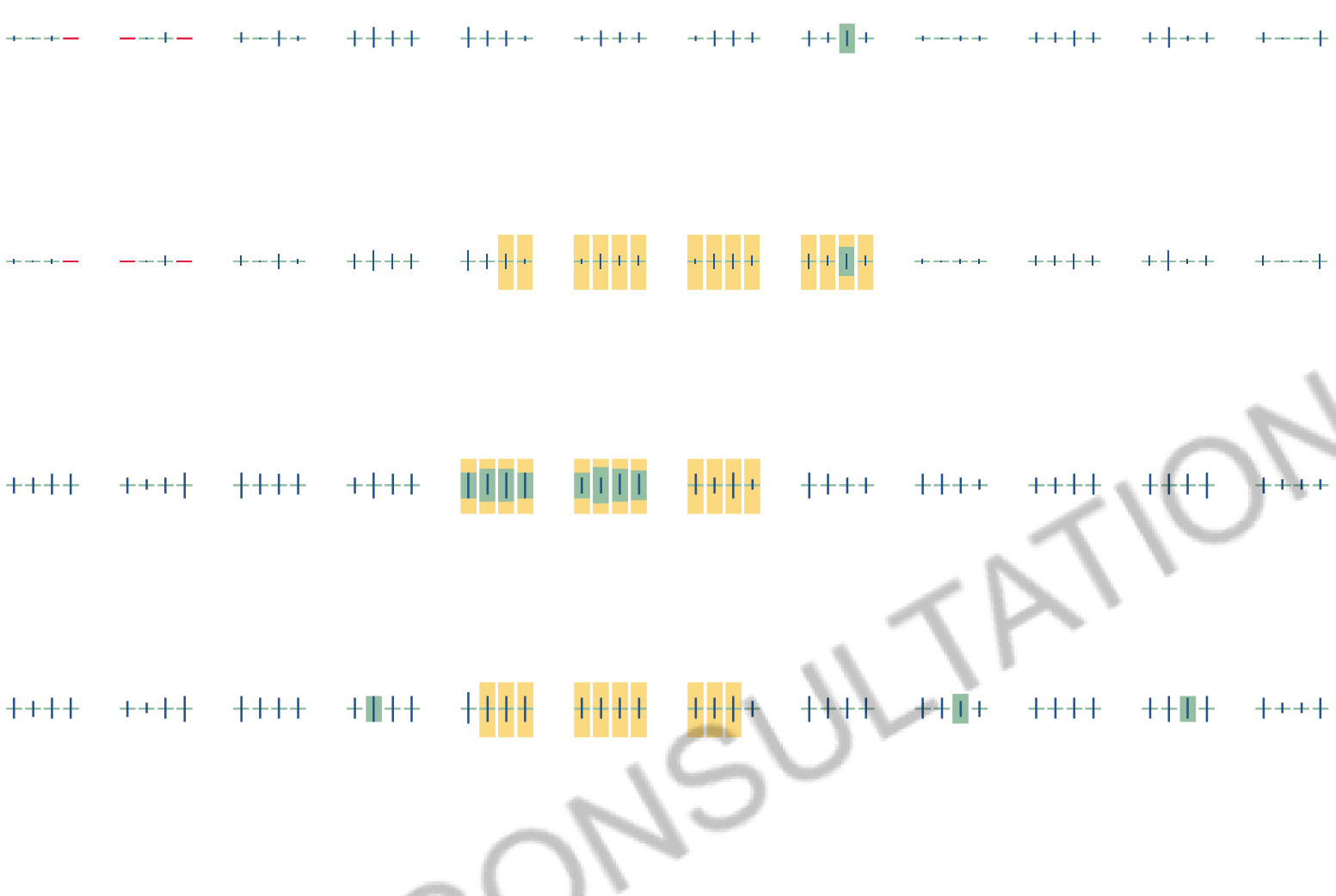
Eastern Whip-poor-will BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Evening Grosbeak BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Golden-winged Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is

not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1E
- PEM1/SS1C
- PEM1F
- PEM1C
- PEM1/FO1E
- PEM1/SS4E

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1/EM1B
- PSS1/EM1E
- PFO1C
- PSS1E
- PSS4/1E
- PFO4/1C
- PFO1E
- PFO1/SS1E
- PSS3/1B
- PFO1/4E
- PFO4E
- PFO4C
- PSS1/4E
- PFO1A
- PSS1/UBF
- PFO1/EM1Eb

FRESHWATER POND

- PUBH

LAKE

L1UBH

RIVERINE

R2UBH
R3UBH
R4SB3C
R5UBH
R4SBC
R3USC
R2EM2H

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of

any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

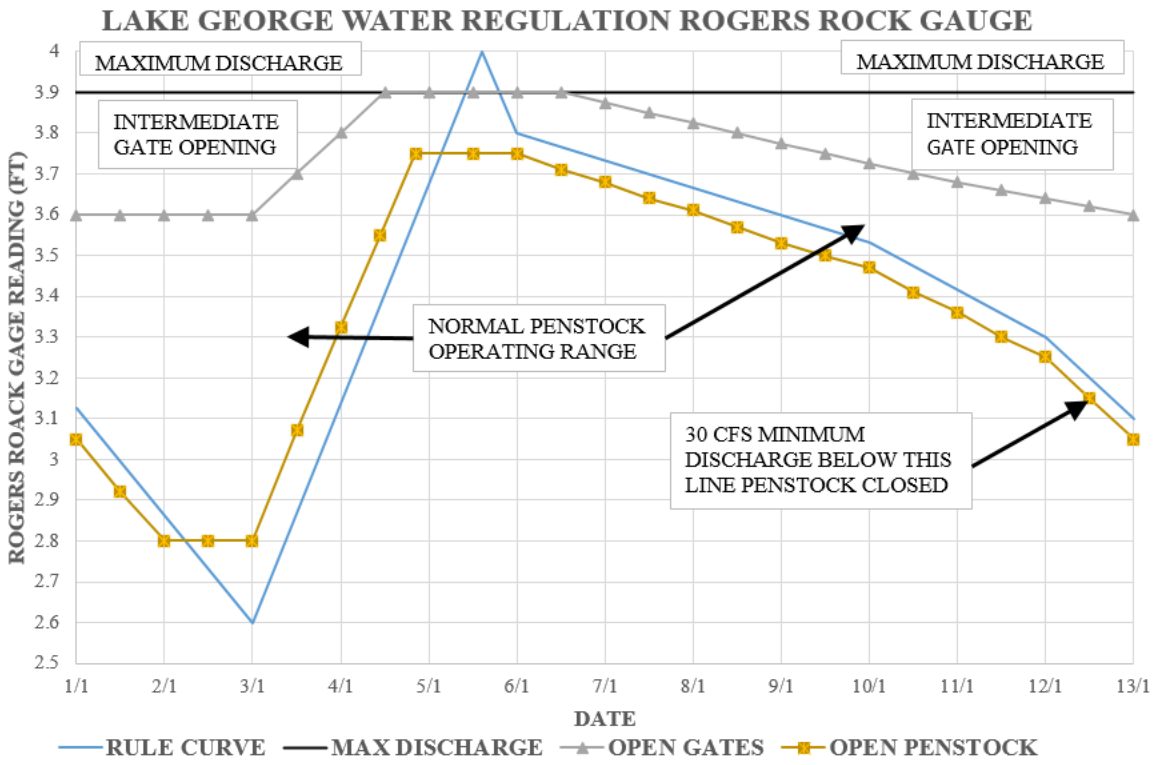
"J:\4757\015\Docs\References\Species List_ New York Ecological Services Field Office_Upper LaChute.pdf"

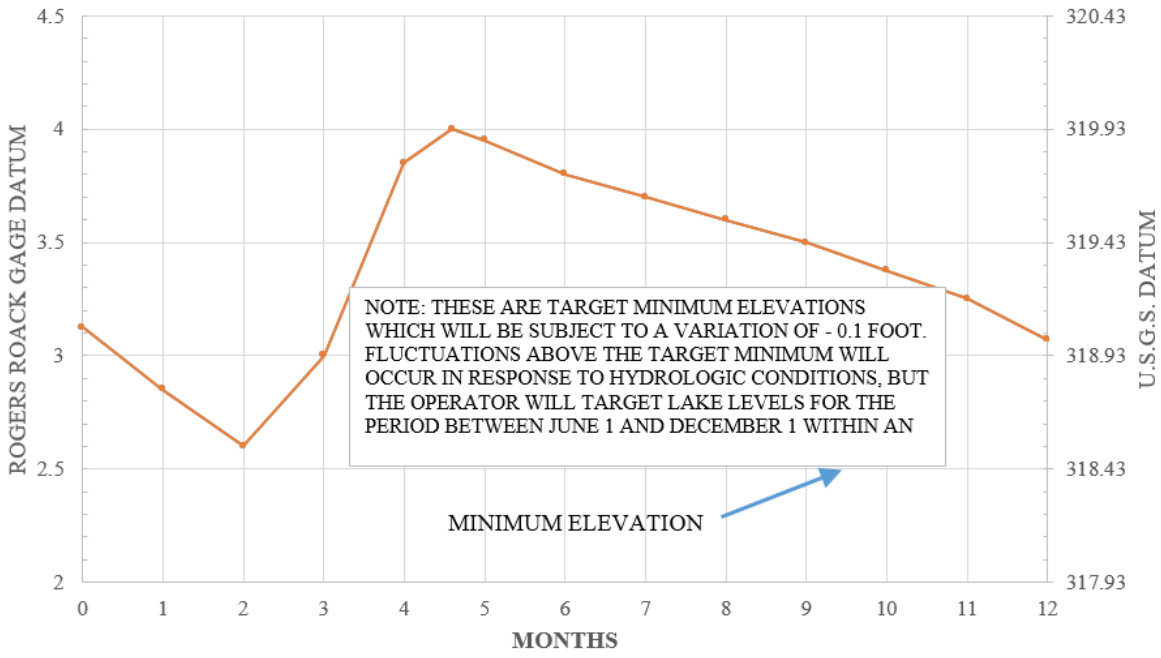
"J:\4757\015\Docs\References\Species List_ New York Ecological Services Field Office_Lower LaChute.pdf"

"J:\4757\015\Docs\References\IPaC_ resource list_03302021.pdf"

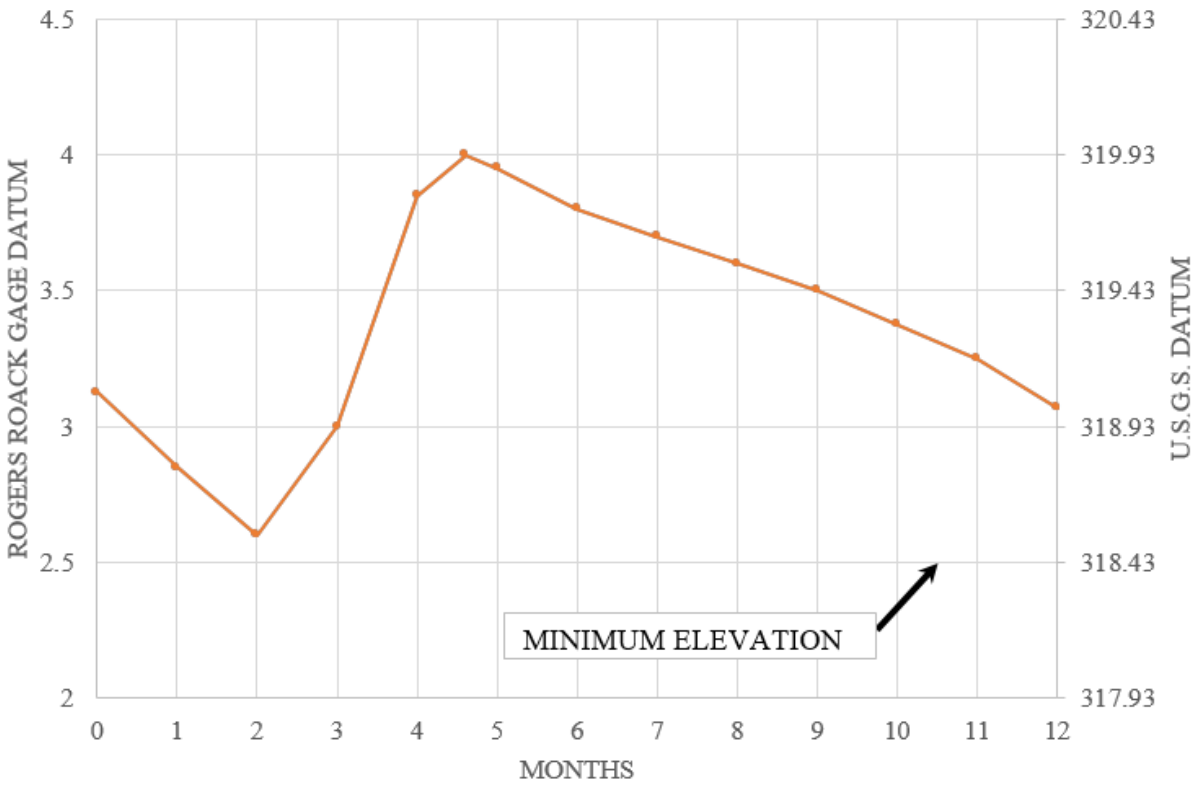
ATTACHMENT C

MINIMUM TARGET LAKE ELEVATIONS





LAKE GEORGE OPETATION
MINIMUM TARTET ELEVATIONS



LAKE GEORGE OPERATION

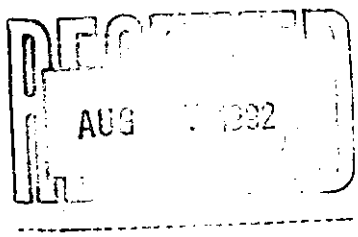
ATTACHMENT D

REFERENCE DOCUMENTS

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

August 3, 1992



Ms. Lois Cashell
Secretary
Federal Energy Regulatory Commission
Mail Code: DPCA HL 21.1
825 North Capital Street, N.E.
Washington, DC 20426

RE: FERC-5760 - UPPER LACHUTE HYDROELECTRIC PROJECT
EXEMPTED PROJECT - LAKE GEORGE DAM OPERATING GUIDELINES

Dear Secretary Cashell:

Enclosed is a copy of the revised Lake George Dam Operating Guidelines for the Upper LaChute Hydroelectric Project.

The operating guidelines are established pursuant to the Use and Occupancy Agreement (the Agreement) between Consolidated Hydro, Inc. (CHI) and the Department of Environmental Conservation (DEC) concerning the use and occupancy of land at the outlet of Lake George and the Lake George Outlet Dam and penstock control gate for purposes of generating hydropower and controlling the water levels of Lake George. Also participating in the discussions were representatives from the Adirondack Park Agency (APA), the Lake George Park Commission (LGPA), the Lake George Association (LGA) and representatives from local government. The guidelines represent our best efforts at establishing lake level operating guidelines that address the various issues of concern expressed by involved parties. The operating guidelines as previously established, addressed minimum lake level elevations while relying on the provisions of Section 38 of the Navigation Law to control maximum lake levels.

These amendments to the operating guidelines provide for certain discharge rates to the Lachute River from Lake George that are dependent upon defined lake levels as measured on the Rogers Rock Gauge (RRG). Four (4) operating ranges have now been established that vary from the minimum discharge rate of ±30 cubic feet per second (cfs) (the minimum base flow determined necessary to maintain aquatic life in the Lachute River) to a maximum discharge of ±1,380 cfs (maximum allowed to prevent

flooding in the Village of Ticonderoga). The following are discharge volumes associated with each discharge range:

1. Maximum discharge	+/- 1380 cfs
2. Intermediate gate opening	+/- 1000 cfs
3. Normal penstock	+/- 580 cfs
4. Minimum discharge	+/- 30 cfs

The attached chart depicts the discharge rates established for each day of the year versus lake elevations measured on the RRG.

Readings of the RRG will be taken before 10:00 a.m. each day and adjustments to the Lake George Dam waste gates and/or the penstock control gate will be made, if necessary, to adjust the discharge rate from Lake George to the Lachute River in accordance with the attached graph on or before 12:00 p.m. each day.

The Lake George Dam Operating Guidelines should be implemented by CHI as soon as possible. It is important to allow a record to be produced and then, if necessary, fine tune as may be required based on lake response data collected in the interim.

I may be reached at (518)457-2224 if you have any questions.

Sincerely,

Edward R. Miller
Associate Environment Analyst
Project Management Section

ERM:lk
cc: L. Cashell (FERC)
M. Robinson (FERC)
S. Edmondson (FERC)
A. Sidoti (FERC-NY)
[redacted]
W. Nelson (CHI)
M. White (LGPC)
M.A. Beebe (LGA)
T. Monore (Director -Reg.5)
L. Corin (USFWS)
File

LAKE GEORGE WATER REGULATION
ROGERS ROCK GAUGE

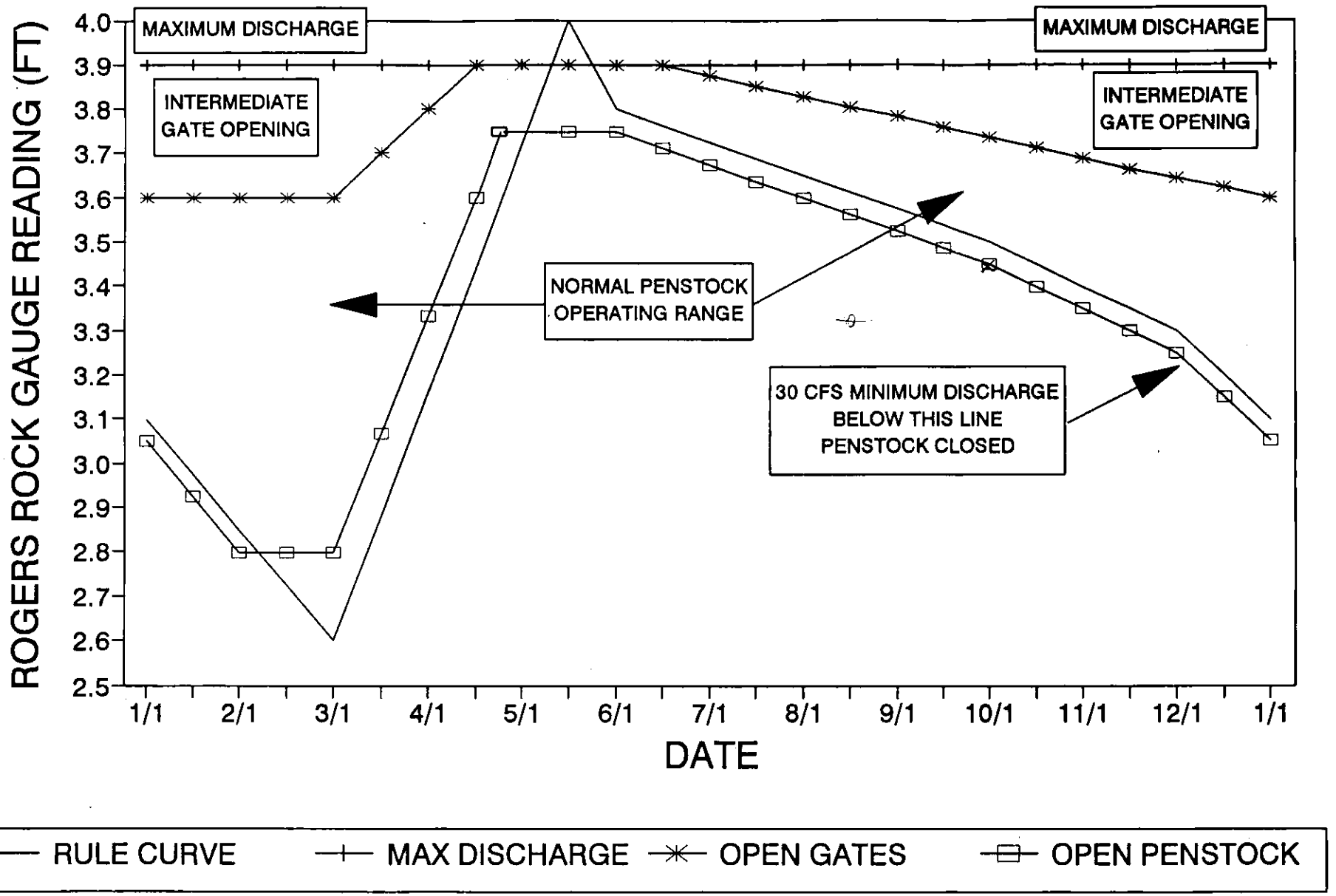


EXHIBIT A

GENERAL GUIDELINES FOR OPERATING OF LAKE GEORGE

LAW - §38 NAVIGATION LAW

The law regulating the water surface at Lake George, dated March 27, 1957, provides a maximum water surface elevation of 4.00 feet through the year, and a minimum water surface elevation of 2.5 feet from June 1 to December 1, with due allowance for natural fluctuations or emergencies. In addition, the law states that the water surface elevation between June 1 and September 30 is to be an average of 3.5 feet. The law further states that if the level of the lake rises above 4.0 that all gates shall be opened and that if the level of the lake drops below 2.5 from June 1 to December 1, no water shall be withdrawn from the Lake for the purpose of generating power. Water surface elevations are measured at Rogers Rock Gauge, owned and maintained on Heart Bay in Ticonderoga by the U.S. Geological Survey. The datum elevation of the gage is 315.93 feet above mean sea level. 4.0 feet on the gauge is at elevation 319.93 feet above mean sea level.

OPERATING REQUIREMENTS

1. In the event the lake rises above 4.0 feet, all gates shall be opened and, if operable, the hydroelectric facility having an intake structure at the outlet dam will be operated to full capacity, such discharges to be reduced in the event they cause safety problems or unusual flooding down stream.

2. In the event the Lake reaches or goes below a level of 2.5 feet, there shall be no water withdrawn from the Lake other than the minimum flows described in the next paragraph.

3. A minimum flow of 30 cfs shall be maintained in the LaChute River at all times for water quality purposes, irrespective of hydrological conditions.

4. The Operator of the flows into the LaChute River must notify the Village of Ticonderoga of impending increase in flow at least 4 hours prior to making changes in station discharges or gate openings at the outlet dam.

MINIMUM TARGET ELEVATIONS

The attached chart sets forth minimum target lake elevations which are explained and subject to refinement as set forth in these Guidelines. Fluctuations above the minimum target elevations will

occur in response to hydrological conditions.

OPERATING GUIDELINES

In addition to the foregoing legal and operating requirements, the outflow from Lake George shall be regulated in the following general manner:

1. On January 1 the lake level should not be below 3.1 fee when it can gradually be brought down to a low of 2.6 feet on March 1 to provide storage for spring runoff.

2. Snow surveys are to be made at seven specified snow courses in the watershed in January, February, March an April, if necessary. Based on this information, after January 1st, regulate discharges to provide storage for calculated spring runoff, and to the extent possible, t prevent the lake level from exceeding 4.0 feet.

3. By May 15th, the level of the Lake should be at a maximum of 4.0 feet to assure desired levels during the navigation season, June through November. Desired average lake level during the navigation season is 3.5± so by having the level high on May 15 there is some allowance for evaporation. To the extent possible, the lake level should not be allowed to fall below 3.8 feet on June 1, 3.5 feet by October 1, nor below 3.3 feet by December 1.

4. From July through September, the usual condition is for the lake level to drop steadily due to evaporation, eve with no withdrawals from the lake other than the 30 cfs minimum flow. Precipitation during October and Novembe normally recharges the lake, and to the extent possible lake level should average 3.4 during this period to facilitate the activity of removing boats from the lake

5. The normally cold months of December and January are critical for homeowners who draw their water from the lake. If conditions warrant a winter drawdown towards 2.6 feet, the lake level will be maintained above 3.0 until the lake is frozen during this period to provide adequate water depth over water intake lines to prevent their freezing. By January 20th, the lake is usually frozen and has an insulating layer of snow to protect these water intake lines.

6. In summary, problem areas to watch will be: (1) spring to allow proper storage for spring runoff; (2) late spring, early summer, and late fall when the ground is usually wet immediate and full discharge will be

required if heavy rains occur and lake levels are high; (3) early winter to avoid too high or too low a freeze-up elevation; (4) summer, to avoid lows during late summer and fall.

7. The above represents general guidelines and should be refined as experience dictates or conditions change. Unusual conditions (floods, droughts, etc.) will deviate from the above and will have to be handled according to the best judgement of the Operator.

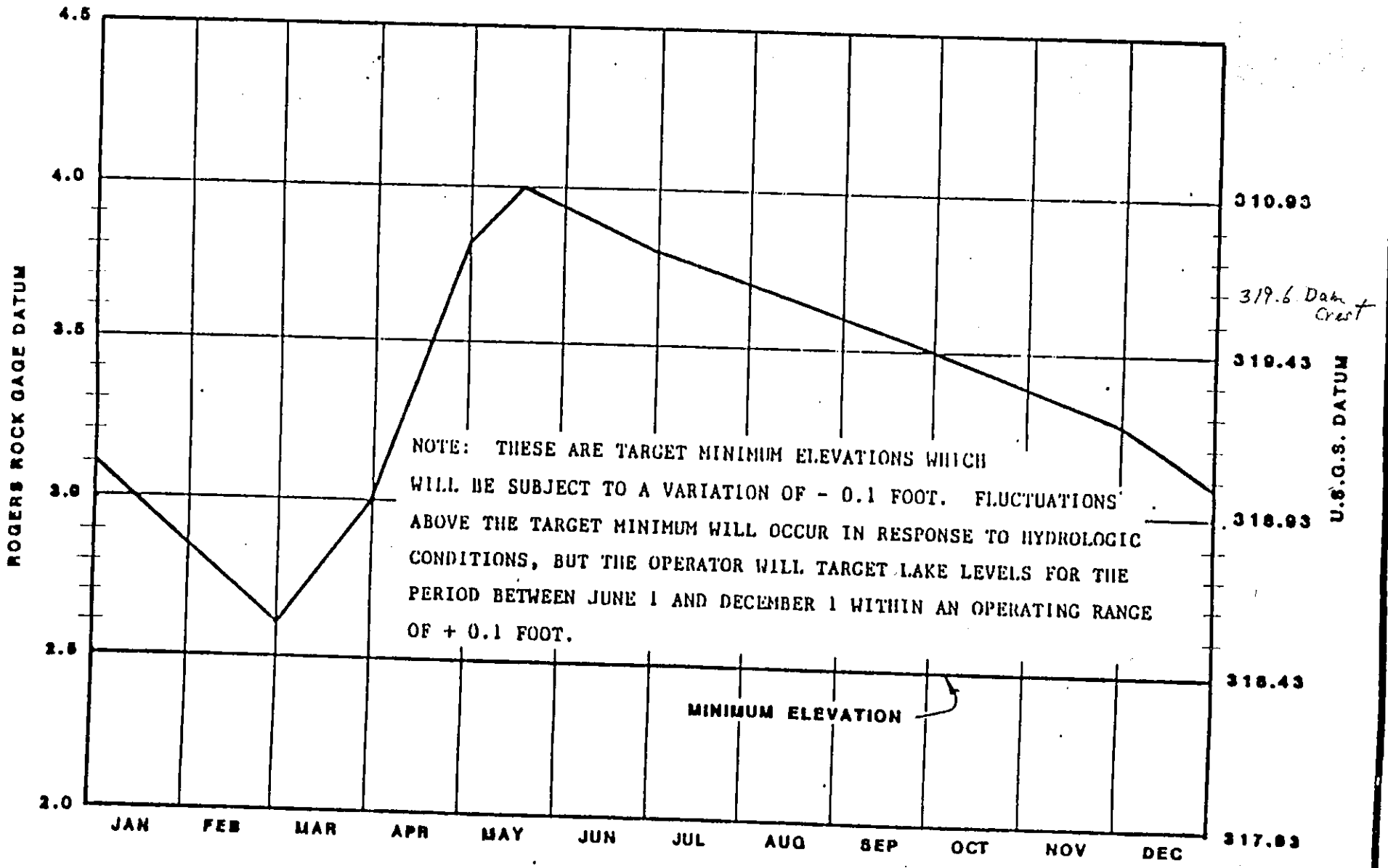
8. The mountainous character and soil of the Lake George Watershed results in a rapid runoff. The discharge capacity of the control structure is rather small in relation to the size of the lake. Therefore, the lake level responds rapidly on inflow but slowly on discharge. For example, an inch of runoff, which can occur in less than 24 hours, will raise the lake level about 6 inches. At a maximum practical outflow of about 1,200 cfs which would minimize flooding in the Village of Ticonderoga, it would take six days to lower the lake 6 inches assuming no additional inflow occurs.

9. Day-to-day discharges will depend primarily on (1) existing elevation of the lake; (2) meteorological conditions, (3) drainage area conditions such as saturated ground, frozen ground, high or low snow melt potential.

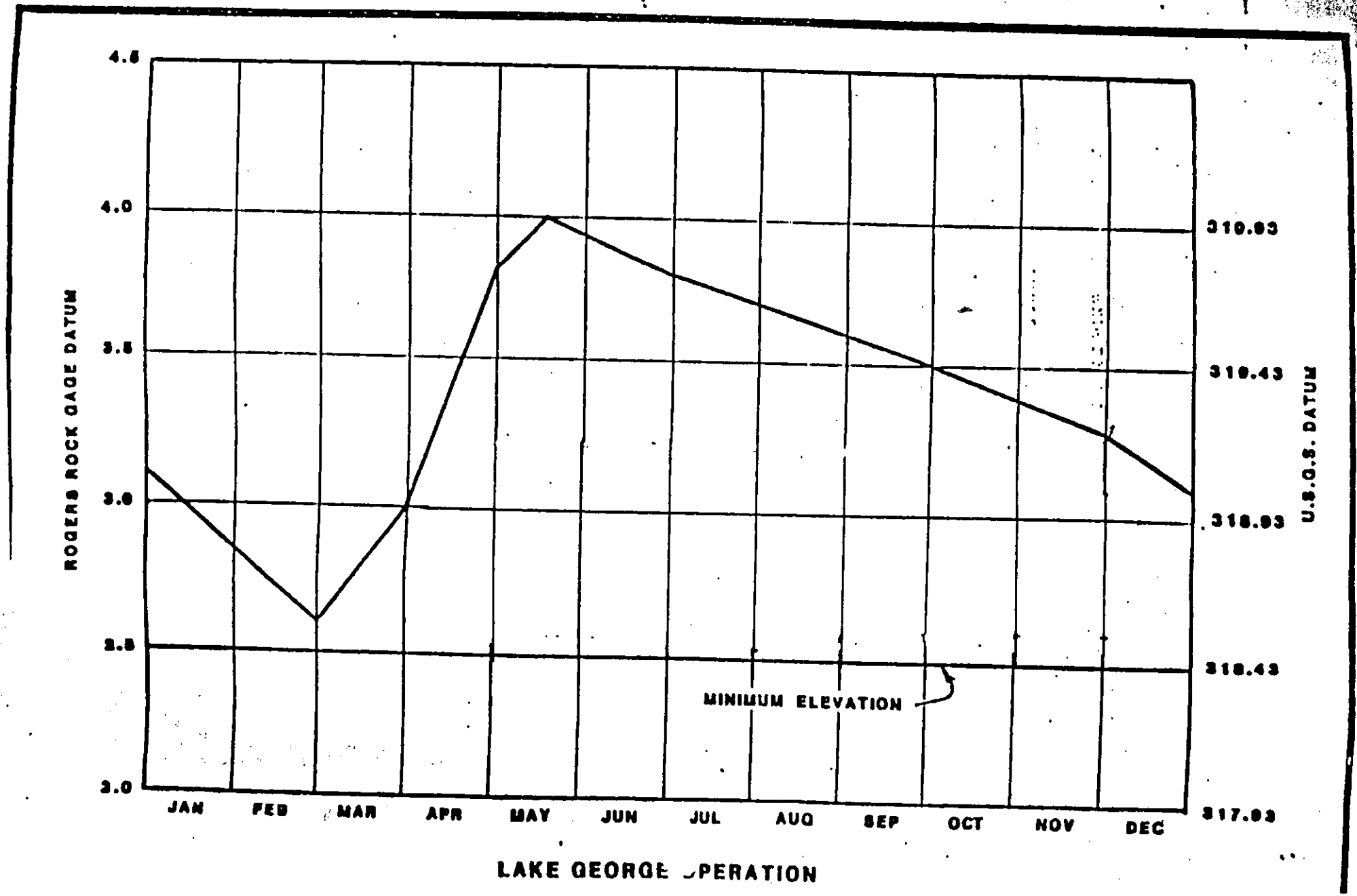
10. During periods when the lake level is high and maximum discharges are warranted, discharges should be controlled to minimize flooding above the banks of the LaChute River.

AMENDMENTS AND REVIEW

These guidelines will be reviewed annually by the Department of Environmental Conservation and the Operator of the flows into the LaChute River when the Operator is not the Department of Environmental Conservation.



LAKE GEORGE OPERATION
MINIMUM TARGET ELEVATIONS


4.5
4.0
3.5
3.0
2.5
2.0
ROGERS ROCK GAGE DATUM
JAN
FEB
MAR
APR
MAY
JUN
JUL
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SEP
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NOV
DEC
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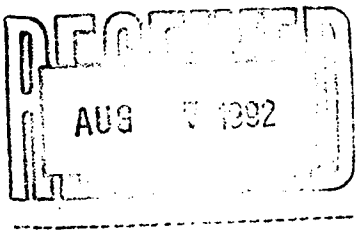
319.43
318.93
318.43
317.93
U.S.G.S. DATUM
MINIMUM ELEVATION
LAKE GEORGE OPERATION

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

August 3, 1992



Ms. Lois Cashell
Secretary
Federal Energy Regulatory Commission
Mail Code: DPCA HL 21.1
825 North Capital Street, N.E.
Washington, DC 20426

RE: FERC-5760 - UPPER LACHUTE HYDROELECTRIC PROJECT
EXEMPTED PROJECT - LAKE GEORGE DAM OPERATING GUIDELINES

Dear Secretary Cashell:

Enclosed is a copy of the revised Lake George Dam Operating Guidelines for the Upper LaChute Hydroelectric Project.

The operating guidelines are established pursuant to the Use and Occupancy Agreement (the Agreement) between Consolidated Hydro, Inc. (CHI) and the Department of Environmental Conservation (DEC) concerning the use and occupancy of land at the outlet of Lake George and the Lake George Outlet Dam and penstock control gate for purposes of generating hydropower and controlling the water levels of Lake George. Also participating in the discussions were representatives from the Adirondack Park Agency (APA), the Lake George Park Commission (LGPA), the Lake George Association (LGA) and representatives from local government. The guidelines represent our best efforts at establishing lake level operating guidelines that address the various issues of concern expressed by involved parties. The operating guidelines as previously established, addressed minimum lake level elevations while relying on the provisions of Section 38 of the Navigation Law to control maximum lake levels.

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The attached chart depicts the discharge rates established for each day of the year versus lake elevations measured on the RRG.

Readings of the RRG will be taken before 10:00 a.m. each day and adjustments to the Lake George Dam waste gates and/or the penstock control gate will be made, if necessary, to adjust the discharge rate from Lake George to the Lachute River in accordance with the attached graph on or before 12:00 p.m. each day.

The Lake George Dam Operating Guidelines should be implemented by CHI as soon as possible. It is important to allow a record to be produced and then, if necessary, fine tune as may be required based on lake response data collected in the interim.

I may be reached at (518)457-2224 if you have any questions.

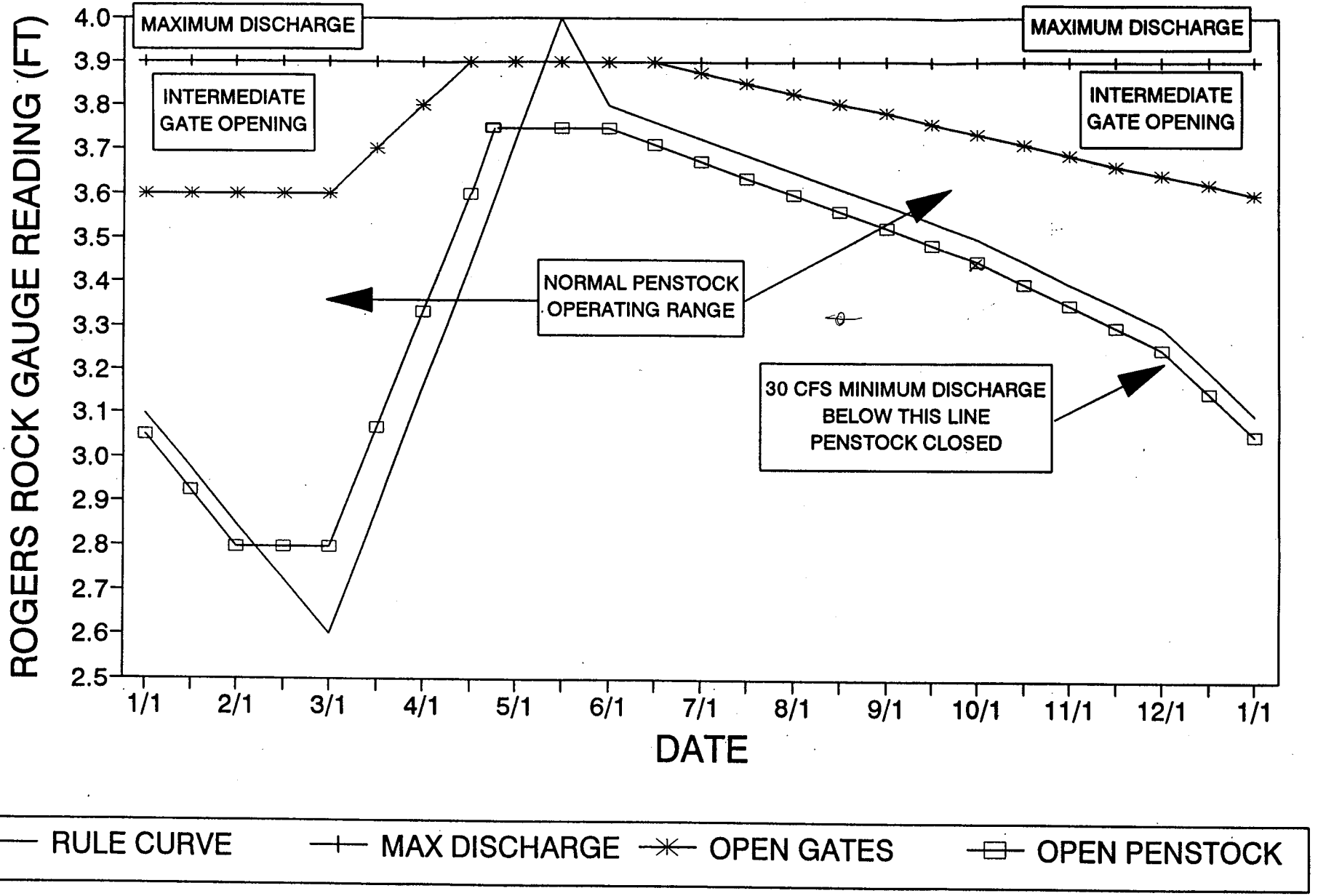
Sincerely,

Edward R Miller

Edward R. Miller
Associate Environment Analyst
Project Management Section

ERM:lk
cc: L. Cashell (FERC)
M. Robinson (FERC)
S. Edmondson (FERC)
A. Sidoti (FERC-NY)
M. Alessi (CHI)
W. Nelson (CHI)
M. White (LGPC)
M.A. Beebe (LGA)
T. Monore (Director -Reg.5)
L. Corin (USFWS)
File

LAKE GEORGE WATER REGULATION
ROGERS ROCK GAUGE



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THIS AGREEMENT, made as of the 15th day of September, 1986 between NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, (herein called "DEC") with its principal office at 50 Wolf Road, Albany, New York 12233 and INTERNATIONAL PAPER COMPANY, (herein called "IP") a New York corporation havings its principal office at 77 West 45th Street, New York, New York.

WITNESSETH:

WHEREAS, DEC and IP entered into an agreement dated as of December 8, 1981 for the use and occupancy of the property referenced herein (the "Agreement"), but the Agreement did not set forth details on the division of revenues between IP and DEC and other matters; and

WHEREAS, both DEC and IP wish to supplement and amend the Agreement by setting forth details on various matters; and

WHEREAS, the DEC has authority to enter into this agreement pursuant to Environmental Conservation Law §3-0305.11 and Navigation Law §38.

NOW, THEREFORE, DEC and IP agree to supplement and amend the Agreement by deleting paragraphs 1 through 10 of the Agreement in their entirety and substituting the following:

1. IP shall have the sole and exclusive right to generate electric power from the waters impounded by the so-called "A" dam at the outlet of Lake George, which dam and appurtenant property is more particularly described in a certain deed from International Paper Company to the People of the State of New York, dated April 5, 1974, and recorded April 18, 1974 in Liber 565 of Deeds at page 70 in the Essex County Clerk's Office, and to use the waters and water rights appurtenant thereto. IP is further authorized to construct and maintain the necessary intake structures, penstock and necessary appurtenant facilities on the properties described in such deed. Title to all such structures and facilities shall remain in IP and IP shall remove the same on the expiration of the term of this Agreement, or any extension thereof.

2. IP shall operate, maintain and repair the above referred to "A" dam at its own cost and expense for the term hereof and shall at all times keep the same in good repair.

3. The operation of the above referred to "A" dam and any diversion of water therefrom shall at all times be in accordance with §38 of the Navigation Law as it may from time to time be amended as well as the Guidelines for Operation of the Lake George Outlet Dam attached hereto as Exhibit A (herein called the "Guidelines"), as the same may be amended from time to time. The Guidelines may be amended by DEC using the

procedures provided in 6 NYCRR 621.13, as they may be amended or superseded, and, if repealed, only after reasonable public notice and opportunity for a hearing.

It is understood that IP will consult from time to time with the DEC with respect to all requirements contained in the Guidelines which require the judgement of IP, particularly with respect to lake levels during January and February, whether or not a failure to meet any such requirement could be considered to be a violation pursuant to paragraph eleven. IP's failure to consult with DEC or failure to follow advice rendered by DEC in the consultation process shall not itself be considered to be a violation pursuant to paragraph eleven.

IP shall also operate the so-called "A" dam consistent with any conditions contained in the exemptions granted to IP by the Federal Energy Regulatory Commission for Projects #5760 and #5762, with any terms and conditions set forth in the final environmental impact statement and the terms and conditions attached to DEC permits #52-86-0015 and 52-86-0016.

4. IP will pay any taxes or other assessment that may be imposed by any local authority on the property described in paragraph one of this Agreement.

5. IP agrees to indemnify the State of New York and/or DEC for any damages arising out of IP's negligent or willful misconduct related to the use and occupancy of the property described in

paragraph one of this Agreement. In any action for damages arising out of the use and occupancy of the property described in paragraph one of this Agreement in which the negligence or willful misconduct of the State of New York and/or DEC is at issue, IP agrees to cooperate with the DEC in the defense of such action.

6. IP shall maintain the following insurance coverage with respect to the property described in paragraph one of this Agreement for the term of the Agreement in a form and with an insurer acceptable to DEC.

Liability - $2,000,000 per accident for injury to third parties or for damage to property of others

Property - for the actual cash value of the "A" dam.

IP shall submit certificates evidencing such insurance to DEC at or prior to the effective date thereof, and upon request shall make its policies available to DEC. Such certificates and policies shall provide for ten (10) days notice to DEC prior to cancellation to modification.

The amounts of such liability insurance shall be reviewed by the parties every five (5) years during the term hereof and may, at the election of DEC, be adjusted to reflect the percentage change as measured by changes from June 1986 to the June immediately preceding the appropriate five-year review hereunder, in the Consumer Price Index for all items for Major Expenditure Classes as determined by the United States Department of Labor, Bureau of Labor Statistics, the year 1967

equaling 100. If there shall be no such Consumer Price Index, then the parties shall use as a successor the most comparable successor index thereto.

7. This Agreement may not be assigned or in any way alienated, mortgaged, pledged or otherwise dealt with by IP without the express written consent of DEC and upon the giving of such consent, the assignee shall be substituted for IP for all purposes hereof. The DEC shall not unreasonably withhold such consent.

8. The DEC or its representatives shall have the right to inspect the property described in paragraph one of this Agreement at reasonable times.

9. In consideration for the use and occupancy of the property described in paragraph one, IP shall pay to DEC two and one-half percent (2 1/2%) of the gross annual revenues attributable to the projects identified as FERC Projects $5760 and $5762. Payments will be made annually on or before the 60th day following the end of each calendar year. Together with such payment, IP shall provide DEC with a statement showing its gross revenues from the sale of power for the calendar year's operation, such statement to be certified by an authorized accounting official of IP. DEC may, at its own expense during normal business hours, audit the records of IP solely to verify such payments.

10. The term of this Agreement shall commence as of the date hereof and shall run to and until July 31, 2035.

11. The obligations of IP under this Agreement are essential to the maintenance of proper lake levels for Lake George and for the fulfillment of the responsibilities of DEC under Navigation Law §38. If these obligations are not properly discharged, adverse consequences may arise to riparian owners, including damage to docks and blocking of potable water intake structures as well as adverse consequences to those using Lake George for recreational purposes and to the portion of the State's economy that derives benefit from the recreational use of Lake George. Further, it is understood that the damages that may be caused by multiple instances of improper lake level management may result cumulatively in adverse impacts beyond those that might be attributable to the individual instances of improper lake level management. Accordingly the parties agree that upon the happening of any of the violations set forth in this paragraph, DEC shall, upon demand, be entitled to compensatory liquidated damages in the following amounts:

Violation	Compensatory damage
first	$ 2,000
second	4,000
third	8,000
fourth	15,000
fifth and successive	20,000

For purposes of determining the appropriate amount of compensatory damages, only violations occurring within 365 days of the date of the demand will be considered. Further, the amounts of compensatory damages shall be doubled for all violations which occur after January 1, 2010.

DEC's right to collect liquidated compensatory damages as provided for in this paragraph may only be employed in lieu of the remedies set forth in paragraphs twelve and eighteen of this Agreement. For purposes of this paragraph, each violation shall be one "occurrence" or "event" no matter how many days such violation continues to occur.

For purposes of this Agreement, violations related to the maintenance of the lake levels for Lake George are defined as follows:

a. Any failure to open all discharge gates for the outlet dam and operate, if operable, the hydroelectric facility having an intake structure at the outlet dam at full capacity as soon as the level of Lake George reaches 4.0 feet as measured at the Rogers Rock gauge (such discharges, however, may be reduced in the event they cause safety problems or unusual flooding downstream);

b. Except for the period May 1 through June 30 inclusive of each year, any discharge by IP through its hydroelectric

facility when the lake levels are at or below those target levels established in the chart attached to and incorporated into the Guidelines, except that IP may discharge water through its hydroelectric facility for up to twenty four (24) hours after a target level is reached. If IP discharges water through its hydroelectric facility after a target level is reached, all discharges must cease, except those that may result from incidental leakage in the gates to those intake structure, within twenty-four hours and such discharges shall not restart until the target level has been restored; or

c. For the period May 1 through June 30 inclusive of each year, any discharge of water by IP through its hydroelectric facility when the level of Lake George is 3.7 feet or below as measured at the Rogers Rock gauge, except those discharges that may result from incidental leakage in the gates to the intake structure.

For purposes of this Agreement, there shall be no violation if IP can demonstrate that any of the occurrences described in this paragraph are due to transient lake level changes due to wind or atmospheric pressure variations which result in measurements below or above specified levels.

12. This Agreement may be terminated by DEC upon the happening of any one of the following events:

a. IP commits any violation as defined in sub-paragraphs 11 a, b or c to this Agreement and such violation continues unremedied for five (5) days after written notice of such violation has been received by IP from DEC;

b. IP commits ten or more violations as defined in sub-paragraphs 11 a, b and c to this Agreement within any 365 day period;

c. IP fails to maintain insurance in the amount set forth in paragraph 6 to this Agreement; or

d. IP defaults in the performance of any other term, covenant or agreement of this Agreement not mentioned heretofore in this paragraph and such default continues unremedied for thirty (30) days after written notice of such default has been received by IP from DEC, or, if it is unreasonable to correct such default within such period, IP has failed to proceed with reasonable diligence to correct such default within such thirty (30) day period.

13. IP reserves the right to terminate this Agreement within one year from the date hereof by giving written notice of its election to DEC in the event it elects not to develop the available water power in the LaChute as such developments are described in the exemptions and DEC permits referred to in paragraph 3.

14. The terms of Exhibit B attached hereto, except for paragraphs VIII and IX, are hereby incorporated into this Agreement to the extent applicable.

15. IP shall be excused from any inability to perform due to events beyond its control unless IP could have reasonably anticipated such events and could have reasonably taken measures to have avoided or mitigated such events. Examples of events that would serve to excuse IP from performance include but are not limited to fire, floods, hurricanes, drought, storms, freezing temperatures, lightening, earthquakes, acts of God, strikes, explosions, war, civil disturbances, shortages of equipment, material, supplies, labor or machinery, or acts or failures to act of third parties beyond IP's control. In the event that IP is excused from performance due to any such event, the time for compliance with the provisions of this Agreement shall be extended for a period reasonably necessary to enable IP to comply with the provisions hereof; however, IP, to the extent that it is reasonably able to do so, shall remedy with all reasonable dispatch the cause or causes preventing it from carrying out its duties or obligations.

16. This Agreement merges all prior negotiations and agreements of the parties and expresses the full agreement of the parties. There are no terms, conditions, covenants, promises or representations of either party to the other except those herein recited. This Agreement may not be modified orally.

17. All notices, requests, demands and other communications herein shall be in writing and shall be deemed to be duly given if delivered personally or mailed by prepaid certified or registered mail addressed as follows:

If to IP - International Paper Company
International Paper Plaza
77 West 45th Street
New York, NY 10036
ATTN: Secretary

If to DEC - Director, Division of Regulatory Affairs
NYS Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-0001,

or such other address(es) as from time to time shall be furnished in writing by either party to the other party.

18. No failure to exercise and no delay in exercising any right, remedy, power or privilege under this Agreement shall operate as a waiver thereof; nor shall any single or partial exercise

of any right, remedy, power or privilege under this Agreement preclude any other or further exercise thereof or the exercise of any right, remedy, power, or privilege. The rights, remedies, powers, and privileges provided in this Agreement are cumulative and not exclusive of any rights, remedies, powers and privileges provided by law or of equity.

19. This Agreement shall bind, and inure to the benefit of, the parties hereto, their successors and assigns.

IN WITNESS WHEREOF the parties hereto have caused this document to be executed by their duly authorized officers and their respective seals to be affixed hereto as of the day and year first above written.

APPROVED AS TO FORM
NEW YORK STATE
ATTORNEY GENERAL
NOV 25 1986
ASSISTANT ATTORNEY GENERAL

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

HENRY G. WILLIAMS, COMMISSIONER

Richard Torkelson
Deputy Commissioner

INTERNATIONAL PAPER COMPANY

By: _____
Vice President

APPROVED DEC 4 1986
William E. Hinchman

FOR THE STATE COMPTROLLER
Date:

3297C

LiLac(1 401.5

THIS AGREEMENT, made as of the 8th day of December, 1981 between the NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (hereinafter DEC) with its principal office at 50 Wolf Road, Albany New York and INTERNATIONAL PAPER COMPANY, (hereinafter IPCO) a corporation organized and existing under the laws of the State of New York and having its principal office at 77 West 45th Street, New York, New York.

WITNESSETH:

WHEREAS, DEC and IPCO each have rights in and to the LaChute River, located in the Village of Ticonderoga, Town of Ticonderoga, County of Essex and State of New York; and

WHEREAS, both DEC and IPCO desire to provide for the orderly development of the water power available in the LaChute River; and

WHEREAS, both DEC and IPCO desire to insure that any hydro-power generation plan for the LaChute recognizes the unique and irreplaceable nature of Lake George and the need to maintain that resource; and

NOW THEREFORE, DEC and IPCO agree that, in the event IPCO obtains an exemption from licensing from the Federal Energy Regulatory Commission, IPCO shall have the sole and exclusive right to generate electric power at or near the so-called "A" dam at the outlet of Lake George, which dam and appurtenant property is more particularly described in a certain deed from International Paper Company to the People of the State of New York, dated April 5, 1974, and recorded April 18, 1974 in Liber 565 of Deeds at page 70 in the Essex County Clerk's Office and to use the waters and water rights appurtenant thereto on the following terms and conditions:

1. The initial term of this agreement is thirty (30) years. Renewal terms are twenty (20) years each, or such other term as the parties may determine. The division of proceeds outlined in paragraph 4 hereof shall be re-negotiated on each renewal with the same arbitration procedure as therein specified to be employed in the event that the parties are unable to agree on the division of proceeds.

2. IPCO shall operate, maintain and repair the above referred to dam at its own cost and expense for the term hereof and shall at all time keep the same in good repair.

3. The operation of the so-called "A" dam and any diversion of water therefrom shall at all times be in accord with §38 of the Navigation Law and all rules and regulations of the Department made pursuant thereto. IPCO shall, at all times, maintain the water level of Lake George in accord with the Navigation Law and all DEC rules, regulations and policies which implement the same.

4. Any power generated from the so-called "A" dam, or using the waters and water rights appurtenant to DEC's ownership of the same, shall be marketed by IPCO. The proceeds from the sale of any such power shall be divided between the parties as they shall agree. Should the parties fail to agree, the matter will be referred to an arbitration panel of three arbiters, one to be appointed by each of the parties and the third, who shall be the chairman, to be agreed to by the other two arbiters or, lacking agreement, to be provided by the American Arbitration Association. Each party will bear the expenses of its own arbiter and one-half the fees and expenses of the chairman.

5. In connection with its use of the so-called "A" dam for power generation, IPCO is authorized to construct and maintain the necessary intake structure, penstock and necessary appurtenant facilities. Title to all such structures and facilities shall remain in IPCO and IPCO agrees to remove the same on the expiration of this agreement, or any extension thereof.

6. This agreement is made pursuant to the authority of DEC under §38 of the Navigation Law to provide for the orderly regulation of the water levels of Lake George.

7. This agreement merges all prior negotiations of the parties and expresses the full agreement of the parties. There are no terms, conditions, convenants, promises or representations of either party to the other except those herein recited. This agreement may not be modified orally.

8. This agreement may not be assigned by IPCO without the prior express written consent of DEC.

9. This agreement shall bind, and enure to the benefit of, the parties and any successors.

10. DEC reserves its right to file a competing application for a license pursuant to Federal Energy Regulatory Commission rules and procedures.

IN WITNESS WHEREOF : the parties hereto have caused this document to be executed by their duly authorized officers and their respective seals to be affixed hereto as of the day and year first above written.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROBERT F. FLACKE, COMMISSIONER

By _____
First Deputy Commissioner

INTERNATIONAL PAPER COMPANY

BY _____
Vice President

STATE OF NEW YORK)
) ss.:
COUNTY OF ALBANY)

On this [illegible] day of December, 1981, before me personally came M. Peter Lanahan who, being by me duly sworn, says that he resides at 10 Guadalupe Pass, Clifton Park, New York, that he is Acting for the Commissioner of Environmental Conservation of the State of New York, described in and which executed the foregoing instrument.

_____
NOTARY PUBLIC STATE OF NEW YORK

[illegible]

STATE OF NEW YORK

COUNTY OF NEW YORK

On this 8th day of December, 1981, before me personally appeared John T. Dillon to me known, who, being by me duly sworn, did depose and say that he resides at 416 East 84th Street, New York, New York 10028, that he is a Vice President of International Paper Company, the corporation mentioned in, and which executed, the foregoing instrument, that he knows the seal of said corporation, that the seal affixed to said instrument is such corporate seal, that it was so affixed by authority of the Board of Directors of said Corporation and that he signed his name thereto by like authorization.

Carolyn Howard

NOTARY PUBLIC

CAROLYN HOWARD
Notary Public, State of New York
No. 41-4637284
Qualified in Queens County
Commission Expires March 30, 1982

STATE OF NEW YORK)
)ss.:
COUNTY OF ALBANY)

On this 23rd day of April, 1987,
before me personally came to me known Richard Torkelson
, who, being by me duly sworn, says that he resides
at 1339 Rowe Road, Schenectady, New York 12309
, that he is a Deputy Commissioner of
Environmental Conservation of New York State and that he executed
the foregoing instrument on December 11, 1986 pursuant to authority of law duly delegated
to him.

Sandra F. Ring
NOTARY PUBLIC
STATE OF NEW YORK

SANDRA F. RING
Notary Public, State of New York
Qualified in Albany County
Reg. No. 4784496
Commission Expires 01/31/90

STATE OF NEW YORK)
)ss.:
COUNTY OF NEW YORK)

On this 29th day of October, 1986,
before me personally appeared John T. Dillon, to
me know, who, being by me duly sworn, did depose and say that he
resides at 416 East 54th Street New York, New York
, that he is a Vice President of
International Paper Company, the corporation mentioned in, and which
executed, the foregoing instrument, that he knows the seal of said
corporation, that the seal affixed to said instrument is such
corporate seal, that it was so affixed by authority of the Board of
Directors of said Corporation and that he signed his name thereto by
like authorization.

Brent Bullock
NOTARY PUBLIC
STATE OF NEW YORK

BRENT BULLOCK
Notary Public, State of New York
No. 31-4740388
Qualified in New York County
Commission Expires June 30, 1989

297C

ASSIGNMENT AND ASSUMPTION

OF USE AND OCCUPANCY AGREEMENT

AGREEMENT OF ASSIGNMENT AND ASSUMPTION dated as of APRIL 24, 1987 by and between International Paper Company, a New York corporation (herein called "Assignor") and LaChute Hydro Company, Inc., a Delaware corporation (herrein called "Assignee").

WITNESSETH:

WHEREAS, Assignor has entered into an agreement with the New York State Department of Environmental Conservation ("DEC") dated as of December 8, 1981 (the "1981 Agreement") and amendments thereto dated as of September 15, 1986 (the "1986 Agreement") concerning the use and occupancy by Assignor of land at the outlet of Lake George into the LaChute River and the appurtenant dam for purposes of generating electric energy as part of the Upper LaChute Project (the "Project") and as more particularly described in the 1981 Agreement and the 1986 Agreement (taken together, the "Amended Agreement"), a true copy of which is attached as Exhibit A hereto; and

WHEREAS, Assignor proposes to convey to Assignee all of its rights and interests in and to the Project; and

WHEREAS, Assignor hereby proposes to assign to Assignee all of its obligations and rights under the Amended Agreement, and Assignee is agreeable to accepting such rights and assuming the obligations of Assignor under the Amended Agreement.

NOW, THEREFORE, in consideration of the premises, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Effective as of the time Assignor conveys and Assignee accepts title to those assets (from among the assets described in Exhibit B attached hereto), which are necessary for the development and operation of the Project consistent with FERC exemption 5760 (as revised by FERC order dated November 15, 1984, 29 F.E.R.C. ¶61,174 as amended by FERC order dated March 17, 1986), and not until then, Assignor hereby assigns and conveys to Assignee all of its rights in and to and all of its obligations under the Amended Agreement; on and after the effective date hereof, Assignee shall be substituted for "IP" for all purposes of the Amended Agreement.

2. Assignee hereby accepts the assignment and conveyance described in Section 1 and hereby agrees to be bound by all of the terms and conditions of the Amended Agreement.

3. Notwithstanding the foregoing, this Assignment and Assumption shall not become effective unless and until the DEC has given its prior written consent hereto, as contemplated by paragraph 7 of the Amended Agreement.

4. Assignee warrants that it has read and fully understands the terms of the Agreement. This warranty is given in order to induce the DEC to give its consent to this Assignment and Assumption and, accordingly, the DEC may rely on this warranty.

5. This Assignment and Assumption shall be governed by the laws of the State of New York and shall be binding upon the parties and their respective successors and assigns.

IN WITNESS WHEREOF. the parties have executed this Assignment and Assumption as of the date hereof.

INTERNATIONAL PAPER COMPANY

By: _____

Its Senior Vice President

LaCHUTE HYDRO COMPANY, INC.

By: _____

Olof S. Nelson, President

GUARANTY

Consolidated Hydro Inc., a Delaware corporation, ("CHI") hereby guarantees the performance by Assignee of all obligations when due under the foregoing Assignment and Assumption of Use and Occupancy Agreement and under the referenced Use and Occupancy Agreement, and warrants that CHI is the holder of all shares of capital stock issued by Assignee.

CONSOLIDATED HYDRO, INC.

By: _____

Olaf S. Nelson, President

STATE OF NEW YORK
COUNTY OF NEW YORK

On the 16th of April, 1987, before me personally came John T. Dillon, to me known, who being by me duly sworn, did depose and say that he resides at 416 East 84th Street, New York, New York; that he is a Senior Vice President of International Paper Company, the corporation described in and which executed the above instrument; that he knows the corporate seal of said corporation; that the seal affixed to the said instruments is such corporate seal; that was so affixed by authority of the Board of Directors of said corporation; and that he signed his name thereto by like authority.

Brent Bullock

BRENT BULLOCK
Notary Public, State of New York
No. 31-4746353
Qualified in New York County
Commission Expires June 30, 1989

STATE OF NEW YORK
COUNTY OF NEW YORK, SS

On this _____ day of _____, 1987 before me personally appeared John T. Dillon, to me known, who, being by me duly sworn, did depose and say that he resides at 416 East 84th Street, New York, New York, that he is a Senior Vice President of International Paper Company, a corporation mentioned in, and which executed, the foregoing instrument, that he knows the seal of said corporation that the seal affixed to said instrument is such corporate seal, that it was so affixed by authority of the Board of Directors of said Corporations and that he signed his name thereto by like authorization.

NOTARY PUBLIC
STATE OF NEW YORK

STATE OF CONNECTICUT
COUNTY OF FAIRFIELD, SS

On this 24th day of April, 1987 before me personally appeared Olof S. Nelson, to me known, who, being by me duly sworn, did depose and say that he resides at 44 Patterson Avenue, Greenwich, Connecticut 06830, that he is the President of each of La Chute Hydro Company, Inc. and Consolidated Hydro, Inc. corporations mentioned in, and which executed, the foregoing instrument, that he knows the seals of said corporations that the seals affixed to said instrument are such corporations' seals, that they were so affixed by authority of the Board of Directors of each of said Corporations and that he signed his name thereto by like authorization.

NOTARY PUBLIC
STATE OF CONNECTICUT

my commission expires
March 31, 1992

CONSENT
TO ASSIGNMENT AND ASSUMPTION
OF USE AND OCCUPANCY AGREEMENT

The New York State Department of Environmental Conservation (herein called "DEC") hereby acknowledges notice of and consents to the execution and delivery and the provisions of the foregoing Assignment and Assumption of Use and Occupancy Agreement dated as of April 23, 1987 (herein called "Assignment") between International Paper Company ("Assignor") and LaChute Hydro Company, Inc. ("Assignee") and to the transactions expressly contemplated thereby and hereby agrees to substitute Assignee for all purposes of the Agreement described in the Assignment instead of "IP", when the Assignment becomes effective.

DEC represents, warrants and agrees that:

(1) Such Agreement is in full force and effect and has not been otherwise amended in any respect, and there are no defaults by either party thereunder.

(2) This Consent has been duly authorized and this Consent will not impair the validity or binding effect with respect to the DEC of such Agreement in any respect.

Dated: April 23, 1987

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
Richard Torkelson

By: _____
Its DEPUTY COMMISSIONER

87-043-005

STATE OF NEW YORK
COUNTY OF ALBANY, SS

On this 23rd day of April, 1987, before me personally came to me Richard Torkelson, to me known who, being by me duly sworn, says that he resides at 1339 Rowe Road, Schenectady, NY 12309, that he is a Deputy Commissioner of Environmental Conservation of New York State and that he executed the foregoing instrument pursuant to authority of law duly delegated to him.

Sandra F. Ring
NOTARY PUBLIC
STATE OF NEW YORK

SANDRA F. RING
Notary Public, State of New York
Qualified in Albany County
Reg. No. 4784486
Commission Expires 01/31/90

95-20-6 (9/85) NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER
52-86-0016

FACILITY/PROGRAM NUMBER(s)
239c - 805

PERMIT
Under the Environmental Conservation Law

EFFECTIVE DATE
AUG 11 1986

EXPIRATION DATE(s)
December 1, 1987

- [X] Article 15, Title 5: Protection of Water
- [ ] Article 15, Title 15: Water Supply
- [ ] Article 15, Title 15: Water Transport
- [ ] Article 15, Title 15: Long Island Wells
- [ ] Article 15, Title 27: Wild, Scenic and Recreational Rivers
- [ ] 6NYCRR 608 Water Quality Certification
- [ ] Article 17, Titles 7, 8: SPDES
- [ ] Article 19: Air Pollution Control
- [ ] Article 23, Title 27: Mined Land Reclamation
- [ ] Article 24: Freshwater Wetlands
- [ ] Article 25: Tidal Wetlands
- [ ] Article 27, Title 7: Solid Waste Management
- [ ] Article 27, Title 9: Hazardous Waste Management
- [ ] Article 34: Coastal Erosion Management
- [ ] Article 36 Floodplain Management
- [ ] Articles 1, 3, 37; 6NYCRR 380: Radiation Control

N—New, R—Renewal, M—Modification
C—Construction, O—Operation, (If Applicable)

PERMIT ISSUED TO
International Paper Company

ADDRESS OF PERMITTEE
77 West 45th Street, New York, NY 10036

AGENT FOR PERMITTEE/CONTACT PERSON
Robert Mck. Hunziker, Counsel, White Papers Group

TELEPHONE NUMBER
212-536-5851

NAME AND ADDRESS OF FACILITY (If different from Permittee

LOCATION OF PROJECT	COUNTY	TOWN/CITY/VILLAGE	UTM COORDINATES
LaChute River	Essex	Ticonderoga	

DESCRIPTION OF PROJECT/FACILITY
Construction of the Lower LaChute project powerhouse and powerhouse cofferdam and construction of the Lower LaChute project penstock and penstock cofferdam exclusive of the "D" mill intake structure as referenced in accordance with the project plan attached to and made a part of this permit.

GENERAL CONDITIONS

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations and the conditions specified herein or attached hereto.

1 The permittee shall file in the office of the appropriate regional permit administrator, or other office designated in the special conditions, a notice of intention to commence work at least 48 hours in advance of the time of commencement and shall also notify him/her promptly in writing of the completion of the work.

2 The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation which may order the work suspended if the public interest so requires.

3 The permittee has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.

4 The Department reserves the right to modify, suspend or revoke this permit at any time after due notice, and, if requested, hold a hearing when
a) the scope of the project is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations are found, or
b) the permit was obtained by misrepresentation or failure to disclose relevent facts; or
c) newly discovered information or significant physical changes are discovered since the permit was issued.

5 The permittee is responsible for keeping the permit active by submitting a renewal application, including any forms, fees or supplemental information which may be required by the Department, no later than 30 days (180 days for SPDES or Solid or Hazarduous Waste Management permits) prior to the expiration date.

6 This permit shall not be construed as conveying to the applicant any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any rights, title or interest in real or personal property held or vested in a person not a party to the permit.
The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of way which may be required for this project.

8 Issuance of this permit by the Department does not, unless expressly provided for, modify, supersede or rescind an order on consent or determination by the Commissioner issued heretofore by the Department or any of the terms, conditions, or requirements contained in such order or determination.

9 Any modification of this permit granted by the Department must be in writing and attached hereto.

PERMIT ISSUANCE DATE	PERMIT ADMINISTRATOR	ADDRESS
AUG 11 1986	Charles E. Gardephe	Rt. 86, Ray Brook, NY 12977

AUTHORIZED SIGNATURE
X Charles E. Gardephe
ALTERNATE REGIONAL PERMIT ADMINISTRATOR

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

11. That the State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage

12 That if the display of lights and signals on any work hereby authorized is not otherwise provided for by law, such lights and signals as may be prescribed by the United States Coast Guard shall be installed and maintained.

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

14 Any material dredged in the prosecution of the work herein permitted shall be removed evenly, without leaving large refuse piles, ridges across the bed of a waterway or floodplain or deep holes that may have a tendency to cause damage to navigable channels or to the banks of a waterway.

15 If any material is to be deposited or dumped under this permit, either in the waterway or on shore above high-water mark, it shall be deposited or dumped at the locality shown on the drawing hereto attached, and, if so prescribed thereon, within or behind a good and substantial bulkhead or bulkheads, such as will prevent escape of the material into the waterway.

16. There shall be no unreasonable interference with navigation by the work herein authorized

17. If granted under Articles 24 or 25, and if upon the expiration or revocation of this permit, modification of the wetland hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration

18 If granted under Article 36, this permit does not signify in any way that the project will be free from flooding

19 All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or his agent as part of the permit application

Such approved plans were prepared by the permittee

_____ on Oct. 31, 198

SPECIAL CONDITIONS

20. The Ray Brook (518-891-1370) Fire Control Office shall be notified instead of the Regional Permit Administrator at least 48 hours prior to commencement of activities authorized by this permit. Notification must be made on weekdays (excluding holidays) between the hours of 8:30 a.m. and 4:30 p.m.

21. Final approval on the dam renovations and intake construction will be delayed until the project sponsor has submitted final engineering plans for department review and approval. No construction activity in these areas can proceed until this approval is received.

22. During periods of work activity, sufficient flow of water shall be maintained at all times to sustain aquatic life downstream.

23. Any ditches installed to concentrate storm water runoff shall be protected with haybale berms to trap sediment.

24. Lake Levels/Minimum River Flows

The final operating guidelines (dated 6/26/86) as revised in consultation with department staff will be the operating procedure for the "A" Mill Dam.

25. Fisheries Management

a) An angled trash-rack with (1") one-inch clear spacing will be installed on both the Upper and Lower project intake structures. Final design will require approval from the Bureau of Fish Management.

b) Downstream fish passage will be provided at the "A" Mill (outlet) Dam by means of a sliding gate structure to be incorporated in gate number three (3). This sliding gate will be operated from April 1 to December 1. Minimum flows will be controlled by the main gates from December 1 to March 31. A screening device will be incorporated in the sliding gate structure to restrict downstream passage of salmon when required. Final design will require approval from the Bureau of Fish Management.

c) A fish trapping and counting device will be installed at the outlet dam. Final design shall be in consultation with and will require approval from the Bureau of Fish Management. Maintenance and operation of this device will be the responsibility of the developer.

d) An assessment will be made of downstream fish passage requirements at the "D" Mill and Richard's Island Dams in consultation with regional fisheries personnel. This passage will be provided after the assessment is completed and recommendations are made. These facilities will be in place prior to operation of the hydro facility.

e) Stream channel improvements will be made in the LaChute River between the "B" Mill Dam and the "D" Mill Pond. These improvements will be specified following a joint (IP/DEC) investigation and assessment of the river and will be in place prior to operation of the hydro facility.

f) As specified in the final operating guidelines, a continuous minimum flow of 30 cfs will be provided in the bypassed reaches of the LaChute. A calibrated staff gauge or similar device will be installed at the "C" Mill Dam and below the "D" Mill Dam to monitor the rate of flow.

g) A parking area and fishing access site will be developed on the Upper project. Final plans are subject to approval by regional DEC staff.

h) Supplemental fish stocking will be provided in the LaChute to enhance the recreational fishery, under the guidance of regional Fisheries staff.

i) An informational leaflet, describing the history and fishery resource of the LaChute River will be published and disseminated.

j) The boat launching facility located downstream from the "F" Mill

Dam will be upgraded along with the adjoining parking lot. Handicapped fishing access will be provided at the Lower Dam site. The improvements will be done in consultation with the Village and department personnel.

k) Construction activities will be scheduled in consultation with department staff to avoid conflicts with the fishery resource in the LaChute.

26. Wetlands Protection/Enhancement

A low weir will be installed in the breach of the "C" Mill Dam to improve the aesthetics of the area and enhance the development of associated wetlands. This weir will require the submission of plans for department review and approval.

27. Project Construction

All construction activity will proceed as specified in the submitted Environmental Management and Construction Plan (EMCP) with the following additions.

a) Any areas scheduled for excavation of sediments will be sampled and tested prior to the onset of construction. These results will be provided to DEC Environmental Quality staff for review and approval.

b) Disposal areas will require approval from Regional DEC staff before use.

c) The silt fence (fabric silt screen) specified in the EMCP will be installed prior to the onset of construction including coffer dam installation. This fence will remain in place until construction is completed and the coffer dams are removed.

d) Any water to be discharged from coffer dammed areas or sediment basins must meet the standards for the surface water into which they are being discharged.

28. Lower Project Powerhouse Design

The design and location of the lower project powerhouse will be accomplished in consultation with the Village and the Office of Park, Recreation and Historic Preservation.

29. Project Aesthetics

Installation of the powerhouse and penstock will be in accordance with those standards set forth in the EMCP and the submitted plans. Penstock sitings will take into account the natural terrain and the existing natural vegetation for concealment wherever possible. Underground placement as proposed will be required from Montcalm St. to the lower powerhouse.

Proposals by I.P. to plug the now defunct penstock opening on the north side of the "F" Mill Dam will require the submission of a plan and proposal for review and approval by our Department.

30. WATER QUALITY CERTIFICATION:

Based upon a review of this project and a request for water quality certification pursuant to Section 401 of the Clean Waters Act of 1977, Public Law 95-217 (the "Act") public notice for which has been duly given, the Department of Environmental Conservation hereby certifies that the applicant will comply with applicable provisions of Section 301, 302, 306 and 307 of the Act.

(1) There are no future changes in any of the following that would result in non-compliance with Sections 301, 302, 306 and 307 of the Act.

(a) The project as modified herein,

(b) The water quality criteria applicable to such waters, or

(c) Applicable effluent limitations or other requirements; and

(2) The applicable provisions of State Law and regulation are complied with.

LaChute

New York State Department of Environmental Conservation
Fish Management
PO Box 296, Rt. 86
Ray Brook, NY 12977-0296

(518) 897-1333
(518) 897-1370 - Fax

Michael D. Zagata
Commissioner

April 2, 1996

Mike Connery, Supervisor
Town of Ticonderoga
Ticonderoga, NY 12883

Dear Mike:

At our meeting last fall you asked about minimum flows in the bypass reach of the LaChute hydro projects. As we discussed, a 30 cfs continuous minimum flow is required in the bypassed sections. I have yet to find a written agreement on how those flows are to be monitored, but staff at CHI Hydro provided the following guidance.

Bypass flows for the Upper Project can be estimated at the C Mill Dam (the breached dam immediately upstream of the upper powerhouse). A rectangular notch in the C Mill Dam is apparently sized to pass the 30 cfs minimum. Jerry Stevens, with CHI, states that he has measured 37 cfs flow when the flow level fills that notch. "Filling the notch" refers to filling the upstream end of the notch; the water surface slopes downward towards the downstream end of the notch. Jerry indicates the extra 7 cfs is leakage under the C Mill Dam. Thus, if the upstream end of the notch is full, a flow greater than 30 cfs is apparently being provided.

I had previously referred to the 30 cfs flow being released as a combination of 20 cfs through the fish bypass plus 10 cfs through one of the gates at the Lake George dam. That procedure applies only during the fall salmon trapping season. At other times the full 30 cfs is released through the fish bypass. The different procedures are due to increased turbulence when the trap device is installed in the fish bypass. With the trap device installed, 30 cfs causes excessive turbulence and some salmon become impinged on the rack. When the trap device is removed, 30 cfs can be passed through the fish bypass with out problems.

Bypass flows for the Lower LaChute Project can be monitored at the D Mill Dam (the dam that includes the intake for the lower project). Jerry Stevens reports that a minimum of 30 cfs is spilled at that dam when the staff gauge at that site reads 100 or greater. Similar to the C Mill site, the notches in the

D Mill Dam should be full at their upstream ends when 30 cfs is being spilled.

I anticipate measuring flow myself this summer. I hope this information is helpful. Please feel free to contact me if you have any questions.

Sincerely,

Bill Schoch

William F. Schoch

WFS/tmc
cc: L. Strait
J. Stevens
T. Post
File: Hydro, LaChute

95-20-6 (9/85) NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER
52-86-0015

FACILITY/PROGRAM NUMBER(s)
239C-808

PERMIT
Under the Environmental Conservation Law

EFFECTIVE DATE
AUG 11 1986

EXPIRATION DATE(s)
September 1, 1987

- [X] Article 15, Title 5: Protection of Water
- [ ] Article 15, Title 15: Water Supply
- [ ] Article 15, Title 15: Water Transport
- [ ] Article 15, Title 15: Long Island Wells
- [ ] Article 15, Title 27: Wild, Scenic and Recreational Rivers
- [ ] 6NYCRR 608 Water Quality Certification
- [ ] Article 17, Titles 7, 8: SPDES
- [ ] Article 19. Air Pollution Control
- [ ] Article 23, Title 27: Mined Land Reclamation
- [ ] Article 24: Freshwater Wetlands
- [ ] Article 25: Tidal Wetlands
- [ ] Article 27, Title 7: Solid Waste Management
- [ ] Article 27, Title 9: Hazardous Waste Management
- [ ] Article 34: Coastal Erosion Management
- [ ] Article 36: Floodplain Management
- [ ] Articles 1, 3, 37; 6NYCRR 380: Radiation Control

N—New, R—Renewal, M—Modification
C—Construction, O—Operation, (If Applicable)

PERMIT ISSUED TO
International Paper Company

ADDRESS OF PERMITTEE
77 West 45th Street, New York, New York 10036

AGENT FOR PERMITTEE/CONTACT PERSON
Robert Mck. Hunziker, Counsel, White Paper Group

TELEPHONE NUMBER
212-536-5851

NAME AND ADDRESS OF FACILITY (If different from Permittee)

LOCATION OF PROJECT	COUNTY	TOWN/CITY/VILLAGE	UTM COORDINATES
LaChute River	Essex	Ticonderoga	

DESCRIPTION OF PROJECT/FACILITY
Construction of the Upper LaChute project powerhouse and powerhouse cofferdam in the existing "C" mill tailrace and construction of the Upper LaChute project penstock and penstock cofferdam exclusive of the "A" mill dam intake structure as referred to in special condition #21 in accordance with the project plan attached to and made a part of this permit.

GENERAL CONDITIONS

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations and the conditions specified herein or attached hereto.

1 The permittee shall file in the office of the appropriate regional permit administrator, or other office designated in the special conditions, a notice of intention to commence work at least 48 hours in advance of the time of commencement and shall also notify him/her promptly in writing of the completion of the work.

2 The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation which may order the work suspended if the public interest so requires.

3 The permittee has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.

4 The Department reserves the right to modify, suspend or revoke this permit at any time after due notice, and, if requested, hold a hearing when
a) the scope of the project is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations are found, or
b) the permit was obtained by misrepresentation or failure to disclose relevent facts, or
c) newly discovered information or significant physical changes are discovered since the permit was issued.

5 The permittee is responsible for keeping the permit active by submitting a renewal application, including any forms, fees or supplemental information which may be required by the Department, no later than 30 days (180 days for SPDES or Solid or Hazarduous Waste Management permits) prior to the expiration date.

6 This permit shall not be construed as conveying to the applicant any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any rights, title or interest in real or personal property held or vested in a person not a party to the permit.

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of way which may be required for this project.

Issuance of this permit by the Department does not, unless expressly provided for, modify, supersede or rescind an order on consent or determination by the Commissioner issued heretofore by the Department or any of the terms, conditions, or requirements contained in such order or determination.

9 Any modification of this permit granted by the Department must be in writing and attached hereto.

PERMIT ISSUANCE DATE	PERMIT ADMINISTRATOR	ADDRESS
AUG 11 1986	Charles F. Gardephe	Rt. 86, Ray Brook, NY 12977

AUTHORIZED SIGNATURE
X Charles F. Gardephe

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

11 That the State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage

12 That if the display of lights and signals on any work hereby authorized is not otherwise provided for by law, such lights and signals as may be prescribed by the United States Coast Guard shall be installed and maintained

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

14 Any material dredged in the prosecution of the work herein permitted shall be removed evenly without leaving large refuse piles, ridges across the bed of a waterway or floodplain or deep holes that may have a tendency to cause damage to navigable channels or to the banks of a waterway.

15 If any material is to be deposited or dumped under this permit, either in the waterway or on shore above high-water mark, it shall be deposited or dumped at the locality shown on the drawing hereto attached, and, if so prescribed thereon, within or behind a good and substantial bulkhead or bulkheads, such as will prevent escape of the material into the waterway.

16 There shall be no unreasonable interference with navigation by the work herein authorized.

17 If granted under Articles 24 or 25, and if upon the expiration or revocation of this permit, modification of the wetland hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration

18 If granted under Article 36, this permit does not signify in any way that the project will be free from flooding

19 All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or his agent as part of the permit application

Such approved plans were prepared by the permittee on Oct. 31, 1985

SPECIAL CONDITIONS

20. The Ray Brook (518-891-1370) Fire Control Office shall be notified instead of the Regional Permit Administrator at least 48 hours prior to commencement of activities authorized by this permit. Notification must be made on weekdays (excluding holidays) between the hours of 8:30 a.m. and 4:30 p.m.

21. Final approval on the dam renovations and intake construction will be delayed until the project sponsor has submitted final engineering plans for department review and approval. No construction activity in these areas can proceed until this approval is received.

22. Following removal of the "C" mill powerhouse cofferdam, the tailrace channel shall be protected with rip-rap or gabions and the embankment shall be topsoiled, seeded and mulched within 30 days of project completion.

23. Any ditches installed to concentrate storm water runoff shall be protected with haybale berms to trap sediment.

24. Lake Levels/Minimum River Flows

The final operating guidelines (dated 6/26/86) as revised in consultation with department staff will be the operating procedure for the "A" Mill Dam and Upper LaChute Project.

25. Fisheries Management

a) An angled trash-rack with (1") one-inch clear spacing will be installed on both the Upper and Lower project intake structures. Final design will require approval from the Bureau of Fish Management.

b) Downstream fish passage will be provided at the "A" Mill (outlet) Dam by means of a sliding gate structure to be incorporated in gate number three (3). This sliding gate will be operated from April 1 to December 1. Minimum flows will be controlled by the main gates from December 1 to March 31. A screening device will be incorporated in the sliding gate structure to restrict downstream passage of salmon when required. Final design will require approval from the Bureau of Fish Management.

c) A fish trapping and counting device will be installed at the outlet dam. Final design shall be in consultation with and will require approval from the Bureau of Fish Management. Maintenance and operation of this device will be the responsibility of the developer.

d) An assessment will be made of downstream fish passage requirements at the "D" Mill and Richard's Island Dams in consultation with regional fisheries personnel. This passage will be provided after the assessment is completed and recommendations are made. These facilities will be in place prior to operation of the hydro facility.

e) Stream channel improvements will be made in the LaChute River between the "B" Mill Dam and the "D" Mill Pond. These improvements will be specified following a joint (IP/DEC) investigation and assessment of the river and will be in place prior to operation of the hydro facility.

f) As specified in the final operating guidelines, a continuous minimum flow of 30 cfs will be provided in the bypassed reaches of the LaChute. A calibrated staff gauge or similar device will be installed at the "C" Mill Dam and below the "D" Mill Dam to monitor the rate of flow.

g) A parking area and fishing access site will be developed on the Upper project. Final plans are subject to approval by regional DEC staff.

h) Supplemental fish stocking will be provided in the LaChute to enhance the recreational fishery, under the guidance of regional Fisheries staff.

i) An informational leaflet, describing the history and fishery resource of the LaChute River will be published and disseminated.

j) The boat launching facility located downstream from the "F" Mill

Dam will be upgraded along with the adjoining parking lot. Handicapped fishing access will be provided at the Lower Dam site. The improvements will be done in consultation with the Village and department personnel.

k) Construction activities will be scheduled in consultation with department staff to avoid conflicts with the fishery resource in the LaChute.

26. Wetlands Protection/Enhancement

A low weir will be installed in the breach of the "C" Mill Dam to improve the aesthetics of the area and enhance the development of associated wetlands. This weir will require the submission of plans for department review and approval.

27. Project Construction

All construction activity will proceed as specified in the submitted Environmental Management and Construction Plan (EMCP) with the following additions.

a) Any areas scheduled for excavation of sediments will be sampled and tested prior to the onset of construction. These results will be provided to DEC Environmental Quality staff for review and approval.

b) Disposal areas will require approval from Regional DEC staff before use.

c) The silt fence (fabric silt screen) specified in the EMCP will be installed prior to the onset of construction including coffer dam installation. This fence will remain in place until construction is completed and the coffer dams are removed.

d) Any water to be discharged from coffer dammed areas or sediment basins must meet the standards for the surface water into which they are being discharged.

28. Lower Project Powerhouse Design

The design and location of the lower project powerhouse will be accomplished in consultation with the Village and the Office of Park, Recreation and Historic Preservation.

29. Project Aesthetics

Installation of the powerhouse and penstock will be in accordance with those standards set forth in the EMCP and the submitted plans. Penstock sitings will take into account the natural terrain and the existing natural vegetation for concealment wherever possible. Underground placement as proposed will be required from Montcalm St. to the lower powerhouse.

Proposals by I.P. to plug the now defunct penstock opening on the north side of the "F" Mill Dam will require the submission of a plan and proposal for review and approval by our Department.

30. WATER QUALITY CERTIFICATION:

Based upon a review of this project and a request for water quality certification pursuant to Section 401 of the Clean Waters Act of 1977, Public Law 95-217 (the "Act") public notice for which has been duly given, the Department of Environmental Conservation hereby certifies that the applicant will comply with applicable provisions of Section 301, 302, 306 and 307 of the Act.

(1) There are no future changes in any of the following that would result in non-compliance with Sections 301, 302, 306 and 307 of the Act.

(a) The project as modified herein,

(b) The water quality criteria applicable to such waters, or

(c) Applicable effluent limitations or other requirements; and

(2) The applicable provisions of State Law and regulation are complied with.

MEMORANDUM OF TELEPHONE CONVERSATION

Date: **September 5, 2014** **Time: 0915**

By: **Skip Medford**

To/From: **Rob Fiorentino**

Of: **NY DEC, Warrensburg, Fisheries**

Phone: **518-623-1234** **Extension:**

Subject: **Fish Trapping Operations, LACU, Fall 2014**

In a voicemail last week, and phone call today, Rob informed me that the DEC has again agreed to defer the fish trapping operation at LaChute this fall. Trapping within the bypass flow is scheduled each year from 9/30—11/30. The DEC has concurred each fall since 2002 to defer the trapping component of bypass operation, for various reasons involving effort, negative effect on fish and wildlife, and overall salmon population conditions and restoration efforts.

Rob has suggested that we also defer (to September 2015) the upcoming site visit, due to their busy schedule on other priorities. If a window and need open sooner, we may interface with DEC at LaChute on our passage operations.

We should revisit the trapping deferment with DEC each fall, and continue good relations with the agency and responsive compliance with fish passage and other regulatory requirements.