EAGLE CREEK
RENEWABLE ENERGY
— EXCELLENCE IN HYDRO —

Alice Falls Hydroelectric Project (FERC No. 5867)

Relicensing Joint Agency Meeting

January 24, 2019

Introduction/Meeting Purpose

Agenda

- Introductions/Meeting Purpose
- Review of Federal Energy Regulatory Commission (FERC) Traditional Licensing Process and Schedule
- Review of Project Facilities and Operations
- Review of Existing Resources and Information provided in the Pre-Application Document (PAD)
- Proposed Resource Studies
- Comments and Questions
- Site Visit Logistics

Introduction/Meeting Purpose

Meeting Purpose

- Initial consultation meeting for the relicensing of the Alice Falls Hydroelectric Project (P-5867)
- Review Alice Falls Project FERC relicensing process and schedule
- Provide agencies and stakeholders information pertaining to existing Project facilities and resources
- Identify any additional relevant existing information pertaining to the Project area resources
- Review process for submittal of comments, additional information, and study requests for the development of the FERC license application

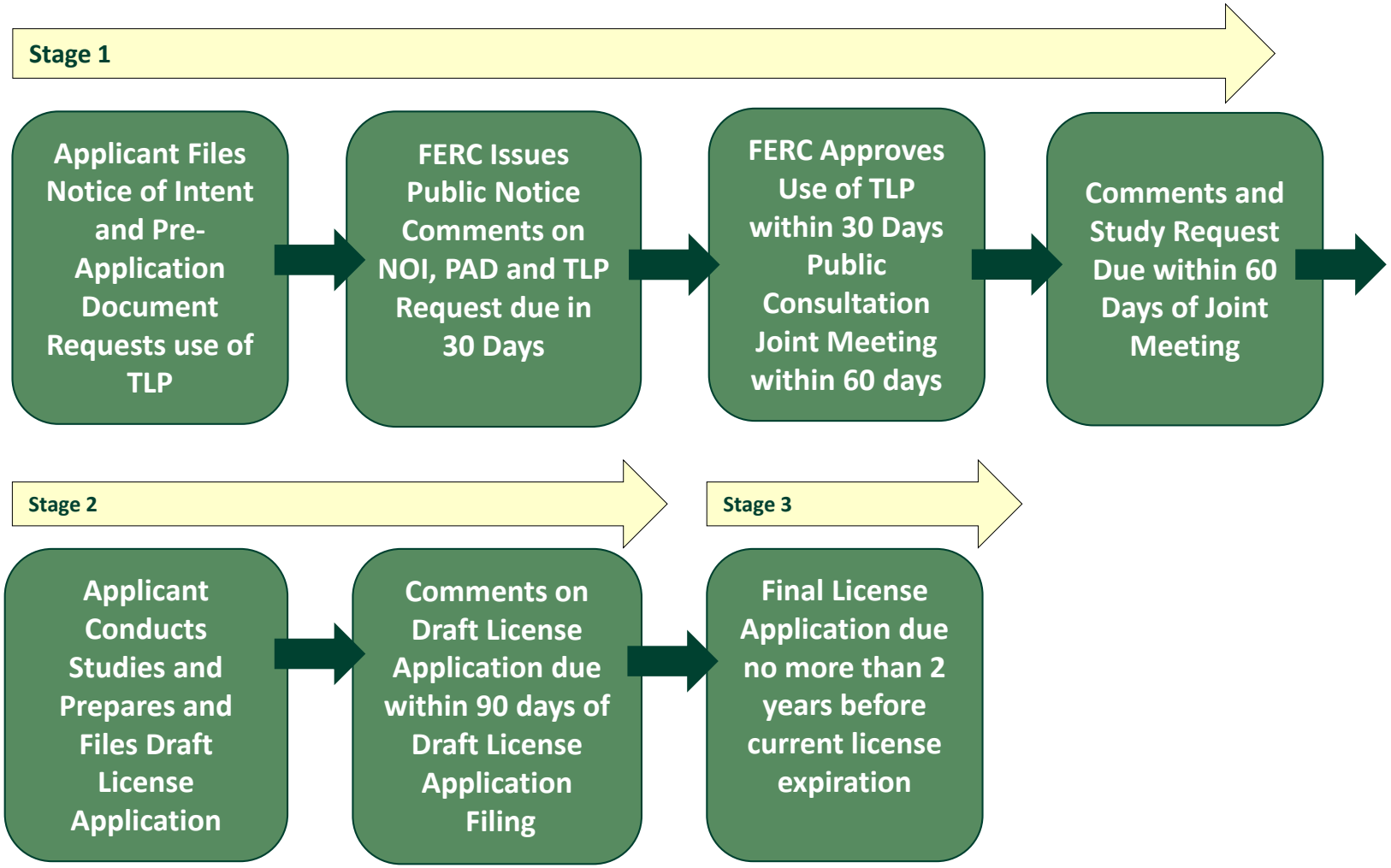
Alice Falls Hydroelectric Project (FERC No. 5867)

- Alice Falls Project is located on the Ausable River in the Hamlet of Keeseville, Clinton and Essex Counties, New York
- Licensee is Alice Falls Hydro LLC, a wholly-owned subsidiary of Eagle Creek Renewable Energy, LLC
- Original 40-year FERC license issued on October 5, 1983 which expires on October 1, 2023
- Eagle Creek acquired the Project in July 2016

FERC Relicensing Activities to Date

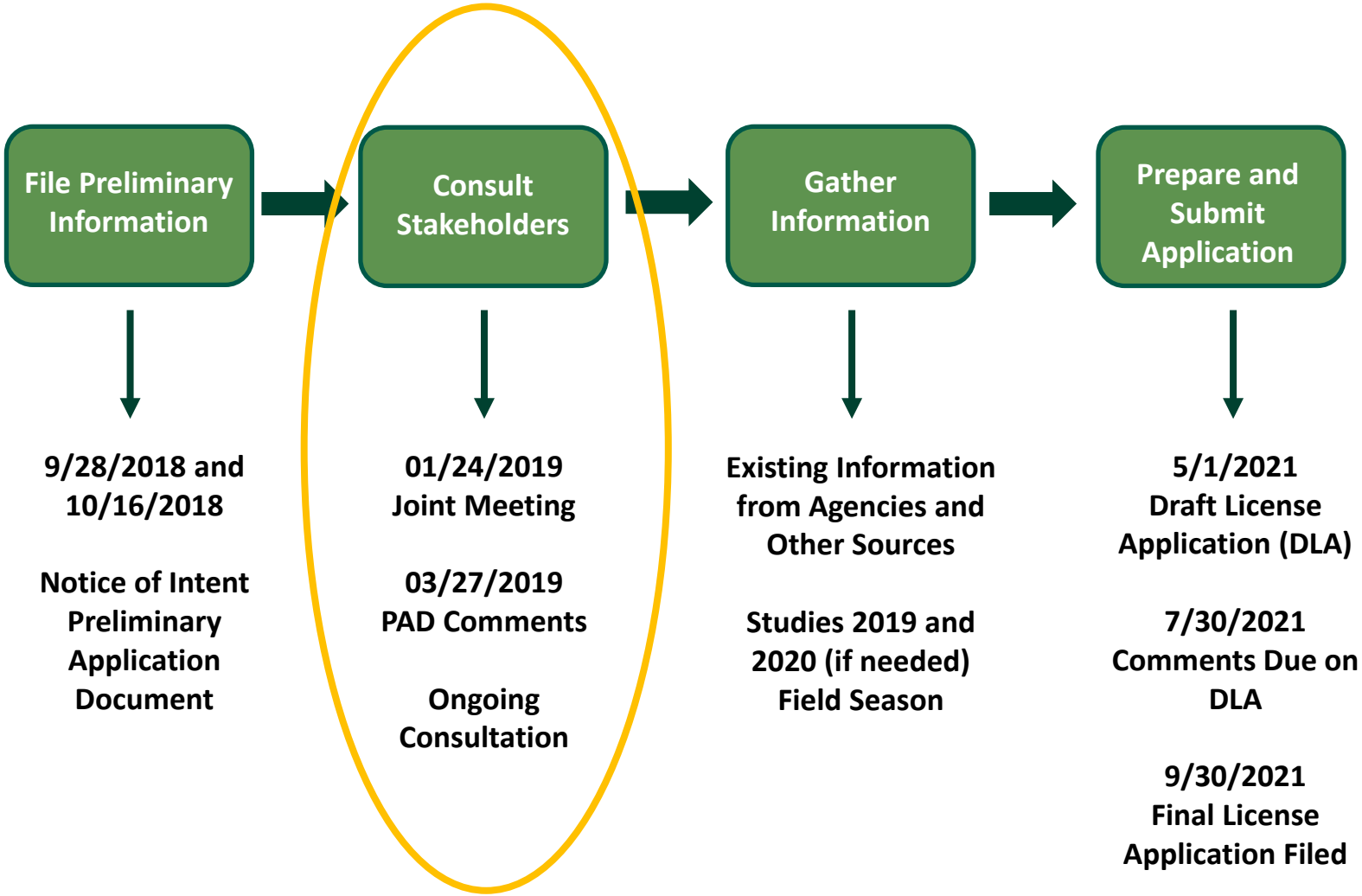
- Alice Falls Hydro submitted Notice of Intent (NOI) and Pre-application Document (PAD) to FERC, agencies and stakeholders on September 28, 2018; Supplement on October 16, 2018
- Alice Falls Project Relicensing is following the FERC Traditional Licensing Process (TLP)
  - Concurrent with the NOI/PAD filing, Alice Falls Hydro requested use of the TLP
  - TLP Supported by NYSDEC and USFWS
  - TLP granted by FERC on November 27, 2018
- Notice of this Joint Meeting and Site Visit submitted to FERC and stakeholders on January 4, 2019
- Public Notice of Joint Meeting and Site Visit provided in the Clinton and Essex County Newspapers - BG/NC Sun and The Valley News Sun - on January 5, 2019

Traditional Licensing Process – Pre-Filing

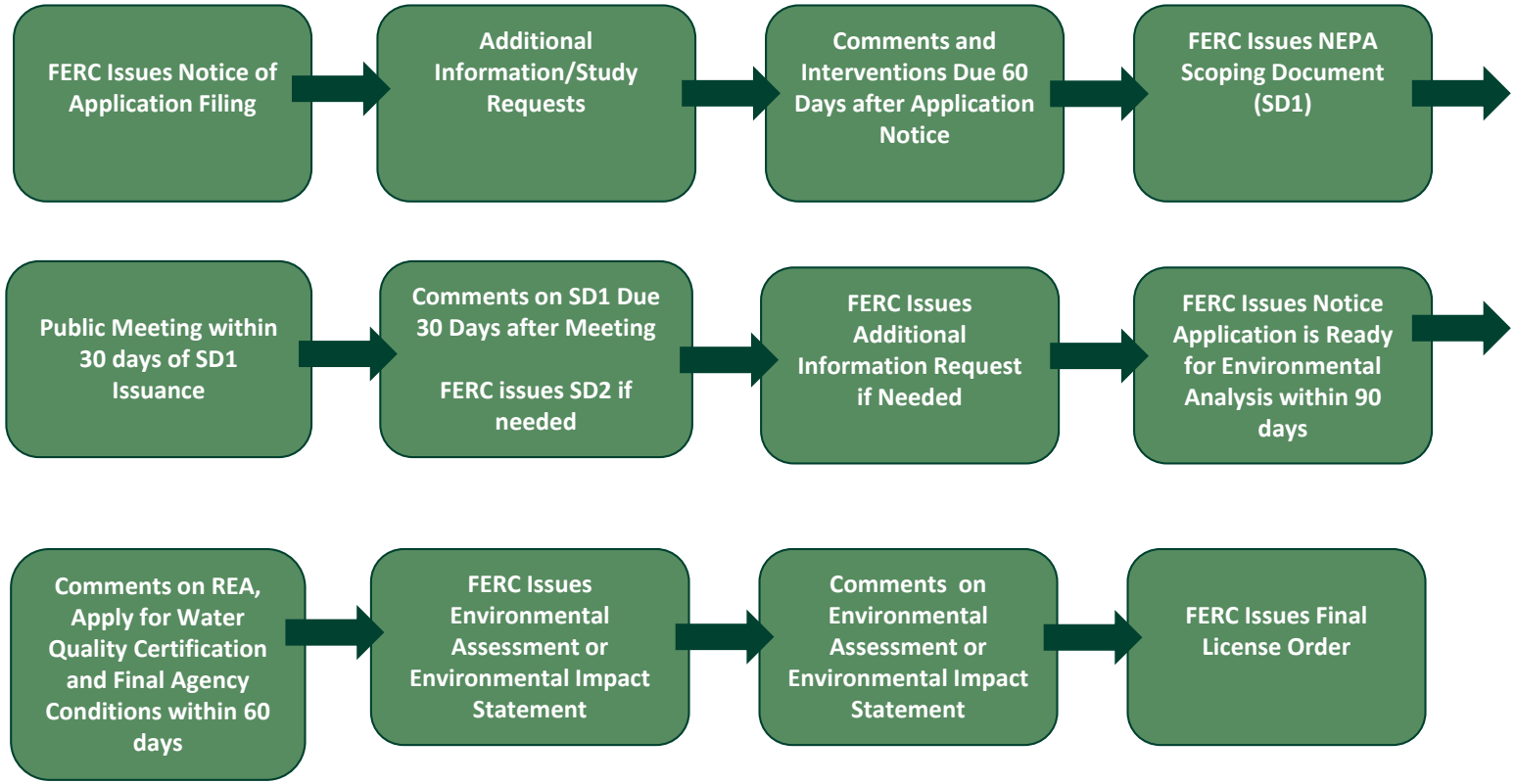


Alice Falls Project FERC Relicensing Process

Traditional Licensing Process – Pre-Filing



Traditional Licensing Process – Post Filing



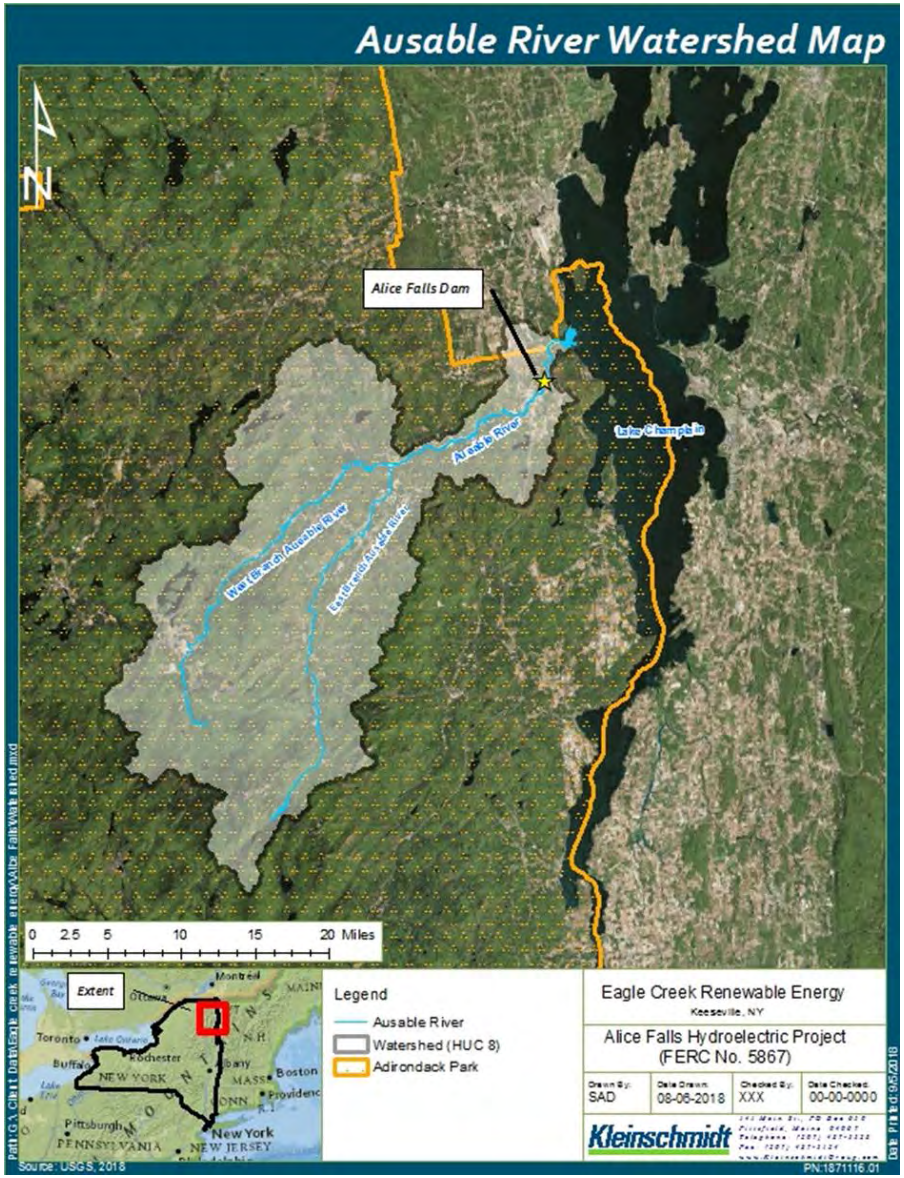
Questions?

Alice Falls Project Overview

General Project Location

- Alice Falls Project is within the approximately 512 square mile Ausable River Watershed

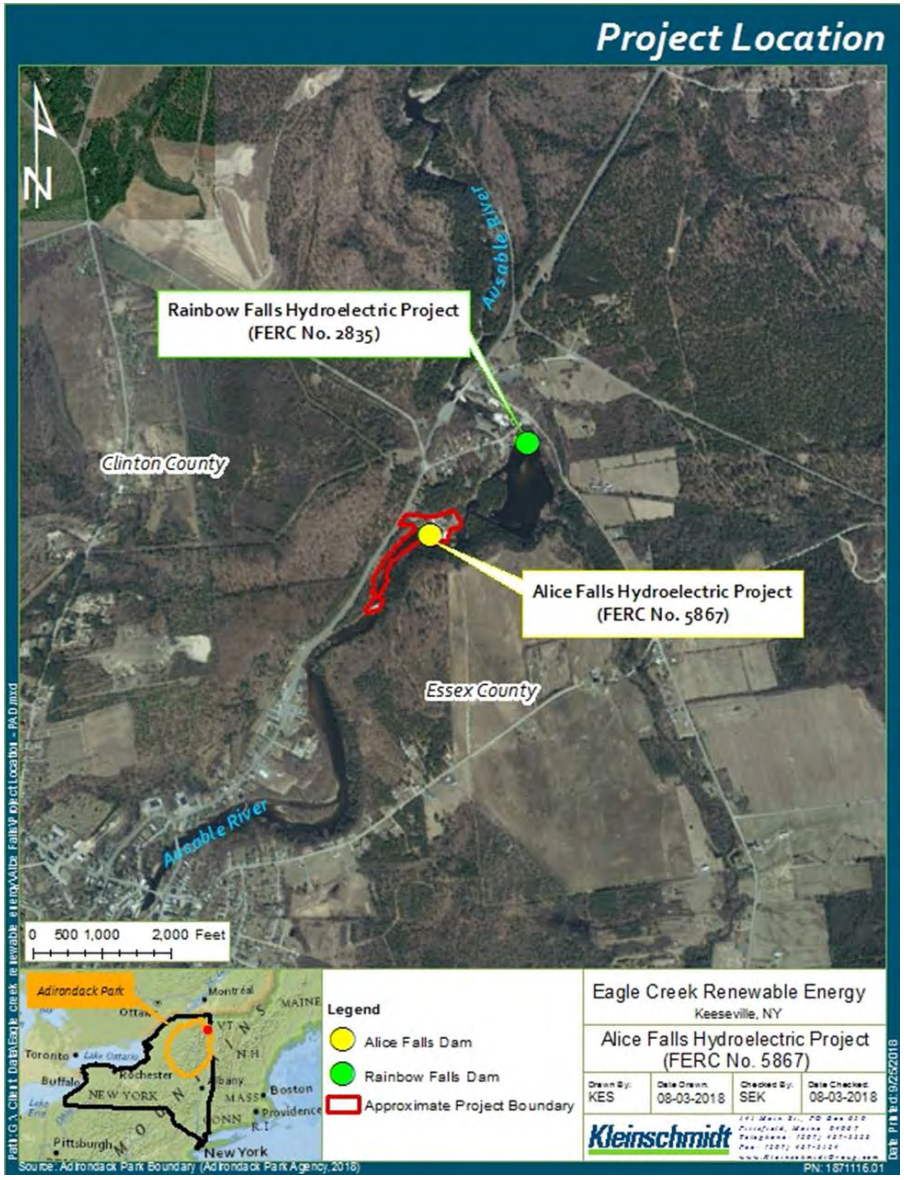
- Alice Falls Project is located on the Ausable River approximately 6 river miles upstream of the confluence with Lake Champlain



Alice Falls Project Overview

Hydroelectric Projects on Ausable River

- The Rainbow Falls Hydroelectric Project (FERC No. 2835) is located 0.5 miles downstream of Alice Falls Dam and just upstream of the Ausable Chasm
- Both Projects are operated as Run-of-River



Alice Falls Project Overview

Project Boundary

- Encompasses the Project impoundment, Project lands (including the substation and recreation areas) and immediately downstream of the Project tailrace

Alice Falls Project General Location of Project Facilities

Alice Falls Project Impoundment

- The Alice Falls impoundment is approximately 1,250-feet-long and encompasses approximately 4.8 acres
- There is negligible net storage capacity
- The shorelines are moderately to steeply sloped and predominantly forested
- The western shoreline is bordered by New York State Route 9

Alice Falls Project Facilities

Alice Falls Project Dam

- Alice Falls dam is a rehabilitated, stone masonry dam originally built in 1892-1893
- The dam is approximately 135-feet long by 80- feet-high and is situated atop a ledge outcrop adjacent to the natural Alice Falls

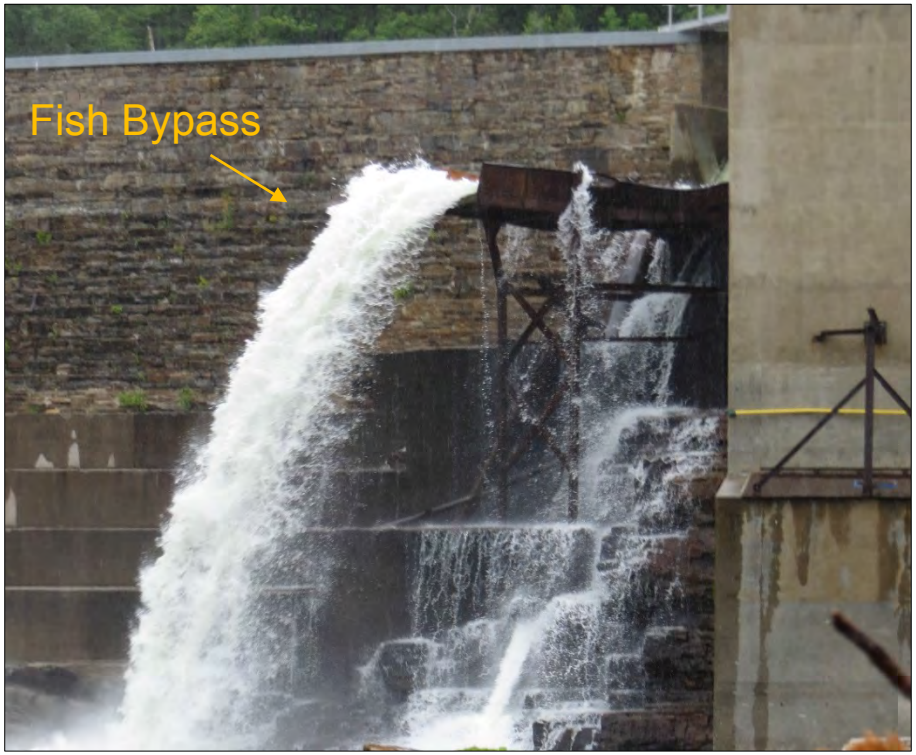
Alice Falls Project Intake and Penstock

- The Project has a 10-foot-wide by 150-foot-long concrete intake
- The intake has a 41-foot-wide by 14-foot-high opening with bar trashracks with 1-inch clear spacing
- The intake connects to a divided 45-foot-long reinforced concrete penstock that conveys water to the powerhouse
  - Penstock 1 is 18-feet-wide by 12-feet-high
  - Penstock 2 is 10-feet-wide by 12-feet-high

Alice Falls Project Powerhouse

- The powerhouse measures 35-feet-wide by 56-feet-long by 32-feet-high
- The powerhouse contains 2 generator units:
  - Turbine Unit No. 1 is a semi-Kaplan Model V5 rated at 1.5 MW
  - Turbine Unit No. 2 is a S. Morgan Smith Kaplan rated at 0.60 MW

Alice Falls Project Downstream Fish Passage



- The fish bypass system consists of a 17-foot-long by 5-foot-wide chute that discharges fish beyond a rock ledge and into a plunge pool
- The system allows for landlocked salmon, rainbow trout, brown trout, and brook trout to safely pass over the Alice Falls dam

Alice Falls Project Spillway

- A 110-foot-long natural rock ledge spillway that supports 2.5-foot-high wooden flashboards is located adjacent to the Dam

Alice Falls

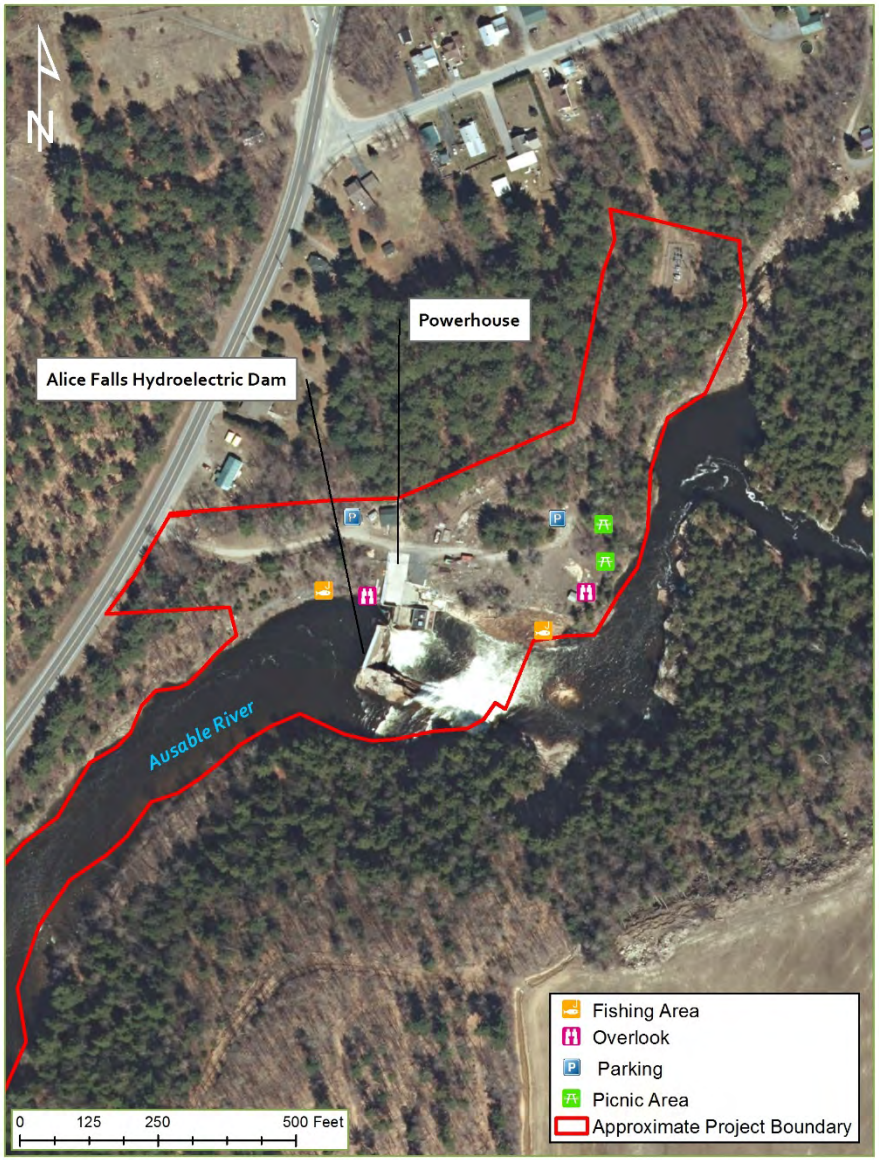
- Alice Falls is located at end of the spillway and is approximately 35-feet-high
- The flows over the falls and from the tailrace converge almost immediately at the discharge of the powerhouse

Alice Falls Project Grid Connection

- A 5 kV underground conduit runs from the powerhouse to a substation.
- A 1,500-foot-long, 46 kV buried transmission line then extends north and ties into NYSENG's interconnection on Old State Road

Project Recreation Access

- Project Recreation access areas include:
  - Impoundment Fishing Access Area
  - Tailrace Fishing Access Area
  - Two Parking Areas
  - Overlook Area with Picnic Areas and Shelter
- Alice Falls Hydro provides and maintains recreation areas from May 20 – September 8 on weekdays from 8 am – 3 pm



Project Recreation Access

Alice Falls Project Overview

Existing Project Operations

- Run-of-river plant where inflow to the powerhouse is generally equal to outflow
- Provides continuous minimum flow of 25 cfs, or inflow, whichever is less, over the Alice Falls year-round
- Provides an additional 125 cfs, or inflow, whichever is less, over the Alice Falls daily Monday – Friday, 8am - 3pm from May 20th – September 8th
- Provides continuous flow of 20 cfs, or inflow, whichever is less, for the seasonal fish bypass facility from April 1 – November 30

Questions?

Geology and Soils

- Alice Falls Project is in the Potsdam Sandstone of the Beekmantown Group which is composed mainly of quartz with pebble or cobble conglomerate at its base
- The soils near the Alice Falls Project are loamy sands and sandy loams that are well drained to excessively drained
- Downstream of the Project, below the Rainbow Falls Project, the Ausable River traverses through the Ausable Chasm

Water Resources - Water Quantity

- River flow data for the Alice Falls Project was generated from U.S. Geological Survey (USGS) gage No. 04275500 (Ausable River near Ausable Forks) for the period 1990 to 2018
- The drainage area at the gage is 446 square miles; data from the gage were pro-rated by a factor of 1.05 to account for the additional drainage area at the Alice Falls Project

Month	Mean flow (cfs)	Median flow (cfs)	Minimum flow (cfs)	Maximum flow (cfs)
January	716	461	169	16,742
February	508	355	191	8,562
March	946	551	156	14,157
April	2,380	1,680	242	20,337
May	1,604	1,236	252	10,719
June	1,008	665	140	10,742
July	537	373	122	5,247
August	438	280	112	20,562
September	392	249	96	7,742
October	779	476	137	13,708
November	873	599	236	24,719
December	757	547	180	8,876
Annual	918	520	96	24,719

Water Resources – Water Quality

- The Ausable River in the Project area is classified as a Class C water
  - pH - shall not be less than 6.5 nor more than 8.5
  - Dissolved Oxygen (DO) - for non-trout waters, the minimum daily average shall not be less than 5.0 mg/L, and at no time shall the concentration be less than 4.0 mg/L
  - Dissolved Solids -shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/L
- Ausable River Association (ASRA) currently monitors temperature, dissolved oxygen (DO), specific conductance, and pH at 25 stream locations throughout the Ausable watershed on a bi-weekly basis
  - Two water monitoring stations are located just upstream and downstream of Alice Falls Dam:
    - Clintonville Station = 8.5 miles upstream
    - Carpenters Flatts Station = 4 miles downstream
- Recorded water quality data resides within acceptable limits imposed for Class C waters

Fish and Aquatic Resources

- The Ausable River has a reputation for excellent brown trout, brook trout, rainbow trout, and landlocked salmon fishing
- Warm and cool water fish occur in the Ausable River (e.g., smallmouth bass, yellow perch) and other non-game resident species are likely to occur in the Alice Falls impoundment
- No federally listed species are known to exist in the Project area
- A NYSE&G survey conducted in 1999 identified 34 fish species, upstream and downstream of the Rainbow Falls Project - see PAD Table 5-8
- Angling for trout on the Ausable River is open from April 1 – October 15 with a daily limit of 5 fish of any size, except in specific areas of the West Branch
- Angling for landlocked Atlantic salmon occurs below the Alice Falls Project, specifically below the mouth of Ausable Chasm and is open year-round

Fish and Aquatic Resources

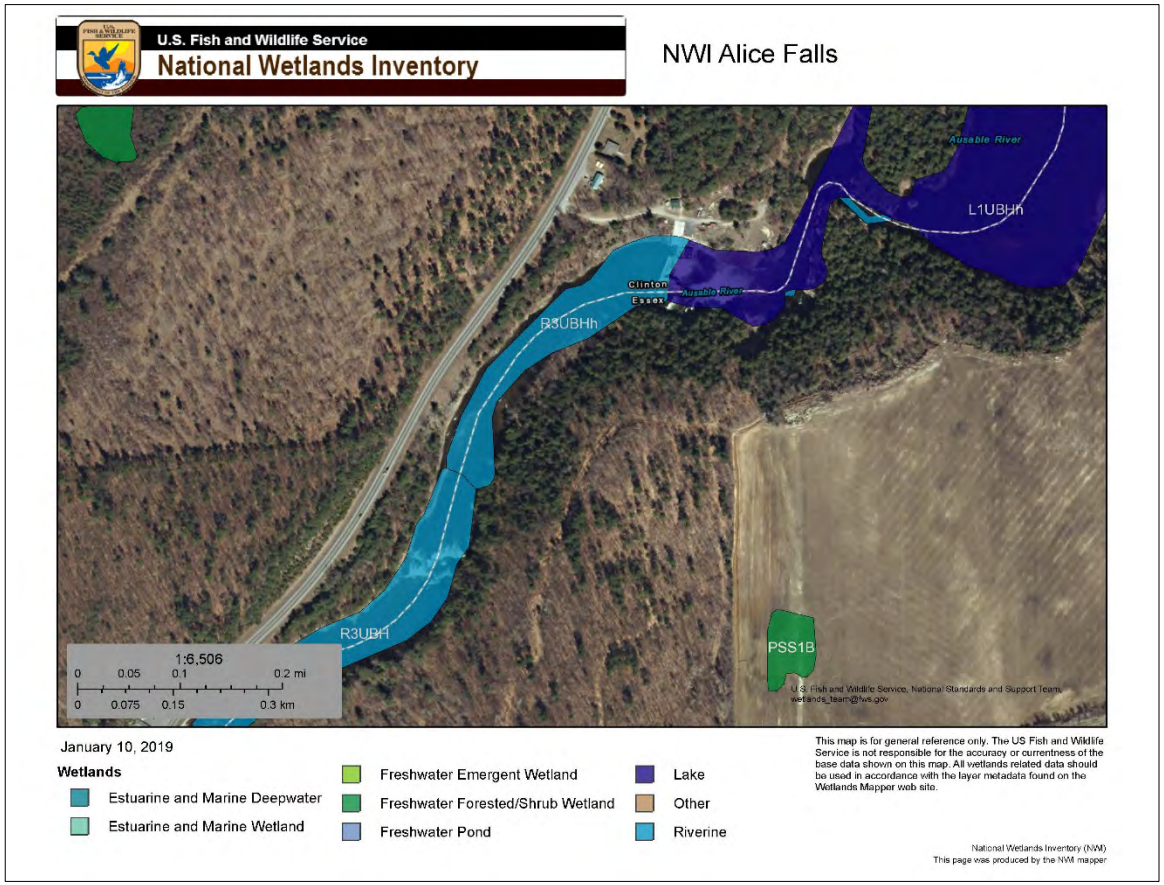
- The Project's fish bypass system directs a 20 cfs spill (generally from April 1 – November 30) clear of a rock ledge and into an approximately 10-feet-deep plunge pool located about 36-feet below the chute
- The Licensee, per FERC Order Approving and Modifying a Fish Bypass Mortality Study Plan (May 28, 1993), conducted a Fish Bypass Mortality Study in 1994 to evaluate fish passage through the bypass system
- The study was conducted in consultation with the New York State Department of Environmental Conservation (NYSDEC) and U. S. Fish and Wildlife Service (USFWS)
- The study estimated fish passage mortality through the bypass facility at 1.2% and concluded that the bypass facility successfully passes out-migrating fish with without undue risk of injury or death

Wildlife and Botanical Resources

- The PAD provides descriptions of Wildlife and Botanical Resources
- The PAD, Appendix F, provides lists of mammals, birds, amphibians and reptiles that may occur in the Project vicinity based on species distribution and habitat preferences
- Potential RTE species within the vicinity of the Project include:
  - The federally endangered Indiana bat (*Myotis sodalist*), and the federally threatened species northern long-eared bat (*Myotis septentrionalis*)
  - The State of New York listed bald eagle (state threatened), golden eagle (state endangered), and golden-winged warbler (species of special concern)
  - No federally- listed botanical species, however, several state-listed plant species are identified as potentially occurring - see Table 5-14 in the PAD

Wetlands, Riparian and Littoral Resources

- USFWS National Wetlands Inventory (NWI) database
- About 6.5 acres of permanently flooded freshwater wetland within the Project boundary
- Riverine (R3UBHh) and Lacustrine (L1UBHh)

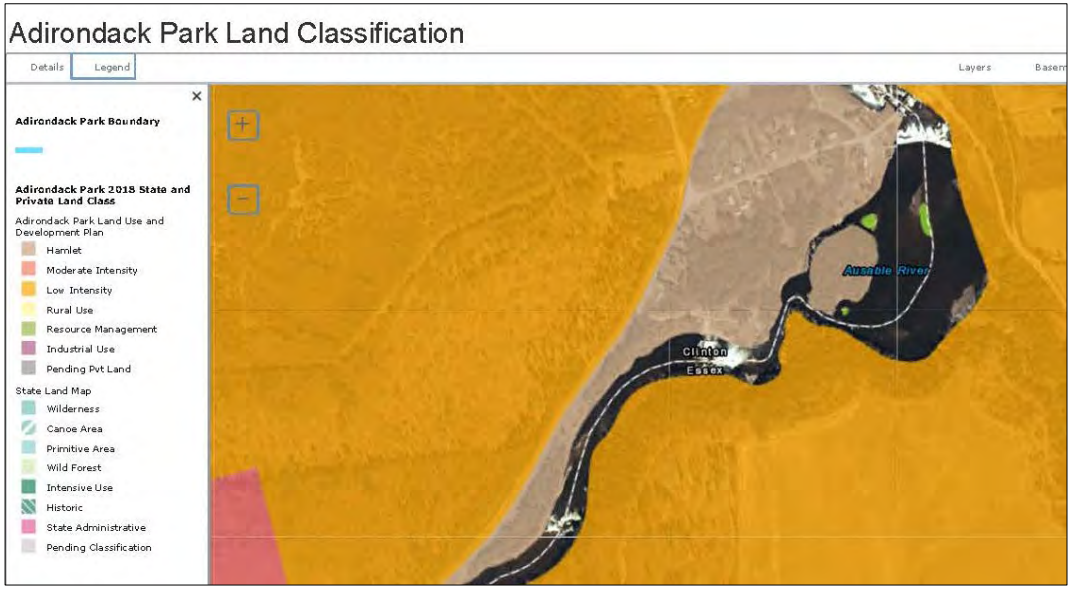


Recreation and Land Use Resources

- Recreation Facilities – include overlook and picnic areas, fishing access areas
- The previous Licensee modified the seasons and timing of public access to the Project to accommodate recreation visitors (predominantly anglers) at the site
- Currently public access is from May 20-September 8 from Monday-Friday from 8:00 am to 3:00 pm with on-site staff for safety purposes
- 1996 FERC Form 80 recorded 46 daytime annual total recreation days and 12 daytime peak weekend recreation days, and the tailwater fishing facilities were estimated to be utilized at 25 percent capacity
- The Commission granted the Licensee an exemption from Form 80 on July 22, 1998

Recreation and Land Use Resources

- Portions of the Ausable River are designated by New York State as recreation and scenic river
- Alice Falls is within designated recreation river, but not within designated scenic river segment
- Alice Falls is located within the Adirondack Park
- Adjacent land use is identified as Hamlet and Low Intensity



Aesthetic Resources

- Article 36 of the 1983 license required consultation and studies for aesthetic flow releases at Alice Falls
- 1992 FERC Order prescribes an aesthetic flow during daylight hours from 11:00 am to 8:00 pm during recreation season (defined as the Friday before Memorial Day weekend through to the Tuesday following Columbus Day weekend)
- Since 2005, the Project is open to the public seasonally from May 20 to September 8 on weekdays from 8:00 am to 3:00 pm.
- Accordingly, the aesthetic flow release was adjusted to accommodate the period when public access is provided at the Project site.

Alice Falls Project - Existing Environment

Cultural Resources

- A Stage 1A Literature Review and Stage 1B Archaeological Survey of the Alice Falls Project area was conducted in 1984, prior to re-development of the Project site
- Within Stage 1B, six shovel test pits were excavated within the Project area, and did not provide any evidence of prehistoric occupation or any historic artifacts
- The Cultural Resource Information System (CRIS) of New York lists the Alice Falls Project as eligible for the National Register of Historic Places
- On August 28, 2011, Tropical Storm Irene caused extensive damage to the Project facilities and major repairs were made

Tribal Resources

- There are no American Indian lands, known traditional cultural properties or religious properties, or National Register-eligible or -listed sites within the Project boundary
- The St. Regis Mohawk Tribe has expressed interest in participating in the Project relicensing

Alice Falls Project – Proposed Measures

Proposed Operations

- Alice Falls Hydro proposes to continue existing Project operations
- Continue run-of-river operations
- Continue providing continuous minimum flow of 25 cfs, or inflow, whichever is less, over Alice Falls
- Continue providing 125 cfs, or inflow, whichever is less, over Alice Falls on weekdays from May 20 – September 8 from 8:00am – 3:00pm
- Continue downstream fish passage with continuous flows of 20 cfs, or inflow, through the fish bypass facility from April 1 – November 30

Proposed Studies

- Alice Falls Hydro is proposing to conduct a recreation study of visitors at the Project site to provide additional information regarding recreation visitation use and preferences at the Alice Falls Project

Alice Falls Project TLP Pre-filing Schedule

Activity	Timeframe	Date
Stage 1 - Initial Consultation		
Notice of Intent (NOI); Pre-Application Document (PAD); Request to Use TLP Submittal	5 Years Prior to License Expiration	9/28/2018
FERC Approval of TLP	60 Days After NOI, PAD, TLP Request	11/27/2018
Joint Agency Consultation Meeting	30-60 Days After TLP Approval	1/24/2019
End of PAD Comment/Study Request Period	60 Days After Consultation Meeting	3/27/2019
Stage 2 - Studies and Draft Application		
Resource Studies • Study Plan Development • Agency Consultation • Study Implementation • Study Reports	During 2019 and 2020 seasons and final reports incorporated into Draft License Application	2019 & 2020 Field Seasons
Draft License Application (DLA) Submittal	Approximately 150 Days Before Final License Application	5/1/2021
End of DLA Comment Period	90 Days After DLA Submittal	7/30/2021
Stage 3 - Final Application		
Final License Application (FLA) Submittal	2 Years Prior to License Expiration	9/30/2021
License Expiration		9/30/2023

Alice Falls Project - Next Steps

Comments and Study Requests

- Submit PAD comments, additional relevant information and study requests to Alice Falls Hydro within 60 Days – by March 27, 2019
- Submit comments and information to Alice Falls Hydro (see relicensing contacts)

Other Additional Existing Information

- Information pertaining to Project area resources?
- Additional relevant regional management plans?
- Any additional known information and existing studies?
- Status of NYSDEC water quality monitoring for Ausable River near Project?

Resource Studies

- To be conducted during 2019 and 2020 (if needed) field season
- Study Plan Development – Spring 2019
- Agency Consultation – Spring 2019
- Study Implementation and Reports – Summer - Winter 2019

Study Requests Information

- Describe goals and objectives of the proposed study
- Explain relevant resource management goals or relevant public interest considerations
- Describe existing information and the need for additional information
- Explain the nexus between project operations and effects on resource to be studied and how the study results would inform the development of license requirements
- Explain how methodology and how it is consistent with generally accepted scientific practice
- Include requested preferred data collection and analysis techniques and schedule
- Describe level of effort and cost

Alice Falls Project Relicensing Contacts

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Questions?

Site Visit Logistics

- ***Location/Time***
  - Address (2502 US 9, Keeseville, NY 12944)
  - Immediately following this Meeting

- ***Safety***
  - Parking
  - Personal Protection Equipment (PPE)