

FULL APPLICATION

Little Falls Hydroelectric Facility

Certification Application to the Low Impact Hydropower Institute

FERC Project No. 2941



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On Behalf of
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September 1, 2017

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I. INTRODUCTION

The Presumpscot 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 Little Falls Project (FERC No. 2941), located at river mile 16.9, was originally constructed in the early 1900's and purchased by S.D. Warren Company ("S.D. Warren") from Lawrence J. Keddy in 1974. This is the fifth hydro project downstream of the Sebago Lake outlet (including the Eel Weir Project). The Little Falls Project was originally licensed in 1980, and currently holds a 40-year license issued on October 2, 2003 that includes water quality certification from the Maine Department of Environmental Protection (MDEP). In accordance with the National Environmental Policy Act (NEPA) an Environmental Assessment was completed as part of the relicensing process and the Final Environmental Impact Statement (EIS) was completed in June, 2002.

Based on the requirements set forth in the Little Falls Project license and Water Quality Certificate, and the conclusions of the final EIS, as well as the efforts made by S.D. Warren to maintain habitat quality in the Presumpscot River and surrounding area, S.D. Warren hereby submits this application for Low Impact Hydropower Institute (LIHI) Certification for the Little Falls Project, FERC No. 2941.

II. FACILITY DESCRIPTION

Information Type	Variable Description	Response (and reference to further details)
Name of the Facility	Facility name (use FERC project name if possible)	Little Falls FERC No. P-2941
Location	River name (USGS proper name)	Presumpscot River
	River basin name	Presumpscot River Basin
	Nearest town, county, and state	Windham and Gorham, Cumberland County, Maine
	River mile of dam	16.9
	Geographic latitude	43°44'03.56" N
	Geographic longitude	70°25'27.67" W
Facility Owner	Application contact names (IMPORTANT: you must also complete the Facilities Contact Form):	Brad Goulet – 207-856-4083
	- Facility owner (individual and company names)	S.D. Warren Company d/b/a Sappi North America
	- Operating affiliate (if different from owner)	N/A
	- Representative in LIHI certification	Brad Goulet – 207-856-4083
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates	<ul style="list-style-type: none">• FERC No. P-2931• 105 FERC ¶ 61,012• Issued October 2, 2003• Expires October 1, 2043

	FERC license type or special classification (e.g., "qualified conduit")	Minor License
	Water Quality Certificate identifier and issuance date, plus source agency name	<ul style="list-style-type: none"> • WQC #L-19715-33-E-N, issued May 1, 2003 by Maine Department of Environmental Protection • Amended Conditions 3(A) & 3(C) July 28, 2008: #L-19713-33-H-C • Modification Condition 7(A) July 31, 2008: #L-19713-33-I-C • Minor Revision in November, 2012 - #L-19713-33-L-M • Minor Revision 5(A) May 27, 2016: #L-19717-33-I-M • Minor Revision 5(A) December 27, 2016: #L-19717-33-K-M¹
	Hyperlinks to key electronic records on FERC e-library website (e.g., most recent Commission Orders, WQC, ESA documents, etc.)	See Appendix A
Power Plant Characteristics	Date of initial operation (past or future for operational applications)	1894
	Total name-plate capacity (MW)	1 MW
	Average annual generation (MWh)	4,200 MWh
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	<ul style="list-style-type: none"> • 4 Turbines • Francis (vertical) • Average Net Head: 18 feet • Max. Hydraulic Capacity: 235 cfs • Min. Hydraulic Capacity: 70 cfs
	Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.)	Run-of-River
	Dates and types of major equipment upgrades	Original equipment. Various minor repairs and upgrades over last 100 years.
	Dates, purpose, and type of any recent operational changes	N/A
	Plans, authorization, and regulatory activities for any facility upgrades	N/A
Characteristics	Date of construction	1894

¹On November 15, 2016, S.D. Warren filed with the FERC a Settlement Agreement with the goal of providing safe and effective fish passage at the Saccarappa (P-2897) site in conjunction with a Project License surrender. On December 28, 2016 the MDEP issued a minor revision to WQC L-19717-I-M, Condition 5A, extending the deadline for fish passage implementation such that further design work could be completed. S.D. Warren successfully defended the minor revision in an appeal to the Maine Board of Environmental Protection. On February 14, 2017, the FERC issued an order incorporating the WQC revision and similarly amended the section 18 fishway prescription to extend the fish passage deadline.

of Dam, Diversion, or Conduit	Dam height	14 ft.			
	Spillway elevation and hydraulic capacity	<ul style="list-style-type: none"> Elevation: 106.7 ft. MSL Hydraulic Capacity: 			
	Tailwater elevation	90.7 ft. MSL			
	Length and type of all penstocks and water conveyance structures between reservoir and powerhouse	None			
	Dates and types of major, generation-related infrastructure improvements	None recently, ongoing minor projects over last 100 years.			
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Electricity generation			
	Water source	Presumpscot River			
	Water discharge location or facility	Discharges into the Presumpscot River at river mile 16.9			
Characteristics of Reservoir and Watershed	Gross volume and surface area at full pool	<ul style="list-style-type: none"> Volume: n/a Surface Area: 29 acres 			
	Maximum water surface elevation (ft. MSL)	108.4 ft. MSL			
	Maximum and minimum volume and water surface elevations for designated power pool, if available	N/A			
	Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile	Name	FERC No.	Owner	RM
		Eel Weir	P-2984	S.D. Warren	25
		North Gorham ²	P-2519	Brookfield	23.6
		Dundee	P-2942	S.D. Warren	21.9
		Gambo	P-2931	S.D. Warren	18.6
	Downstream dam(s) by name, ownership, FERC number (if applicable), and river mile	Name	FERC No.	Owner	RM
		Mallison	P-2932	S.D. Warren	16.4
		Saccarappa	P-2897	S.D. Warren	11.3
		Cumberland Mills	N/A	S.D. Warren	10.3
	Operating agreements with upstream or downstream reservoirs that affect water availability, if any, and facility	See narrative below. Majority of project inflows from Eel Weir Project.			

² North Gorham received LIHI Certification on April 27, 2016 (Certificate #129).

	operation	
	Area inside FERC project boundary, where appropriate	The Little Falls impoundment totals 29 acres. The total project boundary encompasses 31 acres; therefore 2 acres of the project boundary extend beyond the reservoir.
Hydrologic Setting	Average annual flow at the dam	925 cfs
	Average monthly flows	<ul style="list-style-type: none"> • January – 817 cfs • February – 811 cfs • March - 770 cfs • April – 874 cfs • May- 1028 cfs • June – 836 cfs • July – 659 cfs • August – 624 cfs • September – 587 cfs • October – 579 cfs • November – 712 cfs • December- 821 cfs
	Location and name of relevant stream gauging stations above and below the facility	<p>There are four stream gauges located on the river and the lake with available information:</p> <ul style="list-style-type: none"> • No. 01064000 – Outlet of Sebago Lake (operated from 1901-2000) • No. 01063995 – Sebago Lake • No. 01064118 – Westbrook, ME • No. 01064140 – Falmouth, ME <p>Gauge No. 01064000 has a drainage area of 441 square miles, a total period of record from 1901 to 2000, and is located downstream of the Eel Weir Dam. This gauge was utilized to estimate project flows. Flows were normalized to the project using a drainage area ratio. A period of record of 1970-2000 was utilized to reflect more recent historic flows.</p> <p>Gauge No. 01063995 has a drainage area of 440 square miles, a period of record of 2000 to 2017, and is located in North Windham, Maine.</p> <p>Gauge No. 01064118 has a drainage area of 557 square miles, a period of record of 1975 to 2017 and is located downstream of the Saccarappa Project.</p>

		No. 01064140 has a drainage area of 598 square miles, a period of record of 1975-1984 and is located downstream of the Cumberland Mills Dam.
	Watershed area at the dam	500 square miles
Designated Zones of Effect	Number of zones of effect	3
	Upstream and downstream locations by river miles (RM)	<ul style="list-style-type: none"> • Zone 1: 16.9 • Zone 2: 16.9 • Zone 3: 16.9-17.0
	Type of waterbody (river, impoundment, by-passed reach, etc.)	<ul style="list-style-type: none"> • Zone 1: Tailwater • Zone 2: Bypass Reach • Zone 3: Impoundment
	Delimiting structures	Tailrace is defined by downstream face of powerhouse and natural banks extending to the main river channel. The bypass is defined on its upstream end by the dam and downstream by confluence with tailwater. Reservoir is bound by elevation contour 108.4 ft. MSL and dam structure.
	Designated uses by state water quality agency	<p>The Presumpscot River in this location is Class B³ - suitable for the following designated uses⁴:</p> <ul style="list-style-type: none"> • Drinking water after treatment • Fishing • Agriculture • Recreation in and on the water • Industrial process and cooling water supply • Hydroelectric power generation • Navigation • Habitat for fish and other aquatic life • The habitat must be categorized as unimpaired
Additional Contact Information	Names, addresses, phone numbers, and e-mail for local state and federal resource agencies	See Appendix C
Photographs and Maps	Photographs of key features of the facility and each of the designated zones of effect Key Features of Project	

³ 38 MRS §467(9)(A)(2)

⁴ 38 MRS §465(3)(A)

1. Spillway and Powerhouse:



2. Upstream American Eel Passage:



Designated Zones of Effect

3. Project Tailwater – Zone 1



4. Project Bypass – Zone 2



5. Project Impoundment – Zone 3:



6. Project Impoundment – Zone 3:



Maps, aerial photos, and/or plan view diagrams of facility area and river basin:



III. STANDARDS MATRICES

Zone 1 – Project Tailwater

Criterion		<i>Alternative Standards</i>				
		1	2	3	4	Plus
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage		X			
D	Downstream Fish Passage	X				
E	Watershed and Shoreline Protection	X				
F	Threatened and Endangered Species Protection	X				
G	Cultural and Historic Resources Protection		X			
H	Recreational Resources		X			

Zone 2 – Project Bypass

Criterion		<i>Alternative Standards</i>				
		1	2	3	4	Plus
A	Ecological Flow Regimes		X			
B	Water Quality		X			
C	Upstream Fish Passage		X			
D	Downstream Fish Passage	X				
E	Watershed and Shoreline Protection	X				
F	Threatened and Endangered Species Protection	X				
G	Cultural and Historic Resources Protection		X			
H	Recreational Resources		X			

Zone 3 - Impoundment

Criterion		<i>Alternative Standards</i>				
		1	2	3	4	Plus
A	Ecological Flow Regimes	X				
B	Water Quality		X			
C	Upstream Fish Passage	X				
D	Downstream Fish Passage		X			
E	Watershed and Shoreline Protection		X			
F	Threatened and Endangered Species Protection	X				
G	Cultural and Historic Resources Protection		X			
H	Recreational Resources		X			

IV. SUPPORT OF STANDARDS SELECTED

Ecological Flow Regimes

Zone 1 – Tailwater AND Zone 2 – Bypassed Reach

A	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).• Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement.• Explain how the recommendation relates to agency management goals and objectives for fish and wildlife.• Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).
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Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).

The most environmentally stringent agency recommendation for the project is the Section 401 Water Quality Certification (WQC), issued by the Maine Department of Environmental Protection (MDEP) during the most recent relicensing proceedings for the Little Falls Project, and subsequent amendments. A link to the complete WQC and subsequent amendments is available in Appendix A.

The WQC provides that the continued operation of the Presumpscot River hydro projects will not violate water quality standards so long as the conditions of certification are met. With regard to ecological flow regimes, the conditions⁵ are as follows:

- The project will be operated in a run-of-river (ROR) mode with outflow approximately equal to inflow;
- Approximately 26 cfs year-round⁶ shall be provided by the existing leakage at the project to the bypass; and
- To the extent possible, all minimum flows shall be provided as spillage at the project dams, in order to provide maximum reaeration⁷.
- Develop an Operations and Flow Monitoring Plan to document compliance with ROR operations and impoundment drawdown and refill restrictions of the licenses and WQC.

The above conditions are to be adhered to with exceptions only for approved maintenance, emergency electrical conditions, extreme hydrologic conditions, or an agreement between S.D. Warren and authorized state and federal agencies.

⁵ WQC Conditions 1A and 1B

⁶ WQC Condition 1B

⁷ WQC Condition 1B

Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement.

The MDEP used a variety of studies conducted during the relicensing process to arrive at the final WQC. The studies, with respect to ecological flow regimes, requested by MDEP, USFWS, MDIFW, and the Presumpscot River Watershed Alliance (PRWA) include:

- A two-phased Habitat and Flow Study:
 - The first phase (Habitat and Flow Study – Bypass and Free Flowing Reaches – Phase I Habitat Mapping) of the study focused on surveying for the purpose of characterizing the available aquatic habitat under low flow conditions in the free-flowing riverine reaches.
 - The second phase of the study (Habitat and Flow Study – Bypass and Free Flowing Reaches – Phase II Flow Demonstration Report) built on information collected during the Phase I study by evaluating the minimum flows needed to meet water quality and fisheries management goals.
- A Baseline Fisheries Study (1998) that evaluated growth rates, species composition, and types of available habitat in impoundments and tailwaters, among other criteria;
- An Upstream Eel Migration Study (2000), to determine upstream migration patterns and success, as well as eel occurrence within project waters;
- A Water Quality Report (1997) that included river water quality monitoring in the riverine class sections of the Presumpscot River to aid the MDEP in determining compliance with state water quality standards, as well as a trophic state study of Dundee Pond to determine compliance with GPA Trophic State Protocol;
- A Final Environmental Impact Statement (2002) for the Presumpscot River Projects; and
- A Draft Fishery Management Plan for the Presumpscot River Drainage (2001).

The cumulative results of these studies indicate that continued ROR operation of the Little Falls Project is appropriate and acceptable in the context of ecological flow regimes and should continue subject to the conditions set forth in the WQC.

Explain how the recommendation relates to agency management goals and objectives for fish and wildlife.

Changes to the Presumpscot River watershed around the time of relicensing, including (i) the removal of the Smelt Hill Dam, resulting in additional access to upstream habitat, and (ii) the closure of the pulping operation in Westbrook, resulting in improved water quality, led to discussion within the state fisheries agencies regarding diadromous fish runs. In general, MDEP defers to the MDMR and MDIFW with regard to fisheries related recommendations. The collective management goals set forth by MDMR, MDIFW, and the Maine Atlantic Salmon Commission (MASC)⁸ in response to those changes are detailed in the Draft Fishery Management Plan for the Presumpscot River Drainage (2001) and are summarized for the Little Falls Project as follows:

⁸ MASC was instrumental in securing a sustainable recreational fishery within the State of Maine; however, funding was eliminated in 2009 by Public Law, Chapter 462 and 2010 Public Law, Chapter 561 officially abolished MASC. MDMR and MDIFW continue the work that the three agencies began; the recommendations as they relate to S.D. Warren owned projects remain unchanged despite the abolition of MASC.

- Management as a migratory pathway for American eel, Atlantic salmon, and American shad;
- Sustainable populations of resident and diadromous species within the capabilities of the habitat;
- Promotion of the existing and potential commercial American eel fishery;
- Management consistent with the Atlantic States Marine Fisheries Commission's (ASMFC) Interstate Fisheries Management Plan for American eel and the Management Plan for American shad and river herring;
- Recreational angling opportunities for warm water and cold water species; and
- Establishment of a year-round stocked trout fishery.

The strategies developed by MDMR, MDIFW, and MASC for the above stated goals are as follows, as they relate to the Little Falls⁹ Project:

- Upstream American eel passage facilities;
- Downstream American eel passage measures;
- Phased implementation of upstream and downstream anadromous fish passage;
- Identify and map habitat¹⁰;
- Improved access for MDIFW stocking purposes; and
- Suitable year-round minimum flows at Little Falls Dam.

Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

S.D. Warren has worked with the state environmental and natural resource agencies by meeting all requirements set forth in the WQC and FERC license to mitigate the impacts of the hydro facilities on the river and come to equitable solutions that allow for the protection of fish and wildlife as well as energy generation. The removal of the Central Maine Power (CMP) owned Smelt Hill Dam, resulting in an additional 7 miles of habitat access, and the closure of the pulping operation at the S.D. Warren Westbrook mill, resulting in improved water quality, are both events that initiated the potential for diadromous species restoration in the Presumpscot River. An additional mile of habitat became available when fish passage became operational at the Cumberland Mills Dam in 2013, and an additional 5 miles of habitat will become available with the anticipated removal of the Saccarappa Project Dam (P-2897). S.D. Warren, USFWS, MDMR, MDIFW, the City of Westbrook, Friends of the Presumpscot River, and the Conservation Law Foundation have entered into a Settlement Agreement (SA), with the goal of providing safe and effective fish passage at the Saccarappa Project site. Information about the SA, as well as a hyperlink to the document, is available in Appendix D. The agency recommendation (WQC) set by the MDEP aids in maintaining the designated fish and wildlife uses of the Presumpscot River, while still allowing hydroelectric power generation at the Little Falls Project, by including the above stated strategies for diadromous fish passage as WQC Conditions, all of which S.D. Warren is compliant with.

⁹ For clarity and conciseness the strategies to meet the listed goals that do not include actions to be taken by S.D. Warren with regards to the Little Falls Project have been omitted from this application.

¹⁰ A two-phased habitat mapping study was completed by S.D. Warren as part of the relicensing process – Phase I, 1997; and Phase II, 1998.

Additionally, the requirement for year-round minimum flows to the bypass with reaeration flows at upstream projects during warm weather provides for adequate water depth, temperature, and dissolved oxygen levels to maintain fish and wildlife habitat. Based upon the results of the Phase I and Phase II habitat and flow monitoring studies, the prescribed WQC recommendations were tailored to maintain suitable flow regimes in riverine reaches that are affected by the facility in order to support habitat and other conditions suitable for healthy fish and wildlife resources.

In the most recent Environmental Inspection, conducted on July 23, 2013 and included in Appendix A, FERC inspector Joseph Enrico noted compliance with the most recent flow control plan.

“The licensee has implemented its operations and flow control plan and has completed installation of the required gages.”

A December 29, 2014 email from William Atlas of FERC, addressed to Brad Goulet of S.D. Warren, stated that FERC had revised its policy for annual operations and flow compliance filings. After 2014, FERC no longer required an operations and flow compliance letter to be filed if there were no deviations or violations. Please see Appendix A for a copy of the email. Additionally, the following hyperlink provides a memo filed to the FERC eLibrary on March 26, 2015 reiterating the above stated policy change:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14316777

*****Please also see signed statement that accompanies this Application verifying compliance with flow requirements*****

Ecological Flow Regimes

Zone 3 - Impoundment

A	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility. • If Run-of-River operation, provide details on how flows, water levels, and operation are monitored to ensure such an operational mode is maintained. • In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located. • For impoundment zones only, explain how fish and wildlife habitat within the zone is evaluated and managed – NOTE: this is required information, but it will not be used to determine whether the Ecological Flows criterion has been satisfied. All impoundment zones can apply Criterion A-1 to pass this criterion.
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Confirm the location of the powerhouse relative to other dam/diversion structures to establish that there are no bypassed reaches at the facility.



Figure 1. Satellite image of the lower impoundment at Little Falls (FERC No. P-2941).

The satellite image above shows the southern end of the impoundment zone at the Little Falls Project. The powerhouse, spillway, and bypass are located downstream of the impoundment, and therefore are not part of this zone. Furthermore, S.D. Warren selected Criterion A-1 due to LIHI specifications: “All impoundment zones can apply Criterion A-1 to pass this criterion.”

If Run-of-River operation, provide details on how flows, water levels, and operation are monitored to ensure such an operational mode is maintained.

Article 401 of the FERC issued license for the Little Falls Project requires that the project be operated in a run-of-river (ROR) mode and that impoundment fluctuations shall be minimized by ensuring that discharge from the project approximates total project inflow. License article 402 states that the impoundment shall be managed to protect fisheries resources and water quality within the Presumpscot River in accordance with the water quality certification conditions issued by the MDEP. Article 403 of the license requires that an Operations and Flow Monitoring Plan be developed for the project to document compliance with Articles, 401 and 402.

Flow at the Little Falls Project is regulated by releases from the upstream Eel Weir Project (FERC No. P-2984) typically set on a weekly basis and regulated by the Eel Weir License and the Eel Weir Operations and Flow Monitoring Plan¹¹. Additional flows are provided by some small tributaries that join the Presumpscot River below Sebago Lake. Compliance with ROR operations is verified by station operators that check headpond levels daily and record the information in the station log. Any changes to flow are made manually by the S.D. Warren Operations Crew that visits the site daily.

In a conduit project, identify the water source and discharge points for the conduit system within which the hydropower plant is located.

Little Falls is not a conduit project.

For impoundment zones only, explain how fish and wildlife habitat within the zone is evaluated and managed – NOTE: this is required information, but it will not be used to determine whether the Ecological Flows criterion has been satisfied. All impoundment zones can apply Criterion A-1 to pass this criterion.

The Baseline Fisheries Study (1998), conducted as part of the relicensing process for the evaluation of fish and wildlife habitat within the impoundment, indicated that fish communities within the Little Falls Project impoundment are not negatively affected by normal project operations. There was no evidence of water-level fluctuations from ROR operations having any impacts on the fish communities in this zone, as evidenced by successful reproduction of fish species, well-established shoreline aquatic vegetation, and no significant areas of erosion on the shoreline. Given this information, the Little Falls Project impoundment is managed to maintain ROR operation in accordance with the Operations and Flow Monitoring Plan (OFMP.)¹² For details about how the ROR operations are monitored and maintained see section 2 of this criterion discussion.

¹¹ 157 FERC ¶ 62,013

¹² Approved by FERC on October 20, 2004 (109 FERC ¶ 62,037) (with a March 16, 2009 amendment - 126 FERC ¶ 62,198) included Appendix A.

Water Quality Protection

Zone 1 – Tailwater AND Zone 2 – Bypassed Reach

B	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• <i>If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation.</i>• <i>Provide a copy of the most recent Water Quality Certificate, including the date of issuance.</i>• <i>Identify any other agency recommendations related to water quality and explain their scientific or technical basis.</i>• <i>Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.</i>
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If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation.

Due to impoundments and alterations to flow regime of the river, this section of the Presumpscot was historically listed as water quality limited due to low dissolved oxygen (DO). The most recent attainment information provided publicly by the MDEP comes from the 2014 305(b) Report. The data used in that report are now 3 years old, and predate the issuance of a new license for the Eel Weir Project (P-2984), and do not take into account the new flow regime provided by that Project¹³. The Eel Weir Project provides the majority of the flow in the Presumpscot River and in the March 23, 2015 FERC license, and the approved OFMP, total minimum outflow was increased to 408 cfs from June 1 to September 30. This increased minimum flow was predicted and has resulted in full attainment of the dissolved oxygen standard as evidenced by continuous monitoring in the Gambo Project (P-2931) impoundment and reports to the MDEP for the 2015, 2016 and 2017 monitoring seasons.

The most recent review by MDEP of dissolved oxygen data at the Gambo Project impoundment confirmed that dissolved oxygen criteria were met for the 2016 monitoring season and that there were no times of DO non-attainment during 2016. Below is a hyperlink to the 2016 DO report for the Gambo Project filed on January 26, 2017. The report includes communication from the MDEP that supports the above stated DO attainment status.

2016 Gambo Project DO Report: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14533442

The most critical piece of information that demonstrates compliance with water quality standards is in the MDEP letter submitted in support of LIHI certification on May 31, 2017: “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**. The Department supports your application for LIHI certification.”

Provide a copy of the most recent Water Quality Certificate, including the date of issuance.

¹³ [See MDEP Report July 2011](#)

The most recent Water Quality Certificate (WQC)¹⁴ was issued on May 1, 2003 by the Maine Department of Environmental Protection. Two modifications were issued in July, 2008; one to address changes to the upstream eel passage requirements¹⁵, and one to address changes to WQC Condition #7(A)¹⁶, recreation. A Minor Revision¹⁷ was issued in November, 2012 to address modifications to the approved Recreation Plan. More recently, a minor revision was issued on May 27, 2016¹⁸, and another on December 27, 2016¹⁹, both to address fish passage requirements at the Saccharappa Project (FERC No. 2897)²⁰. A link to the original water quality certificate and recent amendments can be found in Appendix A. The July, 2008 modifications can be found in their entirety in Appendix A, as well.

Identify any other agency recommendations related to water quality and explain their scientific or technical basis.

The Water Quality Certification includes all agency recommendations.

Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

As required by WQC Condition 1B a minimum of 26 cfs is spilled into the Little Falls Project bypass year-round. As required by WQC Condition 6A (applicable only to the upstream Gambo and Dundee Projects), 100 cfs is spilled into the Gambo Project (P-2931; next hydro facility upstream of Little Falls) bypass when the water temperature exceeds 22°C before 8:00am at the Gambo Project impoundment in order to meet and maintain Class B dissolved oxygen criteria in the Presumpscot River below the Gambo Project. Beginning June 1 each year and continuing until temperatures drop below 22°C before 8:00am at the Gambo Project impoundment temperature and dissolved oxygen levels at the Gambo Project are continuously monitored June 1 to approximately September 30. These data are maintained at S.D. Warren's Westbrook Mill and are provided to the MDEP in an Annual Report, with a Summary Report filed with the FERC on or before January 31 of each calendar year with deviations reported within 10 days. There have been no unplanned deviation reports for the Project.

Although WQC condition 6, reaeration measures, is only applicable to the upstream Dundee (P-2942) and Gambo (P-2931) Projects, temperature and dissolved oxygen (DO) monitoring at downstream projects was required as part of a study to verify the effectiveness of the reaeration measures. Pursuant to WQC condition 6, and license article 403, an OFMP was approved by FERC on October 20, 2004²¹, and amended on March 16, 2009²².

¹⁴ #L-19715-33-E-N

¹⁵ #L-19713-33-H-C

¹⁶ #L-19713-33-I-C

¹⁷ #L-19713-33-L-M

¹⁸ #L-19717-33-I-M

¹⁹ #L-19717-33-K-M

²⁰ Due to the nature of the combined licenses and WQCs for the river projects, changes to the Saccharappa License affect the licenses for the upstream projects as well.

²¹ 109 FERC ¶ 62,037

²² 126 FERC ¶ 62,198 – Amendment included provisions for a study plan to determine the effectiveness of the reaeration measures taken at the Dundee and Gambo Projects.

As provided by the OFMP, the minimum bypass flows are achieved with existing leakage at the sluiceway section of the dam. Given that this flow is provided by leakage, S.D. Warren has agreed to gauge flow at the Project in the case of any repair or maintenance work at the location of the leakage to ensure that the requisite 26 cfs flow is maintained. There are currently no plans to repair or seal this leakage.

Station operators check all gates and the spillway daily to make sure debris is not preventing minimum flows. If debris is observed, station operators arrange for the removal of any materials that may restrict flows and verify completion on the daily inspection log sheet.

Water Quality Protection

Zone 3 - Impoundment

B	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• <i>If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation.</i>• <i>Provide a copy of the most recent Water Quality Certificate, including the date of issuance.</i>• <i>Identify any other agency recommendations related to water quality and explain their scientific or technical basis.</i>• <i>Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.</i>
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If facility is located on a Water Quality Limited river reach, provide an agency letter stating that the facility is not a cause of such limitation.

Please see responses to Zones 1 and 2, above.

Provide a copy of the most recent Water Quality Certificate, including the date of issuance.

Please see responses to Zones 1 and 2, above.

Identify any other agency recommendations related to water quality and explain their scientific or technical basis.

The Water Quality Certificate includes all agency recommendations.

Describe all compliance activities related to the water quality related agency recommendations for the facility, including on-going monitoring, and how those are integrated into facility operations.

During the months of May and June impoundment drawdowns for maintenance purposes are avoided, unless called for by an emergency situation or a public safety issue. The following procedures, summarized from the WQC, are implemented when refilling the impoundment after any drawdown:

- If allowed, outflows from Sebago Lake will be temporarily increased to refill the impoundment while flows are maintained at the project; and
- If a flow increase out of Sebago Lake is not allowed, a maximum of 25% of the outflow from Sebago Lake will be used to refill the impoundment, while flows are maintained at the project at 75% or more of the outflow from Sebago Lake.

Additionally, as written in the OFMP, while the station is not in operation, including during the nightly eel passage shutdowns, all inflow to the Project is spilled into the bypass.

On April 28, 2016, and June 12, 2017, S.D. Warren conducted repairs to damaged flashboards at the Little Falls Project. The schedule was coordinated with MDIFW and the planned drawdowns were communicated to the MDEP and FERC. A completion report was filed with the FERC for each repair on May 23, 2016 and June 19, 2017, respectively. A hyperlink to each report is available in Appendix A.

Upstream Fish Passage

Zone 1 - Tailwater

C	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).• Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement.• Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.
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Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).

The most environmentally stringent²³ agency recommendation is the Section 401 Water Quality Certification (WQC) issued by the Maine Department of Environmental Protection (MDEP) during the most recent relicensing proceedings for the Little Falls Project, and subsequent amendments. A link to the complete WQC is available in Appendix A.

For clarity and conciseness the specifics of the upstream fish passage requirements set forth in the 2003 WQC are discussed in detail in the Bypass Zone standards discussion, as that would be the location of any installed upstream fish passage facility.

Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement.

Please see response to Zone 2.

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

Please see response to Zone 2.

²³ Section 18 Fishway Prescriptions are found in Appendix B of each license order and contain the same language and scheduling provisions for anadromous fish passage as the WQC²⁴ Section 18 Fishway Prescriptions are found in Appendix B of each license order and contain the same language and scheduling provisions for anadromous fish passage as the WQC.

C	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none"> • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.
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Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).

The most environmentally stringent²⁴ agency recommendation is the Section 401 Water Quality Certification (WQC) issued by the Maine Department of Environmental Protection (MDEP) during the most recent relicensing proceedings for the Little Falls Project, and subsequent amendments. A link to the complete WQC is available in Appendix A.

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 installed²⁵;
- A phased implementation of anadromous fish passage facilities to pass the target number of species annually as determined by MDMR, MDIFW, and MASC²⁶
 - The target numbers are:
 - Phase I:
 - 3,100 American shad
 - 19,000 blueback herring
 - 15 Atlantic salmon
 - These facilities are to be installed no later than two years following passage of at least 2,960 American shad or 18,020 blueback herring in a single year at the downstream Saccarappa Project; and shall include trapping facility for the purposes of counting and sorting.
 - Phase II (replace Phase I facilities with facilities capable of passing the below listed numbers of fish):
 - 43,000 American shad
 - 263,000 blueback herring
 - 168 Atlantic salmon

²⁴ Section 18 Fishway Prescriptions are found in Appendix B of each license order and contain the same language and scheduling provisions for anadromous fish passage as the WQC.

²⁵ WQC Condition 3 – this condition also requires provisions for effectiveness studies and reporting.

²⁶ WQC Condition 5A

- These facilities shall include a counting, trapping, and sorting facility and must be operational no later than two years following:
 - Notification of Phase II restoration above Gambo by MDMR, MDIFW, and MASC; and
 - The capacity for any of the target species has been reached at the Phase I facility.

At present there are no anadromous fish passage facilities at the Little Falls Project. Given that the biological triggers that would initiate the construction of passage facilities at Little Falls have not yet been met, S.D. Warren is compliant with the WQC requirements.

Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement.

The MDEP used a variety of studies conducted during the relicensing process to arrive at the final WQC. The studies, with respect to upstream fish passage, requested by MDEP, USFWS, MDIFW, and the Presumpscot River Watershed Alliance (PRWA) include:

- A two-phased Habitat and Flow Study:
 - The first phase (Habitat and Flow Study – Bypass and Free Flowing Reaches – Phase I Habitat Mapping) of the study focused on surveying for the purpose of characterizing the available aquatic habitat under low flow conditions in the free-flowing riverine reaches.
 - The second phase of the study (Habitat and Flow Study – Bypass and Free Flowing Reaches – Phase II Flow Demonstration Report) built on information collected during the Phase I study by evaluating the minimum flows needed to meet water quality and fisheries management goals.
- A Baseline Fisheries Study (1998) that evaluated growth rates, species composition, and types of available habitat in impoundments and tailwaters, among other criteria;
- An Upstream Eel Migration Study (2000), to determine upstream migration patterns and success, as well as eel occurrence within project waters;
- A Water Quality Report (1997) that included river water quality monitoring in the riverine class sections of the Presumpscot River to aid the MDEP in determining compliance with state water quality standards, as well as a trophic state study of Dundee Pond to determine compliance with GPA Trophic State Protocol; and
- A Final Environmental Impact Statement (2002) for the Presumpscot River Projects.

Additionally, a Draft Fishery Management Plan for the Presumpscot River Drainage (2001) conducted by MDMR, MDIFW, and MASC provided insight into the management goals and objectives related to fish passage in the Presumpscot River. The biological triggers that require implementation of fish passage at the project are based on the goals set forth in this Plan.

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

Pursuant to the FERC License and WQC conditions S.D. Warren filed with FERC an Upstream American Eel Passage Plan on October 29, 2004²⁷. Following approved time extensions and consultation with the Agencies²⁸, the final FERC amended Plan was approved on February 26, 2009²⁹ and includes provisions for passage monitoring at the Cumberland Mills Dam³⁰.

Monitoring of the Little Falls Project was conducted in 2000 and again in 2005 in an effort to locate an appropriate location for eel passage facilities. Observations in both 2000 and 2005 were inconclusive, and a final siting study was completed in 2013. Permanent upstream American eel passage facilities were completed at the Little Falls Project during the 2014 season.

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.” The study (including modifications made following consultation) was executed during the summer of 2014 and submitted to FERC on April 1, 2015³¹.

Please see the 2014 Eel Passage Effectiveness Study with Agency comments:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14320365

The Study at Little Falls indicated that the eel ramp at the Little Falls Project is operated and sited appropriately and that it is effective in safely passing eels. There was one operational recommendation; that the sluice gate closest to the eel ramp be opened last and closed first during high flow events.

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 submitted to FERC on July 1, 2004 and approved on December 13, 2004³². The primary purpose of the Fish Passage Implementation Plan is to monitor the need for fish passage facilities at the project and enhance the population of anadromous species within the Presumpscot River. Requirements include:

- A schedule and format for filing status reports on the progress of anadromous fish passage efforts annually;
- A description of the specific criteria that trigger the development of fish passage facilities; and
- A schedule for installing the required fish passage.

Pursuant to the above license requirements and the approved Fish Passage Implementation Plan, S.D. Warren filed its most recent Anadromous Fish Passage Annual Report on June 30, 2017. A link to the annual report is available in Appendix A.

²⁷ 110 FERC ¶ 62,104 - Approved by FERC on February 4, 2005

²⁸ Resulting in an additional plan amendment including interim monitoring, revised methodology, and a revised schedule issued May 18, 2005 – 111 FERC ¶ 62,178.

²⁹ Following determination that effectiveness monitoring should be postponed until passage is provided at Cumberland Mills - 126 FERC ¶ 62,152.

³⁰ Non-jurisdictional dam owned by S.D. Warren; furthest downstream dam on the Presumpscot, and impacts upstream fish passage before any of the others. Cumberland Mills anadromous fish passage became operational in May, 2013, and upstream eel passage became operational in July, 2014.

³¹ Accession #20150402-5111

³² 109 FERC ¶ 62,183

Finally, WQC Conditions #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 of construction and initiation of operation. This requirement is not being implemented, as the biological triggers that will require anadromous fish passage have not yet been met.

Upstream Fish Passage

Zone 3 – Impoundment

C	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • <i>Explain why the facility does not impose a barrier to upstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural upstream movement (e.g., entrainment into hydropower turbines).</i> • <i>For riverine fish populations that are known to move upstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles.</i> • <i>Document available fish distribution data and the lack of migratory fish species in the vicinity.</i> • <i>If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.</i>
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Explain why the facility does not impose a barrier to upstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines).

Once a migrating fish has entered this zone, there is no direct connection to any facility that causes a physical barrier to upstream passage, and it therefore has no effect on upstream fish passage. The barrier to upstream passage within the confines of the Little Falls Project occurs at the upstream end of the Bypass Zone, and is discussed further in the standards discussion for that zone.

For riverine fish populations that are known to move upstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles.

The Baseline Fisheries Study (1998), conducted as part of the relicensing process for the evaluation of fish and wildlife habitat within the impoundment, indicated that fish communities within the Little Falls project impoundment are not negatively affected by normal project operations. There was no evidence of water-level fluctuations from ROR operations having any impacts on the fish communities in this zone, as evidenced by successful reproduction of fish species, well-established shoreline aquatic vegetation, and no significant areas of erosion on the shoreline. Additionally, once a migrating fish has entered this zone, there is no direct connection, within the confines of the Little Falls Project, to any facility that causes a physical barrier to upstream passage, allowing complete access to the habitat within this zone. Given this information, the Little Falls Project impoundment is managed to maintain ROR operation in accordance with the OFMP. For details about how the ROR operations are monitored and maintained see section 2 of this criterion discussion.

Document available fish distribution data and the lack of migratory fish species in the vicinity.

The Baseline Fisheries Resource Report (1998) indicated that the Little Falls Project impoundment generally supports warm water fish communities. The following are fish species typically found in the Little Falls Project impoundment:

- Smallmouth bass
- Pumpkinseed
- White sucker
- Brown bullhead
- Chain pickerel
- Banded killfish
- American eel
- Yellow perch
- Cyprinids
- Golden shiner
- Common shiner

The American eel is able to move upstream along the length of the Presumpscot River up to the North Gorham Dam with the help of upstream eel passage facilities at each of S.D. Warren's downstream projects, and downstream due to nightly generation shutdowns during downstream migration season. The American eel is the only migratory species found in this zone of the Little Falls Project.

If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

Barriers to habitat caused by dams in the Presumpscot River – constructed over 250 years ago – may have contributed to the extirpation of some migratory fish species. The current license requirements for anadromous fish passage and the installation of upstream American eel passage are steps that have been taken to increase access to habitat necessary for these species. Protection for upstream and downstream passage of American eels is already in place. Downstream dams present the first impediments to upstream fish passage, and resources to facilitate upstream fish passage are being focused on the Saccarappa Dam at river mile 11.3.

Downstream Fish Passage and Protection

Zone 1 – Tailwater

D	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.
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Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines).

Once a migrating fish has entered this zone, there is no direct connection to any facility that causes a physical barrier to downstream passage, and therefore has no effect on downstream fish passage. The barrier to downstream passage occurs at the downstream end of Zone 3, and is discussed further in the standards discussion for that zone.

For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles.

The 1997 Phase I Habitat Mapping Study indicated that the tailwater of the Little Falls Project is backwatered by the Mallison Falls impoundment, resulting in a relatively slow-flowing run habitat with depths that generally exceed 4 feet. The Mapping Study (1997) went on to state that instream and offstream cover is abundant, provided by overhanging vegetation and boulders of varying sizes, aiding in temperature control of the water. Given that it does not connect directly to a physical barrier to downstream passage, this zone does not impact access to habitat below the Little Falls Project or the sustainability of resident fish populations. Additionally, the studies conducted as part of the relicensing process and considered by MDEP for WQC issuance resulted in the development of year-round minimum flow requirements in the bypass to maintain adequate fish and wildlife habitat. Flow requirements are discussed further in the standards discussion for Zone 2.

Finally, as documented by MDMR's Draft Fishery Management Plan (2001), resident fish are defined as species that have the ability to fulfill all of their life history requirements within the river. A list of known resident fish species in the Presumpscot River is provided below, suggesting that these species can, at present, sustain all of their life cycles within the Presumpscot River.

Document available fish distribution data and the lack of migratory fish species in the vicinity.

The Phase I Habitat Mapping Study (1997) indicated that the Presumpscot River sustains a warm water fishery, with seasonal cold water opportunities in the fall and spring. The warm water species such as smallmouth and largemouth bass, white perch, and chain pickerel are naturally sustaining while the cold water species, including brook trout, brown trout, and landlocked Atlantic salmon, are primarily introduced through annual MDIFW stocking efforts. The Draft Fishery Management Plan (2001) lists the following as resident inhabitants of the Presumpscot River:

- Chain pickerel
- Smallmouth bass
- Largemouth bass
- Pumpkinseed
- Black crappie
- Yellow perch
- Brown bullhead (hornpout)
- Golden shiner
- Bridle shiner
- Common shiner
- Fallfish
- Banded killfish
- Fourspine stickleback
- White sucker
- Brook trout
- Brown trout
- Landlocked Atlantic salmon

Although there are tributaries of the Presumpscot that support wild and self-sustaining populations of brook trout, there are no self-sustaining populations of landlocked Atlantic salmon in the Presumpscot River (Wippelhauser, Brautigam, and Dube, 2001).

Migratory species known to exist in the Presumpscot include the following:

- American eel
- Alewife
- Blueback herring
- American shad
- Striped bass
- Rainbow smelt
- Atlantic salmon

Of the migratory species listed above, it is likely that only the American eel, which has access to the entire river via upstream eel passage facilities and downstream eel passage provisions at all of S.D. Warren's hydro projects, is present in this zone.

If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

This zone at the Little Falls Project is a backwatered riverine zone with no impediment to downstream travel; structures that may be responsible for any extirpation are located at the downstream end of Zone 3, and are discussed further in that section.

Downstream Fish Passage and Protection

Zone 2 - Bypassed Reach

D	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines). • For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles. • Document available fish distribution data and the lack of migratory fish species in the vicinity. • If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.
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Explain why the facility does not impose a barrier to downstream fish passage in the designated zone, considering both physical obstruction and increased mortality relative to natural downstream movement (e.g., entrainment into hydropower turbines).

Once a migrating fish has entered this zone, there is no direct connection to any facility that causes a physical barrier to downstream passage, and it therefore has no effect on downstream fish passage. The barrier to downstream passage occurs at the downstream end of Zone 3, and is discussed further in the standards discussion for that zone.

For riverine fish populations that are known to move downstream, explain why the facility does not contribute adversely to the sustainability of these populations or to their access to habitat necessary for successful completion of their life cycles.

The 1997 Phase I Habitat Mapping Study indicated that the bypass of the Little Falls Project is mostly free-flowing, with the downstream most 100 feet backwatered by the Project tailwater. The habitat types include run/riffle, pool, and rapid with an overall bedrock substrate. The Mapping Study (1997) went on to state that in the sections with run/riffle and pool habitat types instream cover provided by boulders is generally abundant, while it is sparse in the rapid habitat, and that there is little shading of this river reach provided by canopy.

Given that it does not connect directly to a physical barrier to downstream passage, this zone does not impact access to habitat below the Little Falls Dam for resident fish populations. Additionally, the studies conducted as part of the relicensing process and considered by MDEP for WQC issuance resulted in the development of year-round minimum flow requirements to maintain adequate fish and wildlife habitat. Flow requirements are discussed further in the Ecological Flow Regimes discussion for this zone.

Finally, as documented by MDMR's Draft Fishery Management Plan (2001), resident fish are defined as species that have the ability to fulfill all of their life history requirements within the river. A list of known resident fish species in the Presumpscot River is provided below, suggesting that these species can, at present, sustain all of their life cycles within the Presumpscot River.

Document available fish distribution data and the lack of migratory fish species in the vicinity.

Please see the response for Zone 1.

If migratory fish species have been extirpated from the area, explain why the facility is or was not the cause of this.

This zone at the Little Falls Project is a free-flowing riverine zone with no impediment to downstream travel; structures that may be responsible for any extirpation are located at the downstream end of Zone 3, and are discussed further in that section.

Downstream Fish Passage and Protection

Zone 3 - Impoundment

D	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).• Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not.• Describe any provisions for fish passage monitoring or effectiveness determinations that are part of the agency recommendation, and how these are being implemented.
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Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent).

WQC Condition 5 contained in the WQC issued May 1, 2003, requires that downstream anadromous fish passage to pass American shad, blueback herring, and Atlantic salmon 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 Little Falls Dam.

At present there are no anadromous fish passage facilities at the Little Falls Project. Given that the biological triggers that would initiate the construction of passage facilities at Little Falls have not yet been met, S.D. Warren is compliant with the WQC requirements.

In addition to the anadromous fish passage requirement, article 405 of the FERC issued Little Falls Project License³³, and Prescription 3 of the Section 18³⁴ Fishway Prescription issued by the USFWS, require 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 migration³⁵. The exact timing of the project shutdown is determined each year in consultation with MDMR and the USFWS. 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. S.D. Warren has included, in Appendix A, logs of the nightly shutdowns from 2014, 2015, and 2016.

Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is part of a Settlement Agreement or not.

³³ 105 FERC ¶ 61,010, issued October 2, 2003

³⁴ Section 18 of the Federal Power Act (FPA) – Appendix B of each project's license

³⁵ In this case the WQC is not the most environmentally stringent recommendation; therefore this recommendation is discussed as it is required by the FERC license and Section 18 Fishway Prescription.

A variety of studies conducted during the relicensing process were used to arrive at the final downstream fish passage requirements incorporated into the license. The studies, with respect to fish passage, requested by MDEP, USFWS, MDIFW, and the Presumpscot River Watershed Alliance (PRWA) include:

- A two-phased Habitat and Flow Study:
 - The first phase (Habitat and Flow Study – Bypass and Free Flowing Reaches – Phase I Habitat Mapping) of the study focused on surveying for the purpose of characterizing the available aquatic habitat under low flow conditions in the free-flowing riverine reaches.
 - The second phase of the study (Habitat and Flow Study – Bypass and Free Flowing Reaches – Phase II Flow Demonstration Report) built on information collected during the Phase I study by evaluating the minimum flows needed to meet water quality and fisheries management goals.
- A Baseline Fisheries Study (1998) that evaluated growth rates, species composition, and types of available habitat in impoundments and tailwaters, among other criteria;
- An Upstream Eel Migration Study (2000), to determine upstream migration patterns and success, as well as eel occurrence within project waters;
- A Water Quality Report (1997) that included river water quality monitoring in the riverine class sections of the Presumpscot River to aid the MDEP in determining compliance with state water quality standards, as well as a trophic state study of Dundee Pond to determine compliance with GPA Trophic State Protocol; and
- A Final Environmental Impact Statement (2002) for the Presumpscot River Projects.

Additionally, a Draft Fishery Management Plan for the Presumpscot River Drainage (2001) conducted by MDMR, MDIFW, and MASC provided insight into the management goals and objectives related to fish passage in the Presumpscot River. The biological triggers that require implementation of fish passage at the project are based on the goals set forth in this Plan.

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

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 submitted to FERC on July 1, 2004 and approved on December 13, 2004³⁶. The primary purpose of the Fish Passage Implementation Plan is to monitor the need for fish passage facilities at the project and enhance the population of anadromous species within the Presumpscot River. Requirements include:

- A schedule and format for filing status reports on the progress of anadromous fish passage efforts annually;
- A description of the specific criteria that triggers the development of fish passage facilities; and
- A schedule for installing the required fish passage.

³⁶ 109 FERC ¶ 62,183

Pursuant to the above license requirements and the approved Fish Passage Implementation Plan, S.D. Warren filed its most recent Anadromous Fish Passage Annual Report on June 30, 2017. A link can be found in Appendix A.

Additionally, WQC Condition 5D and 5E, and License Article 406 require that a study must 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. This requirement is not being implemented, as the biological triggers that will require anadromous fish passage have not yet been met.

Downstream eel passage shutdowns begin at sunset on September 1 each year and last for 8 hours each night until October 31. Timing of the shutdowns is determined each year in consultation with MDMR and USFWS. See attached email communications from MDMR and USFWS, as well as station logs documenting the nightly shutdowns for 2014, 2015, and 2016, provided in Appendix A.

Watershed and Shoreline Protection

Zone 1 – Tailwater AND Zone 2 – Bypassed Reach

E	1	<p><u>Not Applicable/De Minimis:</u></p> <ul style="list-style-type: none">• <i>If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the project boundary).</i>• <i>Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.</i>
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If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the project boundary).

The Little Falls Project is a relatively small project with only 29 acres inside the Project boundary. S.D. Warren has limited ownership over lands surrounding the Project, and those properties S.D. Warren does own include developed areas for public access and recreation managed under provisions in the approved Recreation Management Plan required under license article 409 and the approved Historic Properties Management Plan required under license article 411. These properties and those properties that S.D. Warren does not own inside the project boundary are also regulated by the relevant municipalities under the [Mandatory Shoreland Zoning Act \(MSZA\)](#)³⁷.

Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

There is no requirement in the Little Falls Project license or WQC for a Shoreline Management Plan. Commission staff considered this requirement and ruled that such a plan is not necessary, explaining in Section 4.3.5 of the Draft Environmental Impact Statement (DEIS) that “a SMP is typically required only for major projects when there is a need to resolve a current resource issue (e.g., when a threatened or endangered species is present near areas of project recreational use)... Licensing the project as proposed, with staff’s recommendations and other agency conditions, will adequately protect, enhance, and mitigate damages to fish and wildlife, by providing for run-of-river operation, management of impoundment levels, and fish passage. Therefore, we will not require development of such a plan.” In addition, protections are already provided under the MSZA program discussed above. The MSZA requires municipalities to adopt, administer, and enforce local ordinances that regulate land use activities in the shoreland zone. The shoreland zone is comprised of all land areas within 250 feet, horizontal distance, of the normal high-water line of any great pond or river, the upland edge of a coastal wetland, including all areas affected by tidal action, and the upland edge of defined freshwater wetlands; and all land areas within 75 feet, horizontal distance, of the normal high-water line of certain streams.

³⁷ The purposes of the MSZA include, to prevent and control water pollution, to protect fish spawning grounds, bird and wildlife habitat, to protect buildings and lands from flooding and accelerated erosion, to protect archeological and historic resources, to protect commercial fishing and maritime industries, to protect freshwater and coastal wetlands, to control building sites, placement of structures and land uses, to conserve shore cover, and visual as well as actual points of access to inland and coastal waters, to conserve natural beauty and open space, and to anticipate and respond to the impacts of development in shoreland areas.

License Article 412(a) addresses some aspects of shoreline management by granting permission to the licensee to authorize certain uses and occupancy of project lands and waters without prior approval of the Commission. The authority of the licensee under this Article extends only to uses consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project. License Article 412(b) outlines the uses of project lands that the licensee may grant permission for as landscape plantings; non-commercial piers, landings, and boat docks serving single-family type dwellings, and that cannot accommodate more than 10 watercraft at a time; structures that provide erosion control or protect existing shoreline, such as embankments, bulkheads, and retaining walls; and food plots and other wildlife enhancement. Before granting permission for installation of bulkheads, embankments, and retaining walls the licensee is responsible for inspecting the site and considering if planting vegetation or installing riprap would be sufficient before determining that the proposed construction is necessary; and, that the proposed construction would not change the basic contour of the reservoir shoreline.

A hyperlink to the most recent FERC Environmental Inspection Report, which required no follow-up actions with regard to watershed and shoreline protection, is available in Appendix A.

Watershed and Shoreline Protection

Zone 3 – Impoundment

E	2	<u>Agency Recommendation:</u> <ul style="list-style-type: none">• Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline Management Plans).• Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.
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Provide copies or links to any agency recommendations or management plans that are in effect related to protection, mitigation, or enhancement of shoreline surrounding the facility (e.g., Shoreline

Please see Zones 1 and 2 above.

For this zone specifically, License Article 404 requires the development of an OFMP. The OFMP includes provisions for maintaining the run-of-river operation of the Project and establishes a reporting structure for planned and unplanned deviations of the impoundment level. Reports regarding the deviation of impoundment level must include the cause, severity, and duration of the deviation, post incident monitoring for fish strandings and erosion, as well as:

- Operational data necessary to determine compliance;
- Description of corrective measures implemented, both at the time of the incident, and in the future; and
- Comments or correspondence received from MDEP and USFWS.

Provide documentation that indicates the facility is in full compliance with any agency recommendations or management plans that are in effect.

S.D. Warren maintains full compliance with the OFMP (see signed statement provided to LIHI as a separate document). A hyperlink to the most recent Environmental Inspection Report, which required no follow-up actions with regard to watershed and shoreline protection, is available in Appendix A.

Threatened and Endangered Species Protection

(All Zones)

F	1	<p><u>Not Applicable / De Minimis Effect:</u></p> <ul style="list-style-type: none"> • Document that there are no listed species in the facility area or affected riverine zones downstream of the facility. • If listed species are known to have existed in the facility area in the past but are not currently present, explain why the facility was not the cause of the extirpation of such species. • If the facility is making significant efforts to reintroduce an extirpated species, describe the actions that are being taken.
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Document that there are no listed species in the facility area or affected riverine zones downstream of the facility.

The Final Environmental Impact Statement from 2002 clearly states that “No federally listed endangered or threatened fish species were encountered during either the 1997 fisheries survey or the 2000 eel study, and none are believed to occur in the vicinity of these projects.” By letter dated May 3, 2001, the FWS provided a list of federally threatened or endangered species that are known to occur in the state of Maine, which included the Atlantic salmon and shortnose sturgeon, however, the FWS indicated that only one federally listed threatened or endangered species, the small whorled pogonia (see section 4.3.3 of the 2002 FEIS), is known to occur in the vicinity of the five Presumpscot River projects. There are no threatened or endangered species in this zone as stated in the 1997 Rare, Threatened, and Endangered Species Study.”

S.D. Warren is not aware of any recent studies that would indicate new threatened or endangered species within the Little Falls Project vicinity. The 1997 Rare, Threatened, and Endangered Species Study identified the following target species as potentially occurring in the Presumpscot River:

Species	1997 State Rank	2017 State Rank
Brook floater mussel	Special Concern	Threatened
Squawfoot mussel	Special Concern	Not listed
Small whorled pogonia	S2 – Endangered (Federally threatened)	S2
Variegated horsetail	S3	Not listed
Water awlwort	S2	Not listed
Spicebush	S3	S3
Mountain laurel	S3	S2
Vasey’s pondweed	S1 – Endangered	S2
Spotted pondweed	S1 - Threatened	S1
Wood turtle	Not stated	Not listed
Bald eagle	Not stated	Not listed

The table above incorporates a state designated ranking system for rare, threatened, and endangered species as follows:

- S1 – Critically imperiled in Maine

- S2 – Imperiled in Maine (6 – 20 occurrences)
- S3 – Rare in Maine (20 – 100 occurrences)
- S4 – Apparently secure in Maine
- S5 – Demonstrably secure in Maine
- SH – Known historically from Maine, but not verified in the past 20 years
- SX – Apparently extirpated from Maine
- SU – Under consideration for assigning rarity status

During the 1997 Rare, Threatened and Endangered Species Study the only target species that occurred on project land was the small-whorled pogonia, found in the Dundee Project impoundment zone; protection measures are in place for this plant, and are discussed in detail in the Dundee Project's application. No other threatened or endangered species have been observed.

If listed species are known to have existed in the facility area in the past but are not currently present, explain why the facility was not the cause of the extirpation of such species.

The 1997 Rare, Threatened, and Endangered Species Study indicated that the brook floater (*Alasmodonta varicose*) was listed by the State of Maine as a species of special concern. In 2007 the MDIFW listed the brook floater freshwater mussel as threatened. According to the Rare, Threatened, and Endangered Species Study (1997) there is one historical reference to the brook floater occurring in Westbrook, which is assumed to mean the Presumpscot River. A 1993 survey found brook floater mussels in upstream sections of the Pleasant River (a tributary of the Presumpscot), and none in the Little River Tributary. At that time, the Presumpscot River was not considered to have appropriate habitat, and was therefore not surveyed. The 1997 Rare, Threatened and Endangered Species Study did not find any brook floater mussels in the main stem of the Presumpscot River.

If the facility is making significant efforts to reintroduce an extirpated species, describe the actions that are being taken.

There are currently efforts being made by MDIFW and MDMR to reintroduce migratory fish species to upstream reaches of the Presumpscot River by implementing phased upstream passage facilities at the Presumpscot River hydro projects, as outlined in the Draft Fishery Management Plan (2001) and as required by WQC Condition #5 and Article 408 of the FERC license. S.D. Warren is compliant with all WQC conditions and FERC license requirements; the biological triggers that would initiate installation of upstream fish passage facilities at the Mallison Falls Project have not yet been met.

Cultural and Historic Resources Protection

(All Zones)

G	2	<p><u>Approved Plan:</u></p> <ul style="list-style-type: none">• <i>Provide documentation of all approved state, provincial, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility.</i>• <i>Document that the facility is in compliance with all such plans.</i>
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Provide documentation of all approved state, provincial, federal, and recognized tribal plans for the protection, enhancement, and mitigation of impacts to cultural and historic resources affected by the facility.

License Article 410 requires the development 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, 2005³⁸.

Hyperlinks to pertinent documents are available in Appendix A.

Document that the facility is in compliance with all such plans.

There are three historic sites located within the Little Falls Project area: the Cumberland and Oxford Canal; the Oriental Powder Mill Complex, which encompasses land in both the Little Falls Project area and the Gambo Project area; and archeological site 8.19. The Project in its entirety is subject to the requirements of the PA and the HPMP. 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 that is substantially the same as the previous report filed annually by the license anniversary. The second report is submitted to FERC and SHPO. The most recent report was filed on January 26, 2017³⁹; a hyperlink is available in Appendix A.

³⁸ 112 FERC ¶ 62,113

³⁹ Report is filed as privileged

Recreational Resources

ALL Zones

H	2	<p><u>Agency Recommendation:</u></p> <ul style="list-style-type: none">• Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations.• Document that the facility is in compliance with all such recommendations and plans.
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Document any comprehensive resource agency recommendations and enforceable recreation plan that is in place for recreational access or accommodations.

FERC License Article 408 and Water Quality Certificate Condition #7 require the development of a Recreational Facility Enhancement Plan (RFEP). The requirements for the RFEP issued in the FERC license and the WQC are generally the same, with only minor differences. Collectively, the requirements include:

- Establishing and maintaining a canoe portage trail;
- Assist Gorham Trails in the development of parking, signage, and access for a carry-in boat launch at the Gorham Land Trust (now Presumpscot Regional Land Trust – PRLT) Property off of Tow Path Road; and
- Donate approximately 0.8 acres of land on the island located off-shore of the Hawkes Property to the Gorham Land Trust (PRLT)⁴⁰.

The RFEP was approved by FERC on February 24, 2006.⁴¹ The approved RFEP required the addition of parking for angler use of the portage trail and bypass. The MDEP, Maine Department of Conservation (MDOC), MDIFW, MDMR, Maine Historic Preservation Commission (MHPC), the National Park Service (NPS), the Towns of Gorham and Windham, Gorham Trails, the Casco Bay Estuary Project, and the USFWS were all consulted during development of the final RFEP. Comments made by these agencies and organizations were incorporated into the RFEP and no objections to the final plan were raised.

Additionally, Article 409 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 developed in consultation with MDOC, MDEP, MDIFW, MDMR, and USFWS.

Document that the facility is in compliance with all such recommendations and plans.

The RFEP was approved by FERC on February 24, 2006⁴², with the addition of parking for angler use of the portage trail and bypass. The Recreation Use Monitoring Plan was filed with FERC on August 27,

⁴⁰ PRLT declined the offer in a letter dated July 22, 2011; the requirement was removed from the WQC in by Minor Revision dated November 30, 2012, see Appendix A.

⁴¹ 114 FERC ¶ 62,187

⁴² 114 FERC ¶ 62,187

2013⁴³, supplemented on December 20, 2013, and modified and approved by FERC on March 11, 2014⁴⁴. Links to the FERC approvals of the RFEP and the Recreation Use Monitoring Plan are available in Appendix A.

Ordering paragraph C of the March 11, 2014 Order required submittal of an Interim Recreation Monitoring Report; the report was submitted to FERC on August 1, 2014. A Final Recreation Monitoring Report dated March 11, 2015⁴⁵ and submitted to FERC on March 23, 2015 found the recreational facilities to be adequately meeting public demand. A link to the Final Recreation Monitoring Report can be found in Appendix A.

Additionally, the most recent Environmental Inspection conducted by FERC, on July 30, 2013 found that all recreational facilities are in compliance with the approved plans. A link to the Environmental Inspection Report is available in Appendix A.

All recreational facilities associated with the Little Falls Project, with the exception of the downstream portage take-out/put-in location, were completed on or before December 28, 2014. S.D. Warren has been hampered in finding a suitable location given the listing of the abandoned Keddy Mill as an Environmental Protection Agency (EPA) Superfund site. The Keddy Mill, not owned by S.D. Warren, is adjacent to the Little Falls Project and runs along the left side of the Presumpscot River. The Keddy Mill site has been in the Remedial Investigation and Feasibility Study stage since 2015 to determine the extent of the contamination and risks it poses to the environment and human health.. A link to the EPA information page for this site is available in Appendix A.

The FERC on March 31, 2015 issued an Order granting an EOT⁴⁶, until December 31, 2017, to complete this last component of the Recreation facility at Little Falls. S. D. Warren reports progress annually by December 31, in a filing with the FERC. A link to the most recent status report is in Appendix A.



Figure 2. Signage



Figure 3. Canoe portage

⁴³ Accession #20130827-5159

⁴⁴ 146 FERC ¶ 62,175

⁴⁵ Revised on March 13, 2015 to correct clerical errors

⁴⁶ Accession #20150303-3023



Figure 4. Kiosk and PRLT map



Figure 5. Portage sign adjacent to ramp



Figure 6. Entrance road from boat launch area

V. SWORN STATEMENT AND WAIVER

As an Authorized Representative of S.D. Warren Company, the Undersigned attests that the material presented in the application is true and complete.

The Undersigned acknowledges that the primary goal of the Low Impact Hydropower Institute's Certification Program is public benefit, and that the LIHI Governing Board and its agents are not responsible for financial or other private consequences of its certification decisions.

The undersigned further acknowledges that if certification of the applying facility is issued, the LIHI Certification Mark License Agreement must be executed prior to marketing the electricity product as LIHI Certified.

The undersigned Applicant further agrees to hold the Low Impact Hydropower Institute, the Governing Board and its agents harmless for any decision rendered on this or other applications, from any consequences of disclosing or publishing any submitted certification application materials to the public, or on any other action pursuant to the Low Impact Hydropower Institute's Certification Program.

September 1, 2017



Brad Goulet

Hydrostation Manager

Sappi North America

VI. CONTACTS

Project Name: Little Falls
FERC Project No.: P-2941
LIHI Cert. No.: N/A

Project Owner/Operator:

Name and Title: S.D. Warren Company d/b/a Sappi North America (Owner)
Company: S.D. Warren Company dba Sappi North America
Phone: 207-856-4083
Email address: brad.goulet@sappi.com
Mailing Address: P.O. Box 5000, 89 Cumberland Street, Westbrook, ME 04092

Consulting firm that manages LIHI program participation (if applicable):

Name and Title: Peter Drown, President
Company: Cleantech Analytics LLC
Phone: (207) 951-3042
Email address: peter.drown@cleantechanalytics.com
Mailing Address: 6717 Cub Run Court, Centreville, VA 20121

Party responsible for compliance with LIHI program requirements:

Name and Title: Brad Goulet/Hydrostation Manager
Phone: 207-856-4083
Email address: brad.goulet@sappi.com
Mailing Address: PO Box 5000, 89 Cumberland St, Westbrook, ME 04092

Party responsible for accounts payable:

Name and Title: Brad Goulet/Hydrostation Manager
Phone: 207-856-4083
Email address: brad.goulet@sappi.com
Mailing Address: PO Box 5000, 89 Cumberland St, Westbrook, Me 04092



Project Owner/Authorized Representative Signature

Date

VII. REFERENCES

- Devine Tarbell & Associates, Inc. (2008). Final Operations and Flow Monitoring Plan – Presumpscot River Projects. Prepared for S.D. Warren Company, Westbrook, Maine. April, 2007. (*Revised December, 2008*).
- Duke Engineering & Services (DE&S). (1997). Rare, Threatened, and Endangered Species Study, S.D. Warren Company Presumpscot River Projects. Prepared for S.D. Warren Company. October, 1997.
- Federal Energy Regulatory Commission (FERC). (2002). Final Environmental Impact Statement – Presumpscot River Projects, Maine. June 26, 2002.
- Federal Energy Regulatory Commission (FERC). (2003). Order Issuing Subsequent License Project No. 2941-002. October 2, 2003.
- Federal Energy Regulatory Commission (FERC). (2013). Environmental Inspection Report – Little Falls. July 30, 2013.
- Ichthyological Associates Inc. and Duke Engineering & Services. (1998). A Baseline Investigation of the Fisheries Resources in the Vicinity of the Dundee, Gambo, Little Falls, Mallison, and Saccarappa Hydroelectric Projects, FERC Project Nos. 1942, 2931, 2941, 2932, and 2897, on the Presumpscot River, Cumberland County, Maine. Prepared for S.D. Warren Company, Westbrook, Maine. April 17, 1998.
- Kleinschmidt Associates. (1997). Habitat and Flow Study Bypass and Free Flowing Reaches – Phase I Habitat Mapping Final Report. Prepared for S.D. Warren Company, Westbrook, Maine. December 1997.
- Kleinschmidt Associates. (1998). Habitat and Flow Study Bypass and Free Flowing Reaches – Phase II Flow Demonstration Report. Prepared for S.D. Warren Company, Westbrook, Maine. November 1998.
- Maine Department of Agriculture, Conservation, and Forestry (MDACF). (2013). Maine Natural Areas Program: Small Whorled Pogonia. Accessed from <http://www.maine.gov/dacf/mnap/features/isotmed.htm> on 2 Feb. 2017.
- Maine Department of Environmental Protection (MDEP). (2014). DRAFT 2014 Integrated Water Quality Monitoring and Assessment Report Appendices: Acronyms, HUC Maps, Definitions, and Integrated Lists of Surface Waters. Retrieved from

<https://www1.maine.gov/dep/water/monitoring/305b/2014/draft-appendices.pdf> on January 31, 2017.

Presumpscot River Plan Steering Committee, Presumpscot River Plan Fisheries Subcommittee, and Land & Water Associates. (2002). Fisheries Conditions, Issues, and Options for the Presumpscot River: A Background Paper for the Development of a Plan for the Future of the Presumpscot River. Prepared for The Casco Bay Estuary Project. May 28, 2002.

S.D. Warren Co. (d/b/a Sappi North America). (2007). Historic Properties Management Plan – Little Falls Project (FERC No. 2941). October, 2004.

S.D. Warren Co. (d/b/a Sappi North America). (2015). Recreation Monitoring Report. March 11, 2015. *(Revised March 13, 2015).*

S.D. Warren Co., US Dept. of the Interior, US Fish and Wildlife Service, Maine Dept. of Marine Resources, Conservation Law Foundation, Friends of the Presumpscot River, and The City of Westbrook, Maine. (2016). Settlement Agreement for the Saccarappa Project (FERC No. 2897) License Surrender. November 15, 2016.

Wilson, D.B., and Bourque, B.J. (2000). Phase II Archeological Survey Report for Five Sites on the Presumpscot River. Prepared for S.D. Warren Company, Westbrook, Maine. February 21, 2000.

Wippelhauser, G. S., Brautigam, F. C., and Dube, N. R. (2001). Draft Fishery Management Plan for the Presumpscot River Drainage. December, 2001.

Appendix A

Hyperlinks and Supporting Documentation

2017 Anadromous Fish Passage Annual Report:

http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20170630-5055

Drawdown Completion Reports:

2016: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14456606

FERC Acknowledgement: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14461637

2017: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14581091

FERC Acknowledgement: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14591732

Environmental Inspection Report:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14147156

Historic Properties Management Plan: (Privileged-See Non-Public Appendix)

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=4242416

- FERC Approval of HPMP:
https://elibrary.ferc.gov/idmws/file_list.asp?document_id=4328991
- Most Recent Annual Report Required by HPMP:(Privileged-See Non-Public Appendix)
https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14533439

License Order:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=4140820

- License amendment orders:
20170214: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14539297
20160617: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14470725
- Fishway Prescription amendment:
20160324: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14441500

Programmatic Agreement:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=4186718

FERC Approval of Recreation Use Monitoring plan:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14193427

- Final Recreation Monitoring Report:
https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14318681

Most Recent Annual Recreation Facilities Status Report for Little Falls:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14518703

Water Quality Certification:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=4103478

- WQC Amendments:
 - 2016.05.27: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14465627
 - 2016.12.27: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14525944
 - 2012.11.30 (Begins on .pdf page 103 of document):
https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14074856
 - 2008 amendments are attached in their entirety to this appendix.

1999 Endangered Species Study, Eel Passage Plan, and Habitat Flow Study:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=1915727

2001 USFWS Species Listing:

http://elibrary.ferc.gov/idmws/file_list.asp?document_id=2151773

2004 Operations and Flow Monitoring Plan:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=4221195

- FERC Approval of OFMP:
https://elibrary.ferc.gov/idmws/file_list.asp?document_id=4246361
- 2008 Revised OFMP and MDEP Approval:
https://elibrary.ferc.gov/idmws/file_list.asp?document_id=13670041
- 2009 FERC Order Modifying Operations and Flow Monitoring Plan (based on 2008 MDEP approval): <https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11966280>

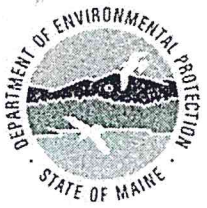
2015 FERC Order Approving Upstream Eel Passage:

<https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13919168>

EPA Information Page for Keddy Mill Superfund Site:

<https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0106078&msspp=med>

2008 Modification and Condition Compliance - WQC
Condition 3



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

DEPARTMENT ORDER

IN THE MATTER OF

S.D. WARREN COMPANY)	WATER QUALITY CERTIFICATION
Gorham, Windham, and Westbrook)	
Cumberland County)	
PRESUMPCOT RIVER HYDRO PROJECTS)	MODIFICATION AND
#L-19713-33-H-C (Approval))	CONDITION COMPLIANCE

Pursuant to the provisions of Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection has considered the application of S.D. WARREN COMPANY with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. Application Summary

S.D. Warren Company ("Warren") has submitted an upstream eel passage plan for the Presumpscot River Hydro Projects, in compliance with Special Condition 3(B) of Department Order #L-19713/19714/19715/19716/19717-33-E-N dated April 30, 2003. This Order was issued pursuant to Section 401 of the Clean Water Act in conjunction with the relicensing of the Presumpscot River Hydro Projects (Nos. 2942, 2931, 2941, 2932, and 2897) by the Federal Energy Regulatory Commission.

2. Certification Condition

Condition 3 of the April 30, 2003 Department Order reads as follows:

"3. UPSTREAM EEL PASSAGE

A. Upstream eel passage facilities shall be installed and operational at all projects within 2 years following the issuance of a new FERC license for the projects.

B. The applicant shall, at least 60 days prior to construction or upon such other schedule as established by FERC, submit final design and operational plans for the upstream eel passage facilities required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of DEP prior to construction. In reviewing the plans, the DEP will consider the recommendations of DMR.

C. The applicant shall, in consultation with the Department of Marine Resources, conduct a study or studies to determine the effectiveness of the upstream eel passage facilities required by this condition.

- D. The applicant shall, concurrent with the commencements of facilities operation or upon such other schedule as established by FERC, submit plans for a study or studies to determine the effectiveness of the upstream eel passage facilities required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive approval of the DEP prior to implementation. In reviewing these plans, the DEP will consider the recommendations of DMR.
- E. The applicant shall, in accordance with a schedule set forth in the study plan or upon such other schedule as established by FERC, submit the results of any upstream eel passage effectiveness studies, along with any recommendations for changes in design and/or operation of any passage facilities installed pursuant to this condition.
- F. The applicant shall be responsible for taking such actions as are needed to effectively pass eels upstream through the projects. After reviewing the study results, and after notice to the applicant and opportunity for public hearing, the Department reserves the right to require reasonable changes in the design and/or operation of the upstream eel passage facilities installed pursuant to this condition as may be deemed necessary to effectively pass eels upstream through the projects.”

3. Condition Compliance Filing

In response to the condition cited above and to related articles in the new FERC licenses for the projects, by filing dated October 29, 2004,¹ Warren submitted an Upstream American Eel Passage Plan for the Presumpscot River Hydro Projects², prepared in consultation with the DEP, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, the Maine Atlantic Salmon Commission, and the U.S. Fish and Wildlife Service.

4. Description of Proposed Plan

Under the plan, Warren proposed to install interim upstream eel passage facilities at all five projects prior to May 15, 2005 for the 2005 upstream eel migration season in order to determine the best location and type of facilities to be installed as permanent upstream passage facilities. The interim passage facilities would consist of an artificial substrate (Enkamat) and attraction flow pumps and spray bars at one or two locations at each project. The Enkamat would either be affixed to an existing dam or gate structure or to a temporary plywood or metal trough. Except where limited by access constraints and safety considerations, a collection bucket would be installed as part of each interim facility.

¹ Under the terms of the new FERC licenses for the projects, an upstream American eel passage plan was due to be filed within 180 days of the effective date of the license (i.e., by April 1, 2004). By order dated March 19, 2004, FERC approved Warren request that the deadline for filing the upstream eel passage plan be extended to July 2, 2004, to accommodate further agency consultation. On July 2, 2004 and August 30, 2004, Warren filed additional requests for extensions until September 1, 2004 and November 1, 2004, respectively, to accommodate further agency consultation.

² Saccarappa Project, Little Falls Project, Mallison Falls Project, Gambo Project, and Dundee Project.

Under the plan, Warren proposed to monitor upstream eel passage at all projects from May 15 through August 15, 2005, using a combination of video monitoring and visual observations. Warren further proposed that, based on the results of the 2005 monitoring, final facility locations and design drawings would be prepared and submitted to DEP and FERC by February 1, 2006, with permanent upstream eel passage facilities to be installed and operational by May 15, 2006.

Finally, under the plan, Warren proposed that, following the installation of permanent upstream eel passage facilities, video monitoring and nighttime manual observations would be conducted for four weeks at each project during the peak migration period (expected to be approximately June 15 to July 15) to verify elver use of the facilities.

5. FERC Approvals/Revisions to Proposed Plan

- a. FERC Approval of Interim Plan. By Order dated February 4, 2005, FERC approved the interim upstream eel passage plan for the Presumpscot River Hydro Projects as submitted by Warren.
- b. Revised Interim Plan. By filing dated April 22, 2005, Warren submitted a Revised American Eel Upstream Passage Plan for the Presumpscot River Hydro Projects to DEP and FERC, prepared after additional consultation with DEP, DIFW, DMR, MASC, and USFWS.

Under the revised plan, Warren proposed to install an interim upstream eel passage facility at the Dundee Project consisting of an entrance ramp with an artificial substrate (both Enkamat and tapered pegs), attraction flow and a collection bucket near the expected entrance to the permanent passage facility, instead of Enkamat affixed to the dam spillway.

Under the revised plan, Warren also proposed to replace video monitoring of the interim passage facilities with a combination of visual monitoring on up to eight nights during the peak migration period, and test releases of elvers collected at the Saccarappa Project to assess the location of elver migration and passage success at each project.

Finally, under the revised plan, Warren proposed to distribute a more detailed monitoring plan for the permanent upstream eel passage facilities along with the final design plans for these facilities.

- c. FERC Approval of Revised Interim Plan. By Order dated May 18, 2005, FERC approved the revised interim upstream eel passage plan for the Presumpscot River Hydro Projects as submitted by Warren.
- d. Extension of Filing Deadline. By Order dated March 2, 2006, FERC approved Warren's request that the deadline for filing the results of the 2005 monitoring of the interim upstream eel passage facilities and proposed design plans for the 2006 installation of

permanent facilities be extended to March 15, 2006, in order for Warren to adequately review and respond to agency comments.

- e. 2005 Monitoring Results and 2006 Passage Plan. By filing dated March 15, 2006, Warren submitted a report titled 2005 Interim Upstream American Eel Passage Plan Monitoring Results and 2006 Final Passage Design and Plan, prepared in consultation with DEP, DIFW, DMR, MASC, and USFWS.

Warren reported that siting ramps and/or interim passage facilities were installed at all project dams during the 2005 upstream eel migration season. The number and approximate length of elvers captured in the collection bucket at each dam were recorded, and up to 10 nights of visual observations were made at each dam to determine the location and type of permanent upstream eel passage facilities.

Based on the 2005 monitoring results, Warren developed a plan for the design, installation, operation, and effectiveness testing of permanent upstream eel passage facilities at the Presumpscot River Hydro Projects.

Under the plan, Warren proposed to install two prefabricated upstream eel passage ramps ("eelways") at the Saccarappa Project, one eelway at the Mallison Falls Project, one eelway at the Gambo Project, and an eel lift at the Dundee Project. Each eelway would consist of a 2-foot-wide inclined metal or wood ramp with artificial Enkamat and tapered peg substrates, attraction flow pumps and spray bars, and would be located in areas where eels have been observed migrating upstream. The Dundee eel lift would consist of a short eelway leading to a moveable hopper, inclined hopper rails ending at the top of the dam, an attraction flow pump and spray bars, and would be located at the east end of the dam spillway. Each upstream eel passage facility would be installed by May 15, 2006 and each year thereafter, subject to river flow conditions, and would be operated through August 15.

Under the plan, Warren further proposed to again monitor elver movement at the Little Falls Project during 2006 to determine where elvers congregate to pass through the project and where an upstream passage facility should be located. In support of this proposal, Warren stated that monitoring in 2000 and 2005 had yet to determine where elvers were passing at the project.

Under the plan, Warren also proposed to undertake qualitative effectiveness monitoring through nighttime observations to confirm that elvers are successfully utilizing the new upstream passage facilities. This monitoring would occur in 2006 for four weeks at each project during the peak migration period.

Finally, under the plan, Warren proposed to consult with DMR and USFWS on the results of the 2006 monitoring and to file a final report on the results of the monitoring and any proposed revisions to the plan with FERC by February 1, 2007.

Little
Falls

- f. Revised 2005 Monitoring Results and 2006 Passage Plan. By filing dated June 1, 2006, Warren submitted a report titled Revised 2005 Interim Upstream American Eel Passage Plan Monitoring Results and 2006 Final Passage Design and Plan, prepared after additional consultation with DMR and USFWS.

Under the revised plan, Warren proposed to install permanent upstream eel passage facilities at the Saccarappa, Mallison Falls, and Gambo Projects by June 15, 2006 and at the Dundee Project by July 15, 2006, and to install and operate these facilities each year thereafter from June 1 to September 15, instead of from May 15 to August 15 as previously proposed.

Under the revised plan, Warren also proposed to provide 2 to 3 gallons per minute of transport water for the eel passage facilities via spray bars at the exit of the facilities and an additional 10 to 15 gallons per minute of additional attraction flow at the entrance to the facilities, and to evaluate during 2006 whether additional flows, as recommended by DMR and USFWS, are needed.

Under the revised plan, Warren further proposed to collect quantitative monitoring data (numbers and lengths) for the eels using the Saccarappa, Gambo and Dundee upstream passage facilities, in addition to the qualitative monitoring previously proposed. Warren stated that quantitative data would not be collected at the Mallison Falls facility for safety reasons.

Finally, under the revised plan, Warren proposed to make reasonable efforts to accommodate agency requests for modifications to the permanent passage facilities based on the results of the 2006 monitoring.

- g. Status Report. By filing dated April 30, 2007, Warren reported that, due to high-flow events, the eelways at the Saccarappa, Gambo and Mallison Falls Projects were not installed until May, June and August of 2006, respectively, and that the Dundee eel lift was not operational during 2006. Warren further reported that, due to the delay in the installation of the eel passage facilities, only limited effectiveness monitoring was conducted during 2006. Finally, Warren reported that all permanent upstream eel passage facilities were scheduled to be fully installed and operational for the 2007 migration season.
- h. Extension of Filing Deadline. By Order dated September 7, 2007, FERC approved Warren's request that the deadline for filing a report on the results of upstream eel passage monitoring be extended to February 1, 2008, in order to allow the previously proposed effectiveness monitoring to be continued during 2007.
- i. Further Extension of Filing Deadline. By Order dated February 15, 2008, FERC approved Warren's request that the deadline for filing a report on the results of upstream eel passage monitoring be extended to April 1, 2008, in order to assure adequate time for resource agency review and consultation on the report.

- j. 2007 Eel Passage Report. By filing dated April 2, 2008, Warren submitted a report on the 2007 installation of permanent upstream eel passage facilities, final facility design plans, and the results of 2007 effectiveness monitoring of these facilities, prepared in consultation with DEP, DIFW, DMR, MASC, and USFWS.

In its report, Warren stated that, during 2007, it installed and operated permanent upstream eel passage facilities at the Saccarappa Project (a west spillway aluminum ramp eelway and an east spillway wooden ramp spillway), the Mallison Falls Project (a single aluminum ramp eelway), the Gambo Project (a single wooden ramp eelway) and the Dundee Project (an inclined eel lift). The eelways were all installed and became operational on June 18, 2007, while the Dundee eel lift did not become operational until August 12, 2007.

In its report, Warren stated that successful eel passage was monitored at all installed passage facilities during 2007, and that no passage delays were observed. Warren also stated that data collected in 2005, 2006 and 2007 has been used to properly site the passage facilities at each project and that passage effectiveness had been demonstrated in all three years. Warren further stated that the constructed eel passage facilities supplement existing passage routes along the spillways and abutments of the project dams and that, as a consequence, there are numerous locations at each project where elvers have been observed passing the projects. Based on these results, Warren stated that it is not proposing any further effectiveness monitoring.

Little Falls
In its report, Warren stated that, despite efforts in 2007 and in previous years, it has been unable to locate where elvers pass upstream at the Little Falls Project, but that it can be assumed that elvers are passing the project because of the large numbers of elvers collected at the upstream Gambo and Dundee Projects. Warren also stated that, without information on where elvers are passing, it is unable to determine a suitable location for the installation of a passage facility. After further consultation with DMR and USFWS, Warren agreed to undertake further monitoring every three years in an effort to determine where elvers are passing at the Little Falls Project.

6. Consultation Comments

DMR and USFWS have approved the location, design and operating schedule of upstream eel passage facilities at the Saccarappa, Mallison Falls, Gambo and Dundee Projects, as proposed and installed by Warren.

*** In comments dated May 12, 2006 on the 2005 Monitoring Results and 2006 Passage Plan, DMR and USFWS stated that Warren proposed a number of modifications in the final design plans for eel passage facilities that differed from the designs/operations of the interim passage facilities used in 2005, and that these changes "represent an experiment that will require post-implementation monitoring to determine their effectiveness." DMR and USFWS again recommended an effectiveness monitoring program based on quantitative eel counts and collection of length data at each project to determine passage efficiency.

In comments dated March 27, 2008 on the 2007 eel passage report, DMR stated that it has either required internal effectiveness studies, or maintained a trap so that eels can be enumerated and biological data collected, at all projects where upstream eel passage has been installed. DMR also stated that upstream eel passage effectiveness studies might be more productive at the Presumpscot River Projects when upstream passage is secured at the Cumberland Mills Dam (located below the licensed Presumpscot River Hydro Projects).

7. Discussion

Based on its independent review, and except as discussed below, the Department has determined that Warren's upstream American eel passage plan for the Presumpscot River Hydro Projects satisfactorily addresses the requirements of Special Condition 3(B) of the April 30, 2003 water quality certification for the projects with respect to final design and operational plans for upstream eel passage facilities.

Condition 3(A) of the April 30, 2003 water quality certification requires that upstream eel passage facilities be installed and operational at all five Presumpscot River Hydro Projects, including the Little Falls Project, within 2 years following the issuance of a new FERC license for the projects. However, as discussed above, despite several years of effort, Warren has been unable to determine where eels are passing upstream at the Little Falls Project and thus has been unable to determine a suitable location and design for an upstream passage facility here. Warren's proposal to undertake further monitoring every three years in an effort to determine where eels are passing upstream at the Little Falls Project, and to submit final design and operational plans for an upstream eel passage facility at the Little Falls Project at a later date, is reasonable, and Condition 3(A) should be modified accordingly, subject to the requirement that Warren submit a report detailing the results of its monitoring efforts by December 31 of each year in which the monitoring occurs. Condition 3(A) should also be modified to recognize that upstream eel passage facilities were installed and operational at the Saccarappa, Mallison Falls, Gambo and Dundee projects in 2006/2007.

Based on its independent review, and as discussed below, the Department has further determined that Warren's upstream American eel passage plan for the Presumpscot River Hydro Projects does not satisfactorily address the requirements of Special Conditions 3(C) and 3(D) of the April 30, 2003 water quality certification for the projects with respect to studies to determine the effectiveness of the required upstream eel passage facilities.

Condition 3(C) of the April 30, 2003 water quality certification requires that Warren conduct a study or studies to determine the effectiveness of the upstream eel passage facilities required by Condition 3(A). As discussed above, Warren states that successful eel passage was monitored at all installed facilities during 2007 with no observed passage delays and that, based on these results, it is not proposing any further effectiveness monitoring. However, according to the reports on file with the DEP, Warren has only conducted limited monitoring of the number of eels using the new upstream eel passage facilities (2006 and 2007 at Saccarappa and Gambo, and 2007 at Dundee) and limited nighttime visual surveys of eel movements at the projects following installation of the passage facilities. In addition, by Warren's own admission, the peak upstream eel migration may have been missed in both

2006 and 2007. Finally, Warren has not collected any weight or length information on the eels using the new facilities. Thus, Warren has not conducted sufficient study to demonstrate that the installed upstream eel passage facilities are effectively passing eels upstream through the projects.

Recently approved upstream eel passage effectiveness study plans at other projects, (e.g., the Lockwood, Hydro-Kennebec, Shawmut, and Weston Projects) have consisted of collecting a known number of upstream migrating eels, placing the collected eels at the entrance of the eel passage facility, and then counting the number of eels collected in a trap installed at the exit of the passage facility. This was preceded by one or more years of counting, measuring and weighing all eels using the passage facilities, as well as one or more years of regular nighttime observations to assess whether eels were successfully finding and using the passage facilities.

As discussed above, DMR has stated that upstream eel passage effectiveness studies might be more productive at the Presumpscot River Hydro Projects when upstream passage is secured at the Cumberland Mills Dam (located below the licensed Presumpscot River Hydro Projects). DMR's proposal is reasonable, and Condition 3(C) should be modified accordingly.

Therefore, based on the above Findings of Fact, the Department CONCLUDES that S.D. WARREN COMPANY has complied with Special Condition 3(B) of Department Order #L-19713/19714/19715/19716/19717-33-E-N dated April 30, 2003, with respect to upstream eel passage facility design and operational plans for the Saccarappa, Mallison Falls, Gambo and Dundee Hydro Projects.

Further, based on the above Findings of Fact, the Department MODIFIES Conditions 3(A) and 3(C) of Department Order #L-19713/19714/19715/19716/19717-33-E-N dated April 30, 2003, to read as follows:

3. UPSTREAM EEL PASSAGE

- A. Upstream eel passage facilities shall be installed and operational at the Saccarappa, Mallison Falls, Gambo and Dundee Projects beginning in 2006/2007 and at the Little Falls Project following additional monitoring to determine where eels are passing upstream at that project. Monitoring shall be conducted at the Little Falls Project every three years, beginning in 2011, and the applicant shall submit a report detailing the results of its monitoring efforts by December 31 of each year in which the monitoring occurs.

*

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*

- C. The applicant shall, in consultation with the Department of Marine Resources, conduct an additional study or studies to determine the effectiveness of the upstream eel passage facilities required by this condition. This study or studies shall be conducted after fish passage has been provided at the downstream Cumberland Mills Dam.

DONE AND DATED AT AUGUSTA, MAINE, THIS 28TH DAY OF July, 2008.

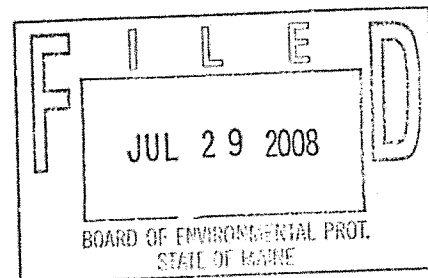
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 11/08/2004

Date application accepted for processing: 11/09/2004



Date filed with Board of Environmental Protection: _____

This Order prepared by Dana Murch, Bureau of land & Water Quality.

2008 Modification and Condition Compliance -
WQC Condition 7



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI

GOVERNOR

DAVID P. LITTELL

COMMISSIONER

July 31, 2008

Thomas P. Howard
Environmental Manager
S.D. Warren Company
PO Box 5000
Westbrook, ME 04092

RE: Recreation Facility Enhancement Plan
Presumpscot River Hydro Projects

Dear Tom:

Enclosed is a copy of the DEP's order approving S.D. Warren's recreation facility enhancement plan for the Saccarappa, Mallison Falls, Little Falls, Gambo and Dundee Hydro Projects. This plan were submitted in compliance with the special conditions of the DEP order dated April 30, 2003 approving water quality certification, pursuant to Section 401 of the Clean Water Act, in conjunction with the relicensing of the Presumpscot River Hydro Projects by the Federal Energy Regulatory Commission.

Please note that the order approving the recreation facility enhancement plan includes a condition requiring that any dredging, filing, or construction of permanent structures in or adjacent to the Presumpscot River associated with implementing the recreation facility enhancement plan must be reviewed and approved by the DEP under the Natural Resources Protection Act.

Also, please note that any person aggrieved by the DEP's decision in this matter may appeal that decision to the Board of Environmental Protection or to Maine Superior Court following the procedures set forth in the applicable State law and DEP rules. These procedures are described in the DEP Information Sheet entitled "Appealing a Commissioner's Licensing Decision," which is attached to the enclosed order.

Thank you for your attention to this important compliance matter.

As always, please contact me if you have any questions.

Sincerely,

Dana Paul Murch
Dams & Hydropower Supervisor

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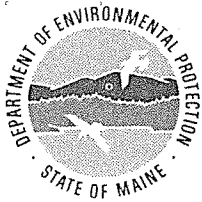
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Letter to Thomas P. Howard
July 31, 2008
Page 2 of 2

cc: Maureen Winters, DTA
Steve Timpano, DIFW-Augusta
Francis Brautigam, DIFW-Region A
George Powell, DOC
Ron Kreisman, Esq., AR/FOPR
Dusti Faucher, FOPR



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

DEPARTMENT ORDER

IN THE MATTER OF

S.D. WARREN COMPANY)	WATER QUALITY CERTIFICATION
Gorham, Windham, and Westbrook)	
Cumberland County)	
PRESUMPSCOT RIVER HYDRO PROJECTS)	MODIFICATION AND
#L-19713-33-I-C (Approval))	CONDITION COMPLIANCE

Pursuant to the provisions of Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection has considered the application of S.D. WARREN COMPANY with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. Application Summary

S.D. Warren Company ("Warren") has submitted a recreation facility enhancement plan for the Presumpscot River Hydro Projects, in compliance with Special Condition 7(B) of Department Order #L-19713/19714/19715/19716/19717-33-E-N dated April 30, 2003. This Order was issued pursuant to Section 401 of the Clean Water Act in conjunction with the relicensing of the Presumpscot River Hydro Projects (Nos. 2942, 2931, 2941, 2932, and 2897) by the Federal Energy Regulatory Commission.

2. Certification Condition

Condition 7 of the April 30, 2003 Department Order reads as follows:

"7. RECREATIONAL FACILITIES

- A. The applicant shall develop and implement a Recreational Facility Enhancement Plan for each project, which shall include, at a minimum, the following measures to maintain and/or enhance recreational access and use in the project areas:

DUNDEE PROJECT

- Rerouting, stabilizing, and maintaining the existing canoe portage trail;
- Seeking an easement to provide walk-in angler access to the project bypass reach; and
- Investigating whether an existing access easement can be altered to permit fishery agency access for stocking purposes.

GAMBO PROJECT

- Enhancing and maintaining the existing informal canoe portage trail;
- Developing an interpretive sign to explain the history of the Oriental Powder Mill Complex;
- Providing walk-in angler access to the bypass reach;

- Developing parking and signs for carry-in boat access at the portage take-out location; and
- Assisting the Town of Gorham in regrading and enhancing the Gambo Road approach to the former bridge area immediately upstream from the dam.

LITTLE FALLS PROJECT

- Establishing and maintaining a canoe portage trail;
- Assist Gorham Trails in developing parking, signage, and access for a carry-in boat launch at the Gorham Land Trust Property off of the Tow Path Road; and
- Donate approximately 0.8 acres of land on the island located off-shore of the Hawkes Property to the Gorham Land Trust.

MALLISON FALLS PROJECT

- Establishing and maintaining a formal canoe portage trail;
- Providing signs for parking and access at the existing carry-in boat access site at the project powerhouse;
- Developing parking, signage, and access for a carry-in boat access site above the project dam;
- Seeking permission from the Department of Transportation and the Town of Gorham to provide a roadside pullout and carry-in boat access site next to the bridge abutment above the project dam; and
- Continuing to seek an easement or other opportunities to provide walk-in angler access to the bypass reach.

SACCARAPPA PROJECT¹

- Seeking an easement to establish parking, signage, and access for a portage take-out and carry-in boat launch site on the project impoundment.

B. The applicant shall, within 12 months following the issuance of a new FERC license for the project or upon such other schedule as established by FERC, submit a Recreational Facility Enhancement Plan for each project as required by Part A of this condition. This plan shall be prepared in consultation with the Department of Conservation and the Department of Inland Fisheries and Wildlife, and shall include a schedule for implementation. This plan shall be reviewed by and must receive approval of the DEP.”

3. Condition Compliance Filing

In response to the condition cited above and to related articles in the new FERC licenses for the projects, by filing dated January 7, 2005, Warren submitted a recreation facility enhancement plan for the Presumpscot River Hydroelectric Projects, prepared in consultation with the DEP, the Maine Department of Conservation, the Maine Department of Inland

¹ While inadvertently missing from the list of projects covered by Condition 7, recreational facility enhancements at the Saccarappa Project were proposed by Warren and are required under the terms of the April 30, 2003 certification.

Fisheries and Wildlife, the Maine Department of Marine Resources, the Maine Historic Preservation Commission, the National Park Service, the Towns of Windham and Gorham, Gorham Trails, the Casco Bay Estuary Project, and the U.S. Fish and Wildlife Service.

4. Description of Proposed Plan

- a. Dundee Project. Under the plan, Warren proposed to remove vegetation, install new signs/relocate existing signs, and conduct routine maintenance and erosion monitoring at the existing canoe portage trail around the project. Warren reported that the existing canoe portage put-in and take-out sites are stable with no active erosion and that, as a consequence, no bank stabilization measures are proposed. Warren also reported that there is no evidence that trail users were hindered by portaging around an existing concrete abutment and that rerouting the trail is not necessary.

Under the plan, Warren also proposed to install new signs, construct and maintain a new gravel road to an existing transmission line, and construct and maintain a gravel parking area for 3-4 vehicles to provide walk-in angler access to the project bypass reach. Warren reported that landowner easements are needed for both the new gravel road and for angler access along the existing transmission line.

Finally, under the plan, Warren proposed to investigate expanding an existing landowner right-of-way easement to allow MDIFW occasional access downstream of the project dam for fish stocking purposes.

- b. Gambo Project. Under the plan, Warren proposed to install new signs, develop a put-in site, install a new bridge, and conduct routine maintenance and erosion monitoring to enhance an existing informal canoe portage trail around the project.

Under the plan, Warren also proposed to install new signs, construct a spur from the existing canoe portage trail, and install steps or stairs to provide walk-in angler access to the project bypass reach.

Under the plan, Warren also proposed to install new signs, regrade an existing gravel road, construct and maintain a gravel parking area for 6-8 vehicles, install an access gate and barrier boulders, and construct a gravel launch site to provide carry-in boat access to the project impoundment adjacent to the Windham athletic fields. Warren reported that a lease is needed from the landowner (the Portland Water District) for construction of the proposed boat launch facility and parking area. Warren also reported that access to the proposed bypass reach angler access site will be provided via the proposed parking area adjacent to the Windham athletic fields and a new Gambo Road Pedestrian Bridge that was being constructed by the Maine Department of Transportation.

Under the plan, Warren also proposed to monitor and remove trees that pose hazards to boating downstream of the project.

Finally, under the plan, Warren proposed to consult with MHPC and Gorham Land Trust to develop interpretive signage to explain the history of the Oriental Powder Mill Complex, located adjacent to the project bypass reach.

- c. Little Falls Project. Under the plan, Warren proposed to remove vegetation, install new signs, develop a new take-out site, and conduct routine maintenance and erosion monitoring to improve an existing canoe portage trail around the project. Warren reported that the trail is located on land owned by an adjacent property owner. Warren also reported that the property owner is amenable to allowing canoe portage access but will not allow angler access due to past littering and loitering problems associated with use of the site by anglers.

Under the plan, Warren also proposed to consult with Gorham Trails and Gorham Land Trust to (1) develop a boat launch site, with signage and parking, at the Gorham Land Trust property off of Tow Path Road to provide carry-in boat access to the project impoundment and (2) donate Warren's portion of Hawkes Island (approximately 0.8 acres) to Gorham Trails.

- d. Mallison Falls Project. Under the plan, Warren proposed to remove vegetation, install new signs, develop a new take-out site, and conduct routine maintenance and erosion monitoring to provide a formal canoe portage trail around the project.

Under the plan, Warren also proposed to install new signs and construct and maintain a gravel parking area adjacent to Mallison Falls Road to provide carry-in boat access to the project impoundment. Warren stated that boat access will be via the proposed canoe portage trail take-out site. Warren also proposed to install new signs to an existing parking lot near the project powerhouse and the existing canoe portage trail put-in site to provide carry-in boat access to the river below the project.

Finally, under the plan, Warren proposed to remove vegetation, install new signs, and conduct routine maintenance and erosion monitoring to provide walk-in angler access to the project bypass reach. Warren reported that an easement is needed from the landowner (Portland Safe Company) for the proposed access route along the Windham side of the project. Warren also reported that access to the proposed bypass reach angler access site will be provided via the proposed parking area adjacent to Mallison Falls Road.

- e. Saccarappa Project. Under the plan, Warren proposed to install new signs, improve and maintain an existing parking area for 4 vehicles, improve an existing boat launch site, and conduct routine maintenance and erosion monitoring to provide carry-in boat access to the project impoundment. Warren stated that the boat launch site will also provide for canoe take-out prior to entering downtown Westbrook. Warren also stated that an easement is needed from the landowner for the parking area and boat launch site.
- f. Schedule. Finally, under the plan, Warren proposed to obtain the necessary landowner and regulatory approvals and undertake all recreation facility enhancements over a 5-year period, starting with the Saccarappa Project in 2005, and moving upstream at the rate of one project per year (ending at Dundee in 2009). Warren stated that the 5-year schedule is designed to allow sufficient time to secure easements, to reach municipal support agreements where necessary, to consider landowner and municipal input, and to consult with agencies on final design and operations details.

5. FERC Approvals/Revisions to Proposed Plan

- a. Dundee Project. By Order dated January 27, 2006, FERC approved the recreation facility enhancement plan for the Dundee Project, subject to the condition that Warren install stairs along the segment of the canoe portage trail leading to the put-in site.

By letter dated July 11, 2008, Warren notified FERC that, instead of providing walk-in angler access to the bypass reach from the east side of the river, access may be provided via a bridge over the tailrace from the west side of the river. Warren proposed to complete construction of all approved recreation facilities by July 31, 2011.

- b. Gambo Project. By Order dated August 2, 2005, FERC approved the recreation facility enhancement plan for the Gambo Project.

By letter dated July 11, 2008, Warren notified FERC that it proposed to complete construction of all approved recreation facilities by July 31, 2010.

- c. Little Falls Project. By Order dated February 24, 2006, FERC approved the recreation facility enhancement plan for the Little Falls Project, subject to the condition that Warren revise the plan to provide parking for angler use of the portage trail and access to the bypass reach.

By letter dated July 11, 2008, Warren notified FERC that the rebuilding of the Maine Department of Transportation highway bridge immediately upstream of the dam on 2006/2007 included substantial re-grading and rip-rapping of the river banks and relocation of the bridge. Warren stated that these activities have necessitated relocating and redesigning the proposed canoe portage take-out site. Warren proposed to complete the donation of its Hawkes Island land, the provision of plans and funding for the Gorham Land Trust carry-in boat launch and parking facility, and the construction of all approved recreational facilities by July 31, 2009.

- d. Mallison Falls Project. By Order dated February 16, 2006, FERC approved the recreation facility enhancement plan for the Mallison Falls Project.

By Order dated October 11, 2006, FERC approved Warren's request that the deadline for obtaining an easement for the proposed walk-in angler access to the project bypass reach, or to locate an alternative access site, be extended to December 14, 2006.

By letter dated December 8, 2006, Warren notified FERC that it had made progress in obtaining the necessary approvals for the angler access easement and approvals of the carry-in boat access/canoe take-out area, but that it had not been able to bring either of these matters to a conclusion. Warren stated that it would continue to pursue resolution of these matters with the goal of completing construction of all approved recreation facilities by June 1, 2007.

By letter dated May 2, 2007, Warren notified FERC that the landowner with whom it had been discussing the angler access easement had now indicated that he is planning to sell the property and was not willing to provide an easement for angler access without a

condition that such access was subject to approval by the landowner or his successor(s). Based on this, Warren stated that it must develop an alternative access site.

By Order dated June 27, 2007, FERC approved Warren's request that it be granted an extension to September 17, 2007 to file a revised recreation plan for the Mallison Falls Project.

By filing dated September 10, 2007, Warren submitted a revised recreation plan for the Mallison Falls Project to DEP and FERC. Under the revised plan, Warren proposed to provide angler access to the bypass reach via a new 4-foot-wide enclosed pedestrian footbridge that would cross over the power canal.

By Order dated March 7, 2008, FERC approved the revised recreation facility enhancement plan for the Mallison Falls Project, subject to the condition that construction of the approved facilities be completed by October 31, 2008.

- e. Saccarappa Project. By Order dated July 22, 2005, FERC approved the recreation facility enhancement plan for the Saccarappa Project, subject to the condition that construction of the proposed carry-in boat access/canoe portage take-out site and parking area be completed by December 31, 2005.

By Order dated April 11, 2006, FERC approved Warren's request that the deadline for the construction of the proposed carry-in boat access/canoe portage take-out site and parking area be extended to July 1, 2006.

By Order dated July 27, 2006, FERC approved Warren's request that the deadline for the construction of the proposed carry-in boat access/canoe portage take-out site and parking area be extended further to September 1, 2006.

By letter dated October 11, 2006, FERC extended the deadline for the construction of the proposed carry-in boat access/canoe portage take-out site and parking area until May 1, 2007 in order to resolve outstanding design issues.

By letter dated December 19, 2007, Warren notified FERC that construction of the Saccarappa Project recreation facilities was complete.

6. Consultation Comments

The recreation facility enhancement plan, as submitted and revised, has incorporated comments on a draft of the plan and subsequent revisions received from the DEP, the Town of Gorham, DMR, DOC, USFWS, NPS, DIFW, and the Maine Historic Preservation Commission.

No objections to the recreation facility enhancement plan for the Presumpscot River Hydro Projects, as revised, have been raised by any of the consulting agencies.

However, in its comments on the draft recreation facility enhancement plan, the DEP commented that separate DEP approval may be required, pursuant to the Natural Resources Protection Act (NRPA), for the construction of several of the proposed recreation facilities

(e.g., the proposed Gambo angler access trail and boat launch facility). An NRPA permit is required for any activity involving dredging, filling, or construction of permanent structures in or adjacent to a river, stream or brook.

7. Discussion

Condition 7(A) of the April 30, 2003 water quality certification requires that specified measures be implemented to maintain and/or enhance recreational access and use at all five Presumpscot River Hydro Projects. However, as discussed above, based on further site evaluations and consultations with adjacent landowners and other parties, Warren has revised some of the measures to be implemented at several of the projects. In addition, FERC has required several additional measures not proposed by Warren. These revisions are reasonable, and Condition 7(A) should be modified accordingly.

Based on its independent review, and subject to the modifications discussed above, the Department has determined that the recreation facilities enhancement plan, as revised, for the Presumpscot River Hydro Projects satisfactorily addresses the requirements of Special Condition 7(B) of the April 30, 2003 water quality certification for the projects, provided that any dredging, filling, or construction of permanent structures in or adjacent to the Presumpscot River associated with implementing the recreation facilities enhancement plan is reviewed and approved by the DEP under the Natural Resources Protection Act.

Therefore, based on the above Findings of Fact, the Department MODIFIES Special Condition 7(A) Department Order #L-19713/19714/19715/19716/19717-33-E-N dated April 30, 2003, to read as follows:

7. RECREATIONAL FACILITIES

- A. The applicant shall develop and implement a Recreational Facility Enhancement Plan which shall include the following measures to maintain and/or enhance recreational access and use in the project areas:

DUNDEE PROJECT

- Maintaining and providing signage for the existing canoe portage trail, and installing stairs along the segment of the trail leading to the put-in site;
- Installing signage and constructing and maintaining a new gravel road and parking area/access path or tailrace footbridge to provide walk-in angler access to the project bypass reach; and
- Investigating expansion of an existing landowner right-of-way easement to allow DIFW access downstream of the project for fish stocking purposes.

GAMBO PROJECT

- Providing signage, developing a new put-in site, installing a new bridge, and maintaining the existing informal canoe portage trail;
- Consulting with MHPC and Gorham Land Trust to develop interpretative signage to explain the history of the Oriental Powder Mill Complex;

- Providing signage, constructing a spur from the canoe portage trail, and installing steps or stairs to provide walk-in angler access to the bypass reach;
- Providing signage, regrading an existing gravel road, constructing and maintaining a gravel parking area, installing an access gate and barrier boulders, and constructing a gravel launch site to provide carry-in boat access to the project impoundment adjacent to the Windham athletic fields; and
- Monitoring and removing trees that pose hazards to boating downstream of the project.

LITTLE FALLS PROJECT

- Providing signage, developing a new take-out site, and maintaining the existing canoe portage trail;
- Providing parking for angler use of the portage trail and access to the bypass reach;
- Assisting the Gorham Land Trust in development of signage, parking and a launch site at the Gorham Land Trust Property off Tow Path Road to provide carry-in boat access to the project impoundment; and
- Donating Warren's ownership of 0.8 acres of land on Hawkes Island to Gorham Trails.

MALLISON FALLS PROJECT

- Providing signage, developing a new take-out site, and maintaining a formal canoe portage trail;
- Providing signage for parking and carry-in boat access to the river below the project;
- Providing signage and constructing and maintaining a gravel parking area to provide carry-in boat access to the impoundment; and
- Providing signage and constructing a new pedestrian footbridge over the power canal for walk-in angler access to the bypass reach.

SACCARAPPA PROJECT

- Providing signage, improving and maintaining an existing parking area, and improving an existing launch site to provide carry-in boat access to the impoundment and a canoe portage take-out prior to entering downtown Westbrook.

Further, based on the above Findings of Fact, the Department CONCLUDES that S.D. WARREN COMPANY has complied with Special Condition 7(B) of Department Order #L-19713/19714/19715/19716/19717-33-E-N dated April 30, 2003, SUBJECT TO THE FOLLOWING CONDITION:

1. Any dredging, filling, or construction of permanent structures in or adjacent to the Presumpscot River associated with implementing the recreation facility enhancement plan shall be reviewed and approved by the DEP under the Natural Resources Protection Act.

DONE AND DATED AT AUGUSTA, MAINE, THIS 29TH DAY OF July, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

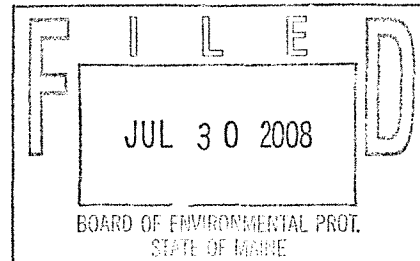
BY: _____

DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 01/11/2005

Date application accepted for processing: 01/11/2005



Date filed with Board of Environmental Protection: _____

This Order prepared by Dana Murch, Bureau of land & Water Quality.

2012 Minor Revision



PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
Department of Environmental Protection

PATRICIA W. AHO
COMMISSIONER

November 2012

S.D. Warren Company
89 Cumberland Street
P.O. Box 5000
Westbrook, ME 04092
ATTN: Brad Goulet

RE: Maine Waterways Development and Conservation Act Application, Gorham/Windham,
#L-19713-33-L-M/L-19715-33-F-M/L-19716-33-F-M.

Dear Mr. Goulet:

Please find enclosed a signed copy of your Department of Environmental Protection land use permit. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at (207) 822-6358 or at jim.s.glasgow@maine.gov.

Sincerely,

James S. Glasgow, Project Manager
Division of Land Resource Regulation
Bureau of Land and Water Quality

pc: File

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST

BANGOR
106 HOGAN ROAD
BANGOR MAINE 04401
(207) 941-4570 FAX (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 764-3143

WEB SITE: WWW.MAINE.GOV/DEP



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

DEPARTMENT ORDER

IN THE MATTER OF

S.D. WARREN COMPANY) MAINE WATER QUALITY PROGRAM;
Gorham, Windham, and Westbrook) FEDERAL CLEAN WATER ACT
Cumberland County) WATER QUALITY CERTIFICATION
PRESUMPCOT RIVER HYDRO PROJECTS)
L-19713-33-L-M (Dundee) (approval))
L-19715-33-F-M (Little Falls) (approval))
L-19716-33-F-M (Mallison Falls) (approval)) MINOR REVISION

Pursuant to the provisions of 38 MRSA Section 464 et seq. and Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection has considered the applications of S.D. WARREN COMPANY with the supportive data, agency comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY:

- A. Applications. S.D. Warren Company proposes the continued operation of the Dundee, Little Falls, and Mallison Falls Hydroelectric Projects, located on the Presumpscot River in the Towns of Gorham and Windham, Cumberland County, Maine.
- B. Summary. S.D. Warren Company is proposing to modify the recreation plans approved in Department Order #L-19713-33-D-N/#L-19715-33-D-N/#L-19716-33-D-N. Other hydropower projects on the Presumpscot River remain unaffected by this modification.
- C. Project Description. The three existing projects consist of three contiguous dams, impoundments, powerhouses, and appurtenant facilities, as described below.

Dundee Project. The Dundee Project, located at River Mile 21.9, consists of a 1,492-foot long, 50-foot high concrete dam with earthen abutments and two-foot high spillway flashboards, a powerhouse integral with the dam containing three turbine-generator units with a total rated generating capacity of 2,400 kW, and a 1,075-foot long tailrace channel formed by a natural earth and bedrock berm.

The Dundee Dam creates a 197-acre impoundment with a normal full pond elevation of 187.22 feet (USGS datum) that extends 1.7 miles upstream to the tailwaters of the North Gorham Project, which is owned and operated by FPL Energy Maine Hydro LLC.

The Dundee Project creates a 1,075-foot long bypass reach between the dam and the downstream end of the tailrace channel. The lower 200 feet of the bypass reach is backwatered by the downstream Gambo Project impoundment.

Little Falls Project. The Little Falls Project, located at River Mile 16.9, consists of a 310-foot long; 14-foot high L-shaped concrete and masonry dam with 2-foot high flashboards, and a powerhouse integral with the dam containing four turbine-generator units with a total rated generating capacity of 1,000 kW.

The Little Falls Dam creates a 29-acre impoundment with a normal full pond elevation of 108.7 feet (USGS datum) that extends upstream 1.7 miles to the tailwaters of the Gambo Project.

The Little Falls Project creates a 300-foot long bypass reach between the upper section of the dam and the powerhouse tailwaters. The lower 100 feet of the bypass reach is backwatered by the project tailwaters.

Mallison Falls Project. The Mallison Falls Project, located at River Mile 16.4, consists of a 14-foot high, 358-foot long concrete, masonry and cut granite diversion dam without flashboards, a 70-foot long headgate structure, a 675-foot long bedrock-lined intake power canal, and a powerhouse containing two turbine-generator units with a total rated generating capacity of 800 kW.

The Mallison Falls Dam creates an 8-acre impoundment with a normal full pond elevation of 90.6 feet (USGS datum) that extends upstream 0.5 miles to the tailwaters of the Little Falls Project.

The Mallison Falls Project creates a 675-foot long bypass reach between the dam and the powerhouse tailwaters. The lower 375 feet of the bypass reach is backwatered by discharges from the Mallison Falls powerhouse and by the downstream Saccarappa Project impoundment.

- D. Construction History. All three existing projects were constructed in the early 1900's. However, dams have existed at some project locations, including Mallison Falls, for over 250 years.
- E. Proposed Protection, Mitigation and Enhancement Measures. The applicant's approved recreation plan for the protection, mitigation and enhancement of public resources for each hydro facility is summarized below:

Dundee Project:

- (1) Implement a Recreation Facility Enhancement Plan, consisting of: rerouting, stabilizing and maintaining the existing canoe portage trail;
- (2) Seeking an easement to provide walk-in angler access to the bypass reach; and
- (3) Investigating whether an existing access easement can be altered to permit fishery agency access for stocking purposes.

Proposal. The applicant seeks to substitute from (2) above a 4-foot wide pedestrian bridge from the main access road to the island for angler by-pass channel access. Additionally, the applicant seeks to substitute from (3) above by S.D. Warren Company continuing to provide

access for the Maine Department of Inland Fisheries and Wildlife (MDIFW) stocking purposes to the project tailrace and will work with MDIFW to establish an alternative location, as is feasible in consultation with State of Maine resource agencies and the Town of Gorham.

Discussion. The construction of a pedestrian bridge and ancillary parking on the S.D. Warren Company-owned and controlled land is an effective substitute for the easement originally proposed. The presence of a pedestrian bridge offers additional alternatives than previously available for fish stocking to be considered by consulting State agencies and the Town of Gorham, provided the present access for stocking is maintained.

Little Falls Project:

- (1) Implement a Recreation Facility Enhancement Plan, consisting of: establishing and maintaining a canoe portage trail;
- (2) Assisting Gorham Trails in developing parking, signage, and access for a carry-in boat launch at the Gorham Land Trust Property off of Tow Path Road; and
- (3) Donate approximately 0.8 acres of land on the island located off-shore of the Hawkes Property to the Gorham Land trust.

Proposal. The applicant seeks to delete requirement (3) above from the plan.

Discussion. The Gorham Land Trust, through its successor, the Presumpscot Regional Land Trust, in a letter dated June 22, 2011, has declined the deed transfer for the land.

Mallison Falls Project:

- (1) Implement a Recreation Facility Enhancement Plan, consisting of: establishing and maintaining a formal canoe portage trail;
- (2) Provide signs for parking and access at the existing carry-in boat access site at the project powerhouse;
- (3) Develop parking, signage, and access for a carry-in boat access site above the project dam; seeking permission from the Maine Department of Transportation and the Town of Gorham to provide a roadside pullout and carry-in boat access site next to the bridge abutment above the project dam; and
- (4) Continue to seek an easement or other opportunities to provide walk-in angler access to the bypass reach.

Proposal. The applicant seeks to delete the requirement for signage advising that a canoe portage exists along the right of way of the Town road. Additionally, the applicant seeks to substitute from (4) above a 4-foot wide pedestrian bridge from the main access road to the island for angler by-pass channel access.

Discussion. The Town of Gorham Planning Board has declined to approve the placement of signs advising the public of canoe portage along the right of way of Mallison Falls Road, a town road. The Planning Board cited safety in voyagers portaging along the road as their concern. The construction of a pedestrian bridge and ancillary parking on the S.D. Warren Company-owned and controlled land is an effective substitute for the easement originally proposed. The remaining elements of the recreation plan for the area remain in effect.

2. FINDING:

Based on the above Discussions and the evidence in the record, the Department concludes that there is a reasonable assurance that the revised recreation plans for the three Facilities will not violate applicable water quality standards.

The proposed projects are minor changes and will not significantly affect any issues identified during previous Department reviews of the projects.

Based on its review of the applications, the Department finds the requested minor revisions to be in accordance with all relevant Departmental standards. All other findings of fact, conclusions and conditions remain as approved in Department Order #L-19713-33-D-N/ #L-19715-33-D-N/#L-19716-33-D-N, and subsequent orders.

THEREFORE, the Department APPROVES the applications of S.D. WARREN COMPANY to modify its recreation plans and GRANTS CERTIFICATION that there is a reasonable assurance that the continued operation of the PRESUMPSCOT RIVER HYDRO PROJECTS, as described above, will not violate applicable water quality standards.

DONE AND DATED AT AUGUSTA, MAINE, THIS 30th DAY OF November, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY Michael Kuhn for
Patricia W. Aho, Commissioner



PLEASE SEE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES...

JSG/L19713LM&L19715FM&L19716FM/ATS#74589&74590&74588

Email Regarding FERC OFMP Compliance
Filing Policy Change

From: [William Atlas](#)
To: [Goulet, Brad](#)
Subject: RE: Courtesy Copy Warren 2014 Operations Flow & Monitoring Compliance Letter
Date: Monday, December 29, 2014 10:02:47 AM

Brad,

FERC has recently revised its policy; for the future you won't need to file an operations and flow monitoring compliance letter if there were no deviations/violations.....you will only have to file a letter notifying us if there were any deviations/violations.

Bill

From: Goulet, Brad [mailto:Brad.Goulet@sappi.com]
Sent: Wednesday, December 24, 2014 2:04 PM
To: William Atlas
Cc: njscancke@njs-law.com; O'Regan, Briana; Kathy Howatt (kathy.howatt@maine.gov)
Subject: Courtesy Copy Warren 2014 Operations Flow & Monitoring Compliance Letter

Mr. Atlas,

Please find attached a copy of S.D. Warrens 2014 compliance letter under the operations and flow monitoring requirements of the project licenses.

Please feel free to contact me with any questions.

Brad

	<p>Brad Goulet Hydro Manager/Utilities Engineer Sappi North America 89 Cumberland Street PO Box 5000 Westbrook, ME 04092 Tel +1 207 856 4083 Mobile +1 207 229 2072 Fax +1 207 856 4456 Brad.Goulet@sappi.com Visit our texture library at www.warrenreleasepapers.com</p>
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2010 Aeration Effectiveness Test



April 8, 2010

Mr. Dana Murch
Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04333

VIA EMAIL

**Subject: Dundee and Gambo Projects (FERC Project Nos. 2942 and 2931)
Report of 2009 Dissolved Oxygen Monitoring**

Dear Dana:

On behalf of the S.D. Warren Company (S.D. Warren), Licensee for the Dundee and Gambo Projects, we are filing the following report of the 2009 Dissolved Oxygen Monitoring for your review and approval.

1. Background

1.1 FERC License and Water Quality Certification Requirements

S.D. Warren owns and operates the Dundee and Gambo Projects on the Presumpscot River in southwestern Maine. The Federal Energy Regulatory Commission (FERC or “Commission”) issued New Licenses (License(s)) for the projects on October 2, 2003¹. A single Water Quality Certification (WQC) under Section 401 of the Clean Water Act had been previously issued for the projects by the Maine Department of Environmental Protection (MDEP) on April 30, 2003. The FERC Licenses and MDEP WQC required development of a Project Operations and Flow Monitoring Plan (“Plan”) to document compliance with various operational requirements of the licenses and WQC, including the requirement to provide re-aeration flows in the Dundee and Gambo Projects to enhance dissolved oxygen concentration downstream of each station, and to study the effectiveness of the re-aeration measures.

S.D. Warren filed an Original Plan with FERC and MDEP on July 16, 2004, after agency consultation. On September 7, 2004 FERC requested additional information from S.D. Warren which S.D. Warren filed October 7, 2004. Per Order dated October 20, 2004 (109 FERC ¶62,037), the FERC approved the Original Plan as amended by S.D. Warren’s October 7, 2004 letter. By letter dated November 30, 2006 the MDEP issued a Compliance Order to S.D. Warren regarding the June 2004 Original Plan. The Compliance Order included clarifications on two issues related to dissolved oxygen and temperature monitoring. S.D. Warren therefore

¹ Gambo Project, No. 2931, 105 FERC ¶61,010 and Dundee Project, No. 2942, 105 FERC ¶61,009.

filed a Revised Plan with MDEP, after agency consultation, on April 6, 2007. The Revised Plan, which was developed pursuant to the licenses and subsequent MDEP Order, was approved by MDEP on October 9, 2007.

Section 5.2 of the Revised Plan addresses providing re-aeration flows at the Dundee and Gambo Projects when water temperatures in the Gambo impoundment at the dam exceed 22°C (approximately 71.6°F). The FERC Licenses do not require any testing of effectiveness of the re-aeration measures. However, the WQC requires a study to be performed to determine the effectiveness of the spillage or other measures implemented to meet the 7.0 mg/L Class B dissolved oxygen standard. The Revised Plan specified that S.D. Warren would conduct a study to evaluate the effectiveness of the re-aeration measures and file a report with the MDEP. It should be noted that the Revised Plan specified that the testing would be conducted in 2007. However, since the Revised Plan was approved by MDEP in November 2007, after the summer monitoring season, the initial testing was done in 2008, not 2007. Based upon the results of the 2008 monitoring S.D. Warren conducted additional testing in 2009, as discussed below.

1.2 2008 Monitoring

Consistent with the approved Revised Plan, dissolved oxygen and temperature were monitored weekly beginning on July 12, 2008, while re-aeration flows were provided at the Dundee and Gambo Projects. The data show that the 7.0 mg/L Class B dissolved oxygen standard was met at Gambo and Saccarappa on all days monitored. At Little Falls, dissolved oxygen fell just below (6.9 mg/l) Class B standards on two monitored days in July. At Mallison dissolved oxygen fell just below (6.8 mg/l) Class B standards on one monitored day in July. Dissolved oxygen was below the Class B dissolved oxygen standard in the Pleasant and Little Rivers consistently in July when river temperatures exceeded 20°C. Based upon these results S.D. Warren proposed to conduct additional testing in 2009.

2.0 2009 Monitoring

2.1 Methods

Dissolved oxygen and temperature were monitored twice weekly beginning on June 16, 2009 and continuing through September 18, 2009. Monitoring was conducted at the following locations:

- Gambo Project: Headpond at continuous monitor
- Little Falls: Headpond at Route 202 bridge
- Mallison Falls: Headpond at Mallison Street bridge
- Saccarappa: Headpond at forebay, or Bridge Street in Westbrook

Due to the impact of non-point source pollution from tributaries to the DO levels in the Presumpscot River, S.D. Warren had monitored the Little River and Pleasant River tributaries in 2008. For 2009 this monitoring was expanded to include the following locations:

- Tributaries to Dundee Pond:
 - Otter Brook at River Road, North Windham
- Tributaries to Gambo Pond:
 - Pleasant River, at Windham Center Road, Windham
 - Pleasant River, at River Road, Windham
 - Nason Brook, at N. Gorham Road, Gorham
 - Black Brook, at Gray Road, S. Windham
- Tributaries to Saccarappa Impoundment:
 - Little River, at Mosher Road, Gorham
 - Colley Wright Brook, at River Road, Windham
 - Inkhorn Brook, at River Road, Windham

Monitoring was done manually prior to 8 a.m. At the Gambo site, data was obtained from the single point continuous monitor in the headpond. At Mallison and Little Falls, quarter point sampling was done at mid-depth. At Saccarappa a single point mid channel and mid depth at the forebay was sampled when the forebay was accessible for sampling. From June 30-July 13, 2009 when the forebay was not safely accessible due to ongoing maintenance work, sampling was conducted at Bridge Street in Westbrook, where quarter point sampling was done at mid-depth.

Due to the small size of most tributaries they were monitored at a single point mid channel. However, at the Pleasant River (at River Road, Windham) and the Little River (at Mosher Road, Gorham) sites quarter point sampling was done at mid-depth.

Temperature and dissolved oxygen measurements were obtained using a hand-held field meter. This unit was calibrated daily prior to use, according to manufacturer specifications.

2.2 Results

Complete results of the 2009 monitoring are provided in Attachment A. Attachment B presents the impoundment data plotted by monitoring location, with dissolved oxygen and temperature graphed against the full season's precipitation data.

Mainstem Locations

- Gambo Project Headpond (at continuous monitor): The Gambo Project continuous monitoring station was calibrated in 2009 prior to the start of the monitoring season. However, data from this location was found to be erratic and inconsistent with data

from the other monitoring locations. Unfortunately, this was not noted until the end of the season when the dataset was compiled, so backup monitoring was not conducted at this site. It is possible that the initial calibration was not correct, but it is also likely that the probe is experiencing significant debris interference and/or biofouling, or is simply located improperly. While portions of the data set appear to be reasonable, other data suggests the station was not operating properly. This was particularly evident when fall data was reviewed and DO levels varied more than 4 mg/l in a one hour span. Since it is not possible to determine what portion of the data set is reliable, no data from this site is included in this report.

- Little Falls Headpond (at Route 202 bridge): Dissolved oxygen exceeded the 7.0 mg/L Class B standard through most of the monitoring period, but fell below the standard on four monitored days in mid to late August, during the period when river temperatures were highest for the season (between 23.7°C and 26.6°C).
- Mallison Falls Headpond (at Mallison Street bridge): Consistent with Little Falls, DO in the Mallison Headpond exceeded the 7.0 mg/L Class B standard through most of the monitoring period, but fell below the standard on four monitoring days in mid to late August and one day in early September.
- Saccarappa Headpond (at forebay, or Bridge Street, Westbrook): Consistent with Little Falls and Mallison Falls, DO in the Saccarappa Headpond exceeded the 7.0 mg/L Class B standard through most of the monitoring period, but fell below the standard on three monitored days in mid to late August and one day in early September.

Tributary Locations

Tributaries to Dundee Pond:

- Otter Brook (River Road, North Windham): DO in Otter Brook was recorded to be well below 7.0 mg/L on all but one day in September. During the warmest period of the season in August DO levels were below 1.0 mg/L on several monitoring days.

Tributaries to Gambo Pond:

- Upper Pleasant River (Windham Center Road, Windham): DO at this location exceeded 7.0 mg/L on all but one monitoring day. This location is upstream of the River Road monitoring location.
- Lower Pleasant River (River Road, Windham) DO at this location were below 7.0 mg/L during approximately half of the monitoring period, notably during August and early September when water temperatures were high. This location is downstream of the Windham Center Road monitoring location.
- Nason Brook (N. Gorham Road, Gorham): DO in Nason Brook was recorded to be above 7.0 mg/L throughout the monitoring period.

- Black Brook (Gray Road, S. Windham): DO in Black Brook was recorded to be well below 7.0 mg/L on all but seven monitoring days. The low DO occurrences did not correlate with river temperatures.

Tributaries to Saccarappa Impoundment:

- Little River (Mosher Road, Gorham): This site was monitored at quarter points and the data show that the Left River (LR) point was probably in a stagnant area with poor flow circulation. Excluding the LR point data, DO at this site exceeded 7.0 mg/L on all but three days in late August. The low DO occurrences did correlate with river temperatures at this site.
- Colley Wright Brook (River Road, Windham): DO in Colley Wright Brook was recorded to be below 7.0 mg/L on one monitoring day in June and from mid July through mid September. The low DO occurrences did not entirely correlate with river temperatures.
- Inkhorn Brook (River Road, Windham): DO in Inkhorn Brook was recorded to be below 7.0 mg/L on all but four monitoring days in June/early July. The lowest DO occurrences (\leq 3.0 mg/L) did correlate with river temperatures, although levels between 3-5 mg/L were observed when river temps were below 20C.

3.0 Summary and Proposed Action for 2010

The 2009 DO monitoring documented compliance with the 7.0 mg/L Class B DO standard at the Little Falls, Mallison, and Saccarappa impoundments except during the period of highest river water temperatures, when DO levels in the 5.5-7 mg/L range occurred.

Tributaries, however, did not consistently follow this trend. The upper Pleasant River at Windham Center Road, a location upstream of significant non-point pollutions sources, was in compliance on all monitoring days. However, further downstream on the lower Pleasant River at the River Road location, DO levels were consistent with the Presumpscot River sites. Nason Brook and the Little River were substantially in compliance for the entire period. The smaller tributaries that are located in more densely populated areas, with greater potential for non-point source pollution, were not in compliance with Class B DO standards for all or most of the monitoring season. This included Otter, Black Brook, Colley Wright, and Inkhorn Brooks.

The low DO occurrences in the tributaries did not consistently correlate with low river water temperatures, indicating other reasons (e.g., non-point sources) for the low DO levels. Also, low DO occurrences in the tributaries and in the Presumpscot River did not correlate with rainfall events.

Non-point source pollution, which causes very low DO levels in several tributaries, is clearly a contributing factor to low DO levels in the Presumpscot River. These low DO waters, combined with higher water temperatures, led to lower DO levels in the impoundments in mid to late summer during 2009. However, the relative contribution of non-point source pollution to low DO levels in the impoundments can not be accurately assessed. Importantly, S.D.

Mr. Dana Murch

April 8, 2010

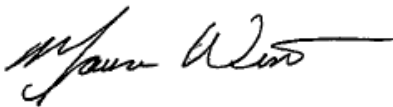
Page 6

Warren can not control these sources. Given this, S.D. Warren proposes to continue monitoring for 2010 at Gambo only. S.D. Warren will relocate or replace the Gambo headpond continuous monitor prior to June 1st, and will conduct weekly monitoring with a hand held meter to verify that the continuous monitor is working properly for the 2010 season.

If you have any questions regarding this report or S.D. Warren's proposed 2010 monitoring program, please contact the undersigned at (207) 776-2193 or (603) 865-5515.

Sincerely,

HDR ENGINEERING, INC.



Maureen Winters
Corporate Consultant

MW/
Enclosures

cc: F. Seavey, USFWS
S. Timpano, MDIFW
F. Brautigam, MDIFW
G. Wippelhauser, MDMR
B. ORegan, SAPPI
T. Howard, SAPPI
B. Goulet, SAPPI
N. Skancke, GKRSE

ATTACHMENT A
2009 MONITORING
FIELD DATA

Sappi Presumpscot River Compliance

Client: 448707 - SAPPI Project: 113530 - 2009 DO Study

2009 Monitoring Results - DO Only

Updated 10/26/2009

= Not Sampled

Location		6/16/2009			6/19/2009			6/24/2009			6/26/2009			6/30/2009			7/2/2009			7/7/2009			
		Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	
Presumpscot River:																							
	Little Falls Bridge	LR	16.5	86.7	8.55	17.9	89.4	8.45	15.3	100.3	10.06	17.9	97.2	9.19	18.2	94.7	8.92	17.4	94.7	9.09	19.8	94.7	8.63
		MR	16.5	85.9	8.34	18.1	88.1	8.32	15.3	100.8	10.08	17.9	97.7	9.25	18.2	94.1	8.90	17.4	94.7	9.09	19.9	95.4	8.66
		RR	16.4	85.3	8.36	18	88.7	8.47	15.4	100.1	9.99	17.9	97.2	9.19	18.2	97.0	9.07	17.3	94.5	9.06	19.9	95.4	8.68
	Mallison Bridge	LR	16.5	87.6	8.53	18.1	91.7	8.68	15.3	102.4	10.25	17.9	99.7	9.46	18.2	97.1	9.19	17.4	96.8	9.29	19.8	96.6	8.83
		MR	16.5	83.5	8.17	18.1	88.3	8.37	15.3	99.4	10.05	17.9	94.7	8.94	18.2	95.2	8.96	17.4	94.5	9.05	19.9	91.6	8.32
		RR	16.4	88.6	8.64	18	93.7	8.83	15.3	102.5	10.22	17.9	98.8	9.35	18.2	97.5	9.15	17.3	97.1	9.32	19.9	96.6	8.82
	Saccarappa Forebay	MR	15.6	85.9	8.62	18	92.7	8.75	15.5	101.5	10.12	17.7	77.6	7.43									
	Bridge Street	LR													18	96.6	9.15	17.1	97.2	9.38	19.6	97.9	8.88
		MR													18	99.4	9.41	17.2	99.7	9.88	19.6	98.5	9.02
		RR													18	101.0	9.68	17.2	102.5	9.98	19.6	99.9	9.18
Tributaries to Dundee Pond:																							
	Otter Brook, at River Road, North Windham (PRW ID # OBO10)	MR	13.3	37.0	3.86	14.7	34.9	3.54	16	25.5	2.5	18.3	15.7	1.47	16.1	17.4	1.71	15.4	21.3	2.18	17.3	14.2	1.34
Tributaries to Gambo Pond:																							
	Pleasant River, at Windham Center Road, Windham (PWR ID # PL030)	MR	15.1	89.8	9.02	17.7	92.4	8.83	17.2	96.5	9.34	19.1	92.9	8.58	17.5	88.6	8.49	17.4	92.3	8.86	19.4	9.19	8.45
	Pleasant River, at River Road, Windham (PRW ID # PL010)	LR												17.5	82.1	8.11	17.4	79.7	7.64	19.2	80.6	7.45	
		MR				17.4	87.5	8.31	17.2	91.2	8.82	18.8	91.5	8.53	17.5	89.8	8.56	17.3	87.6	8.25	19.3	89.3	8.2
		RR												17.5	77.3	7.45	17.4	76.5	7.18	19.4	83.5	7.57	
	Nason Brook, at N. Gorham Road, Gorham (PRW ID # N010)	MR							15	93	9.36	16.2	91.4	8.97	15.4	90.3	8.97	14.6	88.8	9.03	15.5	89.9	8.99
	Black Brook, at Gray Road, S. Windham (PRW ID # BL010)	MR				14	84	8.68	15.3	76.6	7.71	17.1	67.2	6.5	15.4	83.5	8.38	14.8	72.6	7.38	16.3	64.9	6.35
	Nason Brook, at Hurricane Road, Gorham (PRW ID # N010)	MR				13.5	84.5	8.73															
Tributaries to Saccarappa Impoundment:																							
	Little River, at Mosher Road, Gorham (PRW ID # LR010)	LR							15.1	52.2	5.23				15.7	68.2	6.79	14.7	72.5	7.27	19.6	53.8	8.88
		MR	13.5	89.1	9.32	14.5	85.5	8.71	15	88.1	8.87	16.7	85.2	8.29	15.6	89.1	8.88	14.7	85.4	8.64	19.8	81.6	9.02
		RR							15.1	84.5	8.38				16.7	85.2	8.29	14.7	84.8	8.64	19.8	82	9.18
	Colley Wright Brook, at River Road, Windham (PRW # CW010)	MR				14.3	82.4	8.44	15.7	83.6	8.65	17.2	71.4	6.79	15.6	87	8.7	15	80.5	8.1	16.3	75.5	8.02
	Inkhorn Brook, at River Road, Windham (PRW # IN010)	MR	13.7	68.8	7.29	14.8	70.9	7.12	16	66.2	6.51	18	54	5.06	15.3	76.1	7.51	15.1	66	6.71	17.1	53.2	5.1

Sappi Presumpscot River Compliance
Client: 448707 - SAPPI Project: 113530 - 2009 DO Study
2009 Monitoring Results - DO Only
Updated 10/26/2009

Location		7/10/2009			7/13/2009			7/16/2009			7/20/2009			7/23/2009			8/4/2009			8/7/2009			
		Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	
Presumpscot River:																							
	Little Falls Bridge	LR	17	96.0	9.27	19.8	94.7	8.63	20.3	99.3	8.97	21.1	99.6	8.86	21.7	103.2	9.08	22.9	96.5	8.3	22.9	99.2	8.41
		MR	17.2	95.8	9.15	19.9	95.4	8.66	20.5	98.9	8.91	21.2	99.8	8.84	21.7	103.6	9.04	22.9	95.3	8.26	22.6	96.7	8.37
		RR	17.3	96.3	9.24	19.9	95.4	8.68	20.5	98.5	8.86	21.3	100.0	8.87	21.5	101.1	9.01	22.6	98	8.49	23	98.3	8.5
	Mallison Bridge	LR	17.2	98.9	9.48	19.8	96.6	8.83	20.4	96.2	8.63	21.2	99.7	8.85	21.4	101.3	9.42	22.5	99.1	8.6	22.9	100.1	8.66
		MR	17.2	95.1	9.15	19.9	91.6	8.32	20.5	92.2	8.31	21.3	98.4	8.73	21.7	102.1	9.31	22.8	94.4	8.21	22.5	98.2	8.32
		RR	17.3	98.9	9.49	19.9	96.6	8.82	20.5	96.6	8.70	21.3	101.0	9.00	21.7	99.7	9	22.9	100.1	8.68	22.6	100.6	8.72
	Saccarappa Forebay	MR						20.2	96.8	8.75	21.2	104.0	9.23	21.4	106.2	9.25	22.4	100.1	8.69	22.7	100	8.66	
	Bridge Street	LR	16.8	97.8	9.45	19.6	97.9	8.88															
		MR	16.8	99.3	9.71	19.6	98.5	9.02															
		RR	16.8	102.0	9.92	19.6	99.9	9.18															
Tributaries to Dundee Pond:																							
	Otter Brook, at River Road, North Windham (PRW ID # OBO10)	MR	14	25.2	2.60	17.3	14.2	1.34	16.2	24.9	2.43	17.0	29.4	2.84	17.6	34.8	3.24	18.4	8.3	0.82	19.8	7.9	0.93
Tributaries to Gambo Pond:																							
	Pleasant River, at Windham Center Road, Windham (PWR ID # PL030)	MR	16.2	89.7	8.8	19.4	9.19	8.45	20.2	97.4	8.81	21.0	100.3	8.94	20.2	98.2	8.87	20.3	92	8.22	21.4	93.6	8.17
	Pleasant River, at River Road, Windham (PRW ID # PL010)	LR	16.1	80.3	7.88	19.2	80.6	7.45	20.2	86.7	8.65	21.0	86.4	7.69	20.7	88.4	8.13	22.1	75.6	6.79	22	76.4	6.84
		MR	16.2	88.4	8.7	19.3	89.3	8.2	20.4	88.9	8.84	21.1	94.3	8.39	20.6	96.2	8.23	22	79.2	6.82	21.9	82.1	6.99
		RR	16.2	88.3	8.72	19.4	83.5	7.57	20.4	78.4	7.09	21.1	90.4	8.04	20.4	93.1	8.09	21.7	78.7	6.93	22	81.5	6.9
	Nason Brook, at N. Gorham Road, Gorham (PRW ID # N010)	MR	13.8	92.6	9.61	15.5	89.9	8.99	14.5	97.7	9.96	15.7	99.1	9.79	16.3	97.5	9.56	17.7	89.7	8.32	18.4	91.7	8.3
	Black Brook, at Gray Road, S. Windham (PRW ID # BL010)	MR	13.4	79.5	8.33	16.3	64.9	6.35	15.8	62.8	6.2	16.5	63.4	6.18	17.4	79.2	8.01	18	65.3	6.33	19.2	62.4	6.18
	Nason Brook, at Hurricane Road, Gorham (PRW ID # N010)	MR																					
Tributaries to Saccarappa Impoundment:																							
	Little River, at Mosher Road, Gorham (PRW ID # LR010)	LR	14.4	73.2	7.52	19.6	53.8	8.88	16.8	99.3	8.97	18.6	99.6	8.86	17.4	99.6	8.78	19.6	63.6	5.55	20.9	64.1	5.61
		MR	14.1	87.5	8.98	19.8	81.6	9.02	16.9	98.9	8.91	18.5	99.8	8.84	17.3	98.7	9.49	19.3	85.4	7.94	19.8	84.7	7.89
		RR	14.1	87.6	9.01	19.8	82	9.18	16.9	98.5	8.86	18.5	100	8.87	17.4	100.9	9.65	19.3	86	7.95	20.2	86.2	7.86
	Colley Wright Brook, at River Road, Windham (PRW # CW010)	MR	14.4	84.6	8.64	16.3	75.5	8.02	16.1	66.7	6.54	17.9	69.4	6.58	17.7	65.5	6.47	18.7	67	5.37	20.1	66.4	5.13
	Inkhorn Brook, at River Road, Windham (PRW # IN010)	MR	14.3	70.1	7.17	17.1	53.2	5.1	17.2	47.4	4.59	19.0	55.5	5.15	18.3	62.1	6.19	19.6	47.8	4.29	21	46.6	4.17

Sappi Presumpscot River Compliance
Client: 448707 - SAPPI Project: 113530 - 2009 DO Study
2009 Monitoring Results - DO Only
Updated 10/26/2009

Location		8/10/2009			8/13/2009			8/17/2009			8/20/2009			8/21/2009			8/25/2009			8/27/2009			
		Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	
Presumpscot River:																							
	Little Falls Bridge	LR	22.8	86.9	7.46	23.8	81.9	6.95	25.4	89.3	7.34				26.4	82.7	6.67	25.4	77.8	6.34	24.3	77.0	6.43
		MR	22.8	85.7	7.41	23.8	81.5	6.84	25.4	90.2	7.36				26.6	82.6	6.64	25.7	78.5	6.41	24.5	75.6	6.30
		RR	22.6	87.4	7.52	23.7	81.8	6.95	25.4	88.2	7.31				26.6	82.4	6.61	25.7	77.8	6.32	24.5	77.4	6.44
	Mallison Bridge	LR	22.6	89.2	7.76	23.7	85.3	7.24	25.3	84.3	6.95				26.5	86.0	6.98	25.7	80.6	6.58	24.4	77.1	6.50
		MR	22.8	85.8	7.51	23.6	74.3	6.39	25.2	75	6.06				26.6	73.5	5.96	25.7	63.9	5.22	24.5	64.9	5.56
		RR	22.8	91.1	7.76	23.5	86.6	7.41	25.1	85.5	7.03				26.7	88.1	7.06	25.7	80.8	6.59	24.5	79.9	6.64
	Saccarappa Forebay	MR	23.2	93.6	7.99	23.2	86.6	7.38	25	86	7.04				26.4	83.1	6.72	25.2	82.3	6.69	24.6	82.6	6.84
	Bridge Street	LR																					
		MR																					
		RR																					
Tributaries to Dundee Pond:																							
	Otter Brook, at River Road, North Windham (PRW ID # OBO10)	MR	18.1	16.7	1.59	18.8	18.6	1.71	19.8	18.6	1.7	19.9	18.4	1.67				19.7	7.7	0.68	17.3	8.3	0.79
Tributaries to Gambo Pond:																							
	Pleasant River, at Windham Center Road, Windham (PWR ID # PL030)	MR	18.8	76.9	7.16	19.8	80.6	7.43	21.4	87	7.7	22.2	79.0	6.86				21.3	81.5	7.25	19.5	79.0	7.26
	Pleasant River, at River Road, Windham (PRW ID # PL010)	LR	19	73.8	6.27	20.4	69.4	6.33	22.2	52.6	4.5	23.3	58.3	4.97				21.6	47.3	4.17	20.2	53.0	4.79
		MR	19	71.8	7	20.4	68.8	6.22	22.2	75.1	6.56	23.5	60.2	5.13				21.8	65.2	6.64	20.7	62.4	5.62
		RR	19.1	68.9	5.93	20.3	68.1	6.11	22	58.7	5.12	23.5	56.0	4.78				21.9	64.0	5.63	20.7	62.0	5.55
	Nason Brook, at N. Gorham Road, Gorham (PRW ID # N010)	MR	15.7	86.8	8.51	16.6	83.7	8.24	17.4	88.8	8.4	17.7	79.0	7.49				19.1	87.3	7.99	16.5	83.6	8.18
	Black Brook, at Gray Road, S. Windham (PRW ID # BL010)	MR	17.8	42.2	4.51	19.1	36.9	3.39	21.1	35.2	3.11				23.1	35.1	3.01	19.7	55.1	4.93	18.0	34.0	3.23
	Nason Brook, at Hurricane Road, Gorham (PRW ID # N010)	MR																					
Tributaries to Saccarappa Impoundment:																							
	Little River, at Mosher Road, Gorham (PRW ID # LR010)	LR	17.6	60.1	7.6	18.7	54	4.85	20.3	46.2	4.71				21.2	53.3	4.72	19.8	40.6	3.75	18.6	46.0	4.3
		MR	17.6	86.1	8.12	18.7	79.9	7.53	20.3	67.3	6.23				21.0	76.7	6.84	19.8	78.3	7.13	18.8	71.1	6.64
		RR	17.8	88.2	7.99	18.7	81.4	7.6	20.3	80.4	7.2				20.9	70.1	6.28	18.8	77.9	7.11	18.8	74.9	6.95
	Colley Wright Brook, at River Road, Windham (PRW # CW010)	MR	19.2	63.9	5.64	20.1	50.5	4.58	21.8	41.3	3.61	22.9	42.3	6.32				20.6	57.0	5.08	19.8	40.5	3.69
	Inkhorn Brook, at River Road, Windham (PRW # IN010)	MR	19.4	33.2	3.11	20.4	23.2	2.05	21.6	27	2.29				23.0	17.8	1.52	21.6	38.5	3.39	19.7	26.0	2.38

Sappi Presumpscot River Compliance

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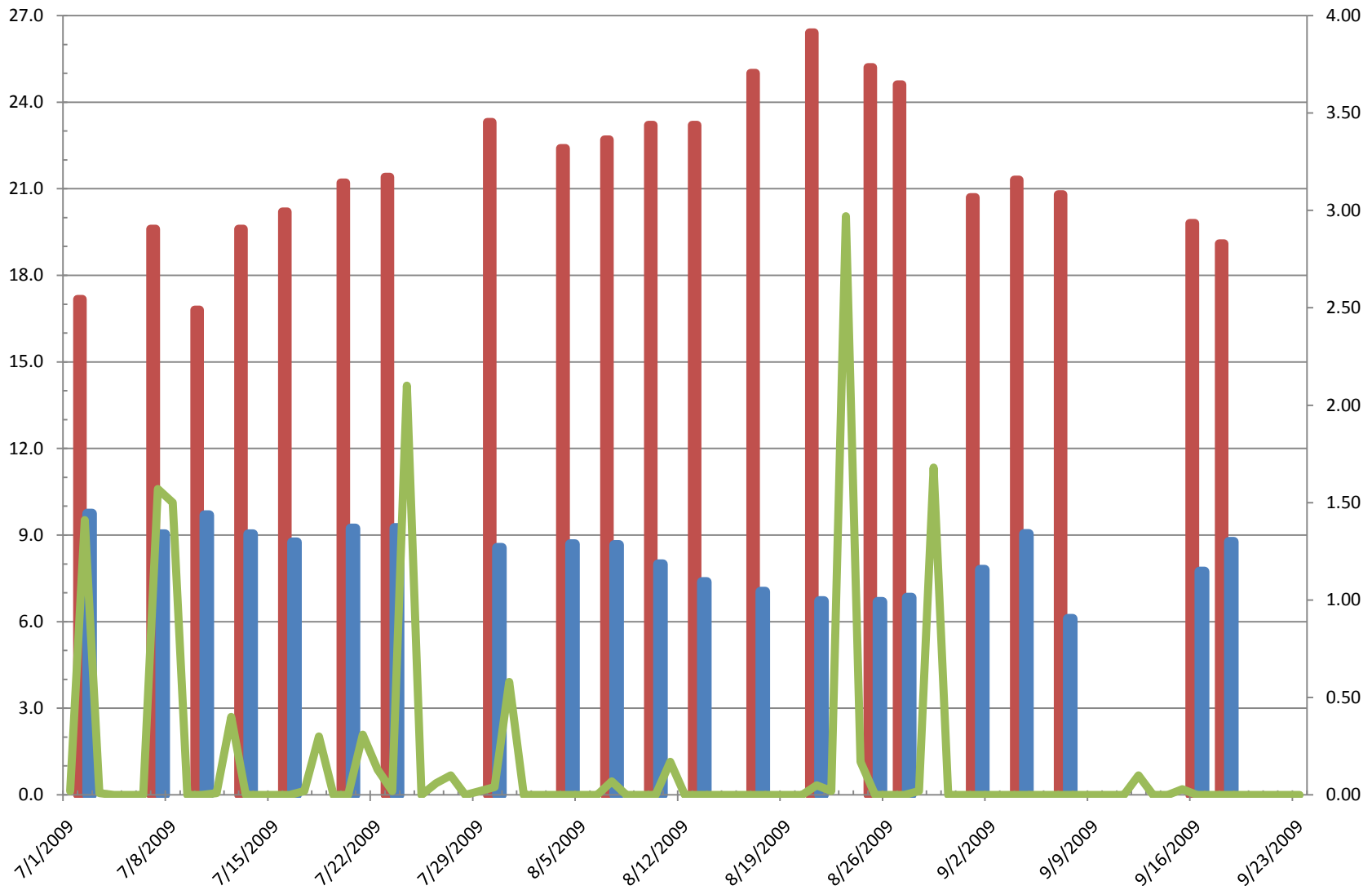
Updated 10/26/2009

Location		9/1/2009			9/4/2009			9/9/2009			9/16/2009			9/18/2009			
		Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	Temp	DO (%)	DO mg/L	
Presumpscot River:																	
	Little Falls Bridge	LR	20.6	84.1	7.56	20.8	101.9	9.05	21.0	87.0	7.77	19.9	97.2	8.51	19.0	95.6	8.87
		MR	20.8	85.1	7.61	20.8	99.4	8.9	21.0	88.8	7.91	20.0	93.6	8.51	19.2	94.7	8.8
		RR	20.8	84.7	7.54	20.6	101.2	9.06	21.0	85.1	7.59	20.0	93.6	8.51	19.2	96.3	8.9
	Mallison Bridge	LR	20.9	86.8	7.7	21	109.9	9.78	20.7	71.7	6.41	19.7	85.5	7.81	19.0	97.8	9.09
		MR	20.8	87.7	7.86	20.9	101.8	8.79	20.8	60.6	5.39	19.8	81.2	7.4	19.1	85.2	7.89
		RR	20.3	82.1	7.35	20.8	110.3	9.88	20.9	72.8	6.5	19.9	86.0	7.83	19.1	98.0	9.09
	Saccarappa Forebay	MR	20.7	87.3	7.8	21.3	102.3	9.04	21.0	72.6	6.48	19.8	84.9	7.74	19.1	94.6	8.77
	Bridge Street	LR															
		MR															
		RR															
Tributaries to Dundee Pond:																	
	Otter Brook, at River Road, North Windham (PRW ID # OBO10)	MR	13.5	23.7	2.55	15.4	26.9	2.73	15.1	30.6	3.08	15.4	83.5	8.34	11.7	46.5	5.02
Tributaries to Gambo Pond:																	
	Pleasant River, at Windham Center Road, Windham (PWR ID # PL030)	MR	18.1	87.3	8.24	16.7	89.1	8.76	16.6	77.6	7.55	15.4	83.5	8.34	13.6	93.4	9.71
	Pleasant River, at River Road, Windham (PRW ID # PL010)	LR	18.6	76.1	7.13	17.8	89.1	8.9	16.4	57.0	5.55	16.4	59.5	5.81	14.7	64.7	6.55
		MR	18.6	77.3	7.17	17.7	90.9	8.11	16.2	67.0	6.57	16.4	59.1	5.8	14.8	71.3	7.19
		RR	18.4	71.4	6.87	17.3	94	9.05	16.0	68.4	6.73	16.3	66.2	6.48	14.9	63.4	6.39
	Nason Brook, at N. Gorham Road, Gorham (PRW ID # N010)	MR	13.6	88	9.14	14.4	107.2	10.45	13.9	76.2	7.86	13	78.7	8.26	11.1	94.1	10.36
	Black Brook, at Gray Road, S. Windham (PRW ID # BL010)	MR	14.2	65.7	6.76	15.5	71.6	6.69	14.6	84.1	8.55	15.9	46.3	4.56	13.7	58.8	6.08
Nason Brook, at Hurricane Road, Gorham (PRW ID # N010)	MR																
Tributaries to Saccarappa Impoundment:																	
	Little River, at Mosher Road, Gorham (PRW ID # LR010)	LR	151	65.2	8.01	15.8	80.1	7.55	15.1	68.1	6.45	14.8	63.3	6.42	13.0	63.2	6.63
		MR	14.9	78.3	7.89	15.8	95.8	9.5	15.1	77.5	7.89	14.7	76.4	7.75	12.8	78.9	8.37
		RR	14.8	78.9	8	15.8	87.8	8.01	15.2	75.4	7.03	14.7	75.4	7.64	12.7	85.9	9.06
	Colley Wright Brook, at River Road, Windham (PRW # CW010)	MR	15	64	6.02	16.7	71.8	6.82									
	Inkhorn Brook, at River Road, Windham (PRW # IN010)	MR	15.8	45.6	4.34	17.3	50.2	4.52	16.0	30.7	3.01	15.7	35.1	3.48	13.7	35.3	3.64

ATTACHMENT B
2009 IMPOUNDMENT SITE GRAPHS

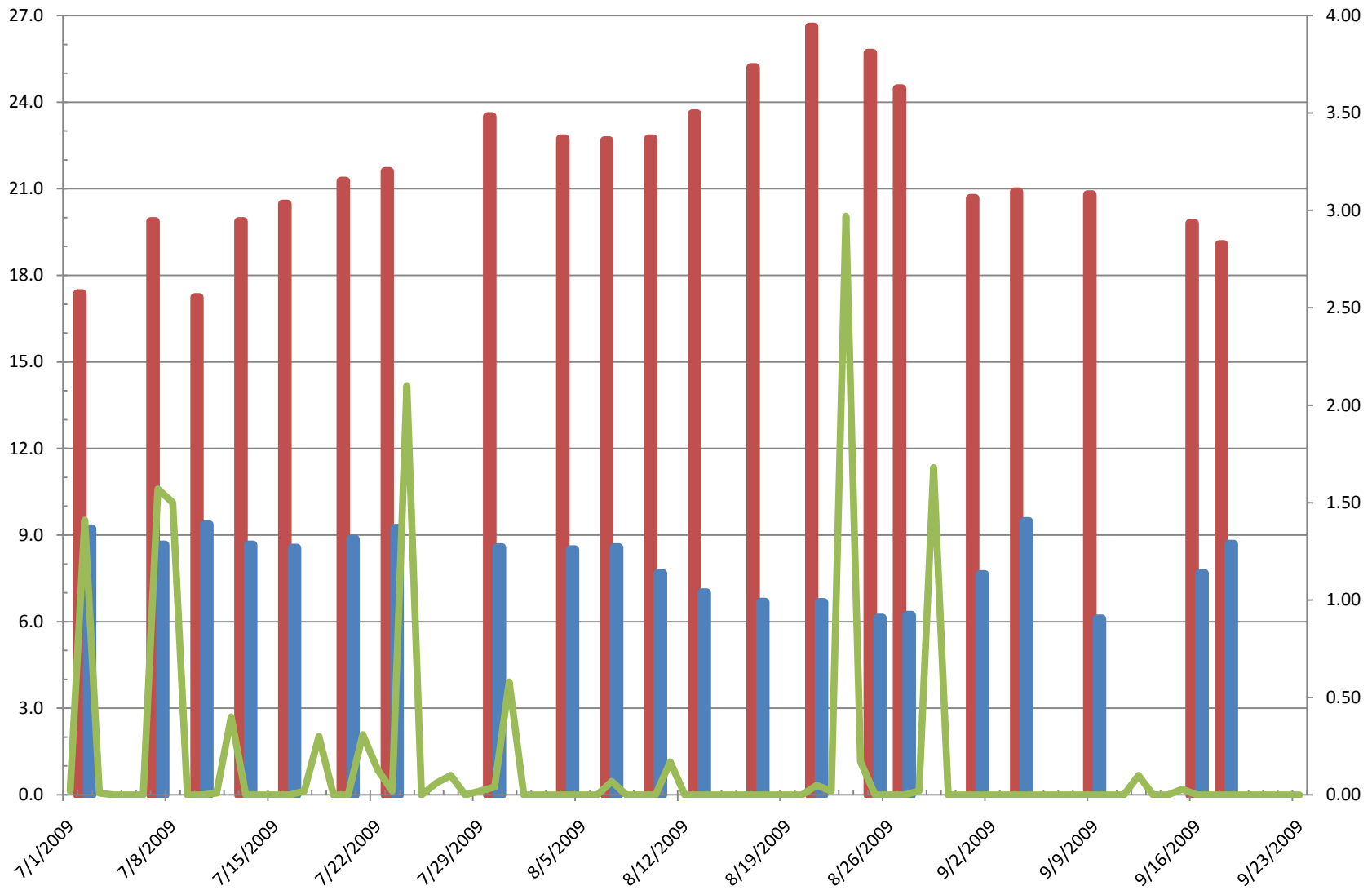
Saccarappa Forebay Dissolved Oxygen and Water Temperature

- Saccarappa Temperature (C)
- Saccarappa DO (mg/L)
- Precipitation (in inches)



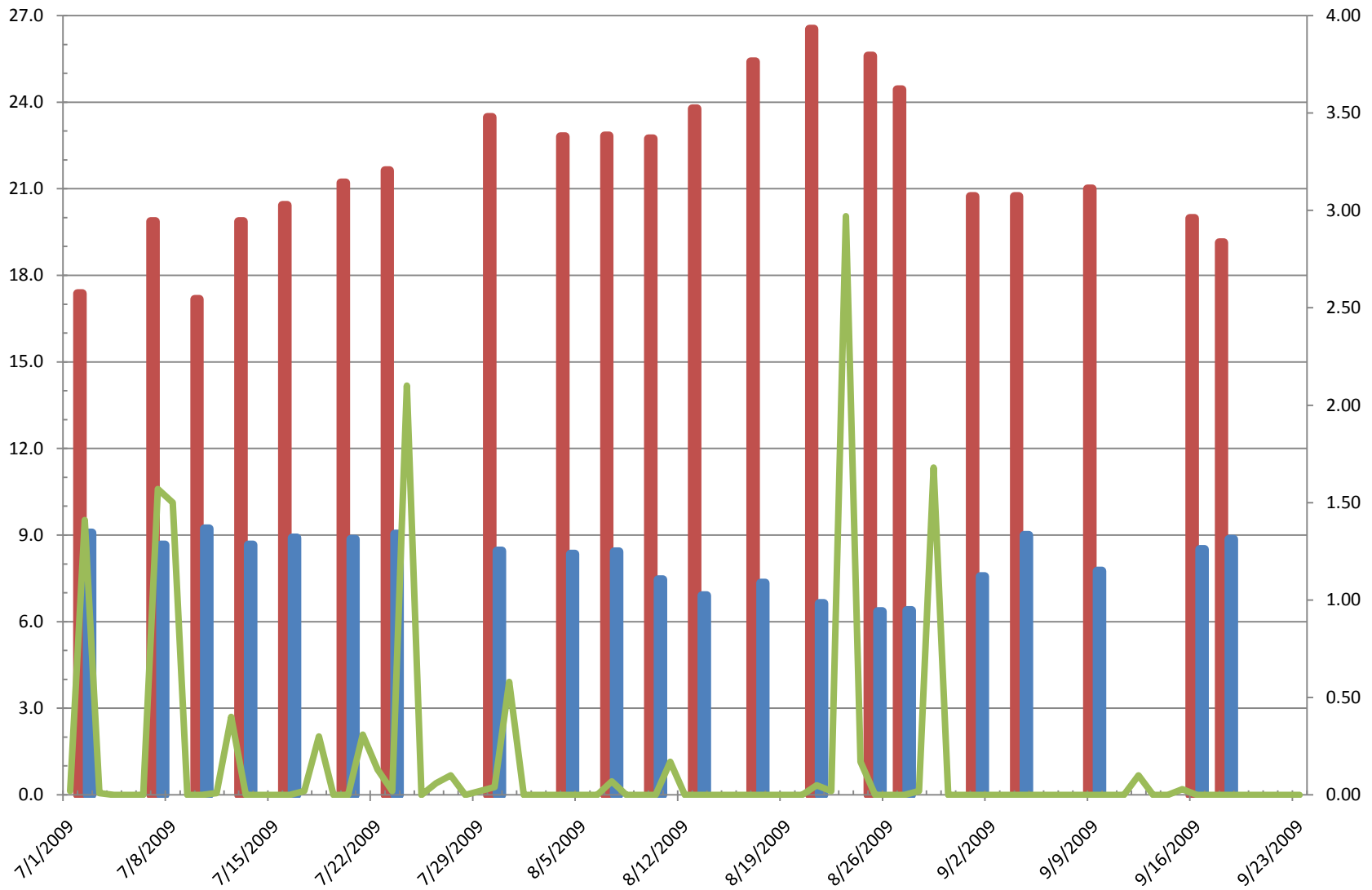
Mallison Forebay Dissolved Oxygen and Water Temperature

- Mallison Temperature (C)
- Mallison DO (mg/L)
- Precipitation (in inches)



Little Falls Forebay Dissolved Oxygen and Water Temperature

- Little Falls Temperature (C)
- Little Falls DO (mg/L)
- Precipitation (in inches)



Email Communication from MDMR Regarding Nightly Eel Passage
Shutdowns for Downstream Eel Passage (2014, 2015, and 2016)

Goulet, Brad

Subject: D/S Eel Shutdowns 2016
Entry Type: Phone call
Company: MDMR

Start: Thu 8/11/2016 1:14 PM
End: Thu 8/11/2016 1:24 PM
Duration: 10 minutes

Categories: State Fed Agency Contact, Hydro's

Confirmed by Phone with Gail Wippelhauser D/S Shutdowns should occur beginning at Sunset 9/1/2016 and ending October 31, 2016

From: [Wippelhauser, Gail](#)
To: [Goulet, Brad](#)
Subject: RE: D/S Eel Migration Presumpscot
Date: Tuesday, August 11, 2015 11:55:06 AM

I agree.

Gail Wippelhauser, Ph. D.
Marine Resources Scientist
Maine Department of Marine Resources
#172 State House Station
Augusta, ME 04333
Phone: 207-624-6349 Fax: 207-624-6501
email: gail.wippelhauser@maine.gov

From: Goulet, Brad [mailto:Brad.Goulet@sappi.com]
Sent: Tuesday, August 11, 2015 10:33 AM
To: Wippelhauser, Gail; 'Shepard, Steven'
Cc: Howatt, Kathy
Subject: D/S Eel Migration Presumpscot


Gail & Steve

The river project D/S migration shutdowns are set to begin at Sunset Sept 1, 2015 for 8 hours with an end to the season on October 31. The license also states Warren will consult on the timing of the shutdowns with MDMR & USFWS.

Are we in agreement the shutdowns will begin at sunset Sept 1 for 8 hours each day until October 31, 2015.

Thanks

Brad

	<p>Brad Goulet Hydro Manager/Utilities Engineer Sappi North America 89 Cumberland Street PO Box 5000 Westbrook, ME 04092 Tel +1 207 856 4083 Mobile +1 207 229 2072 Fax +1 207 856 4456 Brad.Goulet@sappi.com Visit our texture library at www.warrenreleasepapers.com</p>
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From: [Wippelhauser, Gail](#)
To: [Goulet, Brad](#)
Subject: silver eels
Date: Tuesday, August 26, 2014 12:46:03 PM

Hi Brad. I just spoke with Steve Sherpard (USFWS) and we agree that shutdown for eel emigration should begin on September 1.

Gail Wippelhauser, Ph. D.
Marine Resources Scientist
Maine Department of Marine Resources
#172 State House Station
Augusta, ME 04333
Phone: 207-624-6349 Fax: 207-624-6501
email: gail.wippelhauser@maine.gov

Station Logs Showing Nightly Shutdowns for Downstream Eel Passage

Central 2014

Date	Down	Up	Date	Down	Up
9-1	6:45 PM		10-1	6:00 PM	5:00 AM
9-2	6:45 PM	5:15 AM	10-2	6:00 PM	5:06 AM
9-3	6:30 PM	5:28 AM	10-3	5:05 PM	5:00 AM
9-4	6:25 PM	5:20 AM	10-4	5:45 PM	5:00 AM
9-5	6:25 PM	5:10 AM	10-5	5:45 PM	5:00 AM
9-6	6:33 PM	5:18 AM	10-6	5:40 PM	5:00 AM
9-7	6:28 PM	5:15 AM	10-7	5:40 PM	5:00 AM
9-8	6:30 PM	5:15 AM	10-8	5:42 PM	5:00 AM
9-9	6:22 PM	5:13 AM	10-9	5:43 PM	4:40 AM
9-10	6:30 PM	5:20 AM	10-10	5:30 PM	4:40 AM
9-11	6:30 PM	5:22 AM	10-11	5:40 PM	5:00 AM
9-12	6:30 PM	5:24 AM	10-12	5:40 PM	5:00 AM
9-13	6:10 PM	5:20 AM	10-13	5:15 PM	5:05 AM
9-14	6:10 PM	5:23 AM	10-14	5:30 PM	5:15 AM
9-15	6:10 PM	5:00 AM	10-15	5:30 PM	5:15 AM
9-16	6:12 PM	5:00 AM	10-16	5:05 PM	5:15 AM
9-17	6:10 PM	5:00 AM	10-17	5:11 PM	5:18 AM
9-18	6:13 PM	5:00 AM	10-18	5:20 PM	5:14 AM
9-19	6:15 PM	5:00 AM	10-19	5:20 PM	5:17 AM
9-20	5:15 PM	5:00 AM	10-20	5:20 PM	5:10 AM
9-21	5:15 PM	5:00 AM	10-21	5:20 PM	5:18 AM
9-22	6:15 PM	4:37 AM	10-22	5:20 PM	5:13 AM
9-23	6:15 PM	7:05 AM	10-23	5:10 PM	5:14 AM
9-24	6:14 PM	7:15 AM	10-24	5:20 PM	5:25 AM
9-25	6:20 PM	7:10 AM	10-25	4:55 PM	5:25 AM
9-26	5:05 PM	7:30 AM	10-26	4:50 PM	5:23 AM
9-27	5:41 PM	5:02 AM	10-27	4:56 PM	5:00 AM
9-28	5:45 PM	5:22 AM	10-28	4:52 PM	5:00 AM
9-29	6:00 PM	5:05 AM	10-29	5:05 PM	5:00 AM
9-30	6:00 PM	5:03 AM	10-30	4:54 PM	5:00 AM
			10-31	4:56 PM	5:00 AM
			11-1		5:00 AM

Central 2015

Date	Down	Up	Date	Down	Up
9-1	Down Air Line Work		10-1	6:25 PM	4:30 AM
9-2			10-2	5:53 PM	4:40 AM
9-3			10-3	5:55 PM	4:45 AM
9-4	6:45 PM	5:15 AM	10-4	5:45 PM	4:45 AM
9-5	6:35 PM	5:17 AM	10-5	5:40 PM	5:01 AM
9-6	6:37 PM	5:10 AM	10-6	5:40 PM	5:05 AM
9-7	6:58 PM	5:07 AM	10-7	5:40 PM	5:07 AM
9-8	6:32 PM	4:45 AM	10-8	5:35 PM	5:01 AM
9-9	6:35 PM	4:5 AM	10-9	5:35 PM	5:12 AM
9-10	Down all	Down	10-10	5:35 PM	4:45 AM
9-11	6:40 PM	4:45 AM	10-11	5:35 PM	5:00 AM
9-12	6:35 PM	4:45 AM	10-12	5:50 PM	5:01 AM
9-13	6:35 PM	4:45 AM	10-13	5:35 PM	5:00 AM
9-14	6:35 PM	5:13 AM	10-14	5:35 PM	5:07 AM
9-15	6:35 PM	5:04 AM	10-15	5:20 PM	5:10 AM
9-16	6:33 PM	5:07 AM	10-16	5:06 PM	5:07 AM
9-17	6:35 PM	5:11 AM	10-17	5:14 PM	6:05 AM
9-18	6:35 PM	5:18 AM	10-18	5:20 PM	5:11 AM
9-19	6:08 PM	5:10 AM	10-19	5:20 PM	5:00 AM
9-20	6:00 PM	5:13 AM	10-20	5:19 PM	5:00 AM
9-21	6:10 PM	5:13 AM	10-21	5:12 PM	5:00 AM
9-22	6:10 PM	5:02 AM	10-22	6:06 PM	5:00 AM
9-23	6:10 PM	5:10 AM	10-23	5:05 PM	5:00 AM
9-24	6:10 PM	4:59 AM	10-24	5:15 PM	5:00 AM
9-25	6:10 PM	5:05 AM	10-25	5:10 PM	5:00 AM
9-26	5:59 PM	5:05 AM	10-26	5:10 PM	5:22 AM
9-27	6:02 PM	5:00 AM	10-27	5:10 PM	5:12 AM
9-28	6:02 PM	4:45 AM	10-28	5:10 PM	5:10 AM
9-29	6:10 PM	4:45 AM	10-29	5:00 PM	6:45 AM
9-30	6:10 PM	4:45 AM	10-30	5:00 PM	5:23 AM
			10-31	Station Down	
			11-1		

Central 2016

Date	Down	Up	Date	Down	Up
9-1	4:00 PM		10-1		
9-2			10-2		
9-3			10-3		
9-4			10-4		
9-5			10-5		
9-6			10-6		
9-7			10-7		
9-8			10-8		
9-9			10-9		
9-10			10-10	5:30 PM	11:20 AM
9-11			10-11	5:30 PM	5:11 AM
9-12	6:10 PM	10:10 AM	10-12	5:30 PM	5:15 AM
9-13	6:30 PM	5:30 AM	10-13	5:30 PM	5:15 AM
9-14	6:30 PM	5:15 AM	10-14	5:30 PM	5:15 AM
9-15	6:30 PM	5:20 AM	10-15	Down for Eels	
9-16	6:30 PM	5:15 AM	10-16		
9-17	Down for Eels		10-17	5:20 PM	5:15 AM
9-18			10-18	5:20 PM	5:15 AM
9-19	6:00 PM	5:10 AM	10-19	5:20 PM	5:15 AM
9-20	6:00 PM	5:50 AM	10-20	5:20 PM	5:15 AM
9-21	6:00 PM	5:12 AM	10-21	5:20 PM	5:15 AM
9-22	6:00 PM	5:10 AM	10-22		
9-23	6:00 PM	5:12 AM	10-23	Line Trouble	
9-24	Down for Eels		10-24		
9-25			10-25	5:10 PM	5:13 AM
9-26	6:00 AM	5:15 AM	10-26	5:10 PM	5:16 AM
9-27	5:58 PM	5:17 AM	10-27	5:10 PM	5:17 AM
9-28	5:50 PM	5:20 AM	10-28	5:00 PM	5:15 AM
9-29	5:50 PM	5:20 AM	10-29	Down for Eels	
9-30	8:30 AM	5:20 AM	10-30		
			10-31	4:30 PM	5:05 AM
			11-1		5:00 AM

Appendix B

Agency Support Letters



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Maine Field Office
P.O. Box A
306 Hatchery Road
East Orland, Maine 04431
207/469-7300 Fax: 207/902-1588



31 May 2017

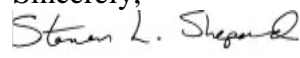
Mr. Brad Goulet
S.D. Warren Company
P.O. Box 5000
Westbrook, ME 04098

REF: LIHI Certification – S.D. Warren Hydroelectric Projects P-2984 Eel Weir, P-2942 Dundee, P-2932 Gambo, P-2941 Little Falls, and P-2932 Mallison Falls, Cumberland County, Maine

Dear Mr. Goulet,

I write in regard to S.D. Warren's (Warren) application for certification of the referenced Presumpscot River hydroelectric projects by the Low Impact Hydropower Institute. The U.S. Fish and Wildlife Service's efforts to restore migratory fishes to the Presumpscot River have spanned more than a decade. In that time, we have worked closely with Warren staff to achieve safe, timely and effective fish passage on the Presumpscot River.

Four of these Projects are included in a Presumpscot River Settlement Agreement. Warren approached the Service and the State of Maine in November 2012 to explore Saccarappa Dam removal as an alternative to installation of certain fish passage structures required by the Service's 2008 Fish Passage Prescription. 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.

Sincerely,

Steven Shepard
Senior Fish and Wildlife Biologist

Maine Field Office



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

May 31, 2017

S.D. Warren Company
P.O. Box 5000
89 Cumberland St.
Westbrook, ME 04908
ATTN: Brad Goulet

RE: Letter of Support for LIHI Certification for Eel Weir (FERC No. 2984), Dundee (FERC No. 2942), Gambo (FERC No. 2931), Little Falls (FERC No. 2941), and Mallison Falls (FERC No. 2932) Hydropower Projects

Dear Mr. Goulet,

On May 17, 2017, you requested a letter of support for Low Impact Hydropower Institute (LIHI) certification from the Maine Department of Environmental Protection (Department) for the Eel Weir, Dundee, Gambo, Little Falls, and Mallison Falls hydropower projects located on the Presumpscot River. Specifically, you wanted a statement from the Department confirming compliance with conditions required in the Water Quality Certifications (WQC) issued for the projects referenced above.

The Department reviewed the respective project files and finds that S.D. Warren is currently in compliance with WQC conditions.

The Department does note that the Gambo impoundment has historically been the primary water quality concern on the Presumpscot River, with dissolved oxygen (DO) concentrations consistently not meeting Maine Water Quality Standards. In response to these concerns, S.D. Warren implemented an augmented flow regime in 2016 to prevent DO non-attainment from recurring in the Gambo impoundment. The first year of water quality data from the new flow regime did not show any non-attainment of DO criteria, despite challenges associated with local drought conditions. Based on data from the first year of the new flow regime, the Department expects to see continued attainment of DO criteria. S.D. Warren will continue monitoring water quality to verify this expected trend.

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 Maine Water Quality Standards. The Department supports your application for LIHI certification.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

Letter to S.D. Warren
May 31, 2017
Page 2 of 2

Please contact me at Michael.OConnor@maine.gov or (207) 441-1732 if you have any questions regarding this letter.

Sincerely,

A handwritten signature in blue ink that reads "Michael O'Connor". The signature is fluid and cursive, with the first name "Michael" and last name "O'Connor" clearly distinguishable.

Michael O'Connor
Licensing Project Manager

Cc: Shannon Ames (LIHI)
Michael Sale (LIHI)
File



PAUL R. LePAGE
GOVERNOR

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

WALTER E. WHITCOMB
COMMISSIONER

30 May 2017

Mr. Brad Goulet
S.D. Warren Company
P.O. Box 5000
Westbrook, ME 04098

Dear Mr. Goulet,

I write in support of S.D. Warren Company's certification process under the Low Impact Hydropower Institute for five projects on the Presumpscot River in Cumberland County: FERC P-2984 Eel Weir, P-2942 Dundee, P-2932 Gambo, P-2941 Little Falls, and P-2932 Mallison Falls. These projects are all in compliance with conditions stipulated in the applicable FERC licenses. Furthermore, S.D. Warren Company has been extremely cooperative with Maine's resource agencies regarding issues and concerns relating to these projects.

Sincerely,

Robert G. Marvinney
State Geologist and Director

ROBERT MARVINNEY, STATE GEOLOGIST
MAINE GEOLOGICAL SURVEY

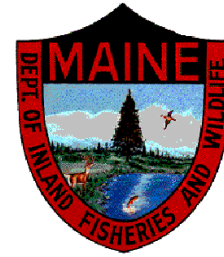


PHONE: (207) 287-2801
FAX: (207) 287-2353
www.maine.gov/dacf/mgs



Maine Department of Inland
Fisheries and Wildlife
358 Shaker Road
Gray, Maine 04039

Telephone: 207-657-2345 ext.111
Fax: 207-657-2980
Email: james.pellerin@maine.gov



Paul R. Lepage
Governor

Chandler E. Woodcock
Commissioner

June 6, 2017

S.D. Warren Company
d/b/a Sappi North America
P.O. Box 5000
89 Cumberland St.
Westbrook, ME 04908

ATTN: Brad Goulet

RE: Letter of Support for LIHI Certification for Eel Weir (FERC No. 2984), Dundee (FERC No. 2942), Gambo (FERC No. 2931), Little Falls (FERC No. 2941), and Mallison Falls (FERC No. 2932) Hydropower Projects

Dear Mr. Goulet,

On May 17, 2017, you requested a letter of support for Low Impact Hydropower Institute (LIHI) certification from the Maine Department of Inland Fisheries and Wildlife (MDIFW) for the Eel Weir, Dundee, Gambo, Little Falls, and Mallison Falls hydropower projects located on the Presumpscot River. Specifically, you requested a statement from the MDIFW that the projects are in compliance with conditions stipulated in the applicable Water Quality Certificates, FERC Licenses, as well as the licensee's ongoing cooperation with resource agencies.

The MDIFW is not directly responsible for regulatory compliance issues, so I will defer comments regarding compliance to the appropriate agencies. S.D. Warren Company has worked very cooperatively with the MDIFW to study and address various inland fishery resource concerns for the above named projects including: minimum flows, fish passage, and recreational issues. In addition, correspondence from S.D. Warren Company with our agency has been timely, professional, accurate, and thorough. MDIFW supports your application for LIHI certification. Please contact me at james.pellerin@maine.gov or (207) 592-2775 if you have any questions regarding this letter.

Sincerely,

A handwritten signature in black ink that reads "James Pellerin".

James Pellerin
Regional Fisheries Biologist
Sebago Lake Region



PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

PATRICK C. KELIHER
COMMISSIONER

June 8, 2017

Mr. Brad Goulet
S.D. Warren Company
P.O. Box 5000
Westbrook, ME 04098

RE: Letter of Support for LIHI Certification for Eel Weir (FERC No. 2984), Dundee (FERC No. 2942), Gambo (FERC No. 2931), Little Falls (FERC No. 2941), and Mallison Falls (FERC No. 2932) Hydropower Projects

Dear Brad:

I am writing in support of S.D. Warren Company's certification process under the Low Impact Hydropower Institute (LIHI) for the Eel Weir, Dundee, Gambo, Little Falls, and Mallison Falls Hydropower Projects, which are located on the Presumpscot River, Cumberland County, Maine. S.D. Warren Company has worked cooperatively with the Maine Department of Marine Resources (MDMR) to address our issues and concerns relating to these projects. The five projects are in compliance with conditions in the applicable FERC licenses that are related to fish passage for diadromous fishes and minimum flows.

MDMR supports your application for LIHI certification. Please contact me at gail.wippelhauser@maine.gov or (207) 624-6349 if you have any questions regarding this letter.

Sincerely,

Gail Wippelhauser
Marine Resources Scientist

Appendix C

State and Federal Resource Agencies Contact Information

Resource Agency	Name of Contact	Title	Address	Phone Number	Email
Maine Department of Environmental Protection (MDEP)	Kathy Howatt	Hydropower Coordinator, Bureau of Land Resources - Land Division	17 State House Station 28 Tyson Drive Augusta, ME 04333-0017	(207) 446-2642	kathy.howatt@maine.gov
Maine Department of Marine Resources (MDMR)	Gail Wippelhauser	Marine Resource Scientist	172 State House Station Augusta, ME 04333	(207) 624-6349	gail.wippelhauser@maine.gov
Maine Department of Inland Fisheries and Wildlife (MDIFW)	Francis Brautigam	Director of Fisheries & Hatcheries	284 State Street Augusta, Maine 04333	(207) 287-5263	francis.brautigam@maine.gov
United States Fish and Wildlife Service (USFWS)	Steven Shepard	C.F.P.	17 Godfrey Drive, Suite 2 Orono, Maine 04473	(207) 866-3344 ext. 1116	steven_shepard@fws.gov
Maine State Historic Preservation Office (MSHPO)	Kirk Mohny	Director, and State Historic Preservation Officer	55 Capitol Street 65 State House Station Augusta, ME 04333-0065	(207) 287-3811	kirk.mohny@maine.gov
Federal Energy Regulatory Commission (FERC)	Kimberly Bose	Secretary of the Commission	888 First Street N.E. Washington, DC 20426	(202) 502-8400	
Federal Energy Regulatory Commission New York Regional Office (FERC NYRO)	John Spain	Regional Engineer, FERC Division of Dam Safety and Inspections	19 W 34th Street, Suite 400 New York, NY 10001	(212) 273-5954	john.spain@ferc.gov

Appendix D

Explanation of Saccharappa Settlement Agreement and Agency Support

Background

On October 2, 2003 FERC issued a new license, for a term of 40 years, for the continued operation of the Saccarappa Hydroelectric Project (FERC No. P-2897). The license includes requirements for upstream and downstream anadromous fish passage with a two-phased implementation schedule, 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 project was not economical, and in December 2013 S.D. Warren began the process of surrendering the license and decommissioning the Saccarappa Project to provide fish passage facilities at the site.

Since the initial surrender application filing, there has been extensive discussion with Federal and State resource agencies, the City of Westbrook, and local nongovernmental 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 requirements of which are discussed further below. The SA was finalized on November 15, 2016 and used as the basis for extensions of the fish passage deadline at Saccarappa. 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 (USDOI), United States Fish and Wildlife Service (USFWS), Maine Department of Marine Resources (MDMR), Conservation Law Foundation (CLF), the Friends of the Presumpscot River (FOPR), the City of Westbrook, Maine, and S.D. Warren; collectively referred to as "Parties." The following link directs the reader to the Settlement Agreement on the FERC Docket:

https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14512222

Goals and Purpose

It is the goal of the SA to ensure timely, safe, and effective anadromous fish passage at the Saccarappa site after project operations have come to an end following the license surrender. The purpose of the SA is to outline the obligations of S.D. Warren as agreed upon by the Parties and in compliance with the Clean Water Act, the Federal Power Act, and the Maine Waterway Development and Conservation Act (MWDCA).

Provisions of the SA

The provisions set by the SA as they relate to fish passage construction at Saccarappa are summarized as follows:

- Cessation of power generation at Saccarappa;
- Removal of both the eastern (upper) and western (lower) spillways, and the Powerhouse;
- Construction of the two-channel upper falls fish passage over the upper eastern and western falls;
- Construction of a double Denil fish ladder at the lower (western) falls site, including a fish counting facility at the exit;
- Changes or repairs to the tailrace guard wall in the western channel to support the fishway and counting facility; and
- Funding for MDMR to perform an effectiveness study upon completion of the fishways.

Additionally, the SA provides for modifications to the requirements for fish passage at the upstream Mallison Falls, Little Falls, Gambo, and Dundee FERC licensed projects as follows:

- Mallison Falls: Upon passage of 2,960 American shad or 18,020 blueback herring at the Saccarappa fish counting facility in any single season, S.D. Warren shall either (1) install fish passage within two years at Mallison Falls pursuant to the current FERC license requirements, or (2) within three years surrender the license and remove the spillway;
- Little Falls: Either construct fish passage as required by the FERC license, or surrender the FERC license and remove the spillway three years after the removal of the Mallison Falls spillway;
- Gambo & Dundee: Removal of fish passage requirements from the licenses for the remainder of the license term.

Support

Having taken into consideration the following issues: fisheries, wetlands, wildlife, water quality, recreational resources, cultural and archaeological resources, aesthetics, access, land use, operation, and generation, as well as the work to be undertaken at the Saccarappa site, the Parties agreed that fish passage at Dundee and Gambo is not required or appropriate during the terms of those licenses, in large part because the focus of fish passage efforts on the river should be the lower reaches (Saccarappa, Mallison Falls, and Little Falls), and there is no evidence that there will be any need for fish passage at Gambo and Dundee before the expiration of those licenses.

Links to letters of support for the Settlement Agreement from the Parties filed to the FERC Docket are available below:

MDMR: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14512255

USDOJ/USFWS: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14512260

City of Westbrook, Maine: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14512345

CLF and FOPR: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14512250