



Hackett Mills Hydroelectric Project (FERC No. 6398)



Relicensing Joint Agency and Public Meeting

December 18, 2019

Agenda

- Introductions/Meeting Purpose
- Relicensing process
- Project overview
- Existing environment
- Proposed measures
- Next steps
- Site visit logistics

Meeting Purpose

- Initial consultation meeting for the relicensing of the Hackett Mills Hydroelectric Project (P-6398)
- Review Hackett Mills 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

Hackett Mills Project FERC Relicensing Process

Hackett Mills Hydroelectric Project (FERC No. 6398)

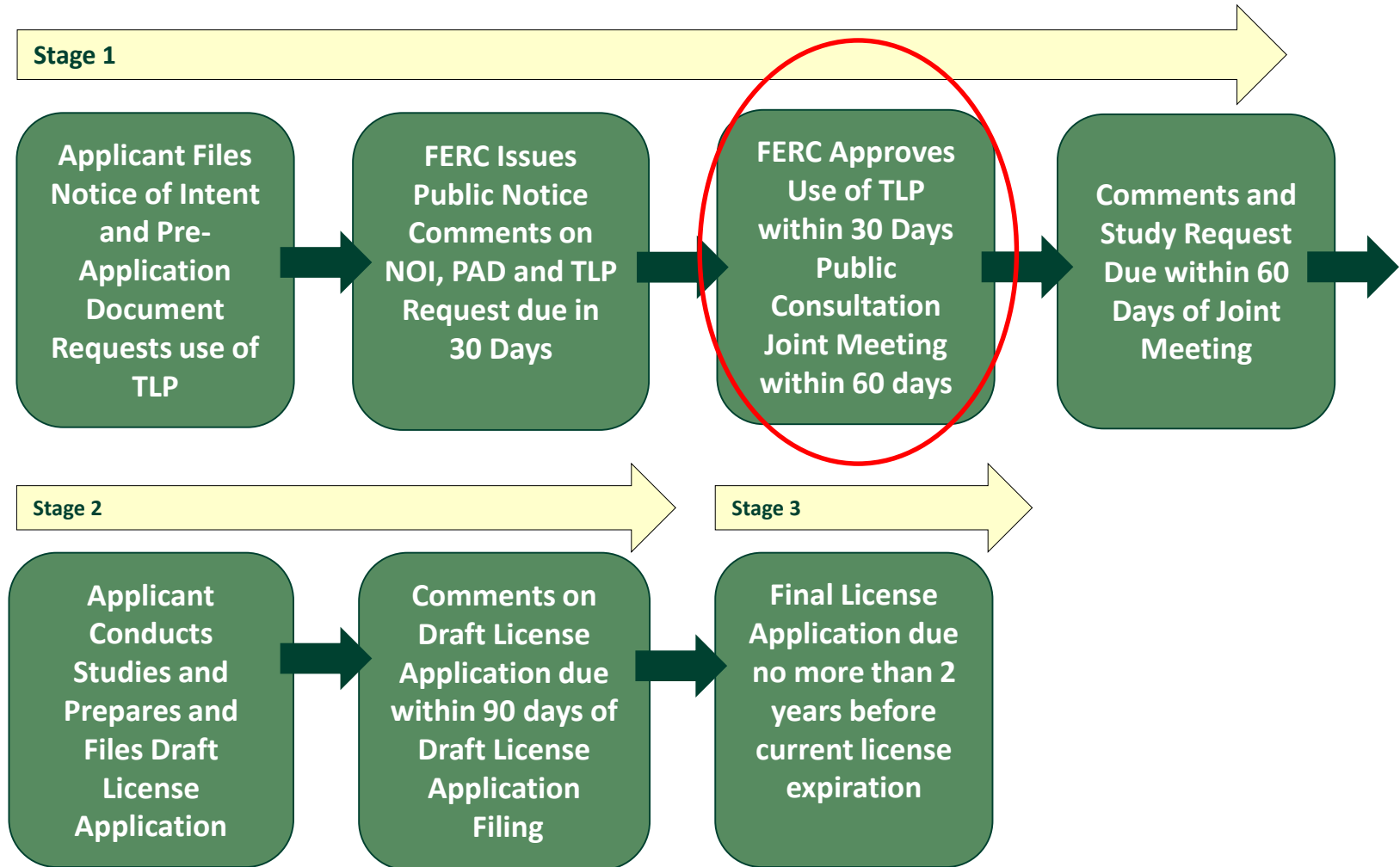
- Hackett Mills Project is location on the Little Androscoggin River in towns of Minot and Poland, Androscoggin County, Maine
- Licensee is Hackett Mills Hydro Associates, a subsidiary of Eagle Creek Renewable Energy
- Original 40-year FERC License issued on September 12, 1984, which expires on August 31, 2024

FERC Relicensing Activities to Date

- Hackett Mills Hydro submitted Notice of Intent (NOI) and Pre-application Document (PAD) to FERC, agencies and stakeholders on August 30, 2019
- Hackett Mills Project Relicensing is following the FERC Traditional Licensing Process (TLP)
 - Concurrent with the NOI/PAD filing, Hackett Mills Hydro requested use of the TLP
 - TLP granted by FERC on October 28, 2019
- Public Notice of Joint Meeting and Site Visit provided in the Lewiston Sun Journal on December 2, 2019

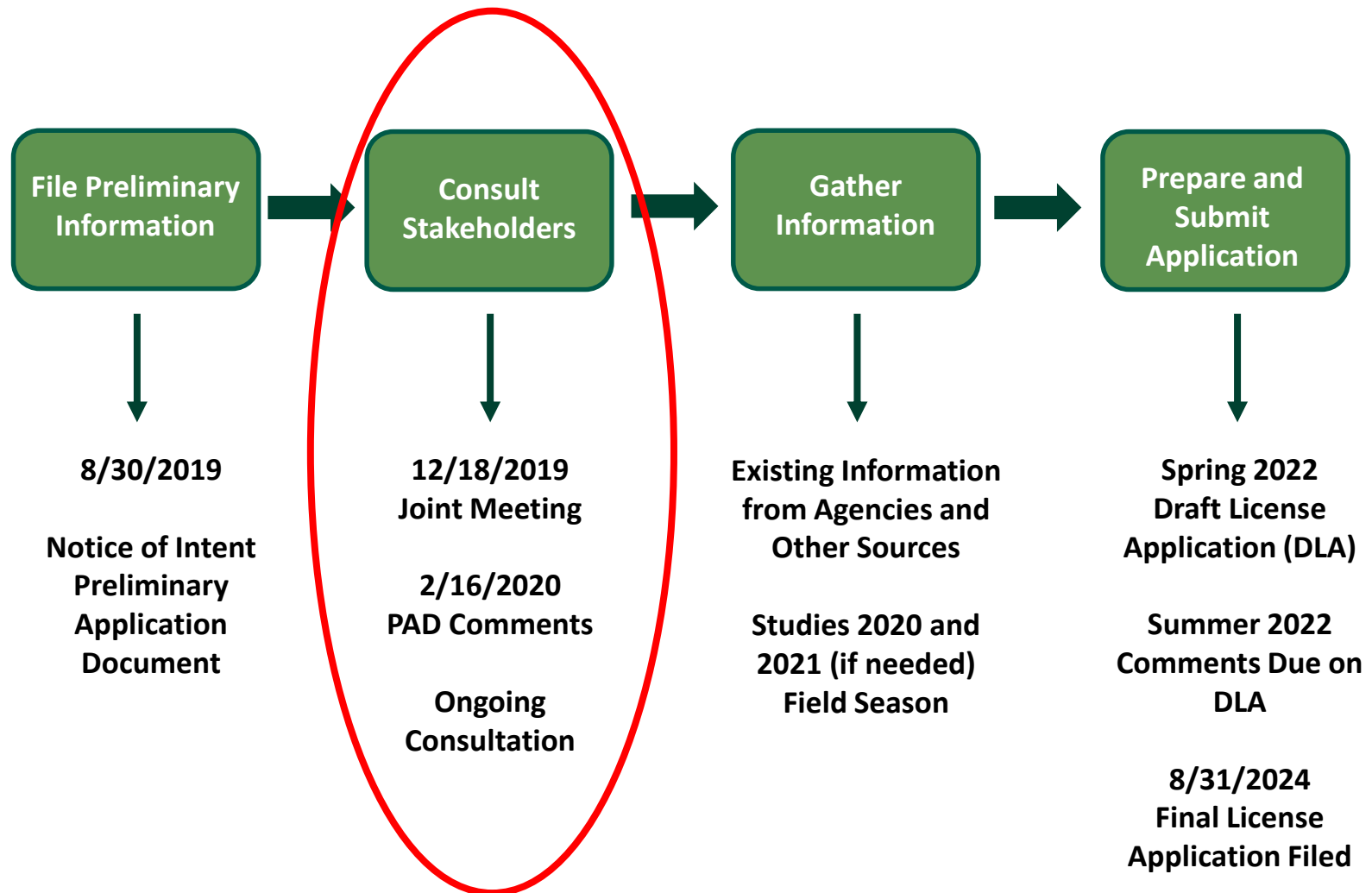
Hackett Mills Project FERC Relicensing Process

Traditional Licensing Process – Pre-Filing



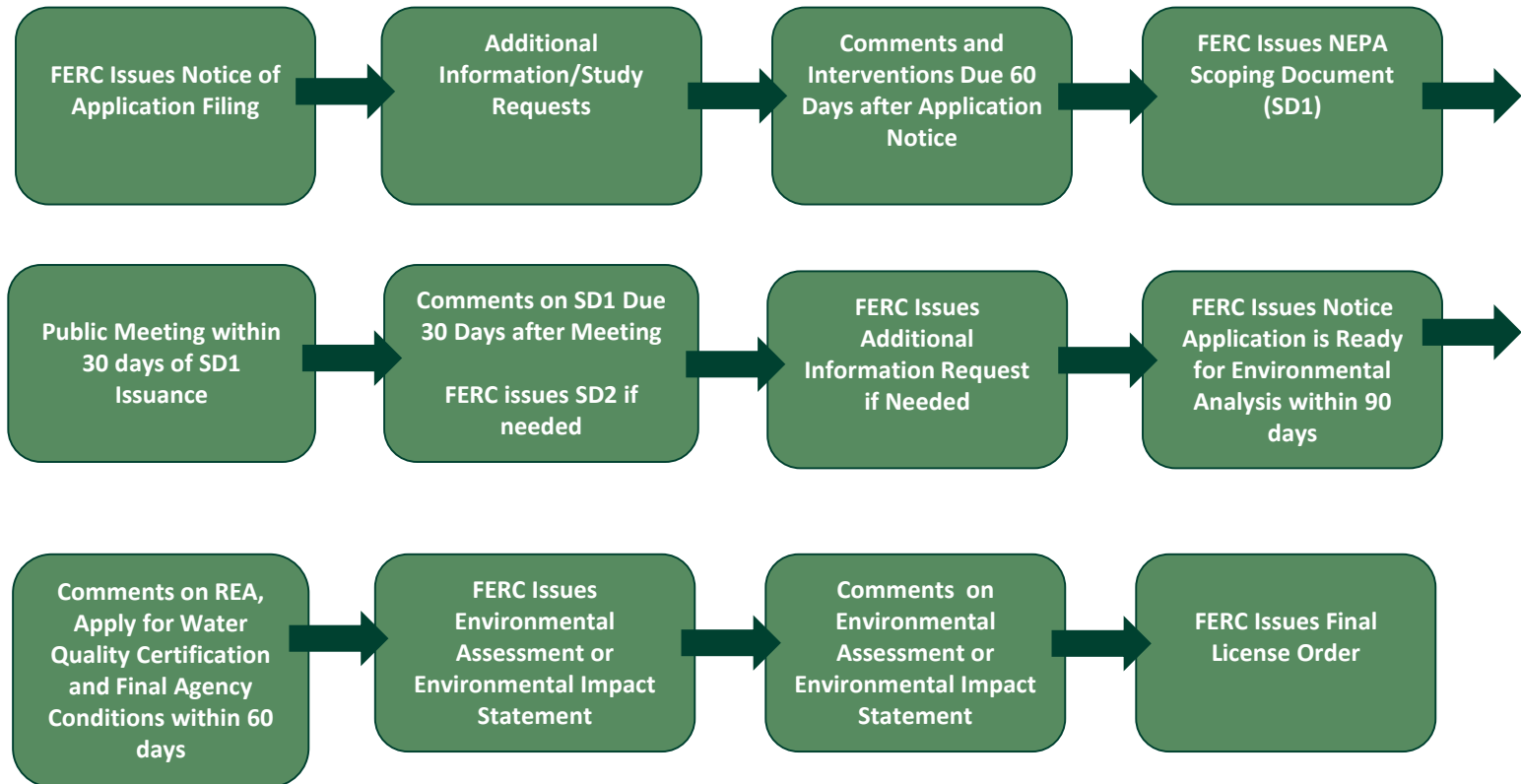
Hackett Mills Project FERC Relicensing Process

Traditional Licensing Process – Pre-Filing



Hackett Mills Project FERC Relicensing Process

Traditional Licensing Process – Post Filing



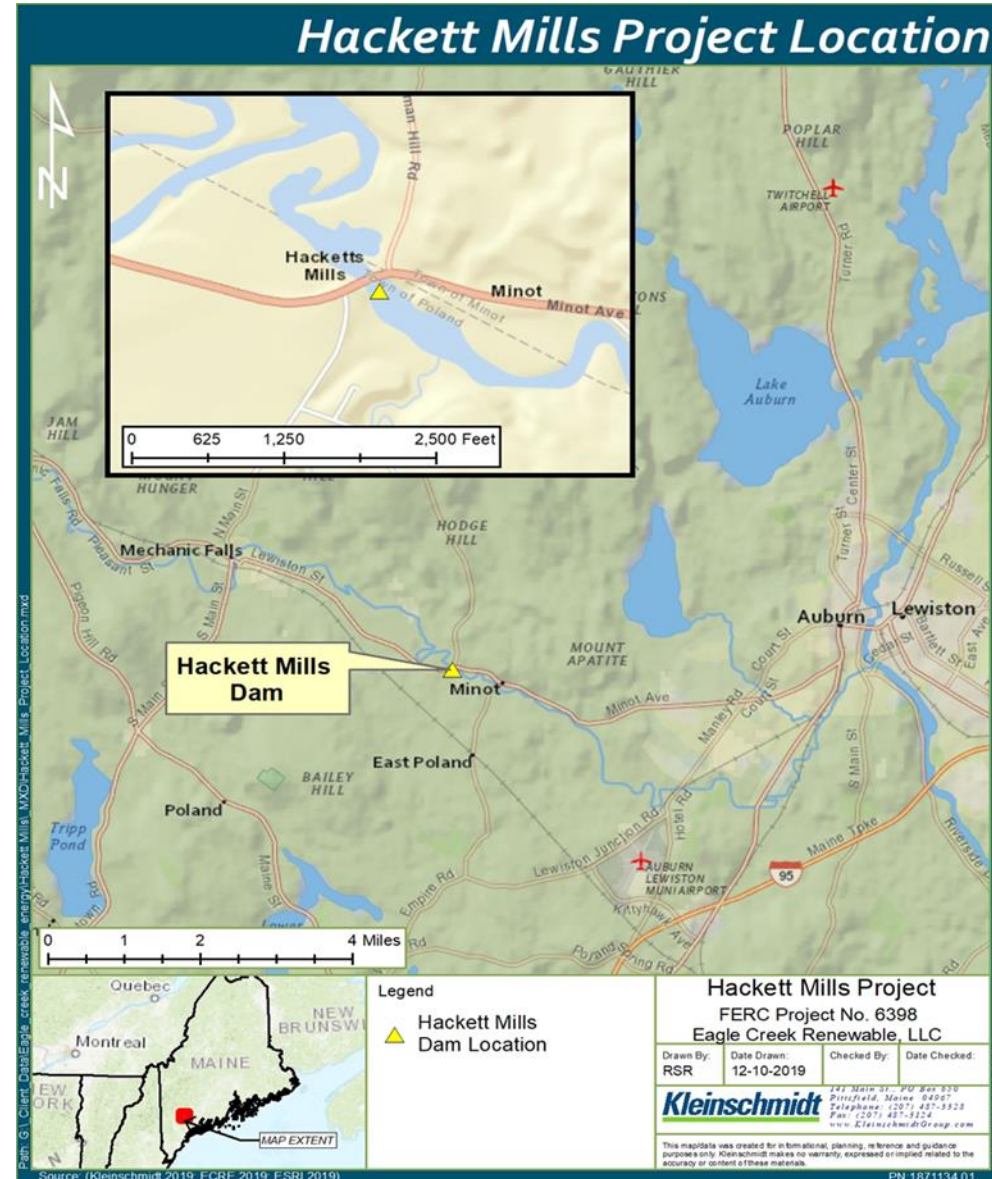
Questions?



Hackett Mills Project Overview

General Project Location

- Hackett Mills Project is located in Androscoggin County
- Hackett Mills Project is located on the Little Androscoggin River approximately 9.6 miles upstream of the confluence with the Androscoggin River



Hackett Mills Project Overview

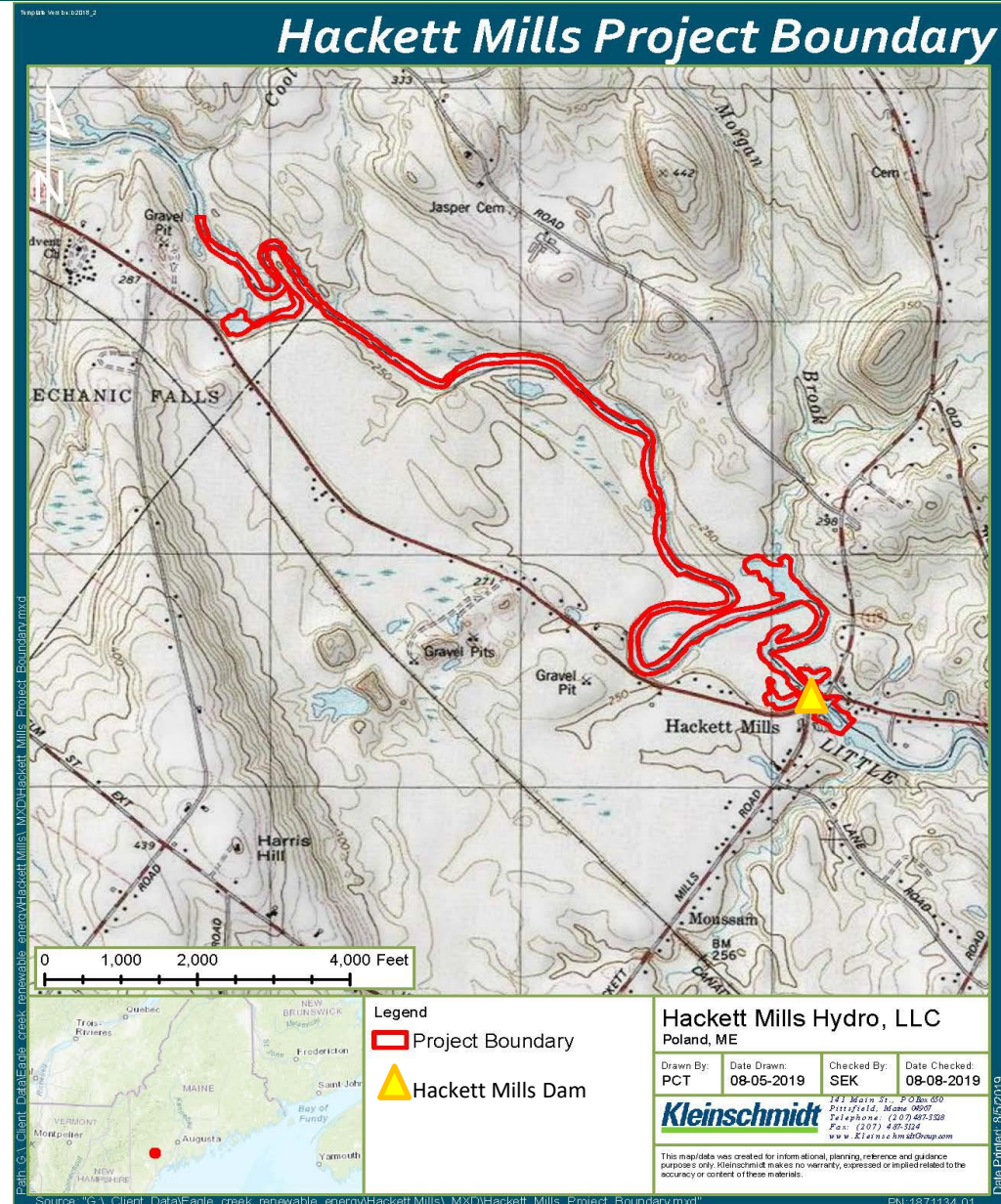
Hydroelectric Projects on the Little Androscoggin River

PROJECT	Owner	River Mile	Height of Dam (FT)	Generation Capacity (kW)
Lower Barker	KEI (Maine) Power Management (III) LLC	0.5	30	1,200
Upper Barker	KEI (Maine) Power Management (III) LLC	1.1	24	1,000
Hackett Mills	Hackett Mills Hydro	9.7	8	485
Mechanic Falls/ Marcal Dam	KEI (Maine) Power Management (IV) LLC	14.8	15.4	1,310
Welchville	Town of Oxford	21.4	16	NA
Biscoe Falls	John Crouch Jr. & Son	40.37	15	50

Hackett Mills Project Overview

Project Boundary

- Encompasses the Project impoundment, Project lands (including the substation and recreation areas) and immediately downstream of the Project tailrace
- Approximately 75 acres



Hackett Mills Project Overview

Hackett Mills Project General Location of Project Facilities



Hackett Mills Project Overview

Hackett Mills Project Impoundment

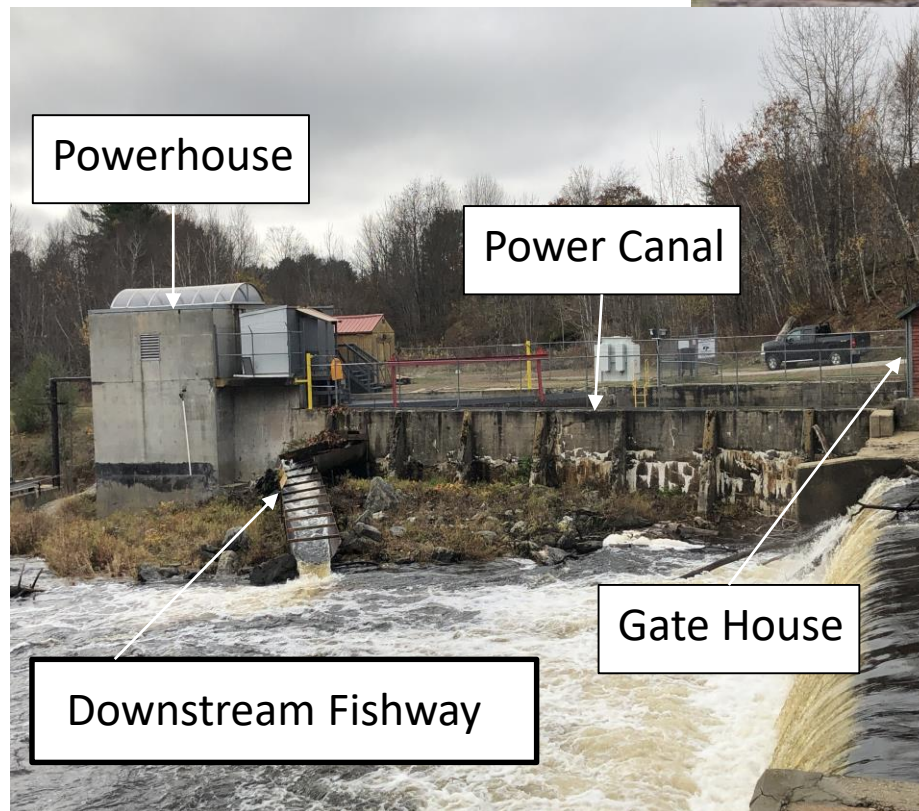


- The Hackett Mills Project impoundment is approximately 5 miles and encompasses a normal maximum surface area of 60 acres
- This is negligible net storage capacity

Hackett Mills Project Overview

Hackett Mills

Project Facilities



Hackett Mills Project Overview

Hackett Mills Project Dam



- Hackett Mills Project dam is a rock filled timber crib dam, completed is 1986
- The dam is approximately 101-feet long, 8 foot-high and has 85-foot concrete gravity section
- There are 3 uncontrolled bays at the north dam abutment

Hackett Mills Project Overview

Hackett Mills Project Power Canal



- The project has a 100-foot-long power canal, that is 25-feet-wide and 7-feet-deep

Hackett Mills Project Overview

Hackett Mills Project Powerhouse



- The powerhouse is approximately 33 feet by 38 feet
- The powerhouse houses
 - One right angle drive bulb turbine – total rated capacity of 485 kW
 - One Kato Engineering generator – 485 kW
- Minimum hydraulic capacity of 80 cfs and maximum of 550 cfs

Hackett Mills Project Overview

Hackett Mills Project Downstream Fish Passage

- The downstream fishway consists of angled trash racks (3 inches at a 45 degree angle, 2.25 inch clear spacing), a fishway entrance, and a sluiceway which discharges into a plunge pool in the bypassed reach.
- There are currently no upstream fish passage facilities at the project.
- The existing License Article 23 requires alignment with Lower Barker for construction of upstream fish passage



Hackett Mills Project Overview

Hackett Mills Project Transmission Line



- The project has a 200 foot long 12.5 kv transmission line

Project Recreation Access

- Hackett Mills Hydro provides free access to project lands and waters for public recreation use including:
 - unimproved parking along the access road to the project
 - informal access to the Little Androscoggin River upstream and downstream of the project for fishermen and car-top Boaters.
- There are no formal public recreation facilities at the Project and access to the dam is blocked to unauthorized vehicles or pedestrians.

Existing Project Operations

- Run-of-river plant where inflow to the powerhouse is equal to outflow
- Provides a minimum flow of 60 cfs from March 31 through November 1 (including 20 cfs in fish passage sluice)
- Provides a minimum flow of 30 cfs November 2 through March 30 (including 20 cfs in fish passage sluice)
- Provides continuous flow of 20 cfs through the downstream fish passage sluice with the remaining minimum flow spilled over the dam (unless insufficient inflow)

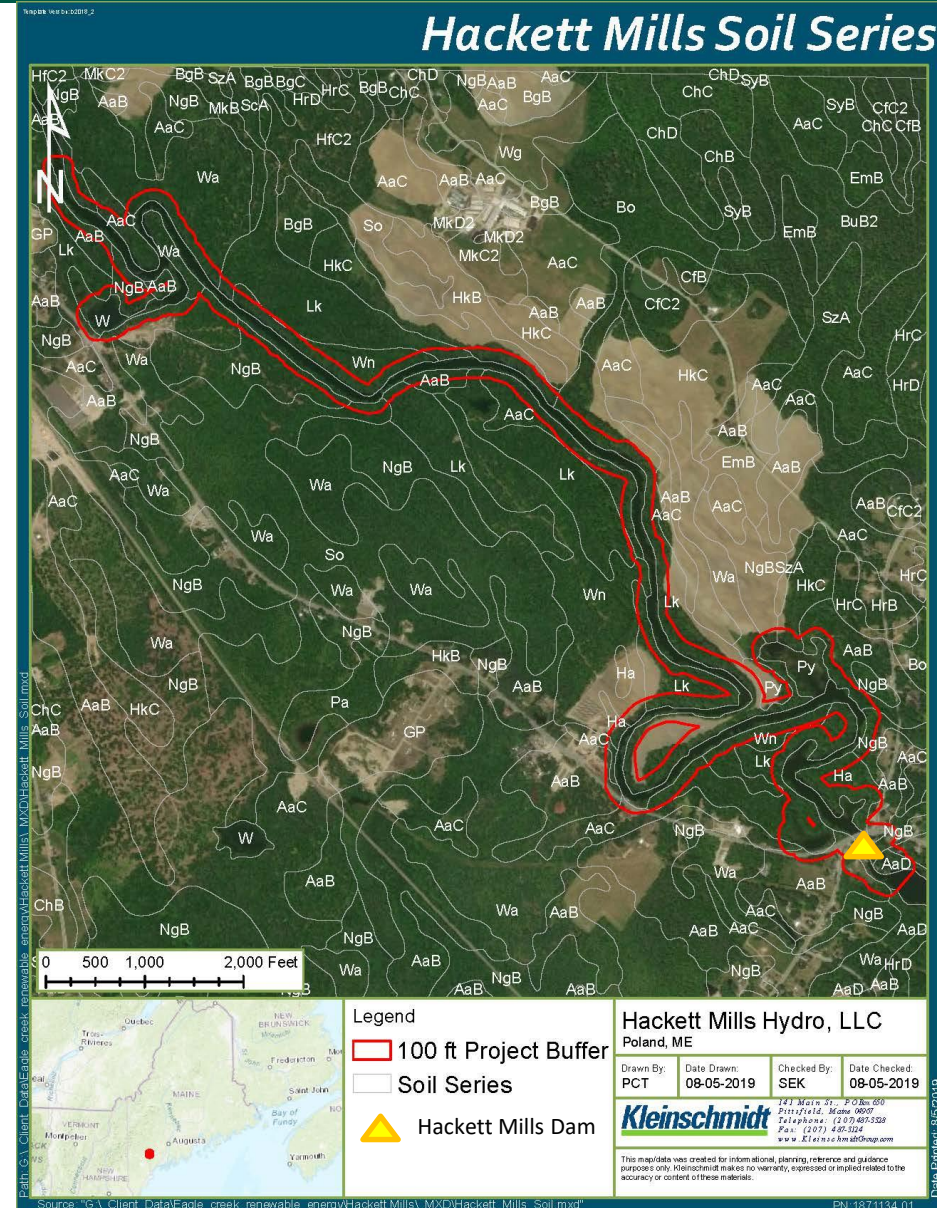
Questions?



Hackett Mills Project – Existing Environment

Geology and Soils

- Androscoggin County is composed of mainly loamy and sandy soils, formed mostly from granite, gneiss, metasandstone, schist.
- Specifically, within and near the project area and immediate vicinity there is primarily loam, and sandy loam,



Hackett Mills Project – Existing Environment

Water Resources – Water Quantity

- River flow data for the Hackett Mills Project was generated from USGS gage No. 01057000 (Little Androscoggin River near South Paris, Maine) for the period January 1989 to December 2018
- The USGS gage is approximately 32 river miles upstream of the Hackett Mills Project. Data from the South Paris gage were pro-rated by a factor of 4.2 to account for the additional drainage area at the Hackett Mills Project.

MONTH	MEAN FLOW (CFS)	MEDIAN FLOW (CFS)	MINIMUM FLOW (CFS)	MAXIMUM FLOW (CFS)
January	448	301	76	6,739
February	355	255	75	3,883
March	852	526	85	8,350
April	1,799	1,242	183	11,868
May	807	598	64	14,072
June	559	296	31	13,775
July	298	127	13	5,637
August	229	72	4	6,146
September	163	59	3	7,672
October	468	208	11	8,265
November	676	462	55	9,071
December	679	410	79	10,681
Annual	611	313	3	14,072

Hackett Mills Project – Existing Environment

Water Resources – Water Quality

- The Little Androscoggin River in the Project area is classified as a Class C water***

PARAMETER	CRITERIA	WATER CLASSIFICATION
Dissolved Oxygen	>5 mg/L or 60% saturation; 30-day average of 6.5 mg/L in salmonid spawning areas	Class C
Iron ^b	1000 µg/L or 1 mg/L	Statewide
Chloride ^b	230,000 µg/L or 230 mg/L	Statewide
Aluminum ^b	87 µg/L or 0.087 mg/L	Statewide
Total Phosphorus ^c	≤ 33 µg/L (0.033 mg/L)	Class C
Water Column Chlorophyll-a ^c	≤ 8 µg/L (0.008 mg/L)	Class C
Secchi Disk Depth ^c	≥ 2.0 m	Class C
pH ^c	6.0 – 8.5	Class C

Hackett Mills Project – Existing Environment

Water Resources – Water Quality

- ECRE monitored dissolved oxygen (DO) and water temperature at two sites at the Hackett Mills Project from August 23 to September 30, 2016.
- The DO concentration and percent saturation were above the standard for Class C waters (5 mg/L or 60 percent saturation) most of the study period with the
 - exception of 15 hours on September 10-11
 - at the upstream site and 9 hours on August 26-27 and
 - one hour on August 29 at the downstream site.

Hackett Mills Project - Existing Environment

Fish and Aquatic Resources

- Diadromous fish species within the Little Androscoggin River include American eel and sea-run alewives.
- MDMR stocks river herring into eight lakes and ponds in the Little Androscoggin River watershed at a target rate of 14.8 fish per hectare (i.e., 6 fish per acre). Two of the stocked ponds are upstream of the Hackett Mills Dam (i.e., Lower Range Pond and Marshall Pond)
- MDIFW annually stocks approximately 4,000 brown trout and rainbow trout (7 to 11 inches) between the Auburn Maine and Minot Maine in the little Androscoggin River. In 2018 the MDIFW additionally stocked 10,000 rainbow trout smolts in the Poland section of river.
- The Hackett Mills Project provides downstream passage of fish, consisting of angled trashracks (3 inches at a 45 degree angle, 2.25 inch clear spacing), a fishway entrance, and a sluiceway discharging into a plunge pool in the bypassed reach.
- Recreational fisheries for coldwater and warmwater fish species exist in the Little Androscoggin River watershed
- Anglers can access the Little Androscoggin River downstream the Hackett Mills Project area from a trail on the south west side of the project which runs parallel to the Little Androscoggin River beginning at the parking area on the west side of the dam.

Hackett Mills Project – Existing Environment

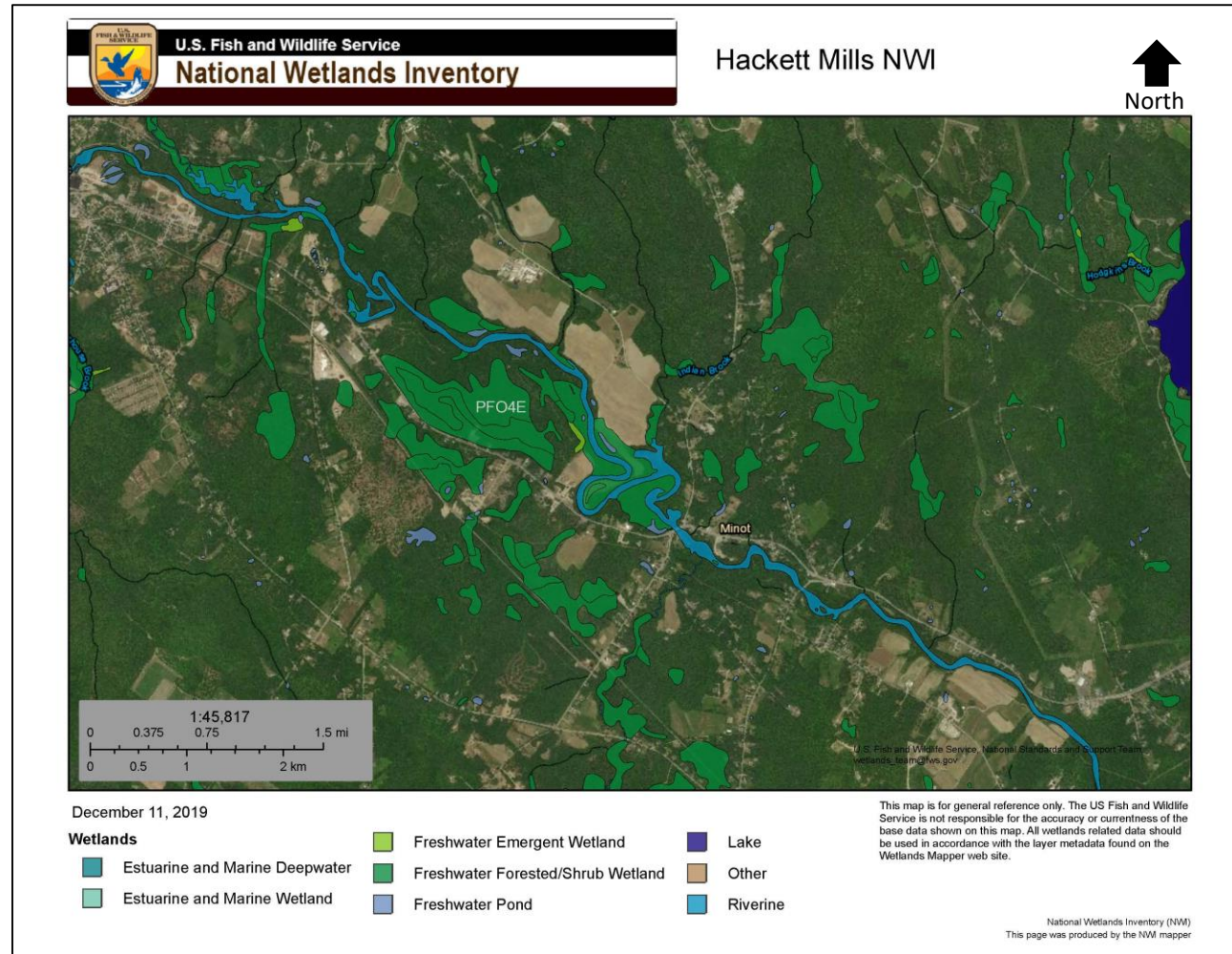
Wildlife and Botanical Resources

- The PAD provides descriptions of Wildlife and Botanical Resources
- The PAD, Appendix E, provides lists of mammals, birds, amphibians and reptiles that may occur in the Project vicinity based on species distribution and habitat preferences
- Potential rare, threatened, and endangered (RTE) Species within the vicinity of the Project include:
 - The federally threatened, state endangered northern long-eared bat (*Myotis septentrionalis*)
 - The federally threatened, state endangered small whorled pogonia (*Isotria medeoloides*)
 - The federally endangered Atlantic salmon (*Salmo salar*)

Hackett Mills Project – Existing Environment

Wetlands, Riparian and Littoral Resources

- USFWS National Wetlands Inventory (NWI) database
- Primarily R2UBH, or riverine, lower perennial, unconsolidated bottom, permanently flooded



Hackett Mills Project – Existing Environment

Recreation and Land Use Resources

- There are no formal public recreation facilities at the Project and access to the dam is blocked to unauthorized vehicles or pedestrians.
- Hackett Mills Hydro provides free access to project lands and waters for public recreation use including:
 - unimproved parking along the access road to the project and informal access to the Androscoggin River upstream and downstream of the project for fishermen and car-top Boaters.

Aesthetic Resources

- There are no aesthetic requirements associated with this project's current license.
- The proposed Hackett Mills Project impoundment is bordered by forest, residential areas, and some agricultural areas near the northmost end of the impoundment.
- A short gated access road off state route 121 leads to the powerhouse and dam.

Hackett Mills Project – Existing Environment

Cultural Resources

- No pre-historical archaeological surveys have been completed in accordance with the Hackett Mills project. In the order issuing the 1984 license there were no known historical, cultural, or archaeological resources that would be affected by the project
- In 2011 Environmental inspection report, there were no known historic, cultural, or archaeological resources that would be affected by operations at the project.

Tribal Resources

- Hackett Mills Hydro is not aware of any Project effects on any Native American tribes. There are no Native American lands, known Native American traditional cultural properties or religious properties, or National Register-eligible or -listed sites associated with Native American Nations within the Project boundary.

Hackett Mills Project – Proposed Measures

Proposed Operations

- Hackett Mills Hydro proposes to continue existing Project operations
- Run-of-river plant where inflow to the powerhouse is equal to outflow
- Provides a minimum flow of 60 cfs from March 31 through November 1 (including 20 cfs in fish passage sluice)
- Provides a minimum flow of 30 cfs November 2 through March 30 (including 20 cfs in fish passage sluice)
- Provides continuous flow of 20 cfs through the downstream fish passage sluice with the remaining minimum flow spilled over the dam (unless insufficient inflow)

Proposed Studies

Water Resources

- Recent relevant water quality data exists at the project.

Fish and Aquatic Resources

- Hackett Mills Hydro believes sufficient baseline fisheries resource information is available to assess project effects. While Hackett Mills Hydro is not currently identifying fish passage related studies, fish passage issues will be discussed with the fisheries agencies to identify what future steps may be evaluated during the relicensing process.

Hackett Mills Project Next Steps

Hackett Mills Project TLP Pre-filling 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	8/30/2019
FERC Approval of TLP	60 Days After NOI, PAD, TLP Request	10/28/2019
Joint Agency Consultation Meeting	30-60 Days After TLP Approval	12/18/2019
End of PAD Comment/Study Request Period	60 Days After Consultation Meeting	2/16/2020
Stage 2 - Studies and Draft Application		
Resource Studies <ul style="list-style-type: none"> • Study Plan Development • Agency Consultation • Study Implementation • Study Reports 	During 2020 and 2021 seasons and final reports incorporated into Draft License Application	2020 & 2021 Field Seasons
Draft License Application (DLA) Submittal	Approximately 150 Days Before Final License Application	Spring 2022
End of DLA Comment Period	90 Days After DLA Submittal	Summer 2022
Stage 3 - Final Application		
Final License Application (FLA) Submittal	2 Years Prior to License Expiration	8/31/2022
License Expiration		8/31/2024

Hackett Mills Project - Next Steps

Comments and Study Requests

- Submit PAD comments, additional relevant information and study requests to Hackett Mills Hydro within 60 Days – by February 16, 2020
- Submit comments and information to Hackett Mills 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?

Resource Studies

- To be conducted during 2020 and 2021 (if needed) field season
- Study Plan Development – Spring 2020
- Agency Consultation – Spring 2020
- Study Implementation and Reports – 2020 and 2021

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
- **Comment/Request due February 16, 2020**

Hackett Mills Project Study Requests

Public Comments

Hackett Mills Hydroelectric Project (FERC No. 6398)

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Written Correspondence:

Kimberly Bose, Secretary

Federal Energy Regulatory Commission

888 First Street, N.E.

Washington, DC 20426

Electronic Correspondence:

<http://www.ferc.gov/docs-filing/efiling.asp>

Please Submit to Licensee and Copy Consultant:

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Questions?



Site Visit Logistics

Location

- 1 Mechanic Falls Road, Poland, ME 04274

Time

- Immediately following meeting

Safety

- Please wear flat, hard-soled, closed-toe shoes, such as work boots or hiking shoes, and long pants

