

REVIEW OF APPLICATION FOR CERTIFICATION BY THE LOW IMPACT HYDROPOWER INSTITUTE OF THE GAMBO HYDROELECTRIC FACILITY

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November 30, 2017

I. INTRODUCTION

This report reviews the updated application submitted by S.D. Warren Company d/b/a S.D. Warren North America (S.D. Warren or Applicant) dated September 1, 2017, to the Low Impact Hydropower Institute (LIHI) for Low Impact Hydropower Certification for the Gambo Hydroelectric Project (P-2931-ME) (Gambo or Project). A review of a draft application dated June 19, 2017, was made by the Reviewer, which resulted in an Intake Review Report and two consultation calls between the Applicant and Reviewer to address some questions. The final application was submitted September 1, 2017. This certification review was conducted in compliance with LIHI's Handbook, 2nd Edition, dated March 7, 2016.

The Gambo Project is located on the Presumpscot River in southern Maine and is one of six hydropower projects owned by S.D. Warren. S.D. Warren also owns a seventh non-hydropower dam, Cumberland Mills, which is the most downstream dam on the river.

The Gambo Project has been used almost continuously for hydroelectric generation since its original construction (c. 1850). The site was originally developed as a sawmill in the 18th century by Jonathan Lovett, and was later part of the Oriental Gun Powder Mill until c. 1904. The current dam was built in 1912 by E.I. duPont de Nemours Company, which used the site to manufacture wood flour for dynamite until 1950. Between 1950 and 1960, the site was owned by the Town of Windham, U.S. Small Business Administration, and the Commercial Chemical Corp; but was not known to have been used. In 1960, Mr. Lawrence Keddy began to use the site to provide power to his Little Falls steel mill. He also sold some of the power to Central Maine Power Company (CMP). S.D. Warren purchased the Gambo Project from the Commercial Chemical Corporation on October 18, 1974 and the John Phinney property on the Gorham side of the River in 1978.

The Gambo Project was originally licensed by the Federal Energy Regulatory Commission (FERC) in 1980, and currently holds a 40-year license issued on October 2, 2003, and a Water Quality Certification from the Maine Department of Environmental Protection (MEDEP) issued May 1, 2003. S.D. Warren's hydroelectric projects operate continuously to generate electricity that is used at S.D. Warren's paper mill at Westbrook. Capacity and energy in excess of that used by the mill is sold on the open market. Nameplate capacity is reported at 1.9 MW with an annual generation of about 7,000 MWh.

II. PROJECT'S GEOGRAPHIC LOCATION

The Gambo Project is located on the Presumpscot River in South Windham and Gorham, Cumberland County Maine. Latitude and longitude are 43°44'44.77" N and 70°26'20.67" W. The river originates at the headgate of the Eel Weir Hydroelectric Project at the outlet of Sebago Lake and extends roughly 25 miles southeast to the Atlantic Ocean at Casco Bay. The Gambo Project is located at river mile 18.6 and is the fifth most downstream dam on the river. Figure 1 in Appendix A illustrates the location of the Gambo Project along with seven other dams on the river. All are owned by S.D. Warren except the North Gorham Hydropower Project, which is owned by Brookfield Renewable Energy Group. The North Gorham Project was certified by LIHI (Certification # 129) effective April 27, 2016. S.D. Warren has submitted applications to LIHI for certification review for the five Projects noted below in bold. These dams are identified as follows beginning with the head waters:

Facility Name	River Mile	FERC Project #
Eel Weir Hydropower Project	25.0	P-2984
North Gorham Hydropower Project	23.6	P-2519
Dundee Hydropower Project	21.9	P-2942
Gambo Hydropower Project	18.6	P-2931
Little Falls Hydropower Project	16.9	P-2941
Mallison Falls Hydropower Project	16.4	P-2932
Saccarappa Hydropower Project	11.3	P-2897
Cumberland Mills Dam	10.3	Not hydropower

S.D. Warren filed a license surrender application in 2015 for the Saccarappa Project, with plans to remove the spillways and install upstream passage for anadromous species. Discussion of this filing as it pertains to Gambo is discussed under Section V – **Regulatory and Compliance Status**. The Cumberland Mills dam impoundment is used for non-contact cooling, process water and fire suppression for adjacent mill operations. The Smelt Hill Dam, which was which was formerly located downstream of the Cumberland Mills facility, was removed in October 2002.

Watershed area at the dam is 504 square miles, as report on the Project's Exhibit A noted in a follow-up email from the Applicant. Seven tributaries feed the Presumpscot River between Sebago Lake and the Saccarappa Project.

III. PROJECT AND IMMEDIATE SITE CHARACTERISTICS

The Gambo Project, which operates in a run-of-river mode, consists of the following features:

- a 300-foot-long, 24-foot-high reinforced concrete dam, consisting of a 250-foot-long overflow section with a height of 133.8 feet USGS; one-foot-four-inch-high wooden flashboards on the spillway section of the dam;
- a 50-foot-long canal intake structure, and a sluice gate structure;
- a 737-foot-long, and 15-foot-deep concrete-lined intake canal;
- a 47-foot-wide by 78-foot-long reinforced concrete and brick powerhouse containing

two vertical Francis turbines direct-connected to generators, each with an installed capacity of 950 kW for a total rated generating capacity of 1,900 kW;

- a 300-foot-long, free-flowing bypass reach between the dam and powerhouse tailwaters;
- a 3.3-mile-long impoundment extending from the Gambo Project dam upstream to the tailwaters of the Dundee Project, with a surface area of approximately 151 acres and a normal surface elevation of 135.13 feet USGS.
- an 8-mile-long, 11-kV transmission line;
- an upstream passage for American eel; and
- a reported average annual flow at the dam of 760 cubic feet per second (cfs).

Appendix A includes figures and photographs of the Project. Figure 2 is an aerial of the Project. Photographs in Exhibit 1 show key Project features. Photographs in Exhibits 2 through 4 show the Zones of Effect of the Project.

Project equipment is original. S.D. Warren reported that no significant modifications have been made.

IV. ZONES OF EFFECT

Three Zones of Effect (ZOE), noted below, are being evaluated for this Project. Photographs in Exhibits 2 through 4 show these zones of effect. They include:

1. The regulated reach (i.e. tailrace);
2. The bypass reach; and
3. The impoundment above the dam, noted as bounded by elevation contour 135.13 ft. MSL and the dam structure.

V. REGULATORY AND COMPLIANCE STATUS

FERC Licensing

The Gambo Dam has a FERC License, P-2931-ME, issued on October 2, 2003, with an expiration date of October 1, 2043. Although the original license did not expire until 2002, in 1996, at S.D. Warren's request, all of the licenses for the Presumpscot River Projects, except Eel Weir, were modified to expire on January 26, 2001, to enable a coordinated review at relicensing. Intervention status was granted in the multi-project proceeding to a large number of organizations, including the U.S. Department of the Interior, representing US Fish and Wildlife Service (USFWS) and National Park Service; Friends of the Presumpscot River (FOPR); Friends of Sebago Lake (FOSL); Maine Council of the Atlantic Salmon Federation (Maine Council); the State of Maine, including the State Planning Office; Maine Department of Marine Resources (MDMR), Maine Atlantic Salmon Commission (MASC), and Maine Department of Inland Fisheries and Wildlife (MDIFW); Trout Unlimited; U.S. Environmental Protection Agency (EPA); Allan Desjardin; American Rivers and Representative Janice E. Labrecque of the Maine House of Representatives. Based on review of the FERC license, only FOPR opposed the relicensing of Gambo, along with that of the Gambo, and Saccarappa Projects. A multi-project Draft Environmental Impact Statement (DEIS) was issued on October 5, 2001, with

comments received from 12 entities and three individuals, which were incorporated into the Final Environmental Impact Statement (FEIS) issued June 26, 2002. Ultimately, five Projects (Saccarappa, Mallison Falls, Little Falls, Gambo and Dundee) simultaneously received a new license with similar requirements.

The key new requirements of the license are listed below and discussed under the applicable criteria:

- Run-of-river operation;
- the provision of specific minimum flows to the bypassed reaches including the provision of additional spillage to maintain state dissolved oxygen standards;
- the preparation and implementation of a headpond elevation and minimum flow monitoring plan;
- future installation of upstream and downstream fish passage facilities for American shad and blueback herring, as generally prescribed by USFWS;
- design and installation of upstream eel passage facilities and monitoring requirements;
- implementation of a plan for downstream eel passage; including unit shutdowns;
- development of a recreational facilities enhancement plan and monitoring plan;
- development of a historic properties management plan (HPMP); and
- maintenance of a shoreline buffer zone as part of a Shoreline Management Plan (SMP).

Gambo's FERC license has been amended in 2013, 2016 and February 2017, all tied to delays in fish passage installation deadlines and several extensions to deadlines for recreational facility development. Upstream and downstream anadromous fish passage requirements are at all of S.D. Warren's Presumpscot River Projects, and are inter-related, as the schedule at each site is based on designated numbers of fish arriving at the next downstream project. The new license for the Saccarappa Hydroelectric Project (FERC No. P-2897), issued October 2, 2003, required passage contingent on fish passage installation at the downstream, non-jurisdictional Cumberland Mills Dam. During the spring of 2013 upstream and downstream fish passage became operational at Cumberland Mills, triggering the requirement for fish passage construction at Saccarappa. After evaluating all possible options, S.D. Warren determined that installing fish passage while continuing to operate the Saccarappa Project was not economical, and in December 2013, S.D. Warren began the process of surrendering the license and decommissioning of the Saccarappa Project.

Since the initial surrender application filing in 2015, there has been extensive discussion with Federal and State resource agencies, the City of Westbrook, and local non-governmental organizations about how to meet the environmental goals for the Presumpscot River. These discussions resulted in S.D. Warren's withdrawal of the surrender application on two separate occasions to modify the original fish passage design proposal, and eventually arriving at the November 2016 Settlement Agreement (SA). The SA was finalized on November 15, 2016 and used as the basis for extensions of the fish passage deadline at Saccarappa, as well as for the Gambo Project and the other sites. S.D. Warren is currently awaiting final design plans in order to prepare and submit a final surrender application with the agreed upon terms and designs.

Parties to, and in support of, the SA include: United States Department of the Interior (USDOJ), USFWS, MDMR, Conservation Law Foundation (CLF), the Friends of the Presumpscot River (FOPR), the City of Westbrook, Maine, and S.D. Warren.

Appendix B provides a summary of the numerous actions and filings relative to fish passage. As noted in this summary, amendments have been made to the Section 18 mandatory prescriptions issued by USFWS. Not shown on this summary however, is the fact that Motions to Intervene and Protests have been filed in early 2017 with FERC relative to the Settlement Agreement by Friends of Merrymeeting Bay (FOMB), Ed Friedman, FOMB Chair, Friends of Sebago Lake (FOSL) and Douglas A. Watts. FERC has not yet taken action on the Settlement Agreement. As noted in their February 14, 2017 Order, FERC stated that the licensee would need to amend its application for surrender of the Sacarrappa Project before the Commission takes any action on the Settlement Agreement and that FERC will review any arguments opposing the settlement at that time. Implications of SA fish passage requirements to the Gambo Project's satisfaction of LIHI's fish passage criterion are discussed under **Criterion C – Upstream Fish Passage**.

Water Quality Certification

A new Water Quality Certification (WQC), #L-19716-33-E-N, was issued May 1, 2003, by MEDEP. One WQC was issued applicable to Sacarrappa (P-2897), Mallison Falls (P-2932), Little Falls (P-2941), Dundee (P-2942), and Gambo (P-2931). It included minimum flow requirements, impoundment drawdown and refill requirements, upstream and downstream passage for eel and anadromous species, passage effectiveness testing, reaeration measures via spillage at the Gambo and Dundee Projects to improve dissolved oxygen levels in the river downstream of these dams, study of the effectiveness of the spillage and other measures in meeting Class B dissolved oxygen standards in the river and enhancement of recreational features.

Two modifications were issued in July 2008; one to address changes to the upstream eel passage requirements, and one to address changes to WQC Condition #7(A), recreation. A Minor Revision was issued in November 2012 to address modifications to the approved Recreation Plan. More recently, a minor revision was issued on May 27, 2016, and another on December 27, 2016, both to address fish passage requirements at the Saccarappa Project (FERC No. 2897 and by default, the other Presumpscot River Projects. Another amendment application to change the deadline of the fish passage effectiveness testing to align with goals of the resource agencies was appealed by an NGO, and ultimately withdrawn.

License and WQC Compliance

My review of FERC's eLibrary indicated no compliance issues. The application included recent letters from USFWS, MEDEP, MDMR and Maine Department of Agriculture, Conservation and Forestry, none of which indicated compliance issues with the Project.

VI. PUBLIC COMMENT RECEIVED OR SOLICITED BY LIHI

Letters from USFWS, MEDEP, MDMR, MDIFW and Maine Department of Agriculture, Conservation and Forestry, included in the application, all were complementary of the efforts made by S.D. Warren in meeting their environmental obligations. They also supported certification of the Project.

The deadline for submission of comments on the LIHI certification application was November 7, 2017. One joint comment letter was received from the Conservation Law Foundation (CLF) and Friends of the Presumpscot River (FOPR). This letter, along with a response letter submitted by the Applicant, are contained in Appendix C. Supporting documents that accompanied the CLF/FOPR letter are included in the comment letter found on LIHI's website. The following is my assessment of the comments made in the CLF/FOPR letter. The letter from S.D. Warren makes many of the same points I discuss below.

While the CLF/FOPR letter format suggests three comments are made, I believe the comment in Section II and Section III-B are essentially duplicative, resulting in basically two comments:

1. The Mallison Fall, Little Falls, Gambo, Dundee and Eel Weir Projects should not be certified as "low impact" until anadromous fish passage is installed and tested as providing safe passage at these sites.
2. The Mallison Falls and Little Falls Projects are not eligible for LIHI Certification since they were recommended for removal by resource agencies, namely the USFWS, MDMR and Maine Atlantic Salmon Commission during a "legal proceeding".

The second comment does not apply to the Gambo Project and therefore is not discussed here.

Regarding their first comment, CLF/FOPR's position that a facility is not "low impact" until fish passage has been installed and proven to provide safe passage, reflects the fact that the definition of "low impact" is in the eye of the beholder, and can mean different things to different individuals. However, LIHI's definition, as clearly detailed in LIHI's Handbook, 2nd Edition, dated March 7, 2016, is specifically based on meeting certain criteria and standards. It is my opinion that S.D. Warren is in "conditional" compliance with the LIHI criteria and the selected standard of satisfying resource agency requirements for upstream and downstream fish passage. (See discussions under these criteria for more detail). S.D. Warren has agreed to a schedule of installing and then evaluating anadromous fish passage. The triggers setting the timeline for achieving these commitments have been approved most recently by the resource agencies responsible for fish passage issues, namely the USFWS and MDMR, as signatories to the 2016 Saccarappa Settlement Agreement (SA). Criteria conditions have been recommended for both upstream and downstream passage since the "trigger" for installing anadromous fish passage facilities at these sites have not yet occurred. Thus, my recommendation is that LIHI must be kept current on the status of reaching these triggers and implementation of their passage commitments.

It is interesting to note that both CLF and FOPR were signatories to the 2016 SA, and as such, would appear to support that the passage plans established in it are agreeable to them. In fact, in

a letter dated December 27, 2016 to the MEDEP supporting an amendment to the WQC which addresses all of the S.D. Warren Projects except Eel Weir, these two organizations clearly state their support of the delayed deadline to May 2019, of operational upstream passage for anadromous fish at the Saccarappa Project, established in the SA, and by default the other upstream S.D. Warren Projects. (A copy of this letter is contained in Appendix C.) In that letter, they also state:

“Our support of the SA and the Application is shared by the state and federal agencies charged with restoring indigenous anadromous fish to Maine’s coastal rivers and watersheds, as made clear in the December 22, 2016 letter to you from Commissioner Keliher. CLF, FOPR, DMR and FWS have been deeply engaged in the effort to restore native species to the Presumpscot on a sustained basis for close to two decades. After contested proceedings with Warren concerning the WQC initially issued to Warren for the Presumpscot projects in 2003, further contested proceedings surrounding fish passage at the Cumberland Mills dam just below the Saccarappa project in 2009, and opposition to Warren’s initial proposal to surrender the Saccarappa project in 2013 and 2015, the parties to the SA have agreed for the first time on a solution to restore native species to their indigenous habitat throughout the Presumpscot watershed.”

In their 2017 comment letter, CLF and FOPR do not dispute that, based on what they know, S.D. Warren is currently in full compliance with the requirements of the USFWS’s 2002 fishway prescription and Maine DEP’s 2003 water quality certification. This in essence shows their agreement that the Warren Projects are in compliance with LIHI’s criteria and S.D. Warren’s selected standard. Therefore, I believe my assessment that the Project should be certified with certain conditions meets LIHI’s requirements, despite the positions forwarded in the CLF/FOPR letter.

Due to the completeness of the agency correspondence provided in the application, the only agencies contacted directly by the Reviewer were to the following individuals. These discussions under summarized under **Criterion D – Downstream Fish Passage**.

- Steven Shepard – USFWS - (207) 866-3344, ext. 1116; steven_shepard@fws.gov
- Gail Wippelhauser – MDMR - (207) 624-6349; gail.wippelhauser@maine.gov

VII. SUMMARY OF COMPLIANCE WITH CRITERIA

The following matrices summarize the standards selected by the Applicant as applicable to this Project. The Reviewer found that these standards are appropriate. Details of compliance are presented in Section VIII.

ZOE #1 - Regulated Reach (Tailwater) and ZOE#2 – Bypass Reach

Criterion		Standards Selected				
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Plus</i>
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			

ZOE #3– Impoundment

Criterion		Standards Selected				
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Plus</i>
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			

VIII. DETAILED CRITERIA REVIEW

A. ECOLOGICAL FLOW REGIMES

Goal: The flow regimes in riverine reaches that are affected by the facility support habitat and other conditions suitable for healthy fish and wildlife resources.

Standards: All river reaches where stream flows are altered by the facility shall be defined. In all locations, appropriate flow management should apply an ecosystem based approach that supports fish and wildlife resources by considering base flows, seasonal variability, high flow pulses, short-term rates of change, and year-to-year variability. Compliance with one of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016 must also be demonstrated.

Assessment of Criterion Passage:

The Applicant has selected and demonstrated compliance with **Standard A-1, Not Applicable/De Minimis Effect** to pass the Ecological Flow Regimes criterion for ZOE #3 Impoundment and **Standard A-2, Agency Recommendation** for ZOE #1 Regulated Reach and ZOE #2 Bypass Reach. These standards require:

- **“STANDARD A-1. Not Applicable/De Minimis Effect:** The Facility operates in a true run-of-river operational mode and there are no bypassed reaches or water diversions associated with the Facility; or the facility is located within an existing water conduit that does not discharge into natural waterways.
- **STANDARD A-2. Agency Recommendation:** The flow regime at the Facility was developed in accord with a site specific, science based agency recommendation.”

Presumpscot River flows are regulated by releases from the Eel Weir Project (FERC No. P-2984), also owned by S.D. Warren. The flows are typically set on a weekly basis and regulated by the Eel Weir License and the Eel Weir Operations and Flow Monitoring Plan. Additional flows are provided by some small tributaries that join the Presumpscot River below Sebago Lake. Compliance with license requirements is verified by station operators. Any changes to flow are made manually by the S.D. Warren Operations Crew that visits the site daily.

The Gambo Project operates as a run-of-river facility, with a minimum flow release to the bypass of 60 cfs year-round, except that 100 cfs is required when the water temperature exceeds 22°C before 8:00am at the Gambo impoundment in order to meet and maintain Class B dissolved oxygen criteria. Releases are made via spillage to maximize reaeration. The FERC license also requires that impoundment fluctuations be minimized by ensuring that discharge from the Project approximates total Project inflow and that the impoundment is managed to protect fisheries resources and water quality in accordance with the water quality certification conditions issued by the MEDEP. An Operations and Flow Monitoring Plan to document compliance with requirements is also required. These requirements were based on a number of studies and assessments made by the MEDEP during Project relicensing and were tailored to maintain suitable flow regimes in riverine reaches that are affected by the Project

in order to support habitat suitable for fish and wildlife resources. They were established in the May 2003 WQC, and adopted into the October 2003 FERC license; none were affected by any WQC or license amendments.

The required Project Operations and Flow Monitoring Plan was established and approved by applicable resource agencies and adopted by FERC. It was revised with resource agency support in 2008 and 2009. Review of FERC's eLibrary confirmed compliance with these requirements for 2012 and 2013. As FERC no longer requires submission of annual statements certifying compliance with license flow requirements as of 2014, S.D. Warren submitted statements confirming that no deviations have occurred between January 2014 and June 2017. The first dates when the river temperature exceeded 22° C before 0800 from 2014 to 2017 were, in 2014 July 2, in 2015 July 04, in 2016 July 20, and in 2017, June 23. Warren proactively released these additional flows at the Gambo Project on June 15 in each year until September 30. Correspondence from the MEDEP dated May 31, 2017, and MDMR dated June 8, 2017, submitted with the application, confirmed that the Project appears to be operated in compliance with these requirements.

This Project Passes Criterion A – Ecological Flow Regimes

B. WATER QUALITY

Goal: Water quality is protected in waterbodies directly affected by the facility, including downstream reaches, bypassed reaches, and impoundments above dams and diversions.

Standards: Compliance with the appropriate state/provincial or federal water quality standards must be demonstrated with all waterbodies where water quality is directly affected by the facility, including those affected areas outside the facility boundary. In all cases, if any waterbody directly affected by the facility has been defined as being water quality limited (for example, on a list of waters with quality that does not fully support designated uses), it must be demonstrated that that the facility has not contributed to that substandard water quality. Compliance with one of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016 must also be demonstrated.

Assessment of Criterion Passage

The Applicant has selected and demonstrated compliance with **Standard B-2, Agency Recommendation** to pass the Water Quality criterion for all three ZOE's. This Standard requires:

“STANDARD B-2. Agency Recommendation: The facility is in compliance with all water quality conditions contained in a science-based agency recommendation providing reasonable assurance that water quality standards will be met for all waterbodies that are directly affected by the facility (for example, a recent Water Quality Certification issued pursuant Section 401 of the Clean Water Act). Such recommendations, whether based on a generally applicable water quality standard or one that was developed on a site-specific basis, must include consideration of all water quality components necessary to preserve healthy fish and wildlife populations, human uses and recreation.”

As noted previously, the flow requirements in the WQC, key to meeting water quality standards, were based on a number of studies and assessments made by the MEDEP, and therefore are scientifically based.

The Presumpscot River in this location is listed as Class B. Due to impoundments and alterations to flow regime of the river, this section of the Presumpscot River was historically listed as water quality limited due to low dissolved oxygen (DO). The most recent MEDEP report, the 2014 Integrated Water Quality Monitoring and Assessment Report, denotes this river segment to be Category 4-C: Rivers and Streams with Impairment Not Caused by a Pollutant. It indicates the cause for impairment is low dissolved oxygen, but that increased flows expected to be released from Eel Weir (and now are) would remedy the problem.

The increased minimum flows have resulted in full attainment of the dissolved oxygen standard as demonstrated by continuous monitoring in 2015 and 2016 monitoring in the upstream Dundee Project (P-2942) impoundment, noted in reports to the MEDEP. The latest report shows that dissolved oxygen criteria were met for the 2016 monitoring season with no times of DO non-attainment. The May 31, 2017 letter from the MEDEP denotes:

“Therefore, based on the Department’s review of the referenced Presumpscot River hydropower project files and available water quality data, the Department concludes that S.D. Warren is currently in compliance with its WQC conditions and the projects attain Water Quality Standards.”

Although the WQC also includes anadromous fish passage requirements, these have not yet been triggered as discussed further below. WQC recreational requirements are addressed under **Criterion H – Recreational Resources**.

This Project Passes Criterion B – Water Quality

C. UPSTREAM FISH PASSAGE

Goal: The facility allows for the safe, timely, and effective upstream passage of migratory fish. This criterion is intended to ensure that migratory species can successfully complete their life cycles and maintain healthy, sustainable fish and wildlife resources in areas affected by the facility.

Standards: The applicant shall list all migratory fish species (for example, anadromous, catadromous, and potamodromous species) that occur now or have occurred historically at the Facility. Maintenance of upstream passage sufficient to support sustainable populations of these migratory species must be demonstrated by compliance with one of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016.

Assessment of Criterion Passage

The Applicant has selected and demonstrated compliance with **Standard C-2, Agency Recommendation** to pass the Upstream Fish Passage criterion for ZOE #1 Regulated Reach and ZOE #2 Bypass Reach and **Standard C-1, Not Applicable/De Minimis Effect** for ZOE #3

Impoundment. These standards require:

“STANDARD C-1. Not Applicable/De Minimis Effect: The facility does not create a barrier to upstream passage, or there are no migratory fish in the vicinity of the facility and the facility is not the cause of extirpation of such species if they had been present historically. **STANDARD C-2. Agency Recommendation:** The facility is in compliance with science-based fish passage recommendations from appropriate resource agency(ies) which have been issued for the facility and which include provision for appropriate monitoring and effectiveness determinations.”

The impoundment (ZOE #3) does not pose a barrier to upstream passage so standard C-1 is appropriate.

At this time, the most environmentally stringent agency recommendation regarding fish passage is the WQC issued by the MEDEP. The requirements align with a Section 18 Fishway Prescriptions issued by the USFWS. State resource agencies support the federal requirements. With regard to upstream fish passage, the current WQC conditions are summarized as follows:

- Within 2 years of license issuance upstream eel passage facilities shall be installed;
- Phase I - No upstream fish passage facilities required.
- Phase II - A fish lift, or other passage facilities of comparable efficiency in passing the target, designed to pass up to 40,000 American shad, 244,000 blueback herring, and 153 Atlantic salmon annually. These facilities, which shall include a counting, trapping and sorting facility, must be operational no later than 2 years after (1) notification from the MDMR, MDIFW and MASCOF initiation of Phase II restoration above Gambo Dam and (2) passage of at least 620 American shad or 3,800 blueback herring in any single year at the downstream Little Falls Project.

Eel Passage Status

Pursuant to the FERC License and WQC conditions, S.D. Warren filed an Upstream American Eel Passage Plan with FERC on October 29, 2004, which was reviewed by the resource agencies and approved by FERC. Observations were made in both 2000 and 2005. Permanent upstream American eel passage facilities were completed at the Gambo Project on June 18, 2007.

In accordance with WQC condition #3, S.D. Warren, in consultation with the Agencies, submitted a study plan for the installed eel passage – “Study Plan, Evaluation of Upstream Eel Passage Effectiveness.” Effectiveness testing of the eel ramp was executed during the summer of 2014 and submitted to FERC on April 1, 2015. This study states that eels are delayed and or prevented from passing the Gambo site because of the larger eels’ inability to easily ascend the near vertical rock/concrete face toward the eel ramp, and that that eels congregated in a pool at the upstream end of this channel. The study recommended several options to remove this impediment to the eel ramp. S.D. Warren has elected to modify the entrance to the eel ramp by placing concrete fill with a slope of 3/1 and a roughened surface at the upstream end of the channel to facilitate easier access to the ramp. All permits needed for this work were issued by January 2016. These modifications have yet to be completed as river flows have not allowed access for pouring concrete, but S.D.

Warren anticipates completion of the work in 2017. A condition has been recommended to address future actions to enhance and possibly re-test upstream eel passage effectiveness.

Anadromous Fish Passage Status

At present, there are no anadromous fish passage facilities at the Gambo Project, as the biological triggers at the Saccarappa Project that would initiate the construction of passage facilities at upstream Projects including Gambo have not yet been met. License Article 407 requires the development of a Fish Passage Implementation Plan to include installation, operation, maintenance, and evaluation of anadromous fish passage facilities. The primary purpose of the Fish Passage Implementation Plan is to monitor the need for fish passage facilities at the Project. The Fish Passage Implementation Plan was approved by FERC on December 13, 2004. S.D. Warren filed its most recent Anadromous Fish Passage Annual Report on June 30, 2017.

The latest Gambo FERC license amendment (which applied to all S.D. Warren Presumpscot River Projects except Eel Weir), dated February 14, 2017, adopted USFWS revisions to the Section 18 Mandatory Prescription, which changed anadromous fish upstream passage schedule that applies to the Saccarappa Project. This amendment to the fish passage prescription changed the deadline of operation of permanent fish passage facilities at the Saccarappa Project to be within five years of installing the fishway at the Cumberland Mills Dam, and not two years, as originally required by the Saccarappa license. As the passage was installed at Cumberland Mills in 2013, then upstream passage at Saccarappa would have been required by 2015, but the Mandatory Prescription delays the deadline to 2018. The Prescription did not directly change the requirements for fish passage at the upstream Projects of Mallison Falls, Little Falls, Gambo, and Dundee, as these require passage installation when certain downstream passage metrics are met, and are not tied to specific dates. However, the delay in requiring fish passage at the Saccarappa Project delays the timing for when fish passage at the upstream Projects is required.

A more significant change in upstream passage requirements for anadromous species would occur if the Settlement Agreement is adopted by FERC. Implementation of the SA, and surrender of the Saccarappa Project license, would eliminate the upstream fish passage requirements at the Gambo Project during the term of the current license (which expires October 1, 2043). This elimination of passage requirements would apply even if the Mallison Falls and Little Falls dams are removed. Both the USFWS and MDMR (along with others) are signatories to the SA. The SA also states that the MDMR shall make a recommendation to MEDEP to issue a revised WQC that would find that the new Surrender Application does not violate water quality standards.

A condition has been recommended to annually keep LIHI abreast of the status and schedule for installation of upstream anadromous fish passage at the Gambo Project, as it is possible that decisions on these measures may be made within the recommended five-year LIHI certification period.

This Project Conditionally Passes Criterion C – Upstream Fish Passage

D. DOWNSTREAM FISH PASSAGE AND PROTECTION

Goal: The facility allows for the safe, timely, and effective downstream passage of migratory fish. For riverine (resident) fish, the facility minimizes loss of fish from reservoirs and upstream river reaches affected by Facility operations. All migratory species are able to successfully complete their life cycles and to maintain healthy, sustainable fish and wildlife resources in the areas affected by the Facility.

Standards: The applicant shall list all fish species (for example, riverine, anadromous, catadromous, and potamodromous) that occur now or have occurred historically in the area affected by the Facility. To pass the downstream fish passage and protection criterion, compliance with one of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016 must be demonstrated.

Assessment of Criterion Passage

The Applicant has selected and demonstrated compliance with **Standard D-1, Not Applicable/De Minimis Effect** for ZOE #1 Regulated Reach and ZOE #2 Bypass Reach and **Standard D-2, Agency Recommendation** for ZOE #3 to pass the Downstream Fish Passage and Protection criterion. These standards require:

“STANDARD D-1. Not Applicable/De Minimis Effect: The facility does not create a barrier to downstream passage, or there are no migratory fish in the vicinity of the facility; if migratory fish had been present historically, the Facility is not responsible for extirpation of such species; the Facility does not contribute adversely to the sustainability of riverine fish populations or to their access to habitat necessary for the completion of their life cycles.

STANDARD D-2. Agency Recommendation: The Facility is in compliance with a science-based resource agency downstream fish passage or fish protection recommendations, which may include provisions for ongoing monitoring and effectiveness determinations that have been issued for the Facility.”

Eel Passage Status

Applicable to ZOE #3, Article 406 of the FERC License, which incorporates the USFWS Section 18 Mandatory Prescription, requires annual Project shutdowns beginning at sunset and lasting at least 8 hours per night from September 1 through October 31 to facilitate American eel downstream migration. The exact timing of the Project shutdown is determined each year in consultation with MDMR and the USFWS. Emails from 2015 showing this consultation were provided. This operational requirement began on September 1, 2004 and has been in effect every year since then. The generation shutdown ensures safe migration for American eels by providing flows over the spillway that can be used to migrate into the bypass. The application included Station Log shutdown data for 2014-2016 which supported S.D. Warren’s position that they are in compliance with these shutdown requirements.

Testing of the effectiveness of the downstream eel passage at Gambo has been delayed with the concurrence of the USFWS and MDMR, since it was jointly decided that such testing would make more sense once the downstream eel passage facility was installed at the Eel Weir Project, which is at the outlet of Sebago Lake. This testing delay also applies to Mallison Falls, Little Falls and Dundee Projects. The Eel Weir downstream passage went into operation on August 15, 2017, and is currently undergoing its first season of testing. Based on the results of this testing, which is expected to be available by the end of the year, more comprehensive testing involving assessment at the downstream dams will be designed and implemented following consultation with MDMR and USFWS. Timing of this testing has not yet been identified. Outreach to both MDMR (Gail Whipplehauser) and USFWS (Steven Shepard) has confirmed this plan, and also confirmed that such testing would also help resolve past concern expressed by these agencies regarding use of spillage as the means of downstream passage. Emails received from these individuals are included in Appendix D. A condition has been recommended regarding the future downstream eel passage testing at the Gambo Project.

Anadromous Fish Passage Status

The Regulated Reach (ZOE #1) and Bypass Reach (ZOE #2) do not impact access to habitat below the Gambo Project Dam. These areas do not contain any barrier to downstream passage. Additionally, the studies conducted as part of the relicensing process and considered by MEDEP for WQC issuance resulted in the development of year-round minimum flow requirements to maintain adequate fish and wildlife habitat.

Regarding ZOE #3, the Impoundment, License Article 407 requires the development of a Fish Passage Implementation Plan to include installation, operation, maintenance, and evaluation of anadromous fish passage facilities. The Fish Passage Implementation Plan was approved by FERC on December 13, 2004. WQC Condition #5 requires downstream anadromous fish passage for American shad, blueback herring, and Atlantic salmon to be installed at the earlier date of either of the following:

- Concurrent with the completion of upstream anadromous fish passage; or
- Within 2 years following notification from MDMR or the MASC of sustained anadromous fish stocking above the Gambo Dam.

Additionally, WQC Condition 5D and 5E, and License Article 406 require that a study be conducted in consultation with MDMR and MASC to determine the effectiveness of the upstream and downstream anadromous fish passage facilities upon completion and initiation of operation.

Currently, there are no upstream nor downstream anadromous fish passage facilities at the Gambo Project, and the deadline for such installation is contingent upon reaching biological triggers at the next downstream dam. To date, notice has not been received from any resource agency of sustained anadromous fish stocking above the Gambo Dam. As previously noted, if the SA is adopted, these facilities will not be required under the term of the existing license.

The condition recommended to address the status of upstream anadromous fish passage includes a requirement to also advise LIHI of the status of downstream anadromous fish passage. This is particularly important since downstream passage may be eliminated if the SA is adopted.

The Project Conditionally Passes Criterion D – Downstream Fish Passage and Protection

E. SHORELINE AND WATERSHED PROTECTION

Goal: The Facility has demonstrated that sufficient action has been taken to protect, mitigate and enhance the condition of soils, vegetation and ecosystem functions on shoreline and watershed lands associated with the facility.

Standards: To pass the watershed protection criterion for LIHI certification, the applicant shall demonstrate compliance with one of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016.

Assessment of Criterion Passage

Of the following possible alternative Standards, the Applicant has selected and demonstrated compliance with **Standard E-2, Agency Recommendations** for all ZOE's, to pass the Shoreline and Watershed Protection criterion. This standard requires:

“STANDARD E-2. Agency Recommendations: The facility is in compliance with all government agency recommendations in a license or certificate, such as an approved shoreline management plan or equivalent regarding protection, mitigation or enhancement of shoreline surrounding the project.”

The Gambo Dam Project boundary includes 139 acres, and includes the impoundment, the area downstream of the dam and the transmission line to Westbrook. The reservoir and everything upstream of the dam is 114 acres; therefore, 25 acres of the Project boundary extends downstream of the dam.

A Shoreline Management Plan (SMP) is required by the FERC License Article 409, was filed with FERC on August 7, 2006, and approved by FERC on September 5, 2007, with one errata notice issued by FERC for the plan on October 9, 2007. The WQC does not require a SMP. The SMP was developed in consultation with the National Park Service (NPS), Maine State Planning Office (MSPO), MDIFW, USFWS, and the Casco Bay Estuary Project (CBEP) for the purpose of maintaining a buffer zone for the protection of sensitive plant species, aesthetic resources, and future recreational access and includes all items required by License Article 409. The SMP required protection of all licensee owned lands within 200 feet of the normal high-water elevation.

One SMP requirement exists for ZOE # 2, the Bypass Reach, which is to maintain the portage trail and angler access as required by the FERC license and approved recreation plan. Construction of this feature was completed in 2012. The most recent FERC Environmental Inspection Report, had no findings of negative effect or requirements to remediate items required by the SMP in this zone. ZOE #3, the impoundment, required development of a car-top boat access to the Gambo Project headpond. This facility was developed in 2017 [see Section H below].

The Applicant stated that shoreline management and protection is also afforded through the provisions of License Article 413, which addresses responsibilities of the licensee to authorize certain uses and occupancy of Project lands and waters, provided specified review of potential impacts to the land/water are made. Review of FERC's eLibrary and consultation with the Applicant has confirmed no such conveyances have been made. The Applicant also noted that shoreline protection is provided by the municipally-enforced Mandatory Shoreland Zoning Act, which includes all lands within 250 feet of the normal high-water line of any river or great pond, upland edge of defined freshwater wetlands, and lands within 75 feet of the high-water line of certain streams.

The Project Passes Criterion E – Shoreline and Watershed Protection

F. THREATENED AND ENDANGERED SPECIES PROTECTION

Goal: The Facility does not negatively impact listed species.

Standards: Facilities shall not have caused or contributed in a demonstrable way to the extirpation of a listed species. However, a facility that is making significant efforts to reintroduce an extirpated species may pass this criterion. To pass the Threatened and Endangered Species criterion compliance with at least one of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016 must be demonstrated.

Assessment of Criterion Passage

The Applicant has selected and demonstrated conditional compliance with **Standard F-1, Not Applicable / De Minimis Effect** to pass the Threatened and Endangered Species Protection criterion for all three ZOE's. This standard requires:

“STANDARD F-1. Not Applicable/De Minimis Effect: There are no listed species present in the facility area or downstream reach, and the facility was not responsible for the extirpation of the listed species if they were previously there;

The LIHI application, supported by follow-up information provided by the Applicant indicates that past field studies, as well as review with state agencies, indicates that there are no specific records of federal or state, endangered or threatened plant or animal species as occurring at the Gambo Project. However, several protected species (one is also federally protected) may potentially occur, based on state records showing their presence “in the vicinity” of the site. (See Appendix D for communications from John Perry of MDIFW). These species are:

- Northern long-eared bat (Federally and State Endangered)
- Eastern small-footed bat (State Threatened)
- Little brown bat (State Endangered)
- Brook floater (State Threatened)
- Eastern box turtle (State Endangered)
- Least bittern (State Endangered)
- Spotted turtle (State Threatened)
- Upland sandpiper (State Threatened)

Data from Maine Natural Areas Program on presence of rare or unique botanical features (which include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural Communities) found no such features at the Gambo Project. This letter is also in Appendix D, although LIHI has elected to not post more detailed information for other sites on the website.

Assessment by the Applicant's consultant, based on agency consultation and research, indicated that impacts to the animal species that may occur onsite are not expected from routine operational activities. The following are the types of activities that may cause impacts should these species be onsite:

- Removal of large trees that may provide roosting habitat for the bats;
- Exposure/de-watering of the Brook Floater mussel during significant, prolonged impoundment drawdowns;
- Loss of or fragmentation of habitat due to development for the Least Bittern, Upland Sandpiper and Spotted Turtle
- Direct taking of Box Turtles for pets.

S.D. Warren has indicated that none of these activities are planned at this site, and that they have no ability to prevent someone from taking Box Turtles in the public recreational areas. To help ensure that such species, if they are onsite, are not affected by future activities, a condition has been recommended to confirm satisfaction of this criterion.

The Project Conditionally Passes Criterion F – Threatened and Endangered Species Protection

G. CULTURAL AND HISTORIC RESOURCE PROTECTION

Goal: The Facility does not inappropriately impact cultural or historic resources that are associated with the Facility's lands and waters, including resources important to local indigenous populations, such as Native Americans.

Standards: To pass the Cultural and Historic Resource criterion compliance with one or more of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016 must be demonstrated.

Assessment of Criterion Passage

The Applicant has selected and demonstrated compliance with **Standard G-2, Approved Plan** to pass the Cultural and Historic Protection criterion for all three ZOE's. This standard requires:

“STANDARD G-2. Approved Plan: The facility is in compliance with approved state, provincial, federal, and recognized tribal plans for protection, enhancement, or mitigation of impacts to cultural or historic resources affected by the facility.”

License Article 412 required implementation of a Programmatic Agreement (PA), which includes a requirement for a Historic Properties Management Plan (HPMP), for the purpose of managing historic properties within the Project's Area of Potential Effect (APE). The Programmatic Agreement was executed on March 16, 2004, and the HPMP was approved by FERC on August 8, 2005.

There are three historic sites located within or near the Gambo Project area; the Cumberland and Oxford Canal, the Oriental Powder Mill Complex, and the Gambo Pony Truss Bridge. Pursuant to §II.C of the PA, S.D. Warren must file a report annually, on the anniversary of licensing, with SHPO and the Penobscot Nation detailing activities conducted under the HPMP throughout the year.

Under the HPMP a second report is due by January 31 of each year. The second report is submitted to FERC and the SHPO. The most recent report was filed on January 26, 2017. It appears the Gambo is in compliance with these requirements.

The Project Passes Criterion G - Cultural and Historic Resource Protection

H. RECREATIONAL RESOURCES

Goal: The facility accommodates recreation activities on lands and waters controlled by the facility and provides recreational access to its associated lands and waters without fee or charge.

Standards: To pass the recreation criterion, compliance with at least one of the alternative standards identified in the Low Impact Hydropower Certification Handbook issued March 7, 2016 must be demonstrated. In all cases, it must be demonstrated that flow-related recreational impacts are mitigated to a reasonable extent in all zones where there is flow-related recreation. Where there is recognized, flow-related recreational use, the facility shall provide the public with relevant and up-to-date information on reservoir levels and river flows, preferably real-time updates. It is understood that recreational activities must be consistent with the assurance of reasonable safety of employees and the public, and with critical infrastructure protection dictated by state or federal authorities.

Assessment of Criterion Passage

The Applicant has selected and demonstrated compliance with **Standard H-2, Agency Recommendations** to pass the Recreational Resources criterion for all ZOE's as at least one recreational feature is in each ZOE. This standard requires:

“STANDARD H-2. Agency Recommendations: If there are comprehensive resource agency recommendations for recreational access or accommodation (including recreational flow releases) on record, or there is an enforceable recreation plan in place, the Facility demonstrates that it is in compliance with those.”

FERC License Article 410 and Water Quality Certificate Condition #7 require the development of a Recreational Facility Enhancement Plan (RFEP). The requirements for the RFEP are generally

the same, with only minor differences. Collectively, the requirements include:

- A formal canoe portage trail with signage, as well as vegetation control near portage and signage;
- Walk-in angler access to the bypass from a spur off the canoe portage route;
- Car-top boat access with parking for 6-8 vehicles and signage at the take-out location;
- Regrading of Gambo Road from the road closed sign to the bridge abutment (1,700 feet) and installation of a road gate for use during the winter;
- Interpretive signage explaining the history of the Oriental Powder Mill complex; and
- A procedure to monitor and remove trees that pose hazards to boating downstream of the Project.

The RFEP was approved by FERC on August 2, 2005. Article 411 of the FERC License requires that S.D. Warren develop and file a Recreation Use Monitoring Plan to determine the adequacy of recreational features installed at the Project. The Recreation Use Monitoring Plan was filed with FERC on August 27, 2013, supplemented on December 20, 2013, and modified and approved by FERC on March 11, 2014.

The recreational facilities were initially required to be installed no later than 2006. Several time extensions were requested for various reasons and all were approved. With the exception of the car-top boat access, parking, and associated signage, all recreation features were completed by December 12, 2014. Completion of the requirement for car-top boat access, parking, and associated signage was delayed due to difficulties in reaching an agreement with the owners of the property, but on March 10, 2016 the Town of Windham was able to purchase the land and sell it to the Windham Youth Soccer Association. S.D. Warren has obtained an easement from the Windham Youth Soccer Association to construct the boat access, secured all required permits and began construction on July 15, 2017 [these features were completed in late 2017 as verified after completion of this report].

A Final Recreation Monitoring Report dated March 11, 2015, and submitted to FERC on March 23, 2015, found the recreational facilities to be adequately meeting public demand. The most recent Environmental Inspection conducted by FERC, on July 30, 2013 found that all current recreational facilities are in compliance with the approved plans.

The Project Passes Criterion H – Recreational Resources

IX. GENERAL CONCLUSIONS AND REVIEWER RECOMMENDATION

Based on my review of information submitted by the Applicant, I believe that this Project meets the requirements of a Low Impact facility and should be certified for a five-year period assuming the following conditions are established:

- *The Owner shall notify LIHI when the modifications to Project to improve upstream eel passage are completed, along with MDMR and USFWS positions on whether these modifications are sufficient, and/or if additional effectiveness testing required to confirm that eels are safely passing upstream at the Project. If such testing is required, that schedule and ultimate results shall be provided to LIHI. The Owner shall also provide LIHI with an annual update on the status of the effectiveness testing of downstream passage of eels. This update shall be reported annually to LIHI as part of the annual compliance letter.*
- *The Owner shall provide LIHI with an update on the status of upstream and downstream anadromous fish passage plans at the Project, including whether or not the Settlement Agreement (SA) for the Saccarappa Project has been formally approved by FERC, and any amendments made to the fish passage requirements within the WQC and FERC license as a result of SA adoption. This update shall be reported annually to LIHI as part of the annual compliance letter.*
- *The Owner shall proactively contact the MIF&W and USFWS a minimum of 60 days prior to any construction activities affecting lands not already developed or structures/tree removal that may provide roosting habitat for listed bat species, to determine if any special measures are needed to ensure no or minimal impact occurs to state and/or federally listed protected species identified as possibly occurring at the site. The MIF&W shall also be contacted 60 days prior to any planned drawdown of the impoundment that would expose a significant portion of the river bottom, to avoid impacts to the Brook Floater. The Owner shall work with the MIF&W and USFWS to implement appropriate measures should they be needed. The Owner shall advise LIHI of any such events, including the results of any activities conducted to minimize such impacts. Such notification shall be provided as part of the annual compliance statement to LIHI.*

**THE GAMBO PROJECT
CONDITIONALLY MEETS THE LIHI
CRITERIA FOR CERTIFICATION AS A
LOW IMPACT FACILITY**

Appendix A
Figures and Photographs

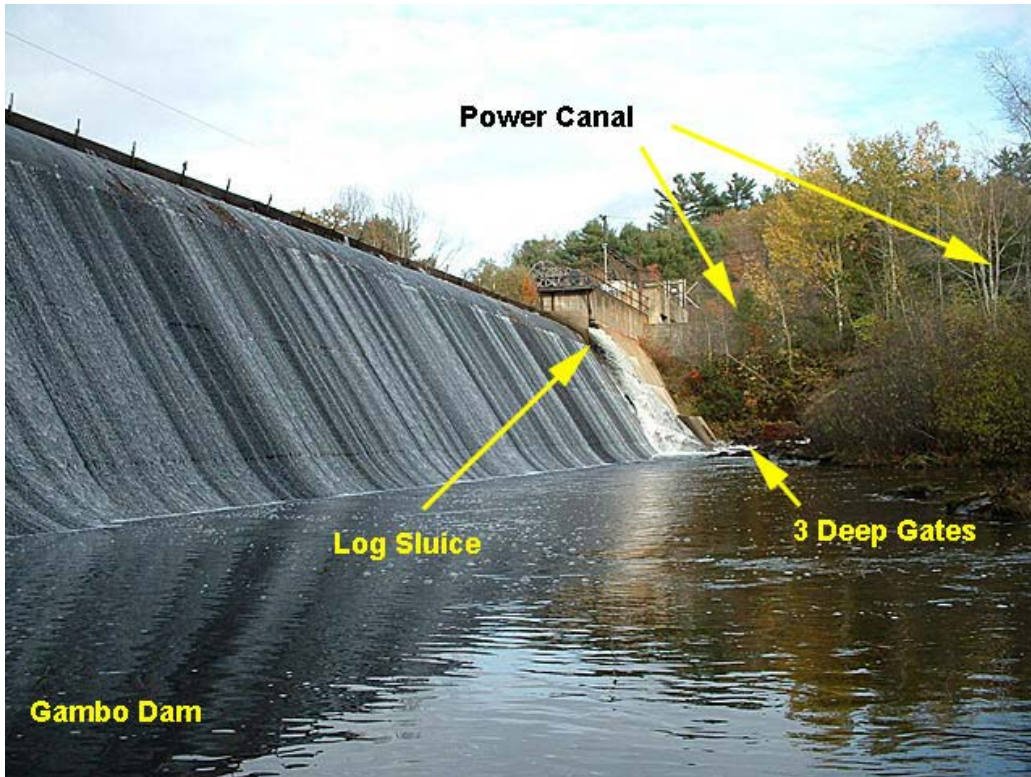
Fig. 1 – Dams located on the Presumpscot River



Fig. 2 – Aerial of Project and Key Features



Exhibit #1 – Photographs of Project Features



Dam and Integrated Features



Powerhouse



Upstream Eel Passage



Power Canal

Exhibit #2 - Photograph of Zone of Effect No. 1 – Project Tailwater



Exhibit #3 – Photograph of Zone of Effect No. 2 – Bypass Reach



Exhibit #4 – Photographs of Zone of Effect No. 3 - Impoundment



Appendix B
Application Comment Letter and Applicant Response



For a thriving New England

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October 31, 2017

Low Impact Hydropower Institute
329 Massachusetts Ave, Suite 2
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RE: Presumpscot River, Maine: applications for certification by Sappi North America for Eel Weir, Dundee, Gambo, Mallison Falls and Little Falls Projects

Dear LIHI,

On behalf of the Conservation Law Foundation (CLF) and Friends of the Presumpscot River (FOPR), two NGOs with long and extensive involvement with and knowledge of hydropower and its effects on the Presumpscot River in Maine, we write to offer the following comments on Sappi's applications for certification of its five Presumpscot River hydropower projects. For almost two decades, and in partnership with American Rivers, CLF and FOPR have been leading the effort to restore numerous species of anadromous fish species to the Presumpscot (alewife, American shad, Atlantic salmon, blueback herring and more) – species which once spawned and reared in the Presumpscot in prodigious quantities but were decimated, and for some species extirpated, as a result of the multitude of impassable dams inhabiting the 25-mile length of this river.

I. Our background with this river and these dams.

Over the past eighteen years, CLF, FOPR and/or American Rivers have, in close collaboration with state and federal natural resource agencies:

- Succeeded in causing the lowermost dam on the river (Smelt Hill) to be removed;
- Succeeded in having the State of Maine require Sappi to install a state-of-the-art fishway on the now-lowermost, non-hydropower dam (Cumberland Mills);
- For the next five dams going up the river (Saccarappa, Mallison Falls, Little Falls, Gambo and Dundee), succeeded in having the State of Maine and FERC order Sappi to install fishways (2003 licensing decisions), with installation to occur on a progressive implementation schedule;
- Successfully defended those state and federal fishway orders against Sappi's appeals of them before the Maine Supreme Court, the D.C. Court of Appeals, and the U.S. Supreme Court;
- Successfully reached a settlement agreement with Sappi and the natural resource agencies in 2016 regarding dam removal and channel reconstruction at the Saccarappa site, as well

as the schedule for fish passage installation over the next decades at the Mallison Falls, Little Falls, Gambo and Dundee dams.

In sum, CLF and FOPR know this river – its fishery history, its ecology, its regulatory past, its restoration potential and the challenges to restoration that it faces from dams – very, very well.

II. Are the dams for which Sappi seeks certification currently having a low ecological impact?

CLF and FOPR do not dispute that, based on what they know, Sappi is currently in full compliance with the requirements of the USFWS’s 2002 fishway prescription and Maine DEP’s 2003 water quality certification. But because installation of the fishways required under these licensing orders has not occurred, will not begin to occur for at least a decade, and has not been determined, once installed, to be effective, there is -- bluntly stated -- no credible scientific or ecological argument that the facilities for which Sappi seeks certification are:

- (1) *currently* having a “low impact” on the sea-run anadromous fisheries of the Presumpscot;
- (2) will have a “low impact” *for at least a decade from now*, when fish passage *might* be triggered and installed at the lowermost dam, Mallison Falls; and
- (3) when finally installed at each dam, *actually able to provide safe, timely and effective passage*.

Thus, certifying these five facilities *right now* as having a “low impact” to migrating anadromous fish *while nonetheless lacking any fish passage* would be patently false. Whether these five facilities eventually prove to be of low ecological impact to migrating anadromous fish is years away from even being tested, let alone determined. LIHI certifying them now as “low impact” to anadromous species, relying on your Criterion C-2 to do so, would at best be a made-up story. At worst, it would be a gross misrepresentation to the public.

To talk specifics: in 2021, under the recently negotiated Saccarappa agreement, the removal of the spillways at Saccarappa will be completed and sea-run fish (principally alewife, American shad and blueback herring) should, for the first time in well over 100 years, have free-swim access to the base of the Mallison Falls dam. At this point, these fish will encounter an impassable wall at Mallison Falls that will completely stop their upriver migration; impassable until either 18,020 of their blueback herring brothers/sisters or 2,960 of their American shad brothers/sisters have similarly passed the Saccarappa site (during spring migration), at which point Sappi will be legally required to build a fishway at Mallison Falls. *Until then constructed*, and in the words of LIHI’s Criterion C “goal,” *there will be no safe, timely and effective upstream fish passage at Mallison Falls, let alone at the dams further upstream*. Achieving these blueback or shad numbers to “trigger” fish passage construction at Mallison Falls is almost certainly at least 10 years in the future, and the fish passage that will then be installed will be untested in its effectiveness for several years thereafter. Until then, Mallison Falls is having, and will continue to have, an absolute, singular and profoundly negative impact on the ability of anadromous fish to migrate upstream, as are the other four facilities for which Sappi seeks certification.

It should be noted that the fact of the very adverse impact that Sappi's dams had on decimating the migratory fishery is not historically disputed (except, possibly, by Sappi) The state and federal natural resource agencies are in complete accord on this history, and have written about it in numerous places (*e.g.*, the 2003 water quality certification issued by the State of Maine and relied upon by Sappi as part of this LIHI application, as well as in discussion contained in the documents submitted as part of these comments).

III. Have LIHI's Eligibility Requirements and Certification Criteria Been Met?

A. The Mallison Falls and Little Falls Projects Are Not Eligible for LIHI Certification

Section 2.2 of LIHI's eligibility requirements state that "[t]he following types of hydropower facilities "are not currently eligible for LIHI certification":

Facilities associated with dams that have been recommended for removal by a resource agency. If a natural resource agency has concluded that a dam should be removed and has documented their recommendation in an official, publically [sic] available report or proceeding, the hydroelectric facilities associated with that dam are not eligible for LIHI certification and owners of those facilities should not apply (see Section 2.1.1 for possible exceptions)

LIHI should have been informed by Sappi that in the case of the Mallison Falls and Little Falls facilities, the Maine Department of Marine Resources, the Maine Atlantic Salmon Commission, and the US Department of the Interior all filed official, publicly available reports during the FERC licensing process urging removal of these two dams, as well as the downriver Saccarappa dam.¹ As acknowledged by FERC in its June 2002 Final Environmental Impact Statement:

...the FWS, the state of Maine resource agencies, American Rivers/FOPR, MCASF/Friends of Sebago Lake, and TU all filed comments and recommended license terms and conditions that state that the Commission should order the removal of the three minor project dams, or at a minimum order the installation of fish passage facilities for anadromous species at all five dams. (p. 116)

On January 31, 2001, the Maine Atlantic Salmon Commission (MASC) stated the following to FERC in writing:

Project decommissioning and dam removal would certainly enhance the prospects and conditions for diadromous fish restoration and the MASC encourages FERC to continue this analysis as part of its environmental assessment as a reasonable alternative benefiting all migratory fish species, especially in light of the fact that some Atlantic salmon periodically are observed in the low Presumpscot River. (p.3)

On November 27, 2001, the same MASC, responding in a highly critical way to FERC's Draft Environmental Impact Statement (which did not recommend removal of the Mallison Falls,

¹ The documents cited in these comments are attached hereto.

Little Falls and Saccarappa dams), stated that it was “genuinely surprised that the FERC staff neglected to take a holistic approach in its analysis of the effects of the Presumpscot River projects” (p.1), and proceeded in the remainder of its comments to set forth the case for Atlantic salmon restoration through dam removal.

On November 28, 2001, the Maine Department of Marine Resources wrote a similarly critical letter to FERC, expressing how “disappointed” it was that FERC’s draft EIS did not adequately analyze the benefits of removing Mallison Falls, Little Falls and Saccarappa (p.2), discussing in some depth the cumulative impact of the inefficiency from relying on upstream fishways and the downstream mortality caused by leaving the three dams in place, noting how FERC’s own analysis demonstrates that “removal of Mallison Falls and Little Falls dams would increase the amount of run habitat above Saccarappa.” (p.3)

On December 3, 2001, also in response to the Draft EIS, the US Department of the Interior wrote to FERC:

While the Commission has included the alternative of decommissioning and removal of one or more of the five projects in its DEIS...the analysis of environmental benefits falls far short of the equal consideration standard required under the Federal Power Act... Had a full accounting of all environmental benefits and costs associated with mitigation of impacts (fish passage and instream flows) been conducted by the Commission as required under NEPA, the analysis would clearly support the finding that decommissioning and removal of one or more of the dams is the alternative that best meets the public interest. (p.2)

In sum, the record on the agencies’ positions on dam removal of Mallison Falls and Little Falls is a very strong preference for dam removal, but having to settle for fishways. These two dams are not eligible for LIHI certification given this record.

B. Certification of the Gambo, Dundee, and Eel Weir Projects should wait until they are actually causing a low impact to migrating fish.

If LIHI is interpreting its section 3.2.3 Criterion C – Upstream Fish Passage to mean that a facility is “low impact” to upstream migrating fish so long as an applicant for certification is subject to and in compliance with a regulatory order which states that at some unknown future date the owner of this complete barrier to upstream migration will be required to install an upstream fishway, even though the present, on-the-ground reality is that,

- (1) the facility currently completely blocks upstream fish migration,
- (2) it will continue to do for decades from now – many cycles of certification and re-certification -- before even the lowermost dam has installed upstream fish passage to remove this complete blockage, and
- (3) even then, there is no proof that, once installed (decades from now) this fish passage will actually prove to be safe, timely and effective,

then indeed Sappi's Gambo, Dundee and Eel Weir facilities are certifiable under LIHI's peculiar and singular view of ecological "low impact."

CLF and FOPR suggest that such a designation would be absurd. A far more defensible approach for LIHI to take would be for LIHI to encourage Sappi to apply for low-impact certification for the Gambo, Dundee and Eel Weir facilities *once it has actually installed fish passage*, and is then able to demonstrate that the installed fish passage is providing safe, timely and effective passage of migrating native anadromous species to occur. At such a time, CLF and FOPR will be the strongest supporters of low-impact certification for the Gambo, Dundee and Eel Weir facilities.

Thank you for your attention to our comments.

Sincerely,



Sean Mahoney, Esq.
Executive Vice President
Conservation Law Foundation



Ronald A. Kreisman, Esq.
Counsel
Friends of the Presumpscot River



**Sappi
North America**

November 17, 2017

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RE: Response to Comments Submitted by CLF and FOPR

Dear Low Impact Hydropower Institute,

S.D. Warren Company d/b/a Sappi North America (Sappi) is hereby submitting this response to public comments submitted on our LIHI application by the Conservation Law Foundation (CLF) and Friends of the Presumpscot River (FOPR). These organizations made three general points that we would like to address:

Argument #1 – The fish passage facilities have not yet been installed, so the Sappi hydropower facilities are currently having a detrimental impact on fish passage.

CLF and FOPR’s primary argument is that the facility cannot have a low ecological impact because the installation of fish passage has not yet occurred. However, this narrow interpretation does not reflect an accurate understanding of the LIHI handbook, criteria, or process.

As stated in the LIHI 2nd Edition Handbook, one of the primary purposes of LIHI is to “provide positive recognition and economic reinforcement to hydropower owners who take steps to improve their facilities and invest in the local environment.” Many hydroelectric facilities have received LIHI certification because they have demonstrated firm commitments and are on a path toward reducing environmental impacts through capital investments and operational improvements. In fact, LIHI often provides the initial incentive for facilities to undertake those improvements in the first place, whether or not they are required by a regulatory proceeding. This is a critical role to fill in the hydropower industry, and LIHI certification provides that incentive to reduce the environmental impacts of hydropower generation, in accordance with LIHI’s mission. Requiring each facility to pass certification only after the facility has successfully installed and demonstrated each environmental improvement to the satisfaction of every party involved would be onerous, and ignores the timelines that are necessary to license improvements, make capital budgeting decisions, and install equipment.

This precedent has been set in many, if not most, LIHI-certified facilities. As just a few examples (there are many more):

- LIHI #66, Orono, and LIHI #67, Stillwater: “This certification review is based on the presumption that the final transfer of the Great Works, Veazie and Howland Projects will occur, and the fish passage protection provisions associated with that option of the Settlement Agreement will be implemented. Should the transfer not take place, and if LIHI certification is still desired, then reanalysis of the Orono Project against LIHI certification criteria, incorporating these alternative fish passage provisions must be requested / performed.”
- LIHI Certificate #11, Pawtucket: “The owner of the Pawtucket hydropower facility shall continue to participate in efforts to restore fish passage in the lower Blackstone River, as documented in Memoranda of Agreement of 2007 (amended 2009) and 2012 with RIDEM. The owner shall keep LIHI fully informed of all progress, delays, and changes in these efforts and agreements. LIHI certification is contingent on the owner continuing to play a strongly supportive and proactive role in achieving the goals of the Blackstone River Fish Passage Restoration Project, subject to cooperation, material progress, and the appropriation of project funding from state and federal agencies.”
- LIHI Certificate #12, Tallassee Shoals: “There are active and evolving efforts to restore migratory fish populations in the Oconee River basin that may eventually interact with the facility at some point in the future. Therefore, the owner shall monitor the progress of these efforts on a regular and continuing basis, and participate in them when appropriate.
- LIHI Certificate #89, Holyoke Hydro: “If HG&E does not meet any of the downstream fish passage design and implementation deadlines that fall within the 5-year term of certification, LIHI will suspend certification unless HG&E demonstrates to LIHI that the resource agencies believe good cause exists for the schedule delay. Any subsequent re-certifications of the Facility will be dependent on HG&E’s passage facilities meeting effectiveness targets set by the agencies.”
- LIHI #110, Stillwater B: “The facility owner shall consult with the involved fisheries resource agencies and the Penobscot Indian Nation (PIN) to confirm that the designs that have been implemented at the new downstream fish and eel passages are consistent with the Settlement Agreement. An annual status report on such consultation, plans and results from effectiveness testing of fishways, and final acceptance by agencies and PIN shall be sent to LIHI along with the owner’s annual compliance letter.”

- LIHI #128, North Gorham: “Within 90 days of LIHI certification, the Owner shall proactively initiate discussions with MDMR and USFWS regarding future construction of an upstream fish passage facility for American eel at the site and implementation of appropriate measures to facilitate safe downstream passage for American eel. The siting and design work on the upstream passage structures shall be initiated within the first two years of LIHI certification; construction and operation shall be completed as soon as practicable, but no later than the end of the five-year LIHI certification period.”

In Sappi’s case, there is a clear timetable and biological triggers in place to install fish passage. This timeline has been agreed to in a Settlement Agreement (S.A.), between Sappi, U.S. Fish and Wildlife Service, Maine Department of Marine Resources, Conservation Law Foundation, Friends of the Presumpscot River, and the City of Westbrook. Sappi will be making significant capital investments to remove Saccarappa Dam and make site alterations to improve fish passage, in excess of \$5 million when design cost are included. All parties to the S.A. concurred with this approach, as evidenced in the S.A. and letters supporting LIHI certification from the various resource agencies. According to the Fish and Wildlife Service (letter dated May 31, 2017):

“Warren, the Service, and other Stakeholders have worked tirelessly to negotiate the terms of a Settlement Agreement (Agreement) affecting fish passage at four of the Projects noted herein. We are now implementing this Agreement. The Agreement addresses issues of concern to the Stakeholders, gives Warren some certainty regarding the requirements for decommissioning and removal of the Saccarappa Project, and extends the time when Warren must comply with fish passage requirements at the other four Projects. S.D. Warren Company has been very cooperative with the Service regarding issues and concerns relating to these projects and we support their application for certification.”

Argument #2 – Dam removal recommendation eliminates eligibility.

CLF and FOPR contend that Sappi’s projects are ineligible because of various comments made during re-licensing recommending that dam removal be considered as an alternative to continued operations of the project. This comment is faulty on two grounds:

1. ***Dam removal was recommended to be considered as an alternative in FERC’s NEPA process – this does not qualify as a recommendation for removal:*** Several agencies requested that FERC consider dam removal as an *alternative*, and removal was never a final recommendation from any resource agency, which instead opted for fish passage facilities. The language from the FEIS reads: “Interior, the state of Maine resource agencies, American Rivers/FOPR, MCASF/Friends of Sebago Lake, and TU all filed comments and recommended that the Commission consider removal of three dams as an alternative to licensing” (page 55). At the time of re-licensing, these facilities did not have any passage installed or plans to do so. Fish passage installation was also recommended as an alternative (in addition to dam removal). The final recommendations from

the agencies (USFWS, MDIFW, MDEP, etc.) almost exclusively focused on installing upstream and downstream passage. The FEIS offers a summary of the final recommendations by all agencies, on pages 21-25. For example:

- a. “The MDMR is the lead state agency in the restoration and management of diadromous (anadromous and catadromous) species of fish other than sea-run Atlantic salmon. **The MDMR recommends** installation of upstream and downstream fish passage facilities for American shad and blueback herring at the lower four projects, including screens on the trashracks and separate upstream and downstream measures (shut downs) for eels at each of the five projects.”
- b. “The Maine Atlantic Salmon Commission (MASC) is responsible for the restoration of Atlantic salmon throughout its historical range in the state of Maine. However, the recent events that prompted the request for dam removal (see section 2.2.2) also have caused the MASC to re-evaluate its priorities for restoration of Atlantic salmon in the Presumpscot River¹. **The MASC recommends** a reopener clause to address the need for upstream and downstream passage facilities for diadromous fish once the Cumberland Mills dam has fish passage facilities; consultation with S.D. Warren every 3 years to develop a schedule for installation of fish passage facilities; and a study to determine appropriate flows to support Atlantic salmon, after MASC has completed its assessment of the river habitat.”
- c. “**Interior also recommends** installing upstream and downstream fish passage facilities for American shad and blueback herring, and separate measures for eel passage.”
- d. “**The FWS recommends** ROR operation, year-round minimum flows, a headpond elevation and flow monitoring plan, the development of a detailed Shoreline Management Plan (SMP) for licensee-owned lands that are needed to project-related purposes within 500 feet of the high water elevation, and recreational use monitoring every 6 years.”

LIHI requires that resource agencies conclusively recommend a dam for removal, not that dam removal is considered as an alternative or that dam removal was considered as an option at some point in the re-licensing proceeding. Recommendations by agencies frequently change during the course of the re-licensing, and did in this case as well, to favor installation of passage facilities. For example, the Shoreline Management Plan originally recommended by USFWS is now a Land Use Recreation Management Plan. The NGOs that commented did recommend removal, but this is not relevant for LIHI criteria, which requires the recommendation to come from resource agencies.

¹ This recommendation was made by NGOs, not a resource agency. See page 21: “Several NGO's, including the Friends of the Presumpscot River (FOPR), Friends of Sebago Lake, and the Maine Council of the Atlantic Salmon Federation (MCASF), as well as numerous individuals are advocating that the Commission order the removal of the Little Falls, Mallison Falls, and Saccarappa dams.” These do not qualify under LIHI standards because, under those standards, recommendations must come from the resource agencies.

2. ***The Agencies' final recommendations are contained in the Settlement Agreement.*** LIHI's criteria states (pg. 42): "If a single Resource Agency has made multiple recommendations, the most recent recommendation shall apply. This principle also applies when there is a settlement. If a Resource Agency is party to a settlement, or otherwise formally concurs in a settlement, the settlement terms are considered to be the most recent Resource Agency Recommendation for these purposes. If, however, a Resource Agency is not party to a settlement and does not formally concur in the settlement, the most recent recommendation of that Resource Agency, and not the settlement terms, apply for purposes of certification."

This is a clear example where the qualifying agency recommendations are contained in the S.A. The timeline and biological triggers for installation of passage at each project has been agreed to in the S.A. by Sappi, U.S. Fish and Wildlife Service, Maine Department of Marine Resources, Conservation Law Foundation, Friends of the Presumpscot River, and the City of Westbrook. Each resource agency party to the S.A. were those that recommended FERC consider dam removal as an alternative during the NEPA process in 2003. The S.A. represents years of study, design and consultation into providing fish passage at the Saccarappa Project and goes far beyond the requirements of the Projects' Section 18 Fishway Prescription in the License, or of a typical decommissioning / license surrender order.

Argument #3 – Certification should wait until the project has proven it is having a low impact to fish.

This is a restatement of Argument #1, and our response is above.

In his December 27, 2016 letter to the MDEP supporting a "Minor Revision" to the Projects' Water Quality Certification (attached), Sean Mahoney, writing on behalf of CLF and FOPR, states:

"For more than three years, the parties to the SA negotiated to reach an agreement that would be the best possible result for water quality of the Presumpscot River. The effort required an enormous investment of resources, in terms of time and money, and at the end of the day each of the parties believes that the SA reached will be to the benefit of the Presumpscot River, the communities that share it and the company that uses it to continue its operations."

This statement undercuts CLF's and FOPR's objections here, showing that CLF and FOPR clearly believe the SA will benefit the Presumpscot River by offering the "best possible result for water quality of the Presumpscot River."

If you have any questions concerning this matter, please contact me at 207-856-4083 or by e-mail at Brad.Goulet@SAPPI.com.

Sincerely,



Brad Goulet
Hydro Manager/Utilities Engineer

Attachment:
December 27, 2016 CLF letter to MDEP

cc: Peter Drown Cleantech
Matt Manahan P.A.
Briana O'Regan Sappi

Appendix C
Agency Correspondence

Print

Date: Tuesday, October 10, 2017 11:19 AM
From: Peter Drown <peter.drown@cleantechanalytics.com>
To: Patricia <pbmwork@maine.rr.com>
Subject: Fwd: T&E Species - SD Warren Hydro Projects

----- Forwarded message -----

From: **Peter Drown** <peter.drown@cleantechanalytics.com>
Date: Tue, Oct 10, 2017 at 10:54 AM
Subject: Fwd: T&E Species - SD Warren Hydro Projects
To: Patricia <pbmwork@maine.rr.com>
Cc: Brad Goulet <Brad.Goulet@sappi.com>, "Robinson, Sydney" <Sydney.Robinson@sappi.com>

Hi Pat,

Please find below email correspondence from John Perry from MIF&W regarding T&E species which may occur at the project sites. Also, attached is a letter from the Maine Natural Areas Program on T&E plants which may occur at the project sites. Without any definitive ruling that a species does occur at the site, we are forced to rely on primary and secondary research (as you recommended to me in your previous email.)

Bat species - based on my previous conversations with agency officials, there is typically no impact to bat species unless tree-cutting is planned. There is no tree-cutting planned at the projects.

Brook floater - this species also occurs in North Gorham. Our assumption is the same review you provided there would apply here.

Least Bittern - my research indicates that the greatest threat to this species is **habitat loss**. There is no activity planned that would result in a loss of habitat at the SD Warren projects.

Upland Sandpiper - as with the Least Bittern, the greatest threat is **habitat loss**. The prime habitat for this species is pastures and agricultural land, and this is threatened due to urbanization (as farms are replaced by housing and developments.) The operation of these existing hydro plants would not appear to pose any kind of threat.

Box Turtle - The State of Maine lists **threats** as predators, cars (road mortality), cold temperatures and taking turtles as pets. None of these are within control of SD Warren.

Spotted Turtle - The State of Maine lists **threats** as habitat fragmentation (primarily due to roads,) predators, cars (road mortality,) pollution, and the filling of small wetlands. Again, none of these are impacted by any current or ongoing actions of SD Warren.

Plant species

Small Whorled Pogonia - this was addressed in the full application: "*S.D. Warren executed a Declaration of Restrictive Covenant (Declaration) in 2008 which establishes a 100-foot conservation buffer around the area where the plant is located, restricting any development of buildings or structures, recreational facilities, and clearing of vegetation. The Declaration is recorded in the Cumberland County Registry of Deeds in Book 26321, page 331. Exhibit A of the Restrictive Covenant indicates that a second population of the pogonia resides on land owned privately by Natalie Penney which is not part of the easement.*

Additionally, S.D. Warren and the Department of Conservation, Bureau of Geology and Natural Areas, Maine Natural Areas Program (Maine NAP) entered into an agreement in 2008 for the monitoring of the small whorled pogonia. The monitoring is conducted by the Maine NAP once every three years. The most recent report was filed with the FERC on October 2, 2015"

Remaining plant species - The letter from Maine Natural Areas Program addresses the remaining plant species, concluding: "If any work will occur outside of existing Right-Of-Way along Dundee Pond, we recommend that plans for that work are reviewed by us to insure the associated rare plants will not be inadvertently harmed."

I hope this correspondence is adequate to support your review. Please let us know if you need anything else.

Regards,

----- Forwarded message -----

From: **Perry, John** <John.Perry@maine.gov>
Date: Tue, Sep 26, 2017 at 7:26 AM
Subject: RE: T&E Species - SD Warren Hydro Projects
To: Peter Drown <peter.drown@cleantechanalytics.com>
Cc: Brad Goulet <Brad.Goulet@sappi.com>, "Robinson, Sydney" <Sydney.Robinson@sappi.com>

Hi Peter,

The following state-listed Endangered, Threatened, and Special Concern species have been documented in the general vicinity of the Presumpscot River watershed. Note that this list should not be considered all-inclusive:

American eel (Special Concern)
Brook floater (State Threatened)
Creek chubsucker (Special Concern)
Eastern box turtle (State Endangered)
Least bittern (State Endangered)
Spotted turtle (State Threatened)
Upland sandpiper (State Threatened)
Wood turtle (Special Concern)

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)

Finally, please note that this list does not include any listed species of migratory birds that are likely found in the area during spring and fall migrations.

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

Please let us know if you need additional information.

John

John Perry

Environmental Review Coordinator
Maine Department of Inland Fisheries and Wildlife
284 State Street, 41 SHS
Augusta, Maine 04333-0041
Tel (207) 287-5254; Cell (207) 446-5145
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www.mefishwildlife.com



Correspondence to and from this office is considered a public record and may be subject to a request under the Maine Freedom of Access Act. Information that you wish to keep confidential should not be included in email correspondence.

From: Peter Drown [mailto:peter.drown@cleantechanalytics.com]
Sent: Thursday, September 14, 2017 12:52 PM
To: Perry, John
Cc: Brad Goulet; Robinson, Sydney
Subject: T&E Species - SD Warren Hydro Projects

Hi John,

I am working with SD Warren Co. on several Low Impact Hydropower Applications for their projects on the Presumpscot River. Our reviewer would like to know whether any T&E species are present in the area, but the data we have is from a 1997 study and we were asked to provide more current data, if possible. I understand you provided a Threatened and Endangered Species review for the North Gorham project last November. Could you also provide any T&E species that may be located in the project boundaries of the SD Warren projects?

Project location map is attached.

Thank you,

--

Peter Drown | President
Mobile: (207) 951-3042


Skype: peter.r.drown

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Peter Drown | President
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 [sappi_sdwarrenhydro.pdf](#)



PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
93 STATE HOUSE STATION
AUGUSTA, MAINE 04333

WALTER E. WHITCOMB
COMMISSIONER

October 4, 2017

Brad Goulet
Sappi North America
89 Cumberland Street
Westbrook, ME 04092

Via email: brad.goulet@sappi.com

Re: Rare and exemplary botanical features in proximity to: SD Warren Hydro: Eel Weir (2984), Dundee (2942), Little Falls (2941), Mallison Falls (2932), and Gambo Project Boundaries; Naples, Sebago, Casco, Raymond, Standish, Frye Island, Windham, Gorham, and Westbrook, Maine

Dear Mr. Goulet:

I have searched the Natural Areas Program's Biological and Conservation Data System files in response to your request received September 22, 2017 for information on the presence of rare or unique botanical features documented from the vicinity of the five project areas, Eel Weir (2984), Dundee (2942), Little Falls (2941), Mallison Falls (2932), and Gambo Project, which are located in Cumberland County. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, two of the project areas, Eel Weir (2984) and Dundee (2942), intersect with rare botanical features. Specifically, Eel Weir (2984) and Dundee (2942) project boundaries both intersect with Small Whorled Pogonia and Spicebush at Dundee Pond. Eel Weir also intersects with a Pocket Swamp, Nodding Pogonia, and Spotted Wintergreen at Frye Island within Sebago Lake. If the Eel Weir project will have no effect on the upland areas associated with Frye Island in Sebago Lake, then there would be no concerns for the rare features that occur there. If any work will occur outside of existing Right-Of-Way along Dundee Pond, we recommend that plans for that work are reviewed by us to insure the associated rare plants will not be inadvertently harmed. No rare botanical features are currently known from the other three project areas, Little Falls (2941), Mallison Falls (2932), and Gambo Project.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM



PHONE: (207) 287-8044
FAX: (207) 287-8040
WWW.MAINE.GOV/DACF/MNAP

Eel Weir (2984):

Feature	State Status	State Rank	Global Rank	Occurrence Rank	MNAP Site	SD Warren Project Site
Small Whorled Pogonia <i>Isotria medeoloides</i>	E	S2	G2	BC Good-Fair	Dundee Pond	Eel Weir (2984)
Spicebush <i>Lindera benzoin</i>	SC	S3	G5	B Good	Dundee Pond	Eel Weir (2984)
Pocket Swamp <i>Hemlock-Hardwood Pocket Swamp</i>	N/A	S2	G5	C Fair	Frye Island South	Eel Weir (2984)
Nodding Pogonia <i>Triphora trianthophora</i>	T	S2	G3G4	A? Excellent?	Frye Island	Eel Weir (2984)
Spotted Wintergreen <i>Chimaphila maculata</i>	E	S2	G5	E Extant	Frye Island	Eel Weir (2984)

Dundee (2942):

Feature	State Status	State Rank	Global Rank	Occurrence Rank	MNAP Site	SD Warren Project Site
Small Whorled Pogonia <i>Isotria medeoloides</i>	E	S2	G2	BC Good-Fair	Dundee Pond	Dundee (2942)
Spicebush <i>Lindera benzoin</i>	SC	S3	G5	B Good	Dundee Pond	Dundee (2942)

Attached is supplemental information regarding rare and exemplary botanical features documented to occur within four miles of each of the five project sites. These lists may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed lists identify features with potential to occur in the area, and should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. The Natural Areas Program welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by the Natural Areas Program are to be published in any form, the Program should be informed at the outset and credited as the source.

The Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$300.00 for four hours of our services.

Letter to Brad Goulet, Sappi North America
Comments RE: SD Warren Hydro
October 4, 2017
Page 3 of 3

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,



Don Cameron | Ecologist | Maine Natural Areas Program
207-287-8041 | don.s.cameron@maine.gov