Low-Impact Hydropower Institute
Recertification Application
Gilman Hydroelectric Project
Gilman, Vermont
FERC Project No. P-2392
LIHI Certificate # 108

Ampersand Gilman Hydro LP
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February 2018

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1 Introduction

This is an application to the Low Impact Hydropower Institute ("LIHI") for the recertification of the Gilman Hydroelectric Project ("Gilman" or "Facility"), relative to a previous LIHI certification that is to expire March 31, 2018.

There have been no material changes in the facility design or operation since the most recent LIHI review that was conducted in May 2013 (referred to as "previous LIHI review").[1] There also have been no material changes in the environmental conditions in the project vicinity since that most recent LIHI review. The only material changes that have occurred recently are in the revised LIHI certification criteria described in the 2016 version of LIHI's certification handbook.

The information provided in this recertification application provides an update to support a new LIHI certification.

2 Facility Description

2.1 Information Table

Table B-1. Facility Description Information for Gilman Hydroelectric Project

Information Type	***Variable Description***	***Response (and reference to further details)***
Name of the Facility	Facility name (use FERC project name if possible)	Gilman Hydroelectric Project
Location	River name (USGS proper name)	Connecticut River
	River basin name	Connecticut River Basin
	Nearest town, county, and state	Town of Lunenburg, Essex County, VT; Town of Dalton, Coos County, NH
	River mile of dam above next major river	The Facility is approximately 300 RM on the main stern of the Connecticut River
	Geographic latitude	44°24'35.85" N
	Geographic longitude	71°43'1.96" W
Facility Owner	Application contact names (IMPORTANT: you must also complete the Facilities Contact Form):	Amit Pinjani Stella Jhang

[1] LIHI. Review of Application for Certification by the Low Impact Hydropower Institute of the Gilman Project. May 2013.

	- Facility owner (individual and company names)	Ampersand Gilman Hydro LP
	- Operating affiliate (if different from owner)	
	- Representative in LIHI certification	Amit Pinjani Stella Jhang
Regulatory Status	FERC Project Number (e.g., P-xxxxx), issuance and expiration dates	P-2392 Issued: April 13, 1994 Expires: March 31, 2024
	FERC license type or special classification (e.g., "qualified conduit")	FERC Licence
	Water Quality Certificate ("WQC") identifier and issuance date, plus source agency name	**Vermont WQC** Issued: July 28, 1989 (amended February 17, 1994) Source Agency: Vermont Agency of Natural Resources **New Hampshire WQC** Issued: November 20, 1992 Source Agency: New Hampshire Department of Environmental Services
	Hyperlinks to key electronic records on FERC e-library website (e.g., most recent Commission Orders, WQC, ESA documents, etc.)	**Most recent Commission Orders:** https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=14633767 https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=13926584 https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=13909888 **FERC License & Environmental Assessment:** https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=3762299 **VT WQC:** https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=1651509 **NH WQC:** https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=1536785

Power Plant Characteristics	Date of construction	1920, refurbished in 1986
	Total name-plate capacity (MW)	4.85
	Average annual generation (MWh)	25,000
	Number, type, and size of turbines, including maximum and minimum hydraulic capacity of each unit	**Unit 1:** 2,250 kW Kaplan **Unit 2:** 1,125 kW Francis **Unit 3:** 750 kW Francis **Unit 4:** 750 kW Francis Max total hydraulic capacity of 2,850 cfs, min total capacity of 130 cfs
	Modes of operation (run-of-river, peaking, pulsing, seasonal storage, etc.)	Run-of-river
	Dates and types of major equipment upgrades	2008 Rubber dam, unit 1 rebuild, unit 4 upgrade 2009 Unit 2 rebuild 2010 Unit 4 rebuild 2011 Unit 3 wicket gate repair, automation and relays 2012 Unit 3 draft tube repairs, downstream fish passage 2013 Generator feeds, unit 3 & 4 HPU upgrade 2015 Unit 2 uprate
	Dates, purpose, and type of any recent operational changes	N/A
	Plans, authorization, and regulatory activities for any facility upgrades	N/A
Characteristics of Dam, Diversion, or Conduit	Date of construction	The old timber crib dam, built in the early 1900's, was refurbished to a concrete gravity structure in 1995 & 1996
	Dam height	6.5 feet
	Spillway elevation and hydraulic capacity	826.8 feet
	Tailwater elevation	809 feet

	Length and type of all penstocks and water conveyance structures between reservoir and powerhouse	N/A
	Dates and types of major, generation-related infrastructure improvements	Please see major equipment upgrades
	Designated facility purposes (e.g., power, navigation, flood control, water supply, etc.)	Power
	Water source	Connecticut River
	Water discharge location or facility	Connecticut River
Characteristics of Reservoir and Watershed	Gross volume and surface area at full pool	Volume: 705 acre-feet Surface Area: 130 acres
	Maximum water surface elevation	833.3 feet USGS
	Maximum and minimum volume and water surface elevations for designated power pool, if available	N/A as the facility is run-of-river
	Upstream dam(s) by name, ownership, FERC number (if applicable), and river mile	1. Canaan, Public Service Company of New Hampshire, P-7528, RM 373
	Downstream dam(s) by name, ownership, FERC number (if applicable), and river mile	1. Fifteen Mile Falls, Great River Hydro, P-2077, RM 274/281/288 2. Dodge Falls, Dodge Falls Hydro, P-8011, RM 270 3. Bellows Falls, Great River Hydro, P-1855, RM 217 4. Wilder, Great River Hydro, P-1892, RM 174 5. Vernon, Great River Hydro, P-1904, RM 142 6. Northfield Mountain Pumped Storage, FirstLight Hydro, P-2485, RM 127 7. Turners Falls, FirstLight Hydro, P-1889, RM 122 8. Holyoke, City of Holyoke Gas & Electric, P-2004, RM 87 9. Station No. 5, City of Holyoke Gas & Electric, P-10806
	Operating agreements with upstream or downstream reservoirs that affect water	N/A

	availability, if any, and facility operation	
	Area inside FERC project boundary, where appropriate	1.1 acres
Hydrologic Setting	Average annual flow at the dam	2,960 cfs
	Average monthly flows (cfs, average)	JAN – 2,235 MAY – 5,416 SEPT – 1,526 FEB – 1,829 JUN – 2,664 OCT – 2,312 MAR – 2,948 JUL – 1,684 NOV – 2,919 APR – 7,781 AUG – 1,523 DEC – 2,628
	Location and name of relevant stream gauging stations above and below the facility	USGS 01131500 Connecticut River near Dalton, NH
	Watershed area at the dam	The watershed area formed by Gilman extends approximately 2.9 miles above and has a drainage area of 1,514 square miles.
Designated Zones of Effect	Number of zones of effect	2
	Upstream and downstream locations by river miles	Zone 1: RM 301.3 to RM 301.55 Zone 2: RM 301.55 to RM 301.85
	Type of waterbody (river, impoundment, by-passed reach)	Zone 1: river Zone 2: impoundment
	Delimiting structures	Dam and powerhouse
	Designated uses by state water quality agency	Water supply, fish habitat, power
Additional Contact Information	Names, addresses, phone numbers, and e-mail for local state and federal resource agencies	See Section 6 Contacts
	Names, addresses, phone numbers, and e-mail for local non-governmental stakeholders	See Section 6 Contacts
Photographs and Maps	Photographs of key features of the facility and each of the designated zones of effect	See Section 7 Photographs and Maps
	Maps, aerial photos, and/or plan view diagrams of facility area and river basin	See Section 7 Photographs and Maps

3 Standards Selection

3.1 Zone of Effect 1: Riverine Downstream of Dam

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

3.2 Zone of Effect 2: Impoundment Upstream of Dam

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

4 Supporting Information

4.1 Riverine Downstream of Dam

4.1.1 Ecological Flow

The Facility satisfies Standard A-2, Agency Recommendation, in the zone downstream of the dam.

Criterion	*Standard*	*Instructions*
A	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is or is not part of a Settlement Agreement. • Explain how the recommendation relates to agency management goals and objectives for fish and wildlife. • Explain how the recommendation provides fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations).

Source and date: New Hampshire Department of Environmental Services, Water Quality Certificate, 1992

The New Hampshire Department of Environmental Services (NHDES) issued a Water Quality Certificate (WQC) on December 16, 1992 to the Gilman Project. However, the WQC did not contain any conditions regarding minimum flows for the protection, mitigation and enhancement of fish and wildlife.

Source and date: Vermont Department of Environmental Conservation, Water Quality Certificate, 1989 (amended 1994)

The Vermont Department of Environmental Conservation (VDEC) issued a WQC on July 28, 1989. The WQC listed seven conditions, of which Condition A relates to project operations, including minimum flow requirements. Condition A states[2]:

[2] Vermont ANR. *Water Quality Certification Amendment*. February 1994. P. 1.

- "The Project shall be operated in strict run-of-river mode where instantaneous flows below the tailrace are maintained equivalent to instantaneous inflows to the impoundment"
- "The pond level shall be maintained at or within six inches of top of the flashboards at all times except where circumstances beyond the control of the applicant occur, such as the loss of flashboards. Under such circumstances, a minimum flow of 757 cfs, or instantaneous project inflow, if less, shall be maintained below the tailrace until normal operations are restored. There shall be no impoundment cycling for generation."
- "In order to protect water quality, a minimum instantaneous flow of 210 cfs shall be spilled at the dam, during the period June 1 through October 15, whenever instantaneous inflow to the project is 1,000 cfs or less. When the Project is not operating, all inflows shall be spilled at the dam."

The Vermont WQC is more environmentally stringent than that of New Hampshire's.

On April 11, 1990, FERC issued an Environmental Assessment (EA) for the Gilman project supporting the need for a 210 cfs spill flow to protect water quality as required in Condition A. The owners at the time, Simpson Paper Company, appealed the condition but ended up finalizing a settlement agreement with the state of Vermont on December 15, 1993.

The agency recommendations are appropriate for maintaining water quality and fish habitat in the Connecticut River. The technical basis for the recommendations are as follows[3]:

- The Project is located in a water quality limited segment in which critical dissolved oxygen (DO) problems occasionally exist. The reduction or elimination of spillage flows results in a loss of potential reaeration capacity and therefore, the 210 cfs spill flow is recommended to prevent low DO.
- Fluctuating water surface levels and changes in flows due to power generation could adversely affect fisheries resources by reducing spawning success and stranding fish and invertebrates, subjecting them to "desiccation and predation from terrestrial predators." As a result, instantaneous un-of-river mode would minimize fluctuations and maintain fish habitat in the Connecticut River.

The conditions and requirements set in the WQC from the state of New Hampshire and state of Vermont provide fish habitat protection by mitigating and reducing habitat changes from power generation at the Gilman Project.

The Facility complies with a Spill Management Plan to report the operation of the Gilman Project for the period of June 1 through October 15. The crest gate is lowered during this period to achieve a flow of 210 cfs when the river flow drops below 1,000 cfs or less, as measured at the Dalton USGS gauge.

The latest report was sent to the Vermont Agency of Natural Resources (VANR) on January 4, 2018 (Appendix A)

[3] FERC. *Environmental Assessment.* April 1990. P. 14.

4.1.2 Water Quality

The Facility satisfies Standard B-2, Agency Recommendation, in the zone downstream of the dam.

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

Source and date: Vermont Department of Environmental Conservation, Water Quality Certificate, 1989 (amended 1994)

The amended Vermont WQC from 1994 did not contain any specific conditions relating to quantitative water quality standards.

Source and date: New Hampshire Department of Environmental Services, Water Quality Certificate, 1992

The NHDES WQC listed one condition: "to monitor dissolved oxygen and water temperature for at least three years after the Project is issued a license.[4]" In addition, the NHDES WQC listed the following requirements[5]:

- Maintain water quality standards of the state of New Hampshire;
- Allow the state access to the Project and monitoring equipment; and
- Structural or operational modifications may need an amended WQC.

The conditions comply with Section 301, 302, 303, 306 and 307 of the Clean Water Act.

The basis of these conditions and requirements were derived from issues discussed in 4.1.1. The Project is located in a water quality limited segment where low DO

[4] FERC. *Order Issuing New License, Water Quality Certification*. April 1994. P.5.

[5] Ibid.

problems can arise, negatively affecting fish habitat. However, with run-of-river operation with adequate spill flow, DO levels can be managed.

Following the issue of the FERC license, the prior owner conducted a sampling program to address the issue of impacts of project operation on water quality. It included DO, temperature, biological oxygen demand (BOD) and total Kjeldahl nitrogen. Results of the 1985 study showed that at an estimated river discharge of 800 cfs, no violation in water quality standards occurred. In addition, a 100 cfs spill over provided a 0.4 mg/L to 0.8 mg/L improvement in DO concentrations. However, VANR indicated the sampling period was not representative of conditions. The prior owner then conducted and reviewed a series of computer modeled analyses of existing and projected DO concentrations in the Gilman project area. VANR also performed modelling. To protect DO, VANR imposed a minimum flow of 210 cfs spilled at the dam from June 1 through October 15 in its WQC. This spill requirement was based on VANR's modeling results and would serve to enhance the aesthetics of the river reach. The dam has been shown to be a good aeration source and the spill flow condition is required to maintain or improve DO concentrations.

Sampling of DO and temperature is conducted at the Gilman Project, as required. The previous tests occurred on August 15, 2016 and on October 14, 2016. Results of the tests are attached in Appendix B. Results have been sent to NHDES and concurrence was received for the instantaneous measurements. NHDES will outline which water quality monitoring data is needed for continuous measurements.

4.1.3 Upstream Fish Passage

The Facility satisfies Standard C-1, Not Applicable / De Minimis Effect, in the zone downstream of the dam.

Criterion	*Standard*	*Instructions*
C	1	<u>Not Applicable / De Minimis Effect</u> • 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). • 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. • 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.

The Gilman Project does not impose a barrier to upstream fish passage as the dam downstream, Fifteen Mile Falls Project (FERC # P-2077, LIHI # 39), has high head dams and no upstream fish passage facilities. Therefore, Fifteen Mile Falls creates an obstruction for fish to reach the Gilman Project.

The USFWS provides fish distribution data for the Connecticut River basin, based on fishway passage counts. However, Wilder Dam which is further downstream than Fifteen Mile Falls Project and the Gilman Project, does not have upstream fish passage so the USFWS data is up to approximately RM 217 or the area near Bellows Falls Project (FERC # P-1855). In 2017, the data indicated the presence of 1 Atlantic Salmon and -158 American Eel.[6] In 2016, the data indicated no Atlantic Salmon and -163 American Eel.[7]

The last stocking program for Atlantic Salmon in the Connecticut River was in 2013 and efforts to restore salmon have halted. More details are discussed in Section 4.2.4.

There may be the presence of some American eels throughout the watershed, though in small quantity. Relicensing studies conducted farther downstream at Wilder Dam (FERC # P-1892) in 2015 showed no eels at the dam in nighttime upstream passage surveys in relicensing study #18, very low numbers of eels using the upstream fish ladder in relicensing study #17, and no eels in the Wilder Dam impoundment which extends to approximately RM 262 in relicensing studies 10 and 11.[8]

4.1.4 Downstream Fish Passage and Protection

The Facility satisfies Standard D-1, Not Applicable / De Minimis Effect, in the zone downstream of the dam.

Criterion	*Standard*	*Instructions*
D	1	<u>Not Applicable / De Minimis Effect:</u> • 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

[6] USFWS. *2017 Connecticut River Basin Fishway Passage Counts*. November 2017. <https://www.fws.gov/r5crc/pdf/2017_counts/CT_River_Fishway_Count_Rpt_11_07_17.pdf>

[7] USFWS. *2016 Connecticut River Basin Fishway Passage Counts*. December 2016. <https://www.fws.gov/r5crc/pdf/CT_River_Fishway_Count_Rpt_12_30_16.pdf>

[8] Great River Hydro, LLC. *Wilder, Bellows Falls, and Vernon Projects Exhibit E.* May 2017. <https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14580050>

		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.

Please refer to section 4.2.4 Downstream Fish Passage and Protection.

4.1.5 Watershed and Shoreline Protection

The Facility satisfies Standard E-1, Not Applicable / De Minimis Effect, in the zone downstream of the dam.

Criterion	*Standard*	*Instructions*
E	1	Not Applicable / De Minimis Effect: • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the project boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements for the facility.

The land south of the river is surrounded by natural lands included within the Forest Lake State Park while land north of the river is a mixed-use zone containing residential and commercial uses. The land within the Project boundary is vegetated with no land use. Using the National Land Cover Database 2011, the Facility vicinity is of non-significant ecological value. It primarily consists of deciduous forest.[9]

There are no requirements for a buffer zone, shoreline protection fund or shoreline management plan for the Gilman Project.

4.1.6 Threatened and Endangered Species Protection

The Facility satisfies Standard F-4, Acceptable Mitigation, in the zone downstream of the dam.

[9] National Land Cover Database 2011. < https://www.mrlc.gov/nlcd11_leg.php>

Criterion	*Standard*	*Instructions*
F	4	Acceptable Mitigation: • If newly listed species are present for which environmental requirements have not been fully determined, describe any significant measures that the facility is implementing to avoid or minimize the impacts on such newly *listed species.* • Document that the mitigation measures for newly listed species are being implemented to the interim satisfaction of applicable resource agencies.

Source and date: Vermont Fish and Wildlife Department, New Hampshire Fish and Game Department and USFWS, 2013

In Essex County of Vermont, the Dwarf Wedgemussel and Canada lynx are listed as threatened or endangered species. In Coos County of New Hampshire, the Dwarf Wedgemussel, Mountain Avens, Northern Myotis Bat, Tricolored Bat, Robbins' Cinquefoil and Boott's Rattlesnake-root are listed.[10]

The Dwarf Wedgemussel is the species of concern in regards to Project operations. As for the other threatened and endangered species, continued run-of-river operations is not expected to negatively impact these species due to their transient nature.

In 2013, the Vermont Fish and Wildlife Department, the New Hampshire Fish and Game Department, and USFWS did not identify that the Facility has an adverse effect on the Dwarf Wedgemussel species.

The Facility required an emergency replacement of two rubber bladder flashboards which required the drawdown of 6.5 feet from the reservoir. The Facility went through extensive studies and consultation with USFW to jointly develop the "Minimization and Monitoring Plan for the Emergency Rubber Bladder Replacement." This plan was submitted and approved by FERC in October 2015. The premise of the study was to protect the Dwarf Wedgemussel, an endangered species which inhabits the impoundment of the Facility (Appendix C).

Following the emergency drawdown, the USFWS and the Facility is working to develop a formal Drawdown Management Plan to protect the Dwarf Wedgemussel during any impoundment drawdowns resulting from normal or emergency operation of the Facility (Appendix C).

[10] NatureServe. *Map of At-Risk Species by County and Watershed.* November 2016. <http://www.natureserve.org/conservation-tools/map-risk-species-county-and-watershed>

4.1.7 Cultural and Historic Resource Protection

The Facility satisfies Standard G-1, Not Applicable / De Minimis Effect, in the zone downstream of the dam.

Criterion	*Standard*	*Instructions*
G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Source and date: Vermont Division for Historic Preservation, April 2013

A letter provided by the Vermont Division for Historic Preservation (VT DHP) states the following: "In 1997, as part of an Act 250 permit review for work on the paper mill, the Vermont Advisory Council on Historic Preservation determined that the mill complex was eligible for the State Register of Historic Places."

The VT DHP does not state there are any cultural or historic resources present on the Facility lands. The mill building quoted above is not located on the Facility's FERC boundary lands, and hence is not applicable.

In addition, there is no requirement in the FERC license with respect to cultural resources protection, mitigation, or enhancement. The New Hampshire State Historic Preservation Office has not expressed any concern with respect to cultural resources at the Facility.

4.1.8 Recreational Resources

The Facility satisfies Standard H-2, Agency Recommendation, in the zone downstream of the dam.

Criterion	*Standard*	*Instructions*
H	2	Agency Recommendation: • 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.

Source and date: FERC Order Issuing New License, 1994

The Environmental Assessment of the Facility's FERC license states the following: "The applicant has incorporated the recommendations of Interior, the NHFGD, the Dalton Conservation Commission, and the town of Dalton in its final recreation plan." It also states the proposal to upgrade the existing canoe portage around the Gilman dam and the boat launch site.

The Facility has since upgraded the portage and boat launch and continues to maintain these recreational resources as part of the requirements of the FERC license. It is open to the public, free of charge. A map showing the recreational resources can be found in Section 7 Photographs and Maps.

4.2 Impoundment Zone Upstream of Dam

4.2.1 Ecological Flow

The Facility satisfies Standard A-1, Not Applicable / De Minimis Effect, in the zone upstream of the dam.

Criterion	*Standard*	*Instructions*
A	1	Not Applicable / De Minimis Effect: • 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

Please refer to section 4.1.1 Ecological Flow.

4.2.2 Water Quality

The Facility satisfies Standard B-2, Agency Recommendation, in the zone upstream of the dam.

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

Please refer to section 4.1.2 Water Quality.

4.2.3 Upstream Fish Passage

The Facility satisfies Standard C-1, Not Applicable / De Minimis Effect, in the zone upstream of the dam.

Criterion	*Standard*	*Instructions*
C	1	Not Applicable / De Minimis Effect

Please refer to section 4.1.3 Upstream Fish Passage.

4.2.4 Downstream Fish Passage and Protection

The Facility satisfies Standard D-2, Agency Recommendation, in the zone upstream of the dam.

Criterion	*Standard*	*Instructions*
D	2	Agency Recommendation: • Identify the proceeding and source, date, and specifics of the agency recommendation applied (NOTE: there may be more than one; identify and explain which is most environmentally stringent). • Explain the scientific or technical basis for the agency recommendation, including methods and data used. This is required regardless of whether the recommendation is 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.

Source and date: Vermont Department of Environmental Conservation, Water Quality Certificate, 1989 (amended 1994)

The Vermont WQC for the Facility required the installation of downstream fish passage upon the request of USFWS and the Vermont Department of Fish and Wildlife. In 2007, USFWS and VDFW requested the installation of downstream fish passage for the spring outmigration of Atlantic salmon by the spring of 2008. The agencies and FERC granted a one-year extension of time due to the discovery of the federal and state listed Dwarf Wedgemussel in the vicinity. In the meantime, the applicant installed interim downstream fish passage in 2009. The applicant continued to work with the agencies on numerous design scenarios through 2009-2011 and received extensions of time to install the downstream fish passage facility by September 1, 2012. The downstream fish passage facility was completed in August 2012 and has been in operation since early 2018. [11]

On August 24, 2017, the Facility requested FERC to suspend its downstream Atlantic salmon smolt passage requirements of its Project license (Appendix E). This was based from the Connecticut River Atlantic Salmon Commission's (CRASC) statement that downstream fish passage is no longer necessary, as Atlantic Salmon restoration efforts have halted (Appendix E). CRASC has noted the following comments:

- "The cooperative restoration effort for Atlantic Salmon was terminated in 2012 by CRASC, with a final basin-wide stocking of salmon fry in the spring of 2013."
- "Stream sampling and assessments have led CRASC to conclude that all smolts produced from this final stocking in the upper basin migrated out of the basin by 2015. As a result, CRASC has determined:
    1. It is no longer necessary to require downstream passage measures for salmon smolts at the main stern hydroelectric facilities identified in the 1990 CRASC MOA, or as included in past Annual Fish Passage Notification letters; and
    2. It is no longer necessary to require downstream passage measures for adult salmon at any hydroelectric facility unless that facility passed 50 or more adult salmon through its fishway the previous spring."

On September 12, 2017, FERC requested to submit the request to suspend fish passage directly to VTDFW, VDEC and FWS for concurrence. The applicant contacted the agencies and received a response on November 6, 2017 (Appendix E).

On January 10, 2018, FERC issued an order to approve the temporary suspension in downstream fish passage requirements (Appendix E). Although discontinued, the

[11] LIHI. Review of Application for Certification by the Low Impact Hydropower Institute of the Gilman Project. May 2013. P. 6.

Facility will still maintain and operate the fish passage as needed to pass extremely high water to help maintain pond level and some debris maintenance.

The Facility has not received a request from USFWS for an assessment on the plunge pool, associated with possible fish scaling, injury, or mortality.

4.2.5 Watershed and Shoreline Protection

The Facility satisfies Standard E-1, Not Applicable / De Minimis Effect, in the zone upstream of the dam.

Criterion	*Standard*	*Instructions*
E	1	Not Applicable / De Minimis Effect: • If there are no lands with significant ecological value associated with the facility, document and justify this (e.g., describe the land use and land cover within the project boundary). • Document that there have been no Shoreline Management Plans or similar protection requirements.

Please refer to section 4.1.5 Watershed and Shoreline Protection.

4.2.6 Threatened and Endangered Species Protection

The Facility satisfies Standard F-2, Finding of No Negative Effects, in the zone upstream of the dam.

Criterion	*Standard*	*Instructions*
F	4	Acceptable Mitigation: • If newly listed species are present for which environmental requirements have not been fully determined, describe any significant measures that the facility is implementing to avoid or minimize the impacts on such newly *listed species*. • Document that the mitigation measures for newly listed species are being implemented to the interim satisfaction of applicable resource agencies.

Please refer to section 4.1.6 Threatened and Endangered Species Protection.

4.2.7 Cultural and Historic Resource Protection

The Facility satisfies Standard G-1, Not Applicable / De Minimis Effect, in the zone upstream of the dam.

Criterion	*Standard*	*Instructions*
G	1	Not Applicable / De Minimis Effect: • Document that there are no cultural or historic resources located on facility lands that can be affected by construction or operations of the facility. • Document that the facility construction and operation have not in the past adversely affected any cultural or historic resources that are present on facility lands.

Please refer to section 4.1.7 Cultural and Historic Resource Protection.

4.2.8 Recreational Resources

The Facility satisfies Standard H-2, Agency Recommendation, in the zone upstream of the dam.

Criterion	*Standard*	*Instructions*
H	2	Agency Recommendation: • 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.

Please refer to section 4.1.8 Recreational Resources.

5 Sworn Statement and Waiver

As an Authorized Representative of Ampersand Gilman Hydro LP, 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.

Company Name: Ampersand Gilman Hydro, LP

Authorize Representative Name: Amit Pinjani Title: Asset Manager

State of _____

County of _____

On this, the_____day of _____, 20____, before me a notary public, the undersigned officer, personally appeared_____, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained. In witness hereof, I hereunto set my hand and official seal.

Notary Public _____

6 Contacts

6.1 Facility

Project Name: Gilman Hydroelectric Project

FERC Project No. P-2392 LIHI Cert. No. 108

Project Owner/Operator: Ampersand Gilman Hydro LP

Name and Title Greg Cloutier, Operator

Company Ampersand Gilman Hydro LP

Phone (603) 443-7610

Email address watrpwr@gmail.com

Mailing Address 717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA

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

Name and Title Amit Pinjani, Asset Manager

Company London Economics International LLC on behalf of Ampersand Gilman Hydro LP

Phone (416) 643-6621

Email address amit@ampersandenergy.com

Mailing Address 717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA

Name and Title Stella Jhang, Project Manager

Company London Economics International LLC on behalf of Ampersand Gilman Hydro LP

Phone (416) 643-6615

Email address stella@ampersandenergy.com

Mailing Address 717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA

Party responsible for compliance with LIHI program requirements:

Name and Title Amit Pinjani, Director of Asset Management

Phone (416) 643-6621

Email address amit@ampersandenergy.com

Mailing Address 717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA

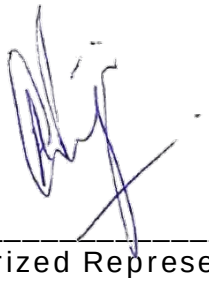
Party responsible for accounts payable:

Name and Title Amit Pinjani, Director of Asset Management

Phone (416) 643-6621

Email address amit@ampersandenergy.com

Mailing Address 717 Atlantic Avenue, Suite 1A Boston, MA 02111 USA



_____ February 15, 2018

Authorized Representative Signature Date

6.2 Agencies

6.2.1 Vermont Agencies

Agency Contact (Check area of responsibility: Flows _X_, Water Quality _X_, Fish/Wildlife Resources __, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Vermont Department of Environmental Conservation
Name and Title	Brian Fitzgerald, Streamflow Protection Coordinator
Phone	(802) 490-6153
Email address	Brian.fitzgerald@state.vt.us
Mailing Address	1 National Life Drive, Main 2, Montpelier, VT 05620-3522

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Vermont Department of Environmental Conservation
Name and Title	Jeff Crocker, Streamflow Protection Coordinator
Phone	(802) 490-6151
Email address	jeff.crocker@vermont.gov
Mailing Address	1 National Life Drive, Main 2, Montpelier, VT 05620

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Vermont Fish & Wildlife
Name and Title	Len Gerardi
Phone	(802) 751-0108
Email address	Len.gerardi@state.vt.us
Mailing Address	1 National Life Drive, Main 2, Montpelier, VT 05620

6.2.2 New Hampshire Agencies

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	New Hampshire Department of Environmental Services
Name and Title	William Thomas
Phone	(603) 271-3406
Email address	William.thomas@des.nh.gov
Mailing Address	29 Hazen Drive, Concord, NH 03302

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	New Hampshire Fish & Game
Name and Title	Carol Henderson, Environmental Review Coordinator
Phone	(603) 271-0676
Email address	Carol.henderson@wildlife.nh.gov
Mailing Address	11 Hazen Drive, Concord, NH 03301

6.2.3 Federal Agencies

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	US Fish and Wildlife Service
Name and Title	Ken Sprankle, Project Leader – Connecticut River conservation
Phone	(413) 548-9138
Email address	ken_sprankle@fws.gov
Mailing Address	103 East Plumtree Road, Sunderland, MA 01375

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	US Fish and Wildlife Service
Name and Title	Melissa Grader, Federal Activities
Phone	(413) 548-8002 ext. 8124
Email address	melissa_grader@fws.gov
Mailing Address	70 Commercial Street, Suite 300, Concord, NH 03301

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	US Fish and Wildlife Service
Name and Title	John Warner, Assistant Supervisor
Phone	(603) 227-6420
Email address	John_warner@fws.gov
Mailing Address	70 Commercial Street, Suite 300, Concord, NH 03301

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	US Fish and Wildlife Service
Name and Title	Tom Chapman, Supervisor
Phone	(603) 227-6410
Email address	Tom_chapman@fws.gov
Mailing Address	70 Commercial Street, Suite 300, Concord, NH 03301

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Federal Energy Regulatory Commission (FERC)
Name and Title	Thoma Beno, Engineer
Phone	(212) 273-5934
Email address	Thoma.beno@ferc.gov
Mailing Address	888 First Street NE, Washington, DC 20426

Agency Contact (Check area of responsibility: Flows__, Water Quality __, Fish/Wildlife Resources _X_, Watersheds __, T/E Spp. __, Cultural/Historic Resources __, Recreation __):	
Agency Name	Federal Energy Regulatory Commission (FERC)
Name and Title	Brian Bartos, Aquatic Resources Branch
Phone	(202) 502-6679
Email address	Brian.bartos@ferc.gov
Mailing Address	888 First Street NE, Washington, DC 20426

7 Photographs and Maps

Figure 1. Overview of the Gilman Hydroelectric Facility

Figure 2. Side view of Gilman dam

Figure 3. View of the powerhouse from the northwest

Figure 4. Angled boom installed upstream of fish passage

Figure 5. Impoundment zone immediately upstream of Gilman

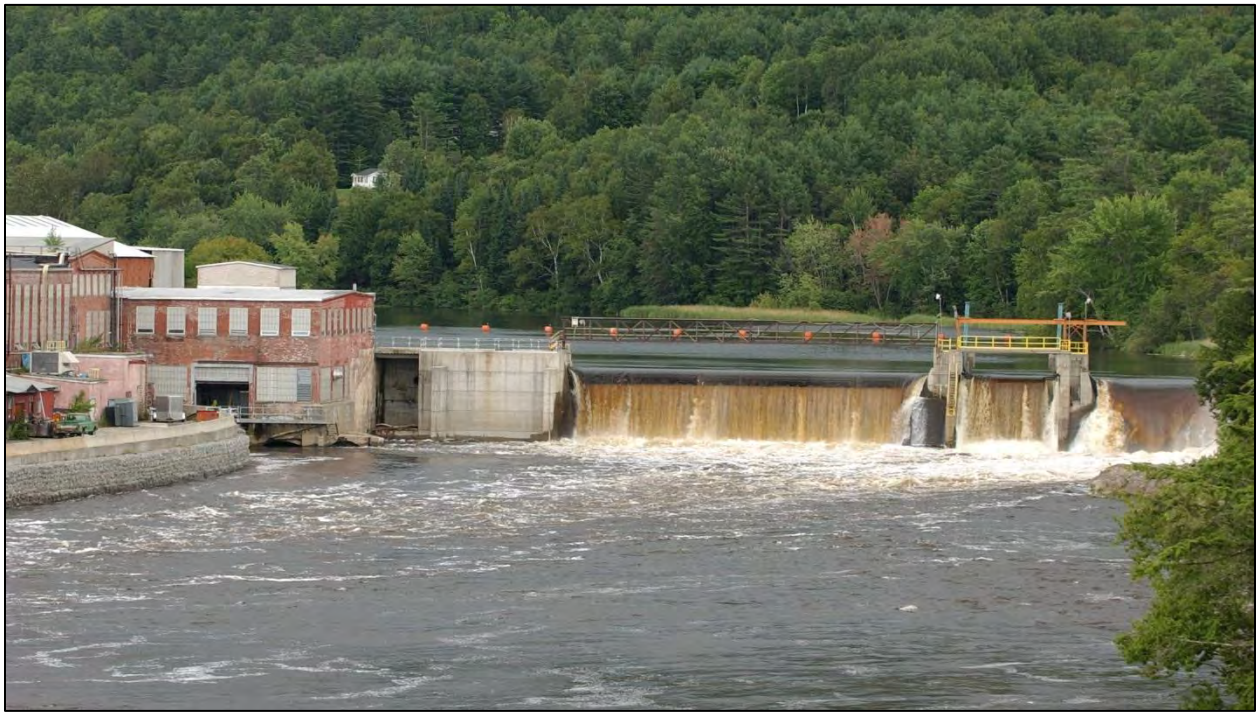


Figure 6. Riverine immediately downstream of Gilman

Figure 7. Location of Gilman dam respective to other Ampersand Hydro LLC assets

Figure 8. Aerial Photo

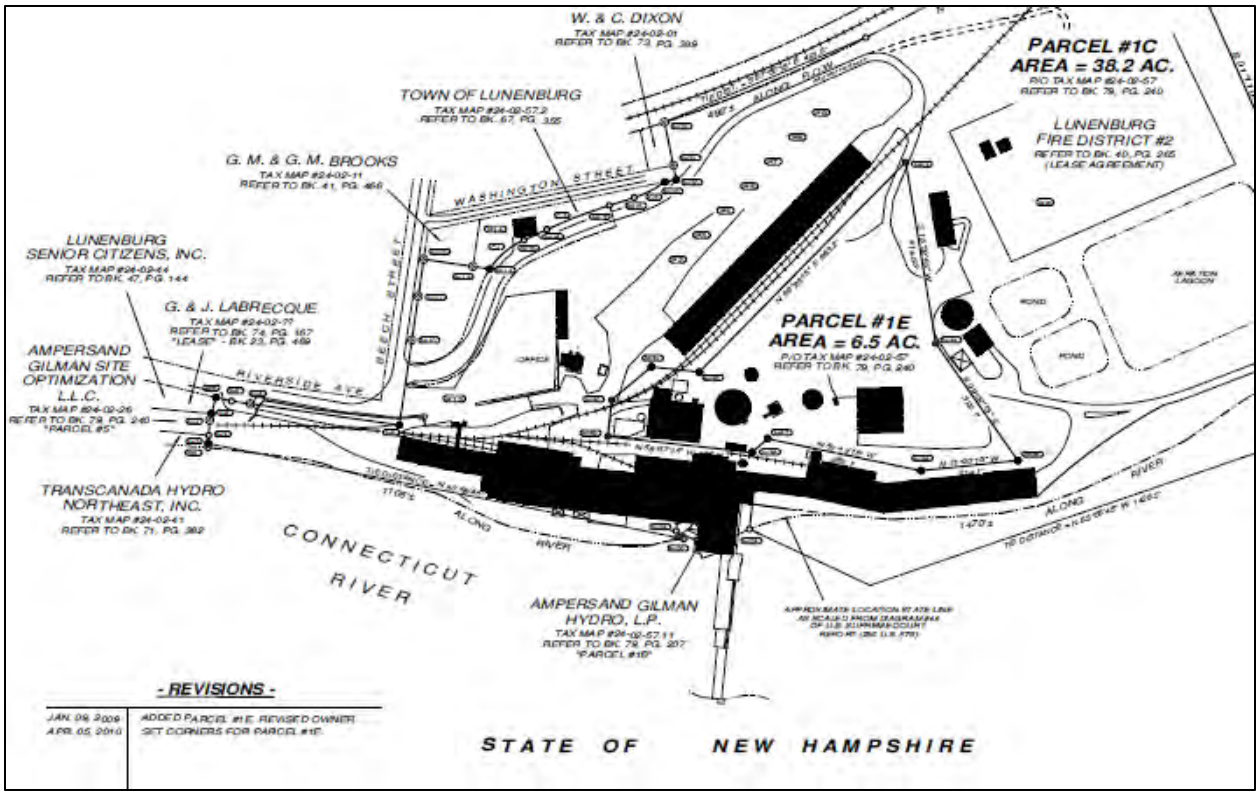


Figure 9. Plan View Diagram

Figure 10. Project Boundary

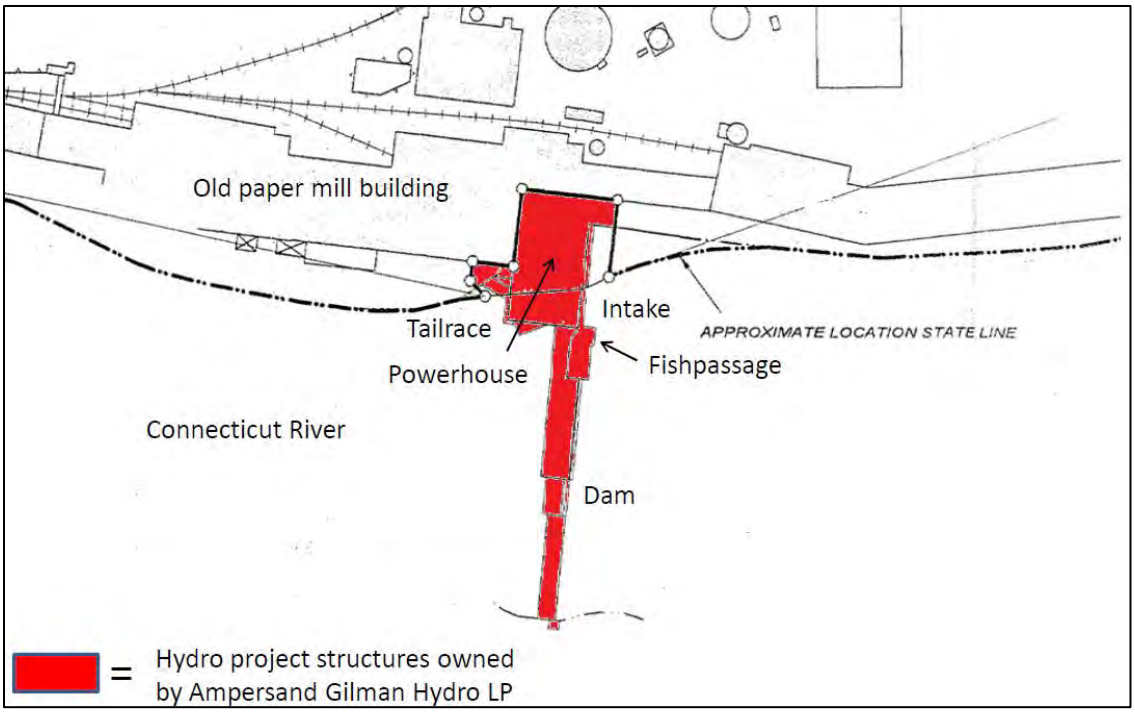


Figure 11. Labeled Key Features of the Facility

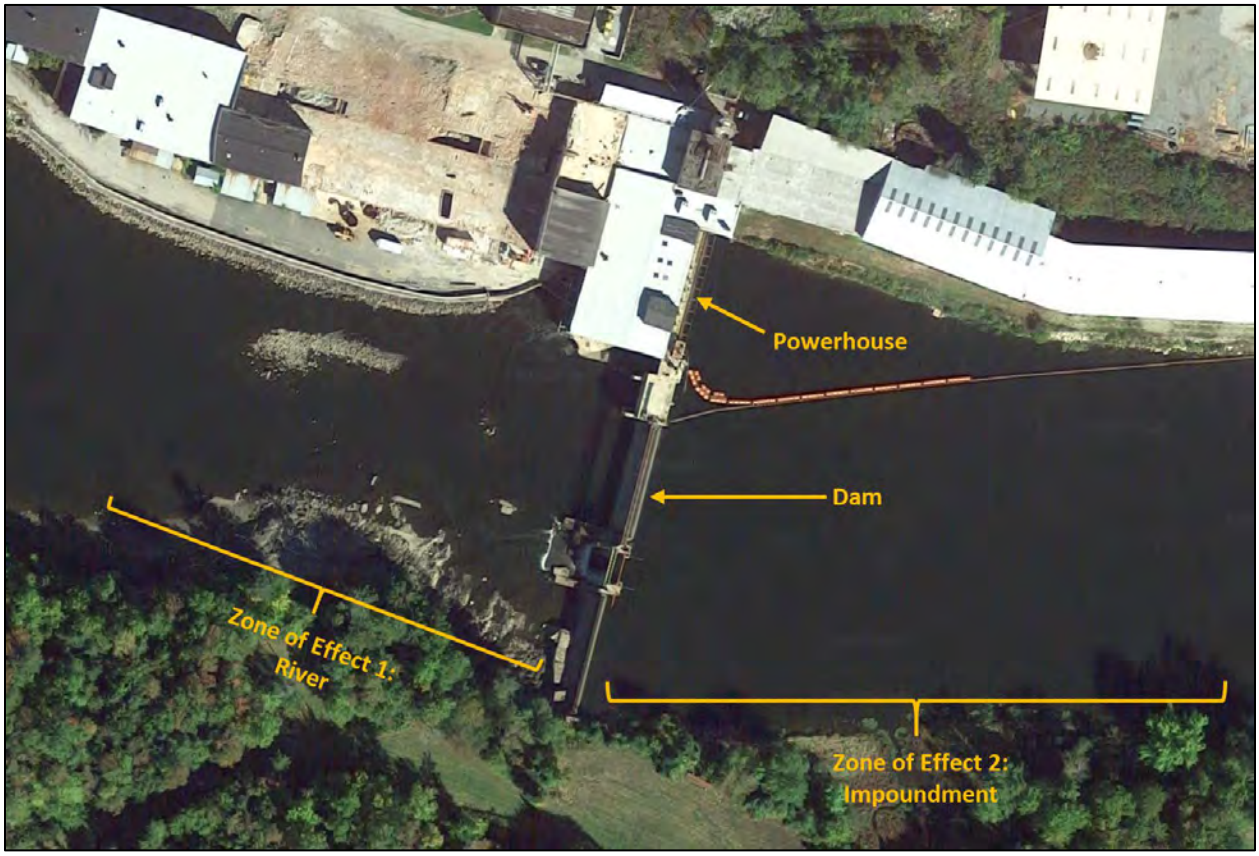


Figure 12. Labeled Zones of Effect

Figure 13. Recreational resources

8 List of Appendices

Appendix A: Spill flow results

Appendix B: Water quality results

Appendix C: Endangered and threatened species

Appendix D: Downstream fish passage requirements

Appendix A: Spill flow results

Pam Kathan

From: Pam Kathan
Sent: Monday, January 08, 2018 4:03 PM
To: Crocker, Jeff
Subject: Re: 2017 Water Spillage

Great Jeff. Thank you.

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: "Crocker, Jeff" <Jeff.Crocker@vermont.gov>
Date: 1/8/18 4:01 PM (GMT-05:00)
To: Pam Kathan <pam@ampersandenergy.com>
Subject: RE: 2017 Water Spillage

Thanks you Pam.

I'll review and let you know if I have any questions.

Jeff

Jeff Crocker, *Supervising River Ecologist*
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
802-490-6151 / Jeff.Crocker@vermont.gov
www.watershedmanagement.vt.gov

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
RIVERS PROGRAM

From: Pam Kathan [mailto:pam@ampersandenergy.com]
Sent: Monday, January 8, 2018 1:21 PM
To: Crocker, Jeff <Jeff.Crocker@vermont.gov>
Subject: 2017 Water Spillage

Jeff,

Please find the cover letter and spreadsheet for 2017 Water Spillage. Hard copy is being mailed. Thank you.

Best Regards,
Pam Kathan
Ampersand Gilman Hydro

Gilman Site Administration
Operations Compliance Specialist
PO Box 59, 2 Riverside Avenue
Gilman, VT 05904
PH: 802-892-1166
pam@ampersandenergy.com

Ampersand Gilman Hydro LP
2 Riverside Avenue
PO Box 59
Gilman, VT 05904

AMPERSAND
Gilman Hydro

January 4, 2018

Mr. Jeff Crocker, Streamflow Protection Coordinator
Vermont Agency of Natural Resources
Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT 05620-3522

Dear Mr. Crocker,

Pursuant to the agreement reached between Simpson Paper Company (now known as Ampersand Gilman Hydro LP) and the State of Vermont, and in accordance with the terms of the Federal Energy Regulatory Commission license issued to Simpson Paper Company (now Ampersand Gilman Hydro LP) for the operation of the Gilman Dam and the Vermont 401 Water Quality Certificate, Ampersand Gilman Hydro LP must report on the Spill Management Plan of operation of the Gilman Dam for the period of June 1st through October 15, 2017.

The crest gate was lowered to the prescribed elevation to achieve a flow of 210 cfs over the crest gate during the periods when the river flow dropped below 1000 cfs as measured at the Dalton USGS gauge per FERC and State of Vermont agreement terms in the FERC License Project No. 2392. Attached, please find the Spillage Report in the requested electronic excel format.

Should you have any questions, please feel free to contact us at 802-892-1166 or email John Chessman at jchess103@gmail.com.

Sincerely,

Greg Cloutier, COO
Ampersand Gilman Hydro LP

GILMAN, VERMONT ANNUAL WATER SPILLAGE REPORT

This report will be maintained from June1 - October 15 of each year by the Shift Technician or Operator during his daily rounds. .
Each entry will be initialed by the Shift Technician or Operator. The water spillage file will be maintained in electronic form on an excel spreadsheet. .
A copy of the file will be submitted via email to the State of Vermont at the end of each recording cycle.

When river flow is at or below 1000 cfs at the Dalton Guage a flow of 210 cfs must be maintained over the dam crestgate. When the flow drops to 1000 cfs or below the crestgate should be opened to 5.31 ft and water wheels cut back to maintain a head pond elevation of 833.25 ft at all times. When flow rises above 1000 cfs the crestgate should be closed.

DATE	TIME	HEADWA ELEV (FT)	TAILRACE ELEV.(FT)	DALTON (CFS)	GATE OPEN (Y/N)	INIT.	COMMENTS
6/1/2017	6am	833.29	809.74	2900	N	FH	
6/1/2017	3p	833.34	809.91	3110	N	CS	
6/1/2017	11p	833.37	809.91	3110	N	FH	
6/2/2017	6am	833.25	809.90	3100	N	FH	
6/2/2017	3p	833.26	809.74	2900	N	CS	
6/2/2017	11p	833.24	809.58	2700	N	FH	
6/3/2017	6am	833.21	809.61	2740	N	FH	
6/3/2017	3p	833.25	809.50	2610	N	SC	
6/3/2017	11p	833.23	809.53	2640	N	FH	
6/4/2017	6am	833.25	809.53	2640	N	FH	
6/4/2017	3p	833.21	809.49	2600	N	SC	
6/4/2017	11p	833.27	809.35	2430	N	FH	
6/5/2017	6am	833.25	809.37	2460	N	FH	
6/5/2017	3p	833.24	809.25	2320	N	CS	
6/5/2017	11p	833.25	809.22	2290	N	CS	
6/6/2017	6am	833.21	809.24	2310	N	PJK	
6/6/2017	3p	833.24	809.31	2390	N	CS	
6/6/2017	11p	833.27	809.43	2530	N	CS	
6/7/2017	6am	833.26	809.70	2850	N	PJK	
6/7/2017	3p	833.26	809.91	3110	N	CS	
6/7/2017	11p	893.28	809.86	3050	N	FH	
6/8/2017	6am	833.20	809.76	2920	N	FH	
6/8/2017	3p	833.22	809.52	2630	N	CS	
6/8/2017	11p	833.23	809.35	2430	N	FH	
6/9/2017	6am	833.23	809.23	2300	N	FH	
6/9/2017	3p	833.21	809.27	2340	N	CS	
6/9/2017	11p	833.25	809.05	2110	N	FH	
6/10/2017	6am	833.21	809.19	2260	N	FH	
6/10/2017	3p	833.24	809.15	2210	N	PJK	
6/10/2017	11p	833.23	809.13	2190	N	FH	
6/11/2017	6am	833.21	809.03	2080	N	FH	
6/11/2017	3p	833.22	808.89	1940	N	CS	
6/11/2017	11p	833.22	808.90	1950	N	FH	
6/12/2017	6am	833.23	808.72	1770	N	FH	
6/12/2017	3p	833.21	808.70	1750	N	CS	
6/12/2017	11p	833.22	808.60	1660	N	CS	
6/13/2017	6am	833.23	808.53	1590	N	PJK	
6/13/2017	3p	833.27	808.34	1420	N	CS	
6/13/2017	11p	833.23	808.37	1450	N	DP	
6/14/2017	6am	833.26	808.31	1400	N	PJK	
6/14/2017	3p	833.26	808.30	1390	N	CS	
6/14/2017	11p	833.25	808.17	1280	N	FH	
6/15/2017	6am	833.27	808.17	1280	N	FH	
6/15/2017	3p	833.24	808.17	1280	N	CS	
6/15/2017	11p	833.23	808.09	1210	N	FH	
6/16/2017	6am	833.24	808.09	1210	N	FH	
6/16/2017	3p	833.26	808.31	1400	N	CS	
6/16/2017	11p	833.27	808.48	1550	N	FH	
6/17/2017	6am	833.27	808.79	1840	N	FH	
6/17/2017	3p	833.31	809.07	2130	N	SC	
6/17/2017	11p	833.26	809.29	2370	N	FH	
6/18/2017	6am	833.26	809.17	2230	N	FH	
6/18/2017	3p	833.23	808.96	2010	N	SC	
6/18/2017	11p	833.23	808.81	1860	N	FH	
6/19/2017	6am	833.25	808.60	1660	N	FH	
6/19/2017	3p	833.25	808.55	1610	N	CS	
6/19/2017	11p	833.23	808.47	1540	N	FH	
6/20/2017	6am	833.23	808.48	1550	N	FH	
6/20/2017	3p	833.59	810.03	3270	N	CS	
6/20/2017	11p	834.19	811.11	4800	N	FH	
6/21/2017	6am	834.22	811.29	5080	Y	FH	Crest Gate lowered for high water
6/21/2017	3p	834.02	810.93	4530	N	CS	
6/21/2017	11p	833.81	810.51	3920	N	CS	
6/22/2017	6am	833.74	810.02	3260	N	PJK	
6/22/2017	3p	833.42	810.08	3330	N	CS	
6/22/2017	11p	833.24	809.69	2840	N	CS	
6/23/2017	6am	833.26	809.48	2580	N	PJK	
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6/24/2017	6am	833.31	809.95	3160	N	FH	
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6/24/2017	11p	834.58	812.05	6320	N	FH	
6/25/2017	6am	834.70	812.35	6840	N	FH	
6/25/2017	3p	834.70	812.35	6840	N	CS	
6/25/2017	11p	834.57	812.07	6350	N	FH	

6/26/2017	6am	834.37	811.63	5620	N	FH
6/26/2017	3p	834.00	810.94	4550	N	CS
6/26/2017	11p	833.80	810.51	3920	N	FH
6/27/2017	6am	833.67	810.24	3550	N	FH
6/27/2017	3p	833.25	810.07	3320	N	CS
6/27/2017	11p	833.21	809.98	3200	N	FH
6/28/2017	6am	833.23	809.66	2800	N	FH
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6/29/2017	6am	833.26	809.51	2620	N	PJK
6/29/2017	3p	833.28	809.52	2630	N	CS
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6/30/2017	6am	833.35	810.11	3370	N	PJK
6/30/2017	3p	833.87	810.65	4120	N	CS
6/30/2017	11p	834.10	811.01	4650	N	CS
7/1/2017	6am	834.05	811.12	4820	N	PJK
7/1/2017	3p	834.03	810.98	4610	N	SC
7/1/2017	11p	834.40	811.17	6260	N	FH
7/2/2017	6am	835.10	813.39	8800	N	FH
7/2/2017	3p	835.15	813.63	9290	N	SC
7/2/2017	11p	835.13	813.30	8520	N	FH
7/3/2017	6am	835.07	812.83	7660	N	FH
7/3/2017	3p	834.69	812.04	6300	N	CS
7/3/2017	11p	834.39	811.44	5300	N	CS
7/4/2017	6am	834.16	811.09	4770	N	PJK
7/4/2017	3p	833.87	810.60	4050	N	CS
7/4/2017	11p	833.70	810.26	3610	N	CS
7/5/2017	6am	833.56	810.21	3510	N	PJK
7/5/2017	3p	833.18	809.99	3220	N	CS
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7/6/2017	6am	833.21	809.62	2750	N	FH
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7/6/2017	11p	833.26	809.42	2510	N	FH
7/7/2017	6am	833.25	809.34	2420	N	FH
7/7/2017	3p	833.28	809.37	2460	N	CS
7/7/2017	11p	833.25	808.99	2040	N	FH
7/8/2017	6am	833.26	808.91	1960	N	FH
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7/8/2017	11p	833.27	808.79	1840	N	FH
7/9/2017	6am	833.26	808.95	2000	N	FH
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7/11/2017	6am	833.25	808.63	1690	N	PJK
7/11/2017	3p	833.25	808.60	1660	N	CS
7/11/2017	11p	833.25	808.55	1610	N	CS
7/12/2017	6am	833.26	808.59	1650	N	PJK
7/12/2017	3p	833.23	808.74	1790	N	CS
7/12/2017	11p	833.23	808.52	1580	N	FH
7/13/2017	6am	833.25	808.70	1750	N	FH
7/13/2017	3p	833.27	809.23	2300	N	CS
7/13/2017	11p	833.26	809.48	2580	N	FH
7/14/2017	6am	833.23	809.62	2750	N	FH
7/14/2017	3p	833.23	809.71	2860	N	AT
7/14/2017	11p	833.26	809.46	2560	N	FH
7/15/2017	6am	833.25	809.61	2740	N	FH
7/15/2017	3p	833.29	809.91	3110	N	SC
7/15/2017	11p	833.59	809.87	3060	N	FH
7/16/2017	6am	833.81	809.93	3140	N	FH
7/16/2017	3p	833.68	809.93	3140	N	SC
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7/18/2017	11p	833.35	808.80	1850	N	CS
7/19/2017	6am	833.36	808.95	2000	N	PJK
7/19/2017	3p	833.26	808.49	1560	N	CS
7/19/2017	11p	833.20	808.69	1740	N	AT
7/20/2017	6am	833.19	808.63	1609	N	AT
7/20/2017	3p	833.21	808.37	1450	N	CS
7/20/2017	11p	833.20	808.32	1410	N	AT
7/21/2017	6am	833.20	808.33	1410	N	AT
7/21/2017	3p	833.19	808.23	1330	N	CS
7/21/2017	11p	833.20	808.15	1260	N	FH
7/22/2017	6am	833.19	808.15	1260	N	FH
7/22/2017	3p	833.20	808.19	1300	N	AT
7/22/2017	11p	833.21	807.86	1040	N	FH
7/23/2017	6am	833.18	807.81	1000	N	FH
7/23/2017	3p	833.11	807.55	1110	N	AT
7/23/2017	11p	833.14	807.86	1040	N	FH
7/24/2017	6am	833.15	807.88	1050	N	FH
7/24/2017	3p	833.11	807.83	1200	N	AT
7/24/2017	11p	833.11	807.87	1050	N	FH
7/25/2017	6am	833.11	807.86	1040	N	FH

7/25/2017	3p	833.12	808.17	1180	N	AT	
7/25/2017	11p	833.14	807.77	973	N	FH	
7/26/2017	6am	833.15	808.76	1350	N	FH	
7/26/2017	3p	833.17	808.18	1290	N	CS	
7/26/2017	11p	833.17	808.19	1300	N	AT	
7/27/2017	6am	833.16	808.50	1180	N	AT	
7/27/2017	3p	833.16	808.06	1190	N	CS	
7/27/2017	11p	833.15	808.07	1200	N	AT	
7/28/2017	6am	833.14	807.99	1140	N	AT	
7/28/2017	3p	833.15	808.06	1190	N	CS	
7/28/2017	11p	833.15	807.92	1080	N	AT	
7/29/2017	6am	833.16	808.19	1300	N	AT	
7/29/2017	3p	833.13	807.83	1020	N	SC	
7/29/2017	11p	833.16	807.81	1000	N	AT	
7/30/2017	6am	833.16	808.11	1230	N	AT	
7/30/2017	3p	833.11	808.10	1220	N	SC	
7/30/2017	11p	833.16	807.75	959	N	AT	
7/31/2017	6am	833.15	807.75	959	N	AT	
7/31/2017	3p	833.13	807.71	931	Y	CS	Crest Gate lowered for low flow min.
7/31/2017	11p	833.14	807.73	945	Y	AT	
8/1/2017	6am	833.14	807.72	938	Y	AT	
8/1/2017	3p	833.16	807.82	1010	Y	CS	
8/1/2017	11p	833.13	807.60	855	Y	AT	
8/2/2017	6am	833.16	807.67	903	Y	AT	
8/2/2017	3p	833.19	807.90	1070	Y	CS	
8/2/2017	11p	833.18	807.41	733	Y	FH	
8/3/2017	6am	833.20	807.70	924	Y	FH	
8/3/2017	3p	833.16	807.69	917	Y	CS	
8/3/2017	11P	833.15	807.69	917	y	FH	
8/4/2017	6am	833.17	807.51	796	Y	FH	
8/4/2017	3p	833.16	807.63	876	Y	CS	
8/4/2017	11p	833.16	807.69	917	Y	FH	
8/5/2017	6am	833.16	807.65	889	Y	FH	
8/5/2017	3p	833.17	807.86	1040	N	AT	Crest Gate raised, flow over min.
8/5/2017	11p	833.16	808.71	1310	N	FH	
8/6/2017	6am	833.17	808.39	1470	N	FH	
8/6/2017	3p	833.28	809.06	2120	N	AT	
8/6/2017	11p	833.47	809.65	2790	N	FH	
8/7/2017	6am	833.50	809.79	2960	N	FH	
8/7/2017	3p	833.00	809.95	3160	N	CS	
8/7/2017	11p	833.16	809.07	2310	N	AT	
8/8/2017	6am	833.15	808.87	1920	N	AT	
8/8/2017	3p	833.16	808.69	1740	N	CS	
8/8/2017	11p	833.16	808.53	1590	N	AT	
8/9/2017	6am	833.16	808.55	1610	N	AT	
8/9/2017	3p	833.19	808.38	1460	N	CS	
8/9/2017	11p	833.19	808.33	1410	N	FH	
8/10/2017	6am	833.15	808.32	1410	N	FH	
8/10/2017	3p	833.16	808.13	1250	N	CS	
8/10/2017	11p	833.14	808.13	1250	N	FH	
8/11/2017	6am	833.16	808.05	1180	N	FH	
8/11/2017	3p	833.15	807.99	1140	N	CS	
8/11/2017	11p	833.17	808.08	1210	N	FH	
8/12/2017	6am	833.16	808.13	1250	N	FH	
8/12/2017	3p	833.16	808.06	1190	N	SC	
8/12/2017	11p	833.15	808.08	1210	N	FH	
8/13/2017	6am	833.15	808.03	1170	N	FH	
8/13/2017	3p	833.18	808.28	1370	N	SC	
8/13/2017	11p	833.16	808.63	1690	N	FH	
8/14/2017	6am	833.17	808.85	1900	N	FH	
8/14/2017	3p	833.90	809.85	3040	N	CS	
8/14/2017	11p	833.56	809.15	2210	N	FH	
8/15/2017	6am	833.38	808.96	2110	N	FH	
8/15/2017	3p	833.16	808.77	1820	N	CS	
8/15/2017	11p	833.15	808.58	1640	N	FH	
8/16/2017	6am	833.15	808.46	1530	N	FH	
8/16/2017	3p	833.15	808.49	1560	N	CS	
8/16/2017	11p	833.18	808.35	1430	N	AT	
8/17/2017	6am	833.20	808.38	1460	N	AT	
8/17/2017	3p	833.17	808.34	1420	N	CS	
8/17/2017	11p	833.16	808.28	1370	N	AT	
8/18/2017	6am	833.16	808.27	1360	N	AT	
8/18/2017	3p	833.16	808.23	1210	N	CS	
8/18/2017	11p	833.18	808.01	1040	N	FH	
8/19/2017	6am	833.14	808.14	1140	N	FH	
8/19/2017	3p	833.15	808.21	1190	N	AT	
8/19/2017	11p	833.15	808.28	1250	N	FH	
8/20/2017	6am	833.16	808.34	1300	N	FH	
8/20/2017	3p	833.18	808.40	1350	N	AT	
8/20/2017	11p	833.13	808.31	1270	N	FH	
8/21/2017	6am	833.16	808.26	1230	N	FH	
8/21/2017	3p	833.15	808.37	1320	N	CS	
8/21/2017	11p	833.16	808.09	1080	N	FH	
8/22/2017	6am	833.16	808.12	1120	N	FH	
8/22/2017	3p	833.17	807.09	952	N	CS	
8/22/2017	11p	833.16	808.25	1220	N	FH	
8/23/2017	6am	833.17	808.31	1270	N	FH	
8/23/2017	3p	833.16	808.67	1580	N	CS	

8/23/2017	11p	833.16	808.76	1670	N	AT	
8/24/2017	6am	833.17	808.91	1810	N	AT	
8/24/2017	3p	833.14	808.87	1770	N	CS	
8/24/2017	11p	833.18	808.59	1520	N	AT	
8/25/2017	6am	833.19	808.45	1390	N	AT	
8/25/2017	3p	833.14	808.38	1330	N	CS	
8/25/2017	11p	833.17	808.16	1150	N	AT	
8/26/2017	6am	833.17	808.17	1160	N	AT	
8/26/2017	3p	833.16	808.13	1130	N	SC	
8/26/2017	11p	833.16	807.96	1000	N	AT	
8/27/2017	6am	833.17	808.00	1030	N	AT	
8/27/2017	3p	833.14	808.01	1210	N	SC	
8/27/2017	11p	833.17	807.86	931	N	AT	
8/28/2017	6am	833.16	807.89	952	N	AT	
8/28/2017	3p	833.16	807.89	952	Y	CS	Crest Gate lowered for low flow min.
8/28/2017	11p	833.16	807.79	882	Y	AT	
8/29/2017	6am	833.17	807.80	889	Y	AT	
8/29/2017	3p	833.17	807.81	896	Y	CS	
8/29/2017	11p	833.16	807.81	896	Y	AT	
8/30/2017	6am	833.16	807.79	882	Y	AT	
8/30/2017	3p	833.16	807.77	869	Y	CS	
8/30/2017	11p	833.14	807.69	816	Y	FH	
8/31/2017	6am	833.14	807.68	809	Y	FH	
8/31/2017	3p	833.17	807.64	783	Y	CS	
8/31/2017	11p	833.14	807.67	803	Y	FH	
9/1/2017	6am	833.14	807.67	803	Y	FH	
9/1/2017	3p	833.16	807.69	816	Y	CS	
9/1/2017	11p	833.15	807.65	790	Y	FH	
9/2/2017	6am	833.14	807.65	790	Y	FH	
9/2/2017	3p	?	?	?	Y	SR	Fill in operator forgot
9/2/2017	11p	833.15	807.62	771	Y	FH	
9/3/2017	6am	833.16	807.59	752	Y	FH	
9/3/2017	3p	833.17	807.61	764	Y	AT	
9/3/2017	11p	833.16	807.84	917	Y	FH	
9/4/2017	6am	833.16	807.95	994	Y	FH	
9/4/2017	3p	833.16	808.21	1190	N	CS	Crest Gate raised, flow over min.
9/4/2017	11p	833.14	808.62	1540	N	CS	
9/5/2017	6am	833.19	808.69	1600	N	PJK	
9/5/2017	3p	833.16	808.69	1600	N	CS	
9/5/2017	11p	833.14	808.62	1540	N	AT	
9/6/2017	6am	833.17	808.53	1460	N	AT	
9/6/2017	3p	833.17	808.88	1780	N	CS	
9/6/2017	11p	833.15	809.14	2060	N	FH	
9/7/2017	6am	833.16	809.37	2350	N	FH	
9/7/2017	3p	833.17	809.36	2340	N	CS	
9/7/2017	11p	833.17	809.42	2410	N	FH	
9/8/2017	6am	833.16	809.38	2360	N	FH	
9/8/2017	3p	833.17	809.33	2300	N	CS	
9/8/2017	11p	833.17	809.23	2170	N	FH	
9/9/2017	6am	833.15	809.21	2150	N	FH	
9/9/2017	3p	833.16	809.09	2170	N	SC	
9/9/2017	11p	833.14	809.00	1900	N	FH	
9/10/2017	6am	833.15	808.92	1820	N	FH	
9/10/2017	3p	833.17	808.73	1810	N	SC	
9/10/2017	11p	833.20	808.70	1610	N	FH	
9/11/2017	6am	833.17	808.71	1620	N	FH	
9/11/2017	3p	833.16	808.57	1490	N	CS	
9/11/2017	11p	833.15	808.41	1350	N	FH	
9/12/2017	6am	833.15	808.34	1300	N	FH	
9/12/2017	3p	833.15	808.26	1230	N	CS	
9/12/2017	11p	833.16	808.21	1190	N	FH	
9/13/2017	6am	833.15	808.15	1140	N	FH	
9/13/2017	3p	833.14	808.73	842	N	CS	
9/13/2017	11p	833.14	807.70	822	N	AT	
9/14/2017	6am	833.16	807.70	822	Y	AT	Crest Gate lowered for low flow min.
9/14/2017	3p	833.14	808.73	842	Y	CS	
9/14/2017	11p	833.14	807.70	822	Y	AT	
9/15/2017	6am	833.16	807.70	822	Y	AT	
9/15/2017	3p	833.17	807.71	829	Y	CS	
9/15/2017	11p	833.15	807.70	822	Y	FH	
9/16/2017	6am	833.15	807.60	758	Y	FH	
9/16/2017	3p	833.16	807.59	752	Y	AT	
9/16/2017	11p	833.16	807.57	739	Y	FH	
9/17/2017	6am	833.16	807.56	733	Y	FH	
9/17/2017	3p	833.15	807.54	720	Y	AT	
9/17/2017	11p	833.16	807.53	713	Y	FH	
9/18/2017	6am	833.16	807.52	707	Y	FH	
9/18/2017	3p	833.16	807.52	707	Y	CS	
9/18/2017	11p	833.16	807.46	667	Y	FH	
9/19/2017	6am	833.16	807.47	673	Y	FH	
9/19/2017	3p	833.18	807.34	589	Y	CS	
9/19/2017	11p	833.19	807.41	634	Y	FH	
9/20/2017	6am	833.19	807.41	634	Y	FH	
9/20/2017	3p	833.17	807.59	752	Y	CS	
9/20/2017	11p	833.16	807.33	582	Y	AT	
9/21/2017	6am	833.16	807.40	627	Y	AT	
9/21/2017	3p	833.15	807.44	653	Y	CS	
9/21/2017	11p	833.13	807.36	601	Y	AT	

9/22/2017	6am	833.14	807.32	576	Y	AT	
9/22/2017	3p	833.16	807.40	627	Y	CS	
9/22/2017	11p	833.14	807.28	551	Y	AT	
9/23/2017	6am	833.16	807.29	558	Y	AT	
9/23/2017	3p	833.16	807.29	638	Y	SC	
9/23/2017	11p	833.15	807.35	595	Y	AT	
9/24/2017	6am	833.16	807.28	551	Y	AT	
9/24/2017	3p	833.15	807.29	688	Y	SC	
9/24/2017	11p	833.17	807.31	570	Y	AT	
9/25/2017	6am	833.15	807.32	576	Y	AT	
9/25/2017	3p	833.15	807.29	688	Y	CS	
9/25/2017	11p	833.15	807.29	688	Y	AT	
9/26/2017	6am	833.15	807.24	657	Y	AT	
9/26/2017	3p	833.18	807.23	651	Y	CS	
9/26/2017	11p	833.17	807.29	688	Y	AT	
9/27/2017	6am	833.16	807.28	681	Y	AT	
9/27/2017	3p	833.14	807.22	645	Y	CS	
9/27/2017	11p	833.17	807.33	713	Y	FH	
9/28/2017	6am	833.15	807.25	663	Y	FH	
9/28/2017	3p	833.13	807.25	663	Y	CS	
9/28/2017	11p	833.13	807.22	645	Y	FH	
9/29/2017	6am	833.15	807.18	621	Y	FH	
9/29/2017	3p	833.16	807.27	675	Y	CS	
9/29/2017	11p	833.14	807.28	681	Y	FH	
9/30/2017	6am	833.15	807.25	663	Y	FH	
9/30/2017	3p	833.15	833.23	645	Y	AT	
9/30/2017	11p	833.16	807.35	725	Y	FH	
10/1/2017	6am	833.16	807.39	621	Y	FH	
10/1/2017	3p	833.17	807.41	634	Y	AT	
10/1/2017	11p	833.16	807.49	686	Y	FH	
10/2/2017	6am	833.16	807.45	660	Y	FH	
10/2/2017	3p	833.16	807.44	653	Y	CS	
10/2/2017	11p	833.16	807.44	653	Y	AT	
10/3/2017	6am	833.16	807.45	660	Y	AT	
10/3/2017	3p	833.16	807.42	640	Y	CS	
10/3/2017	11p	833.17	807.61	764	Y	AT	
10/4/2017	6am	833.16	807.68	809	Y	AT	
10/4/2017	3p	833.15	807.60	855	Y	CS	
10/4/2017	11p	833.16	807.67	903	Y	FH	
10/5/2017	6am	833.16	807.70	924	Y	FH	
10/5/2017	3p	833.15	807.63	876	Y	CS	
10/5/2017	11p	833.16	807.70	924	Y	FH	
10/6/2017	6am	833.16	807.71	931	Y	FH	
10/6/2017	3p	833.14	807.69	917	Y	CS	
10/6/2017	11p	833.16	807.73	945	Y	FH	
10/7/2017	6am	833.16	807.70	924	Y	FH	
10/7/2017	3p	833.16	807.66	936	Y	SC	
10/7/2017	11p	833.16	807.57	835	Y	FH	
10/8/2017	6am	833.16	807.53	809	Y	FH	
10/8/2017	3p	833.18	807.41	764	Y	SC	
10/8/2017	11p	833.16	807.55	822	Y	FH	
10/9/2017	6am	833.16	807.59	849	Y	FH	
10/9/2017	3p	833.13	807.83	1020	N	CS	
10/9/2017	11p	833.14	807.77	973	N	FH	
10/10/2017	6am	833.16	807.94	1100	N	FH	GMP and National Grid Line Work starts
10/10/2017	3p	833.60	808.91	1960	Y	CS	No generation - high flow Crest Gate open
10/10/2017	11p	833.71	808.91	1960	Y	FH	No generation - high flow Crest Gate open
10/11/2017	6am	833.71	809.04	2090	Y	FH	No generation - high flow Crest Gate open
10/11/2017	3p	833.56	808.97	2020	Y	CS	No generation - high flow Crest Gate open
10/11/2017	11p	833.50	808.68	1730	Y	FH	No generation - high flow Crest Gate open
10/12/2017	6am	833.44	808.51	1570	Y	FH	No generation - high flow Crest Gate open
10/12/2017	3p	833.43	808.16	1270	Y	CS	No generation - high flow Crest Gate open
10/12/2017	11p	833.41	808.15	1260	Y	FH	No generation - high flow Crest Gate open
10/13/2017	6am	833.46	808.01	1150	Y	FH	No generation - high flow Crest Gate open
10/13/2017	3p	833.43	807.92	1080	Y	CS	No generation - high flow Crest Gate open
10/13/2017	11p	833.44	807.92	1080	Y	FH	No generation - high flow Crest Gate open
10/14/2017	6am	833.43	807.87	1050	Y	FH	No generation - high flow Crest Gate open
10/14/2017	3p	833.28	808.43	1050	N	AT	Generation begins - Crest Gate closed
10/14/2017	11p	833.16	807.85	1030	N	FH	
10/15/2017	6am	833.16	807.74	952	N	FH	
10/15/2017	3p	833.17	807.61	862	N	AT	
10/15/2017	11p	833.17	807.70	924	Y	FH	Crest Gate lowered for low flow min.

Appendix B: Water quality results

August 15, 2016

Pam

I sampled the Connecticut River temperature (T) and dissolved oxygen (DO) on 12 August 2016 at the tailrace and downstream (<100' upstream of old bridge) of the Gilman hydro-electric station. At 1100, the tailrace at 1100 had T of 24.3 deg. C, DO of 7.8 mg/l, and saturation of 94%; at 1115, the downstream location had T of 25.6 deg. C, DO of 8.25 mg/l, and saturation of 99%. Measurements were taken with a YSI Model 50 meter, with pre- and post- air calibrations at T of 25 deg. C within +-1% of 100% saturation.

Please contact me with any questions.

Thanks

Roland Luxenberg, P.E.
Aquaterra
255 Flynn Avenue
Burlington, VT 05401
802 238 0071

October 14, 2016

Pam

I sampled the Connecticut River temperature (T) and dissolved oxygen (DO) on 13 October 2016 at the tailrace and downstream (<100' upstream of old bridge) of the Gilman hydro-electric station. At 1120, the tailrace had T of 13.4 deg. C, DO of 9.15 mg/l, and saturation of 88%; at 1115, the downstream location had T of 13.7 deg. C, DO of 9.6 mg/l, and saturation of 93%. Measurements were taken with a YSI Model 50 meter, with pre- and post- air calibrations at T of 15 deg. C within +-1% of 100% saturation.

Please contact me with any questions.

Thanks

Roland Luxenberg, P.E.
Aquaterra
255 Flynn Avenue
Burlington, VT 05401
802 238 0071

Stella Jhang

From: Walsh, Ted <Ted.Walsh@des.nh.gov>
Sent: Thursday, February 15, 2018 1:08 PM
To: Stella Jhang
Subject: RE: Ampersand Gilman Hydro - 2016 Water Quality Results

Stella,
Sounds good. Thank you for the update. I will send out a letter in the coming weeks.

Ted

From: Stella Jhang [mailto:stella@ampersandenergy.com]
Sent: Thursday, February 15, 2018 12:55 PM
To: Walsh, Ted
Subject: RE: Ampersand Gilman Hydro - 2016 Water Quality Results

Hi Ted,

We started the recertification process last year and are currently in Stage 2 Review. Thus, LIHI extended our certification to March 31, 2018 (see attached).

Please do send a letter outlining what water quality monitoring data will be needed – I believe we are in compliance with our WQC.

Best,
Stella

From: Walsh, Ted [mailto:Ted.Walsh@des.nh.gov]
Sent: Thursday, February 15, 2018 12:48 PM
To: Stella Jhang <stella@ampersandenergy.com>
Subject: RE: Ampersand Gilman Hydro - 2016 Water Quality Results

Stella,
The LIHI certification for Gilman expired in December of 2017. If you are planning on applying for recertification let me know and I can send a letter outlining what water quality monitoring data will be needed. It will be similar to the data you collected for the original certification in 2012. The two data points you sent do show the dissolved oxygen standard was being met for an instantaneous measurement. We would require continuous data to make a full assessment.

Ted

From: Stella Jhang [mailto:stella@ampersandenergy.com]
Sent: Thursday, February 15, 2018 12:40 PM
To: Walsh, Ted
Subject: RE: Ampersand Gilman Hydro - 2016 Water Quality Results

Hi Ted,

No it is **not** a DES requirement – it is a LIHI condition. I was wondering if you can provide a quick overview and state if it's OK with the state requirements for WQ.

Best,
Stella

From: Walsh, Ted [mailto:Ted.Walsh@des.nh.gov]
Sent: Thursday, February 15, 2018 12:35 PM
To: Stella Jhang <stella@ampersandenergy.com>
Subject: RE: Ampersand Gilman Hydro - 2016 Water Quality Results

Stella,
I can take a look at the data but can you please let me know what I'd be reviewing this data for? Is it something DES required?

Ted

From: Stella Jhang [mailto:stella@ampersandenergy.com]
Sent: Thursday, February 15, 2018 12:31 PM
To: Walsh, Ted
Cc: Amit Pinjani; Greg Cloutier; Pam Kathan
Subject: Ampersand Gilman Hydro - 2016 Water Quality Results

Hi Ted,

In 2016, we conducted water quality sampling tests for DO and temperature at the Gilman Project. Please see attached the results we received from Aquaterra.

Can you please review the results? We would appreciate your comments and conclusions.

Kind regards,
Stella

Stella Jhang
Project Manager
Ampersand Energy Partners LLC
717 Atlantic Ave, Suite 1A
Boston, MA 02111
Tel.: (416) 643-6615
www.ampersandenergy.com

Appendix C: Endangered and threatened species

Ampersand Gilman Hydro, LP
PO Box 129
Riverside Ave.
Gilman, VT 05904
802.892.1166
January 3, 2017

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
Mail Code: OEP/DHAC
888 First Street, NE
Washington, DC 20426

RE: Project 02392 Request for designation as Non-Federal Representative to engage in informal consultation under section 7 of the Endangered Species Act

Dear Ms Secretary;

This Document is electronically filed, and represents our request to be designated the Commission's Non-Federal Representative to engage in informal consultation with US Fish and Wildlife (USFW) as outlined in the Endangered Species Act. The objective of this consultation with USFW, is to develop a formal Drawdown Management Plan to protect Dwarf Wedge Mussels, an endangered species, located in the impoundment area of the FERC Project, during any impoundment drawdowns that may result from normal or emergency operation of the hydroelectric project.

This Gilman project recently, went through extensive studies and consultation with USFW to jointly develop a Minimization and Monitoring Plan for the Emergency Rubber Bladder replacement, approved by the Commission. The Replacement required lowering the impoundment elevation 6.5 feet for approximately 3 weeks of replacement work, located at its Gilman VT hydro plant on the Connecticut River in Essex County, VT.

AGH filed on February 2, 2016 the summary of the repair and the results of the guidelines set forth in USFW - 10.06.15 Language- **FWS RECOMMENDED MODIFICATIONS TO AMPERSAND'S PROPOSED MINIMIZATION AND MONITORING MEASURES FOR THE GILMAN DAM BLADDER REPLACEMENT PROJECT.**

In conclusion, we request that AGH be designated as the Commission's Non-Federal Representative to allow us to conduct informal consultation under the guidelines of the Endangered Species Act to develop a Drawdown Management Plan for this project.

If you have any questions, don't hesitate to contact me at 603.443.7610. Your prompt review will be greatly appreciated.

Sincerely,

Greg Cloutier
Project Manager

CC:
USF&W Melissa Grader
FERC Thoma Beno via email -- Thoma.beno@ferc.gov
David Deen via email -- ddeen@ctriver.org
Dan Gieger
Jennifer Ambler via email -- jennifer.ambler@ferc.gov
Jeff Crocker via email -- Jeff.Crocker@state.vt.us
Carol Henderson via email -- carol.henderson@wildlife.nh.gov

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2392-000--Vermont and
New Hampshire
Gilman Hydroelectric Project
Ampersand Gilman Hydro, LP

January 27, 2017

Mr. Tom Chapman, Supervisor
U.S. Fish and Wildlife Service
New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301

Subject: Designation of non-federal representative for informal consultation under the Endangered Species Act

Dear Mr. Chapman:

By letter dated January 3, 2017, Ampersand Gilman Hydro, LP, licensee for the Gilman Hydroelectric Project, requested designation as our non-federal representative for the purpose of informal consultation with your office pursuant to section 7 of the Endangered Species Act (ESA).[1] The licensee proposes to develop a formal Drawdown Management Plan to protect dwarf wedgemussels, an endangered species, located in the reservoir area of the project during any reservoir drawdowns resulting from normal or emergency operation of the hydroelectric project.

The licensee recently performed an emergency replacement of two rubber bladder flashboards at the project which necessitated a 6.5-foot drawdown of the reservoir for a 3-week period. The licensee implemented recommended conservation measures during the emergency drawdown. Nonetheless, development of a formal Drawdown Management Plan would ensure the protection of endangered species in the reservoir area during any subsequent drawdowns.

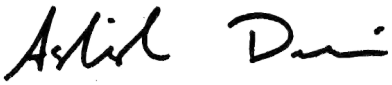
By this letter, we designate the licensee as our non-federal representative for the purpose of conducting informal consultation with your office pursuant to the regulations at 50 C.F.R. §402.08 implementing section 7 of the ESA. The role of the non-federal representative may include conducting studies, developing and supplying information,

[1] The licensee's designation request can be accessed by following this link: http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13693392

attending meetings, ensuring that pertinent endangered species information is maintained in a project file, participating in informal consultation with your agency, developing a draft biological assessment if necessary, and keeping the Commission apprised of its actions. However, the Commission remains ultimately responsible for all findings and determinations regarding the effects of the project on any federally-listed species or critical habitat.

We appreciate your assistance with ESA consultation regarding the Drawdown Management Plan for the Gilman Project. If you have any questions regarding this matter, please contact me at (202) 502-8370 or by email at Ashish.Desai@ferc.gov

Sincerely,



Ashish Desai
Environmental and Project Review Branch
Division of Hydropower Administration
and Compliance

cc: Mr. Amit Pinjani
Asset Manager
Ampersand Gilman Hydro, LP
717 Atlantic Avenue, Suite 1A
Boston, MA 02111

Appendix D: Downstream fish passage requirements

Ampersand Gilman Hydro
2 Riverside Avenue
Gilman, VT 05409
(802) 892-1166

AMPERSAND
Gilman Hydro

August 24, 2017

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

**Re: Ampersand Gilman Hydro, LP; Connecticut River Project P-2392;
2017 Reporting under Article 405 – Downstream fish passage;
Request suspension of Article 405**

Dear Secretary Bose:

Ampersand Gilman Hydro, LP, licensee for the Connecticut River Project P-2392 respectfully submits this update on compliance activities associated with Atlantic salmon passage requirements found in our Connecticut River License and requests the Commission to consider amending the License for the reason stated below.

Article 405 reserves authority to the Federal Energy Regulatory Commission (Commission) to require the licensee to construct, operate and maintain, or to provide the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior, pursuant to Section 18 of the Federal Power Act.

Attached to this letter report, please find correspondence from CRASC (Connecticut River Atlantic Salmon Commission) stating *"The cooperative restoration effort for Atlantic Salmon was terminated in 2012 by CRASC, with a final basin-wide stocking of salmon fry in the spring of 2013. Stream sampling and assessments have led CRASC to conclude that all smolts produced from this final stocking in the upper basin migrated out of the basin by 2015. As a result CRASC has determined:*

1. *It is no longer necessary to require downstream passage measures for salmon smolts at the main stem hydroelectric facilities identified in the 1990 CRASC MOA, or as included in past Annual Fish Passage Notification letters; and*
2. *It is no longer necessary to require downstream passage measures for adult salmon at any hydroelectric facility unless that facility passed 50 or more adult salmon through its fishway the previous spring."*

As stated above, Article 405 has required Ampersand Gilman Hydro, LP to construct, operate and maintain such fishway as may be prescribed by the Secretary of the Interior, pursuant to Section 18 of the Federal Power Act. Given the status of the salmon restoration program, and the letter from CRASC, the requirements under this Article should be suspended.

We look forward to your consideration on this matter. If there are additional questions, please contact me at 802-892-1166 to discuss things further. Thank you for your consideration.

Sincerely,

Pamela J. Kathan
FERC License Management

CONNECTICUT
MASSACHUSETTS
NATIONAL MARINE FISHERIES SERVICE
103 East Plumtree Road
Telephone: 413/548-9138

VERMONT
NEW HAMPSHIRE
U.S. FISH AND WILDLIFE SERVICE
Sunderland, Massachusetts 01375
Fax: 413/548-9622

Re: CRASC's 2016 Downstream
Fish Passage Operations Schedule
FERC Project No.: 2392

Gregory Cloutier
Ampersand Gilman Hydro, LP
P.O. Box 129
Riverside Ave.
Gilman, VT 05904

March 4, 2016

Dear Mr. Cloutier,

The proposed 2016 fish passage schedule for the Gilman Project has changed due to the CRASC decision to no longer require Atlantic salmon smolt protection measures at this project due to the timing of the last fry stocking (2013) and the conclusion of this effort. A letter from CRASC dated February 11, 2016, provides more details on this decision that you were copied on.

Sincerely,

Kenneth Sprankle
Executive Assistant

Enclosure (1)

cc: CRASC Commissioners
CRASC Technical Committee
CRASC Fish Passage Subcommittee
FERC-DLC

CONNECTICUT
MASSACHUSETTS
NATIONAL MARINE FISHERIES SERVICE
103 East Plumtree Road
Telephone: 413/548-9138

VERMONT
NEW HAMPSHIRE
U.S. FISH AND WILDLIFE SERVICE
Sunderland, Massachusetts 01375
Fax: 413/548-9622

February 11, 2016

Ms. Kimberly Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington D.C 20426

Dear Secretary Bose:

The Connecticut River Atlantic Salmon Commission (CRASC), a Congressional-authorized fisheries management body, has required hydroelectric facilities in the basin to operate downstream passage facilities and certain operational measures to protect migrating Atlantic Salmon smolts and post-spawn adults. These measures were established by a Memorandum of Agreement (1990) as well as other complementary instruments implemented by State agencies, and are enforced by the Federal Energy Regulatory Commission (FERC). The CRASC issues an annual "Fish Passage Notification Letter" to the ten main-stem Connecticut River hydroelectric projects. This letter sets the dates for both upstream and downstream passage measures and is used to monitor compliance with these agreements.

The cooperative restoration effort for Atlantic Salmon was terminated in 2012 by CRASC, with a final basin-wide stocking of salmon fry in the spring of 2013. Stream sampling and assessments have led CRASC to conclude that all smolts produced from this final stocking in the upper basin migrated out of the basin by 2015. As a result CRASC has determined:

1) It is no longer necessary to require downstream passage measures for salmon smolts at the main stem hydroelectric facilities identified in the 1990 CRASC MOA, or as included in past Annual Fish Passage Notification letters; and
2) It is no longer necessary to require downstream passage measures for adult salmon at any hydroelectric facility unless that facility passed 50 or more adult salmon through its fishway the previous spring.

The CRASC believes these changes in downstream passage measures, specifically for salmon smolts and post-spawn sea-run salmon, are warranted but reserves the right to reinstate these requirements in the future if the status of Atlantic Salmon and its restoration changes. The CRASC remains committed to ensuring all other diadromous fishes in the basin have safe, timely, and effective upstream and downstream passage to complete all life history

requirements. We look forward to working with FERC on ensuring those passage elements and other elements of hydropower facility operations support our ongoing restoration of the public's fishery resources.

Sincerely,

William Hyatt
Chair, Connecticut River Atlantic Salmon Commission
Director, Connecticut Dept. Energy and Environmental Protection
Bureau of Natural Resources

Electronics copies:

Holyoke Gas and Electric, Richard Murray
TransCanada, John Ragonese
FirstLight Power, John Donohue
CRASC, Commissioners
CRASC, Technical Committee
USFWS, John Warner
USFWS, Brett Towler
FERC Compliance

Mailed copies:

Essex Hydro, Dave Sherman
Ampersand Gilman Hydro, Gregory Cloutier

2016 CT RIVER SCHEDULE OF DOWNSTREAM FISH PASSAGE OPERATIONS

Location (Project)	Downstream Fish Passage Exit	Species	Life Stage	Dates of Operation	Hours of Operation
Gilman/Dalton	Interim Bypass Sluice	salmon	smolt	Not required	
Moore	Bypass Sluice and Trap	salmon	smolt	Not required	
McIndoes	Log Sluice	salmon	smolt	Not required	
Ryegate (Dodge Falls)	Fish Bypass Facility	salmon	smolt	Not required	
Wilder	Log Sluice	salmon	smolt	Not required	———
		salmon	adult	October 15 - December 31[1]	24 hrs/day
Bellows Falls	Angled Fish Guide Wall and Log Sluice	salmon	smolt	Not required	———
		salmon	adult	October 15 - December 31[1]	24 hrs/day
Vernon	Fish Bypass at Unit 10	salmon	smolt	Not required	———
		salmon	adult	October 15 - December 31[1]	24 hrs/day
		shad	adult	April 15 - July 31	24 hrs/day
		shad	juvenile	August 1 - November 15	24 hrs/day
	Louvers and Fish Pipe at Unit 4	eels	adults	September 1 – November 15	24 hrs/day
		salmon	smolt	Not required	———
		salmon	adult	October 15 - December 31[1]	24 hrs/day
		shad	adult	April 15 - July 31	24 hrs/day
		shad	juvenile	August 1 - November 15	24 hrs/day
		eels	adults	September 1 – November 15	24 hrs/day
Northfield	Barrier Net	salmon	smolt	Not required	
Turners Falls	Log Sluice and Trash Sluice	salmon	smolt	Not required	———
		salmon	adult	October 15 - December 31[1]	24 hrs/day
		shad	adult	April 7 - July 31	24 hrs/day
		shad	juvenile	August 1 - November 15	24 hrs/day
		eels	adults	September 1 – November 15	24 hrs/day
Holyoke	Canal Louver and new (2016) low level Bypass	salmon	smolt	Not required	———
		salmon	adult	October 1 - December 31[1]	24 hrs/day
		shad	adult	April 1 – July 31	24 hrs/day
		shad	juvenile	August 1 - November 15	24 hrs/day
		eels	adults	September 1 – December 1	24 hrs/day
		sturgeon	adults	April 1 – November 15[2]	24 hrs/day
		sturgeon	juvenile	April 1- November 15[2]	24 hrs/day
		eels	adults	September 1 – December 1	24 hrs/day
	Bascule Gate	salmon	smolt	Not required	———
		salmon	adult	October 15 - December 31[1]	24 hrs/day
		shad	adult	April 1 - July 31	24 hrs/day
		shad	juvenile	August 1 - November 15	24 hrs/day
		eels	adults	September 1 – December 1	24 hrs/day

1 - Downstream passage operation, for adults will only be required if 50 or more adults are documented as passing upstream of a dam/facility.

2 – Fish passage operations/schedule may be adjusted by NOAA Fisheries, USFWS, and/or MADFW.

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project Nos. 2392-033 – Vermont,
New Hampshire
Gilman Hydroelectric Project
Ampersand Gilman Hydro, L.P.

September 12, 2017

Mr. Greg Cloutier
Chief Operating Officer
Ampersand Gilman Hydro, L.P.
P.O. Box 129, Riverside Avenue
Gilman, VT 05904

Subject: Request for Agency Consultation Regarding Downstream Fish Passage Requirement Suspension

Dear Mr. Cloutier:

This letter is in regard to your request to suspend downstream fish passage requirements at your Gilman Hydroelectric Project No. 2392, filed with the Federal Energy Regulatory Commission (Commission) on August 24, 2017. For reasons discussed in more detail below, the Commission requests that you receive additional agency consultation on the matter before we make a determination on your request.

Article 405 of your project license [1] reserves authority to the Commission to require you to construct, operate and maintain, or to provide for the construction, operation, and maintenance of such fishways as may be prescribed by the Secretary of the Interior, pursuant to Section 18 of the Federal Power Act. Condition C of the Water Quality Certificate (WQC) issued by the Vermont Department of Fish and Wildlife (Vermont DFW) on July 28, 1989, requires the installation of downstream fish passage facilities upon a request from the Vermont DFW and the U.S. Fish and Wildlife Service (FWS).

[1] Order Issuing New License (67 FERC 62,038), issued April 13, 1994.

By letters dated January 31, 2007, and February 5, 2007, the FWS and the Vermont Department of Environmental Conservation (Vermont DEC), on behalf of the Vermont DFW, requested that you develop plans and provide for the installation of downstream fish passage facilities. The Commission approved your downstream facilities on June 9, 2011.[2]

Your request to remove these requirements was made following a letter (included in your filing) dated February 11, 2016, that you received from the Connecticut River Atlantic Salmon Commission [3] (CRASC), informing you that the downstream passage measures for salmon smolts at your project, and others, are no longer required at this time. The CRASC states in its letter that it believes the changes in downstream passage measures, specifically for salmon smolts and post-spawn sea-run salmon are warranted, but it reserves the right to reinstate these requirements in the future if the status of Atlantic Salmon and its restoration changes.

However, being that you developed the downstream fish passage plan in consultation with the Vermont DFW and the FWS to meet the requirements of Article 405 (Section 18 of the Federal Power Act) and Condition C of the WQC, the Commission asks that you submit your request directly to Vermont DFW, Vermont DEC, and FWS regarding the suspension of these requirements in your license, requesting their concurrence. After receiving concurrence or additional comments on the request, please file the documentation with the Commission.

The Commission strongly encourages electronic filing. Please file the requested information using the Commission's eFiling system at http://www.ferc.gov/docs-filing/efiling.asp. For assistance, please contact FERC Online support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Washington, D.C. 20426. The first page of your filing should include docket number 2392-033.

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[2] Order Approving Downstream Fish Passage Facilities (135 FERC ¶ 62,026).

[3] The CRASC is a Congressional-authorized fisheries management body comprised of multiple state agencies including CT, VT, MA, and NH, and federal agencies including FWS and National Marine Fisheries Service.

Thank you for your cooperation. If you have any questions regarding this letter, please contact me via email at brian.bartos@ferc.gov or by telephone at (202) 502-6679.

Sincerely,

Brian Bartos

Brian Bartos
Aquatic Resources Branch
Division of Hydropower Administration
and Compliance

cc: Pamela J. Kathan (via email)
FERC License Management

Pam Kathan

From: Sprankle, Ken <ken_sprankle@fws.gov>
Sent: Friday, September 29, 2017 12:02 PM
To: Pam Kathan
Cc: Eric Palmer; Crocker, Jeff; John Warner
Subject: Re: CRASC and Fish Passage

Hi Pam,

I have sent a poll out to a group of agency people to try and address this coming weeks rather than at the later date I had mentioned. I will get back in touch with you after the group has the opportunity to discuss this.

Contact me at any time with any questions or for updates,

Ken

On Wed, Sep 27, 2017 at 3:02 PM, Pam Kathan <pam@ampersandenergy.com> wrote:

> Hi Ken,
>
> Thanks for your response. If I could have a quicker response that would be great. Really want to get this put completed as soon as I can get responses from everyone. I appreciate any help I can get from everyone. Thank you.
>
> Best Regards,
>
> **Pam Kathan**
>
> **Ampersand Gilman Hydro**
>
> Gilman Site Administration
>
> Operations Compliance Specialist
>
> PO Box 59, 2 Riverside Avenue
>
> Gilman, VT 05904
>
> PH: 802-892-1166
>
> pam@ampersandenergy.com
>
> **From:** Sprankle, Ken [mailto:ken_sprankle@fws.gov]
> **Sent:** Wednesday, September 27, 2017 2:36 PM
> **To:** Pam Kathan <pam@ampersandenergy.com>

Cc: Eric Palmer <eric.palmer@vermont.gov>; Crocker, Jeff <jeff.crocker@state.vt.us>; John Warner <john_warner@fws.gov>
Subject: Re: CRASC and Fish Passage

Hi Pam,

I will bring this matter to the attention of the CRASC (Technical Committee and Commission) which is set to meet on November 7 and 14, 2017. Is that timing sufficient for you or do you need something more quickly?

Ken

On Tue, Sep 26, 2017 at 11:59 AM, Pam Kathan <pam@ampersandenergy.com> wrote:

Dear Mr. Sprankle,

I am contacting you in regard to our Downstream fish passage. We received a letter from the Connecticut River Atlantic Salmon Committee (CRASC) regarding the fish passage operations schedule. It stated that the restoration effort for Atlantic Salmon was discontinued in 2012. Determination was made by CRASC that it was no longer necessary to require downstream passage measures for salmon smolts or adult salmon at hydroelectric facilities. Please see the attached letter.

A request for a change to our FERC license to discontinue the operation schedule was met with concern by FERC. I was requested by FERC to contact you for consultation and possible concurrence that we may be allowed to discontinue the operations schedule. Although the fish passage would not be operated on a specific required schedule, it would still be maintained and used to pass high water when needed. In the event that another fish passage program should arise that would affect us, the fish passage would be indeed be intact for use.

Your thoughts? Thank you for your time.

Best Regards,

Pam Kathan

Ampersand Gilman Hydro

Gilman Site Administration

Operations Compliance Specialist

VERMONT

Vermont Department of Environmental Conservation
Watershed Management Division
1 National Life Drive, Maine 2 [phone] 802-490-6151
Montpelier, VT 05620-3522
http://www.watershedmanagement.vt.gov

Agency of Natural Resources

DISTRIBUTED ELECTRONICALLY

November 6, 2017

Greg Cloutier
Ampersand Gilman Hydro, L.P.
P.O. Box 129, Riverside Avenue
Gilman, VT 05904

RE: Gilman Hydroelectric Project – FERC Project No. 2392
Consultation regarding operations of downstream fish passage

Dear Mr. Cloutier:

The Vermont Agency of Natural Resources (Agency) is writing regarding to Ampersand Gilman Hydro's (Ampersand) request to suspend operations of the downstream fish passage facility at the Gilman hydroelectric project located on the Connecticut River in Gilman, Vermont. By letter dated August 24, 2017, Ampersand filed a request with the Federal Energy Regulatory Commission (FERC) to suspend downstream fish passage requirements. Subsequently, FERC issued a letter requesting Ampersand consult with the Vermont Department of Environmental Conservation, Vermont Department of Fish and Wildlife (collectively the Agency of Natural Resources), and the U.S. Fish and Wildlife Service.

Background

The Agency issued a water quality certification for the Gilman hydroelectric project on June 28, 1989 which was amended on February 17, 1994. Condition C of the certification required that downstream fish passage facilities be constructed and operated after being requested by the Vermont Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service (Service). In 2007 the Agency and Service requested downstream fish passage facilities be constructed at the Project as part of the Connecticut River Atlantic Salmon program.

Subsequent, in 2012, the Connecticut River Atlantic Salmon Commission (CRASC) discontinued the cooperative restoration effort for Atlantic salmon. However, because salmon fry were still rearing in tributaries to the Connecticut River downstream passage facilities needed to be operated through spring of 2015. By letter dated February 11, 2016, CRASC notified FERC and hydroelectric operators that downstream fish passage operations for Atlantic salmon in the Connecticut River would no longer be required. Based on this correspondence, Ampersand filed a request with FERC that article 405 (requires the Licensee to construct, operate, and maintain fishways when prescribed) of FERC license should be suspended.

Comments

A goal of the Agency is to restore and protect fish passage and connectivity of riverine systems in order to connect habitats for fish to utilize during different periods of their life cycles to sustain healthy populations. This includes providing passage at instream structures that may impede or affect the movement of fish, including hydroelectric projects. However, at this time the Agency does not have the necessary information to evaluate the operations of the downstream fish passage facility in regard to the Agency's overall goal of ensuring the connectivity of river systems to sustain healthy populations. Therefore, the Agency does not object to a temporary

discontinuing operation of the existing downstream fish passage at the Gilman Project, until such time more information can be collected during the federal relicensing process.

The FERC license for the Gilman Project will be expiring in 2024, with the relicensing process will begin in 2019. Ampersand should be aware the Agency intends to evaluate the need for the operation of the fish passage for other species during the relicensing process.

Thank you for the opportunity to provide the Agency position regarding the operations of the downstream fish passage at the Gilman Project. Please do not hesitate to contact me if you should have any questions.

Sincerely,

Jeff Crocker
Supervising River Ecologist

c: Eric Palmer, Vermont Fish and Wildlife Department
Pete Emerson, Vermont Fish and Wildlife Department
Pete McHugh, Vermont Fish and Wildlife Department
Eric Davis, Vermont Department of Environmental Conservation
Melissa Grader, US Fish and Wildlife Service
Ken Sprankle, US Fish and Wildlife Service
Gregg Comstock, New Hampshire Department of Environmental Service
Diane Timmins, New Hampshire Department of Fish and Game

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

November 6, 2017

Greg Cloutier
Ampersand Gilman Hydro, L.P.
P.O. Pox 129, Riverside Avenue
Gilman, VT 05904

Dear Mr. Cloutier:

REF: FERC No. 2392-033
Ampersand Gilman Hydro, L.P.
Connecticut River
DOWNSTREAM FISH PASSAGE OPERATION CONSULTATION

This is in response to Ampersand Gilman Hydro, L.P.'s (Ampersand) request, provided via email dated September 26, 2017, for U.S. Fish and Wildlife Service (Service) concurrence on suspending operation of the downstream fish passage facility at the Gilman Project, located on the Connecticut River in Gilman, Vermont and Dalton, New Hampshire.

BACKGROUND

Both the Federal Energy Regulatory Commission (FERC) license and Vermont Water Quality Certificate for the project require Ampersand to construct, operate and maintain fishways when requested by the Vermont Department of Fish and Wildlife (VTDFW) and/or the Service. In 2007, both agencies requested the Licensee to provide downstream fish passage for Atlantic salmon smolts that were stocked as fry upstream from the project as part of the Connecticut River Atlantic salmon restoration program. FERC approved the Licensee's downstream fish passage facilities in an order dated June 9, 2011.

Subsequent to the installation and operation of the Gilman downstream fish passage facilities, the Connecticut River Atlantic Salmon Commission (CRASC) terminated the cooperative restoration effort for Atlantic salmon. Because salmon fry were still rearing in stocked streams, downstream passage was needed at the project through the spring of 2015. By letter dated February 11, 2016, CRASC notified FERC that downstream passage measures for salmon smolts at mainstem hydroelectric projects along the Connecticut River were no longer necessary.

Based on CRASC's notification, Ampersand sent a letter to FERC on August 24, 2017, requesting that license article 405 (which requires the Licensee to construct, operate and maintain fishways when prescribed) should be suspended. By letter dated September 12, 2017, FERC directed Ampersand to seek concurrence from the Service and VTDFW on its request.

In its September 26, 2017 email request, Ampersand stated that it was seeking to discontinue downstream passage operation, but that the downstream passage facility would still be maintained and used to pass high river flows when needed. Additionally, in the event that another fish passage program arises in the future, the downstream passage would be "intact for use."

COMMENTS

The Service, VTDFW, and the Vermont Department of Environmental Conservation held a conference call on October 16, 2017 to discuss Ampersand's request. The agencies were in agreement that Ampersand should be allowed to temporarily discontinue operating the existing downstream passage facility at the Gilman Project. However, the project license expires in 2024, which means the relicensing process will be initiated in 2019. Ampersand should be aware that the agencies will be considering passage needs of other species as part of the relicensing process, which could lead to restoring operation of Gilman's downstream passage facility in the future.

Ampersand requests that FERC amend the project license to suspend Article 405, which reserves authority to FERC to require the construction, operation and maintenance of fishways. We do not see a need to modify or suspend Article 405. Rather, it appears that FERC's June 9, 2011 Order Approving Downstream Fish Passage Facilities may be a more appropriate means of instituting the requested change to passage operations. That order contains Paragraph (B), which states "The Commission reserves the right to require changes to the downstream fish passage plan and project structures or operation, based on information provided by the licensee or the resource agencies…" FERC can exercise this license provision to implement the suspension of passage operations that Ampersand is seeking.

Thank you for the opportunity to clarify our position regarding operation of the downstream fish passage facility at the Gilman Project. If you have any questions regarding these comments, please contact Melissa Grader at 413-548-8002, extension 8124.

Sincerely yours

Thomas R. Chapman
Supervisor
New England Field Office

cc: FERC, Secretary
FWS, CRC
VT DEC, Jeff Crocker
VT DEC, Eric Davis
VT DFW, Pete Emmerson
NH FGD, Diane Timmins
NH DES, Gregg Comstock
Reading File
ES: MGrader:11-06-17:413-548-8002

Pam Kathan

From: Brian Bartos <Brian.Bartos@ferc.gov>
Sent: Tuesday, November 07, 2017 7:19 AM
To: Pam Kathan
Subject: RE: Ref. 2392-033 Downstream Fish Passage Operation Consultation

Good Morning Pam,

Thank you for your email regarding the FWS and VT comments that were filed yesterday. I will review the comments and proceed with an amendment. There are no follow up actions required by you at this time (and I don't foresee you needing to do anything else regarding this, as the comments look to be complete).

If there is anything else, I'll be in touch; don't hesitate to reach out if you have any questions or concerns as well,

---

From: Pam Kathan [mailto:pam@ampersandenergy.com]
Sent: Tuesday, November 07, 2017 6:45 AM
To: Brian Bartos <Brian.Bartos@ferc.gov>
Subject: Ref. 2392-033 Downstream Fish Passage Operation Consultation

Good Morning Brian,

Received the FERC notice via email yesterday. Can you tell me if I need to follow up on anything? Thank you.

Best Regards,
Pam Kathan
Ampersand Gilman Hydro
Gilman Site Administration
Operations Compliance Specialist
PO Box 59, 2 Riverside Avenue
Gilman, VT 05904
PH: 802-892-1166
pam@ampersandenergy.com

162 FERC ¶ 62,020
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Ampersand Gilman Hydro, L.P. Project No. 2392-038

ORDER SUSPENDING DOWNSTREAM FISH PASSAGE REQUIREMENTS UNDER LICENSE ARTICLE 405 AND CONDITION C

(Issued January 10, 2018)

1. On August 24, 2017, Ampersand Gilman Hydro, L.P., licensee for the Gilman Hydroelectric Project No. 2392, filed a request with the Federal Energy Regulatory Commission (Commission) to suspend downstream Atlantic salmon smolt passage requirements of its project license.[1] The project is located on the Connecticut River in Essex County, Vermont, and Coos County, New Hampshire. The project does not occupy federal lands.

Background

2. License Article 405 reserves authority to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of such fishways, as may be prescribed by the Secretary of the Interior, pursuant to Section 18 of the Federal Power Act.

3. Condition C of the project's Water Quality Certificate (WQC) issued by the Vermont Department of Fish and Wildlife (Vermont DFW) on July 28, 1989, requires the installation of downstream fish passage facilities upon a request from the Vermont DFW and the U.S. Fish and Wildlife Service (FWS). By letters dated January 31, 2007, and February 5, 2007, the FWS and the Vermont Department of Environmental Conservation (Vermont DEC), on behalf of the Vermont DFW, requested that the licensee develop plans and provide for the installation of downstream fish passage facilities for the 2008 migration season.

4. On March 29, 2011, the licensee filed its Downstream Fish Passage Plan (Plan), which was approved by the Commission in an order dated June 9, 2011.[2] The licensee

[1] Order Issuing New License (67 FERC 62,038), issued April 13, 1994.

[2] Order Approving Downstream Fish Passage Facilities (135 FERC ¶ 62,206).

filed a letter on February 15, 2013 stating that the downstream fish passage facilities at the project were operational and approved by the agencies.

Licensee's Request

5. The licensee is requesting to suspend downstream fish passage as required by the Plan. The basis for the licensee's request is that downstream passage, which is aimed to provide passage to Atlantic salmon smolts, is no longer needed due to the termination of the cooperative restoration effort for Atlantic salmon by the Connecticut River Atlantic Salmon Commission [3] (CRASC) in 2012, with the final fry stocking in the upper basin in 2013.

Agency Consultation

6. In a February 2016 letter to the Commission, CRASC states that stream sampling and assessments led it to conclude that all smolts produced from the final 2013 fry stocking in the upper [Connecticut River] basin had migrated out of the basin by 2015. Furthermore, CRASC states in its letter that: 1) it is no longer necessary to require downstream passage measures for salmon smolts at the main stem hydroelectric facilities identified in the 1990 CRASC MOA, or as included in past annual fish passage notification letters; and 2) it is no longer necessary to require downstream passage measures for adult salmon at any hydroelectric facility unless that facility passed 50 or more adult salmon through its fishway the previous spring.

7. In a letter filed with the Commission on November 6, 2017, Vermont DFW and FWS indicated that the licensee should be allowed to temporarily discontinue operating the existing downstream passage facility at the Gilman Project. However, being that the current license expires in 2024, the agencies emphasized that future passage needs will be considered for other species as the relicensing process initiates in 2019.

Discussion and Conclusions

8. The Plan was developed under consultation with the agencies pursuant to license Article 405 and WQC Condition C, with the intent to support Atlantic salmon restoration efforts in the Connecticut River. With the termination of the Atlantic salmon restoration efforts in the Connecticut River, the resource agencies agree that the fish passage requirements are not likely to provide any measureable benefit without continued

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[3] The CRASC is a Congressional-authorized fisheries management body comprised of multiple state agencies including CT, VT, MA, and NH, and federal agencies including FWS and National Marine Fisheries Service.

stocking, and that the past several years should have provided sufficient time for any smolts stocked in 2013 to out-migrate.

9. We have reviewed the available reports and data regarding the restoration efforts of Atlantic salmon in the Connecticut River basin, and concur with CRASC that the number of outmigrating fish is not sufficient to warrant downstream fish passage measures at the Gilman project at this time. Therefore, we find the licensee's request to discontinue operation of downstream fish passage facilities at this time to be reasonable, and therefore should be approved.

10. The Commission should reserve the right to reinstate the downstream passage requirements of the Plan in the event that CRASC, the Vermont DFW, or the FWS reinitiate Atlantic salmon restoration efforts, or based on fishery management information provided by the licensee or the abovementioned entities.

The Director orders:

(A) Ampersand Gilman Hydro, L.P's (licensee) request, filed with the Federal Energy Regulatory Commission (Commission) on August 24, 2017, to temporarily discontinue operating the existing downstream fish passage facility according to the Downstream Fish Passage Plan, pursuant to Article 405 and Vermont Water Quality Certificate Condition C of the license, for the Gilman Hydroelectric Project No. 2392, as modified in ordering paragraph (B), is approved.

(B) The Commission reserves the right to reinstate the Downstream Fish Passage Plan based on information provided by the licensee or the resource agencies, to ensure effective fish passage at the Gilman Project.

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2017). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Thomas J. LoVullo
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Division of Hydropower
Administration and Compliance