LOW-IMPACT HYDROPOWER POWER INSTITUTE CERTIFICATION APPLICATION

AMERICAN TISSUE HYDROELECTRIC PROJECT
(FERC NO. 2809)

Prepared for:

KEI (Maine) Power Management (III) LLC
Gardiner, Maine

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November 2019

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CERTIFICATION APPLICATION

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1.0 FACILITY DESCRIPTION

The American Tissue Hydroelectric Project (Project) is located in Kennebec County in southwestern Maine in the town of Gardiner. The Project is located on the Cobbosseecontee Stream, approximately 1 river mile upstream of its confluence with the Kennebec River (Figure 1-1; Figure 1-2; Figure 1-3). The Cobbosseecontee Stream is approximately 11 miles long from its headwaters at Cobbosseecontee Lake. There are five dams on Cobbosseecontee Stream. The Project's dam is the second-most upstream dam on Cobbosseecontee Stream and is the only dam on the stream that is used for hydroelectric generation (Figure 1-2).

The Project is owned by KEI (Maine) Power Management (III) LLC (hereinafter "Licensee" or KEI (Maine)) and was recently relicensed by the Federal Energy Regulatory Commission (FERC) (FERC No. 2809) on April 30, 2019 for a 40-year license expiring May 1, 2059. Prior to this most recent license, the project was licensed to KEI (Maine), for a 40-year license on May 9, 1979.

The Project dam was constructed in 1900 and operated as a run-of-river water power facility until 1970, when the powerhouse was destroyed by fire. The remaining dam, penstock, and reservoir were redeveloped pursuant to the May 9, 1979 license, which licensed repairs to the damaged gates, intake and headworks, and a new powerhouse at the site of the old powerhouse. Construction was completed by 1983.[1]

Current Project works include a cut granite, stone masonry, gravity dam with spillway, east and west abutments, an underground steel penstock, a powerhouse containing one turbine generator unit, tailrace, a 250-foot-long 12-kilovolt (kV) transmission line with a 4/12 kV step up

[1] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15106486

transformer, and appurtenant facilities. The Project boundary generally includes the impoundment, dam, headrace, powerhouse, and tailrace. The American Tissue Project operates as a run-of-river facility with a continuous minimum flow of 10 cfs, or inflow, whichever is less, to the bypass reach; and a flow of 29 cfs released into the bypass reach between June 1 and November 30. The Project utilizes one turbine generator unit with a total rated capacity of 1.0 megawatts (MW) and a generator rated at 1053 kilovolt-ampere (KVA) (1.0 MW).

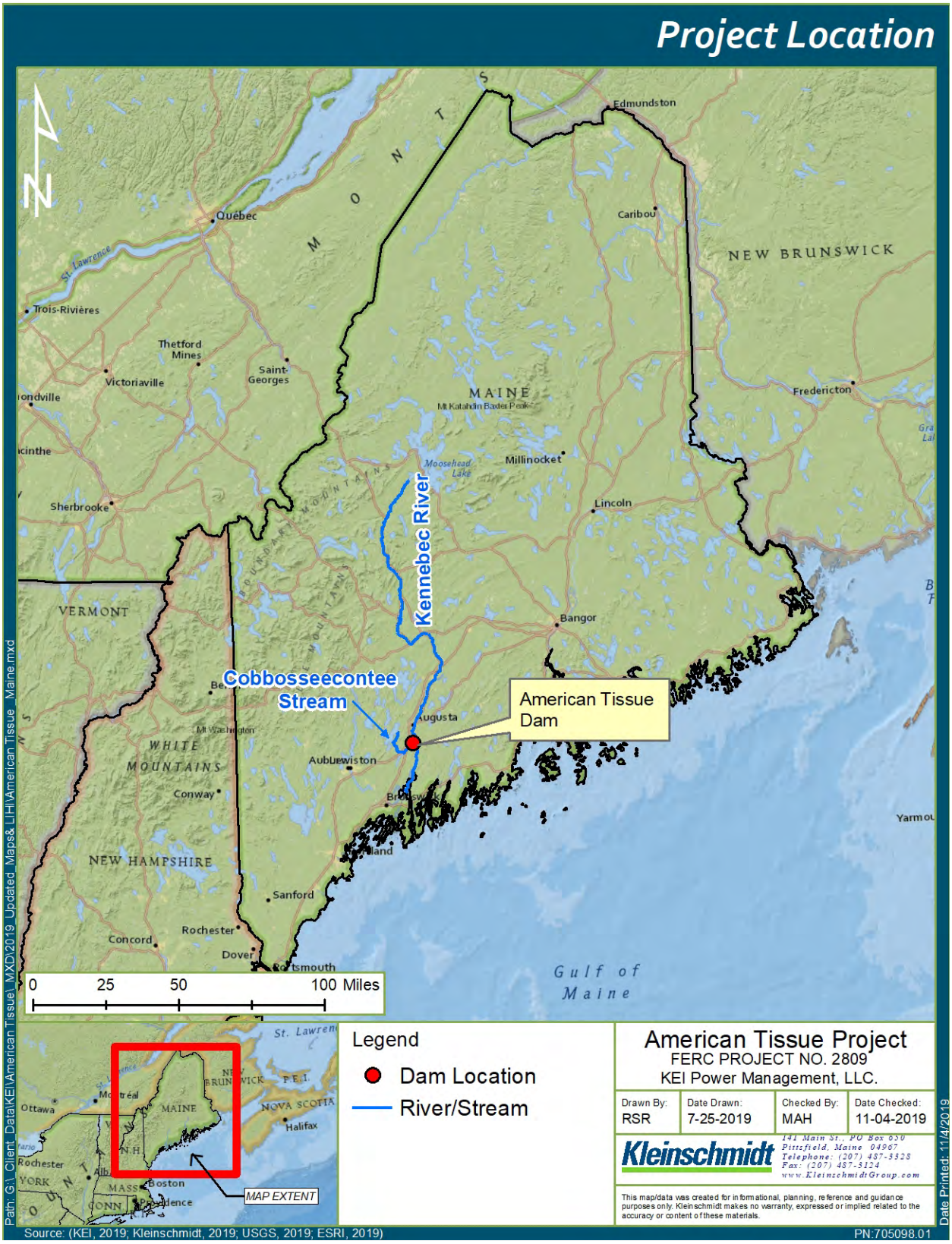

FIGURE 1-1 GEOGRAPHIC OVERVIEW OF PROJECT AREA

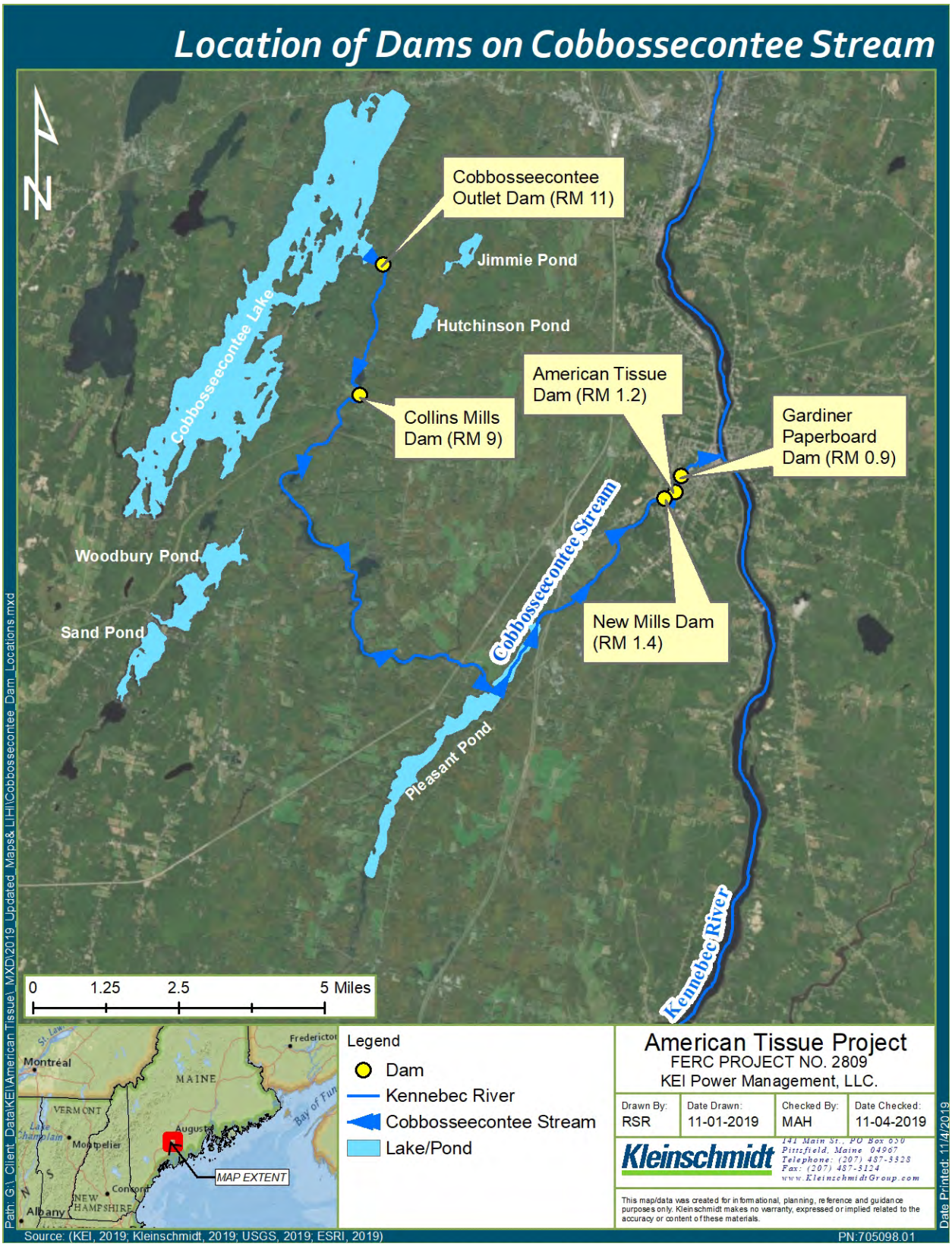

FIGURE 1-2 UPSTREAM AND DOWNSTREAM DAMS ON COBBOSSEECONTEE STREAM

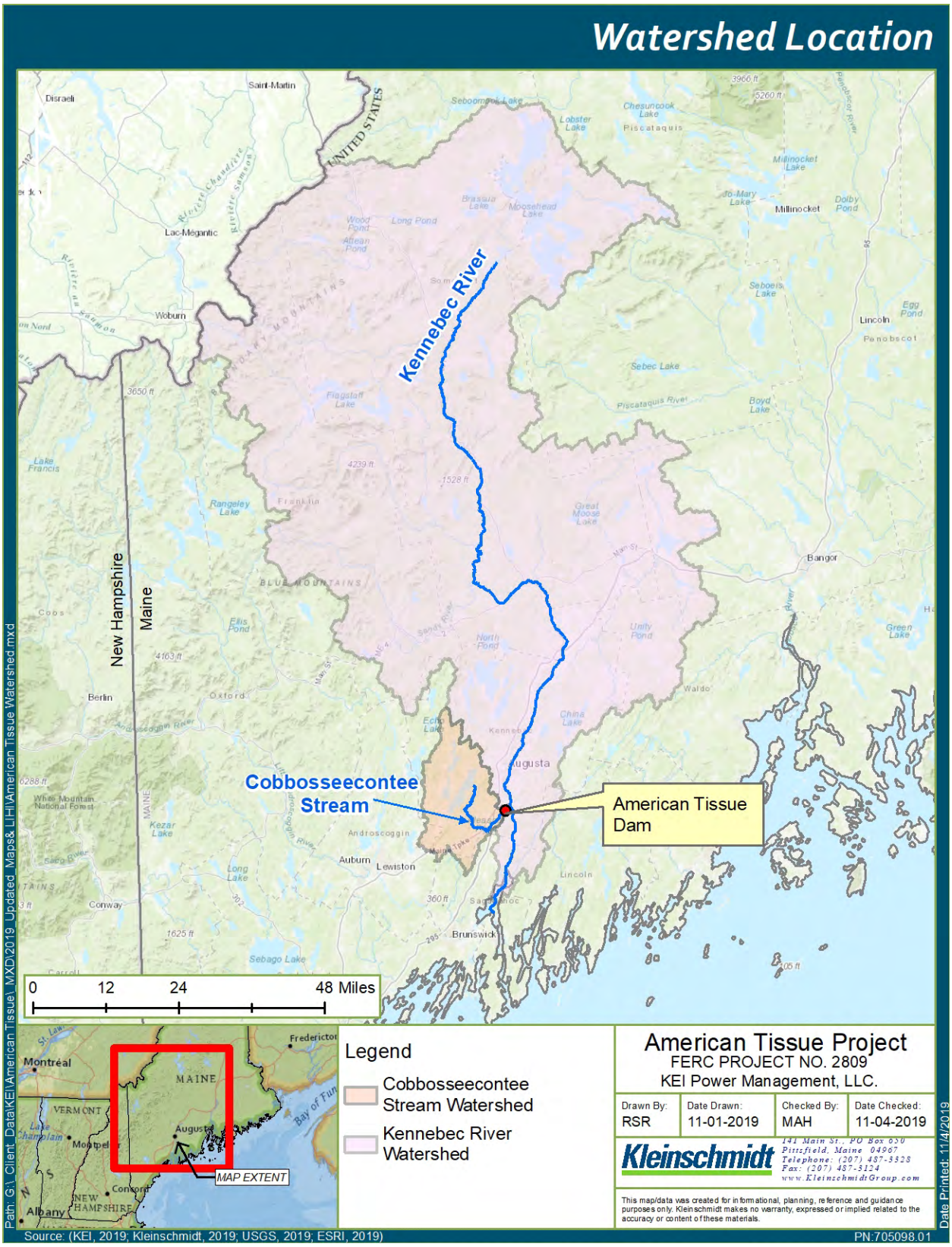

FIGURE 1-3 KENNEBEC RIVER AND COBBOSSEECONTEE STREAM BASINS

1.1 FACILITY DESCRIPTION INFORMATION FOR AMERICAN TISSUE HYDROELECTRIC PROJECT (FERC NO. 2809)

INFORMATION TYPE	VARIABLE DESCRIPTION	FACILITY DESCRIPTION
Name of the Facility		American Tissue Hydroelectric Project (FERC. 2809 or Project) referred to as the Project throughout this application.
Location	River name (U.S. Geologic Survey [USGS] proper name):	Cobbosseecontee Stream
	River Mile:	RM 1.2 on the Cobbosseecontee Stream
	River Basin:	Kennebec River Basin (HUC: 01030003)
	Nearest town, county, and state:	Gardiner, Kennebec County, Maine
	River Mile of Dam:	See above. Other dams on the Cobbosseecontee Stream: Upstream of the Project is the Cobbosseecontee Lake dam near RM 11, Collins Mills dam near RM 9, and the New Mills dam near RM 1.4. The Gardiner Paperboard dam is located downstream near RM 0.9. The Project dam is the only dam used for hydropower purposes.
	Geographic latitude:	44°13’33.26”N
	Geographic longitude:	-69°47’02.58”W
Facility Owner	Application Contact Names	KEI (Maine) Power Management (III) LLC (KEI (Maine)) Sherri Loon 423 Brunswick Avenue Gardiner, Maine, 04345

INFORMATION TYPE	VARIABLE DESCRIPTION	FACILITY DESCRIPTION
	Facility owner (individual and company names):	American Tissue Hydro Project 835 Water Street Gardiner, Maine 04345 Kennebec County
	FERC Licensee (or Exemptee) Company Name (if different from owner):	KEI (Maine) Power Management (III) LLC (KEI (Maine))
	Representative in LIHI certification	Nuria V. Holmes Kleinschmidt Associates 1500 NE Irving Street, Suite 550 Portland, OR 97232
Regulatory Status	FERC Project Number and Issuance and expiration dates	FERC Project No. P-2809 Term of License: 40-years Issued on: April 30, 2019 Expires on: April 30, 2059
	FERC license type or special classification (e.g., "qualified conduit")	Minor license Order Issuing Subsequent License re KEI (Maine) Power Management LLC under P-2809
	Water Quality Certificate identifier and issuance date, plus source agency name	In accordance with Section 401 of the Clean Water Act (CWA), KEI (Maine) applied on December 14, 2017 for a Maine Department of Environmental Protection (MDEP) Water Quality Certificate. On November 29, 2018 a Final Water Quality Certificate (Attachment B) was issued.
	Hyperlinks to key electronic records on FERC e-library website (e.g., most recent Commission Orders, WQC, ESA documents, etc.)	Order Issuing Subsequent License for Project No. 2809 FERC Environmental Assessment November 29, 2018 Water Quality Certificate
Power Plant Characteristics	Date of Initial Operation (past or future for operational applications)	The Facility was originally commissioned in 1879. The Project was first licensed by FERC in 1979 (the facility burned down shortly after being purchased by the American Tissue Corporation in 1970).
	Total authorized capacity	1.0 MW

INFORMATION TYPE	VARIABLE DESCRIPTION	FACILITY DESCRIPTION
	Average annual generation (MWh)	~5,430 MWh
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	The Project powerhouse contains one 1-MW Kaplan turbine-generator. Maximum hydraulic capacity is 360 cfs. Minimum is 100 cfs. See Photo 6-13 and Photo 6-14.
	Trashrack clear spacing (inches) for each trashrack:	2-inch; However, during the fish passage season, KEI (Maine) also installs full overlays on the intakes. They are installed in June and taken out after November 30th annually.
	Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.)	Operated as a run-of-river facility.
	Dates and types of major equipment upgrades	No major equipment changes have occurred at the Project.
	Dates, purpose, and type of any recent operational changes	Since issuance of the 2019 license, the Project no longer provides a continuous minimum flow of 52 cfs, or inflow, whichever is less, downstream from the Project. The 2018 Water Quality Certification instead requires that KEI (Maine) provide a continuous minimum flow of 10 cfs, or inflow, whichever is less, to the bypass reach. The Certification also requires a flow of 29 cfs to be released into the bypass reach between June 1 and November 30.

INFORMATION TYPE	VARIABLE DESCRIPTION	FACILITY DESCRIPTION
	Plans, authorization, and regulatory activities for any facility upgrades	In accordance with the 2019 FERC license and resource agency prescriptions, KEI (Maine) will construct an upstream eel passage facility by the second migration season following issuance of the 2019 FERC license (i.e., by June 2020). Additionally, in accordance with the 2019 FERC license and resource agency prescriptions, KEI Maine will construct a new downstream fish passage facility. The facility will be designed as a surface weir and will release 29 cfs from June 1 to November 15. Flows will spill into a modified plunge pool. The 7/8-inch plates at the base of the intake are in year-round to prevent any eels from entering. The 7/8-inch plates that are installed from June 1st through November 30th are full length over the intake and put in and removed. These upgrades will be completed by the second migration season after the issuance of the 2019 FERC License (i.e. by June 2021).
Characteristics of Dam, Diversion of Conduit	Date of construction	Original Construction: 1900
	Dam height	The dam includes a 26-foot-high west abutment section with 2-foot-high flashboards; a 19-23-foot-high overflow spillway section with 12-ingh-high flashboards; and a 27-foot-high east abutment section.
	Dam width	The west abutment is approximately 7-feet-wide, and the east abutment is approximately 10-feet-wide.
	Spillway elevation and hydraulic capacity	Spillway elevation: 123.3 feet msl at the top of 12-inch-high flashboards Spillway capacity: 8,700 cfs at a reservoir elevation of 128.7’ at the right abutment
	Tailwater (downstream water surface) elevation	The normal tailrace elevation is 85 feet.

INFORMATION TYPE	VARIABLE DESCRIPTION	FACILITY DESCRIPTION
	Length and type of all penstocks and water conveyance structures between reservoir and powerhouse	A steel penstock 280 feet long by 7 feet in diameter runs underground to the powerhouse.
	Dates and types of major, generation-related infrastructure improvements	No major, generation-related infrastructure improvements have occurred since the facility was re-constructed in 1983.
	Designated facility purposes	Generation of Power
	Water source	Cobbosseecontee – a body of water fed by springs, rainwater, and snowmelt.
	Water discharge location or facility	The Project discharges water from its powerhouse located approximately 345 feet downstream of the dam.
Characteristics of the Reservoir and Watershed	Gross volume (Dam)	The Project currently has a pool with a storage capacity of 108-acre-feet and an area of 5.5 acres at normal maximum pool elevation of 123.3 feet msl.
	Surface area at full pool (Dam)	See above.
	Maximum water surface elevation (ft. MSL)	See above.
	Maximum and minimum volume and water surface elevations for designated power pool, if available	N/A – run-of-river facility.
	Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile	Major dams located on the Cobbosseecontee Stream upstream of the Project include: • Cobbosseecontee Lake (RM 11) owned by the Town of Manchester Maine. • Collins Mills (RM 9) owned by the Town of West Gardiner Maine • New Mills Dam (RM 1.4) owned by the City of Gardiner and the towns of Litchfield, Richmond and West Gardiner.
	Downstream dam(s) by name, ownership, FERC number (if applicable), and river mile	Major dams located on the Cobbosseecontee Stream downstream of the Project include: • Gardiner Paperboard Dam (RM 0.9) privately owned

<table>
<tr><th>INFORMATION TYPE</th><th>VARIABLE DESCRIPTION</th><th>FACILITY DESCRIPTION</th></tr>
<tr><td></td><td>Operating agreements with upstream or downstream reservoirs that affect water availability, if any, and facility operation</td><td>The Project has an agreement with the Cobbossee Watershed District to operate the gates at the New Mills Dam (the next dam upstream). Cobbossee Watershed District regulates water releases and discharges, and KEI operates the gates on their behalf.</td></tr>
<tr><td></td><td>Area inside FERC project boundary, where appropriate</td><td>The Project FERC boundary area is currently 7.1 acres.</td></tr>
<tr><td rowspan="5">Hydrologic Setting</td><td>Average annual flow at the dam</td><td>3,940 cfs (January 1985 to December 2015)</td></tr>
<tr><td>Average monthly flows (cfs)</td><td>Average daily flows by month at the Project (Data from USGS Gage 01049500) in cfs:
<table>
<tr><th>Month</th><th>Min. Daily</th><th>Mean Daily</th><th>Max Daily</th></tr>
<tr><td>January</td><td>14</td><td>388</td><td>1,770</td></tr>
<tr><td>February</td><td>28</td><td>359</td><td>2,360</td></tr>
<tr><td>March</td><td>39</td><td>561</td><td>2,260</td></tr>
<tr><td>April</td><td>42</td><td>860</td><td>3,940</td></tr>
<tr><td>May</td><td>24</td><td>441</td><td>2,760</td></tr>
<tr><td>June</td><td>14</td><td>312</td><td>2,660</td></tr>
<tr><td>July</td><td>11</td><td>171</td><td>1,890</td></tr>
<tr><td>August</td><td>9</td><td>127</td><td>1,810</td></tr>
<tr><td>September</td><td>8</td><td>168</td><td>1,390</td></tr>
<tr><td>October</td><td>19</td><td>367</td><td>1,820</td></tr>
<tr><td>November</td><td>14</td><td>451</td><td>1,710</td></tr>
<tr><td>December</td><td>28</td><td>502</td><td>1,960</td></tr>
<tr><td>Annual:</td><td>8</td><td>392</td><td>3,940</td></tr>
</table></td></tr>
<tr><td>Location and name of relevant stream gauging stations above and below the facility</td><td>Relevant stream gauging stations below the facility: USGS Gage No. 01049500 (COBBOSSEECONTEE STREAM AT GARDINER, MAINE)</td></tr>
<tr><td>Watershed area at the dam</td><td>216.7 square miles</td></tr>
<tr><td>Designated</td><td>Number of zones of effect</td><td>3</td></tr>
</table>

INFORMATION TYPE	VARIABLE DESCRIPTION	FACILITY DESCRIPTION
Zones of Effect	Upstream and downstream locations by river miles	Impoundment: RM 1.4 to RM 1.2 Bypass Reach: RM 1.2 to RM 1.15 Tailrace: RM 1.15 to freshwater spring (RM 1.1)
	Type of waterbody (river, impoundment, by-passed reach, etc.)	The waters located within all ZOEs are classified as Riverine by the USFWS National Wetlands Inventory (USFWS 2016).
	Delimiting structures	Zone of Effect #1: **Impoundment** • The Project currently has an impoundment with a surface area of 5.5 acres and a normal pool elevation of 123.3 msl that is 0.22 miles long (1,162 feet). Zone of Effect #2: **Bypass Reach** • The Project's 345-foot bypass reach extends from the dam to the powerhouse about 345 feet downstream. The bypass reach elevation ranges from approximately 99.3 feet to 105.3 feet at the powerhouse tailrace. Zone of Effect #3: **Tailrace** • Extends from the American Tissue dam downstream, approximately 300 feet.
	Designated uses by state water quality agency	Maine DEP has classified the lower reach of the Cobbosseecontee Stream to have the designated uses of drinking water supply after treatment, fishing, agriculture, recreation in and on the water, industrial processes, cooling water supply, hydroelectric power generation, navigation, and unimpaired habitat for fish and other aquatic life (Maine Statute, Title 38, § 465(3) (2007)).
Additional Contact Information:	Names, addresses, phone numbers, and e-mail for local state and federal resource agencies	See Section 4 for the Project Contacts Form.

INFORMATION TYPE	VARIABLE DESCRIPTION	FACILITY DESCRIPTION
	Names, addresses, phone numbers, and e-mail for local non-governmental stakeholders	See Section 4 for the Project Contacts Form.
Photographs of the Facility	Photographs of key features of the facility and each of the designated zones of effect	Please see Figure 1-4 for key Project features and Figure 2-1 for Project Zones of Effect. See Attachment A for photographs of key features of the facility.
	Maps, aerial photos, and/or plan view diagrams of facility area and river basin	

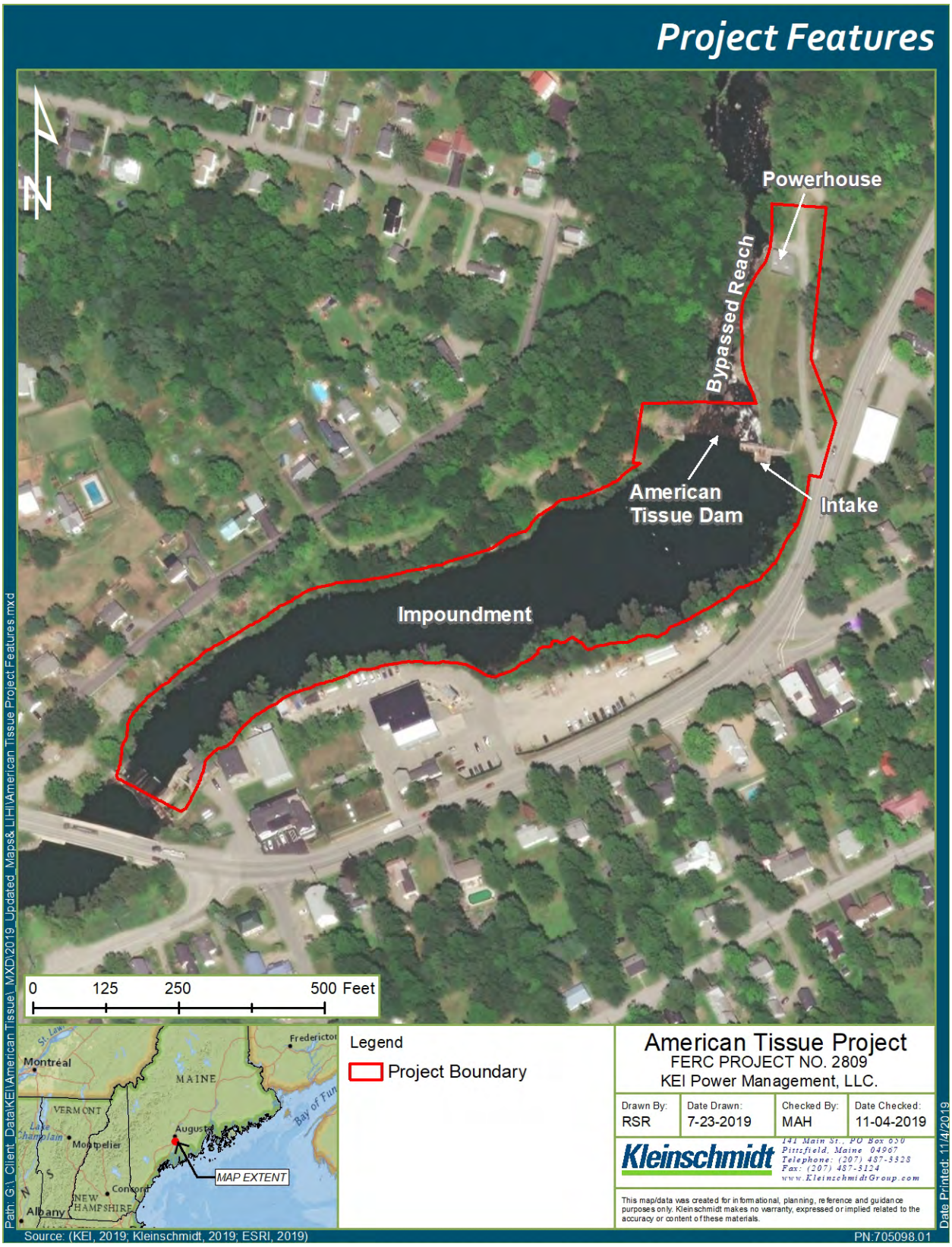

FIGURE 1-4 PROJECT FACILITY FEATURES

2.0 STANDARDS MATRICES

2.1 ZONE OF EFFECT: IMPOUNDMENT ZOE

CRITERION		ALTERNATIVE STANDARDS				
		1	2	3	4	PLUS
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage		X			
D	Downstream Fish Passage		X			
E	Watershed and Shoreline Protection	X				
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection	X				
H	Recreational Resources	X				

2.2 ZONE OF EFFECT: BYPASS REACH ZOE

CRITERION		ALTERNATIVE STANDARDS				
		1	2	3	4	Plus
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage		X			
D	Downstream Fish Passage		X			
E	Watershed and Shoreline Protection	X				
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection	X				
H	Recreational Resources	X				

2.3 ZONE OF EFFECT: TAILRACE ZOE

CRITERION		ALTERNATIVE STANDARDS				
		1	2	3	4	Plus
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage		X			
D	Downstream Fish Passage		X			
E	Watershed and Shoreline Protection	X				
F	Threatened and Endangered Species Protection		X			
G	Cultural and Historic Resources Protection	X				
H	Recreational Resources	X				

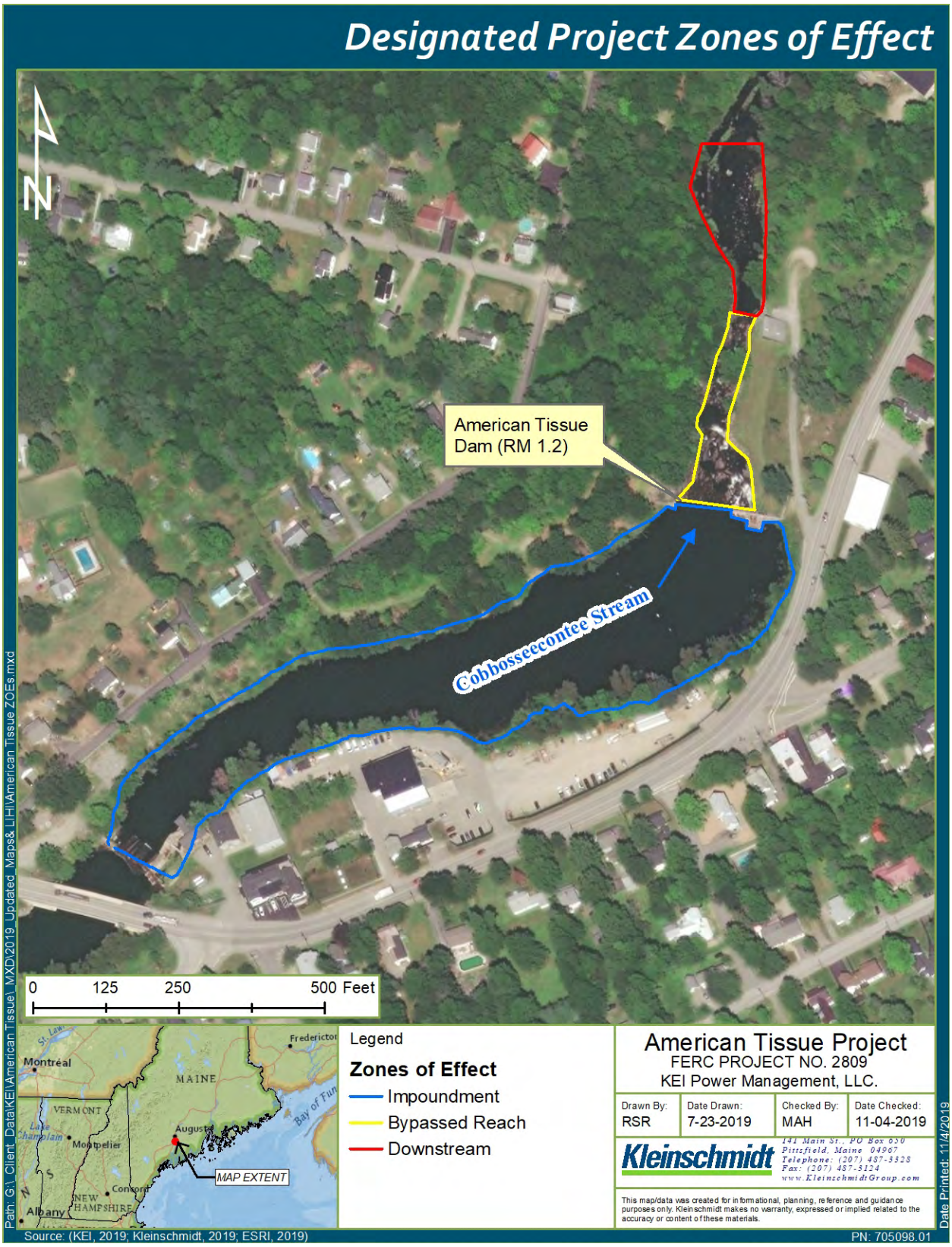

FIGURE 2-1 DESIGNATED ZONES OF EFFECT FOR THE PROJECT

3.0 SUPPORTING INFORMATION

3.1 ECOLOGICAL FLOW STANDARDS

3.1.1 IMPOUNDMENT

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).

- Per the FERC License (FERC No. 2809) dated April 30, 2019:[2]
    - Per Article 402 of the License, KEI (Maine) operates the project as a run-of-river facility by maintaining a discharge from the project so that all outflows approximate the sum of inflows to the project.
    - As summarized in FERC's environmental analysis (EA)[3], results of water quality studies conducted in 2015 demonstrated that impoundment water quality meets the state of Maine's Class B water quality criteria and continued operation of the Project would maintain current water quality conditions. The prescribed operation compliance plan (see below) will ensure continued operation will occur.
- On November 29, 2018, Maine DEP issued a Water Quality Certification (WQC) for the Project. [4] Per the License and the WQC, KEI (Maine):
    - Limits the project impoundment to within one foot of the 123.3-foot msl crest elevation of the dam.

[2] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15234250
[3] https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14960238
[4] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15106486

- Is developing an operation compliance monitoring plan for the impoundment elevation limits and minimum flows. A draft plan will be issued for agency review and a final plan is due to FERC by November 1, 2019.

KEI (Maine) maintains the Project impoundment ecological flows per the terms of License Article 402, and the WQC conditions.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from Maine DEP will be included as part of the Final LIHI Certification Application.

On September 27, 2019, the Maine DEP responded that "the Department has no evidence to suggest that the continued operation of the Project will negatively impact the designated uses, numeric or narrative criteria of its classification standards (Class B)…the Cobbosseecontee Stream is not attaining the designated use of fishing, [however], that the non-attainment status due to the fish consumption advisory is not a result of the operation of the ATHP….

By following these Conditions outlined in the 2018 WQC, the Department has determined that KEI, through consultation with resource agencies, has made adequate provisions to accommodate fish passage for anadromous species. Additional results of WQC studies showed that the ATHP impoundment, the Cobbosseecontee Stream bypass, as well as the tailrace attain most designated uses and water quality standards for Class B waters. The Department has determined that standards that are not attained are not a result of Project activity. Therefore, the Department supports the Low Impact Hydropower Certification of the ATHP (FERC No. 2809)." (Attachment C).

3.1.2 BYPASS REACH

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).

- Per the FERC License (FERC No. 2809) dated April 30, 2019:[5]
    - Per Article 402 of the License, KEI (Maine) operates the project as a run-of-river facility by maintaining a discharge from the project so that all outflows approximate the sum of inflows to the project.
    - The American Tissue Project can generate electricity using flows between the 100-cfs minimum hydraulic capacity of the turbine and the 360-cfs maximum hydraulic capacity of the turbine. When river flow is less than 100 cfs or greater than 360 cfs, water is spilled over the dam into the bypassed reach.
    - As summarized in FERC's EA[6], results of instream flow studies demonstrated that a minimum flow of 10 cfs achieves Maine DEP's guideline that 75 percent of the river cross section is wet at all times, would not constrict zone of passage for downstream alewife and adult eel movements, but a flow of 29 cfs during downstream migration season would increase wetted width to over 95% and provide improved cover from predation, as well as provide additional macroinvertebrate habitat. The prescribed operation compliance plan will help ensure compliance with these minimum flow requirements.
- On November 29, 2018, Maine DEP issued a Water Quality Certification (WQC) for the Project. [7] Per the License and the WQC, KEI Maine:

[5] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15234250
[6] https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14960238
[7] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15106486

- Provides a continuous minimum flow of 10 cfs, or inflow if less, to the bypassed reach from December 1 to May 31; and
- Provides a minimum flow of 29 cfs, from June 1 through November 30.
- Is developing an operation compliance monitoring plan for the impoundment elevation limits and minimum flows. A draft plan will be issued for agency review and a final plan is due to FERC by November 1, 2019.

KEI (Maine) maintains the bypassed reach ecological flows per the terms of License Article 402, and the WQC conditions.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from Maine DEP has been included in the section above, and in Attachment C.

A note about the Bypass ZOE:

- Per the April 30, 2019 FERC License, KEI (Maine) removed (0.7 acre of land and water) from the bypassed reach from the project boundary, downstream of the dam and powerhouse that it indicates is no longer serving a project purpose.

Article 203 of the License requires KEI (Maine) to file revised Exhibit G drawings to also show the locations of the project's step-up transformer and transmission line. On July 16, 2019 KEI (Maine) filed a revised Exhibit G drawing pursuant to Article 203 of the Project license. On August 1, 2019 FERC approved of the Exhibit G drawing filed pursuant to Article 203.[8]

[8] https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=15319566

3.1.3 TAILRACE

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).

- Per the FERC License (FERC No. 2809) dated April 30, 2019:[9]
    - Per Article 402 of the License, KEI (Maine) operates the project as a run-of-river facility by maintaining a discharge from the project so that all outflows approximate the sum of inflows to the project.
    - The American Tissue Project can generate electricity using flows between the 100-cfs minimum hydraulic capacity of the turbine and the 360-cfs maximum hydraulic capacity of the turbine. When river flow is less than 100 cfs or greater than 360 cfs, water is spilled over the dam into the bypassed reach.
    - During the recent relicensing effort, Commission staff found that operating the Project in a run-of-river mode would minimize the effects of Project operation on water quantity in the downstream reach, and no additional benefit would be expected from operating the project with a minimum flow release downstream of the powerhouse. Instead, the 2019 License requires KEI (Maine) to operate the project in a run-of-river mode and construct upstream and downstream passage facilities for migrating alosines and eels, consistent with the mandatory conditions and prescription filed by Maine DEP, Interior, and Commerce.
    - KEI (Maine) is developing an operation compliance monitoring plan for the impoundment elevation limits and minimum flows. A draft plan will be issued for agency review and a final plan is due to FERC by November 1, 2019.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance

[9] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15234250

with the conditions of the FERC license and WQC. The response from Maine DEP is included above, and in Attachment C.

3.2 WATER QUALITY STANDARDS

3.2.1 IMPOUNDMENT

CRITERION	STANDARD	INSTRUCTIONS
B	2	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate, including the date of issuance. • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

- KEI (Maine) is subject to Water Quality Certification under Section 401(a)(1) of the federal Clean Water Act of 1977. The Maine Department of Environmental Protection establishes numeric water-quality standards consistent with the Clean Water Act and state law under Title 38, Chapter 3. The Maine Department of Environmental Protection (DEP) granted the licensee a water quality certification (WQC) for the Project on November 29, 2018.[10]

- Per the WQC and water quality testing for the American Tissue Hydroelectric Project FERC Final License Application in April 2017:[11]

    - Maine statute 38 MRSA §§464-470 establishes the state of Maine's classification system for surface waters. The water classification of Cobbosseecontee Stream, main stem, is a Class B waterway, including both the Project's impoundment and tail water (outlet stream) areas.

    - The quality of Class B waters supports the designated uses of drinking water supply after treatment, fishing, agriculture, recreation in and on the water, industrial process and cooling water supply, hydroelectric power generation, navigation, and unimpaired habitat for fish and other aquatic life.

    - During the recent relicensing process, KEI (Maine) conducted water quality testing between June 2015 and October 2015. KEI (Maine) employed lake trophic, riverine, and macroinvertebrate sampling methods in accordance with

[10] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15106486
[11] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14576633

Maine Department of Environmental Protection's (MDEP) protocols. KEI (Maine) performed lake trophic sampling in the impoundment twice a month using an epilimnetic core; water samples were collected for analysis of total alkalinity, color, pH, chlorophyll-a, and total phosphorous. During each sampling event, KEI (Maine) also collected Secci disk transparency measurements and water temperature and DO profiles at 1-meter intervals. The impoundment water quality sampling station was located approximately 230 feet upstream of the dam. ON August 14, 2015 KEI (Maine) collected additional water samples for analysis of conductivity, dissolved organic carbon, and dissolved metals.

- The results for all sampled parameters met Class B water criteria and the impoundment was characterized as mesotrophic based on Maine's lake trophic status guidelines. Dissolved oxygen concentration in the impoundment ranged from a low of 7.1 mg/L in August to a high of 11.2 mg/L in late October. Average dissolved oxygen during the peak summer period of July through September ranged from 7.4 to 8.7 mg/L. Water quality monitoring also demonstrated that the impoundment did not thermally stratify and exhibited a slight decrease in temperature from the surface to the bottom of the impoundment (ranging from 0.7 to 1.6^{0}C during the months of June, July, and August).

- The Cobbosseecontee Stream at the American Tissue Project is in attainment for the designated uses of "recreation in and on the water" and "habitat for fish and other aquatic life" and meets applicable water quality standards for Class B waters.

- At the request of Maine DEP, KEI (Maine) also collected water temperature and DO profiles from the deep spot in the impoundment of the New Mills Dam; the sample site was located approximately 155 feet upstream of the New Mills Dam. The sampling was conducted so to characterize the influence, if any, of the American Tissue Project on water quality in Cobbosseecontee Stream. The data collected from the sampling effort showed that water temperature is consistent between the New Mills and American Tissue impoundments, and dissolved oxygen concentrations are lower in the New Mills impoundment than in the American Tissue impoundment.

- A successive Maine Pollutant Discharge Elimination System and Maine Water Discharge License[12] was granted to KEI (Maine) for the Project on March 27, 2019, continuing to allow discharge from Outfall #001, limited to a daily maximum flow of 7,200 gallons per day and a daily maximum temperature of 95ºF.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from Maine DEP is summarized below and included in Attachment C.

[12] https://www.epa.gov/sites/production/files/2019-03/documents/draftme0036617permit.pdf

On September 27, 2019, the Maine DEP responded that "the Department has no evidence to suggest that the continued operation of the Project will negatively impact the designated uses, numeric or narrative criteria of its classification standards (Class B)…the Cobbosseecontee Stream is not attaining the designated use of fishing, [however], that the non-attainment status due to the fish consumption advisory is not a result of the operation of the ATHP….

By following these Conditions outlined in the 2018 WQC, the Department has determined that KEI, through consultation with resource agencies, has made adequate provisions to accommodate fish passage for anadromous species. Additional results of WQC studies showed that the ATHP impoundment, the Cobbosseecontee Stream bypass, as well as the tailrace attain most designated uses and water quality standards for Class B waters. The Department has determined that standards that are not attained are not a result of Project activity. Therefore, the Department supports the Low Impact Hydropower Certification of the ATHP (FERC No. 2809)." (Attachment C).

3.2.2 BYPASS REACH

CRITERION	STANDARD	INSTRUCTIONS
B	2	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate, including the date of issuance. • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

- KEI (Maine) is subject to Water Quality Certification under Section 401(a)(1) of the federal Clean Water Act of 1977. The Maine Department of Environmental Protection establishes numeric water-quality standards consistent with the Clean Water Act and state law under Title 38, Chapter 3. The MDEP granted the licensee a WQC for the Project on November 29, 2018.[13]

- During the recent relicensing process, KEI (Maine) conducted water quality testing between June 2015 and October 2015. KEI (Maine) monitored dissolved oxygen and water temperature in the bypassed reach, approximately 230 feet downstream from the dam on an hourly basis. Monitoring demonstrated that water temperatures in the bypassed reach were similar, with an average of 25.0° C each. Dissolved oxygen levels in the bypassed reach exceeded the standard for Class B water and ranged from 7.2 to 8.8 mg/L, with an average of 8.3 mg/L. In a March 31, 2017 letter, Maine DEP confirmed that the American Tissue Project meets applicable Class B dissolved oxygen criteria downstream of the dam.

- KEI (Maine) additionally monitored benthic macroinvertebrates at a site located approximately 300 feet downstream from the dam. Three samplers were placed at the site and were retrieved after 28 days.

  The monitoring results demonstrated that the benthic macroinvertebrate communities downstream of the dam were abundant, but not very rich in taxa. 2015 Monitoring results demonstrated that the benthic macroinvertebrate community in the bypassed reach and did not attain Class B aquatic life standards. On May 4, 2016 KEI (Maine) hosted a telephone conference with MDEP to discuss the results of the benthic macroinvertebrate analysis. MDEP noted that there are signs of nutrient enrichment throughout the

[13] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15106486

watershed, which influences the macroinvertebrate community, and believes the issue originates in or upstream of Pleasant Pond. Furthermore, MDEP stated that it is not likely that the American Tissue Project is causing or contributing to the nutrient enrichment in the watershed or to changes in the benthic macroinvertebrate community structure.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from Maine DEP is included above and in Attachment C.

3.2.3 TAILRACE

CRITERION	STANDARD	INSTRUCTIONS
B	2	Agency Recommendation: • If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation. • Provide a copy of the most recent Water Quality Certificate, including the date of issuance. • Identify any other agency recommendations related to water quality and explain their scientific or technical basis. • Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

- KEI (Maine) is subject to Water Quality Certification under Section 401(a)(1) of the federal Clean Water Act of 1977. The Maine Department of Environmental Protection establishes numeric water-quality standards consistent with the Clean Water Act and state law under Title 38, Chapter 3. The MDEPDEP granted the licensee a WQC for the Project on November 29, 2018.[14]

- During the recent relicensing process, KEI (Maine) conducted water quality testing between June 2015 and October 2015. KEI (Maine) monitored dissolved oxygen and water temperature downstream of the powerhouse (approximately 370 feet downstream from the dam) on an hourly basis from July to September 2015. Monitoring demonstrated that water temperatures in the downstream reach were similar, with an average of 25.0 C each.

- There was one 24-hour period in September when dissolved oxygen levels in the downstream reach dropped below the Class B water quality standard of 7 mg/L to a minimum of 6.6 mg/L. In a March 31, 2017 letter, Maine DEP confirmed that the American Tissue Project meets applicable Class B dissolved oxygen criteria downstream of the dam.

- KEI (Maine) additionally monitored benthic macroinvertebrates at a site located approximately 860 feet downstream from the dam. Three samplers were placed at the site and were retrieved after 28 days.

  The monitoring results demonstrated that the benthic macroinvertebrate communities downstream of the dam were abundant, but not very rich in taxa. 2015 Monitoring results

[14] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15106486

demonstrated that the benthic macroinvertebrate community in the bypassed reach and did not attain Class B aquatic life standards. On May 4, 2016 KEI (Maine) hosted a telephone conference with MDEP to discuss the results of the benthic macroinvertebrate analysis. MDEP noted that there are signs of nutrient enrichment throughout the watershed, which influences the macroinvertebrate community, and believes the issue originates in or upstream of Pleasant Pond. Furthermore, MDEP stated that it is not likely that the American Tissue Project is causing or contributing to the nutrient enrichment in the watershed or to changes in the benthic macroinvertebrate community structure.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from Maine DEP is summarized above and included in Attachment C.

3.3 UPSTREAM FISH PASSAGE STANDARDS

3.3.1 IMPOUNDMENT

CRITERION	STANDARD	INSTRUCTIONS
C	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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

- Overview of River Fisheries:

  Per the December 2002 Draft Fishery Management Plan for the Cobbosseecontee Stream:[15]

  "The Cobbosseecontee Stream drainage historically supported runs of at least seven species of native diadromous[16] fishes, which were reduced or extirpated by construction of dams without fishways. The American eel is still found throughout the drainage, but the first dam on the river (the Gardiner Paperboard Dam) prevents alewife, American shad, Atlantic salmon, blueback herring, rainbow smelt, and striped bass from migrating upstream. In 1997 the Department of Marine Resources (DMR) began stocking alewives in Pleasant Pond (upstream of the New Mills dam) in order to restore a run to the drainage. Alewives are an important forage fish, and DMR anticipated that a run of alewives would attract sportfish to the mouth of Cobbosseecontee Stream. This strategy has proved successful. Striped bass congregate in the lower, free-flowing section of the stream in fall to feed on emigrating juvenile alewives, resulting in an exceptional fishery."

  Per the November 29, 2018, MDEP issued WQC[17]

[15] http://cybrary.fomb.org/pages/20021200-MDMRCobbossee2002.pdf
[16] A collective term referring to anadromous and catadromous fishes, i.e., fishes that migrate between the ocean and fresh water during their life cycle. Anadromous fishes spend most of their lives in the ocean, but spawn in fresh water; catadromous fishes spend most of their lives in fresh water, but spawn in the ocean. Alewife, American shad, Atlantic salmon, blueback herring, rainbow smelt, and striped bass are anadromous. The American eel is catadromous.
[17] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15106486

"Currently, American eel and sea-run alewives occur within the Project area or upstream of the American Tissue Project dam; alewives are stocked into the upstream Pleasant Pond and Horseshoe Pond by MDMR. Adult sea-run alewives migrate downstream throughout the summer after spawning, and juvenile alewives migrate downstream through the Project in the fall."

- Current Upstream American Eel Passage:

In August 2006 KEI (Maine) installed a temporary eel fishway near a rock wall on the west end of the dam, which facilitated passage of over 1,800 eels (2018 EA). The temporary upstream passage currently remains in place.

- New Upstream American Eel Passage:

  Per the FERC License (FERC No. 2809) dated April 30, 2019[18], the 2018 WQC, and Section 18 prescriptions from the U.S. Department of the Interior (DOI) and the U.S. Department of Commerce (DOC), KEI (Maine) is installing upstream passage for American eel. KEI (Maine) will install, operate and maintain an upstream eel passage facility on the west end of the project spillway (to improve upstream passage for adult American eels) before the second migration season after license issuance (i.e. by June 2021). Eel passage facilities will be operated annually, during predefined upstream migration periods, between June 1 and September 15.

  KEI (Maine) will consult with the MDMP, MDIFW, USFWS, and NMFS to develop final eel passage design (designs due September 2019). Within 10 months of the effective date of the 2019 License ((February 2020), KEI (Maine) will, in consultation with resource agencies, submit a plan for effectiveness monitoring at the upstream eel passage facility. Within one year of eel passage installation KEI (Maine) will conduct a study to determine the effectiveness at the passage.

- Per License Article 405, the WQC conditions 3 and 4, DOI prescription 11.4, and DOC prescriptions 7.3.1 and 7.3.3 – Fishway Operation and Maintenance Plan: Within one year of the effective date of the license, KEI (Maine) will file with the Commission, for approval, a plan describing operation and maintenance of the upstream eel passage facility.

  License requirements also require KEI (Maine) to submit an annual Fish Passage Facilities Operation Report by December 1 and to submit an Upstream American Eel Passage Effectiveness Monitoring Report annually, for a two-year period that is due no later than December 1.

New Upstream Anadromous Fish Passage Facility (TBD):

- Per the FERC License (FERC No. 2809) dated April 30, 2019[19], the 2018 WQC, and Section 18 prescriptions from the U.S. Department of the Interior (DOI) and the U.S.

[18] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15234250
[19] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15234250

> Department of Commerce, KEI (Maine) will install, operate and maintain an upstream passage facility for anadromous fish by the second migration season after upstream passage for anadromous fish becomes available at the downstream Gardiner Paperboard Dam.[20] Anadromous fish passage facilities shall be operated annually, during predefined upstream migration periods, between May 1 and July 31.
>
> The Gardiner Paperboard Dam is located 0.3 mile downstream of the American Tissue Dam and currently blocks the upstream passage of anadromous fish because it does not have any upstream fish passage facilities (EA at 136-137). The Gardiner Paperboard Dam is privately-owned and there are no known plans for installing fish passage facilities there or for removing the dam. The timing of construction of an upstream fish passage facility is unknown due to the status of the Gardiner Paperboard Dam.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. Responses were only received from Maine DEP to date. This response is summarized below and included in Attachment C.

On September 27, 2019, the Maine DEP responded that "the Department has no evidence to suggest that the continued operation of the Project will negatively impact the designated uses, numeric or narrative criteria of its classification standards (Class B)…the Cobbosseecontee Stream is not attaining the designated use of fishing, [however], that the non-attainment status due to the fish consumption advisory is not a result of the operation of the ATHP….

By following these Conditions outlined in the 2018 WQC, the Department has determined that KEI, through consultation with resource agencies, has made adequate provisions to accommodate fish passage for anadromous species. Additional results of WQC studies showed that the ATHP impoundment, the Cobbosseecontee Stream bypass, as well as the tailrace attain most designated uses and water quality standards for Class B waters. The Department has determined that standards that are not attained are not a result of Project activity. Therefore, the Department supports the Low Impact Hydropower Certification of the ATHP (FERC No. 2809)." (Attachment C).

3.3.2 BYPASS REACH

CRITERION	STANDARD	INSTRUCTIONS
C	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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Per the FERC License (FERC No. 2809) dated April 30, 2019, the November 29, 2018, Maine DEP issued Water Quality Certification (WQC), and DOI and DOC Section 18 prescriptions, KEI (Maine) is installing upstream American eel passage and is prescribed to install upstream fish passage for anadromous species should it be needed at the Project. See the Impoundment ZOE for more information.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. Responses were only received from Maine DEP to date. This response is summarized above and included in Attachment C.

3.3.3 TAILRACE

CRITERION	STANDARD	INSTRUCTIONS
C	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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Per the FERC License (FERC No. 2809) dated April 30, 2019, the November 29, 2018, Maine DEP issued Water Quality Certification (WQC), and DOI and DOC Section 18 prescriptions, KEI (Maine) is installing upstream American eel passage and is prescribed to install upstream fish passage for anadromous species should it be needed at the Project. See the Impoundment ZOE for more information.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. Responses were only received from Maine DEP to date. This response is summarized above and included in Attachment C.

3.4 DOWNSTREAM FISH PASSAGE AND PROTECTION STANDARDS

3.4.1 IMPOUNDMENT

CRITERION	STANDARD	INSTRUCTIONS
D	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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Overview of River Fisheries:

See Section 3.3 for a summary of fisheries in the Cobbosseecontee Stream.

- Current Downstream Passage System:
  Downstream fish passage for juvenile alewives and American eel has been operational at the Project since 2003, and consists of a seasonal intake trash rack overlay, and operational practice of opening the deep gate furthest from the intake overnight between September 1 and November 15, annually. Downstream alewife passage is provided via an open notch in the flashboards that spills into a plunge pool and is operated upon visual observation of river herring presence or by September 1 of each year, continuing through November 15.[21]

New Downstream Anadromous Fish Passage and American Eel Passage:

Per the FERC License (FERC No. 2809) on November 29, 2018, MDEP issued WQC, and DOI and DOC Section 18 prescriptions for the Project, KEI (Maine) will:

- Install, operate, and maintain a downstream fish passage facility for diadromous fish at the American Tissue Dam that is a surface weir (minimum of two-feet-deep by three-feet-wide) that provides a flow of approximately 29 cfs, or inflow if less, before the second migration season after license issuance (i.e. by June 2020). The downstream fish passage facility will be operated annually, during predefined downstream migration periods, between June 1 and November 30. Install, operate,

[21] In 2019, the downstream fish passage was open by June 1st, and will remain open until November 30th.

and maintain a submerged ("deep passage") downstream fish passage facility for American eels at American Tissue Dam before the second migration season after license issuance (i.e. June 2021). Eel passage facilities will be operated annually, during predefined downstream migration periods, between August 15 and November 15.

- Install a partial depth trashrack overlay with 7/8-inch clear spacing and blinding plates at the base of the penstock intake, to protect migrating alosines and American eels during the downstream passage season from June 1 through November 30.
- Operate and maintain the existing downstream passage facility for diadromous fish and American eel until the new downstream fish passage facility is operational.

- Per License Article 405, the WQC conditions 3 and 4, DOI prescription 11.4, and DOC prescriptions 7.3.1 and 7.3.3 – Fishway Operation and Maintenance Plan: Within one year of the effective date of the license, KEI (Maine) must file with the Commission, for approval, a plan describing operation and maintenance of the downstream fish passage facility.

- The WQC, DOI's Section 18 prescription, and the DOC's Section 18 prescription, require KEI (Maine) to prepare design and effectiveness plans in consultation with the conditioning agencies and to file these plans with the Commission for final approval. Required plans are reviewed in the table provided below:

MAINE WQC	INTERIOR SECTION 18 PRESCRIPTION NO.	COMMERCE SECTION 18 PRESCRIPTION NO.	PLAN NAME	COMMISSION DUE DATE
3(E) - Anadromous Fish	11.6 and 12.1(4)	7.3.6	Downstream Anadromous Fish Passage Facility Design and Location Plan	5 months after the effective date of the license
4(F) Anadromous Fish	11.7 and 12.1(5)	7.3.5	Downstream Anadromous Fish Passage Effectiveness Monitoring	10 months after the effective date of the license
-	11.6 and 12.3(4)	7.3.6	Downstream American Eel Passage Facility Design and Location Plan	5 months after the effective date of the license
4(B) American Eel	11.7 and 12.3(5)	7.3.5	Downstream American Eel Passage Effectiveness Monitoring	1 year after the effective date of license

The WQC, DOI, and DOC's Section 18 prescriptions, respectively, require KEI (Maine) to file reports related to compliance with the requirements of the license. Pursuant to these mandatory conditions, the following reports will be filed with the Commission on an annual basis:

MAINE WQC	INTERIOR SECTION 18 PRESCRIPTION NO.	COMMERCE SECTION 18 PRESCRIPTION NO.	REPORT NAME	COMMISSION DUE DATE
-	11.7	-	Fish Passage Facilities Operation Report	Annually by December 1
4(G) Anadromous Fish	11.7	7.3.5	Downstream Anadromous Fish Passage Effectiveness Monitoring	Annually, no later than December 1 for a two-year period after the facility is operational
4(B) American Eel	11.7	7.3.5	Downstream American Eel Passage Effectiveness Monitoring	Annually, no later than December 1 for a two-year period after the facility is operational

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. Responses were only received from Maine DEP to date. This response is summarized above and included in Attachment C.

3.4.2 BYPASS REACH

CRITERION	STANDARD	INSTRUCTIONS
D	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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Per the FERC License (FERC No. 2809) dated April 30, 2019, the November 29, 2018 MDEP issued WQC, and pursuant to the DOI and DOC's Section 18 prescriptions for the Project, KEI (Maine) is required to install downstream passage for anadromous fish species and for American eel. The downstream system will seasonally provide a minimum flow of 29 cfs to attract and convey migrants over the surface weir. The surface weir flow will fall into an adequately sized plunge pool at the toe of the spillway and that then discharges into flowing water in the bypass reach.

Please see the Impoundment ZOE for more information on the downstream fish passage facility installation and plans/reports.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. Responses were only received from Maine DEP to date. This response is summarized above and included in Attachment C.

3.4.3 TAILRACE

CRITERION	STANDARD	INSTRUCTIONS
D	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. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.

Please see Bypassed Reach ZOE above.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. Responses were only received from Maine DEP to date. This response is summarized above and included in Attachment C.

3.5 SHORELINE AND WATERSHED PROTECTION STANDARDS

3.5.1 IMPOUNDMENT

CRITERION	STANDARD	INSTRUCTIONS
E	1	Not Applicable / De Minimis Effect: • 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 American Tissue Project impoundment is a narrow and shallow pond with less than 24 feet of depth and a total volume of approximately 108 acre-feet at full pond. The shoreline immediately surrounding the impoundment is moderately forested to the north, with some commercial and developed areas to the south. The slopes along the impoundment shoreline are steep with mixed vegetation.

Per Article 402, the Project is currently operated in a run-of-river mode in which outflows approximate inflows, which minimize unnatural fluctuations in the Project's impoundment. The run-of-river operations reduce disruption to any near-shore spawning habitat and passage for migratory fish in the reach downstream of the project. In addition, operating the Project in run-of-river mode maintains relatively stable impoundment levels, which would continue to benefit shoreline habitat, as well as fish and other aquatic organisms that rely on near-shore habitat for spawning, foraging, and cover (FERC EA 2018).[22]

The Project is located in the Acadian Plains and Hills ecoregion, which is characterized by rolling plains and low hills. The Project Vicinity is predominantly forested upland and developed land. Wetlands in the Project Vicinity are limited to deep water habitats and fringe areas within the littoral zone, however, there are no wetlands within the Project Boundary.

Limited areas of upland are located within the Project Boundary. Along the shoreline is approximately 0.8 acre of deciduous and mixed forest, including red maple, red oak, white ash, sugar maple, American beech, paper birch, white pine, hemlock, and balsam fir (FERC EA 2018). The remaining 1.2 acres of land within the Project Boundary is used for commercial and residential areas, which are primarily along the shoreline of the impoundment. The Project shoreline is currently maintained by vegetation removal techniques such as mowing and string trimming of the grass areas, access road, and parking lot (FERC EA 2018).

[22] https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=14960760

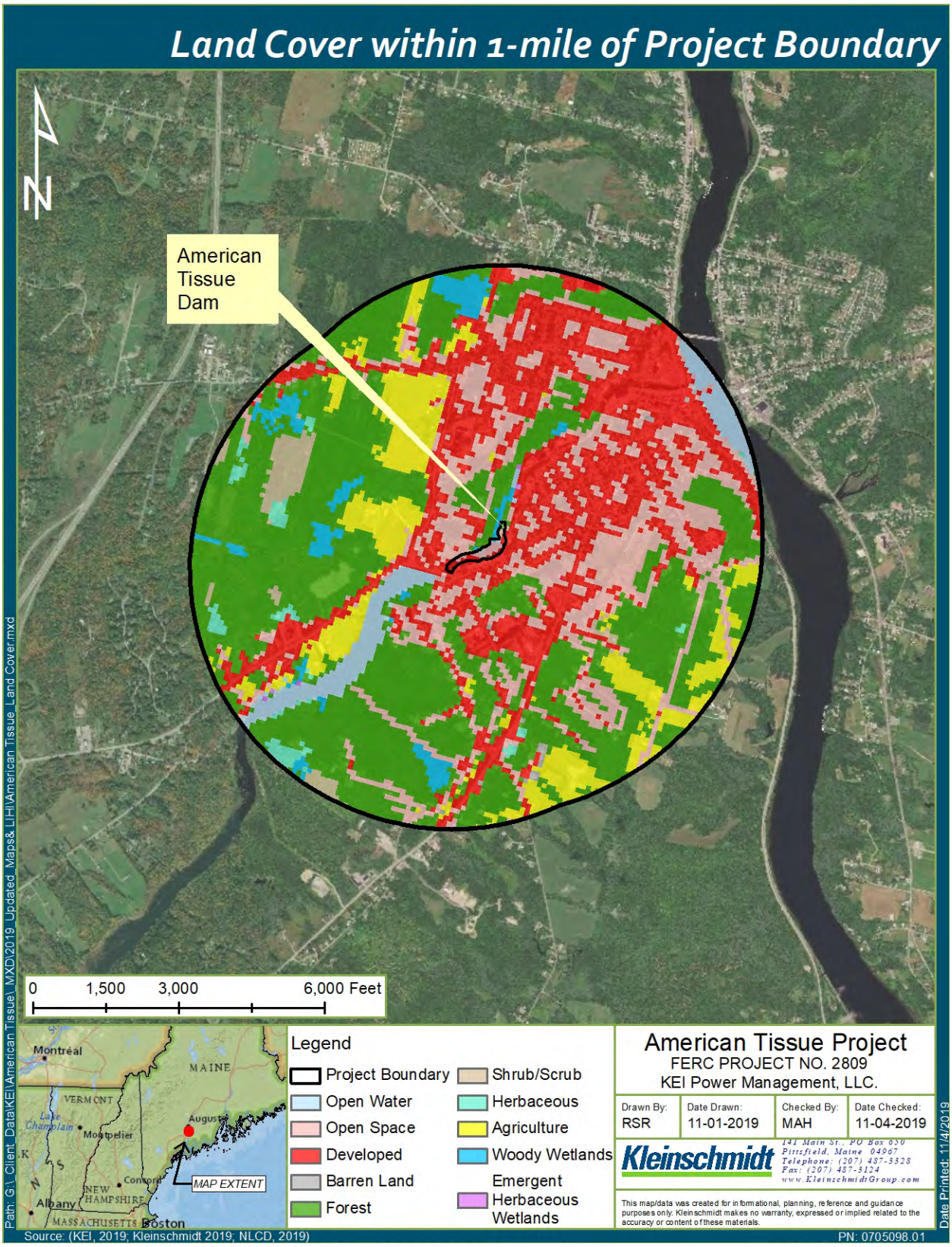

FIGURE 3-1 LAND COVER WITHIN 1-MILE OF PROJECT BOUNDARY

FERC's EA states that during environmental analysis, no agencies filed recommendations or comments for botanical or wildlife resources (or invasive species) with regard to the Project's impoundment or downstream. Run-of-river mode will continue to maintain the impoundment levels and minimize effects on habitat along the shoreline of the impoundment. Invasive species are not currently a known problem, and no significant ground-disturbing activities are proposed in the future license term (FERC EA 2018).

The Project does not contain lands with significant ecological value as noted in the FERC EA (2018). Additionally, the 2019 FERC License does not contain any specific license articles pertaining to the development of a Shoreline management Plan or similar management plan for the facility.

Additionally, no land in the immediate vicinity of the project are included in the national trails system, nor are there any designated wilderness land. The Cobbosseecontee Stream is not on the list of wild and scenic rivers.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. Responses were only received from Maine DEP to date. This response is summarized below and included in Attachment C.

On September 27, 2019, the Maine DEP responded that "the Department has no evidence to suggest that the continued operation of the Project will negatively impact the designated uses, numeric or narrative criteria of its classification standards (Class B)…the Cobbosseecontee Stream is not attaining the designated use of fishing, [however], that the non-attainment status due to the fish consumption advisory is not a result of the operation of the ATHP….

By following these Conditions outlined in the 2018 WQC, the Department has determined that KEI, through consultation with resource agencies, has made adequate provisions to accommodate fish passage for anadromous species. Additional results of WQC studies showed that the ATHP impoundment, the Cobbosseecontee Stream bypass, as well as the tailrace attain most designated uses and water quality standards for Class B waters. The Department has determined that standards that are not attained are not a result of Project activity. Therefore, the Department supports the Low Impact Hydropower Certification of the ATHP (FERC No. 2809)." (Attachment C).

Additional Information:

The City of Gardiner is currently pursuing a Cobbossee Corridor Master Plan that includes plans to revitalize the Cobbosseecontee Stream shoreline by developing new trails, open space recreation opportunities, housing, and new commercial developments. Although the plan was approved in 2005, no implementation schedule has been issued. Part of this master plan includes plans to extend the city park located near the project, such that it would encompass land from Pleasant Pond to downtown Gardiner and connect to the Kennebec River Rail Trail (City of Gardiner 2017).[23]

[23] https://www.gardinermaine.com/economic-development/pages/cobbossee-corridor-master-plan

3.5.2 BYPASS REACH

CRITERION	STANDARD	INSTRUCTIONS
E	1	Not Applicable / De Minimis Effect: • 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 Project's bypassed reach is comprised of the 345-foot-long reach of riverine habitat between the dam and the powerhouse. It is a moderate-to-low gradient, incised channel that runs over bedrock and has boulders, cobblestone and other rock materials along both banks. Aquatic habitat in the bypassed reach is limited.

Per Article 402, KEI (Maine) operates the project in a run-of-river mode in which outflow from the Project approximates inflow to the impoundment.

Shorelands surrounding the bypass reach consist of mowed/maintained area surrounding the powerhouse and access area on the eastern side of the river and natural woodlands on the western side of the river. There are no shoreline management plans laid out for the bypass reach and no lands in the immediate vicinity of the Project are included in the national trails system, nor are there any designated wilderness land. The Cobbosseecontee Stream is not on the list of wild and scenic rivers.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from Maine DEP is included above and in Attachment C.

3.5.3 TAILRACE

CRITERION	STANDARD	INSTRUCTIONS
E	1	Not Applicable / De Minimis Effect: • 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.

There are no specific shoreline protections laid out for the Downstream ZOE. As noted above, there are no lands with significant ecological value associated with the facility. FERC's EA states that during environmental analysis, no agencies filed recommendations or comments for botanical or wildlife resources (or invasive species) with regard to the Project's downstream reach.

Per Article 402, KEI (Maine) operates the Project in a run-of-river mode in which outflow from the Project approximates inflow to the impoundment. The Project's run-of-river operations maintain the river's natural flow regime in the downstream reaches from the Project.

Additionally, no land in the immediate vicinity of the project are included in the national trails system, nor are there any designated wilderness land. The Cobbosseecontee Stream is not on the list of wild and scenic rivers.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from Maine DEP is included above and in Attachment C.

3.6 THREATENED AND ENDANGERED SPECIES STANDARDS

3.6.1 ALL ZOES

CRITERION	STANDARD	INSTRUCTIONS
F	2	Finding of No Negative Effects: • Identify all listed species in the facility area based on current data from the appropriate state and federal natural resource management agencies. • Provide documentation of a finding of no negative effect of the facility on any listed species in the area from an appropriate natural resource management agency.

On May 9, 2018, FERC accessed the USFWS's Information for Planning and Consultation (IPaC) database to determine federally listed species that could occur in the Project vicinity. According to the IPaC database, the federally endangered Atlantic salmon (*Salmo salar*) and threatened northern long-eared bat (*Myotis septentrionalis*) could occur in the Project Vicinity. No critical habitat for either species is present in the Project vicinity.[24] KEI (Maine) will abide by the 4(d) Ruling issued by USFSW for northern long-eared bat in the American Tissue Project Vicinity.[25]

Atlantic Salmon:
No known spawning or rearing habitat occurs within the American Tissue Project area, nor is there any known Atlantic salmon migration upstream or downstream through the Project waters.[26] In the project area, the downstream Gardiner Paperboard Dam blocks movements of Atlantic salmon further upstream and no Atlantic salmon have been found in the Project area. Historically, Atlantic salmon migrated up Cobbosseecontee Stream.[27]

Pursuant to Section 18 and Section 10(j) of the Federal Power Act, the National Marine Fisheries Service (NMFS)[28] filed their preliminary prescriptions[29] in response to FERC's September 28, 2017 "Ready for Environmental" Notice regarding the Final License Application for the Project. Section 7 of the Endangered Species Act (ESA), 16 U.S.C. § 1536, requires KEI (Maine) to ensure that their Project operations are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species.

[24] FERC EA at 11
[25] https://www.fws.gov/midwest/endangered/mammals/nleb/pdf/FRnlebFinal4dRule14Jan2016.pdf
[26] FERC EA at 85
[27] FERC EA at 87
[28] NMFS has statutory authority under the Magnuson-Stevens Fishery Conservation and Management Act (as amended), the Endangered Species Act of 1973 (as amended), the Atlantic Coastal Fisheries Cooperative Management Act (as amended), the Fish and Wildlife Coordination Act (as amended), and the National Environmental Policy Act (as amended).
[29] https://elibrary-backup.ferc.gov/idmws/common/opennat.asp?fileID=15066106

Section 305 of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1855(b)(2), requires federal agencies to consult with NMFS on all actions that may adversely affect Essential Fish Habitat (EFH).[30] EFH for Atlantic salmon has been defined as, "all waters currently or historically accessible to Atlantic salmon within the streams, rivers, lakes, ponds, wetlands, and other water bodies of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut."[31] The Project area constitutes EFH for Atlantic salmon because it is located in Maine and on Cobbosseecontee Stream, which was historically accessible to Atlantic salmon. FERC concluded that operating the Project as proposed by in the Final License Application (i.e. Article 402 requirements) and with FERC-staff recommended measures would not adversely affect Atlantic salmon EFH.

Overall, the FERC EA suggests that the modifications KEI (Maine) will make to downstream fish passage facilities will ultimately result in a net benefit to water quality in the bypassed reach and would enhance the EFH for Atlantic Salmon.[32]

Northern Long-eared Bat:
The northern long-eared bat (NLEB) was listed as a federally threatened species under the ESA on May 4, 2015 and is also a species of special concern in Maine. These bats are flexible in selecting roost sites, choosing roost trees that provide cavities and crevices. Winter hibernation typically occurs in caves and areas around them and can be used for fall-swarming and spring-staging. No critical habitat has been designated for the NLEB in the Project Vicinity. The Project is located within the white-nose syndrome buffer zone for the NLEB. Although there are no known occurrences of NLEB at the Project, the Project vicinity is largely forested and could supply suitable habitat for NLEB summer roosting and foraging activities. [33] No agency recommendations were received regarding the NLEB during the FERC EA process. Ongoing run-of-river operations are no anticipated to negatively affect the NLEB.

American Eel:
Although American eel is not a listed species under the Endangered Species Act, the NMFS did provide Section 18 prescriptions for upstream and downstream passage of the American eel.[34] As described in the upstream and downstream fish passage sections, KEI (Maine) will be constructing an upstream eel passage system and will be constructing a new downstream fish and eel passage system. KEI (Maine)'s provision of upstream and downstream eel passage is not anticipated to negatively affect American eels in the Project area.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. The response from USFWS and NMFS will be included as part of the Final LIHI Certification Application.

[30] Essential fish habitat (EFH) refers to those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity and covers a species' full life cycle (50 C.F.R. § 600.10 (2017)).
[31] FERC EA at 13
[32] FERC EA at 90
[33] FERC EA at 89
[34] https://www.fws.gov/northeast/americaneel/

On September 17, 2019, the Maine Department of Inland Fisheries & Wildlife responded to Kleinschmidt's request. Maine DIFW stated that "the following Endangered, Threatened, and Special Concern species have been documented in the general vicinity of the American Tissue Dam Project on the Cobbosseecontee Stream. Note that this list should not be considered all-inclusive":

- Tidewater Mucket (State Threatened)

Additionally, "while a comprehensive statewide inventory for bats has not been completed it is likely that several of species of bats occur within the project area during migration and/or the breeding season.":

- Little brown bat (State Endangered)
- Northern long-eared bat (State Endangered)
- Eastern small-footed bat (State Threatened)
- Big brown bat (Special Concern)
- Red bat (Special Concern)
- Hoary bat (Special Concern)
- Silver-haired bat (Special Concern)
- Tri-colored bat (Special Concern)

Maine DIFW concluded that "it is not known what effects, if any, the operations of the Project may have on any of the above species." The full e-mail can be reviewed in Attachment C.

3.7 CULTURAL AND HISTORIC RESOURCES 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. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

KEI (Maine) conducted a Phase I History/Architecture Survey to evaluate the eligibility of above-ground resources within the Projects area of potential effect (APE) to be added to the National Registry. The survey determined that none of the Project structures within the APE are eligible and in a January 22, 2016 email, the SHPO concurred with this conclusion. In a February 21, 2017 letter to KEI (Maine), the SHPO requested that a reconnaissance-level archeological survey be performed concurrent with the next scheduled impoundment drawdown. In an April 13, 2017 letter to the SHPO, KEI (Maine) provided photos from the drawdown of the impoundment in 2004, as drawdowns for the Project occur infrequently and are for a brief duration. The Licensee stated it would comply and coordinate with the SHPO on any drawdown for maintenance or inspection purposes.

The only potential historic property within the APE is the Gardiner Mill remains that lay beneath the impoundment and are only exposed for a few days during dewatering events. As KEI (Maine) has not yet preformed the reconnaissance survey as requested by SHPO, there is little known about the remains integrity and the eligibility of them for the National Register. Should the Gardener Mill remains be deemed eligible for listing on the National Register, SHPO should be consulted prior to drawdowns in order to set up protective measures to help protect historic property that could be exposed. During the term of the license, it is possible that undefined historic resources could be disturbed due to general maintenance activities such as landscaping and ground disturbing-yard maintenance. To ensure that these potential historical resources are not adversely affected, the Maine SHPO could be consulted for standard protocol to be implemented prior to maintenance.

As stated within the Project's FERC EA, the Project as proposed would not be likely to affect cultural resources because it would only involve construction of fish passage facilities, which would not occur near or affect any known historic sites. Relicensing the Project is not likely to affect historical properties eligible for or listed on the National Register.

License Article 408 therefore requires KEI (Maine) to conduct a National Register Eligibility Survey on the Gardiner Mill during the first scheduled impoundment drawdown that exposes the remains of the Mill. License Articles 409 and 410 also require that KEI (Maine) consult with the SHPO prior to implementing any Project modifications or should the Licensee discover any previously unidentified cultural resources during construction activities.

Additionally, as stated within the Project's Pre-Application Document (PAD), there are no tribal lands within the Project boundary and there are no federal reservations in the vicinity of the Project. Operating in a run-of-river mode, the Project is unlikely to affect any resources that may impact cultural or economic interest. KEI (Maine) mailed a copy of a PAD questionnaire to the five federally recognized tribes of the state of Maine and received a response from the Penobscot Indian Nation of December 2, 2013, who expressed interest in potential cultural resources within the Project. Additionally, KEI (Maine) hosted an early agency consultation meeting on December 17, 2013 in which none of the five recognized tribes were in attendance.

The Maine State Historic Preservation Officer reported that the project will have no effect upon any structure or site of historic, architectural, or archeological significance. Article 23 will ensure that any such resources discovered during the course of project construction will be protected.

On August 29, 2019, Kleinschmidt, on behalf of KEI (Maine), consulted with state and federal agencies, requesting confirmation that the American Tissue Project is operated in compliance with the conditions of the FERC license and WQC. A response from Maine Historic Preservation Commission has not been received to date.

3.8 RECREATIONAL RESOURCES STANDARDS

3.8.1 ALL ZOES

CRITERION	STANDARD	INSTRUCTIONS
H	1	Not Applicable/De Minimis: • Document that the facility does not occupy lands or water to which the public can be granted safe access and does not otherwise impact recreational opportunities in the vicinity of the facility.

As noted in FERC's EA, KEI (Maine) permits public use of the land and water surrounding the Project for recreation. However, there are no formal Project recreation facilities, and access is generally restricted due to industrial/commercial use on the south bank and steep wooded terrain on the north bank, which pose a potential safety hazard.

Additionally, the Project was exempt from for FERC form 80 on April 4, 1996 because information available to Commission staff at the time indicated that Project had no potential for recreational use. Based on staff observation and evidence such as the dirt ramp to the impoundment, the project likely sees light recreational use through swimming, hand-carry boating, and fishing. FERC eliminated the Licensed Hydropower Development Recreational Report, designated as FERC Form No. 80, effective March 28, 2019 in Order No. 852 issued on December 20, 2018.

The Project lands are not subject to any enforceable Recreation Resource Management Plans or FERC Form 80 requirements as part of their License, and only provide voluntary informal access to the project water for recreation, including fishing and navigation (WQC, Condition 7 and License Article 13).

Additional information:

The Project does not contain any FERC approved recreational facilities, but KEI (Maine) permits public use of the Project land and waters for recreation. The impoundment is open to the public and can be accessed through the city park. The tailrace and downstream of the Project can also be accessed over the Project land. An informal canoe portage route is available from Project impoundment to a hand-carry boat launch downstream of the Gardiner Paperboard Dam. As there is no indication that the City of Gardiner intends to restrict access to or discontinue management of the city park and canoe portage trail, FERC concluded that there was no basis for the development of a recreation plan, as suggested by the City of Gardiner.[35]

[35] There is a city park adjacent to the Project on the north bank of the impoundment that hosts picnic tables and a 5-car parking lot. Informal recreational access to the north shore of the project impoundment is supplied by a dirt ramp adjacent to the city park. The ramp is located just upstream of the seasonal boat barrier in the impoundment and is connected to a trail owned and maintained by the City of Gardiner. The trail runs along the north bank of the project and parallels the Cobbosseecontee Stream. The trail provides an informal canoe portage route between the project impoundment and a canoe put in/take out area near the downstream Gardiner Board Paper Dam. Informal recreational access to the tailrace and downstream of the Project is available over the project land.

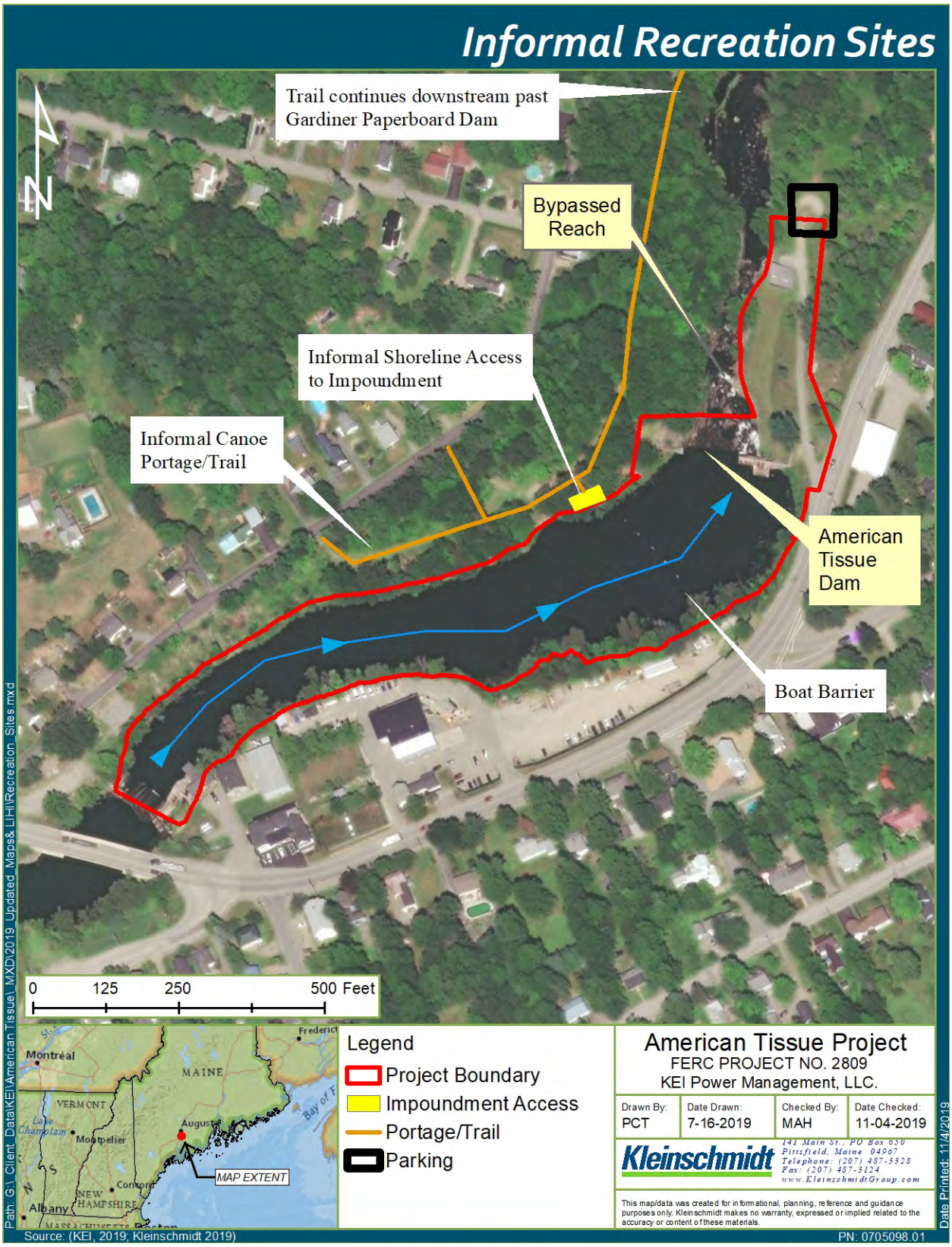

FIGURE 3-2 INFORMAL RECREATION SITES NEAR THE PROJECT

4.0 PROPOSED LIHI CONDITIONS

KEI (Maine) is cognizant of on-going implementation of measures required by the new license that will need to be completed over the first few years the new license term at the Project. KEI (Maine), therefore proposes the following conditions be included within the LIHI Certification for this Project, should it be issued:

- Provide LIHI notice when the Operations Monitoring Plan is complete and approved by FERC.
- Provide LIHI notice when the upstream eel passage construction is complete and as-built drawings are filed with FERC.
- Provide LIHI notice when the Upstream Eel Passage Facility Operations and Maintenance Plan is complete and approved by FERC.
- Provide LIHI notice when the Upstream American Eel Passage Effectiveness Monitoring Report is filed with FERC.
- Provide LIHI notice when the downstream fish and eel passage construction is complete and as-built drawings are filed with FERC.
- Provide LIHI notice when the Downstream Passage Facility Operations and Maintenance Plan is complete and approved by FERC.
- Provide LIHI notice when the Downstream Anadromous Fish Passage Effectiveness Monitoring Report is filed with FERC.
- Provide LIHI Notice when the Downstream American Eel Passage Effectiveness Monitoring is filed with FERC.
- Provide LIHI notice when the Fish Passage Facilities Operation Report is filed with FERC.
- Should upstream anadromous fish passage be required over the course of the LIHI Certification, KEI (Maine) will provide LIHI notice when construction is complete and as-built drawings are filed with FERC, when the Upstream Passage Facility Operations and Maintenance Plan is complete and approved by FERC and notice of when an Upstream Anadromous Fish Passage Effectiveness Monitoring Report is filed with FERC.

5.0 FACILITY CONTACTS FORM

1. **All applications for LIHI Certification must include complete contact information to be reviewed.**

Project Owner:	
Name and Title	Sherri Loon, Coordinator - Operations USA
Company	KEI (Maine) Power Management (III) LLC
Phone	207-203-3026
Email Address	Sherri.Loon@kruger.com
Mailing Address	423 Brunswick Avenue, Gardiner, ME 04345
Project Operator (if different from Owner):	
Name and Title	Sherri Loon, Coordinator – Operations USA
Company	KEI (Maine) Power Management (III) LLC
Phone	(207) 203-3026
Email Address	Sherri.Loon@kruger.com
Mailing Address	423 Brunswick Avenue, Gardiner, ME 04345
Consulting Firm / Agent for LIHI Program (if different from above):	
Name and Title	Nuria V. Holmes
Company	Kleinschmidt Associates
Phone	971-266-5395
Email Address	Nuria.Holmes@Kleinschmidtgroup.com
Mailing Address	1500 NE Irving Street, Suite 550, Portland, OR 97232
Compliance Contact (responsible for LIHI Program requirements):	
Name and Title	Sherri Loon, Coordinator - Operations USA
Company	KEI (Maine) Power Management (III) LLC
Phone	207-203-3026
Email Address	Sherri.Loon@kruger.com
Mailing Address	423 Brunswick Avenue, Gardiner, ME 04345
Party responsible for accounts payable:	
Name and Title	Sherri Loon, Coordinator - Operations USA
Company	KEI (Maine) Power Management (III) LLC
Phone	207-203-3026
Email Address	Sherri.Loon@kruger.com
Mailing Address	423 Brunswick Avenue, Gardiner, ME 04345

2. **Applicant must identify the most current and relevant state, federal, provincial, and tribal resource agency contacts (copy and repeat the following table as needed).**

Agency Contact (Check area of responsibility: Flows☐, Water Quality ☐, Fish/Wildlife Resources ☒, Watersheds ☐, T/E Spp. ☒, Cultural/Historic Resources ☐, Recreation ☐):	
Agency Name	National Marine Fisheries Service
Name and Title	Sean McDermott, Fisheries Biologist
Phone	978-271-9113
Email address	Sean.mcdermott@noaa.gov
Mailing Address	55 Great Republic Drive, Gloucester, MA 01930

Agency Contact (Check area of responsibility: Flows☒, Water Quality ☒, Fish/Wildlife Resources ☐, Watersheds ☐, T/E Spp. ☐, Cultural/Historic Resources ☐, Recreation ☒):	
Agency Name	Maine Department of Environmental Protection
Name and Title	Kathy Howatt
Phone	207-453-4258
Email address	Kathy.howatt@maine.gov
Mailing Address	17 State House Station, Augusta, ME 04333

Agency Contact (Check area of responsibility: Flows☒, Water Quality ☒, Fish/Wildlife Resources ☒, Watersheds ☒, T/E Spp. ☒, Cultural/Historic Resources ☒, Recreation ☒):	
Agency Name	U.S. Fish and Wildlife Service
Name and Title	Antonio Bentivoglio
Phone	207-781-8364 x 18
Email address	antonio_bentivoglio@fws.gov
Mailing Address	4 Fundy Road #R, Falmouth, Maine 04105

Agency Contact (Check area of responsibility: Flows☐, Water Quality ☐, Fish/Wildlife Resources ☒, Watersheds ☐, T/E Spp. ☐, Cultural/Historic Resources ☐, Recreation ☐):	
Agency Name	Maine Department of Marine Resources
Name and Title	Gail Wippelhauser
Phone	207-624-6349
Email address	Gail.wippelhauser@maine.gov
Mailing Address	21 State House Station, Augusta, ME 04333

Agency Contact (Check area of responsibility: Flows☐, Water Quality ☐, Fish/Wildlife Resources ☐, Watersheds ☐, T/E Spp. ☐, Cultural/Historic Resources ☒, Recreation ☐):	
Agency Name	Maine Historic Preservation Commission
Name and Title	Kirk Mohney, Director
Phone	207-287-3811
Email address	kirk.mohney@maine.gov
Mailing Address	65 State House Station, Augusta, ME 04333

Agency Contact (Check area of responsibility: Flows☐, Water Quality ☐, Fish/Wildlife Resources ☐, Watersheds ☒, T/E Spp. ☐, Cultural/Historic Resources ☐, Recreation ☒):	
Agency Name	Maine Department of Inland Fisheries and Wildlife
Name and Title	John Perry, Environmental Review Coordinator
Phone	207-287-5254
Email address	John.perry@maine.gov
Mailing Address	284 State Street, 41 SHS, Augusta, ME 04333

6.0 SWORN STATEMENT

As an Authorized Representative of KEI (USA) Power Management Inc., 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 is certification of the applying facility is issues, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified.

The Undersigned Applicant 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.

Signature

Lewis C. Loon

Name

General Manager, Operations & Maintenance - USA/QC

Title

KEI (USA) Power Management Inc.

Company

ATTACHMENT A

PROJECT PHOTOGRAPHS

PHOTO 6-1 AMERICAN TISSUE DAM (EAST AND WEST ABUTMENTS AND SPILLWAY)

PHOTO 6-2 AMERICAN TISSUE DAM EAST ABUTMENT

PHOTO 6-3 BYPASS REACH FLOWS LOOKING DOWNSTREAM FROM DAM

PHOTO 6-4 VIEW LOOKING UPSTREAM AT BOAT BARRIER

PHOTO 6-5 AMERICAN TISSUE PROJECT IMPOUNDMENT

PHOTO 6-6 DOWNSTREAM FISH PASSAGE "DROP BOX" AT DAM

PHOTO 6-7 BEDROCK CASCADE IMMEDIATELY DOWNSTREAM OF DAM

PHOTO 6-8 POOL IMMEDIATELY DOWNSTREAM OF BEDROCK CASCADE

PHOTO 6-9 INTERIM DOWNSTREAM EEL LADDER AT LEFT ABUTMENT

PHOTO 6-10 VIEW OF BURIED PENSTOCK FROM DAM TO POWERHOUSE

PHOTO 6-11 AMERICAN TISSUE POWERHOUSE

PHOTO 6-12 POWERHOUSE TAILRACE

PHOTO 6-13 GENERATOR IN POWERHOUSE

PHOTO 6-14 TURBINE IN POWERHOUSE

ATTACHMENT B

WATER QUALITY CERTIFICATE

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

KEI (Maine) Power Management (III) LLC	) MAINE WATER QUALITY PROGRAM
Gardiner, Kennebec County	) FEDERAL CLEAN WATER ACT
AMERICAN TISSUE HYDROELECTRIC	)
PROJECT	)
#L-16416-33-E-N (Approval)	) WATER QUALITY CERTIFICATION

Pursuant to the provisions of 38 M.R.S. §§ 464 *et seq*., Section 401 of the Clean Water Act, 33 U.S.C. §§ 1251 *et seq*. (formerly known as the Federal Water Pollution Control Act) (CWA), Department Rules 06-096 CMR Chapters 579-582, the Department of Environmental Protection (Department) has considered the application of KEI (Maine) POWER MANAGEMENT (III) LLC (applicant or Licensee) with all supporting data, agency review comments, public review comments, and other related materials in the administrative record. Based on the record evidence and the Department's professional experience, judgment, and expertise, the Department makes the following findings of fact, determinations, and conclusions:

1. APPLICATION SUMMARY

A. Application: On December 14, 2017, the applicant submitted an application to the Department for Water Quality Certification (WQC) pursuant to Section 401 of the CWA for the proposed relicensing and continued operation of the existing American Tissue Hydroelectric Project P-2809 (Project or American Tissue Project) located on the Cobbosseecontee Stream in the Town of Gardiner, Kennebec County, Maine.

B. History: The Department finds that the Project dam was constructed in 1900 and operated as a run-of-river water power facility until 1970, when the powerhouse was destroyed by fire. The remaining dam, penstock, and reservoir were redeveloped pursuant to a new May 9, 1979 license issued by the Federal Energy Regulatory Commission (FERC), which licensed repairs to the damaged gates, intake and headworks and a new powerhouse at the site of the old powerhouse. Construction was completed by 1983. The May 9, 1979 FERC license (FERC license) expires on April 30, 2019.

C. Existing Project Features: The Department finds that the existing Project works include a cut-granite gravity dam with a spillway, east and west abutments, an underground steel penstock, a wheelpit, and a tailrace. The powerhouse contains one

turbine generator unit, and a 250-foot-long- 12-kV transmission line with a 4.5 kV step up transformer. The project boundary includes the impoundment, dam, headrace, powerhouse, and tailrace. The Department further finds as follows:

1) Project Dam. The Department finds that the American Tissue Project dam is a cut granite and stone masonry gravity structure that is 17 to 23.3 feet in height and approximately 256 feet long with a permanent crest elevation of 122.3 feet above mean sea level (msl). The dam is founded on bedrock and has a downstream concrete facing and concrete buttresses. The dam has a 100-foot-long spillway topped by 1-foot-high flashboards. The west abutment is a mortared stone masonry structure, approximately 61 feet long, ranging in width from 7 feet to 2.5 feet, with an elevation of 128.7 feet msl including two-foot-high permanent crest boards. The east abutment is a mortared stone masonry and mortared brick structure, approximately 95 feet long and 10 feet wide with a crest elevation of 128.7 feet msl. The east abutment contains the intake structure and three low level outlets.

2) Project Impoundment. The Department further finds that the impoundment extends approximately 1000 feet upstream of the Project dam, to the toe of the New Mills dam, and has a normal, full pond water surface elevation of 123.3 feet msl and a surface area of approximately 5.5 acres. Because the Project operates in run-of-river mode, there is minimal storage behind the dam; the volume of water available for generating electricity at the American Tissue Project is 108 acre-feet.

3) Penstock. The Department further finds that the Project penstock consists of a steel tube, 280 feet long by 7 feet in diameter, which runs underground between the intake structure at the dam and the Project powerhouse.

4) Powerhouse. The Department further finds that the American Tissue Project powerhouse is a wooden and concrete structure, constructed in 1983, and is located approximately 300 feet downstream of the dam on the east side of Cobbosseecontee Stream. The powerhouse contains one turbine with a total rated capacity of 1.15 MW and a generator rated at 1053 KVA (1.0 MW) at a normal operating head of 42 feet. The hydraulic capacity is 100 cubic feet per second (cfs) and the maximum hydraulic capacity of the Project is 360 cfs.

5) Bypass Reach and Tailrace. The Department further finds that the Project bypass reach extends from the American Tissue dam downstream, approximately

300 feet. The bypass reach elevation ranges from approximately 99.3 feet to 105.3 feet at the powerhouse tailrace. The normal tailwater elevation is 85 feet.

D. Existing Project Operation: The Department finds that the American Tissue Project operates as a run-of-river facility with a minimum flow requirement of 52 cfs or inflow to the reservoir (whichever is less), provided downstream of the powerhouse. The minimum downstream flow is passed through the Project turbines when operational; when the unit is offline (i.e., inflow is less than 100 cfs) the 52 cfs or inflow is passed over the crest of the flashboards by instantaneous spill or via the deep discharge gates adjacent to the intake. Flows exceeding the Project's maximum hydraulic capacity (360 cfs) are spilled or passed via the deep gates. Flows that pass through the Project turbines are discharged into Cobbosseecontee Stream at the downstream powerhouse, creating an approximately 345-foot-long bypass reach. The Project is automated and can be monitored remotely. Electric water level sensors are used to control the headpond and turbine, and sensors are used to monitor water levels at the tailrace and upstream and downstream of the trashracks.

The Department further finds that downstream fish passage for juvenile alewives and American eel has been operational at the Project since 2003, and consist of a seasonal intake trash rack overlay, along with the operational practice of opening the deep gate furthest from the intake overnight between September 1 and November 15 annually. Downstream alewife passage is provided via an open notch in the flashboards that spills into a plunge pool, and is operated upon visual observation of river herring presence or by September 1 of each year, continuing through November 15. The plunge pool is 15 feet by 4 feet and constructed of angled steel and ¾ inch plywood. If injured or dead eels or alewives are observed following passage through the turbine, generation is reduced or ceased. There is no upstream fish passage at the Project

E. Proposed Operation and Protection, Mitigation and Enhancement Measures: The applicant proposes to continue operating the Project in run-of-river mode, with a minimum flow of 52 cfs downstream of the powerhouse and to continue to provide 40 cfs through the low-level gate from September 1 to November 15 for downstream eel passage; in addition, the applicant proposes to provide a continuous minimum flow of 10 cfs or inflow, whichever is less, to the bypass reach. No other operational changes are proposed.

The applicant is proposing to upgrade the existing downstream fish passage system to reduce entrainment potential for out-migrating diadromous fish species. In addition, the applicant also proposes to build American eel upstream passage facilities. The applicant will develop both designs in consultation with the National Marine Fisheries Service

(NMFS), United States Fish and Wildlife Service (USFWS), and the Maine Department of Marine Resources (MDMR).

1. Proposed Minimum Flows: The applicant proposes to provide 10 cfs to the bypass reach and continue to provide a downstream minimum flow of 52 cfs to the river reach downstream of the powerhouse.

2. Proposed Impoundment Water Levels: The applicant proposes to operate the facility in run-of-river mode, with one-foot-high flashboards and a normal head pond elevation of 123.3 feet msl.

2. JURISDICTION

The Department finds and determines as follows: The proposed continued operation of the Project qualifies as an "activity…which may result in (a) discharge into the navigable water (of the United States)" under the CWA. Section 401 of the CWA requires that any applicant for a federal license or permit to conduct such an activity obtain a certification that the activity will comply with applicable State water quality standards. State law authorizes the Department to issue a WQC pursuant to Section 401 of the CWA when the standards of classification of the water body and the State's antidegradation policy are met. 38 M.R.S. § 464(4)(F)(3).

State WQC for the Project was not issued by the Department at the time of its initial FERC license in 1979 or prior to installation of hydroelectric power generating facilities at the site of the American Tissue Project dam. Under a 1996 Executive Order of the Governor of the State of Maine, the Department is designated as the certifying agency for issuance of Section 401 WQC for all activities in the State not subject to Land Use Planning Commission (LUPC) permitting and review. Because the Project is not subject to LUPC permitting review, the Department is the certifying agency for the Project. Executive Order No. 3 FY 96/97.

The Project is licensed by FERC as a water power project under the Federal Power Act (FERC Project No. 2809). The initial FERC license was issued on May 9, 1979, and expires on April 30, 2019. The Licensee has filed an Application for New License with FERC to continue to operate the Project. This application is currently pending before the FERC.

3. APPLICABLE STATE WATER QUALITY STANDARDS

A. Classification: The Department finds and determines that the Cobbosseecontee Stream meets the definition of a river, stream or brook pursuant to 38 M.R.S. § 480-B(9), and that the Project impoundment does not meet the definition of a great pond pursuant to 38 M.R.S. § 480-B(5). Accordingly, under the introductory language in 38 M.R.S. §§ 465 and 467, the Project impoundment is riverine in nature and classified under 38 M.R.S. § 467. Therefore, the water classification of Cobbosseecontee Stream, main stem, is Class B, including both the Project's impoundment and tail water (outlet stream) areas. 38 M.R.S. § 467(4)(C)(1).

B. Designated Uses: The applicant must demonstrate that the American Tissue Project impoundment and the Cobbosseecontee Stream below the Project dam meets the following Class B water classification standards and designated uses described in 38 M.R.S. § 465(3)(A):

Class B waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.

C. Numeric Standards: The applicant must demonstrate that the American Tissue Project impoundment and Cobbosseecontee Stream below the Project dam also meet the following numeric Class B standards set forth in 38 M.R.S. § 465(3)(B) and in M.R.S. § 464(13), in pertinent part:

The dissolved oxygen content of Class B water may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the 1-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas…

Compliance with dissolved oxygen criteria in existing riverine impoundments must be measured as follows:

A. Compliance with dissolved oxygen criteria may not be measured within 0.5 meters of the bottom of existing riverine impoundments.
B. Where mixing is inhibited due to thermal stratification in an existing riverine impoundment, compliance with numeric dissolved oxygen criteria may not be measured below the higher of:

(1) The point of thermal stratification when such stratification occurs; or
(2) The point proposed by the Department as an alternative depth for a specific riverine impoundment based on all factors included in section 466, subsection11-A and for which a use attainability analysis is conducted if required by the United States Environmental Protection Agency.

For purposes of this paragraph, "thermal stratification" means a change of temperature of at least one degree Celsius per meter of depth, causing water below this point in an impoundment to become isolated and not mix with water above this point in the impoundment.

C. Where mixing is inhibited due to natural topographical features in an existing riverine impoundment, compliance with numeric dissolved oxygen criteria may not be measured within that portion of the impoundment that is topographically isolated. Such natural topographic features may include, but not be limited to, natural deep holes or river bottom sills.

Notwithstanding the provisions of this subsection, dissolved oxygen concentrations in existing riverine impoundments must be sufficient to support existing and designated uses of these waters. For the purpose of this subsection, "existing riverine impoundments" means all impoundments of rivers and streams in existence as of January 1, 2001 and not otherwise classified as GPA.

D. Narrative Standards: The applicant must also demonstrate that the American Tissue Project impoundment and Cobbosseecontee Stream meet the following Class B narrative standards set forth in M.R.S. § 465(3)(C):

1) Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic

species indigenous to the receiving water without detrimental changes in the resident biological community.

2) Hydropower facilities are also subject to 38 M.R.S. § 464 (10), wherein hydropower projects in existence on June 30, 1992, the impoundments of which are classified under M.R.S. § 465 (as riverine in character like the American Tissue Project here), are subject to the provisions of that subsection in recognition of some changes to aquatic life and habitat that have occurred due to the existing impoundments of those projects. Generally, this subsection provides that Class A and Class B riverine impoundments are deemed to meet their respective classification standards if the aquatic life and habitat in those impoundments meets Class C aquatic life and habitat standards, provided that no changes can be made to improve such habitat that do not significantly affect existing energy generation capacity. When the actual water quality of waters affected by this standard attain higher water quality classification or criteria, that water quality must be maintained and protected.

E. Antidegradation: The Department may only approve WQC if the standards of classification of the waterbody and the requirements of the State's antidegradation policy will be met. The Department may approve WQC for a project affecting a waterbody in which the standards of classification are not met if the project does not cause or contribute to the failure of the waterbody to meet the standards of classification. 38 M.R.S. § 464(4)(F)(3). A hydropower project, as defined by 38 M.R.S. § 632, that was constructed after June 30, 1992, may cause some change to the habitat and aquatic life of the project's impoundment and the water immediately downstream of and measurably affected by the project, so long as the habitat and aquatic life criteria of those waters' classification under 38 M.R.S. § 465, 465-A, 467, and 468 are met. 38 M.R.S. § 464(4)(H).

F. Department Rules: Attainment of water quality standards is assessed through application of the following Department Rules:

1) 06-096 Chapter 579: Classification Attainment Evaluation Using Biological Criteria for Rivers and Streams. Criteria to quantify aquatic life standards for Classes AA, A, B, and C waters are defined in this rule. The benthic macroinvertebrate community is used as a surrogate to determine conformance with statutory aquatic life standards, related statutory definitions, and statutory provisions for the implementation of biological water quality criteria that are

provided in Maine's standards for classification of fresh surface waters. Methods described in this chapter are used to make decisions about classification attainment.

2) 06-096 Chapter 580: Regulations Relating to Sampling Procedures and Analytical Procedures. This rule establishes standards whereby all sampling and analysis is performed according to accepted technical procedures for chemical and biological analysis.

3) 06-096 Chapter 581: Regulations Relating to Water Quality Evaluations. This rule provides for the maintenance of stream and lake classifications without violations by computing capacity of the waters to break down waste and provides fish, wildlife, and organisms in the receiving water a zone of passage to migrate both up and downstream in an undisturbed section of river adjacent to the waste discharge outfall. In addition, a scale of 0-100 is established in order to measure the trophic state or degree of enrichment of lakes due to nutrient input.

4. DEPARTMENT ANALYSIS

A. Trophic State Storage Impoundment (38 M.R.S.A § 465(3)(A)): In order for the American Tissue Project impoundment to meet the Class B designated uses of swimming and recreation in and on the water, the applicant must demonstrate that the trophic state of the Project impoundment is stable or decreasing, and must be free of culturally induced algal blooms that impair their use and enjoyment. Water discharged from the American Tissue Project impoundment must meet, at a minimum, Class C aquatic life and habitat criteria; however, if such water meets a higher classification standard, that higher standard must be maintained[1].

A hydropower impoundment shall be considered to have stable or declining trophic state unless it exhibits (1) a perceivable and sustained increase in its trophic state as characterized by its Trophic State Index or other appropriate indices, or (2) the onset of algal blooms. 06-096 Chapter 581 (6)(C). The trophic state is the ability of water to produce algae and other aquatic plants. The trophic state a body of water is a function of its nutrient content and may be estimated using measurements of chlorophyll, phosphorus and/or Secchi disk transparency. 06-096 Chapter 581 (6)(A). Algal bloom is defined as a planktonic growth of algae which causes Secchi disk transparency to be less than 2.0 meters. 06-096 Chapter 581 (6)(B).

[1] 38 M.R.S. § 465 (4)(C) requires that discharged water must be equal to or better than the existing water quality of the receiving waters. However, 38 M.R.S. 464 (10) allows that some changes to aquatic life and habitat may occur in hydropower impoundments.

1) Existing Conditions. The Department finds that Cobbosseecontee Stream is impounded by the American Tissue Hydroelectric Project dam, creating an impoundment that is approximately 5.5 acres, extending approximately 1000 feet upstream of the Project dam, to the toe of the New Mills dam, with a normal, full-pond water surface elevation of 123.3 feet msl. The American Tissue Project operates in run-of-river mode, with minimal storage behind the dam; the volume of water available for generating electricity at the American Tissue Project is 108 acre-feet. The impoundment is entirely within the boundaries of the city of Gardiner. The applicant's land use within the Project boundary is limited to structures and activities associated with hydroelectric generation and other Project purposes.

2) Water Quality Data. The Department finds as follows: To assess the effects of continued operation and maintenance of the American Tissue Project on water quality, the applicant submitted data collected during water quality studies conducted between June and November 2015 in accordance with a study plan reviewed and approved by the Department. Baseline trophic data was collected twice monthly from June through October 2015 using an epilimnetic core sampling method[2]; water samples were collected for analysis of total alkalinity, color, pH, chlorophyll-A, and total phosphorus. Secchi disk measurements and water temperature and dissolved oxygen (DO) were collected with a handheld DO and water temperature meter (i.e., YSI 550A model). All lake trophic samples were collected at a sampling station located approximately 230 feet (70 meters) upstream of the dam and upstream of the boat barrier, in approximately 18 feet (5 meters) of water. A late summer core sample was collected on August 14, 2015. The core sample technique was used because the impoundment did not stratify during the summer sampling period.

Total phosphorus is an indicator of nutrient enrichment and is measured in hydropower impoundments in conjunction with chlorophyll-a to assess the trophic state of the waters. Total phosphorus levels measured in the American Tissue impoundment ranged between 0.012 and 0.025 mg/L with an average of 0.018 mg/L; all measurements were below Maine's draft water quality criteria of <0.030 mg/L for Class B waters. Chlorophyll-a is a measure of algae in the water column, and can be an indicator of eutrophication. Chlorophyll-a levels measured in the impoundment ranged from 0.0036 mg/L to 0.0079 mg/L, averaging 0.0053 mg/L; all measurements were below the draft water quality criteria of an average of ≤0.008 mg/L with no single value >0.01mg/L. Nutrient and chlorophyll-a

[2] Small-diameter hosing used to take a sample of the water column.

values were used to assess a Trophic State Index value of 54, categorizing the impoundment as mesotrophic. Secchi disk transparency ranged from 2.8 meters (9.2 feet) to 4.7 meters (15.4 feet), averaging 3.6 meters (11.8 feet). The pH of impoundment waters ranged from 6.8 to 7.1, within the recommended range of 6.0 to 8.5 for Class B waters. Alkalinity is an indicator of the water's capacity to neutralize acids, or to buffer against changes in pH. Alkalinity measured in the American Tissue impoundment ranged from 20 to 23 mg/L, with an average of 22 mg/L. Color, an indication of water clarity, reflects the amount of dissolved organic acids and suspended solids in the water. Color in the American Tissue impoundment ranged from 12 to 20 platinum cobalt units (PCU), with an average of 16 PCU. Conductivity measures dissolved ions in water and is an indicator of pollutants. Conductivity in the American Tissue impoundment measured 101 µS/cm, which is higher than the average conductivity of Maine Lakes (46 µS/cm), according to the Maine Lakes Report 2012). Concentrations of iron (<0.2 mg/L and chloride (14 mg/L) measured in the impoundment were less than the established State standards. Dissolved metals measured in the impoundment included calcium, measured at 7.7 mg/L; magnesium was 1.3 mg/L; potassium was <1 mg/L; sodium was 7.3 mg/L; and aluminum was <0.2 mg/L. Dissolved nutrients measured included nitrate, measured at <0.05 mg/L; and sulfate at 2 mg/L. Dissolved organic carbon was measured at 2.2 mg/L.

3) Applicant's Proposal. The applicant proposes to continue operation of the American Tissue Project in run-of-river mode, with a minimum flow of 52 cfs downstream of the powerhouse and to continue to provide 40 cfs through the low-level gate from September 1 to November 15 for downstream eel passage; in addition, the applicant proposes to provide a continuous minimum flow of 10 cfs or inflow, whichever is less, to the bypassed reach.

4) Discussion. Based on water quality studies conducted by the applicant, the Department finds that water quality in the American Tissue impoundment is considered to be mesotrophic[3], and does not show signs of eutrophication or nutrient enrichment, with a low potential for nuisance algal blooms. An algal bloom is defined as a planktonic growth of algae which causes Secchi disk transparency to be less than 2.0 meters. 06-096 C.M.R. ch. 581. Based on the information provided by the applicant, the Department further finds and determines that the Project impoundment is free of culturally induced algal blooms which would impair its use or enjoyment. Therefore, in accordance with 06-096 C.M.R. ch. 581, the Department finds and determines that the trophic state

[3] A body of water having a moderate amount of dissolved nutrients. https://www.merriam-webster.com/dictionary/mesotrophic .

of the American Tissue Project is stable or is declining and its impoundment is suitable for swimming and for recreation in and on the water to the extent that those activities are available in the Project impoundment.

B. Aquatic Life and Habitat – Project Impoundment (38 M.R.S.A § 465 (3)(A), (C)): For this standard, the applicant must demonstrate that the American Tissue Project impoundment, as a Class B water, is suitable for fish and other aquatic life and is characterized as unimpaired. In a riverine impoundment that existed before June 30, 1992, such as the American Tissue Project impoundment, the Class B aquatic life and habitat standards are met if Class C aquatic life standards are met (see also footnote 1, on page 5, and 38 M.R.S. § 464(10)).

Under Class C aquatic life standards, 38 M.R.S. § 465(4)(C), there may be some changes to aquatic life, except that the water must be of sufficient quality to support all species of fish indigenous to the receiving water and maintain the structure and function of the resident biological community. Attainment of such aquatic life and habitat standards can be demonstrated in a variety of ways, including evaluation of the structure and function of the biotic community and measurements that demonstrate the maintenance of the impoundment's littoral zone[4]. Based on its experience, expertise, and professional judgment, the Department generally presumes the presence and suitability of sufficient aquatic life and habitat, especially for small or young fish as well as other aquatic life that rely on that refuge and forage provided by nearshore aquatic vegetation, when at least 75% of that area, called the littoral zone, remains watered at all times. Conversely, water levels that provide wetted conditions for 75% of the littoral zone of a lake or a pond, as measured from full pond conditions, are presumed necessary to meet aquatic life and habitat standards. This longstanding Department practice and rebuttable presumption are set forth in the Department's Hydropower Project Flow and Water Level Policy dated February 4, 2002 (Water Level Policy).

1) Existing Habitat and Resources. The Department finds that the American Tissue Project impoundment extends approximately 1,160 feet (0.22 miles) upstream of the Project dam, to the toe of the New Mills dam, and is comprised of 5.5 acres at its normal, full pond water surface elevation of 123.3 feet msl. The

[4] The 'littoral zone' of lakes and lake-like waterbodies is defined in limnology as the portion of a lake where light penetration allows plant growth on the bottom. The littoral zone extends from the shoreline to the maximum depth where plants on the bottom receive enough sunlight for photosynthesis. This depth, known as the euphotic zone, is commonly estimated as the depth which receives approximately 1% of incident light (Cole, 1979). While depth of the zone varies with many factors, it can be estimated as a multiple of the Secchi disk transparency (SDT). Based on Tyler (1968), for more than 20 years the Department has delineated the littoral zone using a depth two times the SDT for purposes of determining attainment of Maine's Water Quality Standards.
Cole, GA. (1978) *Textbook of Limnology*, 2nd Ed. 165, St. Louis, MO: The CV Mosby.
Tyler, JE. (1968) *The Secchi disk, Limnology and Oceanography* 13(1): 1-6.

Project operates in run-of-river mode, and there is minimal storage behind the dam; the volume of water available for generating electricity at the American Tissue Project is 108 acre-feet. The impoundment is relatively shallow and narrow, with a riverine character and a maximum depth of 24 feet. The shoreline is moderately steep and is surrounded by forest and shrubs; the substrate is dominated by ledge and boulders with some silt. There are no tributary streams.

2) Applicant's Proposal. The applicant proposes to continue operating the Project in run-of-river mode, where outflow generally equals inflow. The normal, full pond water surface elevation of 123.3 feet msl includes one-foot-high flashboards. Electric water level sensors are used to control the headpond and turbine operation.

3) Discussion. Based on the Department's experience, expertise, and professional judgment, and in accordance with its longstanding practice and rebuttable presumption as reflected in its Water Level Policy, the Department finds and determines that the structure and function of the resident biological community is being maintained in the Project's impoundment and the designated use of habitat for fish and other aquatic life, as well as other aquatic life and habitat standards, are being attained in the Project impoundment because at least 75 % of the littoral zone remains wetted at all times. The Department further finds that continued run-of-river operation of the American Tissue Project, wherein outflow is generally equal to inflow, would require only infrequent adjustments to the headpond water level, for limited purposes such as maintenance activities or under emergency conditions. Accordingly, the littoral zone of the Project's impoundment is almost fully wetted throughout the year during normal operations, and the structure and function of the shoreline habitat remains intact. Secchi disk measurements collected in the Project impoundment indicate, and the Department finds, that the littoral zone extends from the surface of the impoundment to an average 23.6-foot depth, in an impoundment where the deepest point is 24 feet; therefore, nearly the entire impoundment is considered littoral. Run-of-river operations allow a one-foot drawdown. Therefore, the Department finds that the normal, full pond water elevation of 123.3 feet msl could be lowered by as much as two feet if the 1-foot flashboards were down (to sill elevation 122.3 feet msl) and the impoundment was drawn down the maximum allowed (to 121.3 feet msl). The Department finds that, based on the applicant's Secchi disk transparency analysis and impoundment depth measurements, a maximum allowable two-foot drawdown of the impoundment maintains approximately 98% of the littoral zone of the American Tissue Project impoundment. Accordingly, the Department presumes the presence and

suitability of aquatic life and habitat based on the Project's proposed run-of-river operation. Based on the evidence provided by the applicant, the Department determines that the Project operations meet all applicable Class B and C aquatic life and habitat standards including the Class B designated uses of habitat for fish and other aquatic life.

Aquatic Life and Habitat – Outlet Stream. 38 M.R.S. §465(3)(A), (C): In addition to satisfying all other aquatic life and habitat requirements, including the designated use of habitat for fish and other aquatic life, discharges to Class B water must be equal to or better than the existing water quality of the receiving waters. The applicant may meet this Class B aquatic life standard by demonstrating that the benthic macroinvertebrate community attains aquatic life standards as determined by Department rule 06-096 CMR 579. The benthic macroinvertebrate community is an indicator of the general state of aquatic life for the purpose of attainment of outlet stream aquatic life classification standards. Where there is documented evidence of conditions that could result in uncharacteristic findings, allowances may be made to account for those situations by adjusting the classification attainment decision by the use of professional judgment. In addition, based on its experience, expertise, and professional judgment, and in accordance with its longstanding practice and rebuttable presumption as reflected in its Water Level Policy, the Department generally presumes the presence and suitability of sufficient aquatic life and habitat in the outlet streams (in addition to impoundments), when at least 75% of the cross section of the stream is wet at all times.

4) Existing Habitat and Resources. The Department finds as follows: between the Project dam and the powerhouse lies a 345-foot riverine bypass reach; inflows less than 100 cfs and more than 360 cfs are spilled over the dam or passed through existing gates into the bypassed reach. The bypass reach is a high-gradient incised channel characterized by ledge; bedrock cascades and falls immediately below the dam are followed by a large pool, a riffle with moderate gradient, and a run. The banks on both sides of the bypass reach are steep and have been modified in places; the river right bank includes large boulder riprap and concrete support walls for the dam. Habitat in the bypass reach provides cover for fish and other aquatic organisms in its shady banks, tree canopy, large boulders, and water depth.

5) Studies. The Department finds as follows: The applicant conducted a benthic macroinvertebrate study downstream of the American Tissue dam to evaluate the structure and function of the benthic community in Cobbosseecontee

Stream downstream of the Project. Standard rock bags were installed at two sites in July, 2015; one sample was collected in the bypass reach approximately 300 feet downstream of the dam, and a second sample was collect approximately 400 feet downstream of the powerhouse. The study was conducted in accordance with Department protocols, and the rock bags were retrieved after approximately 28 days. Upon retrieval, the rock bags downstream of the Project tailrace were determined to have been disturbed; the samplers were redeployed and were collected on September 15, 2015. Study results indicate that benthic macroinvertebrates downstream of the American Tissue dam are abundant, however they are not especially diverse and were found to be comprised primarily of filter feeders (*i.e.*, caddisfly), flatworms other and organisms that are adapted to a wide range of water quality conditions, with a relatively low abundance of the more sensitive macroinvertebrates (*i.e.*, mayfly or stonefly larvae).

The applicant also conducted an instream flow study at two cross sections below the Project dam to assess the outlet stream habitat. The applicant measured the wetted width at both transects at flows of 10 cfs, 25 cfs, 50 cfs, and 108 cfs, flows which provide between 78% and 95% of the bankfull wetted cross-section width at transect 1 and 78% to 82% of the bankfull wetted width at transect 2.

6) Applicant's Proposal. The applicant proposes to continue operating the Project in run-of-river mode, where outflow generally equals inflow. The applicant proposes to provide a minimum flow of 52 cfs downstream of the powerhouse and to continue to provide 40 cfs through the low-level gate from September 1 to November 15 for downstream eel passage; in addition, the applicant proposes to provide a continuous minimum flow of 10 cfs or inflow, whichever is less, to the bypassed reach in addition to providing spill when flows are outside the hydraulic capacities of the turbine and during the downstream fish passage season.

7) Discussion. The Department finds as follows: Continued run-of-river operation of the American Tissue Project, wherein outflow is generally equal to inflow, is expected to maintain the water level in and flow from the impoundment. Through its other work in the Cobbosseecontee watershed, the Department has identified signs of nutrient enrichment throughout the drainage that influence the structure of the macroinvertebrate community, and finds that, due to its small size and run-of-river operations, the American Tissue impoundment cannot and does not delay the water flow sufficiently to cause the observed results of the macroinvertebrate survey. The Department further finds that these conditions, coupled with the known nutrient enrichment further

upstream in the watershed, results in the Department's determination that the operation of the American Tissue Project does not cause any non-attainment of aquatic life and habitat standards in Cobbosseecontee Stream, and that the discharge in the outlet stream is at least equal to the existing water quality of the receiving waters in the downstream portion of Cobbosseecontee Stream. Moreover, based on the instream flow study conducted by the applicant, the Department finds that a minimum flow of 10 cfs maintains wetted conditions across 78% of the habitat in the bypass reach transect, which the Department determines is sufficiently wetted to meet all applicable aquatic life and habitat standards. Based on the evidence provided by the applicant and the Department's findings, the Department determines that the Project operations meets the Class B designated uses of habitat for fish and other aquatic life, and all other applicable aquatic life and habitat standards, including the requirement that the discharge in the outlet stream is equal to or better than the existing water quality of the receiving water in the downstream portion of Cobbosseecontee Stream.

Dissolved Oxygen – (38 M.R.S.A. § 465 (3)(B)): For this standard, the applicant must demonstrate that the dissolved oxygen (DO) content shall be not less than 7 parts per million[5] or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean DO concentration may not be less than 9.5 parts per million and the 1-day minimum DO concentration may not be less than 8.0 parts per million in identified fish spawning areas[6]. Compliance with dissolved oxygen criteria in existing riverine impoundments must be measured in accordance with the standards set forth in 38 M.R.S. § 464(13).

American Tissue Impoundment

1) Existing Conditions. The Department finds that the American Tissue Project impoundment has a surface area of approximately 5.5 acres at full pond and extends approximately 1,160 feet (0.22 miles) upstream of the Project dam, to the toe of the New Mills dam. The normal, full pond water surface elevation is 123.3 feet msl including 1-foot flashboards. The Project will continue to operate in run-of-river mode, where inflow is generally equal to outflow.

[5] Parts per million is a measure of concentration and is equivalent to mg/L because a liter of water weighs approximately 1000 grams.
[6] No fish spawning areas were identified by the Maine Department of Inland Fisheries and Wildlife (MDIFW) within the American Tissue impoundment.

2) Studies. The Department finds as follows: The applicant conducted water quality studies of the impoundment between June and the end of October 2015, including water temperature and DO profiles at 1-meter intervals with a handheld DO and water temperature meter (*i.e.*, YSI 550A), in accordance with Department sampling protocols and a study plan reviewed and approved by the Department, to assess the effects of continued operation of the Project on impoundment water quality. The sampling location was at an approximate depth of 18 feet, approximately 230 feet upstream of the Project dam.

DO is dependent on temperature; as temperature decreases, DO increases. The Department finds that DO profiles in the American Tissue impoundment were highest in the beginning and end of the monitoring period, with values greater than 9 mg/L in early June and in October. DO concentrations throughout the water column ranged from 7.4 to 8.7 in July, August, and September. The lowest DO concentration, measuring 7.1 mg/L, was on August 27, 2015; DO concentrations did not fall below 7.0 mg/L throughout the sampling period.

At the Department's request, the applicant collected temperature and DO measurements in a deep location in the New Mills impoundment, upstream of the American Tissue Project, to better characterize any influence of the American Tissue Project on water quality in Cobbosseecontee Stream. Those measurements indicate, and the Department further finds, that the water temperature was consistent between the New Mills and American Tissue impoundments, and that low DO concentrations (3.8 mg/L to 6.3 mg/L) and saturation (44% to 63.4%) were present near the bottom of the New Mills impoundment in June, July, August, and September. The average DO concentration and percent saturation throughout the water column was lower in the New Mills impoundment than in the American Tissue impoundment.

3) Applicant's Proposal. The applicant proposes to continue operating the Project in run-of-river mode, where outflow generally equals inflow. The applicant proposes to provide a minimum flow of 52 cfs downstream of the powerhouse and to continue to provide 40 cfs through the low-level gate from September 1 to November 15 for downstream eel passage; in addition, the applicant proposes to provide a continuous minimum flow of 10 cfs or inflow, whichever is less, to the bypassed reach in addition to providing spill when flows are outside the hydraulic capacities of the turbine and during the downstream fish passage season.

4) Discussion. DO data collected by the applicant demonstrates, and the Department finds, that water in the American Tissue Project impoundment is sufficiently oxygenated and that the Project impoundment does not adversely impact DO that enters the impoundment from the New Mills dam. Based on the evidence in the record and the Department's findings, the Department concludes that the Project impoundment meets applicable Class B DO standards during critical water quality conditions under current and proposed operating conditions.

Outlet Stream

5) Existing Conditions. The Department finds that Cobbosseecontee Stream below the American Tissue Project powerhouse and dam receives flows released from the dam, runoff, and ice melt. The Project is located on Cobbosseecontee Stream between the upstream New Mills dam and the downstream Gardiner Paperboard dam. Between the Project dam and the powerhouse lies a 345-foot riverine bypass reach that receives inflows less than 100 cfs and more than 360 cfs as well as a minimum flow of 10 cfs. The bypass reach is a high-gradient incised channel characterized by ledge; bedrock cascades and falls immediately below the dam are followed by a large pool, a riffle with moderate gradient, and a run.

6) Studies. The Department finds as follows: The applicant monitored DO and temperature in the bypass reach and in Cobbosseecontee Stream below the powerhouse between July 9 and September 10, 2015 with Onset Hobo U26-001 data loggers. Water temperature monitoring demonstrated, and the Department finds, that water temperature ranged between 22.6ºC and 27.7 ºC in the bypass reach and between 22.6ºC and 27.8ºC, averaging 25.0ºC at both transect locations. The Department further finds that DO concentrations in the bypass reach ranged from 7.2 mg/L to 8.8 mg/L[7]; DO percent saturation ranged from 89.9% to 103.2%. DO concentrations in Cobbosseecontee Stream below the powerhouse ranged from 6.6 mg/L to 8.5 mg/L; DO was measured above 7 mg/L throughout the majority of the sampling period (98.3% of the hourly readings), falling below 7mg/L for one 24-hour period on September 7-8, 2015. During that time, DO fell to 6.6 mg.L for one hour, and ranged between 6.8 mg/L and 7.1 mg/L. DO percent saturation in the tailrace area ranged from 81.2% to 100.1%.

[7] Two short periods of rapid decreases in DO were measured on July 26 at 4 AM to July 27 at 6 AM and on July 29 at 4 AM to July 29 at 9 AM. These data were excluded from the analysis because the data was determined to likely be erroneous because a corresponding drop in DO was not observed in the tailrace, water temperature decreased, and aeration from river turbulence likely occurred in the riffles in which the logger was located. The erroneous readings were thought to be caused by biofouling or sedimentation on the logger. The Department finds that these data were properly excluded for these reasons.

7) Applicant's Proposal. The applicant proposes to continue operating in run-of-river mode, providing a minimum flow of 52 cfs downstream of the powerhouse and providing 40 cfs through the low-level gate from September 1 to November 15 (for downstream eel passage); in addition, the applicant will provide a continuous minimum flow of 10 cfs or inflow, whichever is less, to the bypassed reach in addition to spilling flows that are outside the hydraulic capacities of the turbine.

8) Discussion. DO data collected by the applicant indicates, and the Department finds, that water below the American Tissue dam is sufficiently aerated and that water temperature and DO are not adversely affected by operations of the American Tissue Project. While DO was measured below the DO criteria on one date, there were no low DO measurements in the impoundment and chlorophyll-a is no higher there than in the lake above the New Mills dam, suggesting that one lone instance of the low DO downstream of the dam was not a result of the American Tissue impoundment or facility operations. The applicant's sampling results demonstrate, and the Department finds and determines, that Cobbosseecontee Stream below the American Tissue Project meets applicable Class B DO standards during critical water quality conditions. Based on the evidence in the record, the Department concludes that the Project meets water quality standards under current and proposed operating conditions.

C. Fishery Resources (38 M.R.S.A. § 465 (3)(A)): For this standard, the applicant must demonstrate that the proposed impoundment water levels and flow releases to Cobbosseecontee Stream will be adequate to ensure that these waters will be suitable for the designated uses of habitat for fish and for fishing.

1) Existing Habitat and Resources, American Tissue Project Impoundment. The Department finds that the American Tissue Project impoundment has a surface area of approximately 5.5 acres at full pond and extends approximately 1,160 feet (0.22 miles) upstream of the Project dam, to the toe of the New Mills dam. The normal, full pond water surface elevation is 123.3 feet msl including 1-foot flashboards. The Project will continue to operate in run-of-river mode, where inflow is equal to outflow. The impoundment is relatively shallow and narrow, with a riverine character and a maximum depth of 24 feet. The shoreline is moderately steep and is surrounded by forest and shrubs; the substrate is dominated by ledge and boulders with some silt. There are no tributary streams and very limited habitat for fish.

2) Existing Habitat and Resources, Outlet (Cobbosseecontee Stream). MDMR reports and the Department finds that the Cobbosseecontee Stream historically supported runs of diadromous fish, including striped bass, river herring, rainbow smelt, American shad, Atlantic salmon, and American eel. Access to Cobbosseecontee Stream for migratory fish species is restricted by the Gardiner Paperboard dam, which has not operated since 2000. Five native migratory fish species (blueback herring and alewife, collectively known as river herring, striped bass, American shad, and rainbow smelt) are reported to use habitat downstream of the Gardiner Paperboard dam. Currently, American eel and sea-run alewives occur within the Project area or upstream of the American Tissue Project dam; alewives are stocked into the upstream Pleasant Pond and Horseshoe Pond by MDMR. Adult sea-run alewives migrate downstream throughout the summer after spawning, and juvenile alewives migrate downstream through the Project in the fall.

A 2002 electrofishing study of the main stem of the Kennebec River, including in the vicinity of Cobbosseecontee Stream, by the Midwest Biodiversity Institute identified resident fish species including spottail shiner, eastern banded killifish, mummichog, American eel, white sucker, redbreast sunfish, white perch, smallmouth bass, largemouth bass, common carp yellow perch, pumpkinseed sunfish, and white catfish. No follow-on studies were requested in support of this relicensing. MDIFW commented that there is little littoral habitat and no identified fish spawning habitat in the impoundment.

3) Studies. The Department finds that, in accordance with study plans, the applicant conducted an upstream juvenile American eels study in 2015 to identify eel presence, abundance, distribution, and behavior in the vicinity of the American Tissue Project, identify areas where eels congregate or attempt to ascend structures, and identify potential locations for an upstream eelway. Surveys were conducted after sunset between June 9 and August 19, 2015, for 1 to 1.5 hours each night, to search for juvenile eel on the downstream face of the dam and spillway, the deep gate, and the bedrock immediately downstream of the dam. The majority of eel were observed on the left side of the river within small pools, in rock crevices, and along the rock wall just below the dam. The 2015 survey results are consistent with data collected in a 2006 survey by MDMR, and demonstrate that the river left is likely to provide the most effective location for installation of an upstream eelway to pass juvenile eel upstream over the dam.

The Department further finds that the applicant has maintained and operated downstream fish passage facilities at the American Tissue Project for juvenile

alewives and adult American eel since 2003. Downstream passage measures include the installation of seasonal intake trashrack overlays with 7/8 inch clear spacing, and release of 10 cfs flow through an open notch in the flashboards that spills into a 15-foot by 4-foot plunge pool, beginning when alewives are observed or by September 1 annually and continuing through November 15 to facilitate alewife outmigration; installation of blinding plates at the base of the trashracks; and nightly release of 40 cfs from the deep gate furthest from the intake between September 1 and November 15 to facilitate downstream passage of adult American eel. The applicant employs additional operational measures of reduced generation if injured or dead juvenile alewives are observed, and overnight turbine shutdown if daily visual monitoring identifies entrained eel. There is currently no upstream fish passage at the American Tissue Project as there is no upstream fish passage at the downstream Gardiner Paperboard dam.

The applicant must demonstrate that the American Tissue Project impoundment and outlet stream would be suitable for the designated use of fishing by ensuring that the fish in the American Tissue impoundment do not contain more mercury as a result of hydropower operations than would be found in fish residing in a lake or pond in Maine without a hydropower facility.

Mercury contamination in northern lakes, including those in Maine, is well documented. The Department finds that the largest source of mercury appears to be atmospheric deposition from out-of-state sources, primarily power plants and manufacturing operations.[8,9] Fish consumption advisories have been issued for all freshwater in Maine since 1994 due to the presence of elevated levels of mercury in fish tissue.[10] In addition, high mercury levels have been shown to affect the reproduction of loons. The conditions that influence mercury mobilization and bioavailability are not completely understood; however, studies of mercury in fish and in piscivorous loons from hydropower impoundments indicate higher levels of mercury occur in fish from impoundments with greater than ten-foot

[8] USEPA. 1996. Mercury study report to Congress. Vol. V: An ecological assessment of anthropogenic mercury emissions in the United States. USEPA-452/R-96-0016, Washington, DC.
[9] Mercury in Maine, A Status Report, February 2001. Prepared for the Joint Standing Committee of the Maine Legislature having Jurisdiction of Natural Resources, by the Maine Department of Environmental Protection. Augusta, Maine. 65pp.
[10] http://www.maine.gov/ifw/fishing/laws/consumption_advisory.htm; http://www.maine.gov/dhhs/mecdc/environmental-health/eohp/fish/documents/meffguide.pdf

drawdowns.[11,12] The licensed operational drawdown in the Project impoundment is not more than two feet, which is not expected to influence the bioavailability of mercury or concentration of mercury in fish. Therefore, no studies of mercury in fish tissue were conducted at the Project.

4) Applicant's Proposal. The applicant proposes to continue operating the Project in run-of-river mode, with a minimum flow of 52 cfs downstream of the powerhouse and to continue to provide 40 cfs through the low-level gate from September 1 to November 15 for downstream eel passage; in addition, the applicant proposes to provide a continuous minimum flow of 10 cfs or inflow, whichever is less, to the bypassed reach. No other operational changes are proposed.

i. Water Levels: The applicant proposes to operate the facility in run-of-river mode, with one-foot-high flashboards and a normal head pond elevation of 123.3 feet msl.

ii. Minimum Flows: The applicant proposes to provide 10 cfs to the bypassed reach and continue to provide a downstream minimum flow of 52 cfs to the river reach downstream of the powerhouse.

iii. Fish Passage: The applicant is proposing to upgrade the existing downstream fish passage system to reduce entrainment potential for out-migrating diadromous fish species. In addition, the applicant also proposes to build American eel upstream passage facilities.

5) Discussion. Based on the evidence in the record, the Department finds and determines that sufficient information regarding the magnitude of Project drawdown exists and, therefore, did not require the applicant to conduct mercury studies. And based on the record evidence and on the Department's experience and expertise and on its professional judgment, the Department finds and determines that the current and proposed Project operations at the American Tissue Project impoundment do not cause fish in the impoundment to contain more mercury as a result of hydropower operations than would be found in fish

[11] Evers, David C., Han, Young-Ji, Driscoll, Charles T., Kamman, Neil C., Goodale, M. Thomas, Lambert, Kathleen Fallon, Holsen, Thomas M., Chen, Celia Y., Clair, Thomas A., Butler, Thomas. (2007) *Biological Mercury Hotspots in the Northeastern United States and Southeastern Canada. BioScience* 57(1): 29-43.
[12] Evers, David, Reaman, Pete. (1998) *A comparison of mercury exposure and risk between artificial impoundments and natural lakes measured in Common Loons and their prey, 1996-97. BioDiversity Research Institute 1997 Field Season Report.*

residing in a lake or pond in Maine without a hydropower facility. In-stream flow studies conducted by the applicant demonstrate, and the Department finds, that the existing minimum flows and the seasonal augmented flows at the American Tissue Project maintain and support habitat for aquatic species in Cobboseecontee Stream below the dam, and that those same minimum flows and seasonal augmented flows are sufficient to connect the tailrace and bypass reach to the impoundment for passage of American eel. Eels are not known to pass downstream via the deep gate, however, and FERC's Environmental Analysis (EA) determined this mode of downstream passage to be ineffective and recommended eliminating the flow release of 40 cfs at night from the discharge pipe at the base of the dam. Further, the EA determined that a minimum flow of 52 cfs is not sustainable at the Project due to the configuration of the turbines. The minimum hydraulic capacity of the turbine is 100 cfs, and flows below 100cfs cannot be released from the powerhouse. FERC recommends that the project operate in instantaneous run-of-river mode, where outflow from the project approximates inflow to the impoundment. FERC's proposals to manage lake levels and stream flows will be adequate to ensure that these waters are suitable for the designated uses of habitat for fish and fishing. DIFW indicated that the littoral habitat is limited and that no fish spawning habitat has been identified in the American Tissue impoundment. Therefore, the Department determines that the modified proposal to manage impoundment water levels and stream flows, along with enhancements for eel passage through the Project and to modify downstream fish passage facilities will be adequate to ensure that these waters are suitable for the Class B designated use of habitat for fish and fishing, including the consumption of fish.

D. Recreational Access and Use (38 M.R.S.A § 465 (3)(A)): For this standard, the applicant must demonstrate that the Project waters are suitable for designated use of recreation in and on the water.

1) Existing Facilities and Use. The Department finds that regional recreational opportunities on water and land include two state parks, Colburn House State Historic Site in Pittston, Maine and the Fort Halifax State Historic Site in Winslow, Maine. Locally, the Kennebec River Rail Trail provides a 6.5-mile trail connecting the city of Augusta with the neighboring towns of Hallowell and Gardiner; the Gardiner Waterfront Park provides a trail, boat launch and boat docks, along with parking, park benches and picnic tables. The Gardiner Commons is a 3-acre park containing playground facilities, a gazebo, a war memorial, a fountain, park benches, picnic tables and trails. The Steamboat Lane Nature Trail is a wooded, 0.25-mile trail in the City of Gardiner, providing

benches and wildlife watching opportunities. There are no formal recreation sites associated with the Project and access to the dam is blocked to unauthorized vehicles or pedestrians; however, the applicant permits public use of land and waters surrounding the American Tissue Project. Informal access along the impoundment banks provides opportunities for bank fishing and, there is a canoe portage and hiking trail that extends from the impoundment to the tailrace area for use with a hand-carry boat. Boat barriers are maintained by the applicant between May and October, for public safety. Additionally, the Town of Gardiner has developed a park adjacent to the impoundment with picnic tables which provides access for bank fishing, and plans to upgrade the trail north of the Project, and to develop a bike and pedestrian trail linking a site near the Project with downtown Gardiner.

2) Existing Management Plans. The Department further finds that management plans that cover recreation resources within the vicinity of the American Tissue Project include the 2014-2019 Maine State Comprehensive Outdoor Recreation Plan, the 1997 Gardiner Comprehensive Plan, the Comprehensive Economic Development Strategy 2013-2018, and the Cobbossee Corridor Master Plan. There are no recommendations in these plans specific to the American Tissue Project lands or facilities but all the plans highlight objectives that are potentially relevant to the Project, including connection with health and wellness benefits of outdoor recreation; support for regionally connected trail systems; protecting the environment and conserving the natural resources of the Kennebec Valley while providing for recreational opportunities.

3) Applicant's Proposal. The applicant is not proposing to add any formal recreational facilities to the American Tissue Project. Public use of the land and waters surrounding the Project will continue to be permitted for the purpose of recreation.

4) Discussion. The Department finds that the American Tissue Project land and waters are lightly used for recreational purposes, primarily for fishing by foot access and less so via hand-carry boats. No formal recreation facilities are associated with the Project, and little recreation access was acknowledged by FERC in an Environmental Inspection Report in 2006. The Project has been exempted from the FERC Form 80 recreation survey since April 4, 1996. However, while the recreation opportunities at this small Project are limited, the applicant allows informal access to the Project features, both at the impoundment and in the bypass and tailrace reach via a canoe portage trail. Additionally, the Town of Gardiner maintains a picnic park adjacent to the impoundment which

provides bank fishing opportunity. The Department determines that the Project operations meets the Class B designated uses of recreation in and on the water, fishing and navigation.

E. Wetlands and Wildlife Resources (38 M.R.S. § 465 (3)(A), (C)): For this standard, the applicant must demonstrate that the Project waters, including those waters contained in wetlands, are suitable for the designated use of habitat for fish and other aquatic life, and are unimpaired.

1) Existing Resources. The Department finds that most wildlife habitat in the vicinity of the American Tissue Project occurs on private lands adjacent to the Project boundary. The Project is located in an area of predominantly deciduous forest with areas of mixed forest, in an urban and suburban environment. Overstory vegetation common in the area may include red maple, red oak, white ash, sugar maple, American beech, and paper birch. Shrub vegetation may include hobblebush, or saplings of American beech, striped maple, and sugar maple. Herbaceous vegetation may include bracken fern, Canada mayflower, and wild sarsaparilla. Areas of mixed forest may also include coniferous species such as white pine, hemlock or balsam fir. Project lands provide limited wildlife habitat and upland areas. The area immediately surrounding the Project consists of forested shoreline surrounded by extensive urban and residential development.

2) Wildlife. The Department further finds that the Project occurs within the range of large mammals such as moose and white-tailed deer, however based on habitat present within the Project and the high level of urban development, such species are limited to transient individuals rather than residents. Mammals with less aversion to human activity and development are more likely to be found within the Project area and may include red fox, raccoon, skunk, eastern chipmunk, eastern gray squirrel, red squirrel, eastern red bad, long-tailed shrew, and the white-footed mouse. Forested areas adjacent to the Project provide habitat for birds such as mourning dove, wild turkey, ruffed grouse, and barred owl. Perching birds may include the eastern meadowlark, pine warbler, brown thrasher, house finch and house wren, among others. Raptor species found in central Maine and possibly in the Project area include the bald eagle, osprey, and red-tailed hawk. Neotropical avian species such as the ruby-throated hummingbird and various flycatchers and warblers may occupy habitat surrounding the Project during spring, summer, and fall before returning to the tropics of Central and South America during the winter season. Passerines may include the northern shrike, gray catbird, brown-headed cowbird, and various sparrows. Invasive wildlife species including birds, mammals and insects may

occur in the vicinity of the Project, based on habitat characteristics. Nineteen invasive plant species are known to occur in Maine, and several of them may be found at or near the Project, including Japanese knotweed, honeysuckle, and purple loosestrife. Variable-leaf milfoil has been reported in Pleasant Pond (impounded by the New Mills dam) and in parts of Cobbosseecontee Stream and could be present in the Project area. Some wildlife species commonly found in the Project's impoundment and riverine portion may include muskrats, mallards, common merganser, and kingfishers. Five species of freshwater mussels have been documented in Cobbosseecontee Stream, including alewife floater, eastern elliptio, eastern floater, eastern lampmussel, and tidewater mucket. The tidewater mucket is a threatened species in Maine.

3) Wetlands. The Department further finds that the only mapped wetland type within the Project impoundment is a lacustrine system wetland; aquatic habitat directly downstream of the Project dam is classified as freshwater riverine. The American Tissue Project is located upstream of the head-of-tide located at the Gardiner Paperboard Dam. Wetlands in the Project area are primarily deepwater habitats, consisting of primarily rock, cobble, or gravel substrate with patches of sand. No mapped terrestrial wetlands (*i.e.*, forested, scrub-shrub, or emergent) occur within the Project boundary. Generally, wetland development in the Project area is limited to fringe wetlands located within the littoral zone and support a variety of common emergent vegetation found along river shorelines, such as soft rush, wool grass, arrowhead, and pickerelweed.

Riparian wetland habitat is the zone of vegetation between upland and the riverine environment. It provides streambank stability and sediment filtration. Littoral zone habitat is found in the shallow water area along the perimeter of the impoundment, extending between high and low water levels and is defined by the depth that light penetrates (see footnote 4). The banks of Cobbosseecontee Stream provide riparian and littoral habitat for a variety of species. Tree cover includes white birch, green ash, and red maple. Shrub layer vegetation consists of common species such as sumac.

4) Applicant's Proposal. The applicant proposes to continue operating the Project in run-of-river mode with one-foot-high flashboards and a normal head pond elevation of 123.3 feet msl. Project operations provide a minimum flow of 52 cfs downstream of the powerhouse including 40 cfs through the low-level gate from September 1 to November 15 for downstream eel passage; in addition, the applicant proposes to provide a continuous minimum flow of 10 cfs or inflow,

whichever is less, to the bypassed reach. No other operational changes are proposed.

5) Discussion. The Department finds and determines that continued operation of the American Tissue Hydropower Facility as a run-of-river project, where inflow is generally equal to outflow, will maintain the littoral habitat necessary for fish and other aquatic organism such as macroinvertebrates, including mussels, present in the impoundment and will support a variety of birds and other small mammals likely to inhabit or use the Project area. A year-round minimum flow of 10 cfs, as proposed, maintains aquatic habitat for fish and other aquatic organisms in the bypass reach. Moreover, the Department finds that this minimum flow is supported by the applicant's instream flow study and provides an adequate zone of passage and maintenance of 78% of the bankfull width of Cobbosseecontee Stream, and provides habitat for aquatic species in the bypass reach as well as downstream of the Project. The Department thus determines that the Project operations meets the Class B designated uses of habitat for fish and other aquatic organisms. (See also Section 4(B)-(C) above, which also apply to and address this standard).

F. Hydroelectric Power Generation (38 M.R.S. § 465 (3)(A)): For this standard, the applicant must demonstrate that the Project waters are suitable for the designated use of hydroelectric power generation.

1) Existing Generation. The Department finds that the Project operates in run-of-river generating facility, and has a total authorized nameplate generating capacity of 1,000 kW, producing a gross average annual energy output of 5,430,000 kilowatt-hours (KWH) of electricity annually. This is equivalent to the energy that would be produced by burning 9,050 barrels of oil or 2,516 tons of coal each year.

2) Energy Utilization. The Department further finds that the Project power interconnects with the electric grid distribution line via a 250-foot-long, 12 kV transmission line with a 4.5 kV step up transformer.

3) Applicant's Proposal. The applicant proposes to continue generating power under the current operational mode during the term of a new Project license. The applicant proposes no additional turbine generator units or other redevelopment activities at the Project at this time.

4) Discussion. The applicant proposes to continue the current mode of operations at the Project during the term of a new license, providing a dependable source of energy to ISO New England. The Department determines that the Project operations demonstrate that the Project meets the Class B designated use of hydroelectric power generation.

G. Drinking Water Supply (38 M.R.S.A. § (465 (3)(A)): Class B standards indicate that water must be of sufficient quality to be used as drinking water supply after treatment.

1) Discussion. The applicant did not submit information indicating that the American Tissue Project impoundment or Cobbosseecontee Stream is used as a drinking water supply. However, the Department finds that water quality data collected for the Trophic State Study in the Project impoundment and for DO, and data collected downstream of the dam generally indicate that water quality meets state standards and there are no culturally induced algal blooms. The Department thus determines that the Project operations meet the Class B designated uses of drinking water after treatment.

H. Industrial Process and Cooling Water Supply (38 M.R.S. § 465(3)(A)): Class B standards indicate that water must be of sufficient quality to be used as an industrial process and cooling water supply.

1) Discussion. The Department finds that the American Tissue impoundment and Cobbosseecontee Stream below the Project dam are not used for any industrial processes. However, water quality data indicates that it could be suitable as an industrial process or cooling water supply. Thus, the Department determines that the Project operations meet the Class B designated uses as industrial process and cooling water supply.

I. Antidegradation (38 M.R.S. § 464(4)(F)): For this standard, the applicant must demonstrate that the Project waters maintain existing in-stream water uses occurring on or after November 28, 1975.

1) Discussion. The Department finds that the American Tissue Project dam was constructed in1900 and operated in run-of-river mode until 1970, when the powerhouse was destroyed by fire. A new powerhouse was constructed and the new license was issued in 1979. Project operations continued from that point under the run-of-river mode. In-stream use of Cobbosseecontee Stream in the vicinity of the Project prior to November 28, 1975 was for hydropower

generation. Current in-stream uses include power generation, fishing and kayaking. Accordingly, the Department further finds that in-stream uses were generally the same on and after November 1975 as those in place prior to November 1975. Therefore, the Department determines that the Project will maintain the in-stream water uses in place on and after November 28, 1975, and therefore meets this requirement of the antidegradation policy.

J. Navigation (38 M.R.S. § 465 (3)(A)): Class B standards indicate that water must be of sufficient quality to be used for navigation.

1) Discussion. The Department finds that use of the impoundment for navigation is limited by its small size and shallow character. However, the applicant demonstrated that it maintains a canoe portage between the impoundment and the tailrace area which could serve as access to the impoundment for the use of non-motorized watercraft, providing evidence of the Project's adequacy for navigation, to the extent possible. Thus, the Department determines that the Project operations meets the Class B designated use of navigation.

5. PUBLIC COMMENTS

At the request of the applicant, the Department released the Draft Order on November 13, 2018. A period of five business days provided for public comment; no comment was received.

6. DEPARTMENT CONCLUSIONS

BASED on the above findings of fact and determinations, as well as the record evidence including that contained in the application and supporting documents, and subject to the conditions listed below, the Department CONCLUDES that the continued operation of the Project, as described above will result in all waters affected by the Project being suitable for all designated uses and results in the meeting all other applicable water quality standards, including the following standards:

A. The applicant has provided adequate evidence and the Department finds and determines that the American Tissue Project impoundment meets all the narrative classification standards for Class B waters and is determined to be of such quality that it is suitable for the designated uses of drinking water after treatment; recreation in and on the water; fishing; agriculture; industrial process and cooling water supply; hydroelectric power generation; navigation; and as habitat for fish and other aquatic life, and the habitat can be characterized as unimpaired. 38 M.R.S. § 465(3)(A).

B. The applicant has provided adequate evidence, and the Department finds and determines, that Cobbosseecontee Stream in the vicinity of the outlet of the Project meets all narrative classification standards for Class B waters and is of such quality that it would be suitable for the designated uses of drinking water after treatment; fishing, agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation; navigation; and as habitat for fish and other aquatic life and the habitat can be characterized as unimpaired. 38 M.R.S. § 465(3)(A).

C. The applicant has provided adequate evidence, and the Department finds and determines, that water in the American Tissue Project impoundment and the water immediately downstream of and measurably affected by the Project are of sufficient quality to meet all Class B habitat and aquatic life standards. The Department finds and determines that water discharged from the impoundment meets the narrative standard of being at least equal to the existing water quality of the receiving water. 38 M.R.S. § 465(3)(C), 38 M.R.S. § 464(10).

D. The Department notes that the aquatic life of Cobbosseecontee Stream exhibits some impacts from "lake outlet effect" and that those impacts are present in the impoundment from water discharged to the impoundment from Pleasant Pond at the New Mills dam. However, in its professional judgment and experience, the Department finds and determines that the impacts measured below the American Tissue impoundment are not caused by any operations of the American Tissue Project. The Department further finds and determines that, due to the small size of the Project impoundment and the nature of Project operations, those effects are the result of conditions further upstream from the Project, and are passed through the American Tissue Project impoundment and discharged to the Project tailrace. The Department thus determines that the aquatic life of Cobbosseecontee Stream is characterized as unimpaired by any Project operations. 38 M.R.S. § 465(3)(A).

E. The applicant has provided adequate evidence, and the Department finds and determines, that the applicant meets all DO measurement standards and other requirements, and further finds and determines that DO concentrations in the American Tissue Project impoundment and in Cobbosseecontee Stream below the American Tissue dam meets or exceeds seven parts per million or 75% saturation and meet all Class B numeric water quality standards for DO. 38 M.R.S. § 464(13), 38 M.R.S. § 465(3)(B).

F. The Department finds and determines that Project operations at the American Tissue Project have remained essentially the same prior to and after November 28, 1975, and that in-stream uses established prior to November 28, 1975 are maintained. The

Department thus concludes that the Project meets the state's antidegradation policy. 38 M.R.S. § 464(4)(F).

G. The applicant has provided adequate evidence, and the Department finds and determines, that the proposed operations at the American Tissue Project are sufficient to meet all other applicable standards and criteria for the Project's impoundment and the water immediately downstream of and measurably affected by the Project.

7. DECISION AND ORDER

THEREFORE, the Department APPROVES the water quality certification application of KEI (Maine) Power Management (III) LLC and GRANTS certification pursuant to Section 401(a) of the CWA. The Department finds and determines that there is a reasonable assurance that the continued operation of the AMERICAN TISSUE HYDROELECTRIC PROJECT, as described above, will not violate applicable water quality standards, SUBJECT TO THE FOLLOWING CONDITIONS:

1) WATER LEVELS

A. Except as temporarily modified by 1) approved maintenance activities, 2) extreme hydrologic conditions[13], 3) emergency electrical system conditions[14], or 4) agreement between the applicant, the Department, and appropriate state and/or federal agencies, daily Project impoundment water level fluctuations shall be limited to within one foot of the normal full pond water elevation of 123.3 feet msl during normal operations.

B. The applicant shall, within six months of issuance of a new license for the Project by FERC or upon such other schedule as established by FERC, submit a final operations monitoring plan for Department review and approval[15], describing how the Project impoundment water levels required by Part A of this condition will be achieved and monitored.

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[13] For the purposes of this certification and Order, extreme hydrologic conditions mean the occurrence of events beyond the Licensee's control such as, but not limited to, abnormal precipitation, extreme runoff, flood condition, ice conditions or other hydrologic conditions such that the operational restrictions and requirements contained herein are impossible to achieve or are inconsistent with the safe operation of the Project.

[14] For the purposes of this certification and Order, emergency electrical system conditions mean operating emergencies beyond the Licensee's control which require changes in flow regimes to eliminate such emergencies which may in some circumstances include, but are not limited to, equipment failure or other temporary abnormal operation conditions, generating unit operation or third-party mandated interruptions under power supply emergencies, and orders from local, state, or federal law enforcement or public safety authorities.

[15] Department review and approval is granted through the condition compliance process, initiated with submission by the applicant or the applicant's agent of a condition compliance application and resulting in a Condition Compliance Order.

2) MINIMUM FLOWS

A. Except as temporarily modified by 1) approved maintenance activities, 2) extreme hydrologic conditions (see footnote 13), 3) emergency electrical system conditions (see footnote 14), or 4) agreement between the applicant, the Department, and appropriate state and/or federal agencies, a continuous minimum flow of 10 cfs, or inflow, whichever is less, shall be released to the bypass reach; and a flow of 29 cfs shall be released to the bypassed reach between June 1 and November 30 to promote eel passage; in order to protect downstream fish and aquatic resources.

B. The applicant shall, within six months of issuance of a new license for the Project by FERC or upon such other schedule as established by FERC, submit a final operations monitoring plan for Department review and approval (see footnote 15), describing how the minimum flow releases required by Part A of this condition will be achieved and monitored.

3) UPSTREAM FISH PASSAGE

AMERICAN EEL

A. Upstream eel passage facilities, as approved by the Department in consultation with the Resource Agencies as needed, shall be constructed, installed and operational at the American Tissue Project by the second migration season following issuance by FERC of a new license for the Project.

B. The applicant shall consult with the MDMR, MDIFW, USFWS, and NMFS (the Resource Agencies) to develop final eel passage design, including resource agency review and concurrence at 30%, 60% and 90% design completion. The facility shall be consistent with the USFWS's 2017 Fish Passage Engineering Design Criteria Manual[16].

C. The applicant shall, at least 190 days prior to construction, submit to the Department for review and approval (see footnote 15) an application for construction of upstream eel passage facilities required by Part A of this condition. Application may be made based on 60% design; however, design modifications subsequently made may, as determined necessary by the

[16] https://www.fws.gov/northeast/fisheries/fishpassageengineering.html; https://www.fws.gov/northeast/fisheries/pdf/USFWS_R5_2017_Fish_Passage_Engineering_Design_Criteria.pdf

Department, require further amendment of any applicable state-issued permit for such construction, including a permit or permit amendment under the Maine Waterway Development and Conservation Act, 38 M.R.S. §§ 630-638 (MWDCA). In such an instance, the applicant shall apply for and adhere to all further requirements of any such state permit or permit amendment.

D. The applicant shall, at least 90 days prior to construction or upon such other schedule as established by FERC, submit final design and location plans for the upstream eel passage facilities required by Part A of this condition, as prepared in consultation with the Resource Agencies.

E. Within one year of commencement of its operation, the applicant shall develop an operations and maintenance plan for the upstream eel passage facility required by Part A of this condition. The operations and maintenance plan for the upstream passage facility shall be developed in consultation with the Resource Agencies. The applicant shall submit the operations and maintenance plan to the Department for review and approval (see footnote 15) in consultation with the Resource Agencies.

F. Eel passage facilities shall be operated annually between June 1 and September 15.

G. The applicant shall, concurrent with the commencement of the eel passage facilities operation or upon such other schedule as established by FERC, submit plans for a study or studies to determine the effectiveness of the upstream eel passage facilities required by Part A of this condition, prepared in consultation with the Resource Agencies. These plans shall be reviewed and approved (see footnote 15) by the Department prior to implementation. In reviewing the plans, the Department may consider the recommendations of the Resource Agencies.

H. Within one year of eel passage installation or upon other schedule determined by FERC, the applicant shall, in consultation with the Resource Agencies, conduct a study or studies described in Part G, above, to determine the effectiveness of upstream eel passage facilities required by Part A of this condition.

I. After reviewing the results of the effectiveness study or studies, and after consultation among the applicant, the Department, and the Resource Agencies, the applicant shall modify the design and/or operation of the

upstream eel passage facilities installed pursuant to Part A of this condition as may be determined necessary to effectively pass eels upstream through the Project by the Department in consultation with the Resource Agencies.

ANDADROMOUS FISH

A. By the second migration season after upstream passage for anadromous fishes becomes operational at the Gardiner Paperboard dam, the applicant shall install and operate an upstream passage facility at the American Tissue Project to provide safe, timely, and effective upstream passage for anadromous fishes, as determined by the Department in consultation with the Resource Agencies as needed. The facility shall be designed to pass a maximum of approximately 3.2 million river herring.

B. The anadromous fish passage facility described in Part A of this Condition shall be operated annually between May 1 and July 31.

C. The applicant shall consult with the Resource Agencies to develop final anadromous fish passage design, including review and concurrence by the Resource Agencies at 30%, 60% and 90% design completion. The facility shall be consistent with the USFWS's 2017 Fish Passage Engineering Design Criteria Manual (see footnote 16).

D. The applicant shall, at least 190 days prior to construction, submit to the Department for review and approval (see footnote 15) an application for construction of upstream fish passage facilities required by Part A of this condition. Application may be made based on 60% design; however, design modifications subsequently made may, as determined necessary by the Department, require further amendment of any applicable state-issued permit for such construction, including a permit or permit amendment under the Maine Waterway Development and Conservation Act, 38 M.R.S. §§ 630-638 (MWDCA). In such an instance, the applicant shall apply for and adhere to all further requirements of any such state permit or permit amendment.

E. The applicant shall, at least 90 days prior to construction or upon such other schedule as established by FERC, submit final design and location plans for the upstream fish passage facility required by Part A of this condition, as prepared in consultation with the Resource Agencies.

F. Within one year of commencement of its operation, the applicant shall develop an operations and maintenance plan for the upstream fish passage facility required by Part A of this condition. The operations and maintenance plan shall be developed in consultation with the Resource Agencies. The applicant shall submit the operations and maintenance plan to the Department for review and approval (see footnote 15) in consultation with the Resource Agencies.

G. The applicant shall, concurrent with the commencement of the fish passage facility's operation or upon such other schedule as established by FERC, submit plans for a study or studies to determine the effectiveness of the upstream fish passage facilities required by Part A of this condition, prepared in consultation with the Resource Agencies. These plans shall be reviewed and approved (see footnote 15) by the Department prior to implementation. In reviewing the plans, the Department may consider the recommendations of the Resource agencies as needed.

H. Within one year of upstream fish passage facility installation or upon other schedule determined by FERC, the applicant shall, in consultation with the resource agencies, conduct a study or studies to determine the effectiveness of upstream fish passage facility required by this condition.

I. After reviewing the results of the effectiveness study or studies, and after consultation among the applicant, the Department, and the Resource Agencies, the applicant shall modify the design and/or operation of the upstream fish passage facility installed pursuant to this condition as may be determined necessary to effectively pass anadromous fish upstream through the Project by the Department in consultation with the Resource Agencies.

4) DOWNSTREAM FISH PASSAGE

DIADROMOUS FISH

A. The applicant shall continue to install, maintain, and operate, to the satisfaction of the Department in consultation with the Resource Agencies as needed, all existing downstream passage measures for diadromous fish at the American Tissue Project until such time as a new downstream fish passage facility is constructed and operational pursuant to Part B of this Condition.

B. By the second migration season after issuance of a new license by FERC pursuant to its pending application, the applicant shall construct, operate, and maintain a new downstream fish passage facility for diadromous fish that provides safe, timely and effective passage, as determined by the Department in consultation with the Resource Agencies as needed. The new downstream passage system shall consist of a minimum two-foot deep by three-foot wide surface weir that produces gradually accelerating discharge, and a minimum flow of 29 cfs to attract and convey migrants over the surface weir without coming in contact with the concrete surface of the spillway. The surface weir flow shall fall into an adequately-sized plunge pool at the toe of the spillway that then discharges into flowing water in the Project bypass reach.

C. The anadromous fish passage facility described in Part B of this Condition shall be operated annually between June 1 and November 30.

D. The applicant shall deploy 7/8 inch, partial depth trash rack overlays with blinding plates at the base of the penstock intake to physically exclude downstream migrants from the turbine intake during the downstream migration season, to be approved by the Department in consultation with the Resource Agencies as needed, from June 1 to November 30.

E. The new downstream passage facility shall be designed in consultation with the Resource Agencies, and the Resource Agencies shall review the 30%, 60% and 90% design drawings which are to be consistent with the USFWS's 2017 Fish Passage Engineering Design Criteria Manual (see footnote 16).

F. The applicant shall, concurrent with the commencement of fish passage facility operation or upon such other schedule as established by FERC, submit plans for a study or studies to determine the effectiveness of the downstream fish passage facilities required by Part B of this Condition, prepared in consultation with the Resource Agencies. These plans shall be reviewed and approved (see footnote 15) by the Department prior to implementation. In reviewing the plans, the Department may consider the recommendations of the Resource Agencies.

G. Within one year of downstream diadromous fish passage facility installation or upon other schedule determined by FERC, the applicant shall, in consultation with the Resource Agencies, conduct a study or studies to

determine the effectiveness of downstream fish passage facility required by Part B of this Condition.

H. Within one year of the commencement of its operation, the applicant shall develop an operations and maintenance plan for the downstream diadromous fish passage facility in consultation with the Resource Agencies for review and approval (see footnote 15) by the Department in consultation with the Resource Agencies as needed. The operations and maintenance plan shall include general schedules of routine maintenance, procedures for routine operation, procedures for monitoring and reporting on the operation of the downstream fish passage facility and measures, schedules of procedures for annual start-up and shut-down, and procedures for emergencies and Project outages significantly affecting fishway operations. Once approved by the Department, copies of the fishway operations and maintenance plans and any revisions made during the term of the license shall be provided to the Department and to the Resource Agencies.

AMERICAN EEL

A. The applicant shall maintain all existing downstream passage measures at the Project currently in place for diadromous species and American eel with the exception of water release from the deep gate until safe, timely, effective passage for American eel is established pursuant to Condition B for diadromous fish to the satisfaction of the Department, in consultation with the Resource Agencies as needed.

B. The applicant shall test the improved downstream diadromous passage facility to ensure it provides safe, timely, and effective passage for juvenile and adult diadromous fish, including American eel, as determined by the Department in consultation with the Resource Agencies. Alternatively, the applicant may test an experimental airlift-assisted deep bypass at the Project for passing downstream migrating American eels, with the approval of the Department in consultation with the Resource Agencies.

5) STANDARD CONDITIONS

The applicant shall comply with all Standard Conditions attached to the certification, with such compliance to be determined by the Department.

6) WATER QUALITY REOPENER

Upon any future determination by the Department that operation of the American Tissue Project, as approved by this certification and as conditioned by FERC for the Project, may be causing or contributing to a decline in water quality or non-attainment of water quality standards, the Department reserves the right to, in its discretion and upon notice to the applicant and opportunity for hearing in accordance with its regulations, reopen this certification to consider requiring modifications to this certification or additional conditions, as may be determined necessary by the Department to ensure that the Project does not cause or contribute to any decline in water quality or non-attainment of water quality standards.

7) RECREATIONAL ACCESS AND USE

The applicant shall continue to provide informal access to the project waters for the purpose of recreation in and on the water, for fishing, and for navigation to the extent possible, for the term of the new license, as determined necessary by the Department.

8) LIMITS OF APPROVAL

This approval is limited to and includes the proposals and plan contained in the application and supporting documents submitted and affirmed to the Department by the applicant. Any variations from the plans and proposal contained in said documents are subject to the review and approval of the Department prior to implementation.

9) COMPLIANCE WITH ALL APPLICABLE LAWS

The applicant shall secure and appropriately comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements and Orders required for the operation of the Project, in accordance with the terms and conditions of this certification, as determined by the Department.

10) EFFECTIVE DATE

This water quality certification shall be effective concurrent with the effective date of the new license issued by FERC for the Project.

11) SEVERABILITY

If any provision or part thereof, of this certification is declared to be unlawful by a reviewing court, the remainder of the certification shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

DONE AND DATED AT AUGUSTA, MAINE, THIS 29TH DAY OF NOVEMBER, 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Filed
NOV 29 2018
State of Maine
Board of Environmental Protection

BY: _____
For: Melanie Loyzim, Acting Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES...

KH/16416EN/ATS#82593

STANDARD CONDITIONS OF APPROVAL TO BE ATTACHED TO HYDROPOWER PERMITS

1. Limits of Approval. Project approval is limited to and includes the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. All variances from the plans and proposals contained in said documents are subject to the review and approval of the Administering Agency prior to implementation.

2. Noncompliance. Should the project be found, at any time, not to be in compliance with any of the conditions of this approval, or should the permittee construct or operate this project in any way other than as specified in the application or supporting documents, as modified by the conditions of approval, then the terms of this approval shall be considered to have been violated.

3. Compliance with all Applicable Laws. The permittee shall secure and appropriately comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation of the permitted project.

4. Inspection and Compliance. Authorized representatives of the Administering Agency or the Attorney General must be granted access to the premises of the permittee at any reasonable time for the purpose of inspecting the construction or operation of the project and assuring compliance by the permittee with the conditions of this approval.

5. Initiation and Completion of Construction. If construction is not commenced within 3 years and completed within 7 years from the date of issuance of the Authorizing Agency's permit, this approval will lapse, unless a request for an extension of these deadlines has been approved by the Commissioner.

6. Construction Schedule. Prior to construction, the permittee shall submit a final construction schedule for the project to the Administering Agency.

7. Approval Included in Contract Bids. A copy of the project's approval must be included in or attached to contract bid specifications for the project.

8. Approval Shown to Contractor. Work done by a contractor pursuant to the project's approval may not begin before a copy of the approval has been provided to the contractor by the permittee.

9. Notification of Project Operation. The permittee shall notify the Commissioner or Director of the commencement of commercial operation of the project within 10 days prior to such commencement.

10. Assignment of Transfer of Approval. Written consent to transfer an approval must be applied for no later than two weeks after the assignment or transfer of ownership of property covered by an approval under these Rules. Pending Administering Agency determination on the application for a transfer or assignment of ownership of an existing approval, the person(s) to whom such property is assigned or transferred shall bide by all of the terms and conditions of that approval and is jointly and severally liable with the original permitee for any violation of the terms and conditions thereof.

To obtain the Administering Agency's approval of transfer, the proposed assignee or transferee must demonstrate the financial capability and technical ability to (1) comply with all terms and conditions of the approval and (2) satisfy all other applicable statutory criteria. As used in this paragraph, "transfer of ownership" means a change in the legal entity that owns a project that is the subject of a permit issued pursuant to this chapter. A sale or exchange of stock (or in the case of a limited liability corporation, of membership interests), or a merger, is not a transfer of ownership for the purposes of this rule provided the legal entity that owns the project remains the same.

Effective November 2, 2017
DEPLW0430

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: November 2018 **Contact: (207) 287-2452**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S. §§ 341-D(4) & 346; the *Maine Administrative Procedure Act*, 5 M.R.S. § 11001; and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed more than 30 calendar days after the date on which the Commissioner's decision was filed with the Board will be dismissed unless notice of the Commissioner's license decision was required to be given to the person filing an appeal (appellant) and the notice was not given as required.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017. An appeal may be submitted by fax or e-mail if it contains a scanned original signature. It is recommended that a faxed or e-mailed appeal be followed by the submittal of mailed original paper documents. The complete appeal, including any attachments, must be received at DEP's offices in Augusta on or before 5:00 PM on the due date; materials received after 5:00 pm are not considered received until the following day. The risk of material not being received in a timely manner is on the sender, regardless of the method used. The appellant must also send a copy of the appeal documents to the Commissioner of the DEP; the applicant (if the appellant is not the applicant in the license proceeding at issue); and if a hearing was held on the application, any intervenor in that hearing process. All of the information listed in the next section of this information sheet must be submitted at the time the appeal is filed.

INFORMATION APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time the appeal is submitted:

1. *Aggrieved Status*. The appeal must explain how the appellant has standing to maintain an appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.

2. *The findings, conclusions, or conditions objected to or believed to be in error.* The appeal must identify the specific findings of fact, conclusions regarding compliance with the law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.

3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing requirements that the appellant believes were not properly considered or fully addressed.

4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested*. The Board will limit its consideration to those matters specifically raised in the written notice of appeal.

6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for public hearing must be filed as part of the notice of appeal, and must include an offer of proof in accordance with Chapter 2. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.

7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed evidence must be submitted with the appeal. The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered in an appeal only under very limited circumstances. The proposed evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Specific requirements for supplemental evidence are found in Chapter 2 § 24.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made easily accessible by the DEP. Upon request, the DEP will make application materials available during normal working hours, provide space to review the file, and provide an opportunity for photocopying materials. There is a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer general questions regarding the appeal process.

3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of

the decision is requested and granted, a license holder may proceed with a project pending the outcome of an appeal, but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, and will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, any materials submitted in response to the appeal, and relevant excerpts from the DEP's application review file will be sent to Board members with a recommended decision from DEP staff. The appellant, the license holder if different from the appellant, and any interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. The appellant and the license holder will have an opportunity to address the Board at the Board meeting. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452, or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

ATTACHMENT C

AGENCY CONSULTATION RECORD

Kleinschmidt

August 29, 2019

VIA E-MAIL

Distribution List

Low Impact Hydropower Institute Recertification
American Tissue Hydroelectric Project LIHI Intake Application

Dear Resource Agency:

Kleinschmidt Associates (Kleinschmidt), on behalf of KEI (Maine) Power Management (III) LLC, is assisting with the environmental review and resource agency consultation associated with the Low Impact Hydropower Institute Recertification (LIHI) of the American Tissue Hydroelectric Project (FERC No. 2809), located along the Cobbosseecontee Stream in Maine.

The American Tissue Hydroelectric Project (Project) is located in Kennebec County in southwestern Maine in the town of Gardiner. The Project is located on the Cobbosseecontee Stream, approximately 1 river mile upstream of its confluence with the Kennebec River. The Cobbosseecontee Stream is approximately 11 miles long from its headwaters at Cobbosseecontee Lake. There are five dams on Cobbosseecontee Stream. The Project's dam is the second-most upstream dam on Cobbosseecontee Stream and is the only dam on the stream that is used for hydroelectric generation. Project figures can be found in Attachment A.

The Project is owned by KEI (Maine) Power Management (III) LLC (hereinafter KEI (Maine)) and was recently relicensed by the Federal Energy Regulatory Commission (FERC) (FERC No. 2809) on April 30, 2019 for a 40-year license expiring May 1, 2059. Prior to this most recent license, the project was licensed to KEI (Maine), for a 40-year license on May 9, 1979.

The LIHI recertification process requires the applicant to consult with agencies and receive agency agreement that the continued use of the Project does not have a negative impact on resources. Therefore, KEI (Maine) is requesting confirmation that the Projects are, to your knowledge, being operated consistent with the FERC license and Section 401 Water Quality Certificates.

We respectfully request your confirmation of compliant operations within 30 days so that it may be included and considered in the application to LIHI.

Thank you for your assistance in this matter. If you have questions, please contact me at 971-266-5395 or Nuria.Holmes@KleinchmidtGroup.com.

Sincerely,

KLEINSCHMIDT ASSOCIATES

Nuria Holmes
Regulatory Coordinator

NVH:mjm
cc: Distribution List
Attachment A: Project Figures

DISTRIBUTION LIST

Ms. Kathy Howatt
Hydropower Coordinator
Maine Department of Environmental Protection
17 State House Station
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kathy.howatt@maine.gov

Mr. John Perry
Environmental Coordinator
Maine Department of Inland Fisheries and Wildlife
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41 SHS
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Mr. Sean McDermott
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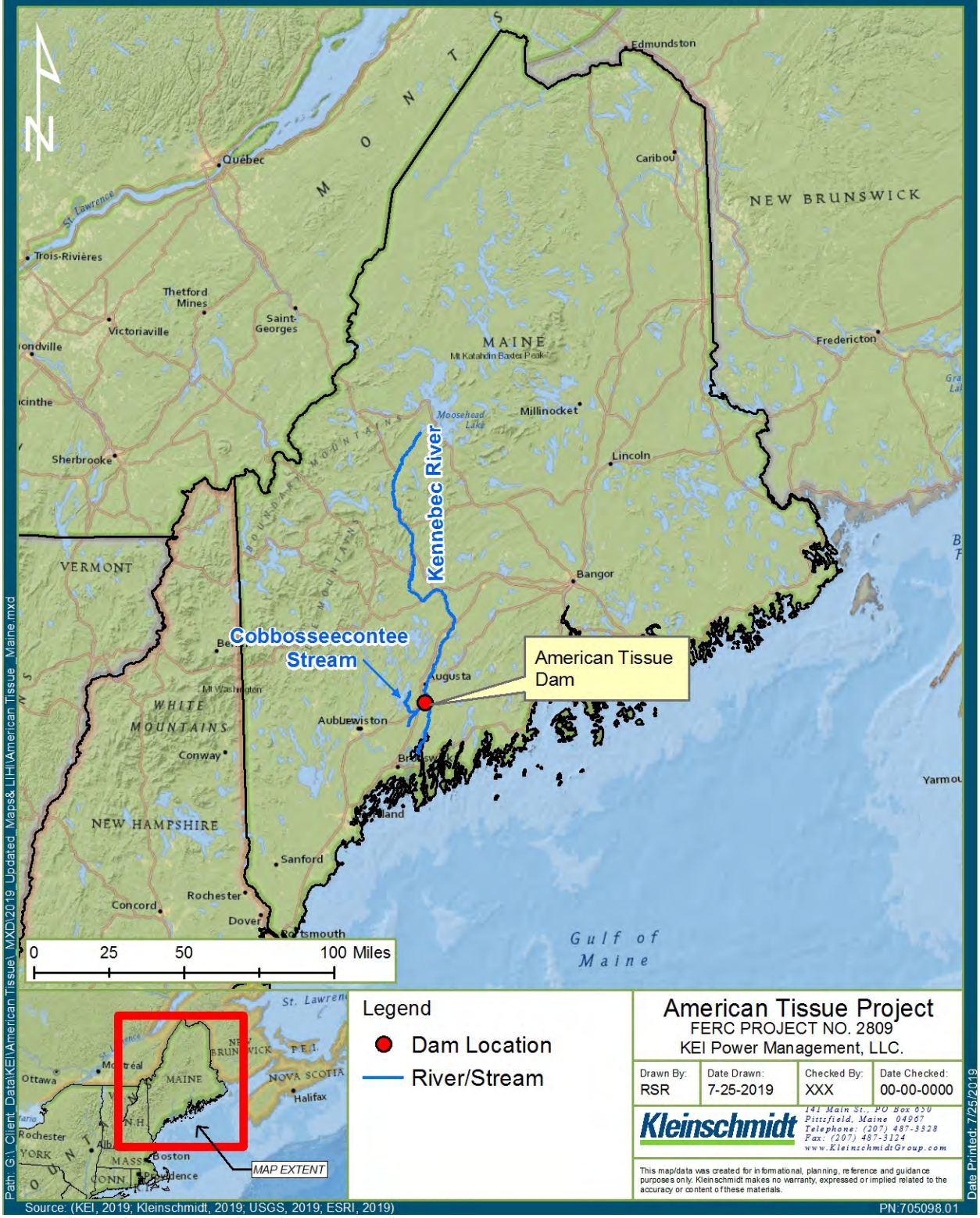
Mr. Kirk Mohney
Director
Maine Historic Preservation Commission
65 State House Station,
Augusta, ME 04333
kirk.mohney@maine.gov

ATTACHMENT A

Project Location



Legend

- Dam Location
- River/Stream

American Tissue Project

FERC PROJECT NO. 2809

KEI Power Management, LLC.

Drawn By:	Date Drawn:	Checked By:	Date Checked:
RSR	7-25-2019	XXX	00-00-0000

Kleinschmidt
141 Main St., PO Box 650
Pittsfield, Maine 04967
Telephone: (207) 487-3328
Fax: (207) 487-3124
www.KleinschmidtGroup.com

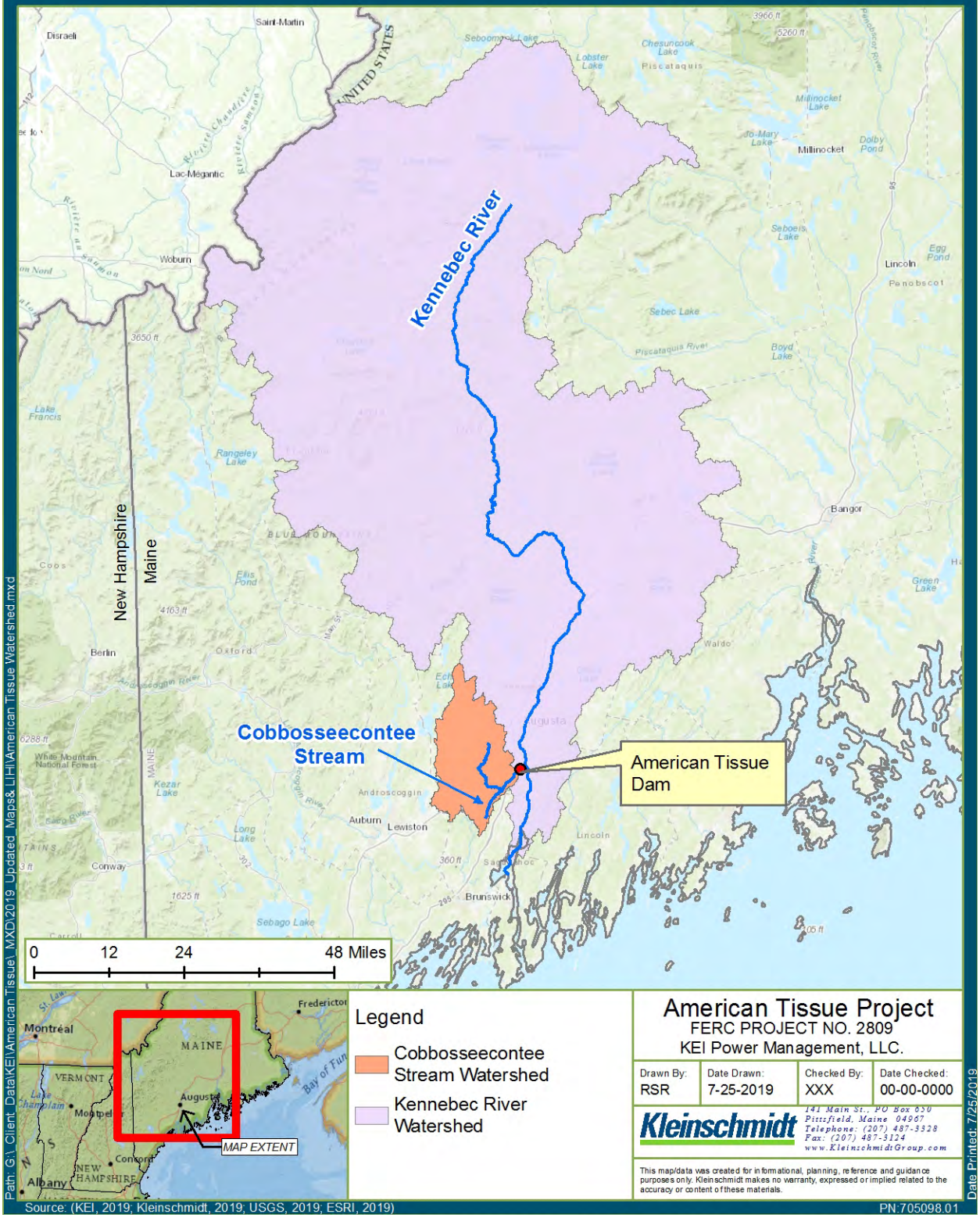
Path: G:\Client_Data\KEI\American Tissue_MXD\2019_Updated_Maps&_LIHI\American Tissue_Maine.mxd

Date Printed: 7/25/2019

Source: (KEI, 2019; Kleinschmidt, 2019; USGS, 2019; ESRI, 2019)

PN:705098.01

Watershed Location



Legend

- Cobbosseecontee Stream Watershed
- Kennebec River Watershed

American Tissue Project

FERC PROJECT NO. 2809

KEI Power Management, LLC.

Drawn By:	Date Drawn:	Checked By:	Date Checked:
RSR	7-25-2019	XXX	00-00-0000

Kleinschmidt

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Date Printed: 7/25/2019

Source: (KEI, 2019; Kleinschmidt, 2019; USGS, 2019; ESRI, 2019)

PN:705098.01

Project Features

Legend

Project Boundary

American Tissue Project

FERC PROJECT NO. 2809

KEI Power Management, LLC.

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RSR	7-23-2019	XXX	00-00-0000

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Date Printed: 7/25/2019

Source: (KEI, 2019; Kleinschmidt, 2019; ESRI, 2019)

PN:705098.01

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

GERALD D. REID
COMMISSIONER

September 27, 2019

RE: LOW IMPACT HYDROPOWER INSTITUTE APPLICATION FOR CERTIFICATION FOR THE AMERICAN TISSUE HYDROELECTRIC PROJECT (FERC NO. 2809)

To whom it may concern:

The American Tissue Hydroelectric Project (ATHP, Project) is owned and operated by KEI (Maine) POWER MANAGEMENT (III) LLC (KEI, the applicant) and located on Cobbosseecontee Stream in the town of Gardiner, in Kennebec County, Maine. The Project is located approximately 1 river mile upstream of the confluence of Cobbosseecontee Stream and the Kennebec River. There are several dams on Cobbosseecontee Stream and the Project is the only dam that is used for hydroelectric generation. The ATHP operates as a run of river facility with a minimum flow of 52-cfs in the tailrace and 10-cfs or inflow to the bypassed reach. The Project consists of a stone masonry dam with spillway, east and west abutments, an underground steel penstock, a powerhouse with one generator unit, and a bypass reach that is approximately 345 feet long.

The Department of Environmental Protection (MDEP, the Department) has reviewed its most recent water quality data for surface waters at the ATHP. The American Tissue dam creates an impoundment with a surface area of 5.5 acres at full pond which extends upstream 1,160 feet to the toe of the New Mills Dam. The New Mills Dam is the upstream water control dam which impounds Pleasant Pond. The full impoundment surface elevation is 123.3 feet msl including 1-foot flashboards. The impoundment is relatively shallow and narrow, with a riverine character and a maximum depth of 24 feet. The Cobbosseecontee Stream surface waters associated with the impoundment and downstream of the project dam are Class B waters, the 3rd highest classification. The Department has no evidence to suggest that the continued operation of the Project will negatively impact the designated uses, numeric or narrative criteria of its classification standards (Class B).

The Department's latest Integrated Water Quality and Assessment Reports (305b/303d Reports) (2016) indicate that the waters associated with the ATHP are categorized as 2: Rivers and Streams Attaining Some Designated Uses, 4-A: Rivers and Streams with Impaired Use with an advisory for total phosphorus, and 5-A: Rivers and Stream Impaired by Pollutants with an advisory for benthic macroinvertebrates and periphyton. The 303d report shows that a Watershed Management Plan was established in 2008 and further monitoring in 2010 showed Pleasant Pond's nutrient and trophic state indicators remained high. The Department has determined that impairment of water quality in the stream is likely related to the upstream Pleasant Pond impoundment and is not a result of the operations of the ATHP. In addition to not attaining the designated use of 'habitat for fish and other aquatic life', Cobbosseecontee Stream is not attaining the designated use of fishing, since there is a statewide fish consumption advisory

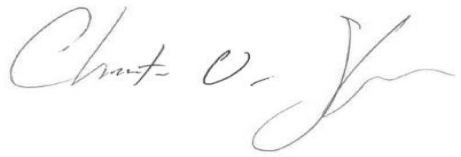
for all freshwaters due to mercury. The Department has determined that the non-attainment status due to the fish consumption advisory is not a result of the operation of the ATHP.

On November 29, 2018, MDEP issued its decision and order (#L-16416-33-E-N) approving KEI's water quality certification (WQC) application. The federal licensing process is integrated with MDEP's WQC process for review, pursuant to Section 401 of the federal Clean Water Act (CWA) and related state laws and rules if applicable. As discussed in the MDEP WQC issued in 2018, the Maine Department of Marine Resources (MDMR) reported and the Department found that the Cobbossecontee Stream historically supported runs of diadromous fish including striped bass, blueback herring and alewife (known collectively as river herring), rainbow smelt, American shad, Atlantic Salmon and American eel. Migratory access to Cobbosseecontee Stream is restricted by the downstream Gardiner Paperboard (GPB) dam, which has not operated since 2000. Five native migratory fish species (blueback herring, alewife, striped bass, American shad and rainbow smelt) are reported to utilize habitat downstream of the GPB dam. Currently, American eel and sea-run alewives occur within the Project area or upstream of the ATHP; alewives are stocked into the upstream Pleasant Pond and Horseshoe Pond by MDMR.

During the WQC analysis, the Department found that KEI has maintained and operated downstream fish passage facilities for alewives and American eel at the Project since 2003. Additionally, Condition 3 outlines Upstream Fish Passage requirements to be initiated at the ATHP by the second migration season (2020) for American eel. Fish passage for other anadromous species must be initiated by the second migration season after upstream passage becomes operational at the downstream GPB dam. By following these Conditions outlined in the 2018 WQC, the Department has determined that KEI, through consultation with resource agencies, has made adequate provisions to accommodate fish passage for anadromous species. Additional results of WQC studies showed that the ATHP impoundment, the Cobbosseecontee Stream bypass, as well as the tailrace attain most designated uses and water quality standards for Class B waters. The Department has determined that standards that are not attained are not a result of Project activity. Therefore, the Department supports the Low Impact Hydropower Certification of the ATHP (FERC No. 2809)

Please feel free to contact me at (207) 446-1619 or via email at Christopher.Sferra@maine.gov if you have any questions regarding this project.

Sincerely,



Christopher O. Sferra, Project Manager
Bureau of Land Resources
Maine Department of Environmental Protection

From: Settele, Rebecca
To: Nuria Holmes
Cc: Perry, John
Subject: RE: American Tissue Hydro LIHI review [response requested]
Date: Tuesday, September 17, 2019 5:51:38 AM

Hi Nuria,

The following Endangered, Threatened, and Special Concern species have been documented in the general vicinity of the American Tissue Dam Project on the Cobbosseecontee Stream. Note that this list should not be considered all-inclusive:

Tidewater Mucket (State Threatened)

In addition, while a comprehensive statewide inventory for bats has not been completed it is likely that several of species of bats occur within the project area during migration and/or the breeding season.

Little brown bat (State Endangered)
Northern long-eared bat (State Endangered)
Eastern small-footed bat (State Threatened)
Big brown bat (Special Concern)
Red bat (Special Concern)
Hoary bat (Special Concern)
Silver-haired bat (Special Concern)
Tri-colored bat (Special Concern)

It is not known what effects, if any, the operations of the project may have on any of the above species.

Please let us know if you need additional information.

Becca Settele
Wildlife Biologist
Maine Dept of Inland Fisheries & Wildlife
Wildlife Division
650 State St
Bangor ME 04401
(207)941-4438
mefishwildlife.com | facebook | twitter

From: Nuria Holmes <Nuria.Holmes@Kleinschmidtgroup.com>
Sent: Thursday, August 29, 2019 6:50 PM

To: Howatt, Kathy <Kathy.Howatt@maine.gov>; antonio_bentivoglio@fws.gov; Wippelhauser, Gail <Gail.Wippelhauser@maine.gov>; Mohney, Kirk <Kirk.Mohney@maine.gov>; sean.mcdermott@noaa.gov; Perry, John <John.Perry@maine.gov>
Cc: Andy Qua <Andy.Qua@KleinschmidtGroup.com>; Nuria Holmes <Nuria.Holmes@Kleinschmidtgroup.com>
Subject: American Tissue Hydro LIHI review [response requested]

Good afternoon,

Kleinschmidt Associates, on behalf of KEI (Maine) Power Management (III), LLC, is assisting with the environmental review and resource agency consultation associated with the Initial certification for the Low Impact Hydropower Institute of the American Tissue Hydro Project (FERC No. 2809). The LIHI certification process requires the applicant to consult with agencies and receive agency agreement that the continued use of the Project does not have a negative impact on resources.

Please see the attached request for confirmation that the Projects are, to your knowledge, being operated consistent with the FERC License and Section 401 Water Quality Certificate. We respectfully request your confirmation within 30 days so that it may be included into the application.

If you have any questions about this request, please do not hesitate to contact me.

Nuria V. Holmes, M.S.
Regulatory & Licensing Project Manager
Office: 971.266.5395
Cell: 503.380.9888
Kleinschmidt
www.KleinschmidtGroup.com
Providing practical solutions for complex problems affecting energy, water, and the environment.

ATTACHMENT D

LIHI REVIEWER REPORT RESPONSES

LOW IMPACT HYDROPOWER INTAKE REVIEW

Name of Project/Facility:	American Tissue Hydroelectric Project
FERC License or Exemption # (or N/A):	2809
Date Application Submitted to LIHI:	September 5, 2019
Name of Reviewer:	Gary Franc
Date Review Completed:	Oct 16, 2019

Note to applicant: This intake review is a preliminary review only. The application reviewer may have additional questions or request additional information to fill data gaps identified during the full application review.

General Review Comments:

This intake review is for the American Tissue Hydroelectric Project (Project). The intake review indicates that only minor additional information and supporting documentation is required to perform a certification review. Inconsistences in the selection of alternative standards needs to be resolved. The applicant states that a revised final application will be completed. The application should be delayed for posting for comments until it is revised. A signed sworn statement will also be needed.

I: BACKGROUND INFORMATION REVIEW

Information Type	*Complete? (Y, N, NA)*	*Missing Information*
Name of the Facility:	Y	None
Location:	Y	None
Facility Owner:	Y	None
Regulatory Status:	Y	None
Characteristics of the Power Plant:	Y	None
Characteristics of the Dam or Diversion:	Y	None
Characteristics of Conduit:	NA	This is not a conduit facility.
Characteristics of Reservoir and Watershed:	Y	None
Hydrologic Setting:	Y	None.
Designated Zones of Effect:	Y	None
Additional Contact Information:	Y	None
Photographs of the Facility	Y, but …	Provide photos of turbine/generator if available.Photos added to Application.
Map/aerial of facility and location of nearby dams	Y	None

II. CRITERIA INFORMATION REVIEW

General Criteria Comments: The Project has three ZOEs all on the Cobbosseecontee Stream above its confluence with the Kennebec River:

- ZOE 1 is the Impoundment from river mile (RM) 1.4 to RM 1.2;
- ZOE 2 is the Bypass Reach from RM 1.2 to RM 1.15;
- ZOE is the Tailrace form RM 1.15 to the freshwater spring at RM 1.1.

A. Ecological Flow Regime

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	2	Y, but …	Please provide a link or copy of the draft operation compliance monitoring plan scheduled for November 1, 2019.	The Operation Compliance Monitoring Plan is still in development. An interim Plan will be filed with FERC as downstream passage is still in development.
2-Bypass	2	Y, but …	See ZOE 1.	When available turbine flow is less than 100 cubic feet per second (CFS) or greater than 360 CFS, water is spilled over the dam into the bypassed reach. The Project provides a continuous minimum flow of 10 CFS, or inflow from December 1 to May 31; and a minimum flow of 29 CFS from June 1 through November 30.
3-Tailrace	2	Y, but …	See ZOE 1.	

B. Water Quality Protection

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	2	Y, but …	If available, please provide the MDEP response.	The Maine Department of Environmental Protection (MDEP) Issued a water quality certification (WQC) for the Project on November 29, 2018. Meets Class B water standards. This will be provided as part of final submittal. On August 29, 2019, state and federal agencies were requested to confirm that the Project is operated in compliance with the conditions of the FERC license and WQC.
2-Bypass	2	Y, but …	See ZOE 1.	In a March 31, 2017 letter, MDEP confirmed that the Project meets applicable Class B dissolved oxygen (DO) criteria downstream of the dam.
3-Tailrace	2	Y, but …	See ZOE 1.	

C. Upstream Fish Passage

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	1 or 2	Y, but …	Standard defined as 1 in section 2.1 and as 2 in section 3.3. Need to select one or the other.	This Standard has been corrected.
2-Bypass	2	Y, but …	Please provide references (links) to consultation and draft plan status updates as they become available.	Per the FERC License, dated April 30, 2019, upstream passage for American eel will be installed on the west end of the project spillway before the second migration season after license issuance (by June 2021). Eel passage facilities will be operated annually from June 1 and September 15.
3-Tailrace	2	Y, but …		

Update on Upstream Passage: Upstream eel will be installed on the River Left side looking downstream and be operations in 2021. KEI just had a meeting with the agencies on 10/31/2019, and are at 60% of drawing complete.

D. Downstream Fish Passage and Protection

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	2?	N	Standard undefined in section 2.1, 2.2 and 2.3, and as 2 in section 3.4. Need to select a standard. Provide reference to passage status updates.	This Standard has been corrected. New Downstream Anadromous Fish Passage and American Eel Passage and operation and maintenance plan per WQC guidelines.
2-Bypass	2?	N	See ZOE 1.	See ZOE 1.
3-Tailrace	2?	N	See ZOE 1.	See ZOE 1.

E. Watershed and Shoreline Protection

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	1	Y		A Shoreline Management Plan (SMP) is not required.
2-Bypass	1	Y		See ZOE 1.
3-Tailrace	1	Y		See ZOE 1.

F. Threatened and Endangered Species Protection

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	2 or 3	Y, but ….	Standard is defined as 3 in section 2.1, 2.2 and 2.3, and as 2 in section 3.6. Need to select one or the other.	This Standard has been corrected. An Information for Planning and Consultation (IPaC) report and USFWS Official Species List was developed for the Project.
2-Bypass	2 or 3	Y, but ….		See ZOE 1.
3-Tailrace	2 or 3	Y, but ….		See ZOE 1.

G. Cultural and Historic Resource Protection

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	1 or 2	N	Standard is defined as 2 in section 2.1, 2.2 and 2.3, and as 1 in section 3.7. Need to select one or the other. If available, please provide reference or more information on the planned survey status.	The only potential historic property is the Gardiner Mill remains that lay beneath the impoundment and are only exposed for a few days during dewatering events. A reconnaissance survey is planned as requested by SHPO. Standard was selected as 1 in all sections. Unclear where Reviewer is seeing 2.
2-Bypass	1 or 2	N	See ZOE 1.	See ZOE 1.
3-Tailrace	1 or 2	N	See ZOE 1.	See ZOE 1.

Reconnaissance survey is to be completed only when KEI de-waters the headpond for any reason. No planned dewaterings in near future.

H. Recreational Resources

Zone of Effect	*Standard selected*	*Complete? (Y or N)*	Information needed to complete the review	Initial issue identification and standards recommendations
1-Impoundment	1 or 2	N	Standard is defined as 2 in section 2.1, 2.2 and 2.3, and as 1 in section 3.8. Need to select one or the other.	The Project lands are not subject to any enforceable Recreation Resource Management Plans or FERC Form 80 requirements as part of their License, and only provide voluntary informal access to the project water for recreation, including fishing and navigation. Standard was selected as 1 in all sections. Unclear where Reviewer is seeing 2. However, there is informal access to canal portage and trail.
2-Bypass	1 or 2	N	See ZOE 1.	See ZOE 1.
3-Tailrace	1 or 2	N	See ZOE 1.	See ZOE 1.