



FINAL LICENSE APPLICATION

Volume III of V (Public)

Exhibits F, G, and H

Mongaup River Hydroelectric Projects:

Swinging Bridge Hydroelectric Project (No. 10482)

Mongaup Falls Hydroelectric Project (No. 10481)

Rio Hydroelectric Project (No. 9690)

March 2020



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List of Acronyms

CEII	Critical Energy/Electric Infrastructure Information
CFR	Code of Federal Regulations
CUI	Controlled Unclassified Information
DSSMP	Dam Safety Surveillance and Monitoring Plan
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
NYISO	New York Independent System Operator
NYSDEC	New York State Department of Environmental Conservation
PFMA	Potential Failure Modes Analysis
SD2	Scoping Document 2
SDR	Supporting Design Report
STID	Supporting Technical Information Document

Exhibit F**General Design Drawings (18 CFR §4.51(g))****F.1 Design Drawings**

In accordance with Title 18 of the Code of Federal Regulations (CFR) Part 388, Eagle Creek is requesting that the General Design Drawings for the Projects be given privileged treatment because the drawings contain Controlled Unclassified Information (CUI) and Critical Energy/Electric Infrastructure Information (CEII). Therefore, in conjunction with filing this License Application, the Exhibit F General Design Drawings are being filed with the Federal Energy Regulatory Commission (“FERC” or “Commission”) in Volume IV of this application as CUI/CEII.

F.2 Supporting Design Report

Pursuant to 18 CFR §4.41(g)(3) and (4), an applicant for a new license is required to file with the Commission two copies of a Supporting Design Report (SDR) when the applicant files an application for a new license. An SDR demonstrates that the existing structures are safe and adequate to fulfill their stated functions.

All three Projects are subject to the requirements of 18 CFR Part 12 – Safety of Water Power Projects and Project Works, Subpart D – Inspection by an Independent Consultant. In 2003, the Commission instituted a new program to be used in the context of the Part 12 Independent Consultant Safety Inspection Program entitled “Potential Failure Modes Analysis” (PFMA), which is a dam- and project-safety tool intended to broaden the scope of the safety evaluations to include potential failure scenarios that may have been overlooked in past investigations. In conjunction with these endeavors, the Commission also initiated a requirement for development of a Supporting Technical Information Document (STID) for Projects subject to Part 12D of the Commission’s regulations.

The STID includes sufficient information to understand the design and current engineering analyses for the Project such as:

1. A complete copy of the PFMA report and associated addendums;
2. A detailed description of the project and project works;
3. A summary of the construction history of the project;
4. Summaries of Standard Operating Procedures;
5. A description of geologic conditions affecting the project works;
6. A summary of hydrologic and hydraulic information;
7. Summaries of instrumentation and surveillance for the project;
8. Summaries of stability and stress analyses for the project works;
9. A summary of the spillway gate analyses; and
10. Pertinent dam safety correspondence.

Given that the Projects are subject to Part 12D of the Commission’s regulations, the Projects have been inspected by an independent consultant within the past five years and an STID for each Project has been prepared and submitted to the Commission. For reference purposes, Table F.2-1 provides the dates for which the Projects’ most recent Part 12 Safety Inspection Report and PFMA Report, which are included within the

STID, were filed with the Commission's New York Regional Office. Based on the information provided in these filings, which is consistent with the information that would be provided in an SDR, SDRs for the Projects are not being included in this application.

TABLE F.2-1
LIST OF DAM SAFETY DOCUMENTS AND FILING DATES

Document Name	Filing Date
Swinging Bridge Project	
Initial PFMA Report	2008, Rev. 2011, and 2014
Initial STID	February 28, 2009
Most recent STID Update	February 17, 2014 – Swinging Bridge Dam December 31, 2019 – Cliff Lake Dam December 31, 2019 – Toronto Dam
7 th Part 12 Safety Inspection Report	March 1, 2019
Mongaup Falls Project	
Initial PFMA Report	2004
Initial STID	2004
Most recent STID Update	January 1, 2020
5 th Part 12 Safety Inspection Report	2015
Rio Project	
Initial PFMA Report	2004; Rev. 2010
Initial STID	2004
Most recent STID Update	January 1, 2020
5 th Part 12 Safety Inspection Report	2015

Exhibit G

Project Maps (18 CFR §4.51(h))

The current Project Boundary Maps for the Swinging Bridge Project were prepared in accordance with the requirements of 18 CFR §4.39 and 4.51(h) and show the Project vicinity, location, and boundary to provide an understanding of the Project's location. The current, FERC-approved Exhibit G drawings for the Swinging Bridge Project are listed below in Table G.1-1 and are provided at the end of this exhibit.

TABLE G.1-1
SWINGING BRIDGE PROJECT EXHIBIT G PROJECT BOUNDARY DRAWINGS

Exhibit No.	FERC Drawing No.	FERC Approval Date
G-1	10482-22	May 10, 2013
G-2	10482-23	
G-3	10482-24	
G-4	10482-25	
G-5	10482-26	
G-6	10482-28	May 17, 2016

The Exhibit G Project Boundary Maps for the Mongaup Falls Project (previously prepared in 1986) were recently updated to meet the Commission's current requirements pursuant to 18 CFR §4.39 and 4.51(h) and show the Project vicinity, location, and boundary to provide an understanding of the Project's location. The updated drawings for the Mongaup Falls Project are listed below in Table G.1-2 and are provided at the end of this exhibit.

TABLE G.1-2
MONGAUP FALLS PROJECT EXHIBIT G PROJECT BOUNDARY DRAWINGS

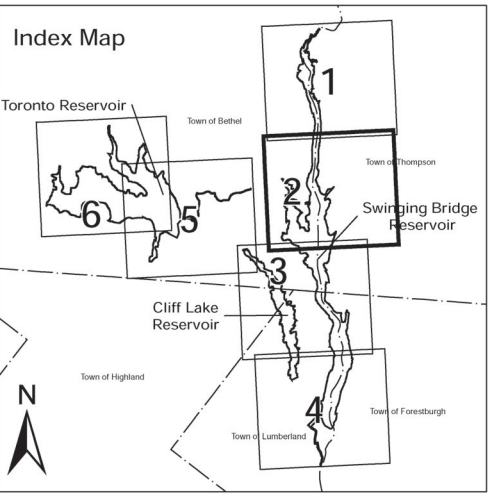
Exhibit No.	FERC Drawing No.	FERC Approval Date
G-1	TBD	Submitted for Approval
G-2	TBD	
G-3	TBD	
G-4	TBD	

The current Project Boundary Maps for the Rio Project were prepared in accordance with the requirements of 18 CFR §4.39 and 4.51(h) and show the Project vicinity, location, and boundary to provide an understanding of the Project's location. The current, FERC-approved Exhibit G drawings for the Rio Project are listed below in Table G.1-3 and are provided at the end of this exhibit.

TABLE G.1-3
RIO PROJECT EXHIBIT G PROJECT BOUNDARY DRAWINGS

Exhibit No.	FERC Drawing No.	FERC Approval Date
G-11	9690-20	April 3, 2013
G-12A	9690-21	
G-12B	9690-22	
G-13	9690-23	
G-14	9690-24	

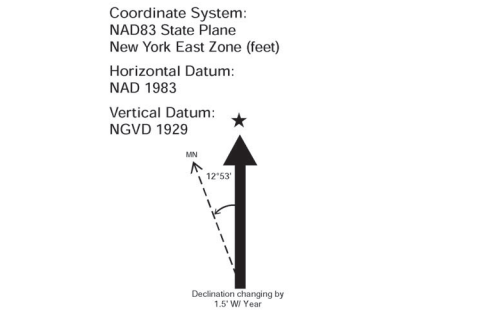
Swinging Bridge Project Exhibit G Project Boundary Drawings



- Legend**
- FERC Project Boundary
 - Project Boundary Reference Point
 - Reference Point
 - Elevation Contour Line (Elevations in feet)*
 - Project Recreation Site
 - Non-Project Recreation Site
 - Recreation Trail
 - Recreation Area
 - Transmission Line ROW
 - Land Ownership
 - Easement
 - Own in Fee
 - Legal Subdivision (Parcels)*

*Except where noted, contour elevations and legal subdivision boundaries are provided from May 31, 2010 survey conducted by C.T. Male Associates, P.C.

The licensee has acquired rights in fee or easement to all lands necessary for construction, maintenance, and operation of the project.

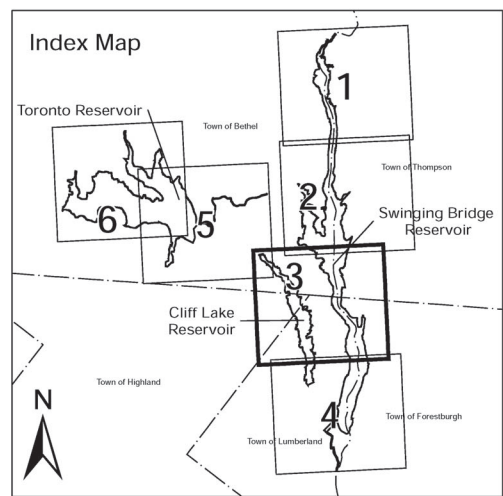
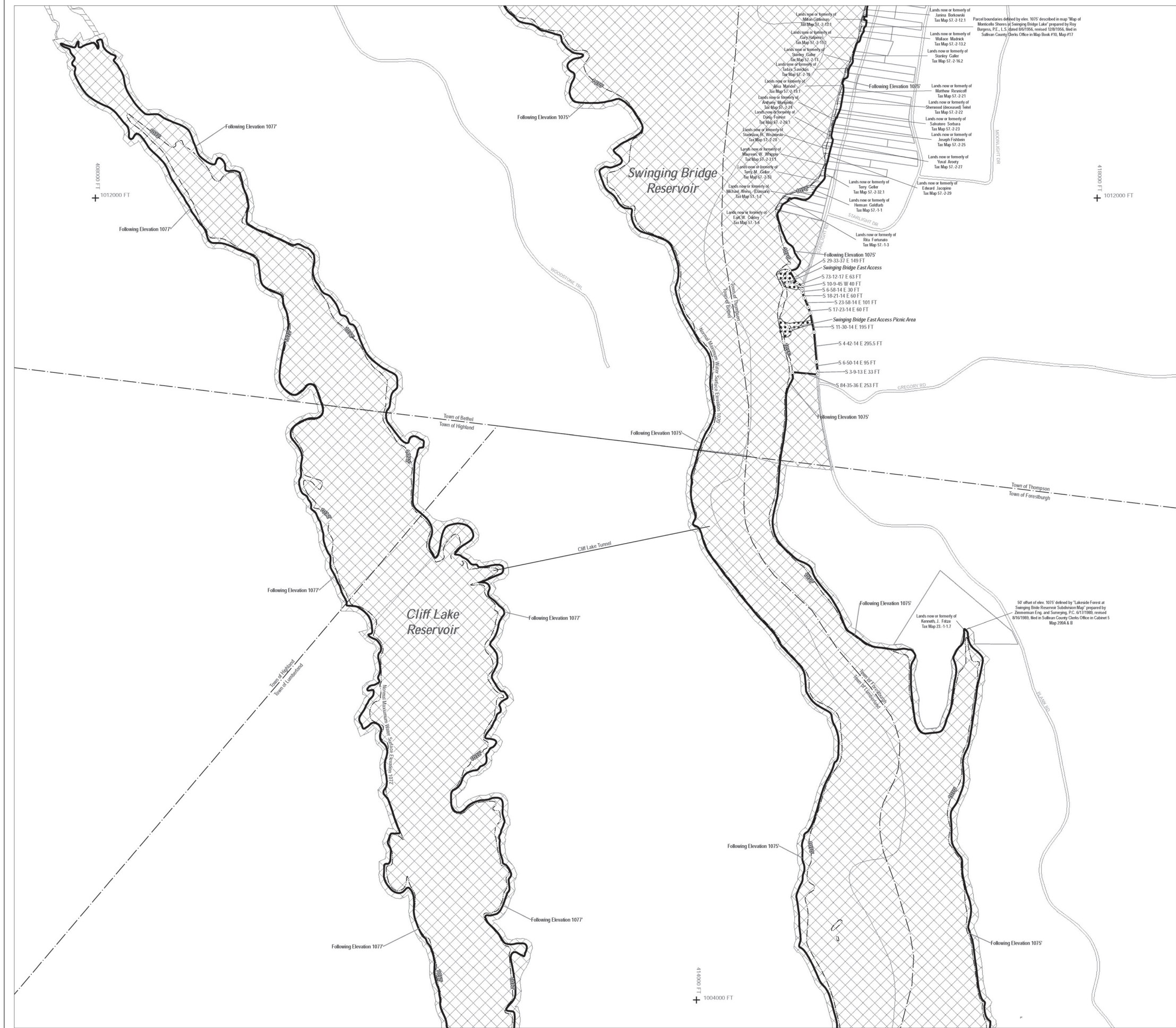


I HEREBY STATE THAT THE PROJECT BOUNDARY DELINEATION FOR THE SWINGING BRIDGE HYDROELECTRIC PROJECT (FERC #10482) AS SHOWN ON THIS EXHIBIT "G" DRAWING IS DEVELOPED WITHIN REASONABLE ACCURACIES AS REQUIRED IN 18CFR 41 TO THE GEOGRAPHIC LOCATION BASED ON A GRAPHICAL POSITIONING IN REFERENCE TO USGS QUADRANGLE MAPPING WITHIN +/-40 FEET. THE SWINGING BRIDGE HYDROELECTRIC PROJECT DOCUMENTED PROJECT BOUNDARY LINE WAS ADJUSTED AND OR ROTATED TO BEST FIT WITH THE USGS QUADRANGLE MAP FEATURES GRAPHICALLY AND WAS NOT FIELD SURVEYED.

March 21, 2013

EAGLE CREEK HYDRO POWER, LLC
SWINGING BRIDGE HYDROELECTRIC PROJECT
PROJECT NO. 10482
SHEET 2 of 6 **March 2013**

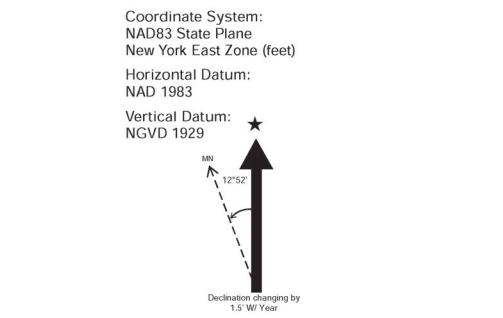
400 200 0 400 800 1,200 1,600 Feet
EXHIBIT G-2 1 inch = 400 feet FERC DWG NO. 10482-23



- Legend**
- FERC Project Boundary
 - Project Boundary Reference Point
 - Reference Point
 - Elevation Contour Line (Elevations in feet)*
 - Project Recreation Site
 - Non-Project Recreation Site
 - Recreation Trail
 - Recreation Area
 - Transmission Line ROW
 - Land Ownership
 - Easement
 - Own in Fee
 - Legal Subdivision (Parcels)*

*Except where noted, contour elevations and legal subdivision boundaries are provided from May 31, 2010 survey conducted by C.T. Male Associates, P.C.

The licensee has acquired rights in fee or easement to all lands necessary for construction, maintenance, and operation of the project.



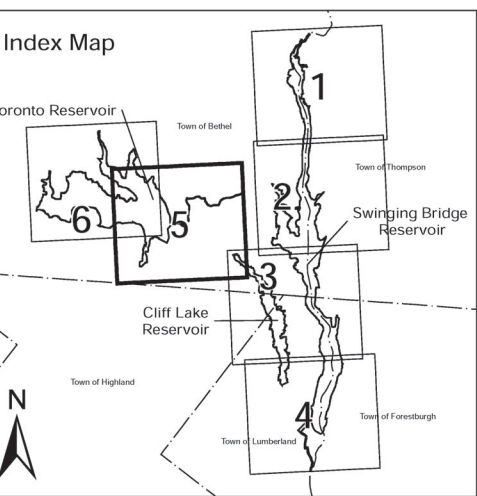
I HEREBY STATE THAT THE PROJECT BOUNDARY DELINEATION FOR THE SWINGING BRIDGE HYDROELECTRIC PROJECT (FERC #10482) AS SHOWN ON THIS EXHIBIT "G" DRAWING IS DEVELOPED WITHIN REASONABLE ACCURACIES AS REQUIRED IN 18CFR 41 TO THE GEOGRAPHIC LOCATION BASED ON A GRAPHICAL POSITIONING IN REFERENCE TO USGS QUADRANGLE MAPPING WITHIN +/- 40 FEET. THE SWINGING BRIDGE HYDROELECTRIC PROJECT DOCUMENTED PROJECT BOUNDARY LINE WAS ADJUSTED AND OR ROTATED TO BEST FIT WITH THE USGS QUADRANGLE MAP FEATURES GRAPHICALLY AND WAS NOT FIELD SURVEYED.

March 21, 2013

EAGLE CREEK HYDRO POWER, LLC
SWINGING BRIDGE HYDROELECTRIC PROJECT
PROJECT NO. 10482
SHEET 3 of 6 **March 2013**

400 200 0 400 800 1,200 1,600 Feet

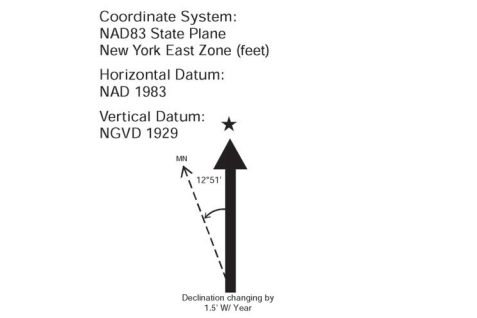
EXHIBIT G-3 1 inch = 400 feet FERC DWG NO. 10482-24



- Legend**
- FERC Project Boundary**
 - Project Boundary Reference Point**
 - Reference Point**
 - Elevation Contour Line (Elevations in feet)***
 - Project Recreation Site**
 - Non-Project Recreation Site**
 - Recreation Trail**
 - Recreation Area**
 - Transmission Line ROW**
 - Land Ownership**
 - Easement**
 - Own in Fee**
 - Legal Subdivision (Parcels)***

*Except where noted, contour elevations and legal subdivision boundaries are provided from May 31, 2010 survey conducted by C.T. Male Associates, P.C.

The licensee has acquired rights in fee or easement to all lands necessary for construction, maintenance, and operation of the project.

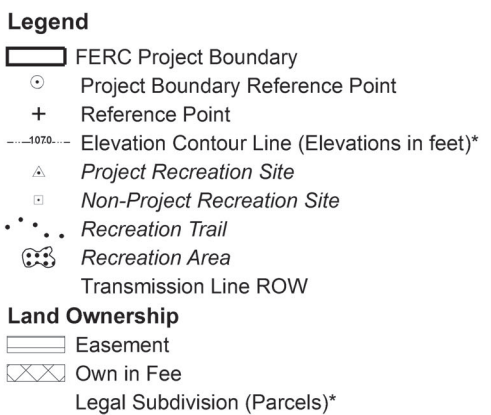
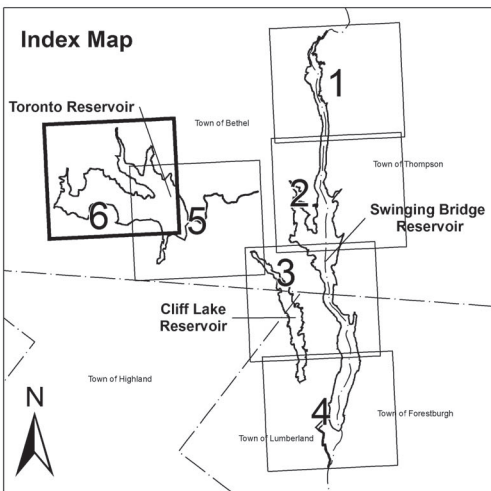


I HEREBY STATE THAT THE PROJECT BOUNDARY DELINEATION FOR THE SWINGING BRIDGE HYDROELECTRIC PROJECT (FERC #10482) AS SHOWN ON THIS EXHIBIT "G" DRAWING IS DEVELOPED WITHIN REASONABLE ACCURACIES AS REQUIRED IN 18CFR 41 TO THE GEOGRAPHIC LOCATION BASED ON A GRAPHICAL POSITIONING IN REFERENCE TO USGS QUADRANGLE MAPPING WITHIN +/- 40 FEET. THE SWINGING BRIDGE HYDROELECTRIC PROJECT DOCUMENTED PROJECT BOUNDARY LINE WAS ADJUSTED AND OR ROTATED TO BEST FIT WITH THE USGS QUADRANGLE MAP FEATURES GRAPHICALLY AND WAS NOT FIELD SURVEYED.

March 21, 2013

EAGLE CREEK HYDRO POWER, LLC
SWINGING BRIDGE HYDROELECTRIC PROJECT
PROJECT NO. 10482
SHEET 5 of 6 **March 2013**

400 200 0 400 800 1,200 1,600 Feet
EXHIBIT G-5 1 inch = 400 feet FERC DWG NO. 10482-26



*Except where noted, contour elevations and legal subdivision boundaries are provided from May 31, 2010 survey conducted by C.T. Male Associates, P.C.

The licensee has acquired rights in fee or easement to all lands necessary for construction, maintenance, and operation of the project.

Coordinate System:
NAD83 State Plane
New York East Zone (feet)

Horizontal Datum:
NAD 1983

Vertical Datum: ★
NGVD 1929



I HEREBY STATE THAT THE PROJECT BOUNDARY DELINEATION FOR THE SWINGING BRIDGE HYDROELECTRIC PROJECT (FERC #10482) AS SHOWN ON THIS EXHIBIT "G" DRAWING IS DEVELOPED WITHIN REASONABLE ACCURACIES AS REQUIRED IN 18CFR41.1 TO THE GEOGRAPHIC LOCATION BASED ON A GRAPHICAL POSITIONING IN REFERENCE TO USGS QUADRANGLE MAPS WITHIN 140 FEET. THE SWINGING BRIDGE HYDROELECTRIC PROJECT DOCUMENTED PROJECT BOUNDARY LINE WAS ADJUSTED AND OR ROTATED TO BEST FIT WITH THE USGS QUADRANGLE MAP FEATURES GRAPHICALLY AND WAS NOT FIELD SURVEYED.



**EAGLE CREEK HYDRO POWER, LLC
SWINGING BRIDGE HYDROELECTRIC PROJECT
PROJECT NO. 10482**

SHEET 6 of 6

May 2016

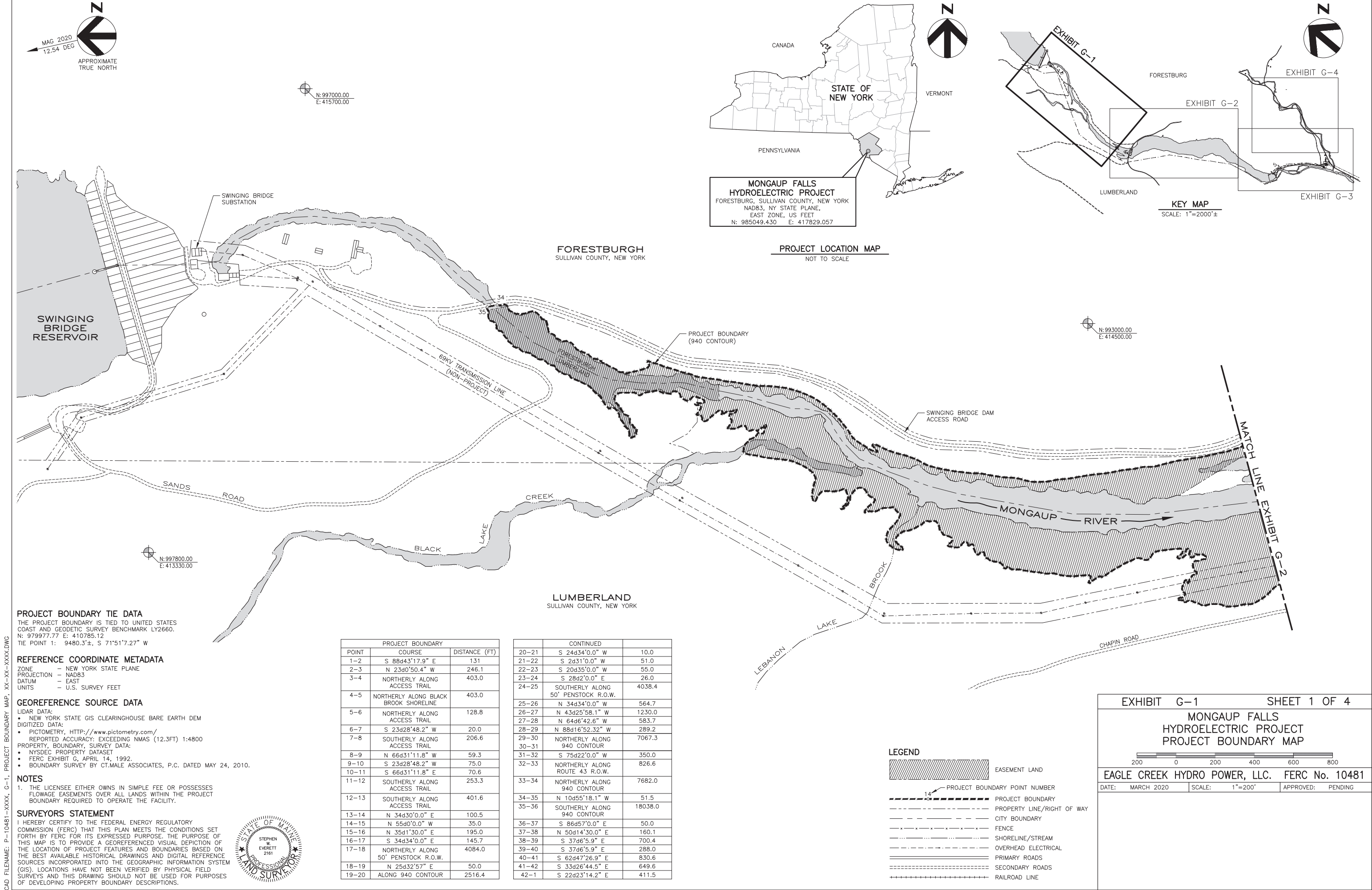


EXHIBIT G-6

1 inch = 400 feet

FERC DWG NO. 10482-28

Mongaup Falls Project Exhibit G Project Boundary Drawings

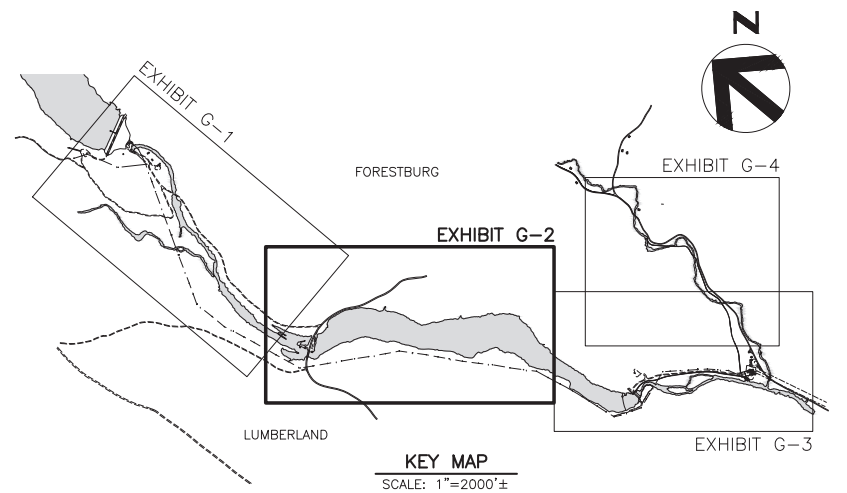


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CAD FILENAME: P-10481-XXXX, G-2, PROJECT BOUNDARY MAP, XX-XX-XXXX.DWG



N: 992000.00
E: 415280.00



N: 988065.00
E: 417800.00

N: 989200.00
E: 414700.00

PROJECT BOUNDARY TIE DATA

THE PROJECT BOUNDARY IS TIED TO UNITED STATES COAST AND GEODETIC SURVEY BENCHMARK LY2660.
N: 979977.77 E: 410785.12
TIE POINT 1: 9480.3'±, S 71°51'7.27" W

REFERENCE COORDINATE METADATA

— NEW YORK STATE PLANE
— NAD83
PROJECTION — EAST
DATUM — U.S. SURVEY FEET
UNITS

GEOREFERENCE SOURCE DATA

LIDAR DATA:
• NEW YORK STATE GIS CLEARINGHOUSE BARE EARTH DEM
DIGITIZED DATA:
• PICTOMETRY, [HTTP://WWW.PICTOMETRY.COM/](http://www.pictometry.com/)
REPORTED ACCURACY: EXCEEDING NMAS (12.3FT) 1:4800

PROPERTY, BOUNDARY, SURVEY DATA:

• NYSDEC PROPERTY DATASET
• FERC EXHIBIT G, APRIL 14, 1992.
• BOUNDARY SURVEY BY CT.MALE ASSOCIATES, P.C. DATED MAY 24, 2010.

NOTES

1. THE LICENSEE EITHER OWNS IN SIMPLE FEE OR POSSESSES FLOWAGE EASEMENTS OVER ALL LANDS WITHIN THE PROJECT BOUNDARY REQUIRED TO OPERATE THE FACILITY.
2. SEE EXHIBIT G-1 FOR PROJECT BOUNDARY TABLES.

SURVEYORS STATEMENT

I HEREBY CERTIFY TO THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) THAT THIS PLAN MEETS THE CONDITIONS SET FORTH BY FERC FOR ITS EXPRESSED PURPOSE. THE PURPOSE OF THIS MAP IS TO PROVIDE A GEOREFERENCED VISUAL DEPICTION OF THE LOCATION OF PROJECT FEATURES AND BOUNDARIES BASED ON THE BEST AVAILABLE HISTORICAL DRAWINGS AND DIGITAL REFERENCE SOURCES INCORPORATED INTO THE GEOGRAPHIC INFORMATION SYSTEM (GIS). LOCATIONS HAVE NOT BEEN VERIFIED BY PHYSICAL FIELD SURVEYS AND THIS DRAWING SHOULD NOT BE USED FOR PURPOSES OF DEVELOPING PROPERTY BOUNDARY DESCRIPTIONS.



LEGEND

	EASEMENT LAND
	PROJECT BOUNDARY POINT NUMBER
	PROJECT BOUNDARY
	PROPERTY LINE/RIGHT OF WAY
	CITY BOUNDARY
	FENCE
	SHORELINE/STREAM
	OVERHEAD ELECTRICAL
	PRIMARY ROADS
	SECONDARY ROADS
	RAILROAD LINE

EXHIBIT G-2 SHEET 2 OF 4

MONGAUP FALLS HYDROELECTRIC PROJECT PROJECT BOUNDARY MAP

200 0 200 400 600 800

EAGLE CREEK HYDRO POWER, LLC. FERC No. 10481

DATE: MARCH 2020 SCALE: 1"=200' APPROVED: PENDING



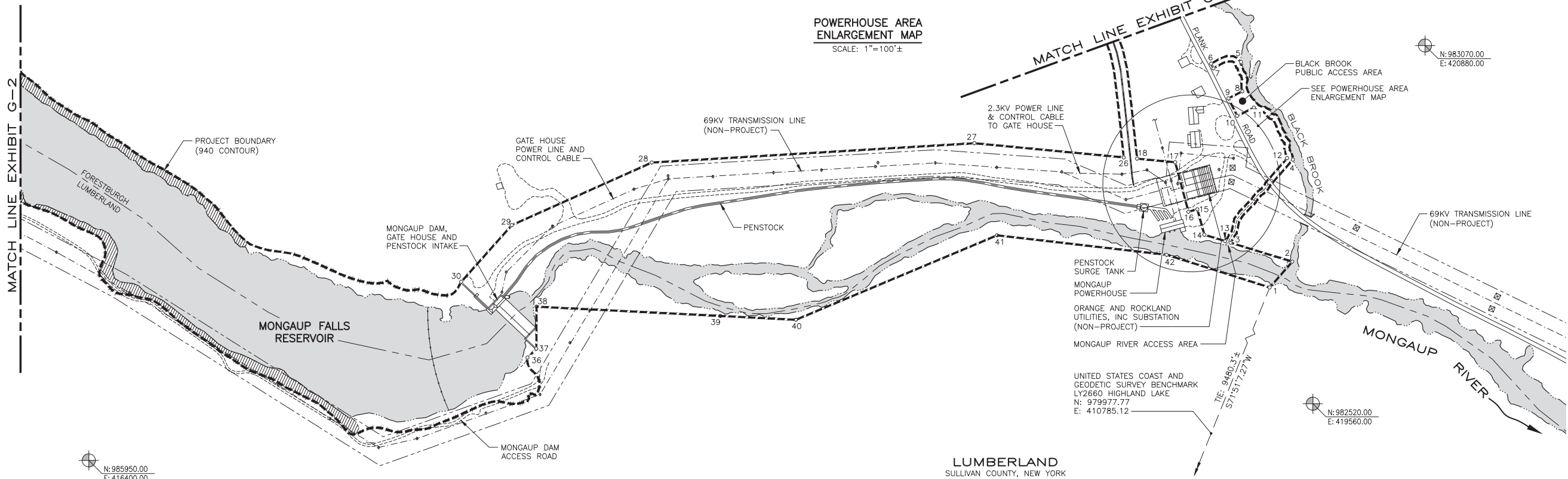
N: 986370.00
E: 418470.00

FORESTBURGH
SULLIVAN COUNTY, NEW YORK

POWERHOUSE AREA
ENLARGEMENT MAP
SCALE: 1"=100'±

KEY MAP
SCALE: 1"=2000'±

N: 983070.00
E: 420880.00



N: 985950.00
E: 416400.00

N: 982520.00
E: 419560.00

PROJECT BOUNDARY TIE DATA

THE PROJECT BOUNDARY IS TIED TO UNITED STATES COAST AND GEODETIC SURVEY BENCHMARK LY2660.
N: 979977.77 E: 410785.12
TIE POINT 1: 9480.3'±, S 71°51'7.27" W

REFERENCE COORDINATE METADATA

— NEW YORK STATE PLANE
— NAD83
— PROJECTION — EAST
— DATUM — U.S. SURVEY FEET
— UNITS

GEOREFERENCE SOURCE DATA

LIDAR DATA:
• NEW YORK STATE GIS CLEARINGHOUSE BARE EARTH DEM
DIGITIZED DATA:
• PICTOMETRY, [HTTP://WWW.PICTOMETRY.COM/](http://www.pictometry.com/)
REPORTED ACCURACY: EXCEEDING NMAS (12.3FT) 1:4800
PROPERTY, BOUNDARY, SURVEY DATA:
• NYSDEC PROPERTY DATASET
• FERC EXHIBIT G, APRIL 14, 1992.
• BOUNDARY SURVEY BY CT.MALE ASSOCIATES, P.C. DATED MAY 24, 2010.

NOTES

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2. SEE EXHIBIT G-1 FOR PROJECT BOUNDARY TABLES.

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LEGEND

- EASEMENT LAND
- PROJECT BOUNDARY POINT NUMBER
- PROJECT BOUNDARY
- PROPERTY LINE/RIGHT OF WAY
- CITY BOUNDARY
- FENCE
- SHORELINE/STREAM
- OVERHEAD ELECTRICAL
- PRIMARY ROADS
- SECONDARY ROADS
- RAILROAD LINE

EXHIBIT G-3 SHEET 3 OF 4

MONGAUP FALLS
HYDROELECTRIC PROJECT
PROJECT BOUNDARY MAP

200 0 200 400 600 800

EAGLE CREEK HYDRO POWER, LLC. FERC No. 10481

DATE: MARCH 2020 SCALE: 1"=200' APPROVED: PENDING

CAD FILENAME: P-10481-XXXX, G-4, PROJECT BOUNDARY MAP, XX-XX-XXXX.DWG

PROJECT BOUNDARY TIE DATA

THE PROJECT BOUNDARY IS TIED TO UNITED STATES COAST AND GEODETIC SURVEY BENCHMARK LY2660.
N: 979977.77 E: 410785.12
TIE POINT 1: 9480.3'±, S 71°51'7.27" W

REFERENCE COORDINATE METADATA

— NEW YORK STATE PLANE
— NAD83
— PROJECTION — EAST
— DATUM — U.S. SURVEY FEET
— UNITS

GEOREFERENCE SOURCE DATA

LIDAR DATA:
• NEW YORK STATE GIS CLEARINGHOUSE BARE EARTH DEM
DIGITIZED DATA:
• PICTOMETRY, [HTTP://WWW.PICTOMETRY.COM/](http://www.pictometry.com/)
REPORTED ACCURACY: EXCEEDING NMAS (12.3FT) 1:4800

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I HEREBY CERTIFY TO THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) THAT THIS PLAN MEETS THE CONDITIONS SET FORTH BY FERC FOR ITS EXPRESSED PURPOSE. THE PURPOSE OF THIS MAP IS TO PROVIDE A GEOREFERENCED VISUAL DEPICTION OF THE LOCATION OF PROJECT FEATURES AND BOUNDARIES BASED ON THE BEST AVAILABLE HISTORICAL DRAWINGS AND DIGITAL REFERENCE SOURCES INCORPORATED INTO THE GEOGRAPHIC INFORMATION SYSTEM (GIS). LOCATIONS HAVE NOT BEEN VERIFIED BY PHYSICAL FIELD SURVEYS AND THIS DRAWING SHOULD NOT BE USED FOR PURPOSES OF DEVELOPING PROPERTY BOUNDARY DESCRIPTIONS.



N:984569.30
E:419729.70

LEGEND

- EASEMENT LAND
- PROJECT BOUNDARY POINT NUMBER
- PROJECT BOUNDARY
- PROPERTY LINE/RIGHT OF WAY
- CITY BOUNDARY
- FENCE
- SHORELINE/STREAM
- OVERHEAD ELECTRICAL
- PRIMARY ROADS
- SECONDARY ROADS
- RAILROAD LINE

EXHIBIT G-4 SHEET 4 OF 4

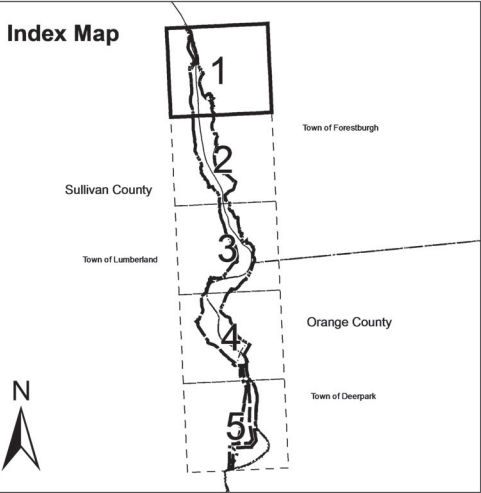
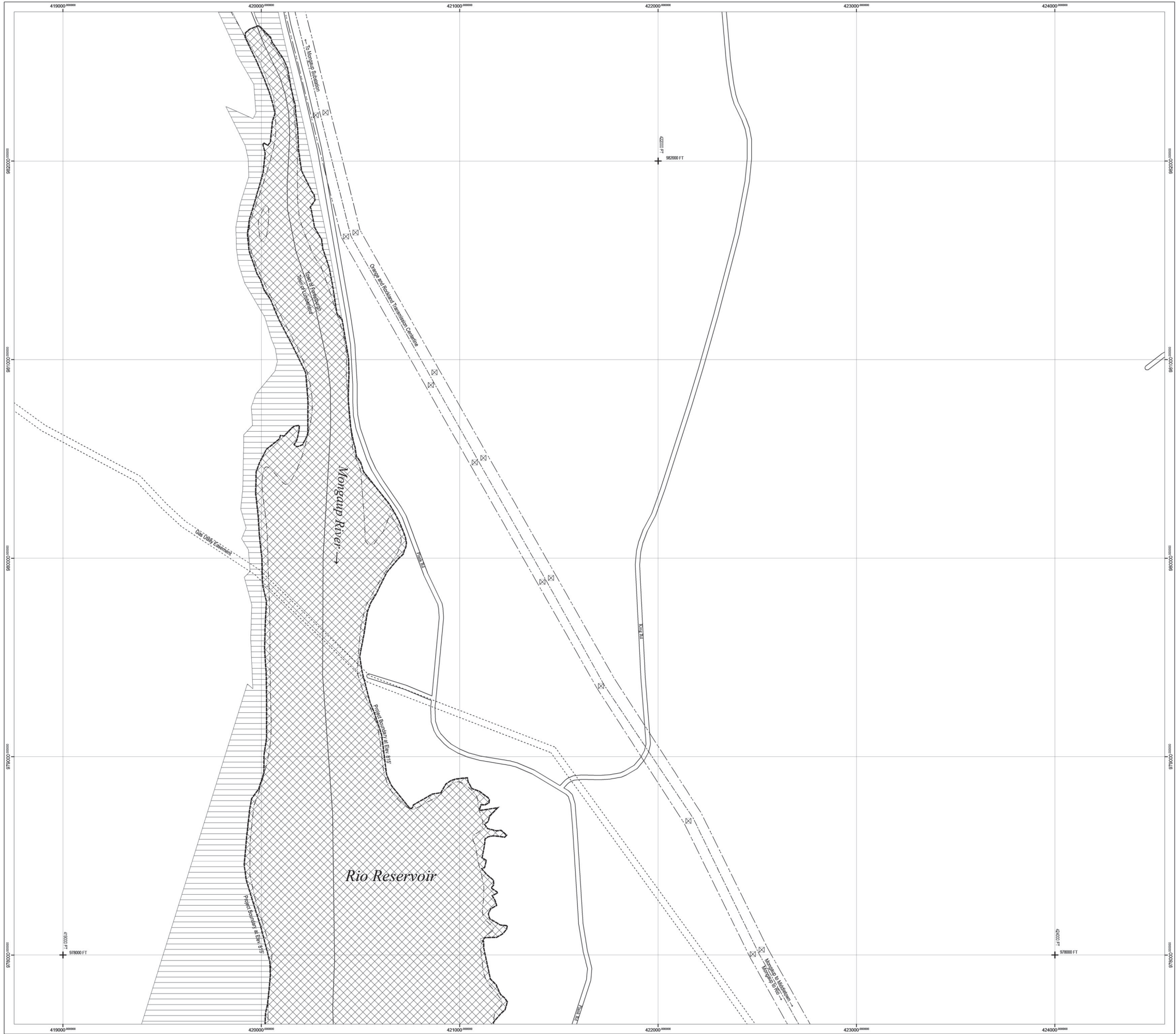
MONGAUP FALLS HYDROELECTRIC PROJECT PROJECT BOUNDARY MAP

200 0 200 400 600 800

EAGLE CREEK HYDRO POWER, LLC. FERC No. 10481

DATE: MARCH 2020 SCALE: 1"=200' APPROVED: PENDING

Rio Project Exhibit G Project Boundary Drawings

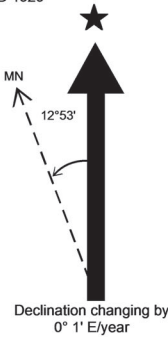


- Legend**
- Recreation Site
 - Utility Tower
 - Gas Utility Line
 - Transmission Center Line
 - R/W Boundary
 - Project Boundary as of June 2012
 - Water Body
- Land Ownership**
- Easement to Licensee
 - Own by Licensee

Coordinate System:
NAD83 State Plane
New York East Zone (feet)

Horizontal Datum:
NAD 1983

Vertical Datum:
NGVD 1929



I HEREBY STATE THAT THE PROJECT BOUNDARY DELINEATION FOR THE RIO HYDROELECTRIC PROJECT (FERC #9690) AS SHOWN ON THIS EXHIBIT "G" DRAWING IS DEVELOPED WITHIN REASONABLE ACCURACIES AS REQUIRED IN 18CFR4.41 TO THE GEOGRAPHIC LOCATION BASED ON A GRAPHICAL POSITIONING IN REFERENCE TO USGS QUADRANGLE MAPPING WITHIN +/-40 FEET. THE RIO HYDROELECTRIC PROJECT DOCUMENTED PROJECT BOUNDARY LINE WAS ADJUSTED AND OR ROTATED TO BEST FIT WITH THE USGS QUADRANGLE MAP FEATURES GRAPHICALLY AND WAS NOT FIELD SURVEYED.



EAGLE CREEK HYDRO POWER, LLC
RIO HYDROELECTRIC PROJECT
PROJECT BOUNDARY – PROJECT NO. 9690

SHEET 1 of 5 **April 2013**

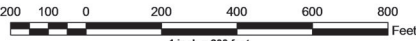
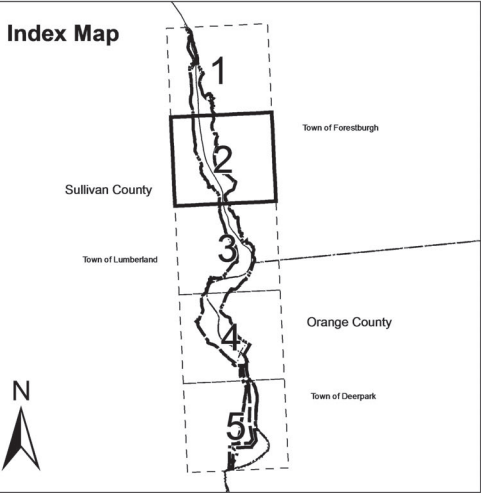


EXHIBIT G-11

FERC DWG NO. P-9690-20

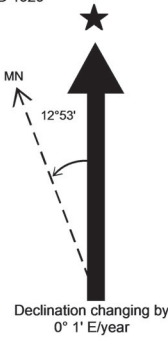


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EAGLE CREEK HYDRO POWER, LLC
RIO HYDROELECTRIC PROJECT
PROJECT BOUNDARY – PROJECT NO. 9690
SHEET 2 of 5 **April 2013**

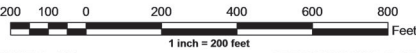
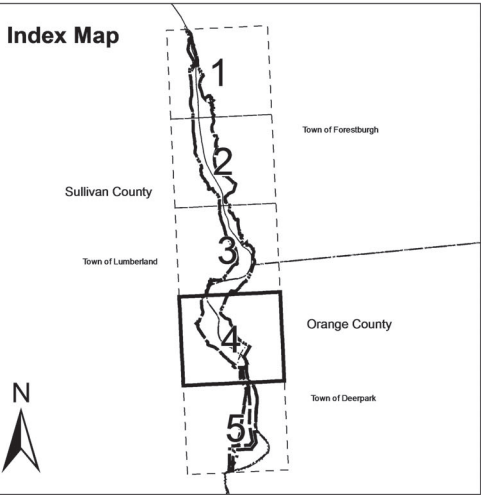


EXHIBIT G-12A **FERC DWG NO. P-9690-21**



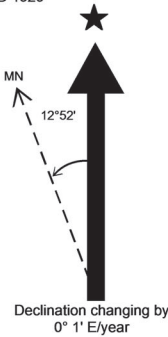
Legend

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- Transmission Center Line
- R/W Boundary
- Project Boundary as of June 2012
- Water Body

Land Ownership

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- Own by Licensee

Coordinate System:
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New York East Zone (feet)
Horizontal Datum:
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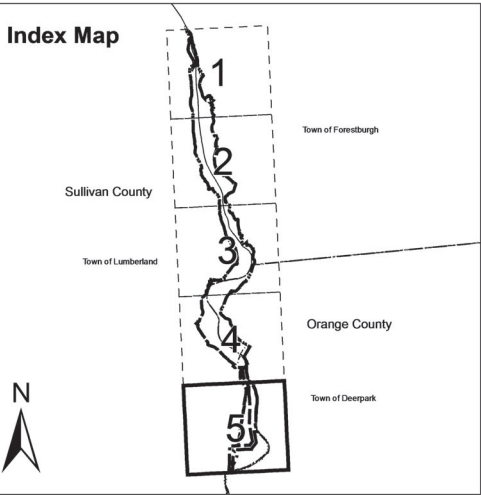
EAGLE CREEK HYDRO POWER, LLC
RIO HYDROELECTRIC PROJECT
PROJECT BOUNDARY – PROJECT NO. 9690

SHEET 4 of 5 **April 2013**



EXHIBIT G-13

FERC DWG NO. P-9690-23



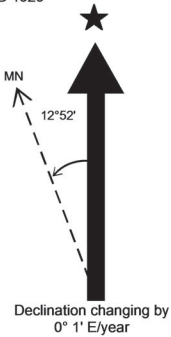
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EAGLE CREEK HYDRO POWER, LLC
RIO HYDROELECTRIC PROJECT
PROJECT BOUNDARY – PROJECT NO. 9690

SHEET 5 of 5 **April 2013**

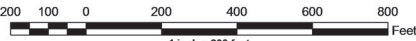


EXHIBIT G-14

FERC DWG NO. P-9690-24

Exhibit H**Ability to Operate (18 CFR §5.18(c))****H.1 Licensee's Ability to Provide Efficient and Reliable Electric Service (18 CFR §5.18(c)(1)(i)(A))****H.1.1 Increase in Capacity or Generation**

Eagle Creek currently has no plans to increase the capacity or generation of the Projects as part of this relicensing.

H.1.2 Coordination of Operation with Upstream and Downstream Projects

As described in Exhibit B of this application, the Mongaup River Hydroelectric Projects are required to operate in a coordinated manner such that the downstream units at the Mongaup Falls and Rio Projects are operated first in order to draw down their respective reservoirs to accommodate the water released from the operation of the unit(s) at the larger, upstream Swinging Bridge Project. There are no additional hydroelectric projects located upstream or downstream of the Mongaup River Hydroelectric Projects.

H.1.3 Coordination of Operation with Electrical Systems

Energy generated from the Projects is bid into the day-ahead wholesale market and updated as necessary in the hourly market and dispatched to meet the demand of the New York Independent System Operator (NYISO). Energy is also dispatched at the request of the local transmission owner, Orange & Rockland Utilities, to support reliability of the electricity grid.

H.2 Need For Project Power (18 CFR §5.18(c)(1)(i)(B))**H.2.1 Cost and Availability of Alternative Sources of Power**

Eagle Creek is not a utility with retail load obligations. If power from the Projects were unavailable for the markets operated by NYISO, the services provided by the Projects to the grid including peaking generation, capacity, reserve, ancillary services, locational forward reserve market, and real-time reserves and regulation would need to be provided from other, existing generation sources or from new generation sources to the system operator. These sources would likely include fossil fuel generation facilities.

H.2.2 Increase in Fuel, Capital, and Other Costs to Purchase or Generate Replacement Power

Costs to the market of replacing services that the Projects provides would include reduced efficiency of other generation sources, as they would need to modify operations to meet peak daily demand, operating reserve requirements, and system ramp needs. Replacement of the Projects would also likely result in additional carbon emissions within New York and/or the Northeast.

H.2.3 Effect of Alternative Power Sources on Licensee's Customers, Operating and Load Characteristics, and Communities Served

The Projects provide an important source of electricity during times of peak demand and fast start and fast ramping capability to manage system ramping needs. In order to replace this important service, NYISO would need to modify its management of energy production. Alternative sources of power may need to throttle their production levels, which could reduce their overall efficiency.

Replacing the Mongaup River Hydroelectric Projects with an alternative facility would result in a change of the system generation characteristics by reducing the available spinning reserve and peak generation capacity. The Mongaup River Hydroelectric Projects provide NYISO with peaking generation, capacity, and spinning reserves. These services are beneficial to the reliability and efficiency of the NYISO electric grid. The Projects also provide NYISO with the ability to bring units to the electric grid quickly in support of a grid disturbance such as a loss of a major unit or other change of load occurrence.

If Eagle Creek was not to receive new licenses and the Projects were taken over by the Federal government or decommissioned, the energy grid would be less reliable and efficient in the absence of the Projects.

H.3 Need, Reasonable Cost, And Availability Of Alternative Sources Of Power (18 CFR §5.18(c)(1)(i)(C))

H.3.1 Average Annual Cost of Power

Swinging Bridge Project

This information is being filed as CUI//Privileged information in Volume V of this application.

Mongaup Falls Project

This information is being filed as CUI//Privileged information in Volume V of this application.

Rio Project

This information is being filed as CUI//Privileged information in Volume V of this application.

H.3.2 Projected Resources to Meet Licensee's Capacity and Energy Requirements over the Short and Long Term

Eagle Creek is an independent electric generator; as such, this section is not applicable.

H.4 Use of Power for Applicant-Owned Industrial Facility (18 CFR §5.18(c)(1)(i)(D))

Eagle Creek does not use the power generated at the Projects to supply its own industrial facilities; therefore, this section is not applicable.

H.5 Native American Tribe as Applicant (18 CFR §5.18(c)(1)(i)(E))

Eagle Creek is not a Native American tribe; therefore, this section is not applicable.

H.6 Impacts of Receiving or not Receiving a License on Licensee's Operations of the Transmission Facility (18 CFR §5.18(c)(1)(i)(F))

Eagle Creek does not own or operate a transmission system. The substations at each Project are directly connected to and incorporated into Orange and Rockland Utilities' transmission system via the interconnects located within the adjacent substations. Therefore, the Projects' transmission lines are limited to the generator leads from each powerhouse to the adjacent substation, summarized in Table A.4-1 in Exhibit A of this application. If new licenses were not received for the Projects, NYISO would lose a resource that is valuable to the reliability of its system in downstate New York and would likely cause an increase in carbon emissions within New York and/or the Northeast.

Eagle Creek maintains a single-line diagram for each of the three Projects which is considered CUI/CEII in accordance with the Commission's regulations and, thus, is not being distributed as a public document. The single line diagrams for the Projects are being filed with the Commission as CUI/CEII in Volume IV of this application.

H.7 Modifications to Project Facilities and Consistency with Comprehensive Plans (18 CFR §5.18(c)(1)(i)(G) and (H))

Section 10(a)(1) and (2) of the Federal Power Act (FPA) requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by a project. The Commission's Scoping Document 2 identified eleven comprehensive plans that are potentially relevant to the Mongaup River Projects. However, based on additional review, it appears that the National Park Service's 1987 Upper Delaware Scenic and Recreational River Plan contains the 1986 Conference of Upper Delaware Townships' Final River Management Plan for the Upper Delaware Scenic and Recreational River and, thus, these two plans have been combined. Additionally, via letter dated February 27, 2020, the Commission approved four additional comprehensive plans, which were filed by the National Park Service on January 7, 2020. Eagle Creek has reviewed the Commission's list of the available comprehensive plans (including the four additional plans approved by the Commission on February 27, 2020 – two of which Eagle Creek believes are applicable to the Projects). Listed below are the 12 comprehensive plans that Eagle Creek believes are applicable to the Projects. For the reasons noted in this application, Eagle Creek has determined that the continued operation of the Projects, as proposed in this Final License Application, is consistent with these plans.

1. Atlantic States Marine Fisheries Commission. 2000. Interstate Fishery Management Plan for American eel (*Anguilla rostrata*). (Report No. 36). April 2000.
2. Delaware River Basin Commission. 1961. Delaware River Basin Compact. Trenton, New Jersey. January 1961.

3. Delaware River Basin Commission. 1983. Resolution No. 83-13. Criteria for defining drought warning and drought conditions and to schedule phased reductions in diversions and releases during such periods. West Trenton, New Jersey. June 29, 1983.
4. Delaware River Basin Commission. 1984. Resolution No. 84-7. Coordinated operation of Delaware River Basin Reservoirs during a basinwide drought. West Trenton, New Jersey. April 25, 1984.
5. National Park Service. 1987. Upper Delaware Scenic and Recreational River. Department of the Interior, Philadelphia, Pennsylvania. February 1987.
6. National Park Service. 2012. Delaware River Basin National Wild and Scenic River Values. Department of the Interior, Pennsylvania, New York, and New Jersey. September 2012.
7. New York State Office of Parks, Recreation, and Historic Preservation. New York Statewide Comprehensive Outdoor Recreation Plan (SCORP): 2014-2019. Albany, New York. January 2014.
8. Pennsylvania Department of Environmental Resources. 1983. Pennsylvania State water plan. Harrisburg, Pennsylvania. January 1983. 20 volumes.
9. Pennsylvania Department of Environmental Resources. 1988. Pennsylvania 1988 water quality assessment. Harrisburg, Pennsylvania. April 1988.
10. Pennsylvania Department of Environmental Resources. 1990. The Pennsylvania scenic rivers program scenic rivers inventory. Harrisburg, Pennsylvania. April 1990.
11. U.S. Fish and Wildlife Service. Canadian Wildlife Service. 2012. North American waterfowl management plan. Department of the Interior. Environment Canada.
12. U.S. Fish and Wildlife Service. Undated. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

H.8 Financial and Personnel Resources (18 CFR §5.18(c)(1)(i)(I))

H.8.1 Financial Resources

Eagle Creek is dedicated to operating the Projects in a safe and reliable manner to provide clean renewable electric energy to the electricity grid. As demonstrated under the existing license, Eagle Creek has the financial resources to meet the operation, maintenance, and capital requirements of the Projects.

H.8.2 Personnel Resources

Operations, maintenance, compliance, technical, management, and administrative activities required for the Projects are performed and supported by Eagle Creek employees and contractors of Eagle Creek. With offices in Morristown, New Jersey, and at the Mongaup Falls Project, Eagle Creek employs sufficient staff to perform the required routine and non-routine activities associated with the Projects. Included within this staff is a chief dam safety engineer; compliance manager; plant (traveling) operators; operation personnel who track, report, and communicate inflows and outflows to the system on a daily basis; and administrative staff. In addition to

local Eagle Creek personnel, Eagle Creek routinely leverages additional technical and administrative staff from other operation centers associated with Eagle Creek’s hydropower portfolio.

Regarding contractors, Eagle Creek routinely employs a number of contractors, consultants, and specialty service providers on an as-needed basis to support the safe and efficient operation of the Projects. In addition, on an as-needed basis, Eagle Creek routinely employs outside service providers in support of operating the Projects to meet license requirements and additional commitments.

H.9 Expansion of Project Lands (18 CFR §5.18(c)(1)(i)(J))

At this time, Eagle Creek does not anticipate a proposed expansion of Project boundaries at the Projects.

H.10 Electricity Consumption Efficiency Improvement Program (18 CFR §5.18(c)(1)(i)(K))

Eagle Creek is an independent electric generator; as such, this section is not applicable.

H.11 Names and Addresses of Native American Tribes with Land on which the Project is Located or Tribes that May Be Affected by the Project as Proposed (18 CFR §5.18(c)(1)(i)(L))

The Projects are not located on Native American lands. In support of the relicensing process, Eagle Creek and the Commission consulted with the following federally-recognized Native American tribes that may be affected by the Projects. Points of contact (names) associated with each of the following Native American Tribes are presented in the Initial Statement of this application and the associated distribution list.

Delaware Nation
P.O. Box 825
Anadarko, OK 73005

Saint Regis Mohawk Tribe
412 State Route 37
Akwesasne, NY 13655

Delaware Tribe
P.O. Box 64
Pocono Lake, PA 18347

Stockbridge-Munsee Community Band of Mohican Indians
N8476 MoHeConNuck Road
Bowler, WI 54416

H.12 Safe Management, Operation, and Maintenance of the Project (18 CFR §5.18(c)(1)(ii)(B))

H.12.1 Existing and Proposed Operation During Flood Conditions

Swinging Bridge Project

During periods of high flow, flows released from Toronto Dam and Cliff Lake Dam may be increased to avoid spill conditions at Toronto Dam and Cliff Lake Dam. The Swinging Bridge Development is operated to pass flows through the Unit No. 2 and 3 powerhouses as well as the minimum flow discharge valve. If inflows exceed the

hydraulic capacity of the powerhouse(s) and the discharge valve, and the Swinging Bridge Reservoir is at full elevation, spill will occur via the Swinging Bridge side-channel spillway.

Mongaup Falls Project

During periods of high flow, flows released from Mongaup Falls Dam may be increased to avoid spill. Additionally, Mongaup Falls Powerhouse is operated to pass inflows. If inflows exceed the hydraulic capacity of the powerhouse, and the Mongaup Falls Reservoir is at full elevation, flows will spill at the Mongaup Falls Dam spillway.

Rio Project

During periods of high flow, the Rio Minimum Flow and Main powerhouses are operated to pass inflows to avoid spill at Rio Dam. If inflows exceed the hydraulic capacity of the powerhouse(s), the Project's bypass valve is used to pass excess flow. If the Rio Reservoir exceeds full elevation of the Project's spillway, flows will spill at the Rio Dam spillway.

H.12.2 Proposed Project Operation and Emergency Action Plan

Eagle Creek proposes operations of the Projects very similar to current operations with no proposed modifications that would affect the Emergency Action Plans maintained for the Projects.

H.12.3 Warning Devices for Downstream Public Safety

Eagle Creek maintains public safety measures at the Projects for public safety upstream, in the vicinity of, and downstream of the Projects pursuant to the Projects' Commission-approved Public Safety Plans. Warning devices for public safety include an audible alarm, visual alarm, signage in multiple locations at each Project, seasonal upstream boat barriers, and additional measures (e.g., restricted public access to the Swinging Bridge Development spillway during spill events) consistent with the Projects' Public Safety Plans.

H.12.4 Monitoring Devices

The Projects are maintained by Eagle Creek in accordance with manufacturers' instructions and industry best practices and monitored as described in the Dam Safety Surveillance and Monitoring Plans (DSSMPs) that are maintained for the Swinging Bridge, Mongaup Falls, and Rio Projects and are on file with the Commission's Division of Dam Safety and Inspections – New York Regional Office.

As further described in the DSSMPs for the Projects, instrumentation at the Projects are summarized below.

Swinging Bridge Project

Instrumentation at the Toronto Dam includes visual observations; crest settlement surveys (every 18 months); five open-well piezometers used to monitor phreatic surfaces within the earth embankment; and five monitoring weirs, four of which are currently monitored for seepage.

Instrumentation at the Cliff Lake Dam includes visual observations; crest surveys; eight open-well piezometers (two of which were recently installed in 2020); and one weir that is currently monitored for seepage.

Instrumentation at the Swinging Bridge Development includes visual observations, a rain gage, a reservoir elevation staff gage, six seepage monitoring points, 21 standpipe and 45 vibrating wire piezometers, two active and two backup inclinometers (installed primarily to monitor slope movements during construction of the conduit filters), and 51 dam crest settlement monuments.

Mongaup Falls Project

Instrumentation at the Mongaup Falls Dam includes visual observations; three inactive standpipe piezometers located along the spillway crest (designated as M-1, M-2 and M-3); two vibrating wire piezometers installed at the toe of the spillway; four seepage monitoring locations designated as W1, W2, W3 and W4; and post-tensioned anchor heads.

Rio Project

Instrumentation at Rio Dam includes visual observations, 18 standpipe and cassagrande-type piezometers (15 of which are functional) for monitoring phreatic surfaces and uplift pressures, three seepage monitoring points (two weir boxes and one pipe), two non-functioning load cells for monitoring the load in the post-tensioned spillway anchors, three inclinometers (two of which are currently monitored) for monitoring slope movements along a section of the penstock, and seven spillway foundation toe drains (five of which are functional). A crack monitor is located on the Rio Dam Bridge near the gatehouse to monitor for any movement that may occur between the bridge deck and the adjoining bridge abutment.

H.12.5 Employee Safety and Public Safety Record

Eagle Creek manages the Projects consistent with its long-standing commitment to employee safety. This commitment begins with compliance with applicable local, state, and federal regulations regarding the safe operation of industrial and electrical facilities.

As a result of the safety program implemented by Eagle Creek, no Occupational Safety and Health Administration Lost Time or Recordable accidents have occurred at the Projects since March 18, 2017. In addition, no reportable public safety incidents have occurred within the Projects' boundaries within at least the last ten years.

H.13 Current Operation of the Project (18 CFR §5.18(c)(1)(ii)(C))

The Projects have been operated in a manner consistent with the requirements of the current license. Details regarding operation and constraints of the Projects are discussed in Exhibit B of this application. The Projects will continue to operate in a manner consistent with the requirements of the current license until the new licenses are issued, after which time the Projects will be operated in accordance with the requirements and conditions of the new licenses.

H.14 Project History (18 CFR §5.18(c)(1)(ii)(D))

A summary of the history of the Projects, including recent operation and maintenance upgrades, are provided in Exhibit C of this application.

H.15 Summary of Generation Lost at the Project Due to Unscheduled Outages (18 CFR §5.18(c)(1)(ii)(E))

A summary of unscheduled outages for the Projects from 2014 through 2018 is provided in Tables H.15-1 through H.15-3.

TABLE H.15-1
SUMMARY OF UNSCHEDULED OUTAGES LASTING
LONGER THAN 24 HOURS (2014-2018) AT THE SWINGING BRIDGE PROJECT

Unit	Outage Start Time	Outage End Time	Duration	Cause
Station	03/02/2018 14:00	03/03/2018 21:20	31.3 hours	Storms (ice, snow, etc.)

TABLE H.15-2
SUMMARY OF UNSCHEDULED OUTAGES LASTING
LONGER THAN 24 HOURS (2014-2018) AT THE MONGAUP FALLS PROJECT

Unit	Outage Start Time	Outage End Time	Duration	Cause
Station	11/05/2014 18:00	11/30/2014 24:00	606 hours	69kV Circuit Breaker Failure
2	09/26/2018 00:00	10/12/2018 12:00	396 hours	Exciter Commutator Brushes

TABLE H.15-3
SUMMARY OF UNSCHEDULED OUTAGES LASTING
LONGER THAN 24 HOURS (2014-2018) AT THE RIO PROJECT

Unit	Outage Start Time	Outage End Time	Duration	Cause
3	9/6/2014 01:30	09/12/2015 18:00	160.5 hours	Relay Failure
Station	11/19/2014 08:15	02/16/2015 10:00	2137.7 hours	Rio Unit 3 Penstock Event
3	2/16/2015 10:00	12/23/2015 10:00	7440.0 hours	Rio Unit 3 Penstock Event
2	02/26/2015 18:00	02/28/2015 24:00	54.0 hours	Turbine Bearing
2	03/01/2015 00:00	03/06/2015 13:00	133.0 hours	Turbine Bearing
1	10/19/2015 00:00	10/26/2015 13:00	181.0 hours	Generator Breaker
3	08/30/2016 19:00	09/06/2016 13:00	162.0 hours	Line 83 Shorted to Ground
1	01/23/2018 15:50	01/25/2018 16:40	48.8 hours	DC Controls Signal Relay
1	10/26/2018 13:00	10/30/2018 09:00	92.0 hours	Turbine Shaft Packing

H.16 Record of Compliance (18 CFR §5.18(c)(1)(ii)(F))

Since obtaining ownership of the Projects in 2011, Eagle Creek has operated the Project pursuant to the requirements of the existing licenses or otherwise communicates an excursion to the Commission and the applicable resource agencies. Additionally, in support of the Projects' existing licenses, Eagle Creek routinely monitors downstream flows associated with the Projects, as well as water quality consistent with the water quality monitoring program developed in coordination with the New York State Department of Environmental Conservation (NYSDEC). Based on the water quality monitoring activities, Eagle Creek and NYSDEC have identified conditions when dissolved oxygen concentrations (e.g., downstream of Swinging Bridge Dam) deviate from the applicable standards. Based on this understanding, Eagle Creek has been coordinating with NYSDEC regarding operating conditions and measures to meet applicable dissolved oxygen standards.

H.17 Actions that Affect the Public (18 CFR §5.18(c)(1)(ii)(G))

Eagle Creek believes that past actions and future actions related to the Projects will not adversely affect the public. To the contrary, Eagle Creek believes that actions by the Licensee are favorable to the public in that the Projects provide clean, zero-carbon emission, renewable electric energy as well as other non-power benefits associated with the Projects.

H.18 Ownership and Operating Expenses Affected by Transfer of License (18 CFR §5.18(c)(1)(ii)(H))

There is presently no proposal or application to transfer the Projects' licenses from the existing Licensee; therefore, this section is not applicable.

H.19 Annual Fees Under Part 1 of the Federal Power Act (FPA) (18 CFR §5.18(c)(1)(ii)(I))

Given that there are no federal or Native American lands associated with the Projects, Eagle Creek does not pay annual fees under Part 1 of the FPA