APPENDIX 1-1
FERC ORDER APPROVING TRANSFER OF LICENSE (PROJECT NO. 2392)
DTD OCTOBER 30, 2008

UNITED STATES OF AMERICA 125 FERC ¶ 62,104
FEDERAL ENERGY REGULATORY COMMISSION

Dalton Hydro, LLC
Ampersand Gilman Hydro LP

Project No. 2392-024

ORDER APPROVING TRANSFER OF LICENSE

(Issued October 30, 2008)

By application filed July 25, 2008 and supplemented on July 31, 2008, Dalton Hydro, LLC (Dalton or transferor) and Ampersand Gilman Hydro LP (AGH or Transferee) seek Commission approval to transfer the license for the 4.85-megawatt Gilman Project No. 2392[1] from Dalton to AGH (transferee). The project is located on the Connecticut River in Essex County, Vermont and Coos County, New Hampshire.

Public notice of the application was issued on September 3, 2008, setting September 30, 2008, as the deadline for filing comments, protests, and motions to intervene. No motions to intervene or comments were filed. [2]

Transferee has agreed to accept all of the terms and conditions of the license and to be bound by the license as if it were the original licensee.

Transferor has generally complied with the terms and conditions of the license and agrees to pay annual charges that have accrued to the date of the transfer. Transferee will be required to comply with the requirements of the license as though it were the original licensee. Transfer of the license for this project is consistent with the Commission's regulations and is in the public interest.

The Director orders:

(A) Transfer of the license for the Gilman Project No. 2392 from Dalton Hydro, LLC to Ampersand Gilman Hydro LP is approved.

(B) Dalton Hydro, LLC shall pay all annual charges that accrue up to the effective date of the transfer.

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[1] 67 FERC ¶ 62,038 (1994).

[2] The Connecticut River Watershed Council, Inc. filed on August 28, 2008, a motion to intervene, which it withdrew on October 15, 2008.

(C) Approval of the transfer is contingent upon: (1) transfer of title of the properties under license and delivery of all license instruments to Ampersand Gilman Hydro LP, which shall be subject to the terms and conditions of the license as though it were the original licensee; and (2) Ampersand Gilman Hydro LP acknowledging acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet. Within 60 days from the date of this order, the transferee shall submit certified copies of all instruments of conveyance and the signed acceptance sheet.

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR §385.713.

William Guey-Lee
Chief, Engineering & Jurisdiction Branch
Division of Hydropower
Administration and Compliance

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this order, _____ this _____ day of _____, 20___, has caused its corporate name to be signed hereto by _____ _____, its President, and its corporate seal to be affixed hereto and attested by _____ its Secretary, pursuant to a resolution of its Board of Directors duly adopted on the _____ day of _____, 20____, a certified copy of the record of which is attached hereto.

By_____

Attest:

_____
Secretary
(Executed in quadruplicate)

APPENDIX 1-2
FERC ORDER ISSUING NEW LICENSE (PROJECT NO. 2392)
DTD APRIL 13, 1994

67 FERC ¶ 62,038

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Simpson Paper (Vermont) Company — Project No. 2392-004
New Hampshire ~~and Vermont~~

ORDER ISSUING NEW LICENSE
(Major Project)

APR 13 1994

INTRODUCTION

Simpson Paper (Vermont) Company (SPC) filed a license application under Part I of the Federal Power Act (Act) to continue to operate and maintain the Gilman Project located on the Connecticut River in Essex County, Vermont and Coos County, New Hampshire. 1/ 2/ The Commission issued the original license for the project on May 17, 1965, under its jurisdiction over constructed projects situated on navigable waters of the United States. The license expired on December 31, 1990, and the project has since then been operated under annual license.

SPC proposes no changes to increase the project's capacity. SPC, a manufacturer of paper products, would continue to utilize the electricity generated by the project at its mill.

BACKGROUND

Notice of the application has been published. Any protests or motions to intervene that were filed in this proceeding have been withdrawn, and no agency objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether to issue this license.

PROJECT DESCRIPTION

The project structures consist of the Gilman dam, a concrete gravity structure approximately 108 feet long and 29 feet high, and a rock-filled timber crib structure approximately 170 feet long and 40 feet high, each with a crest elevation of 828.3 feet USGS; 5-foot-high flashboards bringing the normal water surface elevation to 833.3 feet USGS; a hydraulically operated crest gate

1/ Georgia-Pacific Corporation filed an application for new license for the Gilman Project on December 27, 1988. Transfer of the annual license from Georgia-Pacific Corporation to Simpson Paper (Vermont) Company was approved by Commission order dated June 30, 1992.

2/ The Connecticut River is a navigable waterway of the United States. See Connecticut River Power Company, 10 FPC 1255 (1951) and Gilman Paper Company, 33 FPC 1021, 1022 (1965).

18 feet high and 27 feet wide; a reservoir having an area of 130 acres, a storage capacity of 705 acre-feet, and a normal water surface elevation of 833.3 feet USGS; a powerhouse containing four turbine-generator units, one rated at 2,250 kilowatts (kW), one rated a 1,000 kW, and two rated at 800 kW each for a total rated capacity of 4,850 kW; a 200-foot-long transmission line; a 2.4-kV generator bus, a 2.4kV/34.5kV step-up transformer; and appurtenant facilities. A detailed project description is inc'uded in ordering paragraph (B)(2). SPC proposes to continue to operate the project in a run-of-river mode.

APPLICANT'S PLANS AND CAPABILITIES

Pursuant to Section 10(a)(2)(C) and Section 15(a) of the Act the staff evaluated the applicant's record as a licensee for these areas: (1) conservation efforts; (2) ability to comply with the new license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission line improvements; (7) project modifications; and (8) compliance record. 3/ I accept the staff's finding in each of these areas.

Consumption Efficiency Improvement Programs (Section 10(a)(2)(C))

The applicant, SPC, is a manufacturer of paper products, and as such, is not an electric utility selling power to end-use consumers. SPC is not subject to state or other regulatory authorities on matters relating to the conservation of electric energy or load-management to reduce peak demands for capacity.

SPC has on-going programs to conserve energy and reduce capacity demands in the SPC paper-products manufacturing facility. These programs improve the profitability of the corporation's operations and are sufficient. No other incentives are necessary.

The plans and abilities of the applicant to comply with the articles, terms, and conditions of any license issued to it and other applicable provisions of Part I of the Act (Section 15(a)(2)(A)).

SPC states that it is committed to meeting the requirements of all the articles, terms, and conditions of the existing license. SPC maintains that its past performance, in conjunction

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3/ The original applicant for new license was Georgia-Pacific Corporation. (see footnote 1) For the purposes of the section 10 and section 15 findings, and the compliance record finding we consider Simpson Paper (Vermont) Company to have acquired Georgia-Pacific's record.

of compliance with the requirements of the jurisdictional agencies, demonstrate that it is committed to meeting the future requirements for the continued operation of the project.

Staff's review of the compliance record of SPC substantiates that SPC has complied in a good faith with all articles, terms, and conditions of its existing license. Also, it appears that SPC has the financial and personnel resources necessary to fulfill its obligations under the license and Part I of the Act. Based on the above SPC will be able to comply with the terms and conditions of the new license and other provisions of Part I of the Act.

The plans of the applicant to manage, operate and maintain the project safely (Section 15(a)(2)(B))

SPC states that it is operating the generating facilities with foremost concern for the safety of its employees and the public. Records indicate that there has never been an employee fatality associated with the project's operations. The only injury occurred on April 9, 1984, when an employee sustained a lower back strain while repairing the No. 4 waterwheel, and lost 10 days of work.

The project is, and will continue to be, operated run-of-river which causes no extreme water level fluctuations, thus posing no project-caused hazard for fishermen and boaters.

Based upon the review of the specific information provided by SPC on various aspects of the project that affect public safety, and inspection reports prepared by the Commission's Regional Director, it is concluded that SPC's plans to manage, operate, and maintain the project safely, are adequate.

The plans and abilities of the applicant to operate and maintain the project in a manner most likely to provide efficient and reliable electric service (Section 15(a)(2)(C))

A new No. 1 water wheel and generator unit, installed in 1985-86, is automatically controlled. The three other turbines and generators (Nos. 2, 3, and 4) are manually controlled. Maintenance upkeep has included upgrading electrical systems and repairs to the project works. Also, in 1979, the SPC installed a new hydraulically operated crest gate in the Gilman dam. This 27-ft-wide gate is operated to maintain the level of the headpond at top of flashboards and up to a surcharge of 1.5 feet, and to reduce the incidence of flashboard failure at high flows.

In addition, SPC's routine maintenance and rehabilitation of hydroelectric equipment increases efficiency and generation.

SPC believes that the Gilman Project is fully developed and, therefore, does not currently have plans for additional development at the Gilman Project site. Furthermore, SPC evaluated the project and determined that no economically feasible opportunities currently exist to install additional capacity at the project.

Based on the above considerations, a review of the operation inspection reports by the Regional Director, SPC's past performance, and future plans to operate the project, staff concludes that the project is, and under the new license will continue to be, operated and maintained in an efficient and reliable manner.

Need of the applicant over the short and long terms for the electricity generated by the project - (Section 15(a)(2)(D))

SPC's need for the electricity produced by the project is addressed in the attached EA. Based on the discussion in the EA, staff finds that SPC's short- and long-term need for power exists to justify licensing the Gilman Project.

The Applicant's Existing and Planned Transmission Service (Section 15(a)(2)(E))

If the applicant is issued a new license, no changes of the existing, very simple transmission system, its operation, or operating characteristics, will occur, and none are planned. The transmission facilities are adequate for continued operation.

If a new license is denied, the applicant will be forced to increase the capacity of the mill's power-line facilities sufficiently to accommodate the replacement power which SPC will be forced to purchase from a local utility - most probably the NEP. SPC will also be forced to install higher-capacity transformers at the utility interconnection point - at a cost estimated by SPC to be approximately $400,000.

Whether the plans of the applicant will be achieved, to the greatest extent possible, in a cost effective manner (Section 15(a)(2)(F))

No increase of generating capacity at the Gilman Project is planned. With the hydraulic capacity of 2,850 cfs, SPC adequately utilizes the flows of the Connecticut River.

The proposed minimum flow release of 210 cfs, from June 1 to October 15, would not significantly impact the power generation. The generation would be decreased by about 2.6% or 671,185 kWh.

SPC is an industrial entity engaged in the manufacture of paper products from wood pulp; thus, the electrical output of the

Gilman Project is used by SPC at the Gilman mill, and none of the output is sold to other end-use customers. It is, however, an economic necessity for SPC to continue to conserve electricity, thereby reducing costs, and remaining competitive in the paper-making industry.

Recreation resources meet the needs of the area.

Staff concludes that the applicant's plans for continued operation of the project will be fulfilled, to the greatest extent possible, in a cost effective manner.

The Applicant's Record of Compliance with the Terms and Conditions of the Existing License (Section 15(a)(3))

The compliance records of SPC with the terms and conditions of its existing license are satisfactory. Further, the Licensee has maintained the project in a satisfactory manner.

WATER QUALITY CERTIFICATION

The Gilman Project is located within the jurisdiction of both New Hampshire and Vermont, and therefore requires a 401 State Water Quality Certification (WQC) from each state. On December 16, 1992, the New Hampshire Department of Environmental Services issued SPC a WQC for the Gilman Project No. 2392. The WQC listed one condition, to monitor dissolved oxygen and water temperature for at least three years after the project is issued a license. In addition, the WQC has three other requirements; that Gilman maintain the state water quality standards; allow the state access to the project and monitoring equipment; and structural and operational modifications to the project may require an amended WQC.

On July 28, 1989, the Vermont Department of Environmental Conservation (VDEC) issued a WQC for the Gilman Project No. 2392. The WQC listed seven conditions, A through G. Condition A relates to project operations (including minimum flow requirements); condition B relates to impoundment drawdowns; conditions C and D relate to upstream and downstream fish passage facilities; condition E relates to trash and debris removal; condition F relates to desilting of the project impoundment; and condition G requires that any significant change in project operation have prior VDEC written approval.

On April 11, 1990, the Commission issued an EA for the Gilman Project supporting the need for a 210 cfs spillflow to protect water quality as required in condition A of the original WQC. SPC did not agree that a 210 cfs spillflow was needed to protect water quality, and therefore, by letter dated December 30, 1992, SPC appealed this condition of the WQC and requested that the Commission issue a revised EA. On December 15, 1993,

SPC and the State of Vermont finalized a settlement agreement resolving the dispute over the spillflow condition. By letter dated February 17, 1994, the Vermont Agency of Natural Resources amended the WQC, changing condition A as noted in bold print below. Conditions B through G of the original WQC remain unchanged.

> A. The project shall operate run-of-river, maintain the impoundment at or within 6 inches from the top of the flashboards, maintain a 210 cfs minimum flow at the dam from June 1 through October 15, **whenever instantaneous inflow to the project is 1,000 cfs or less,** to protect water quality, and the applicant shall **file for review and approval a flow monitoring plan.**

The requirements in condition A, regarding the timing for spillflows and a spillflow monitoring plan, are appropriate for maintaining water quality in the Connecticut River, and are included in license articles 401, 402, and 403. Additionally, this spillflow will result in only a small reduction in power generation. On average, inflows of 1,000 cfs or less occur about 25 percent of the time between June and October, thus 210 cfs would be spilled at the dam about 25 percent of the time during these months.

New Hampshire's WQC has four requirements. Vermont's amended WQC has seven conditions, A through G as stated in the certificate. Pursuant to Section 401(d) of the Clean Water Act (CWA), conditions of the water quality certification become terms and conditions of the license as a matter of law. All New Hampshire's requirements relate to water quality. Vermont's conditions A, E, F, and G, relate to water quality. However, Vermont's conditions C and D, regarding upstream and downstream fish passage facilities, are clearly unrelated to water quality. In addition, Interior has reserved its authority, pursuant to Section 18 of the Act, to prescribe fishways at the Gilman Project (for discussion see SECTION 18 - RESERVATION OF AUTHORITY TO PRESCRIBE FISHWAYS), which provides for upstream and downstream fish passage facilities at such time when they are needed.

COASTAL ZONE MANAGEMENT PROGRAM

The State of Vermont is not a participant in the Coastal Zone Management Program (CMP). The New Hampshire Office of State Planning is responsible for reviewing hydroelectric projects for consistency with New Hampshire's CMP. The Gilman Project is not located within New Hampshire's coastal zone boundary and is not expected to affect coastal resources, therefore, no consistency certification is required.

SECTION 18 - RESERVATION OF AUTHORITY TO PRESCRIBE FISHWAYS

The New Hampshire Fish and Game Department (NHFGD) and the Vermont Agency of Natural Resources (VANR) recommend that both upstream and downstream fish passage facilities be installed at the Gilman dam when deemed necessary by the state fish and wildlife agency, the FWS, and the National Marine Fisheries Service. Interior, by letter dated May 5, 1989, stated that, although fish passage facilities are not needed at the present time, they may be needed in the future. Interior, therefore, recommends that the Licensee be required to provide fish passage facilities at the project when prescribed by the Secretary of the Interior under Section 18 of the Act. SPC does not oppose a reservation clause that would permit consideration of fishway facilities in the future.

I recognize that future fish passage needs and management objectives can not always be predicted at the time of license issuance. Section 18 of the Act provides the Secretary of the Interior the authority to prescribe fishways. 4/ Although fishways may not be recommended by Interior at the time of project licensing, upon receiving a specific request from Interior, it is appropriate for the Commission to include a license article which reserves the Interior's prescription authority. 5/ Therefore, article 405 reserves the Commission's authority to require fishways that Interior may prescribe.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

Section 10(j) of the Act requires the Commission to include license conditions, based on recommendations of Federal and state fish and wildlife agencies, for the protection, mitigation of adverse impacts to, and enhancement of fish and wildlife resources. Pursuant to Section 10(j) of the Act, staff made a determination that the recommendations of the Federal and state fish and wildlife agencies are consistent with the purposes and requirements of Part I of the Act and applicable law. Staff has addressed the concerns of the Federal and state fish and wildlife agencies in the EA and the license includes conditions consistent with the recommendations of the agencies.

COMPREHENSIVE PLANS

Section 10(a)(2) of the Act, 16 U.S.C. §803(a)(2), requires the Commission to also consider the extent to which the project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways

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4/ Section 18 of the Act states that the Commission shall require such fishways as may be prescribed by the Secretary of Commerce or the Secretary of the Interior as appropriate.

5/ Lynchburg Hydro Associates, 39 FERC ¶ 61,079 (1987).

affected by the project. Under section 10(a)(2), federal and state agencies have filed with the Commission eight comprehensive plans that address various resources in New Hampshire and seven comprehensive plans that address various resources in Vermont. Of these, the staff identified and reviewed six New Hampshire plans and four Vermont plans relevant to this project. 6/ No conflicts were found.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the Act, require the Commission to give equal consideration to all uses of the waterway on which a project is located. When the Commission reviews a project, the recreational, fish and wildlife resources, and other nondevelopmental values of the involved waterway are considered equally with power and other developmental values. In determining whether, and under what conditions, a hydropower license should be issued, the Commission must weigh the various economic and environmental tradeoffs involved in the decision.

A. Recommended Alternative

Based on staff's independent review and evaluation of the proposed Gilman Project, agency recommendations, and the recommended alternative, I have selected issuing a license for the proposed project, with additional staff-recommended environmental measures, as the preferred option. I selected this option because: (1) with these measures, the environmental effects of subsequent operation would be minor; (2) these measures would protect or improve fish, wildlife, and recreation resources; and (3) the electricity generated from a renewable resource would be provided, thus continuing to offset the use of existing fossil-fueled, steam-electric generating plants; thereby, conserving nonrenewable energy resources, and reducing atmospheric pollution, and global warming.

The beneficial effects (in addition to the air quality benefits) on the environment associated with the licensing of the Gilman Project would result from the required environmental measures. These measures include:

(a) operating the project in a run-of-river mode;

(b) spilling from the project dam, whenever inflow to the project is 1,000 cfs or less, a continuous minimum flow of 210 cubic feet per second from June 1 through October 15, or inflow to the project, whichever is less, into the

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6/ For a list of the plans, see the attached Environmental Assessment.

Connecticut River for the protection of water quality in the Connecticut River;

(c) developing and implementing a plan to monitor the run-of-river operating mode and the minimum flow conditions of this license;

(d) developing and implementing a plan to monitor dissolved oxygen (DO) concentrations and water temperature of the Connecticut River downstream and upstream of the Gilman Project.

(e) implementing the canoe portage plan, filed December 27, 1988, and the boat launch site plan, filed September 19, 1989.

B. Developmental and Nondevelopmental Uses of the Waterway

The project would annually generate an estimated 25,078 MWh of relatively low-cost electricity from a renewable energy resource for use by the applicant in its paper mill and by NEP's wholesale customers. Positive, long-term benefits to water quality and resident fisheries below the project would occur due to the spillage of an instantaneous minimum flow of 210 cfs at the Gilman dam to improve dissolved oxygen (DO) conditions. The Atlantic salmon restoration program for the Connecticut River Basin (CRB) would benefit from the cooperation and support of the Licensee in implementing a fish passage plan involving the Gilman dam. Upgrading the existing canoe portage around the project dam and improving the existing boat launch site for the project impoundment would provide better access to the river for water-based recreation within the project area.

The primary costs associated with the project would be: (1) the loss of approximately 182,015 kWh, or 0.7 percent, in potential annual energy generation currently valued at approximately $11,000 7/ due to the release of the minimum spillage flow; (2) the costs that would be shared by the Licensee in implementing a fish passage plan involving the Gilman dam; and (3) the construction and maintenance expenses of implementing the proposed recreational enhancement measures.

Based on the above discussion, the costs of the environmental measures are commensurate with the benefits to the resources, and the project would be economically beneficial even with the environmental measures.

Based on review of the agency and public comments filed on this project, and on staff's independent analysis and assessment

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7/ 182,015 kWh at $0.06/kWh.

of the project pursuant to sections 4(e), 10(a)(1), and 10(a)(2) of the Act, I find that the Gilman Project is best adapted to a comprehensive plan for the proper use, conservation, and development of the Connecticut River and other project related resources.

PROJECT RETIREMENT

The Commission has issued a Notice of Inquiry (NOI), dated September 15, 1993, requesting comments that address numerous issues involving the potential decommissioning of licensed hydropower projects at some future time, based on project-specific circumstances. 8/ The NOI states that the Commission is not proposing new regulations at this time, but is inviting comments on whether new regulations may be appropriate. Alternatively, the Commission may consider issuing a statement of policy addressing the decommissioning of licensed hydropower projects, or take other measures. The Gilman Project may be affected by future actions that the Commission takes with respect to issues raised in the NOI. Therefore, the license includes Article 204, which reserves authority to the Commission to require the licensee to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning of the project in appropriate circumstances. The terms of Article 204 are effective unless the Commission, in Docket No. RM 93-23, finds that it lacks statutory authority to require such actions.

By including Article 204, I do not intend to prejudge the outcome of the NOI. I am simply including the article so that the Commission will be in a position to make any lawful and appropriate changes in the terms and conditions of this license, which is being issued during the pendency of the NOI, based on the final outcome of that proceeding.

TERM OF LICENSE

In 1986, the Electric Consumers Protection Act modified Section 15 of the Act to specify that any license issued under Section 15 shall be for a term which the Commission determines to be in the public interest, but not less than 30 years, nor more then 50 years. The Commission's policy is to establish 30-year terms for those projects which propose little or no redevelopment, new construction or new capacity; 40-year terms for those projects that propose moderate redevelopment, new construction or new capacity; and 50-year terms for those

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8/ Notice of Inquiry, Project Decommissioning at Relicensing, Docket No. RM93-23-000, September 15, 1993, 58 FR 48,991 (1993).

projects that propose extensive redevelopment, new construction or new capacity.

SPC proposes no modifications to the existing project facilities or changes in operation of the project. The existing license expired on December 31, 1990. Accordingly, the new license for the project will be for a term of 30 years effective the first day of the month in which this license is issued.

SUMMARY OF FINDINGS

An EA was issued for this project. Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if operated and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment. 9/

I conclude that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

THE DIRECTOR ORDERS:

(A) This license is issued to Simpson Paper (Vermont) Company (Licensee), for a period of 30 years, effective the first day of the month in which this license is issued to operate and maintain the Gilman Project. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The project consists of:

(1) All lands, to the extent of the Licensee's interests in those lands, enclosed by the project boundary shown by exhibit G:

Exhibit G-	FERC No.2392 -	Showing
1	16	Project Location

9/ A Safety and Design Assessment was prepared for the Gilman Project No. 2392 and is available in the Commission's public file for this project.

2 17 Boundary Map

(2) Project works consisting of: (a) the Gilman dam, a concrete gravity structure approximately 108 feet long and 29 feet high, and a rock-filled timber crib structure approximately 170 feet long and 40 feet high, each with a crest elevation of 828.3 feet USGS; (b) 5-foot-high flashboards bringing the normal water surface elevation to 833.3 feet USGS; (c) a hydraulically operated crest gate 18 feet high and 27 feet wide; (d) a reservoir having an area of 130 acres, a storage capacity of 705 acre-feet, and a normal water surface elevation of 833.3 feet USGS; (e) a powerhouse containing four turbine-generator units, one rated at 2,250 kW, one rated a 1,000 kW, and two rated at 800 kW each for a total rated capacity of 4,850 kW; (f) a 200-foot-long transmission line; (g) a 2.4-kV generator bus, a 2.4kV/34.5kV step-up transformer; and (h) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of exhibits A and F recommended for approval in the attached Safety and Design Assessment.

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The exhibit G described above and those sections of exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-3 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States", and the following additional articles:

Article 201. The Licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

> For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 6,460 horsepower.

Article 202. Pursuant to Section 10(d) of the Act, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One half of the project surplus earnings, if any, accumulated under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserve account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the Licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 203. If the Licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed. The benefits will be assessed in accordance with Subpart B of the regulations.

Article 204. The Commission reserves authority, in the context of a rulemaking proceeding or a proceeding specific to this license, to require the Licensee at any time to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning of the project. The terms of this

article shall be effective unless the Commission, in Docket No. RM93-23, finds that the Commission lacks statutory authority to require such actions or otherwise determines that the article should be rescinded.

Article 401. The Licensee shall operate the Gilman Project in a run-of-river mode for the protection of aquatic resources in the Connecticut River. The Licensee, in operating the project in a run-of-river mode, shall at all times act to maintain the reservoir water surface elevation at or within 6 inches of the top of the flashboards, and minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream of the project, approximates the sum of the inflows to the project reservoir.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Licensee, or for short periods upon mutual agreement between the Licensee, the Vermont Agency of Natural Resources, the New Hampshire Fish and Game Department, and the U.S. Fish and Wildlife Service. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. From June 1 through October 15, whenever inflow to the project is 1,000 cfs or less, the Licensee shall release from the Gilman Project dam a continuous minimum flow of 210 cubic feet per second, or inflow to the project, if less. This flow release is required for the protection of water quality in the Connecticut River. During the entire year, all flows not used for hydropower operation shall also be spilled from the project dam.

This flow may be temporarily modified if required by operating emergencies beyond the control of the Licensee, or for short periods upon mutual agreement between the Licensee, the Vermont Agency of Natural Resources, the New Hampshire Fish and Game Department, and the U. S. Fish and Wildlife Service. If the flow is so modified, the Licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. Within 90 days of issuance of this license, the Licensee shall file, for Commission approval, a plan to monitor the run-of-river operating mode and the minimum flow specified in articles 401 and 402 of this license.

The Licensee shall prepare the aforementioned plan after consultation with the U.S. Fish and Wildlife Service, the New Hampshire Fish and Game Department, and the Vermont Agency of Natural Resources. The Licensee shall include with the plan

documentation of consultation, copies of comments and recommendations on the plan after the plan has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the Licensee's plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project specific information.

The Commission reserves the right to require changes to the proposed plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

Article 404. Within 90 days of issuance of this license, the Licensee shall file with the Commission for approval a plan to monitor dissolved oxygen (DO) concentrations and water temperature of the Connecticut River downstream and upstream of the Gilman Project.

The Licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, the New Hampshire Fish and Game Department, and the Vermont Agency of Natural Resources. The Licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations prior to filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project specific information.

The Commission reserves the right to require changes to the proposed plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.

If the results of the monitoring indicate that changes in project structures or operations are necessary to ensure maintenance of state water quality standards for the Connecticut River, the Commission may direct the Licensee to modify project structures or operations.

Article 405. Authority is reserved 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.

Article 406. The canoe portage plan, filed December 27, 1988, and the boat launch site plan, filed September 19, 1989, are approved and made part of the license. The canoe portage plan, consisting of two pages and three drawings, figures A-C, in Appendix E-VIII of the application, provides for upgrading the canoe portage around Gilman dam, including signs, trail maintenance, a portage rest area, and foot access to New Hampshire State Route 135. The boat launch site plan, consisting of a cover letter and four pages and one drawing in attachment 3 of the additional information, provides for leveling and surfacing the boat launch, enlarging the parking area, installing trash cans, relocating the entrance to the boat launch site, posting signs at the boat launch to limit its use to car-top and small trailered boats, and relocating the Dalton Fire Department's dry hydrant.

The Licensee shall implement the plan within 1 year from issuance of this license and upon completion of the recreation facilities, file documentation with the Commission that all facilities approved herein were constructed as proposed. In addition, the Licensee shall operate and maintain or arrange for the operation and maintenance of the recreation facilities during the term of license.

Article 407. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-

commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary

state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the Licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the Licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational

use; and (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the Licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(E) The Licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) This order is issued under authority delegated to the Director and constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. section 385.713. 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, except as specifically ordered by the Commission. The Licensee's failure to file a request for rehearing shall constitute acceptance of this order.

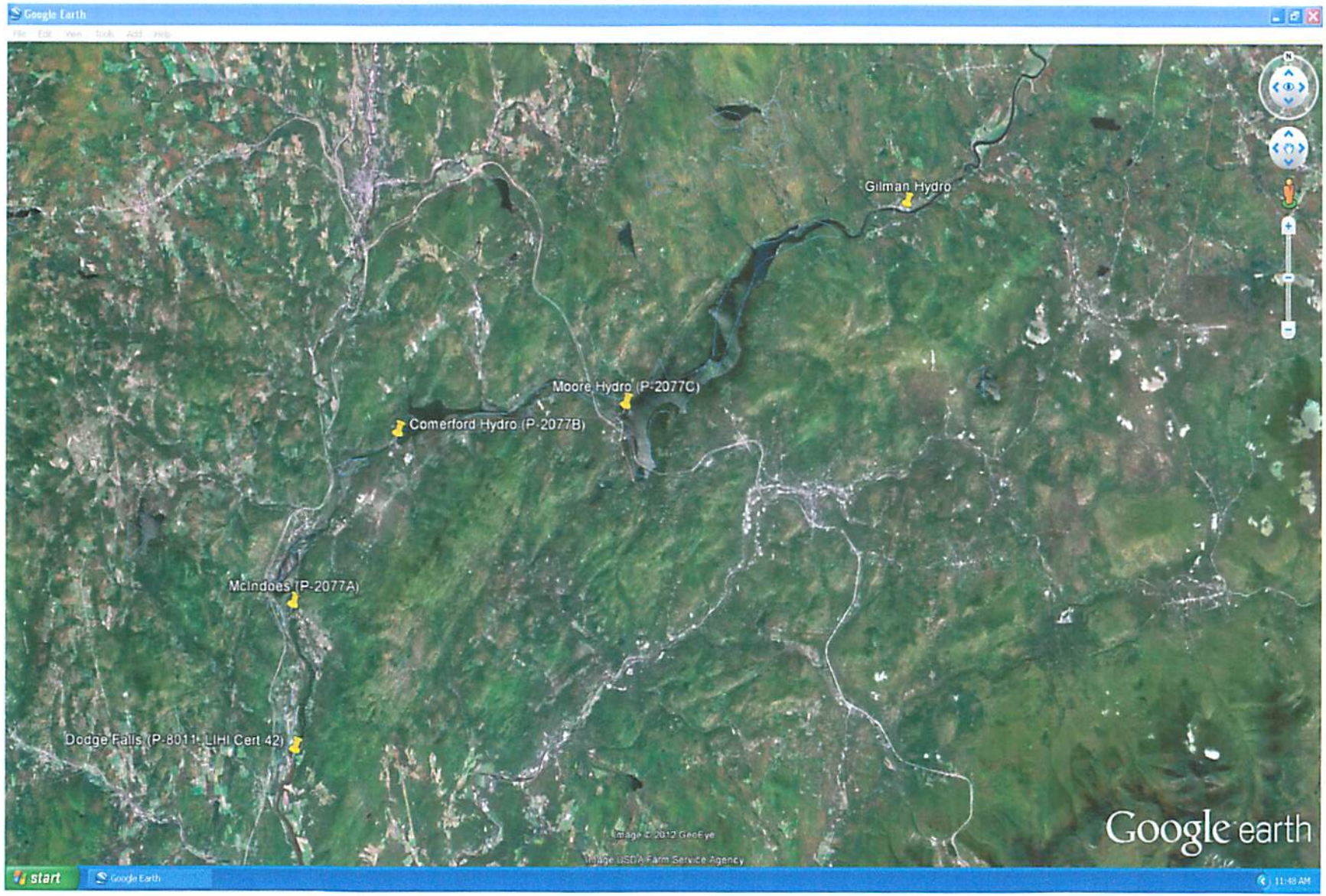
Fred E. Springer
Director, Office of
Hydropower Licensing

APPENDIX 3-1
GILMAN HYDROELECTRIC PROJECT LOCATION MAP

Gilman Hydroelectric Project Location
Connecticut River
Essex County VT, Coos County NH

APPENDIX 3-2
LOCATION OF DAMS ON THE CONNECTICUT RIVER IN CLOSE PROXIMITY TO THE GILMAN HYDROELECTRIC PROJECT

Gilman Hydroelectric Project
Location of Dams on the Connecticut River within the Proximity of the Gilman Dam



APPENDIX B-1
WATER QUALITY CERTIFICATION FOR THE GILMAN HYDROELECTRIC PROJECT
ISSUED BY THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AUGUST 2 1988 AS AMENDED FEBRUARY 17, 1994

APPENDIX C

WATER QUALITY CERTIFICATION
(P.L. 92-500)

IN THE MATTER OF: GEORGIA-PACIFIC CORPORATION
GILMAN, VERMONT 05904

Application for the Gilman Project

The Water Quality Division of the Vermont Department of Environmental Conservation (the Department) has reviewed the water quality certification application filed for Georgia-Pacific Corporation (the applicant) by letter dated August 2, 1988. The Department finds:

1. The Gilman Project, an existing hydroelectric station on the Connecticut River, has entered the Federal Energy Regulatory Commission relicensing process. The present license expires December 31, 1990.
2. The project is located at the Georgia-Pacific Corporation Whitefield Division paper plant at Gilman village in the Town of Lunenburg. The dam was constructed about 1900 and is a low timber crib and concrete structure.
3. The powerhouse is integral with the dam and located on the west side of the river, partly in Vermont and partly in New Hampshire. It contains four units with a total plant capacity of 4850 kw.
4. The dam, which is about 319 feet long with a maximum height of 38 feet, is 21 miles below the breached Northumberland Dam and 11 miles above the Moore Reservoir Dam. Five feet of flashboards

on Gilman Dam bring the normal pond to elevation 833.3′ NGVD. The approximate tailwater elevation is 809.0′ NGVD, which corresponds to the Moore Reservoir full pool elevation. Gilman Dam creates an impoundment that extends 2.9 miles upstream to a point just above the Johns River. The surface area and gross volume are 130 acres and 705 acre-feet, respectively.

5. The project is described as run-of-river with a "usable (net) storage capacity [that] is considered to be negligible" (page A-10 of the FERC application, which was filed as supporting documentation for the certification request). "Outflow [equals] inflow on an instantaneous basis" (page A-2 of the FERC application). The hydraulic capacities of the four turbines are 1250 cfs, 600 cfs, 500 cfs and 500 cfs, for a total of 2850 cfs. The total capacity is close to the mean river flow of 2915 cfs. The 1250 cfs unit was installed as a replacement for an older unit in 1985-1986. It is automatically operated while the other units are manual. A crest gate installed in 1979 is used to help maintain the pond level at the top of the boards at inflows up to project capacity and to reduce the incidence of flashboard failure, which occurs at surcharges in excess of 1.5 feet. The powerhouse can generate down to 130 cfs without cycling.

6. The average operating level of Moore Reservoir during the months of July and August is 805.2′ NGVD. At this level, the reservoir extends to Cushman Brook, which is on the new Hampshire side about one mile below Gilman Dam.

7. The Connecticut River is Class B waters from Groveton to Gilman Dam and Class C from Gilman to the Lunenburg town line. A critical dissolved oxygen problem occasionally exists in the river at

certain times of the year as a result of pollutant loading and reduced reaeration potential caused by impounded waters and reduced spillage at dams due to hydroelectric operation. The project is in a water quality limited segment.

The river is designated as a cold water fish habitat, which sets the dissolved oxygen standard at a minimum of 6 mg/l or 70% saturation (75% for New Hampshire) unless a higher standard is determined to be necessary for reaches critical for spawning or nursery. Section 1-03 of the Vermont Water Quality Standards imposes a higher level of protection by outlining the public good criteria to be met in cases where a project may degrade water quality where existing water quality generally exceeds minimum standards.

8. In the project area, the river receives treated wastewater discharges from the municipalities of Groveton, Lancaster, Northumberland and Lunenburg and from the paper mills at Gilman and Groveton (James River Paper Company). According to the application, untreated sanitary wastes enters the Johns River at the Village of Whitefield, N.H.

9. Metcalf & Eddy, Inc. modeled water quality conditions in the Connecticut from the Upper Ammonoosuc to Gilman in 1983 for E.P.A. The model indicated that substandard conditions would prevail for a substantial portion of the study reach under critical low flows and design wastewater discharges.

10. The applicant contracted with Aquatec, Inc. to perform an intensive 48-hour dissolved oxygen sampling program that included stations from just upstream of the Johns River to a point about 1½ mile downstream of the dam (within the summer

operating pool of Moore Reservoir). The study was conducted August 12-14, 1985. Flows were estimated at 800 cfs, or about twice the 7Q10 of 373 cfs. An effort was made to quantify the potential benefits of reaeration at the dam. During the first half of the study, downstream samples were collected with no water being spilled at the dam. During the last 24 hours, 100 cfs was released over the crest gate discharging at 833.3' NGVD above the sill elevation of 812.1' NGVD.

All samples collected on the main stem were above 6 mg/l dissolved oxygen. The Johns River exhibited lower dissolved oxygen levels down to 5.2 mg/l. Releases over the crest gate gained from this point source of reaeration from 0.4 mg/l to 0.8 mg/l of dissolved oxygen over the levels measured in the tailrace discharge. Dissolved oxygen levels also generally increased in the free-flowing river reach between the two sampling stations furthest down the study reach below the dam.

The sampling period 800 cfs does not represent conditions under which violations of dissolved oxygen standards would be expected.

11. Under a contract with the applicant, Metcalf & Eddy, Inc. modeled reaeration of flows over Gilman Dam and the upstream dissolved oxygen conditions with the new discharge permit limits for the Groveton paper mill. Conidtions were modeled at 800 cfs and 7Q10, with and without a spillage of 100 cfs. At 7Q10, upstream dissolved oxygen levels reached 5.2 mg/l (3.6 mg/l deficit from saturation at 22.5 C) at the dam and at 800 cfs, 6.05 mg/l. Spillage of 100 cfs mixed with the unaerated turbine discharge produced a mixed dissolved oxygen directly below the dam of 6.3 mg/l at 7Q10 and 6.9 mg/l at 800 cfs.

No attempt was made to determine the mixed dissolved oxygen concentrations necessary at different river discharges in order to assure that the downstream dissolved oxygen sag remains above standards. Without adequate spillage and consequent elevated dissolved oxygen levels, substandard conditions would occur in the downstream reach to Moore Reservior. For example, at 7Q10 flows and the project operating without spillage, the substandard condition on the upstream side of the dam (5.2 mg/l) would be released through the turbine, additional wasteload would be added at Gilman, and the dissolved oxygen levels would continue to decline.

12. The applicant's FERC application indicates no changes to their present mode of operation; however, the applicant has proposed to spill 130 cfs under circumstances during the period July 15-September 15 where inflow is below 500 cfs and measured dissolved oxygen levels downstream fall below 6.2 mg/l.

13. The project's capability to operate at a broad range of flows from mean flow down to 130 cfs, which is below the 7Q10 value of 373 cfs, does not provide for reaeration over the dam at these flows. The dissolved oxygen deficit reduction caused by spillage reaeration is important in this water quality limited segment. Run-of-river operation does not in and of itself assure standards will be met.

14. During June, 1989 and in cooperation with Kleinschmidt Associates, the applicant's engineering consultant, the Department performed a screening model analysis of the reach from Gilman Dam to Moore Reservoir to estimate the spillage necessary to assure maintenance of dissolved oxygen above Vermont's minimum standards. At 7Q10 flows

of 373 cfs, 210 cfs must be spilled to create a mixed dissolved oxygen level of 7.4 mg/l directly below the dam (6.2 mg/l assumed upstream of dam). The resulting dissolved oxygen sag curve downstream would decline to 6.2 mg/l (70% saturation at 22 C), including the effect of the discharge of Georgia-Pacific's permitted waste load of 3150 lb./day UOD combined with a dissolved oxygen flux caused by algal respiration and photosynthesis.

The model indicates that dissolved oxygen levels would drop below minimum standards to less than 60% saturation at the sag under a no-spill operating condition, assuming 7Q10 flows and waste discharges at design. The project can operate down to 130 cfs; dissolved oxygen levels during periods of flow less than 7Q10 would be even more severely depressed. Under flow conditions higher than 7Q10, the increase in dilution of pollutant loadings combined with a spillage of 210 cfs will assure that standards are met downstream.

15. Vermont manages the Connecticut River as a cold water fish habitat. Resident species include rainbow, brook and brown trout as well as several warm water species including smallmouth bass, perch, bullhead, and pickerel. Vermont is also participating in a cooperative program with several other states and federal agencies to restore Atlantic salmon and shad to the Connecticut River Basin.

    Present plans include construction of trap facilities at Ryegate Dam and transporting salmon upstream for access to spawning habitat. Between Gilman Dam and Canaan Dam, approximately 9% of the nursery habitat for the Connecticut is believed to exist. The applicant would be expected

to participate in the cost of effecting the final upstream passage plan.

Safe downstream passage of the salmon is also critical to the success of the program. Reduction of both turbine and trashrack impingement mortality and provision of conveyance flows over or through the dam are important elements of downstream passage plans. An alternative of using trap-and-truck facilities to accommodate downstream passage is also being considered.

The applicant has developed conceptual designs for downstream passage facilities with the U.S. Fish & Wildlife Service. The plan consists of an angled intake guidance system, a bell-mouthed intake and a bypass conduit. A flow of 30 cfs would be used to operate the system. The applicant proposes in the license application to institute these measures when warranted by planned stocking of salmon upstream of Gilman. No use of the Upper Connecticut River is being made at this time. It should be noted that hatchery produced salmon may be placed upstream of Gilman Dam to use the available spawning and nursery habitat *before* upstream passage facilities are constructed.

16. Operation as a strictly run-of-the-river project with no artificial flow regulation and no impoundment fluctuations will prevent the aquatic habitat degredation associated with a cycling type of operation. By letter dated October 3, 1988, the N.H. Fish and Game Department recommended a license article requiring an instantaneous minimum stream flow of 757 cfs. The operation as proposed should assure that this standard is met.

17. The applicant proposes to improve the canoe portage route and the existing boat launch near the Johns River. Both of these facilities are on the

New Hampshire side. The Agency of Natural Resources finds that recreational use demands on the Connecticut are continuing to increase and that additional amentities to further enhance recreational use will be sought in the future.

18. Spillage of 210 cfs for protection of downstream water quality during the period June 1 through October 15 will also serve to restore to a degree the aesthetics of this river reach. This is particularly important during the high public recreational use period.

19. The State of New Hampshire certified this project under Section 401 on October 27, 1988, conditional on submittal of erosion control plans (although no construction is proposed at this time).

20. By letter dated July 24, 1989, the applicant filed a report with the Department through John R. Ponsetto, Esq. The report defines the water quality modeling runs performed to date, including recent Qual-2e modeling done using basically the same parameter values used before. No additional field data has been collected to refine the modeling attempts.

CONDITIONS

In certifying that there is a reasonable assurance that project activities will be conducted in a manner that will not violate applicable water quality standards, the Department of Environmental Conservation imposes the following conditions:

A. The project shall be operated in a strict run-of-the-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 the 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 unusual circumstances, a minimum instantaneous 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.

A minimum instantaneous flow of 210 cfs shall be spilled at the dam during the period June 1 through October 15 to protect downstream water quality. When the project is not operating, all inflows shall be spilled at the dam.

The applicant shall submit a complete description, hydraulic design calculations, and specifications for the operational procedures and measures to be used to meet this condition. The filing shall be made within six months of the date of this certification and shall be subject to Departmental approval. All necessary modifications shall be instituted within one year of the date of this certification.

B. The impoundment shall not be drawn down for maintenance purposes without prior written approval of the Department.

C. Downstream fish passage facilities, as approved by the Vermont Department of Fish and Wildlife and the U.S. Fish and Wildlife Service, shall be constructed within one year of a request made by those agencies and operated following a schedule determined by the agencies. Flows needed to operate the bypass facility shall be in addition to those spillage flows required in Condition A for water quality. The final plans and approval letters shall be filed with the Department for the record prior to construction of these facilities. Erosion and sediment control and water management plans for the construction of these facilities shall be filed with

the Department for approval. Construction shall not proceed without approval of these plans.

D. Provision of upstream passage facilities, which may consist of participation in the construction and operation of a trap-and-truck facility at a downstream site, shall follow a schedule determined appropriate by the Vermont Department of Fish and Wildlife. Erosion and sediment control and water management plans for the construction of these facilities, if located at Gilman Dam, shall be filed with the Department for approval. Construction shall not proceed without approval of these plans. Plans for a facility at Gilman Dam are subject to the approval of the Vermont Department of Fish and Wildlife, and, in such case, the approval letter and design drawings must be filed with the Department for the record.

E. Debris associated with project operation, including trashrack debris, shall be disposed of properly.

F. Any desilting of the dam impoundment shall be done in accordance with the Agency of Natural Resources *Desilting Policy*, a copy of which is attached. The Department shall be contacted prior to any desilting activity.

G. Any significant changes, including project operation, shall be submitted to the Department for prior review and written approval.

Dated at Waterbury, Vermont this 28th day of July, 1989.

/s/ Timothy J. Burke
TIMOTHY BURKE
Commissioner
Department of
Environmental Conservation

TB:JRC/vld

Dan H.
For your records
Dave

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council
RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
WATER QUALITY DIVISION
103 South Main Street
Building 10 North
Waterbury, VT 05671-0408

802-241-3770

February 17, 1994

David G. Blanchette
Energy Manager
Simpson Paper Company
Centennial Mill
P.O. Box 129
Gilman, VT 05904

RE: Gilman Dam - FERC Project No. 2392
Water Quality Certification

Dear Mr. Blanchette:

Enclosed please find the signed amendment to the water quality certification for the Gilman Project. I am sending this to you by facsimile copy as well.

Condition 5 of the agreement requires the filing of a joint request with FERC for issuance of the new license. This is to occur within five days of the certification amendment becoming final, which I assume for purposes of the agreement to be within five days of the end of the 15-day appeal period if no appeal is filed.

Sincerely,

Jeffrey R. Cueto

Jeffrey R. Cueto, P.E.
Principal Hydrologist

cc: Secretary Clarke
William Brierley, P.E.
Ron Shems, Esq.
Stephen Sease
401 distribution list

Water Quality Certification Amendment
(P.L. 92-500, Section 401)

In the matter of: **Simpson Paper Company**
Gilman, Vermont 05904

APPLICATION TO AMEND
THE GILMAN PROJECT
WATER QUALITY CERTIFICATION

The Water Quality Division of the Vermont Department of Environmental Conservation (the Department), pursuant to the attached December 15, 1993 settlement agreement between the Agency of Natural Resources and the Simpson Paper Company (Simpson or applicant), has reviewed the change in spillage regime for consistency with Vermont Water Quality Standards. The subject of the settlement agreement and this action is the July 28, 1989 water quality certification for the Gilman Project in the towns of Lunenburg, Vermont and Dalton, New Hampshire. The Department has made the following findings and conclusions:

1. Condition A of the water quality certification requires that the project spill 210 cfs continuously during the period June 1 through October 15 in order to protect water quality. Simpson has agreed to spill 210 cfs during that period whenever the instantaneous inflow to the project is 1,000 cfs or less. The addition of an inflow criteria to trigger the spillage during the period is the only change proposed pursuant to the agreement.

2. On the average, inflow can be expected to recede below 1,000 cfs about one quarter of the time during the critical summer/fall period (based on a review of the Dalton U.S. Geological Survey gage records for 1980-1990). Spillage of 210 cfs during the low flow will remove a portion of the dissolved oxygen deficit that would otherwise exist at and below the Gilman Dam. During higher flows, the mix of a highly oxygenated 210 cfs spillage with the total turbine discharge is less significant in terms of benefits to the downstream dissolved oxygen regime and consequently is not necessary for habitat improvement for aquatic organisms.

3. By facimile copy on October 26, 1993, Kleinschmidt Associates filed a minimum flow release plan with the Department. This management plan outlines a method for spilling the 210 cfs using the dam crest gate; a procedure to be followed in monitoring project inflows and initiating spillage when flows recede to 1,000 cfs; and recordkeeping details.

4. Simpson has demonstrated that it can reliably manage spillage as a function of inflow and thereby assure that water quality standards for dissolved oxygen will be met.

5. Pursuant to the settlement agreement, Simpson would institute the spillage-flow management beginning June 1, 1994.

ACTION OF THE DEPARTMENT

Based on its review of this change and the above findings, the Department concludes that there is reasonable assurance that operation of this project in accordance with Condition A as amended below and the remaining original certification conditions will not cause a violation of Vermont Water Quality Standards and will be in compliance with sections 301, 302, 303, 306, and 307 of the Federal Clean Water Act, P.L. 92-500, as amended, and other appropriate requirements of state law:

A. The project shall be operated in a strict run-of-the-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.

No later than 90 days from the issuance of this certification, the applicant shall file for review and approval a plan for monitoring instantaneous flow releases at the project, both in terms of spillage and total discharge below the project; instantaneous inflows to the project; headpond elevations; and gate settings. Following approval of the monitoring plan, the applicant shall initiate collection of the aforementioned

data and report the data to the Department on a regular basis as per specifications of the Department.

Chuck Clarke

Chuck Clarke
Secretary
Agency of Natural Resources

Dated at Waterbury, Vermont this 17 day of February, 1994.

attachment: settlement agreement
cc: distribution list

JRC

APPENDIX B-2
WATER QUALITY CERTIFICATION FOR THE GILMAN HYDROELECTRIC PROJECT
ISSUED BY THE NEW HAMPSHIRE DEPARTMENT OR ENVIRONMENTAL SERVICES
ISSUED NOVEMBER 20, 1992 AS AMENDED DECEMBER 18, 1992

State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
603-271-3503 FAX 603-271-2867
TDD Access: Relay NH 1-800-735-2964

December 18, 1992

Simpson Paper (Vermont) Company
Centennial Mill, P.O. Box 129
Gilman, VT 05904
Attn: David Blanchette

RE: Simpson Paper (Vermont) Company Hydroelectric Project (FERC# 2392)

Dear Mr. Blanchette:

Attached you will find a copy of the ammended Section 401 Water Quality Certificate for the Simpson Paper (Vermont) Company hydroelectric facility. This certificate replaces the November 20, 1992 certificate at your request. The only change to the certificate was the facility name. If you have any questions, please feel free to call me at 603-271-2471.

Sincerely yours,

Robert J Baczynski

Robert J. Baczynski
Environmentalist
Water Supply & Pollution Control Division

EJS/RJB/20
cc: Delbert Downing - NHWB
Katherine Ueland - Comm
Tim Drew - Comm
Nancy Derey - Corps of Engineers
Lois Cashill - FERC
Mark Robinson - FERC
Town of Dalton
Jeff Cueto - VT

AIR RESOURCES DIV.
64 No. Main Street
Caller Box 2033
Concord, N.H. 03302-2033
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Fax 603-271-1381

WASTE MANAGEMENT DIV.
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Concord, N.H. 03301
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WATER RESOURCES DIV.
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WATER SUPPLY & POLLUTION CONTROL DIV.
P.O. Box 95
Concord, N.H. 03302-0095
Tel. 603-271-3503
Fax 603-271-2181

Cy Faxed To Jean 12/28/92

State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
603-271-3503 FAX 603-271-2867
TDD Access: Relay NH 1-800-735-2964

December 16, 1992

David Blanchette
Simpson Paper (Vermont) Company
Centennial Mill P.O. Box 129
Gilman, VT 05904

Re: Water Quality Certificate (pursuant to Section 401 of the Clean Water Act): FERC Project #2392. Simpson Paper (Vermont) Company Hydroelectric Project, Dalton, NH and Gilman, VT.

Dear Mr. Blanchette:

The Division has determined that under the conditions outlined in this amendment to your Water Quality Certificate, FERC Project #2392 will comply with the applicable provisions of Section 301, 302, 303, 306, and 307 of the Clean Water Act as amended.

The following amended conditions are placed on this section 401 Water Quality Certificate:

1) The following water quality monitoring program must be enacted the first summer following FERC licensing and must continue for three consecutive years. It will be determined by DES after assessing three years of data whether sampling will continue.
   (a) Dissolved oxygen and water temperature must be monitored at three stations in the Connecticut River; 1) upstream of the Gilman impoundment, 2) at three depths in the impoundment (surface, bottom, and mid-depth), and 3) downstream of the tailrace. Station locations will be specified by DES-WSPCD.
   (b) Monitoring must occur once each month during a non-rain condition for a three day period during the following months: July, August, and September. Samples will be collected between 0500 and 0800 daily.
   (c) Equipment calibration and quality control measures must be followed to assure accurate reporting.
   (d) Monitoring events will be conducted under as close to limiting water quality conditions as possible (water temperature 18°C or greater and river flows less than 1000 cfs). Sampling flows must be documented.
   (e) Water quality monitoring and QA/QC results must be reported on an annual basis and a yearly summary report must be submitted to DES-WSPCD.

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If structural and/or operational modifications which impact the water quality of the Connecticut River are to be made at the Gilman Hydroelectric Project, this document may require amendment. An amended certificate, or a determination that no amendment is required, must be obtained prior to creating any such modifications.

This office reserves the right to gain access to the Gilman Hydroelectric site at any time to check monitoring equipment and records to assure compliance with the State's water quality standards.

Finally, all existing river uses must be maintained and protected, and at no time shall the Gilman Hydroelectric Project cause Class B water quality standards to be violated.

Please address all correspondence to Robert J. Baczynski at the Water Supply & Pollution Control Division address indicated.

Sincerely,

Edward J. Schmidt

Edward J. Schmidt, P.E., Ph.D.
Director
Water Supply & Pollution Control Division

RBJ/EJS/:8398.
cc: Delbert Downing - NHWB
Katherine Ueland - Comm
Tim Drew - Comm
Leslie Ludtke - AG
Nancy Derey - Corps of Engineers
Sec. Lois Cashill - FERC
Mark Robinson - FERC
Town of Dalton
Jeff Cueto - VT

APPENDIX B-3
GILMAN HYDROELECTRIC PROJECT (P-2392) FINAL MINIMUM FLOW RELEASE PLAN, WATER QUALITY MANAGEMENT PLAN, AND RUN-OF-RIVER MANAGEMENT PLAN
DTD AUGUST 11, 1994

Dan.
This is the Final FERC plan
for dam operation. I feel you
need to know what is in it as
it relates to your area.
Dave

FILED
94 AUG 11 PM 4:26
FEDERAL ENERGY REGULATORY COMMISSION

VAN NESS FELDMAN
A PROFESSIONAL CORPORATION
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THE NATIONAL BUILDING, SUITE 506
1008 WESTERN AVENUE
SEATTLE, WASHINGTON 98104

WRITER'S DIRECT DIAL NUMBER

(202) 298-1891

August 11, 1994

HAND DELIVERY

Ms. Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Room 3110
Washington, D.C. 20426

Re: Project No. 2392, Gilman Hydroelectric Project

Dear Ms. Cashell:

Pursuant to Articles 403 and 404 of its new license for the above-referenced project, issued April 13, 1994, 67 FERC ¶ 62,038, Simpson Paper (Vermont) Company (Simpson) hereby encloses its final minimum flow release plan, water quality management plan, and run-of-river management plan. These plans have been revised to incorporate agency comments on the draft plans which were previously circulated to the agencies. The draft plans and written agency comments were filed with the Commission by letter dated July 12, 1994.

In its July 12 letter, Simpson explained that it had received the comments of the Vermont Agency of Natural Resources (VANR) on the run-of-river management plan too late to be considered prior to filing of the draft plan. Simpson subsequently consulted with the VANR regarding its comments and has clarified the plan to address those comments.

Also enclosed is a letter dated July 12, 1994 from the New Hampshire Fish and Game Department commenting on the draft plans. The letter was received following Simpson's filing of the draft plans, and states that the plans are satisfactory.

If you have any questions, please feel free to call the undersigned or Mr. David G. Blanchette, Energy Manager, Simpson Paper Company Centennial Mill at (802) 892-5515.

Respectfully submitted,

Michael A. Swiger

Michael A. Swiger
Counsel for Simpson Paper (Vermont) Company

cc: J. Mark Robinson, Federal Energy Regulatory Commission
Richard A. Flanders, Jr., New Hampshire Department of Environmental Services
William Ingham, New Hampshire Fish & Game Department
John Warner, U.S. Fish & Wildlife Service
Jeffrey Cueto, Vermont Agency of Natural Resources

ATTACHMENT A

MINIMUM FLOW RELEASE PLAN

Simpson Paper Company
Gilman, Vermont

Gilman Project
FERC No. 2392

Minimum Flow Release Plan

INTRODUCTION

Pursuant to Articles 402 and 403 of the new project license and condition A of the Vermont 401 certification, this plan sets forth the method by which Simpson Paper will discharge the minimum flow volume (210 cfs). The plan outlines the methods by which Simpson will monitor river flow, pond level, and assure dependable and reliable flow data. The plan also presents the method by which Simpson will record, compile and report the required data.

Between June 1 and October 15, annually, Simpson is required to maintain a spillage at the dam of at least 210 cfs (or inflow, whichever is less) whenever river flow is equal to or less than 1000 cfs. Simpson will use the crest gate located in the middle of the spillway structure as the means to provide and monitor this discharge (See Figure 1). This crest gate is a manually operated, hydraulically actuated gate installed in 1979. The gate has a total width of 22 feet between the cylinder connections and 27 feet overall and a gate invert at Elevation 815.4'.

CALCULATION OF SPILLAGE

During normal operation, the headpond level is maintained at Elevation 833.25'. This level is controlled through the automatic pond level control system installed for Unit 1.

Hydraulic conditions using both the critical depth method and the standard weir flow formula have indicated that lowering the crest gate 1.96 feet below the headpond level will result in a discharge of 210 cfs. This figure includes the leakage flow around the side seals of the gate which was estimated to be 20 cfs. Simpson proposes to use a gate setting of 2.0 feet below the headpond level which will provide a margin of conservatism to the required discharge. A copy of the computations used to determine the indicated gate position is attached.

PLAN FOR PROVIDING MINIMUM FLOW RELEASE

Operation of the crest gate is through manual control of the hydraulic system. Access to the gate is via a walkway system (See Figure 1). During periods when spillage is required, the station operator will check and record that the gate position is constantly set 2.0 feet below Elevation 833.25' twice during each shift (4 hour intervals) . Gate position will be determined using a calibrated cylinder extension located on the cylinder closest to the powerhouse. The extension will be clearly marked to the required position so that the operators can position the gate to proper setting.

Headpond level will be checked and recorded manually at the same intervals as the gate monitoring and confirmed using the pond level transducer that has been installed as part of the pond level control system for Unit 1. The consistent flow characteristics of the river, the pond level control system installed for Unit 1, and years of operational experience assure that the required spillage will be maintained using a 4 hour monitoring interval.

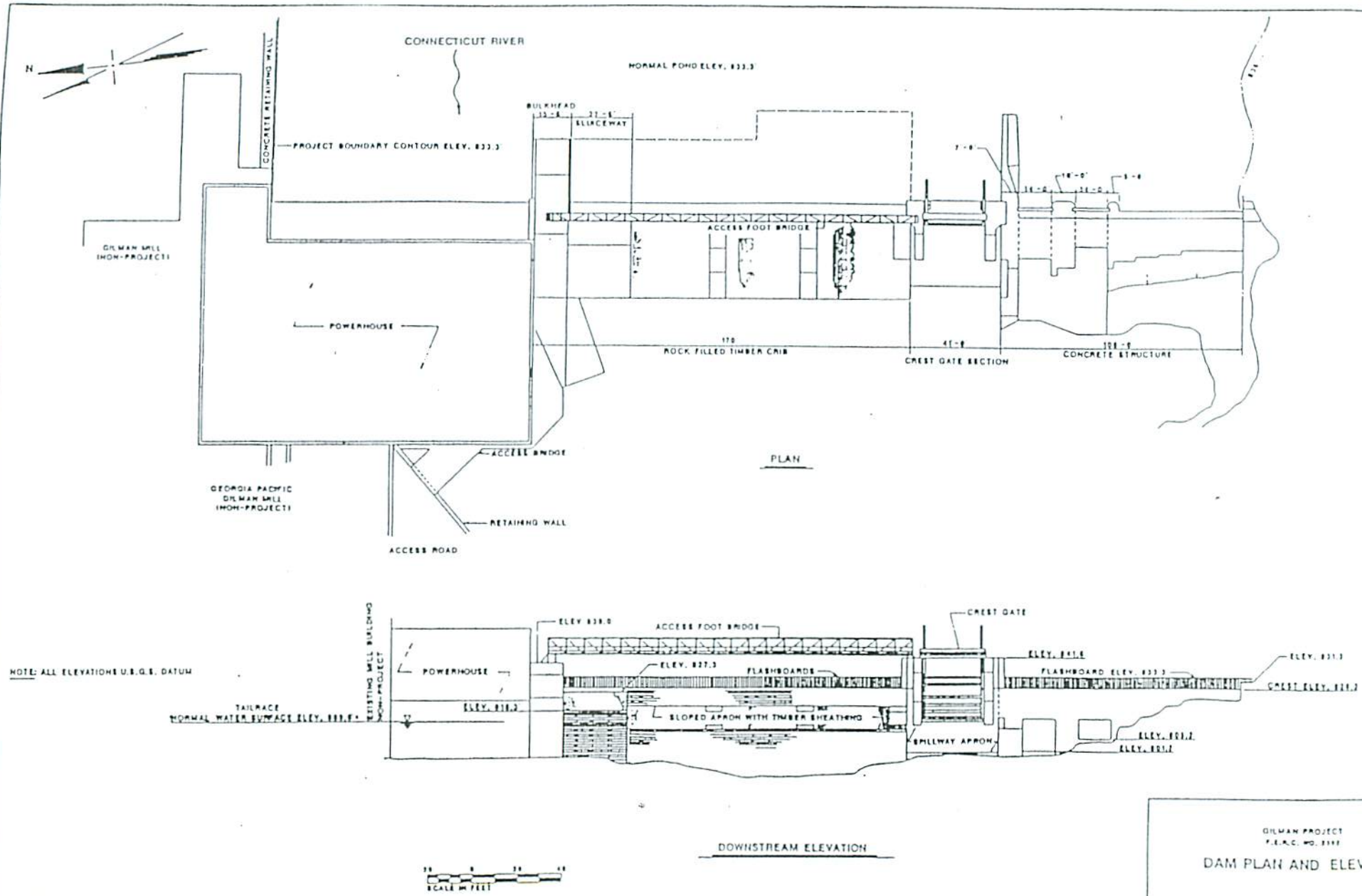
Additionally, Simpson has made arrangements to interrogate the USGS gage on the Connecticut River near Dalton via conventional phone lines. This will ensure that this station operator will be fully aware of when a minimum flow release is required (i.e., river flow is 1,000 cfs or less).

RECORDING AND REPORTING PROCEDURES

Simpson currently logs station output, headpond level, gate position and other pertinent station data every four hours. These readings are recorded by the station operators and are part of the daily station log. Simpson proposes to continue this process with the addition of recording the gage interrogation data. These records will be compiled and will be made available upon request.

A summary report will be compiled and submitted to the Vermont Agency of Natural Resources (VANR) and New Hampshire Department of Environmental Services on an annual basis. Any deviations during periods of required spillage where the gate position and headpond level are not at the levels specified in this plan will be noted in the annual reports. During the first year, filing of the data with the VANR will occur at two month intervals. In subsequent years, a single annual summary will be provided by January 31 of the following year. Data will be provided to the VANR in tabular form, both hardcopy and on a 3-1/2 inch disk as a Quattro-Pro (*.WQ1) spreadsheet file. The VANR may, at its discretion, suspend the requirement of a hardcopy submittal.

When Simpson becomes aware of any occurrence when the facility varies, or varied, from the minimum flow release requirements of condition A of the 401 certification, Simpson will report such variance to the VANR on the same business day if during business hours, or on the next business day if not during business hours. Such reporting shall not constitute legal determination of liability or non-compliance. Upon request by the VANR, Simpson will make reasonable modifications to the minimum flow release plan as necessary to provide for and demonstrate compliance with the minimum flow release conditions of condition A of the 401 Certification.



Kleinschmidt Associates
Consulting Engineers
Pittsfield, Maine

GILMAN PROJECT
F.E.R.C. NO. 3332

DAM PLAN AND ELEVATION

Figure 1

SIMPSON PAPER COMPANY
GILMAN DAM

HYDRAULICS OF CREST GATE
SUMMARY OF CALCULATIONS

GIVEN: Downward-opening crest gate at Gilman Dam
Top of flashboards = El. 833.33'
Normal Pond El. = 1" below top boards = 833.25' = HW

DETERMINE: Position of top of gate to pass 210 cfs.

PROCEDURE:

Summary: Our approach uses two methods for calculating the flow through the gate at a given position, each providing a check on the other. First, we have utilized a spreadsheet analysis to analyze the hydraulic conditions. A printout for the computed condition is attached. The calculations are based on an assumption of critical flow at the top of the gate and weir flow over the two "lugs" at the sides of the gate. The program then uses the Standard Step Method to compute the water-surface profile upstream of the gate. Finally, the headloss through the gate entrance is computed with the submerged-weir equation (Brater & King, 1976, Eqn. (5-50). The calculations are done as a trial-and-error process, varying the gate position each time, until the computed headpond elevation matches the given headpond elevation. A diskette copy of the spreadsheet (Lotus 1-2-3 format) is available from Kleinschmidt Associates on request. Second, the discharge is calculated using the Weir Equation as a check.

Backwater Analysis: Do trial-and-error analysis as follows:

1. Select trial gate extension.

2. Compute flow through "side slots" (between gate and walls) and over top "lugs." Conservatively estimate "side" flow as 10 cfs for each side of the gate (20 cfs total), for gate extensions of two feet or greater, based on visual observation of the flow around the gate through a range of gate positions. Calculate flow over the "lugs" using the weir equation ($Q = CLh^{1.5}$), with C=3.0 and L=5.0 ft.

3. Compute "remaining" flow to be passed over the gate top. ($Q_{GATE} = 210 - Q_{SLOTS} - Q_{LUGS}$)

4. Compute critical depth over gate top.

5. Compute a backwater profile upstream from the top of the gate to the sill. Using the Standard Step Method, select incremental distances upstream from the gate to the gate bay entrance. Assume a Water-Surface Elevation (W.S.E.), then compute actual W.S.E. Reiterate by trial until the assumed and calculated agree.

6. Compute headwater elevation required to produce the given flow (210 cfs) over the gate bay, using the submerged weir equation.

7. Compare HW elevation computed at Step 6 with "actual" HW:

   a. If the two HW values are equal, stop.

   b. If not equal, return to Step 1, repeat with new gate extension.

Weir Equation/Check: Use the Weir Equation to calculate flow over the gate for the top-of-gate elevation determined above. Use a discharge coefficient of 3.33 and a gate width of 22 ft.

SIMPSON PAPER/GILMAN DAM 07-Oct-93 :jhc
HYDRAULICS OF CREST GATE - DETERMINE POSITION TO PASS MINIMUM FLOW ka # 526-011-99
file: GILMAN2.WR1

TOTAL FLOW = 210 CFS POND ELEV. = 833.25 FT
GATE TOTAL LENGTH = 18.5 FT
SILL ELEV. = 815.40 FT
BOTTOM HINGE ELEV. = 814.83 FT (C.L.)

1. TRIAL GATE EXTENSION = 5.31 FT
   GATE ANGLE (FROM CLOSED POS.) = 17.52 DEGREES
   ELEV. OF GATE TOP = 831.29 FT
   ELEV. OF GATE TOP "LUGS"= 832.71 FT
2. FLOW THRU GATE "SIDE SLOTS" = 20 CFS
   FLOW OVER GATE TOP LUGS = 6 CFS
3. "REMAINING" FLOW OVER GATE TOP = 184 CFS
4. CRITICAL DEPTH OVER GATE "TOP" = 1.30 FT

   GATE WIDTH = 22.0 FT @ TOP
   GATE BAY WIDTH = 27.0 FT (total)

5. CHANNEL WATER PROFILE: MANNING'S N = 0.013 (STEEL & CONC.)

LOCATION U/S FROM GATE TOP (%)	(FT)	BOTTOM ELEV. (FT)	CHANNEL WIDTH (FT)	ASSUMED DEPTH (FT)	ASSUMED WATER SURFACE (FT)	TOTAL FLOW @ X-SEC (CFS)	VELOCITY (FT/S)	HYDRAUL. RADIUS (FT)	ENERGY SLOPE	CALC. WATER SURFACE (FT)
0	0.0	831.29	22.00	1.30	832.59	184	6.46	1.16	0.00261	
10	0.9	829.65	27.00	3.52	833.17	210	2.21	2.79	0.00009	833.17
20	1.7	828.01	27.00	5.20	833.21	210	1.50	3.75	0.00003	833.21
30	2.6	826.37	27.00	6.86	833.23	210	1.13	4.55	0.00001	833.23
40	3.4	824.73	27.00	8.51	833.24	210	0.91	5.22	0.00001	833.24
60	5.1	821.45	27.00	11.80	833.25	210	0.66	6.30	0.00000	833.25
80	6.8	818.17	27.00	15.08	833.25	210	0.52	7.12	0.00000	833.25
100	8.5	814.89	27.00	18.36	833.25	210	0.42	7.78	0.00000	833.25

6. SUBMERGED WEIR EQUATION: BROAD-CRESTED WEIR: C = 2.65

SUB-MERGED FLOW (CFS)	H2 (FT)	ASSUMED POND (FT)	H1 (FT)	VELOCITY INTO WEIR (FT/SEC)	QS UNSUBMERG. FLOW (CFS)	QS/Q	CALC. H2/H1	CALC. POND (FT)	
210	17.85	833.25	17.85	0.44	4282.78	0.049	1.000	833.25	OK

CONCLUSIONS: REQUIRED ELEV. OF GATE TOP: 831.29 FT

DROP FROM FULL-UP POSITION (EL. 833.05'): 1.81 FT

ELEV. DIFF. FROM HEADPOND TO GATE TOP: 1.96 FT

CYLINDER EXTENSION FROM GATE FULL-UP: 5.31 FT

KLEINSCHMIDT ASSOCIATES
Consulting Engineers
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(207) 487-3211

CALCULATION SHEET

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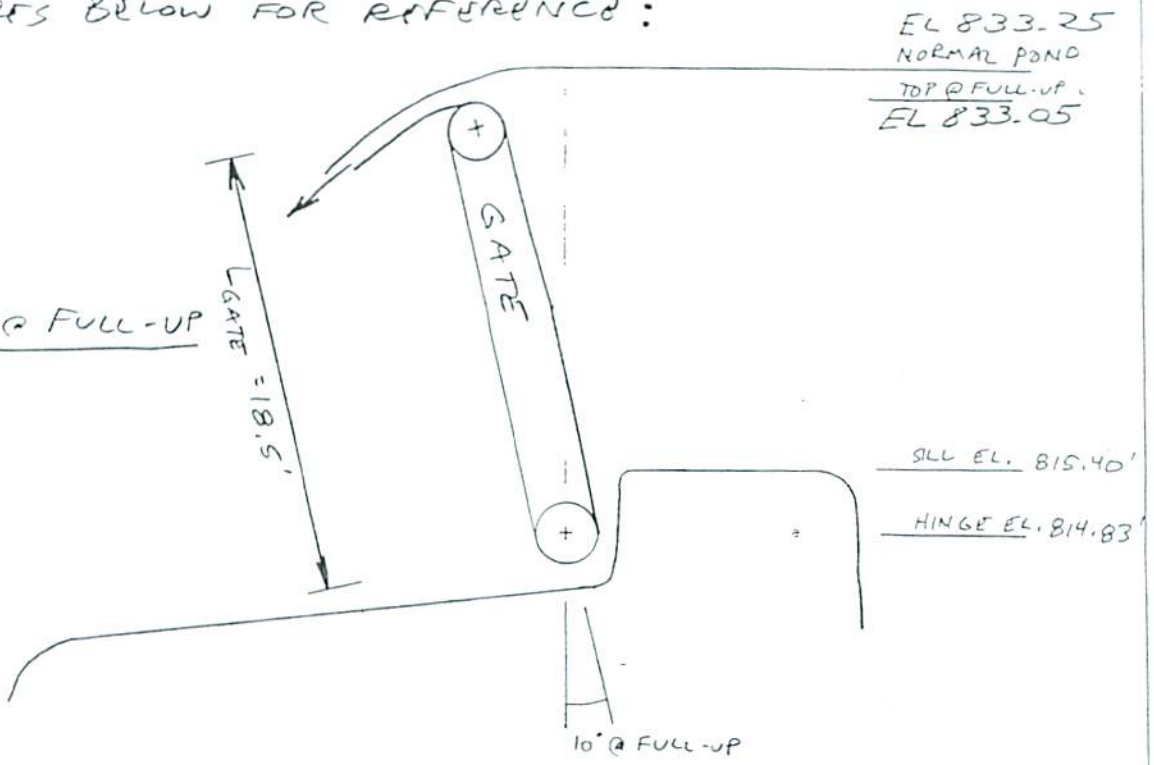
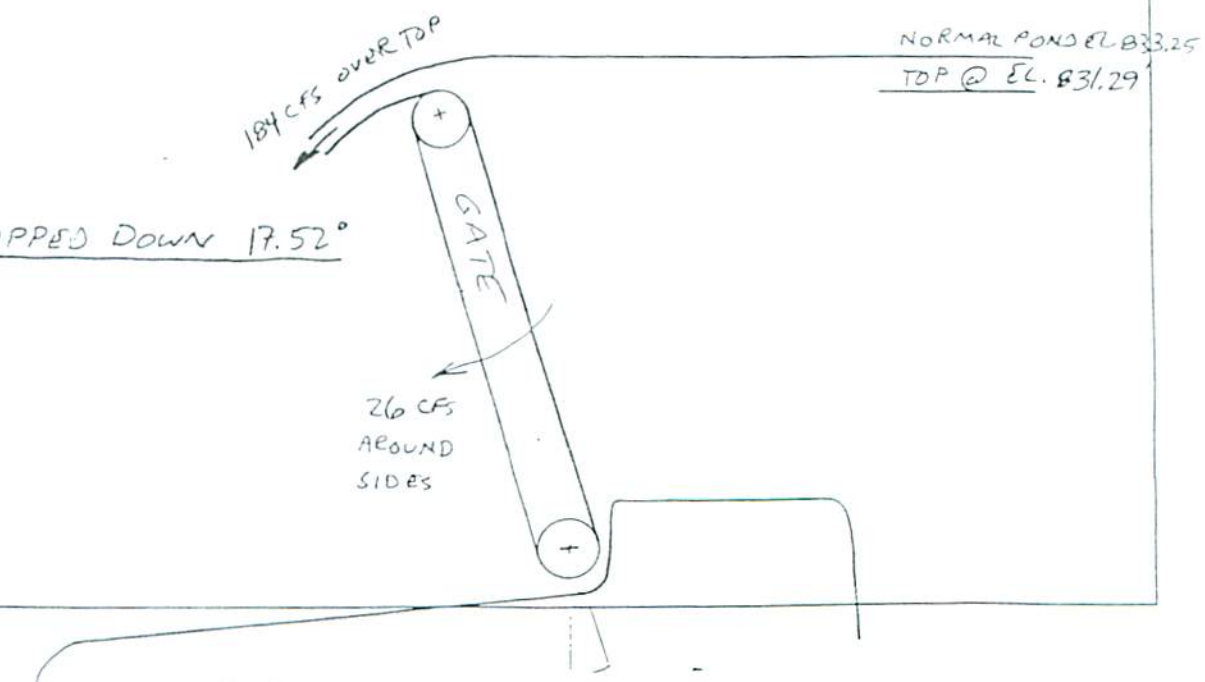
Project No.:	526-011.99-00
Project:	SIMPSON/GILMAN
By: / Date:	JHC 9/29/93
Subject:	CREST GATE
Checked: / Date:	JLK 9/30/93

ANALYSIS: CALCULATIONS ARE SUMMARIZED ON SYMPHONY SPREADSHEET "GILMAN2" - COPY ATTACHED.
FIGURES BELOW FOR REFERENCE:

(1) GATE @ FULL-UP



(2) GATE TIPPED DOWN 17.52°



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CALCULATION SHEET

Page: CG-2

Project No.: 526-011-99-00

Project: SIMPSON/GILMAN

By: JHC Date: 10/7/93

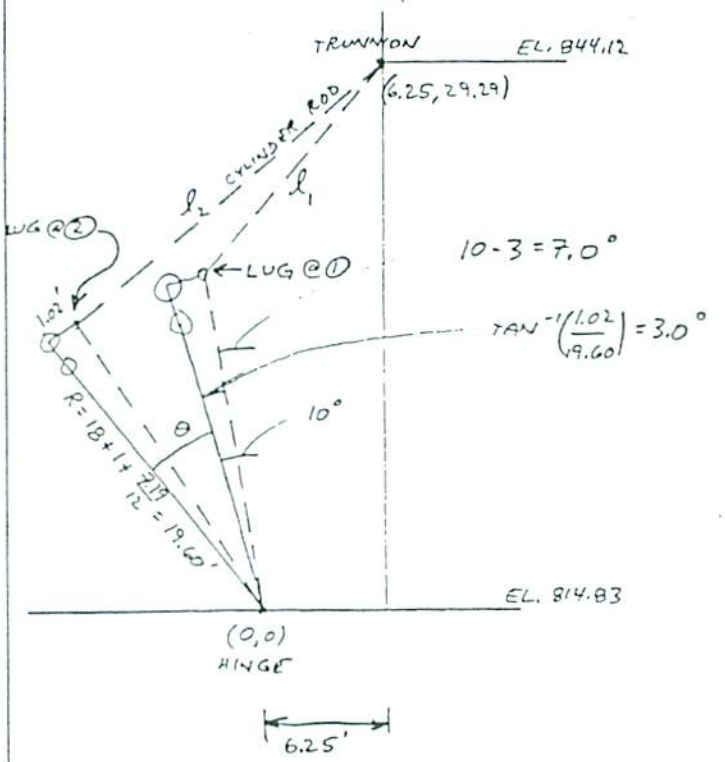
Subject: CREST GATE

Checked: Date:

SPREADSHEET VERIFICATION [PAGES CG-2 THRU CG-8]

① SELECT TRIAL GATE EXTENSION ⇒ X =

COMPUTE GATE ∠ FOR GIVEN EXTENSION ⇒



LUG @ POSITION ① ⇒

$(X_1, Y_1) = (-19.6 \sin 7°, 19.6 \cos 7°)$

$= (-2.39, 19.45)$

LUG @ POSITION ② ⇒

$(X_2, Y_2) = (-19.6 \sin(7+\theta), 19.6 \cos(7+\theta))$

LONGTH $\ell_1 = \sqrt{(6.25-(-2.39))^2+(29.29-19.45)^2}$

$= 13.09'$

LENGTH $\ell_2 = \sqrt{(6.25+19.6\sin(7+\theta))^2+(29.29-19.6\cos(7+\theta))^2}$

$\therefore X = \Delta\ell = \ell_2 - \ell_1 = \sqrt{(6.25+19.6\sin(7+\theta))^2+(29.29-19.6\cos(7+\theta))^2} - 13.09$

[IN SPREADSHEET, SELECT GATE ∠, θ, TO PROVIDE DESIRED EXTENSION, X.]

FOR $X = 5.31'$, $\theta = 17.52°$

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Consulting Engineers
Pittsfield, Maine 04967
(207) 487-3328
(207) 487-3211

CALCULATION SHEET

Page: CG-3

Project No.: 526-011-99-00

Project: SIMPSON/GILMAN

By: JHC Date: 10/7/93

Subject: CREST GATE

Checked: Date:

SPREADSHEET VERIFICATION (CONT.)

(2) COMPUTE FLOW THRU "SIDE SLOTS" ⇒

BASED ON VISUAL OBSERVATIONS OF FLOW AROUND GATE FOR RANGE OF GATE EXTENSIONS (0-15') AT HEADPOND LEVEL OF 833.6' ± ON 10/5/93, THIS FLOW IS A LIMITED AMOUNT. THE FOLLOWING ESTIMATES WERE MADE IN THE FIELD:

GATE EXTENSION	FLOW AROUND SIDES (@ TOP)*	FLOW AROUND SEALS*	TOTAL FLOW (BOTH SIDES)
0'	1 CFS	0 CFS	2 CFS
1	2	<1	5
2	4	1±	10
3	5	3	16
4	6	5	22
5	5	5±	20
6	5	5±	20
7	5	5±	20

*FLOW @ EACH SIDE OF GATE.

FOR SIMPLICITY, ASSUME TOTAL FLOW AS FOLLOWS:

GATE EXTENSION = 0 ⇒ Q = 2 CFS
" " = 0-2' ⇒ Q = 10 CFS
" " ≥ 2' ⇒ Q = 20 CFS

∴ FOR EXTENSION = 5.31', Q = 20 CFS
SOES

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(207) 487-3328
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CALCULATION SHEET

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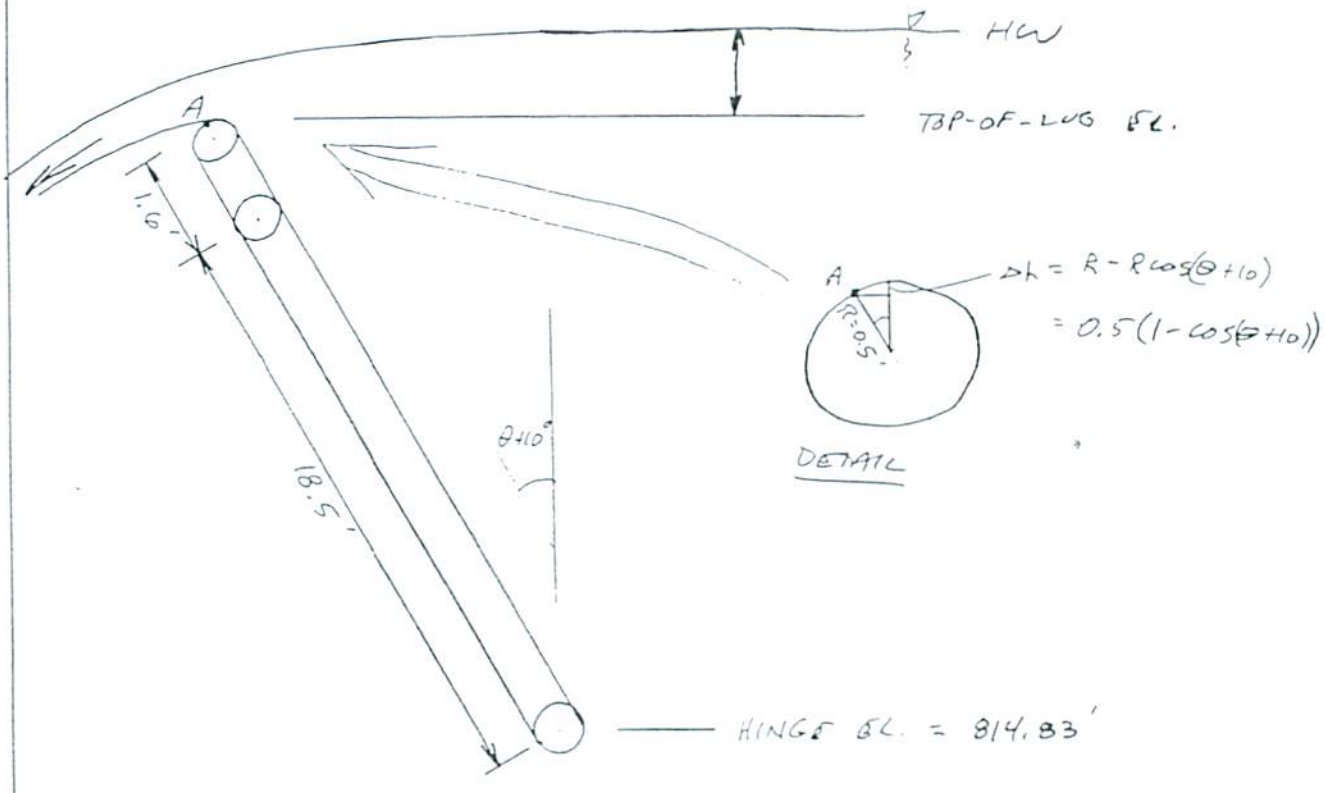
Project: SIMPSON/GILMAN	By: JHC Date: 10/7/93
Subject: CREST GATE	Checked: Date:

VERIFICATION (CONT.)

② "SIDE SLOTS" (CONT.)

EST. FLOW OVER "LUGS" @ TOP OF GATE – USE WEIR EQN.



ELEV. @ "A" = HINGE EL. + (18.5 + 1.6 = 20.1') $\cos(\theta+10^\circ)$ = $814.83 + 20.1\cos(\theta+10)$

ELEV. @ TOP OF LUG = EL. @ A + Δh = $814.83 + 20.1\cos(\theta+10) + 0.5\left[1-\cos(\theta+10)\right]$

$\theta = 17.52^\circ \Rightarrow$ TOP-OF-LUG ELEV. = $814.83 + 20.1\cos(27.52) + 0.5\left[1-\cos(27.52)\right]$
= 832.71'

EFFECTIVE WIDTH OF LUGS = 2.5 - 3.0' EACH SIDE ⇒
CONSERVATIVELY USE 2.5' ⇒ TOTAL WIDTH = 2(2.5) = 5.0'

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Pittsfield, Maine 04967
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(207) 487-3211

CALCULATION SHEET

Page: CG-5

Project No.: 526-011-99-80

Project: SIMPSON/GILMAN

By: JHC Date: 10/7/93

Subject: CREST GATE

Checked: Date:

VERIFICATION (CONT)

② "SIDE SLOTS" (CONT.)

USE COEFFICIENT = 3.0 (CONSERVATIVELY LOW, TO ACCOUNT FOR INTERFERENCES OF BRACKETS & HYDRAULIC ARM)

$$\therefore Q_{LUGS} = CLH^{1.5} = (3)(5)\left(HW - 814.83 + 20.1\cos(\theta+10) + 0.5 - 0.5\cos(\theta+10)\right)$$

$$\theta = 17.5^\circ \Rightarrow Q_{LUGS} = 15\left(837.25 - 832.71 = 0.54'\right)^{1.5} = 6.0$$

$$Q_{LUGS} = 6 \quad CFS$$

③ COMPUTE "REMAINING" FLOW OVER "CENTRE" OF GATE TOP (I.E. BETWEEN LUGS) ⇒

$$Q_{GATE\ TOP} = Q_{TOTAL} - Q_{SIDES} - Q_{LUGS}$$

$$= 210 - 20 - 6 = 210 - 26$$

$$= 184 \ CFS$$

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Consulting Engineers
Pittsfield, Maine 04967
(207) 487-3328
(207) 487-3211

CALCULATION SHEET

Page:	CG 6
Project No.:	526-011-99-80
Project:	SIMPSON/GILMAN
By: / Date:	JHC 9/30/93
Subject:	CREST GATE
Checked: / Date:	TEK 9/30/93

VERIFICATION (CONT.)

(4) - COMPUTE CRITICAL DEPTH OVER GATE TOP ⇒

BRATER & KING (1976) EQN. (8-19) ⇒ $\frac{Q^2}{g} = \frac{A^3}{T}$ @ CRITICAL FLOW

WHERE Q = DISCHARGE = 98 CFS

g = 32.2 FT/SEC^2

A = FLOW AREA = $d_c T$

T = TOP WIDTH OF FLOW

d_c = CRITICAL DEPTH

$T = 2\left[(13'-11\tfrac{1}{4}") - 4" - 6\tfrac{1}{8}" - (2'-0") - \tfrac{1}{2}"\right] \Rightarrow \underline{22.1'}$ [REF.: EA DWG. NO. 100, RECORD DWG. DATED 12/18/91]

$\therefore \frac{Q^2}{g} = \frac{A^3}{T} = \frac{(d_c T)^3}{T} = d_c^3 T^2 \Rightarrow d_c = \left(\frac{Q^2}{g T^2}\right)^{1/3}$

$\therefore d_c = \left[\frac{184^2}{(32.2)(22.1)^2}\right]^{1/3} = \underline{1.29 \text{ FT}}$

(5) COMPUTE BACKWATER PROFILE FROM TOP OF GATE U/S TO SILL ⇒ USE STANDARD STEP METHOD [REF.: V.T. CHOW (1959), PP 265-268].

SEE SPREADSHEET CALCS. (ATTACHED), WHICH GIVE SUMMARY VALUES FOR EACH DISTANCE U/S FROM GATE TOP.

NOTE THAT CHANNEL WIDTH INCREASES FROM 22' TO 27' FOR DISTANCES MORE THAN 0.5' U/S OF GATE TOP - LIFTING LUGS ARE ONLY @ TOP 0.5' OF GATE.

KLEINSCHMIDT ASSOCIATES
Consulting Engineers
Pittsfield, Maine 04967
(207) 487-3328
(207) 487-3211

CALCULATION SHEET

Project No.: 526-011-99-80

Project: SIMPSON/GILMAN

By: JHC Date: 9/30/93

Subject: CREST GATE

Checked: TCK Date: 9/30/93

VERIFICATION (CONT.)

⑤ BACKWATER PROFILE (CONT.)

U/S OF GATE LUGS, REDUCE EFFECTIVE CHANNEL WIDTH BECAUSE OF SIDE WALLS:

$\therefore$ WIDTH = 28 − 1 = 27'

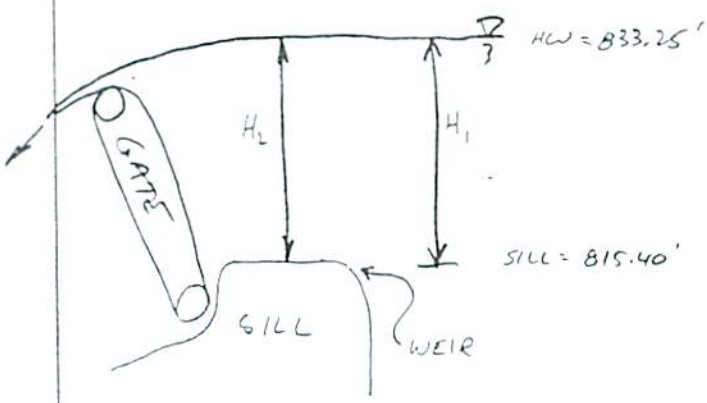
ALSO, INCREASE FLOW MOVING U/S, TO PROVIDE COMPLETE 210 CFS @ 10% OF GATE DISTANCE U/S.

HEADWATER ELEV. @ U/S END = 833.25'

⑥ COMPUTE HEADWATER ELEV. REQ'D. IN HEADPOND ⇒
BRATER & KING (1976) EQN. (5-50) ⇒ SUBMERGED WEIR EQN.

$$\frac{Q}{Q_s} = \left[1 - \left(\frac{H_2}{H_1}\right)^{1.5}\right]^{0.385}$$

WHERE Q_s = WEIR DISCHARGE (UNSUBMERGED)
$= C L H_1^{1.5}$
Q = SUBMERGED DISCHARGE = 210 CFS
C = 2.65 (BROAD-CRESTED WEIR)
$L = 25' - 0.2 H_1 = 25 - (0.2)(17.85) = 21.4'$
(TRIAL) H_1 = U/S HEAD ON WEIR = 833.25 − 815.4 = 17.85'
H_2 = D/S HEAD ON WEIR = 17.85'
$Q_s = (2.65)(21.4)(17.85)^{1.5} = 4277$ CFS



TRANSPOSITION OF ABOVE EQN. ⇒

$$\frac{H_2}{H_1} = \left[1 - \left(\frac{Q}{Q_s}\right)^{\frac{1}{0.385}}\right]^{2/3} = \left[1 - \left(\frac{210}{4277}\right)^{\frac{1}{0.385}}\right]^{2/3} = 0.9996, \text{ SAY } 1.00$$

KLEINSCHMIDT ASSOCIATES
Consulting Engineers
Pittsfield, Maine 04967
(207) 487-3328
(207) 487-3211

CALCULATION SHEET

Page: CG-8	
Project No.: 526.011-99.80	
Project: SIMPSON/GILMAN	By: JHC Date: 10/7/93
Subject: CREST GATE	Checked: Date:

VERIFICATION (CONT.)

(6) HEADPOND ELEV. (CONT.)

$\therefore H_1 = H_2 = 17.85' \Rightarrow$ HW ELEV. = 815.4 + 17.85 = 833.25'

(7) COMPARE W/ "ACTUAL" HEADPOND ELEV. $\Rightarrow$ OK

NOTE THAT HEAD LOSS THRU GATE OPENING IS NEGLIGIBLE ($< 0.01'$) BECAUSE THE AVG. VELOCITY IS SO SMALL (0.44 FT/SEC $\Rightarrow$ VEL. HEAD $= \frac{V^2}{2g} < 0.01'$).

KLEINSCHMIDT ASSOCIATES
Consulting Engineers
Pittsfield, Maine 04967
(207) 487-3328
(207) 487-3211

CALCULATION SHEET

Project No.: 526-011-99-00

Project: SIMPSON CREST GATE

By: MCS Date: 10/7/93

Subject: MINIMUM FLOW

Checked: JHC Date: 10/7/93

ALTERNATIVE METHOD

GATE WIDTH = 22'

ASSUME SQUARE EDGE ENTRANCE K=0.1

FLOW REQUIRED = 200 CFS

ASSUME 10 CFS for leakage

Head Required	Lact	C	Q
1	21.8	3.33	72.6
2	21.6	3.33	203 CFS

CRITICAL DEPTH METHOD = 1.96' Depth

CHECKS against weir flow method

ATTACHMENT B

WATER QUALITY MANAGEMENT PLAN

Simpson Paper Company
Gilman, Vermont

Water Quality Management Plan

Continued water quality monitoring is required by the Article 404 of the new project license for the Gilman Project, FERC No. 2392. This monitoring will consist of dissolved oxygen (DO) and water temperature monitoring downstream and upstream of the Gilman Project.

Monitoring will be conducted over a three-day period at the same monitoring locations used over the past several years. These are described in Table 1 below. Sampling will consist of measurements taken in the late afternoon and the following morning prior to local sunrise to document the diurnal range of any oxygen and temperature fluctuation. Monitoring will be conducted over one period in each July, August and September for three years (1994, 1995, and 1996). Timing of these samplings will be to coincide with low flow periods of the river.

Table 1 - Sampling locations

River Mile	Description
302.9	Railroad Bridge
300.5	upstream of Gilman dam
300.0	Dalton-Gilman Bridge

Total Connecticut River flow at the Dalton, NH USGS gage and estimated spillage at the dam at the time of sampling will also be recorded.

DO and temperature will be measured in-situ by use of a portable DO and temperature meter. Before calibration of the meter each day, the meter must be turned on for a minimum of 15 to 20 minutes to allow the probe to polarize. Once calibrated, the meter must be left on through the entire sampling run to maintain the polarization. Following the sampling run, the calibration will again be checked to determine any drift. If a drift equal to or greater than 0.3 mg/l is found, the DO results must be adjusted commensurately.

Following completion of the September sampling a summary report will be prepared and submitted to the New Hampshire Department of Environmental Services, the New Hampshire Fish and Game Department, and the Vermont Agency of Natural Resources. A final report will be prepared at the end of the three years of monitoring. Following submittal of the final report, Simpson will consult with these agencies to determine if further sampling is needed.

526-014-99-00
022-526.wp/526-00b

ATTACHMENT C

RUN-OF-RIVER MANAGEMENT PLAN

Simpson Paper Company
Gilman, Vermont

Run-of-River Management Plan

Run-of-river operation of the Gilman Project is required by the Article 401 of the new project license and Condition A of the Vermont 401 Certification. This run-of-river operation at the Gilman dam will be ensured by maintaining the water level in the impoundment within 6 inches of the top of flashboards, targeting to be at approximately one-inch below the top of flashboards. The 6-inch maximum operating band will only be used to comply with the project's run-of-river requirements, no project cycling will be done. Therefore, outflows will approximate the sum of the inflows to the project reservoir.

Unit settings will be established based on existing flow conditions. The unit settings will be modified as required if a change in river flow occurs that changes the headpond levels. This will be determined by headpond water level during periodic (4-hour) monitoring. During re-establishment of normal pond level to within one inch of top of flashboards, the project discharge will be no less than 90% of project inflow in order to maintain flows below the dam.

Headpond water level, total river flow, and output of the hydroelectric generating station will be monitored and recorded every four hours by the shift electrician. Records will be maintained at Simpson Paper for inspection during normal business hours by federal or state officials.

Under Article 401, run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of Simpson Paper Co., or for short periods upon mutual agreement between Simpson Paper Co. the Vermont Agency of Natural Resources, The New Hampshire Fish and Game Department, and the U.S. Fish and Wildlife Service.

If the flow is modified by an emergency condition, Simpson Paper Co. shall notify the Commission, the above resource agencies, and the New Hampshire Department of Environmental Services as soon as possible, but no later than 10 days after each such incident. Notification will include the reason for the modification, the duration of the modification, an estimate of how much outflows varied from inflow, and what steps, if any, will be taken to avoid recurrence of the emergency condition.

APPENDIX B-4
FERC ORDER APPROVING AND MODIFYING P-2392 WATER QUALITY MANAGEMENT PLAN
DTD AUGUST 31, 1994

Don
Fory nr info
Dave

(DAM F)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Simpson Paper Company

Project No. 2392-007
Vermont

ORDER APPROVING AND MODIFYING WATER QUALITY MANAGEMENT PLAN

(Issued August 31, 1994)

On July 12, 1994, and supplemented August 11, 1994, the Simpson Paper Company (licensee) filed its water quality management plan pursuant to the requirements of article 404 of the project license for the Gilman Project (FERC No. 2392), issued April 13, 1994. Article 404 requires the licensee, after consultation with the U.S. Fish and Wildlife Service (FWS), the New Hampshire Fish and Game Department (NHFGD), and the Vermont Agency of Natural Resources (VANR), to file a plan to monitor the dissolved oxygen (DO) concentration and water temperature of the Connecticut River downstream and upstream of the Gilman Project.

Licensee's proposed water quality management plan

The licensee proposes to monitor DO concentration and water temperature over a three day period at the same locations as used over the past several years. Monitoring will be conducted at the Railroad Bridge (river mile 302.9), upstream of Gilman dam (river mile 300.5), and at the Dalton-Gilman Bridge (river mile 300.0). Sampling will consist of measurements taken in the late afternoon and the following morning prior to local sunrise to document the diurnal range of any oxygen and temperature fluctuation. Monitoring will be conducted over one period in each July, August, and September for three years (1994, 1995, and 1996). Timing of these sampling periods will be to coincide with low flow periods of the river.

The total Connecticut River flow at the Dalton, New Hampshire U.S. Geological Survey gage and the estimated spillage at the dam at the time of sampling will also be recorded. Water temperature and DO concentration will be measured in-situ by use of a portable DO and temperature meter. Before calibration of the meter each day, the meter will be turned on for a minimum of 15 to 20 minutes to allow the probe to polarize. Once calibrated, the meter will be left on through the entire sampling run to maintain the polarization. Following the sampling run, the calibration will again be checked to determine any drift. If a drift equal to or greater than 0.3 mg/l is found, the DO results must be adjusted commensurately.

Following completion of the September sampling a summary report will be prepared and submitted to the NHDES, NHFGD, and the VANR. A final report will be prepared at the end of the three years of monitoring. Following submittal of the final

report, the licensee will consult with these agencies to determine if further sampling is needed.

Agency comments

In a letter dated June 17, 1994, the NHDES concurred with the plan, but reminded the licensee that the monitoring condition is not limited to three years and may be extended if needed. By letter dated July 6, 1994, the VANR stated they would concur with the plan, but recommended that the licensee change morning sampling time from "prior to 0800 hours" to "prior to sunrise" and that dam spillage, if any, be recorded in addition to the flow at the Dalton gage. The licensee incorporated the VANR's comments into the plan. The FWS, in a telephone conversation with the licensee on June 30, 1994, stated that since the VANR, the NHDES, and the NHDFG were commenting on the plan, the FWS would not provide comment.

Conclusions and recommendations

The licensee's proposed monitoring strategy of sampling twice a day (prior to sunrise and in the late afternoon) during a three-day period each in July, August, and September, coinciding with low flow periods of the river, for three years (1994-1996), may not provide an adequate representation of DO concentration and water temperature conditions in the Connecticut River. Since timing of the samples will be to coincide with low flow periods of the river, sampling would occur when river water quality conditions would be at the extreme and therefore not characteristic of the entire July thru September period. However, the licensee proposes to submit a summary report to the agencies following the completion of the September sampling and a final report after the three years of monitoring. After submittal of the final report, the licensee would consult with the resource agencies to determine if further sampling is needed.

To ensure that the licensee's proposed monitoring provides an adequate representation of water quality conditions in the Connecticut River, the licensee, after consulting with the NHDES, NHDFG, FWS, and VANR, and within 90 days after the September 1994 sampling period, should file for Commission approval, a sampling frequency plan for 1995. The plan filed should be based on the current sampling year's monitoring results, and should address whether to continue the current sampling strategy that was originally proposed or to increase the frequency of sampling. The licensee should include comments from the consulted agencies on the plan. The Commission should reserve the right to require changes to the plan. The licensee's proposed water quality management plan, with the modifications described above, should therefore be approved.

The Director orders:

(A) The licensee's water quality management plan, filed on July 12, 1994, and supplemented August 11, 1994, as modified by paragraph (B), is approved.

(B) The licensee, after consulting with tl Fish and Wildlife Service, the New Hampshire Fish and Gai ment, the New Hampshire Department of Environmental Servi the Vermont Agency of Natural Resources, and within after the September 1994 sampling period, shall file for Cc a approval, a sampling frequency plan for 1995. Th filed shall be based on the current sampling year's mon g results, and address whether to continue the current sampl strategy that was originally proposed or to increase the frequency of sampling. The licensee shall include comments from the consulted agencies on the plan. The Commission reserves the right to require changes to the plan.

(C) Unless otherwise directed in this order, the licensee shall file an original and eight copies of any filing required by this order with:

The Secretary
Federal Energy Regulatory Commission
Mail Code: DPCA, HL-21.1
825 North Capitol Street, N.E.
Washington, D.C. 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

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RIVERSIDE AVENUE
P. O. BOX 129
GILMAN VT 05904-0129

APPENDIX B-5
MODIFICATION OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES WATER QUALITY SAMPLING REQUIREMENTS
DTD JULY 10, 2002

7/16/02

State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-2457 FAX (603) 271-7894

July 10, 2002

Mr. Mark Smith
American Paper Corporation
300 Raybro Drive
Hauppauge, NY 11788

Re: Gilman Hydroelectric Project, FERC #2392 – Water Quality Monitoring

Dear Mr. Smith:

The water quality monitoring program that was included as a condition in the Section 401 Water Quality Certificate (Certificate) issued December 16, 1992 shall continue during summer 2002 at the above referenced project. This is based on the review of water quality data collected during the past 10 years pursuant to the Certificate. Although the data do not indicate exceedances of New Hampshire surface water quality standards for dissolved oxygen, the data indicate that sustained, low flow, high water temperature conditions only existed in 1995. In addition, ambient river conditions precluded the implementation of NHDES' request for three separate sampling events during several years, including 1999, 2000, and 2001 where only one sampling event occurred in 1999 and 2000, and only two sampling events occurred in 2001.

Through previous correspondence, NHDES had expressed interest in the documentation of dissolved oxygen conditions associated with river flows less than 800 cfs and water temperatures greater than 20°C. Although 800 cfs remains as an important target, additional interest exists for the documentation of dissolved oxygen conditions at river flows ranging from 400-600 cfs.

As with previous efforts, three separate sampling events should occur during summer 2002 (one event per month during July, August, and early September), if conditions exist. Monitoring is contingent on river flow, where sampling events should be conducted only if river flows range from 400-600 cfs. Data should be collected over a three-day period. Sampling locations and methods in summer 2002 should be consistent with those used during the 1999-2001 monitoring periods (i.e., surface, mid-depth, and bottom samples at the Railroad Bridge and Dalton-Gilman Bridge, and at 1-meter depth intervals in the impoundment).

The water quality monitoring program will be assessed annually; the NH DES will inform you as to when the program can be discontinued.

Please feel free to call me if you have any questions.

Sincerely Yours,

Paul Piszczek

Paul Piszczek
Watershed Management Bureau

cc: Don Hallee, APMV
Jeff Cueto, VANR
John Warner, USFWS
William Ingham, NHDF&G
Jeff Bagley, Kleinschmidt

APPENDIX B-6
NH DEPARTMENT OF ENVIRONMENTAL SERVICES WATER QUALITY MONITORING RECOMMENDATIONS

WATER QUALITY MONITORING RECOMMENDATIONS HAVE BEEN REQUESTED FROM NH DES AND WILL BE FORWARDED TO LIHI UPON RECEIPT

APPENDIX C-1
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION REQUEST FOR INSTALLATION OF DOWNSTREAM FISH PASSAGE FACILITIES AT THE GILMAN DAM
DTD FEBRUARY 5, 2007

State of Vermont
Department of Environmental Conservation

AGENCY OF NATURAL RESOURCES

FACILITIES ENGINEERING DIVISION
103 South Main Street
Laundry Building
Waterbury, VT 05671-0511

TEL 802-241-3737

February 5, 2007

Stephen Harmsen
Dalton Hydro, LLC
26 North State Street
Salt Lake City, UT 84103

RE: Gilman Hydroelectric Project – FERC Project No. 2392
Downstream Fish Passage

Dear Mr. Harmsen:

Condition C of the July 28, 1989, water quality certification issued by the Vermont Department of Environmental Conservation under 33 U.S.C. §1341 for the Gilman Hydroelectric Project contains a provision for instituting downstream fish passage upon a request by the U.S. Fish and Wildlife Service and the Vermont Department of Fish and Wildlife. I am in receipt of a letter to you dated January 31, 2007 from the Fish and Wildlife Service making such a request. I have also received a note of concurrence from the Vermont Department of Fish and Wildlife. Please consider this letter as the Department of Environmental Conservation's formal request on behalf of the Vermont Agency of Natural Resources, which includes the Vermont Department of Fish and Wildlife, that Dalton Hydro, LLC move forward with the design and construction of downstream passage facilities under the provisions of the water quality certification.

Functional facilities are to be in place and operational for spring outmigration of Atlantic salmon in 2008. Per the certification, the design plans and operating schedule are subject to approval by both the Fish and Wildlife Service and the Vermont Department of Fish and Wildlife and must be filed with my office for the record, along with the approval letters, before the start of construction.

Thank you for your cooperation.

Very truly yours,

Jeffrey R. Cueto, P.E.
Chief Hydrologist

c Rod Wentworth, FWD
Len Gerardi, FWD
Jay McMenemy, FWD
John Warner, USFWS
Diane Emerson, NHFGD
Paul Piszczek, NHDES
FERC
Joseph Peterson, Dalton Hydro-Gilman
David Deen, CRWC

200702055028 Received FERC OSEC 02/05/2007 01:34:00 PM Docket# P-2392-000

Submission Contents

APPENDIX C-2(a) – (c)
COMPLETE HISTORY OFCONSTRUCTION PROGRESS REPORTS SUBMITTED TO THE AGENCIES AND FERC REGARDING THE CONSTRUCTION OF DOWSNTREAM FISH PASSAGE FACILITIES AT THE GILMAN DAM (FERC PROJECT NO. 2392)
DTD FEB 5, 2007 – APRIL 8, 2012

DUE TO SIZE LIMITATIONS, SEE COMPLETE FISH PASSAGE CORRESPONDENCE FILES FORWARDED TO MR. FRED AYER, EXECUTIVE DIRECTOR OF THE LOW IMPACT HYDROPOWER INSTITUTE

APPENDIX C-3
ABBREVIATED TIMELINE OF DOWNSTREAM FISH PASSAGE CORRESPONDENCE
AT THE GILMAN DAM
DTD FEB 5, 2007 – APRIL 8, 2012

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

Gilman Fish Passage History

February 5, 2007 – State of Vermont Department of Environmental Conservation
Jeffrey R. Cueto, P.E.

Condition C of the July 28, 1989, water quality certification issued by the Vermont Department of Environmental Conservation under 33 U.S.C. §3141 for the Gilman Hydroelectric Project contains a provision for instituting downstream fish passage upon a request by the U.S. Fish and Wildlife Service and the Vermont Department of Fish and Wildlife. On January 31, 2007 the Fish and Wildlife Service made such a request. The Vermont Department of Fish and Wildlife concurred with the January 31 request by Fish and Wildlife. On January 5, 2007 the Department of Environmental Conservation formally requested on behalf of the Vermont Agency of Natural Resources, which includes the Vermont Department of Fish and Wildlife, that Dalton Hydro, LLC move forward with the design and construction of downstream passage facilities under the provision of the water quality certification.

Functional facilities are to be in place and operational for spring outmigration of Atlantic salmon in 2008. Per the certification, the deign plans and operational schedule are subject to approval by both the Fish and Wildlife Service and the Vermont Department of Fish and Wildlife and must be filed with the Vermont Department of Environmental Conservation for record, along with approval letters, before the start of construction.

February 28, 2007 – Federal Energy Regulatory Commission
George H. Taylor, Chief, Biological Resources Branch, Division of Hydropower Administration

Pursuant to paragraphs 12.4, 12.11, and 12.40 of the Commission's regulations, a plans and specifications package and a quality control plan must be submitted to the Regional Engineer prior to construction of the downstream fish passage facilities.

January 31, 2008 – Federal Energy Regulatory Commission

Letter indicating that Dalton Hydro would likely by unable to provide downstream passage for out migrating salmon within the year required by the February 2007 letter and a request for explanation

March 20, 2008 – horizons engineering PLC

Request for one year extension due to discovery of the dwarf wedgemussel in the project vicinity while acquiring permits needed for fish passage construction. May 2008 was the earliest an underwater survey could be performed. It was anticipated that a one year extension would allow the necessary timeline for environmental surveys, design submittal and agency review, and permit application. A timeline was included for design and construction subject to the discovery of the dwarf wedgemussel.

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

April 2, 2008 – Vermont Department of Environmental Conservation
Jeffrey R. Cueto, P.E.

Grant of request for one year extension until April 2009 based on the discovery of the dwarf wedgemussel.

Request for monthly updates starting in May 2008

April 30, 2008 – Federal Energy Regulatory Commission
Robert H. Grieve, Biological Resources Branch, Division of Hydropower Administration and Compliance

By letter dated February 27, 2007, we discussed the requirements and timing for installation of the downstream fish passage facilities. We requested that you provide us an update on progress you have made toward completing the requirements for installation of the passage facilities and a schedule for ensuring that functional passage facilities are in place and operational as required.

You replied that the FWS indicated that a survey for the federally-listed endangered dwarf wedgemussel was needed prior to its permit issuance and that May 2008 would be the earliest a survey could be conducted. In addition more time is required for you to permit adequate consultation with the resource agencies and to complete the design of the facilities.

By letter dated April 1, 2008, the FWS stated it supports your request based on the need for mussel survey and the need for adequate consultation. The VDEC, by letter dated April 2, 2008, has granted your request and stated that facilities must be completed and operational by April 1, 2009.

We grant your request herein, based on your consultation with the resource agencies. The new due date for completion of downstream fish passage facilities is April 1, 2009.

September 7, 2008 – Ampersand Gilman Hydro, LP
Gregory Cloutier, Chief, Chief Operations Officer

Notification to FERC that Gilman Hydro is in the process of being sold to Ampersand Gilman Hydro, LP. (AGH). While the FERC license is being transferred, AGH has signed an operating agreement with Dalton and has assumed the responsibilities for operating and maintaining the project. AGH has committed $250,000 to escrow and has committed to spend an additional $450,000 on capital expenditures to improve the project.

Waiting on construction permits from Vermont ANR, USACE and EPA.

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

Trash rake and downstream passage inlet have reached final design stage by the H.L. Turner Group from Concord, NH.

Included timeline to illustrate the scheduling of the project

April 8, 2009 Completed all filings required for a project extension of time. The FERC filing included critical path dates necessary to meet the installation of the fish passage by April 1, 2010

April 15, 2009 Interim fish passage was made operational with 60 cfs of flow, inlet trash rack and downstream plunge pool.

April 28, 2009 – Vermont Department of Environmental Conservation
Jeffrey Cueto, Chief Hydrologist

Receipt of April 7, 2009 letter requesting extension in deadline for having operational fish passage facilities in place at Gilman Dam.

May 4, 2009 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Filed the first project status summary report with the Vermont Department of Environmental Conservation. Completed all filings required for a project extension of time. The FERC filing included critical path dates necessary to meet the installation of the fish passage by April 1, 2010. Interim fish passage was made operational with 60 cfs of flow, inlet trash rack and downstream plunge pool.

June 4, 2009 – Troutman Sanders LLP
Fred Springer

Filed Downstream fish passage progress report with the FERC and the Vermont Department of Environmental Conservation. The interim fish passage was operational during this period of time. The baffle design was determined with Blue Hill Hydraulics using CFD models.

July 6, 2009 – Ampersand Gilman Hydro, LP
Gregory Cloutier

The monthly project status summary report was filed with Jeff Cueto of the Vermont Department of Environmental Conservation. The interim fish passage was shut down June 15, 2009. Negotiations continued with FWS regarding design modifications to reduce the intake velocities at the trash rack inlet.

July 15, 2009 Troutman Sanders LLP
Fred Springer

Filed monthly downstream fish passage status report with the FERC including files indiciating ongoing negotiations with FWS regarding design modifications.

August 10, 2009 Troutman Sanders LLP
Fred Springer

Filed marked up sketches of proposed changes to trash rack and downstream passage emailed to John Warner and Ben Rizzo for review and comment.

August 17, 2009 Federal Energy Regulatory Commission
Joseph Enrico

Acknowledgement of Ampersand Gilman Hydro's filing o May, June, July and August 2009 monthly progress reports and confirmation of letter dated May 4, 1009 granting extension of time to complete the installation and operation of downstream facilities by April 1, 2010.

September 4, 2009 Troutman Sanders LLP
Fred Springer

Monthly progress report indicating a revised CFD Model run to measure any decrease in the intake velocities as well as Ampersand's consultant, John Truebe presented 6 design alternatives to John Warner and Ben Rizzo for consideration.

October 5, 2009 Troutman Sanders LLP
Fred Springer

Ampersand's monthly progress report indicating that additional information is required by USFWS to evaluate the third CFD and six alternatives presented by AGH. AGH indicated Acoustic Doppler Current Profile Contractors had been hired to perform the necessary work.

November 16, 2009 Federal Energy Regulatory Commission
Joseph Enrico

Acknowledgement of August, September and October progress reports filed by AGH highlighting that the river profiles were completed on October 8, 2009 and the results were forwarded to Blue Hill Hydraulics for incorporation into the models. The six alternative designs for CFD models were revised and meetings were held to discuss the alternatives as well as a proposal to run the models logically rather than do all six.

December 4, 2009 – Ampersand Gilman Hydro, LP
Gregory Cloutier

November and December 2009 progress report filed with Jeffrey Cueto of the Vermont Department of Environmental Conservation.

November 16, 2009 Federal Energy Regulatory Commission
Joseph Enrico

Acknowledgement of November and December monthly progress reports which indicate that the next Computational Fluid Dynamics (CFD) study (run 4) will be completed in January 2010 and upon completion, a meeting with USFWS will be scheduled to discuss the results. After completing the passage design phase a firm construction schedule can then be developed.

February 5, 2010 Troutman Sanders LLP
Fred Springer

Monthly status report filed by AGH. Request for extension of time based on the number of steps which remain to work through the final design phase, get approval of all the stake holders and FERC, and the construction implementation. Due to the additional time necessary to complete the design steps, hardware purchase and installation, a letter was sent to VT DEC requested extension of time to have the downstream passage installed and reauested approval to continue operating the interim downstream passage system installed in 2009. The unque features of the Gilman project have proven difficult and have moved from major cofferdam requirements to what we believe is a simple passage alternative. The hope is to have the downstream passage operational by April 1, 2011; however, agency approval will determine the exact date.

March 5, 2010 Troutman Sanders LLP
Fred Springer

Monthly status report filed with the FERC indicating that negotiations are still underway with VTDEC regarding the request for an extension until April 1, 2010 to have the downstream passage installed and operational. A proposal has been put in front of USFWS and VTDEC to review AGH's downstream passage design and the results of CFD model run 4, which move the fishway away from the turbine trash rack area by using a combination of a fish boom, barrier curtain and flow boosters.

November 16, 2009 Federal Energy Regulatory Commission
Joseph Enrico

FERC's contingent approval of extension of time request to have downstream passage facilities at the Gilman Project April 1, 2011 pending approval by VTDEC.

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

April 1, 2010 Troutman Sanders LLP
Fred Springer

Response to FERC February 23, 2010 letter and request for extension of time. Included is VT DEC's March 29, 2010 approval of request for extension of time until April 1, 2011 when facilities are to be completed and operational. Additionally, the project received conditional approval from USFWS to move the fish away from the turbine trash rack area by using a combination of a fish boom, barrier curtain and flow boosters. USFWS approved the plan subject to Ampersand moving ahead on the downstream passage design, structural review and cutting the larger downstream passage hole for the 2011 passage season; increasing the depth of the barrier curtain and tag testing the week of June 2011.

April 2, 2010 Troutman Sanders LLP
Fred Springer

Monthly update filed with the FERC detailing that on March 25, 2010, Greg Cloutier, John Trube of Lakeside Engineering and USF&W's John Warner and Ben Rizzo met in Concord NH to review CFD model run 4 which proposes moving the fish away from the turbine trash rack area by using a combination of fish boom, barrier curtain and flow boosters. The model further evaluated flow vectors and velocities during low and high river flow conditions utilizing two scenarios, no spilling and scenario 2 spilling 1000cfs as would be experienced in high spring river conditions, this flow was placed over the Vermont side rubber flash board. The design also incorporates 3 fifteen hp flow boosters which are positions along a diversion boom upstream of the dam with the intent of directing surface currents towards the downstream fish passage opening. The model utilized actual river flow bathymetry from data collected by Lakeside Engineering. The information was sent to the FERC as part of AGH's March 5, 2010 report.

April 8, 2010 Federal Energy Regulatory Commission
Joseph Enrico

FERC's acknowledgment of notice that AGH is in discussions with the agencies regarding potential modifications the downstream passage design. FERC acknowledged that the interim downstream passage measures became operational on April 1, 2010.

May 5, 2010 Troutman Sanders LLP
Fred Springer

Monthly progress report indicating job responsibilities and the expectation that John Truebe of Lakeside Engineering would have the initial downstream passage designs completed during May 2010.

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

June 3, 2010 Troutman Sanders LLP
Fred Springer

Monthly progress report indicating job responsibilities and the fact that AGH is reviewinf a second design option for the fish curtains which are a pre-engineered barrier system fabricated by TUFFBOOM. Literature is attached.

August 12, 2010 Federal Energy Regulatory Commission
Joseph Enrico

FERC's acknowledgment of June, July and August monthly progress report filings. The reports noted that draft functional designs for the fish boom, boom curtain, flow inducer attachment, and power connections were completed; plans for the passage system were filed with thw US Fish and Wildlife Service (FWS); comments from the FWS are being incorporated into the plans as they are received and approvals are in place from rhw FWS and Vermont Department of Environmental Protection to lower the impoundment and cut a hole for the installation of the passage system and final design of the location and size of the hole is being drafted by AGH's structural engineer.

September 7, 2010 Troutman Sanders LLP
Fred Springer

Monthly progress report. Updates included hiring, at the request of USFWS, Blue Hill hydraulics to run additional CFD models for approach flows to the bypass as it turns 90 degrees (and up to 120 degrees) in the two downstream passage openings design options. Additionally the project started design sketches for agency approval, engaged H.L. Turner Engineering to design anchor block sizes necessary to secure the existing "Low Boom", the new "Fish Curtains" and the "Flow Inducers" which make up the Gilman passage. In August AGH met with the Stream Alteration Chief Engineer for Vermont about the need for a "Stream Alterations Permit Application". Arrangements and purchase options were finalized with the flow inducer supplier.

September 27, 2010 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Request for Commission approval for dam modifications ahead of the final downstream passage design approval by the agencies given the short construction season.

October 5, 2010 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly update to VTDEC

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

January 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly update to VTDEC detailing that AGH is awaiting comments from VTDEC, NHF&G and USF&W to AGH's 2010 fish passage plan. This approval and comments are necessary for AGH to file for FERC passage approval.

February 4, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly update to VTDEC detailing conditional approval of Gilman fish passage plan submitted 10.28.10 was received from USF&W and that due to the time required to get agency approvals and to submit required documents to FERC for reviews and approvals, AGH will no have the downstream passage implemented by April 15, 2011 and requested a delay in the installation until April 15, 2012 with approval to use the interim fish passage for 4.15.2011. **Due to the difficulty of fitting a passage design into the existing powerhouse inlet, AGH has had to perform many computer models which have resulted in even more design options to review. The design difficulty has delayed approval by VTDEC, USF&W and other agencies.**

March 1, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly update to VTDEC. AGH received approval from VTDEC to delay installation of downstream passage until April 15, 2012. AGH is awaiting approval from USF&W to delay installation of s=downstream passage to April 15, 2012. AGH has hired Lakeview Engineering to update and finalize the FERC submittal package.

March 17, 2011 - Federal Energy Regulatory Commission
Joseph Enrico

FERC's acknowledgment of January and February 2011 passage reports as well as the conditional approval received from USF&W regarding the downstream passage plans. FERC acknowledged that AGH will shortly be filing total package plans and documents for fish passage as well as an extension of time request with the Commission upon acceptance by USF&W and VTDEC.

March 28, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly update to FERC. Condition C of the Vermont Water Quality Certificate (VWQC) requires the Gilman Hydroelectric Project to install downstream fish passage wen so requested by the agencies. The Gilman Hydroelectric Project is required to have downstream passage operational by April 1, 2011. However, to start construction, AGH must have approval by all interested parties and FERC.

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

Due to difficulty in fitting a passage design into the existing powerhouse inlet, AGH has performed many computer flow models, which resulted in even more design options to review. This design difficulty has simply delayed approval by VTDEC, USF&W and other agencies. AGH's progress has been outlined in monthly progress reports. AGH has received final comments and approval from USF&W and AGH expects to submit the Gilman Dam Final Passage Plan to FERC for approval during the first week of April, 2011. However, without approvals, and with the cold winter, AGH is out of time for an April 1, 2011 operations date.

On January 1, 2011, AGH wrote a letter to Vermont Department of Environmental Services, Mr. Brian Fitzgerald with a copy to John Warner of USF&W, outlining the progress AGH has made along with a request to delay the required installation of the downstream passage to April 15, 2012. VTDEC approved the extension request on February 8, 2011 and approval from USF&W on March 21, 2011.

AGH has made great progress over the past two years and only just agreed with the agencies on the final design. Due to the additional time necessary to get these approvals and considering the time that will be required to receive an approval from the FERC, AGH request FERC approval of an extension of time for the Gilman downstream passage until April 15, 2012 and that AGH be allowed to continue the operation of the interim downstream passage system for the April 2011 downstream passage season.

April 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. On March 21, 2011 AGH received an email from John Warner of USF&W approving AGH's request for an extension of time for installation of the Gilman Passage from April 15, 2011 to April 15, 2012. On March 28, 2011 AGH filed with FERC the approval letters from VTDEC and USF&W for an Extension of Time for installation of the Gilman Passage from April 15, 2011 to April 15, 2012. On March 29, 2011, AGH filed with the FERC the Final Design documents for the Gilman Dam fish passage for FERC Approval along with VTDEC and USF&W consultation.

May 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. Discussions have taken place with Paul Becht of HL Turner to being structural and fabrication design work on the passage inlet, bull nose, entrance gate, etc. Design modifications have been made to the fish curtain as a result of testing at Lockwood Hydro in Maine. AGH will submit final fabrication designs on the guidance curtain to the two suppliers. On March 28, 2011 AGH filed with FERC for an Extension of Time for the installation of the Gilman Passage from April 15 2011 to April 15, 2012. On March 29, 2011 AGH filed with the FERC the final Design documents for the Gilman dam passage along with VTDEC and USF&W consultation and is awaiting approval.

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

June 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. AGH scheduled the installation of the fish passage slot for the month of September 2011. AGH has not heard from FERC on its passage submittal.

July 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. HL Turner provided AGH with final design sketches for the fish passage closure design so AGH can begin construction of the passage inlet frame and passage gate. Final bull nore design sketches are expected from HL Turner by the end of July. Final pricing is expected to be received from Worthington Product Inc. for the fish curtain by the end of July. AGH received FERC approval of the fish passage design was received on June 9, 2011

August 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. Ampersand has ordered the portal gate steel and fabrication has begun with an expected delivery for install of 9.01.11. Ampersand has scheduled the impoundment 5' draw down for the week of 9.5.11. The bull nose design by Paul Becht of HL Turner is completed and submitted for VTDEC review. AGH has received final pricing for the fish curtain but is waiting to view the installation of the curtain at Lockwood Hydro before ordering theirs. AGH has scheduled the cutting of the passage hole for the week of 9.12.11 and the installation of the Gate and bull nose for the week of 9.19.11.

September 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. AGH has scheduled the 5 foot drawdown for the week of 9.5.11 which is still on schedule. Vermont Concrete is scheduled to cut the portal hole starting the week of September 12, 2011. The gate and bull nose is scheduled for installation the week of 9.19.2011. All dates are contingent upon the high water from Irene residing.

October 5, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. The downstream passage portal is installed. The concrete abutment cut and entrance devices were installed over the past month, while the impoundment water levels were lowered by 5 feet. AGH awarded Worthington Tuffboom the purchase order for two

segments of the fish curtain. Segment 1 is 200 feet of 60" deep screens and Segment 2 is 60' of 120" deep screens

October 27, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly passage report submitted to the Vermont Department of Environmental Conservation indicating that AGH has ordered the hydraulic operating cylinder for the Fish Passage Portal and started the installation of the hydraulics to operate the entrance gate. AGH fabricated and galvanized the plunge pool and angled exit plates which are onsite and ready to install. AGH has ordered the access doors to the Fish Passage portal and fabricated the safety rails.

December 6, 2011 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. AGH made its first payment on the Worthington fish curtain, engineering has begun. AGH has installed and operated the hydraulic operating cylinder for the Fish passage portal and started the installation of the hydraulics to operate the entrance gate. AGH installed access doors to the Fish Passage portal and fabricated and installed safety rails. A jib crane was installed for the maintenance of 10' deep curtains. Evaluations have been ongoing regarding installation methods for the 200' long by 5' deep fish curtain during Spring flooding.

January 5, 2012 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. AGH is working with its consultant, John Trube of Lakeside engineering on a phased installation of the fish curtains and flow inducers for 2012. The fish curtains would be installed sometime in April after peak Spring Flows and flows are being passed through the projects deflated rubber flashboard section. The flow inducers would be installed in May.

January 30, 2012 - Federal Energy Regulatory Commission
Joseph Enrico

FERC's acknowledgment of AGH's January 5, 2012 update indicating the the fish curtain would be installed in April, 2012 with the flow inducers to follow in May 2012. FERC reminded AGH that the installation for fish passage facilities at the Gilman project is due on April 1, 2012. Any extension beyond that date would need concurrence of the State of Vermont Department of Environmental Conservation and the U.S. Fish and Wildlife Service.

Prepared by Stephen Hickey, authorized agent of Ampersand Gilman Hydro, LP

February 5, 2012 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. AGH expects the fish passage curtain to be delivered March 19, 2012. AGH is working on a few final details which should have no impact on the expected delivery. AGH is working with Tuffboom on methods of installation of the curtain by April 1. AGH has not worked on the three thrusters.

March 1, 2012 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Request for an extension of time to implement the downstream fish passage required at the Gilman dam per Condition C of the Vermont Water Quality Certificate. The Gilman Vermont Hydroelectric project is required to have downstream fish passage fully operational by April 1, 2012. During 2012 AGH mad great progress with the Gilman passage as was outlined in the monthly progress reports. Namely, the 5' X 7' passage slot was installed along with, inlet gate, bull nose, plunge pool and fish curtain downstream anchor. The fish curtain has been engineered, purchased and is expected for onsite delivery by the end of March 2012. Lakeside Engineering the provider of the flow inducers has delivered (1) test inducer on site for hydraulic testing in 2012. AGH plans to assemble the fish curtains during March 2012. The 5' X 7' permanent fish passage slot will be used starting April 1, 2012. During the month of April the Connecticut River is generally in high spring flood flows and it will not be safe for our first installation. This should not impact the April passage because flows above 8,500 cfs will create true attraction flows over the deflated rubber flashboards. After the Spring Flood Flows peak AGH plans to install the 200' section of the 5' deep curtains. AGH will then install the 60' long section of the 10' deep curtains which is closer to the dam and the passage slot and finally the Test flow inducer. During May and June AGH plans to complete the hydraulic test of the installation ahead of any tagged fish testing for 2012. AGH will make any necessary changes resulting from the hydraulic testing and plan for actual tagged fish testing in June 2013.AGH respectfully requests an extension of time for the Gilman Passage to be fully operational until April 1, 2013.

March 3, 2012 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. The Tuffboom fish passage curtain is on schedule for delivery March 19, 2012. Lakeview Engineering will have one Test thruster available for hydraulic testing for the Spring of 2012. Because the Gilman Fish Passage will not be FULLY operational by April 1, 2012, AGH has requested another extension of time. AGH expects the 5'w x 7'h downstream passage slot open and fully operational on April 1, 2012. The Worthington curtains will be onsite and AGH staff will have started assembly. If the Spring Flood Flows are low enough and it is safe for installation, AGH staff will begin

installing the 200' long 5' deep fish curtain in the River. Hydraulic testing is planned for the end of May.

April 5, 2012 – Ampersand Gilman Hydro, LP
Gregory Cloutier

Monthly progress report filed with the Vermont Department of Environmental Conservation. The Tuffboom fish passage curtain was delayed from the original March 19 delivery date to April 2, 2012. AGH is still waiting on comments from the agencies regarding its request for a final extension due to the delayed delivery of the fish curtain. FERC was provided a summary of the project progress to date. The new 5 x t' downstream fish passage portal was opened April 1, 2012 as required. Hydraulic testing is planned for the end of May.

April 8, 2012 – Vermont Department of Environmental Conservation
Brian T. Fitzgerald

AGH's request for an extension in the deadline for having operational fish passage facilities in place at the Gilman Dam is granted. Facilities are to be complete and operational by September 1, 2012. The interim fish passage is to be operational during the spring 2012 downstream passage period.

APPENDIX C-4

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION RESPONSE TO AMPERSAND GILMAN HYDRO LP'S, MARCH 1, 2012 REQUEST FOR AN EXTENSION IN THE DEADLINE TO HAVE OPERATIONAL FISH PASSAGE FACILITIES AT THE GILMAN DAM

VERMONT

Vermont Department of Environmental Conservation
Watershed Management Division
103 South Main Street, Building 10 North
Waterbury, VT 05671-0408
www.vtwaterquality.org

Agency of Natural Resources

[phone] 802.338.4852
[fax] 802.338.4890

DISTRIBUTED ELECTRONICALLY

April 8, 2012

Gregory Cloutier
Ampersand Gilman Hydro, LP
PO Box 129
Gilman, VT 05904

RE: Gilman Hydroelectric Project – FERC Project No. 2392
Downstream Fish Passage

Dear Mr. Cloutier:

I have received your March 1, 2012 letter requesting an extension in the deadline for having operational fish passage facilities in place at Gilman Dam. Your request is granted. Facilities are to be completed and operational by September 1, 2012. All reporting and filing requirements detailed in Jeffrey Cueto's April 28, 2009 extension approval remain in effect. The interim fish passage will be operated during the spring 2012 downstream passage period.

Don't hesitate to contact me if you have any questions.

Very truly yours,

Brian T. Fitzgerald
Streamflow Protection Coordinator

c: Rod Wentworth, VDFW
Jud Kratzer, VDFW
Len Gerardi, VDFW
John Warner, USFWS
Gregg Comstock, NHDES
Dianne Timmins, NHF&G
Robert Grieve, FERC-DHAC
Martha Abair, USACE
David Deen, CRWC

APPENDIX C-5
UNITED STATES FISH AND WILDLIFE SERVICE RESPONSE TO AMPERSAND GILMAN HYDRO LP'S, MARCH 1, 2012 REQUEST FOR AN EXTENSION IN THE DEADLINE TO HAVE OPERATIONAL FISH PASSAGE FACILITIES AT THE GILMAN DAM

THE RESPONSE FROM THE UNITED STATES FISH AND WILDLIFE SERVICE WILL BE FORWARDED TO THE LOW IMPACT HYDROPOWER INSTITUTE IMMEDIATELY UPON RECEIPT.

APPENDIX C-6
MAY 2012 FISH PASSAGE PROGRESS REPORT FILED WITH THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION SHOWING THE INSTALLATION OF THE DOWNSTREAM FISH PASSAGE CURTAINS
DTD MAY 5, 2012

Ampersand Gilman Hydro, LP
PO Box 129
Riverside Ave.
Gilman, VT 05904
802.892.1166
May 5, 2012

Vermont Agency of Natural Resources
Department of Environmental Conservation
Water Quality Division
103 South Main Street
Waterbury, VT. 05671-0408
Attention: Mr. Brian T. Fitzgerald.

RE: Gilman Hydroelectric Project - FERC Project No. 2392 Downstream Fish Passage – Project Status Summery Filing as required by VDEC April 28, 2009 Letter—37 th. PROGRESS REPORT.

Dear Mr. Fitzgerald:

As per Jeff Cueto's April 28, 2009 letter and your extension letter requirements, I have prepared this month's project status report.

Progress Made in this Month

1. The Tuffboom fish passage curtain which did not arrive on site until April 2, 2012 As of this progress report all of the fish curtains have been installed.(See attached Photos)
2. AGH has received and Extension of time for installation from VTDES. The install date must be Sept 9, 2012.
3. We have emailed another request from USFW for an Extension of Time.

Next Month and Future Work

1. The installation of the fish curtains have moved the Gilman Hydro Log boom closer to the Vermont shoreline, which is not as we predicted. Because of this it has crowded the boom and appears to change how the current inducers will be installed.
2. In the next month we will have Jon Trube and Lakeside Engineering come on site to test the actual flow and current velocities. With this we "may" consider different placement locations for the flow inducers.
3. We are planning hydraulic testing for the end of May.

If you have any questions or suggestions don't hesitate to contact me.

Sincerely yours,

Gregory Cloutier
Chief Operating Officer
Ampersand Gilman Hydro. LP

cc:
FERC
VTDES Ext of Time Letter
Photos of the Worthington fish Curtain

TITLE	NAME	PHONE NUMBER	E-MAIL ADDRESS
NH DES	William Thomas	603-271-3504	William.thomas@eds.nh.gov
NHDES	Steve Doyon	603-271-3501	Steve.doyon@des.nh.gov
USFWS	Curt Orvis	413-253-8288	Curtis_Orvis@fws.gov
USFWS	John Warner	603-223-2541	John_Warner@fws.gov
VT Fish & Wildlife	Rod Wentworth	802-241-3709	rod.wentworth@state.vt.us
VT Fish & Wildlife	Len Gerardi	802-751-0108	Len.gerardi@state.vt.us
NH Fish & Game	Carol Henderson	603-271-2501	Carol.Henderson@wildlife.nh.gov
NH DES	Craig Rennie	603-271-0676	crennie@des.state.nh.us
VT ANR	Brian Fitzgerald	802-241-3468	brian.fitzgerald@state.vt.us
CRWC	David Deen		ddeen@ctriver.org
FERC NY	Charles Cataldo		Charles.Cataldo@ferc.gov
FERC NY	Joe Enrico		Joseph.enrico@ferc.gov


ALGON
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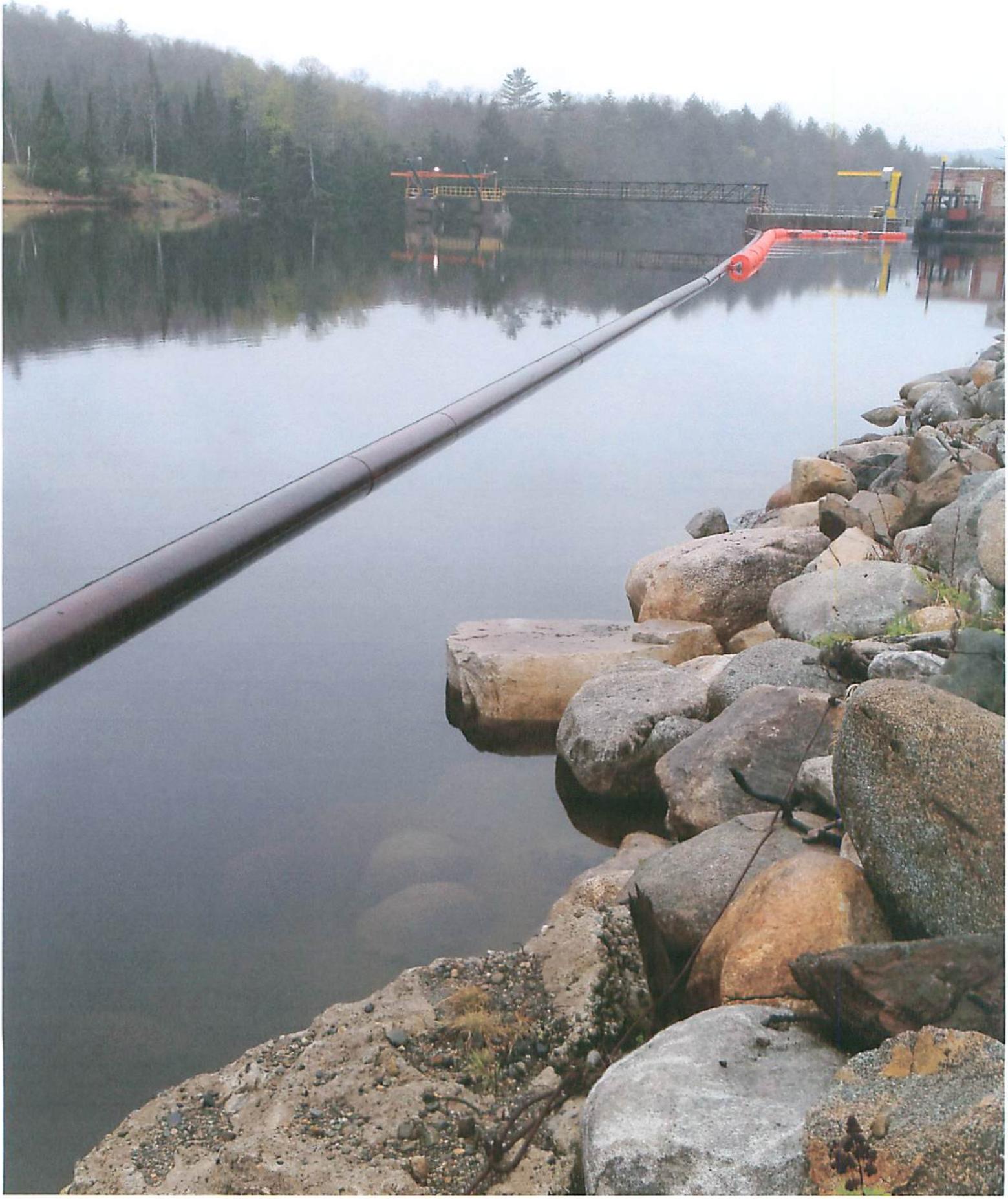


APPENDIX C-7
UNITED STATES FISH AND WILDLIFE SERVICE APPROVAL OF THE FISH PASSAGE FACILITIES AT THE GILMAN DAM

THE APPROVAL LETTER FROM THE UNITED STATES FISH AND WILDLIFE SERVICE OF THE EFFECTIVESS OF THE DOWNSTREAM FISH PASSAGE FACILITIES INSTALLED AT THE GILMAN DAM WILL BE FORWARDED TO THE LOW IMPACT HYDROPOWER INSTITUTE IMMEDIATELY UPON RECEIPT.

APPENDIX C-8
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION APPROVAL OF THE FISH PASSAGE FACILITIES AT THE GILMAN DAM

THE APPROVAL LETTER FROM THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONERVATION OF THE EFFECTIVESS OF THE DOWNSTREAM FISH PASSAGE FACILITIES INSTALLED AT THE GILMAN DAM WILL BE FORWARDED TO THE LOW IMPACT HYDROPOWER INSTITUTE IMMEDIATELY UPON RECEIPT.

APPENDIX E-1
GILMAN HYDROELECTRIC PROJECT REVIEW
NEW HAMPSHIRE NATURAL HERITAGE BUREAU
DTD MARCH 16, 2012
&
VERMONT AGENCY OF NATURAL RESOURCES
DTD MARCH 14, 2012

Memo

NH Natural Heritage Bureau
NHB Datacheck Results Letter

To: Stephen Hickey, Essex Hydro Associates, L.L.C.
55 Union Street, 4th Floor
Boston, MA 02108

From: Melissa Coppola, NH Natural Heritage Bureau
Date: 3/16/2012
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB12-0616 Town: Dalton Location: Tax Maps: map 403, lot 34
Description: This request pertain to the existing hydroelectric project located on the Connecticut River which is applying to the Low Impact Hydropower Institute for certification as a low impact facility . A complete list of the threatened and endangered species found within the project boundary is a requirement of the application.
cc: Kim Tuttle, Susi von Oettingen

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: This site is within an area flagged for possible impacts on the federally-listed *Alasmidonta heterodon* (dwarf wedgemussel) in Connecticut River.

Invertebrate Species	State[1]	Federal	Notes
Dwarf Wedge Mussel (*Alasmidonta heterodon*)	E	E	Contact the NH Fish & Game Dept and the US Fish & Wildlife Service (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544. Contact for federally-listed species: Susi von Oettingen, US FWS, at (603) 223-2541.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

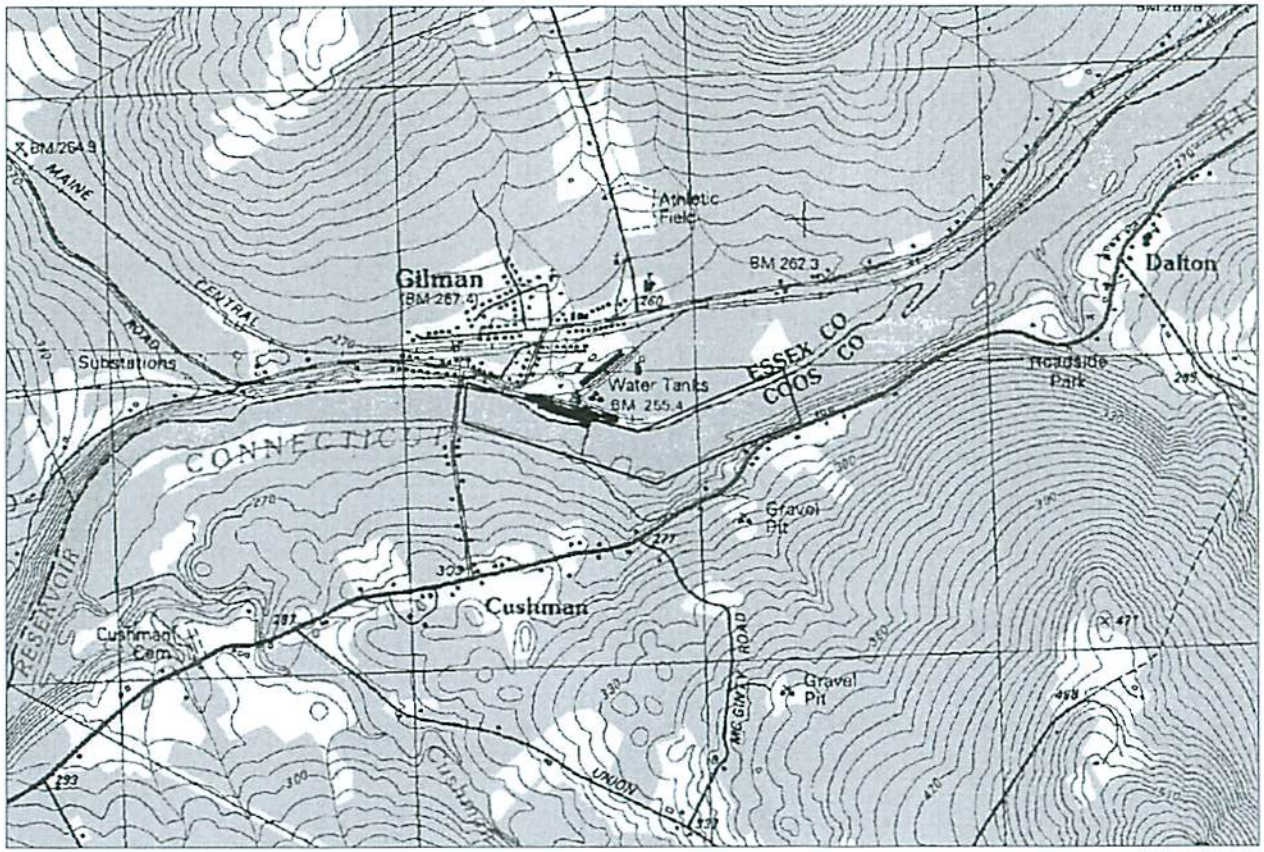
Memo

NH NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

NH NATURAL HERITAGE BUREAU

Known locations of rare species and exemplary natural communities

Note: Mapped locations are not always exact. Occurrences that are not in the vicinity of the project are not shown.



*Historical record

Valid for one year from this date: 16 Mar 2012

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

State of Vermont

AGENCY OF NATURAL RESOURCES
VERMONT

Department of Fish and Wildlife
5 Perry Street, Suite 40
Barre, VT 05641-4266
www.vtfishandwildlife.com

[phone] 802-476-0199
[fax] 802-476-0129
[tdd] 802-828-3345

March 14, 2012

Mr. Stephen Hickey
Hydro Management Group, LLC
55 Union Street, 4th Floor
Boston, MA 02108
sjh@essexhydro.com

Re: Gilman Hydro LIHI Certification. Gilman, VT.

Dear Mr. Hickey:

I am in receipt of your March 9, 2012 email to John Austin and Amy Alfieri requesting information regarding the presence of threatened and endangered species located in the project area. I have been directed to respond to your request. A search of our database indicates the presence of a federal and state listed endangered species, dwarf wedgemussel (*Alasmidonta heterodon*), present above and below the Gilman hydroelectric facility. The Lunenburg, VT reach of the Connecticut River is documented as having one of the highest densities of dwarf wedgemussel throughout the species' range which was originally from New Brunswick to North Carolina.

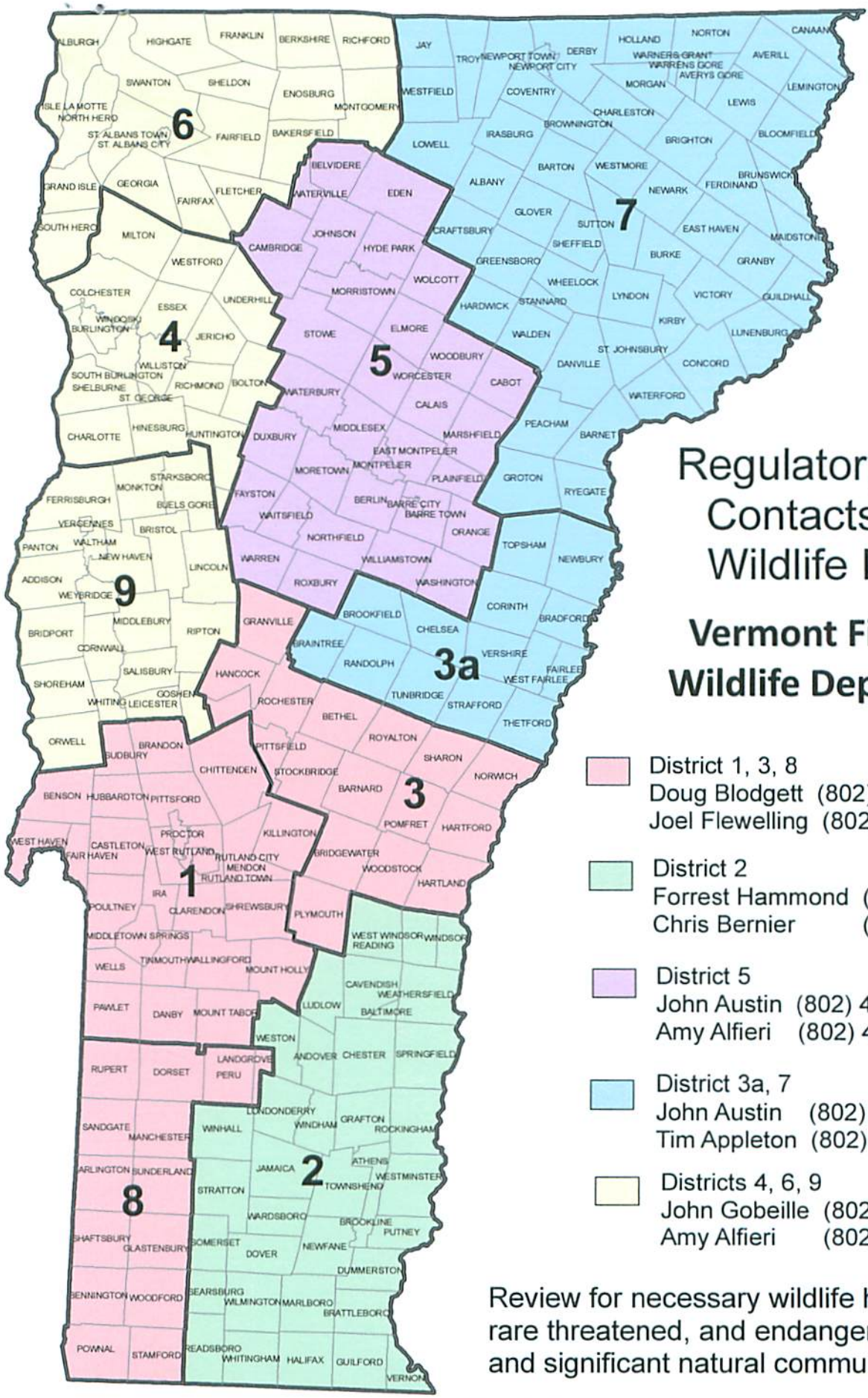
If you have any questions or concerns, please feel free to contact me at (802) 476-0198, or by email at time.appleton@state.vt.us. For your information, I have attached a map indicating areas of responsibility for project review, and direct your attention to the Department's website vtfishandwildlife.com for additional information under tabs *wildlife programs* and then *regulatory review*.

Sincerely.

Timothy J. Appleton

Timothy J. Appleton
Fish & Wildlife Specialist

cc: John Austin, Wildlife Biologist
Mark Ferguson, Natural Heritage Information Project
Amy Alfieri, Wildlife Specialist



Regulatory Review Contacts for the Wildlife Division

Vermont Fish and Wildlife Department

District 1, 3, 8
Doug Blodgett (802) 878-3861
Joel Flewelling (802) 786-3879

District 2
Forrest Hammond (802) 885-8832
Chris Bernier (802) 885-8833

District 5
John Austin (802) 476-0197
Amy Alfieri (802) 479-4439

District 3a, 7
John Austin (802) 476-0197
Tim Appleton (802) 476-0198

Districts 4, 6, 9
John Gobeille (802) 879-5696
Amy Alfieri (802) 479-4439

Review for necessary wildlife habitat; rare threatened, and endangered species; and significant natural communities

VFWD March 2010

Links for Department Regulatory Review Page & Contacs
http://www.vtfishandwildlife.com/nnhp_RegulationReview.cfm
http://www.vtfishandwildlife.com/about_staff.cfm

APPENDIX E-2
GILMAN HYDROELECTRIC PROJECT IMPACT REVIEW
THE UNITED STATES FISH AND WILDLIFE SERVICE
DTD APRIL 19, 2012

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

April 19, 2012

Mr. Stephen J. Hickey
Hydro Management Group, LLC
55 Union Street, 4th Floor
Boston, MA 02108

Dear Mr. Hickey:

This responds to your April 8, 2012 e-mail requesting that we review an application to the Low Impact Hydropower Institute for certification of the Gilman Hydroelectric Project for potential effects to federally endangered dwarf wedgemussels. Our comments are provided in accordance with section 7 of the Endangered Species Act of 1973, as amended (16. U.S.C. 1531-1533).

Dwarf wedgemussels occur below and above the Gilman Hydroelectric Project in Gilman, Vermont/Dalton, New Hampshire. According to information provided in your April 8, 2012 e-mail, the hydroelectric dam operates in a run-of-river mode where instantaneous flows below the tailrace are maintained equivalent to instantaneous inflows into the impoundment. No structural or operational changes are proposed as part of the certification application. Therefore, based on the fact that there will be no physical or operational changes to the project, and no documented adverse effects to dwarf wedgemussels have occurred from the current operation of the hydroelectric dam, we anticipate that the proposed certification is not likely to adversely affect dwarf wedgemussels.

Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required at this time. Should project plans change, or additional information on listed or proposed species becomes available, this determination may be reconsidered. Thank you for your cooperation, and please contact Ms. Susi von Oettingen at (603) 223-2541, extension 22, if you need any further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

cc: Mark Ferguson, VTDFW
Mike Marchand, NHFGD
Reading file
ES: SvonOettingen:4-19-12:603-223-2541

Subject: RE: USFWS Comments re Gilman Hydro impact on Dwarf Wedgemussel for LIHI Certification
From: "Ferguson, Mark" <mark.ferguson@state.vt.us>
Date: 4/20/2012 4:29 PM
To: 'Stephen Hickey' <sjh@essexhydro.com>

Steve,
I concur with the U.S. Fish & Wildlife Service's assessment.

Mark Ferguson
Zoologist
Natural Heritage
Vermont Department of Fish & Wildlife
(802)654-8995

-----Original Message-----
From: Stephen Hickey [mailto:sjh@essexhydro.com]
Sent: Friday, April 20, 2012 2:27 PM
To: Ferguson, Mark
Subject: USFWS Comments re Gilman Hydro impact on Dwarf Wedgemussel for LIHI Certification

Mark,

I received the attached review from USFWS via fax today indicating that "no documented adverse effects to dwarf wedgemussels have occurred from the current operation of the hydroelectric dam" and "that that the proposed certification is not likely to adversely affect dwarf wedgemussels." Please indicate if ANR is in agreement with the assessment provided by USFWS.

Thank you,
Steve

Stephen Hickey
Hydro Management Group, LLC
as authorized agent for Ampersand Gilman Hydro
55 Union Street, 4th Floor
Boston, MA 02108
tel: 617-367-0032
fax: 617-367-3796

APPENDIX F-1
GILMAN HYDROELECTRIC PROJECT REVIEW
NEW HAMPSHIRE DEPARTMENT OF RESOURCES AND ECONOMIC DEVELOPMENT
DTD JULY 8, 1985

NEW HAMPSHIRE DEPARTMENT of RESOURCES and ECONOMIC DEVELOPMENT

JOHN T. FLANDERS
COMMISSIONER

TELEPHONE: 603-271-2411

July 8, 1985

Mr. Andrew E. Sims
Director of Licenses & Permits
Kleinschmidt and Dutting
75 Main Street
PO Box 76
Pittsfield, Maine 04967

Re: The Gilman Project / FERC #2392

Dear Mr. Sims:

In response to your letter of June 13, 1985, the State Historic Preservation Office has again reviewed the undertaking cited above and has determined the findings to be the same as those stated in our letter of April 9, 1985. (a copy included in your Application for Amendment submitted to our office April 16, 1985). At this time, the project was found to have "No Effect" on known architectural, historical, archeological or cultural resources.

Sincerely,

Joseph F. Quinn, Director
Recreation Services
Deputy State Historic Preservation Officer

JFQ:MM:g

P.O. BOX 856 CONCORD, N.H. 03301

105 LEGION ROAD

APPENDIX F-2
GILMAN HYDROELECTRIC PROJECT REQUEST FOR PROJECT REVIEW
NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES
DTD MARCH 8, 2012

Sent 3/8/12

Ampersand Gilman Hydro, LP
c/o HYDRO MANAGEMENT GROUP, LLC
55 UNION STREET, 4TH FL
BOSTON, MA 02108

TELEPHONE: +617-367-0032
E-MAIL: sjh@essexhydro.com

March 08, 2012

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attn: Review and Compliance
19 Pillsbury Street, Concord, NH 03301-3570

Dear New Hampshire Division of Historical Resources Review and Compliance,

Please find enclosed a Request for Project Review for Ampersand Gilman Hydro LP's Gilman Hydroelectric Project located on the Connecticut River in Dalton, Coos County, New Hampshire. This request is being submitted to comply with a requirement of the Low Impact Hydropower Institute's (http://www.lowimpacthydro.org/) application for certification as a low impact facility. Hydro Management Group, LLC as the authorized agent for Ampersand Gilman Hydro, LP therefore requests confirmation from your agency that there are no historical properties of architectural of archeological significance within the project bounds. Please note that no properties were found when the project was relicensed in 1994. I have included a copy of the FERC License No. 2392 for your reference. This inquiry involves no ground disturbing activity. The project and dam have been in existence since the early 1960s.

Thank you and please contact me if you need any additional information.

Sincerely,

Ampersand Gilman Hydro, LP
By Hydro Management Group

Stephen J. Hickey

Stephen J. Hickey

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

DHR Use Only	
R&C #	
Log In Date	___/___/___
Response Date	___/___/___
Sent Date	___/___/___

Request for Project Review by the New Hampshire Division of Historical Resources

☐ This Project is funded by the American Recovery and Reinvestment Act of 2009

☐ This is a new submittal ☐ This is additional information relating to DHR Review #:

GENERAL PROJECT INFORMATION

Project Title Gilman Hydroelectric Project

Project Location 35 Riverside Avenue, Gilman VT

Tax Map & Lot # Map: 403; Lot: 34

NH State Plane - Feet Geographic Coordinates: Easting 970867 Northing 969153 WGS84 datum
(see RPR Manual and R&C FAQ's for help accessing this data)

Lead Federal Agency Federal Energy Regulatory Commission
(Agency providing funds, licenses, or permits)
Permit or Job Reference # FERC License No. 2392

State Agency and Contact (if applicable)
Permit or Job Reference #

APPLICANT INFORMATION

Applicant Name Ampersand Gilman Hydro, LP

Street Address 717 Atlantic Avenue, Suite 1A Phone Number 416-643-6615

City Boston State MA Zip 02111 Email sjh@essexhydro.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Hydro Management Group LLC

Mailing Address 55 Union Street, 4th Floor Phone Number 617-367-0032

City Boston State MA Zip 02108 Email sjh@essexhydro.com

Please refer to the Request for Project Review manual for direction on completing this form. Submit one copy of this project review form for each project for which review is requested. Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, the Division of Historical Resources (DHR) may require additional information to complete our review. All items and supporting documentation submitted with a review request, including photographs and publications, must be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at 603.271.3558.

PROJECT BOUNDARIES AND DESCRIPTION

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

REQUIRED

☒ Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) ***indicating the defined project boundary.***

☒ Attach a detailed written description of the proposed project. Include: (1) a narrative description of the proposed project; (2) site plan; (3) photos and description of the proposed work if the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures; and (4) a photocopy of the relevant portion of a soils map (if accessible) for ground-disturbing projects.

Architecture

Are there any buildings or structures within the project area? ☒ Yes ☐ No

If yes, submit all of the following information:

Approximate age(s): Powerhouse and dam constructed in 1965

☒ Photographs of ***each*** building located within the project area along with a photo key. Include streetscape images if applicable. (Digital photographs are accepted. All photographs must be clear, crisp and focused)

☐ DHR file review conducted on Provide file review results in project narrative.

Please note that as part of the review process, the DHR may request an architectural survey or other additional information.

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☐ Yes ☒ No

If yes, submit all of the following information:

☐ Project specific map and/or preliminary site plan that fully describes the project boundaries and areas of proposed excavation.

☐ Description of current and previous land use and disturbances.

☐ Any available information concerning known or suspected archaeological resources within the project area.

Please note that as part of the review process, the DHR may request an archaeological survey or other additional information.

DHR COMMENT

This Space for Division of Historical Resources Use Only

☐ No Potential to cause Effects ☐ Additional information is needed in order to complete our review

☐ No Adverse Effect ☐ No Historic Properties Affected ☐ Adverse Effect

Comments: _____

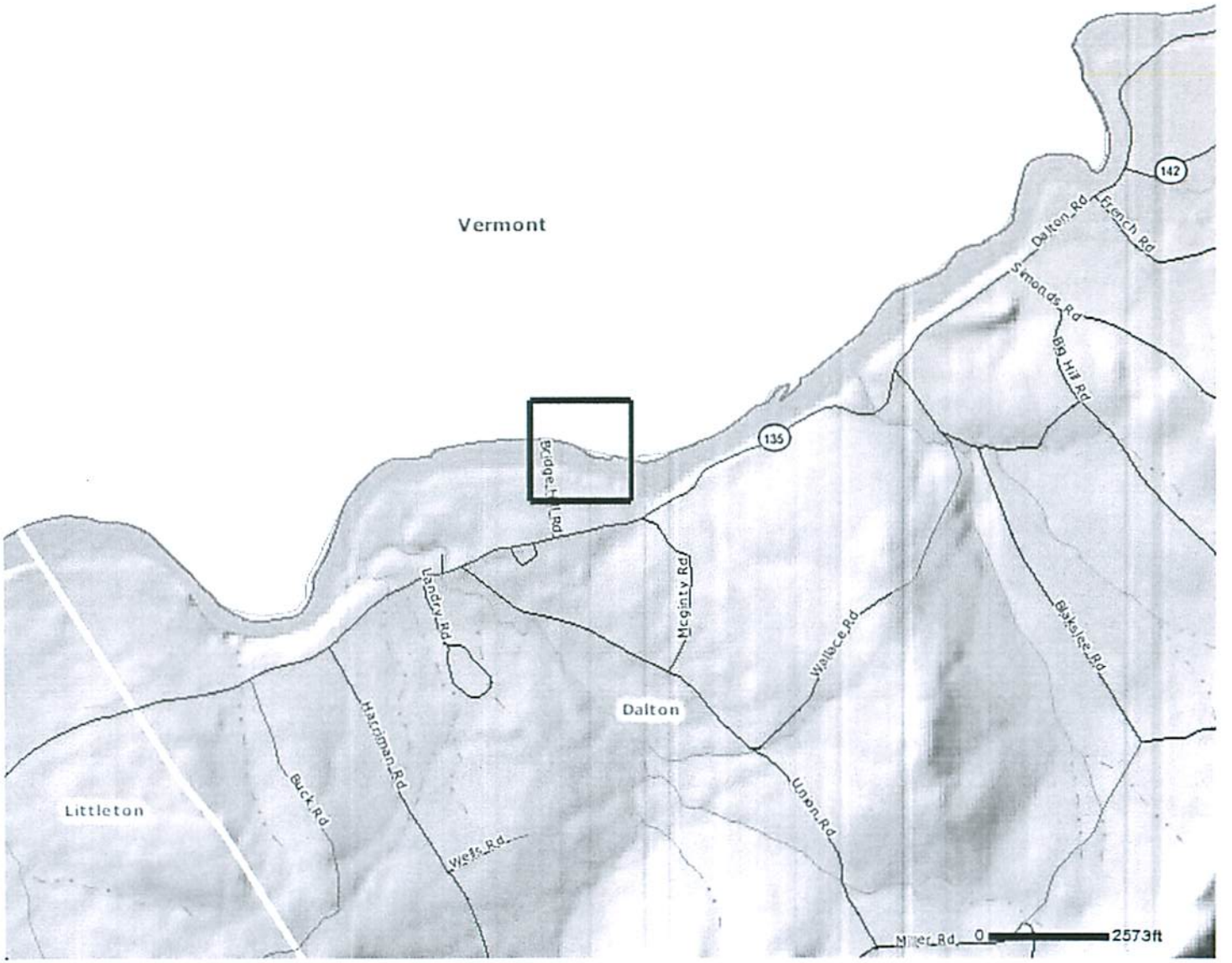
_____

_____

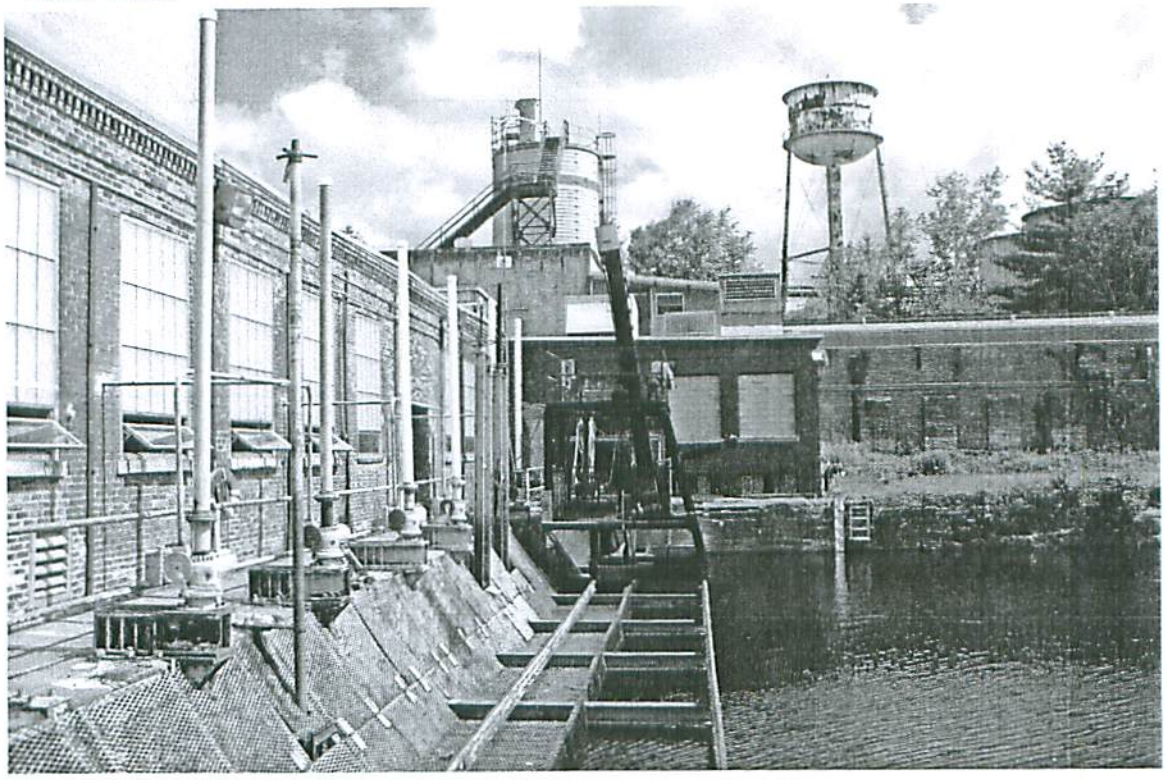
If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized Signature: _____ Date: _____

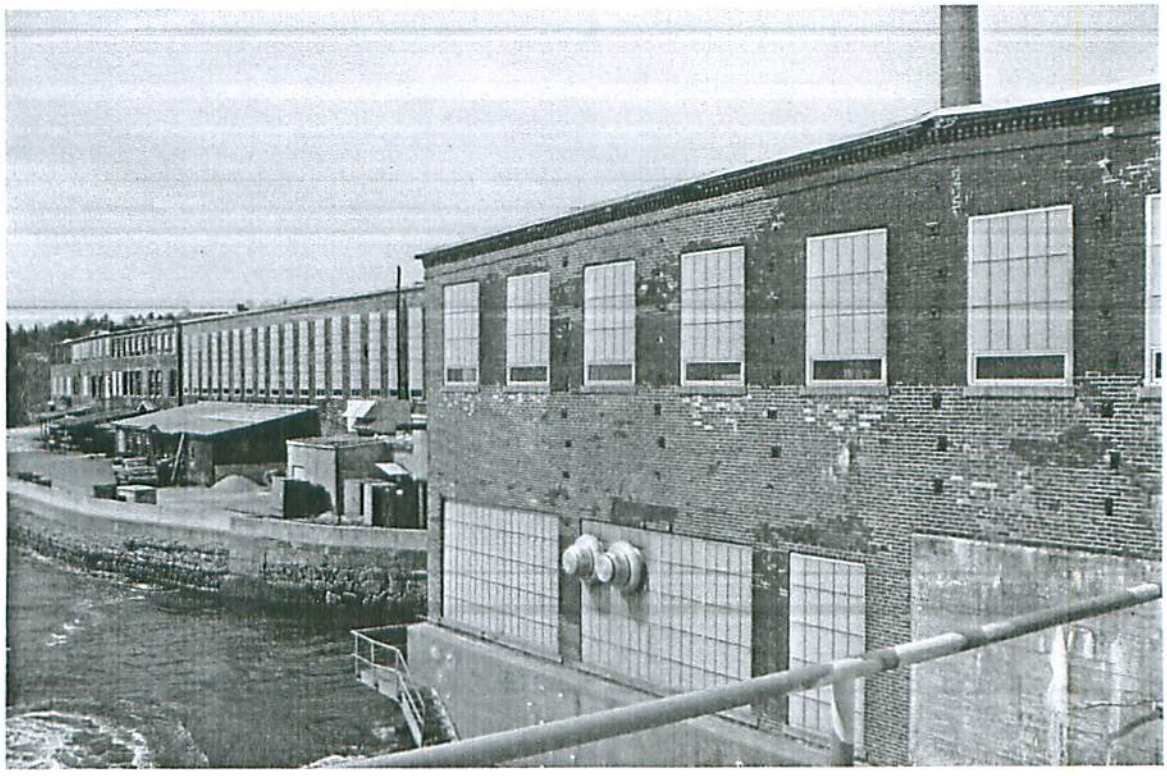
Gilman Hydroelectric Project Boundary Map for New Hampshire Division of Historical Resources LIHI Review



Gilman HydroElectric Powerhouse
View One



Gilman HydroElectric Powerhouse
View Two



Gilman HydroElectric Dam

APPENDIX F-3
GILMAN HYDROELECTRIC PROJECT REVIEW
NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES
DTD APRIL 3, 2012

Please mail the completed form and required material to:

New Hampshire Division of Historical Resources
State Historic Preservation Office
Attention: Review & Compliance
19 Pillsbury Street, Concord, NH 03301-3570

RECEIVED
MAR 12 2012

DHR Use Only	
R&C #	3641
Log In Date	3/12/12
Response Date	4/3/12
Sent Date	4/3/12

Request for Project Review by the New Hampshire Division of Historical Resources

☐ This Project is funded by the American Recovery and Reinvestment Act of 2009

☐ This is a new submittal ☐ This is additional information relating to DHR Review #:

GENERAL PROJECT INFORMATION

Project Title Gilman Hydroelectric Project Low Impact Cert.

Project Location 35 Riverside Avenue, Gilman VT Dalton, NH

Tax Map & Lot # Map: 403; Lot: 34

NH State Plane - Feet Geographic Coordinates: Easting 970867 Northing 969153 WGS84 datum
(see RPR Manual and R&C FAQ's for help accessing this data)

Lead Federal Agency Federal Energy Regulatory Commission
(Agency providing funds, licenses, or permits)

Permit or Job Reference # FERC License No. 2392

State Agency and Contact (if applicable)

Permit or Job Reference #

APPLICANT INFORMATION

Applicant Name Ampersand Gilman Hydro, LP

Street Address 717 Atlantic Avenue, Suite 1A Phone Number 416-643-6615

City Boston State MA Zip 02111 Email sjh@essexhydro.com

CONTACT PERSON TO RECEIVE RESPONSE

Name/Company Hydro Management Group LLC

Mailing Address 55 Union Street, 4th Floor Phone Number 617-367-0032

City Boston State MA Zip 02108 Email sjh@essexhydro.com

Thank You

Please refer to the Request for Project Review manual for direction on completing this form. Submit one copy of this project review form for each project for which review is requested. ✓ Include a self-addressed stamped envelope to expedite review response. Project submissions will not be accepted via facsimile or e-mail. This form is required. Review request form must be complete for review to begin. Incomplete forms will be sent back to the applicant without comment. Please be aware that this form may only initiate consultation. For some projects, the Division of Historical Resources (DHR) may require additional information to complete our review. All items and supporting documentation submitted with a review request, including photographs and publications, must be retained by the DHR as part of its review records. Items to be kept confidential should be clearly identified. For questions regarding the DHR review process, please visit our website at: www.nh.gov/nhdhr/review or contact the R&C Specialist at 603.271.3558.

PROJECT BOUNDARIES AND DESCRIPTION

PROJECTS CANNOT BE PROCESSED WITHOUT THIS INFORMATION

REQUIRED

☒ Attach the relevant portion of a 7.5' USGS Map (photocopied or computer-generated) ***indicating the defined project boundary.***

☒ Attach a detailed written description of the proposed project. Include: (1) a narrative description of the proposed project; (2) site plan; (3) photos and description of the proposed work if the project involves rehabilitation, demolition, additions, or alterations to existing buildings or structures; and (4) a photocopy of the relevant portion of a soils map (if accessible) for ground-disturbing projects.

Architecture

Are there any buildings or structures within the project area? ☒ Yes ☐ No

If yes, submit all of the following information:

Approximate age(s): Powerhouse and dam constructed in 1965

☒ Photographs of ***each*** building located within the project area along with a photo key. Include streetscape images if applicable. (Digital photographs are accepted. All photographs must be clear, crisp and focused)

☐ DHR file review conducted on Provide file review results in project narrative.

Please note that as part of the review process, the DHR may request an architectural survey or other additional information.

Archaeology

Does the proposed undertaking involve ground-disturbing activity? ☐ Yes ☒ No

If yes, submit all of the following information:

☐ Project specific map and/or preliminary site plan that fully describes the project boundaries and areas of proposed excavation.

☐ Description of current and previous land use and disturbances.

☐ Any available information concerning known or suspected archaeological resources within the project area.

Please note that as part of the review process, the DHR may request an archaeological survey or other additional information.

DHR COMMENT

This Space for Division of Historical Resources Use Only

☐ No Potential to cause Effects ☐ Additional information is needed in order to complete our review

☐ No Adverse Effect ☑ No Historic Properties Affected ☐ Adverse Effect

Comments: However, the dam may need to be evaluated for future undertakings since at when it reaches 50 yrs

If plans change or resources are discovered in the course of this project, you must contact the Division of Historical Resources as required by federal law and regulation.

Authorized Signature: [signature] DHRO Date: 4-3-12

APPENDIX F-4
GILMAN HYDROELECTRIC PROJECT REVIEW
STATE OF VERMONT DIVISION FOR HISTORIC PRESERVATION
DTD MARCH 16, 2012

VERMONT

State of Vermont
Division for Historic Preservation
One National Life Drive, Floor 6
Montpelier, VT 05620-0501
www.HistoricVermont.org

[phone] 802-828-3211
[division fax] 802-828-3206

Agency of Commerce and Community Development

March 16, 2012

Stephen Hickey
Hydro Management Group, LLC
55 Union Street, 4th Floor
Boston, MA 02108

Re: LIHI Application for Gilman Hydroelectric Project, Lunenburg, VT
FERC No. 2392
Ampersand Gilman Hydro, LP

Dear Mr. Hickey:

Thank you for your email of March 7, 2012, requesting a statement from the Vermont Division for Historic Preservation as to whether or not the above-referenced hydroelectric project is in compliance with its Federal Energy Regulatory Commission (FERC) license.

The licensing of hydroelectric projects is a federal process managed by FERC and, as such, only FERC can evaluate the degree to which a hydroelectric project is in compliance with its federal license. We encourage the applicant or the Low Impact Hydropower Institute to contact FERC directly to obtain this information.

Sincerely,
VERMONT DIVISION FOR HISTORIC PRESERVATION

Giovanna Peebles
State Historic Preservation Officer

APPENDIX F-5
GILMAN HYDROELECTRIC PROJECT REVIEW
STATE OF VERMONT DIVISION FOR HISTORIC PRESERVATION
DTD MAY 7, 2012

Subject: RE: LIHI - Gilman Hydro & Ladd's Mil Hydro
From: "Colman, Devin" <Devin.Colman@state.vt.us>
Date: 5/7/2012 4:55 PM
To: 'Stephen Hickey' <sjh@essexhydro.com>

Hi Stephen,

The identification of historic properties within the area of potential effect is the responsibility of the federal agency involved in funding, licensing or permitting the project (in this case, FERC). The State Historic Preservation Office is provided an opportunity to review and comment on determinations of eligibility for the National Register of Historic Places, but we do not initiate such assessments on our own. We are a participant in the review process, but the ultimate authority as to whether or not to require studies, document historic resources, and issue a license lies with FERC, not us.

In looking through the project file, I see the following:

- Letter dated April 5, 1985 from our office to Kleinschmidt and Dutting stating that the mill and associated hydro facilities may be eligible for the National Register.

- Statement in the December 1988 FERC application that Georgia-Pacific Co. will continue to consult with our office on the eligibility of Gilman Village and the paper mill facilities for nomination to the National Register.

- Memo dated June 22, 1995, from our office to FERC stating that the project is not in compliance with Section 106, lacks a Programmatic Agreement, a Cultural Resources Management Plan, etc.

- 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.

I hope this is helpful.

Sincerely,

Devin Colman
Historic Preservation Review Coordinator
Vermont Division for Historic Preservation
One National Life Drive, Floor 6
Montpelier, VT 05620-0501

(P) 802-828-3043
(F) 802-828-3206

www.historicvermont.org

-----Original Message-----
From: Stephen Hickey [mailto:sjh@essexhydro.com]

Sent: Monday, May 07, 2012 4:18 PM
To: Colman, Devin
Subject: Re: LIHI - Gilman Hydro & Ladd's Mil Hydro

Devin,

Can the Vermont Division of Historic Resources comment on whether there are historic properties located at either of these projects? I do not believe that this is a FERC regulated issue as your attached letters suggest.

Thank you,

Steve

Sent from my iPhone

On May 7, 2012, at 3:54 PM, "Colman, Devin" <Devin.Colman@state.vt.us> wrote:

> Hi Stephen,
>
> Based on your email of 4/23, it sounds like you may not have received these comment letters?
>
> Please contact me if you have any additional questions.
>
> Sincerely,
>
> Devin Colman
> Historic Preservation Review Coordinator Vermont Division for Historic
> Preservation One National Life Drive, Floor 6 Montpelier, VT
> 05620-0501
>
> (P) 802-828-3043
> (F) 802-828-3206
>
> www.historicvermont.org
>
> Looking for ways to improve the energy efficiency of your older home? Click here for weatherization tips.
>
>
> -----Original Message-----
> From: Colman, Devin
> Sent: Monday, March 19, 2012 9:55 AM
> To: 'Stephen Hickey'
> Subject: LIHI - Gilman Hydro & Ladd's Mil Hydro
>
> Dear Stephen,
>
> Please find attached two scanned PDFs of the Division's comment letters on the Gilman Hydro and Ladd's Mill Hydro projects for the LIHI. The original hard copies will be maintained in our project files.
>
> Sincerely,
>
> Devin Colman
> Historic Preservation Review Coordinator Vermont Division for Historic
> Preservation One National Life Drive, Floor 6 Montpelier, VT

> 05620-0501
>
> (P) 802-828-3043
> (F) 802-828-3206
>
> www.historicvermont.org
>
> Looking for ways to improve the energy efficiency of your older home? Click here for weatherization tips.
>
>
> -----Original Message-----
> From: Stephen Hickey [mailto:sjh@essexhydro.com]
> Sent: Wednesday, March 07, 2012 4:52 PM
> To: Colman, Devin
> Subject: Re: Gilman Hydro, Connecticut River - Gilman, VT, Dalton, NH - Request for LIHI review
>
> Perfect, thank you Devlin. All I really need is confirmation that there are no historic properties of architectural or archaeological significance at the project. It was already determined during licensing that there are not but LIHI likes a reconfirmation.
>
> Thanks,
> Streve
>
> On 3/7/2012 4:44 PM, Colman, Devin wrote:
>> Hi Stephen,
>>
>> Thanks for contacting me about the LIHI application for this project. I have several of these requests in process right now - more than a dozen at least - for hydro projects across the state. Because FERC is control of compliance with their licenses we're not able to comment on whether or not a project is in compliance with its FERC license. I'm working on some general language that can be tailored to suit the specific circumstances of each project as necessary and will get a response back to you.
>>
>> Sincerely,
>>
>> Devin Colman
>> Historic Preservation Review Coordinator Vermont Division for
>> Historic Preservation One National Life Drive, Floor 6 Montpelier, VT
>> 05620-0501
>>
>> (P) 802-828-3043
>> (F) 802-828-3206
>> _____
>> From: Stephen Hickey [sjh@essexhydro.com]
>> Sent: Wednesday, March 07, 2012 3:52 PM
>> To: Colman, Devin
>> Subject: Gilman Hydro, Connecticut River - Gilman, VT, Dalton, NH - Request for LIHI review
>>
>> Dear Mr. Coleman,
>>
>> Hydro Management Group, LLC as the authorized agent for Ampersand Gilman Hydro, LP, owner and operator of the Gilman hydroelectric project (FERC Project No. 2392) is hereby notifying you of its intent

>> to submit the Gilman hydroelectric project located on the Connecticut
>> River in Gilman, Essex County, Vermont and Dalton, Coos County, New
>> Hampshire to the Low Impact Hydropower Institute
>> (http://www.lowimpacthydro.org/) for certification as a low impact
>> facility. Attached for your reference is the project's FERC License
>> issued April 13, 1994. It was confirmed during the application for
>> the licensing that no historic properties (architectural or
>> archaeological) are impacted by the project's operation. LIHI
>> requires confirmation from you that there are still no historic
>> properties (architectural or archaeological) impacted by the project's
operations.
>>
>> For your convenience I have included a USGS Topographic Map showing
>> the location of the project.
>>
>> Thank you and please feel free to contact me if you have any
>> questions or need any additional information in order to make this determination.
>>
>> Stephen Hickey
>> Hydro Management Group, LLC
>> as authorized agent for Ampersand Gilman Hydro, LP
>> 55 Union Street, 4th Floor
>> Boston, MA 02108
>> tel: 617-367-0032
>> fax: 617-367-3796
>>
> <LIHI Letter_Ladd's Mill_8242.pdf>
> <LIHI Letter_GIlman_2392.pdf>

APPENDIX F-6
VERMONT (ESSEX COUNTY) REGISTER OF HISTORIC PLACES
AS OF JUNE 5, 2012

VERMONT - Essex County

Bloomfield--Nulhegan River Route 102 Bridge ** (added 1991 - - #91001605)
Also known as **Bloomfield Bridge**
VT 102 over the Nulhegan R. , Bloomfield

Historic Significance: Architecture/Engineering, Event
Architect, builder, or engineer: Unknown
Architectural Style: Other
Area of Significance: Transportation, Engineering
Period of Significance: 1925-1949
Owner: **State**
Historic Function: Transportation
Historic Sub-function: Road-Related
Current Function: Transportation
Current Sub-function: Road-Related

Columbia Covered Bridge *** (added 1976 - - #76000123)
Also known as **Columbia Bridge**
Across Connecticut River between US 3 and VT 102 , Lemington

Historic Significance: Event, Architecture/Engineering
Architect, builder, or engineer: Babbitt,Charles
Architectural Style: Other
Area of Significance: Transportation, Engineering
Period of Significance: 1900-1924
Owner: **Local**
Historic Function: Transportation
Historic Sub-function: Road-Related
Current Function: Transportation
Current Sub-function: Road-Related

Guildhall Village Historic District ** (added 1980 - - #80000331)
VT 102 , Guildhall

Historic Significance: Event, Architecture/Engineering
Architectural Style: Greek Revival
Area of Significance: Politics/Government, Architecture, Commerce, Industry
Period of Significance: 1850-1874, 1825-1849
Owner: **Federal , Local , Private**
Historic Function: Commerce/Trade, Domestic, Government
Historic Sub-function: Business, City Hall, Single Dwelling
Current Function: Domestic, Government
Current Sub-function: City Hall, Single Dwelling

Hibbard, Judge David, Homestead (added 1995 - - #95000294)
Also known as **Norma Stuart Place**
Woodland Rd. , Concord

Historic Significance: Architecture/Engineering, Event
Architect, builder, or engineer: Unknown
Architectural Style: Federal
Area of Significance: Agriculture, Architecture
Period of Significance: 1925-1949, 1900-1924, 1875-1899, 1850-1874, 1825-1849, 1800-1824

Owner: **Private**
Historic Function: Agriculture/Subsistence, Domestic
Historic Sub-function: Agricultural Fields, Animal Facility, Secondary Structure, Single Dwelling
Current Function: Agriculture/Subsistence, Domestic, Vacant/Not In Use
Current Sub-function: Agricultural Fields, Secondary Structure, Single Dwelling

Island Pond Historic District ** (added 1979 - - #79000275)
Jct. of VT 105 and VT 114 , Island Pond

Historic Significance: Architecture/Engineering, Event
Architectural Style: Italianate, Other, Second Empire
Area of Significance: Architecture, Transportation, Commerce
Period of Significance: 1950-1974, 1925-1949, 1900-1924, 1875-1899, 1850-1874
Owner: **Federal , Local , Private**
Historic Function: Commerce/Trade, Domestic, Religion, Transportation
Historic Sub-function: Business, Rail-Related, Religious Structure, Single Dwelling
Current Function: Commerce/Trade, Domestic, Religion, Transportation
Current Sub-function: Business, Park, Religious Structure, Single Dwelling

Jacobs Stand ** (added 1980 - - #80000332)
Also known as **Alice M. Ward Memorial Library**
W. Park St. , Canaan

Historic Significance: Person, Event, Architecture/Engineering
Architectural Style: Other
Historic Person: Jacobs,Fernando C.
Significant Year: 1846
Area of Significance: Architecture, Transportation, Social History
Period of Significance: 1850-1874, 1825-1849
Owner: **Local**
Historic Function: Domestic, Government, Transportation
Historic Sub-function: Hotel, Pedestrian Related
Current Function: Education
Current Sub-function: Library

Maidstone State Park (added 2001 - - #01001285)
4858 and 4876 Maidstone Rd. , Maidstone

Historic Significance: Event, Architecture/Engineering
Architect, builder, or engineer: Dept. of the Interior, CCC
Architectural Style: Other
Area of Significance: Architecture, Entertainment/Recreation
Period of Significance: 1925-1949
Owner: **State**
Historic Function: Landscape, Recreation And Culture
Historic Sub-function: Forest, Outdoor Recreation, Park, Parking Lot
Current Function: Landscape, Recreation And Culture
Current Sub-function: Forest, Outdoor Recreation, Park, Parking Lot

Mount Orne Covered Bridge *** (added 1976 - - #76000124)
Also known as **Mount Orne Bridge**
SW of Lancaster off NH 135 , Lunenburg

Historic Significance: Event, Architecture/Engineering
Architect, builder, or engineer: Berlin Iron Bridge Co.
Architectural Style: Other
Area of Significance: Engineering, Transportation
Period of Significance: 1900-1924
Owner: **Local**
Historic Function: Transportation
Historic Sub-function: Road-Related
Current Function: Transportation
Current Sub-function: Road-Related

Return to Top

APPENDIX G-1
DOCUMENTATION CERTIFYING THE GILMAN PROJECT HAS COMPLIED WITH THE RECREATIONAL REQUIREMENTS OF ITS FERC LICENSE (P-2392)
DTD MAY 15, 1995

ORIGINAL

KLEINSCHMIDT ASSOCIATES
Consulting Engineers

75 Main Street PO Box 576 • Pittsfield, Maine 04967 • Phone 207-487-3328 • Fax 207-487-3124

95 MAY 17 PM 1:10

May 15, 1995

Lois D. Cashell, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Gilman Project - FERC No. 2392-004
Compliance with Article 406

Dear Secretary Cashell:

The Commission issued a new license for the referenced project to the Simpson Paper Company (Simpson) on April 13, 1994. Article 406 of the license required Simpson to implement its recreation plan, which included the construction of a boat launch facility and a canoe portage, within one year of the issuance.

On behalf of Simpson Paper Company, Inc. this letter documents that the Gilman Project's recreation plan was implemented within one year of the issuance of the license. Reproductions of photographs of the project facilities are enclosed for your information and to document the existence of the recreation facilities.

If you have questions about the project, please feel free to contact me at (207) 487-3328, or Mr. David Blanchette of Simpson Paper at (802) 892-5515.

Sincerely,

KLEINSCHMIDT ASSOCIATES

Jon M. Christensen
Project Manager

JMC:gls
cc: D. Blanchette
M. Swiger, Esq.

FERC DOCKETED
MAY 17 1995

526-015-99-00
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9505230297

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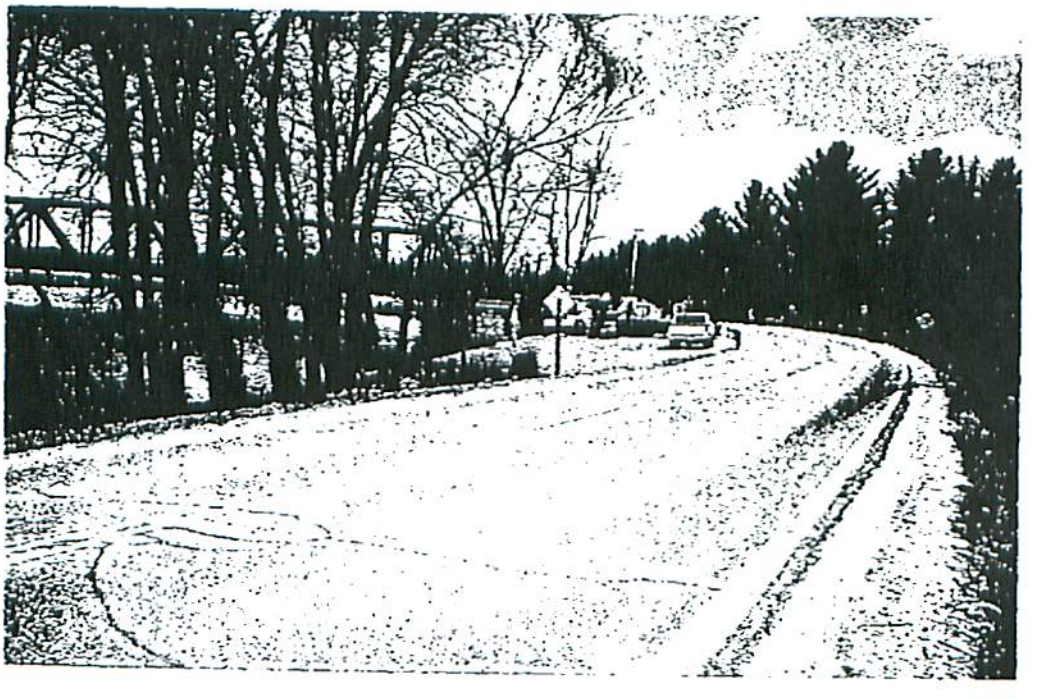
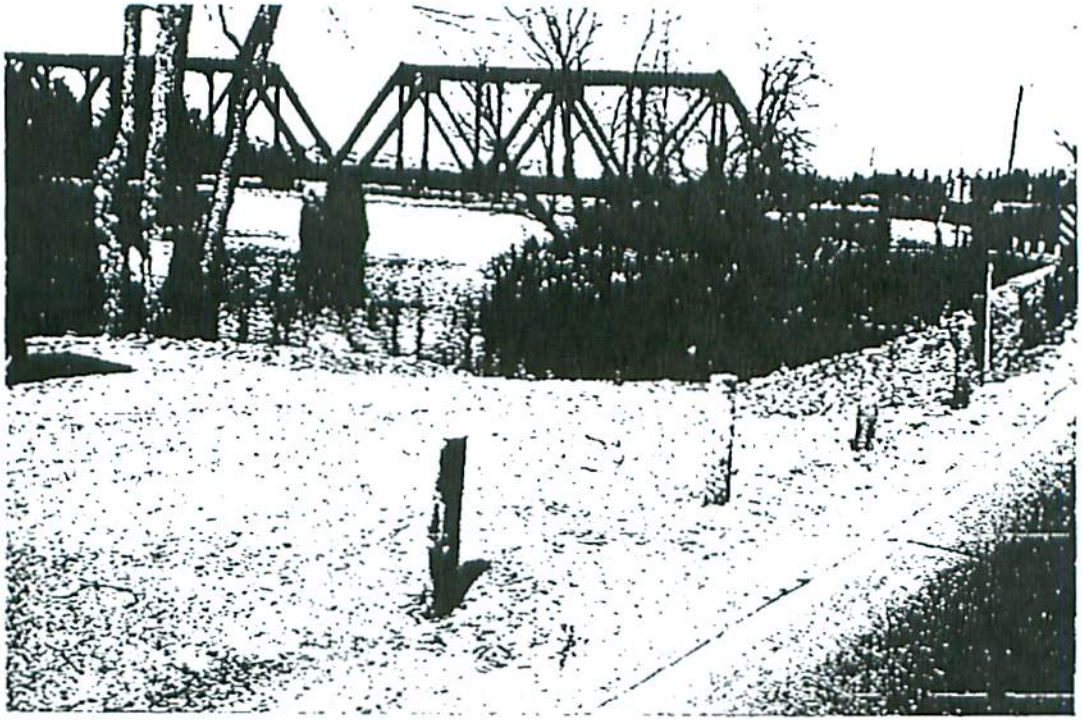
BOAT LAUNCH PHOTOGRAPHS

Car-Top Boat Launch Sign



View of Public Car-Top Boat Launch



View of Launch Site from Parking Area

View of Launch Site from Bridge

CANOE PORTAGE PHOTOGRAPHS

Canoe Portage Sign

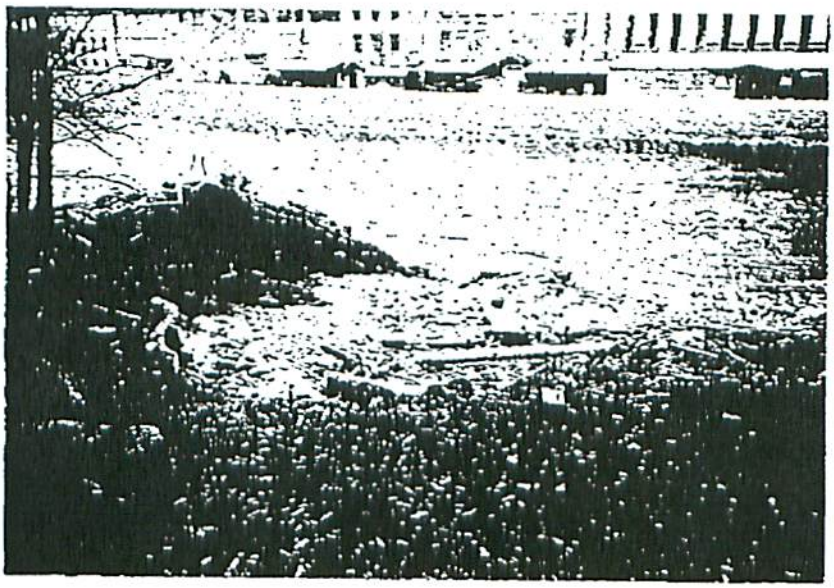
Directional Sign on Right River Bank

Upstream View of Canoe Take-Out

View of Take-Out

Portage Directional Sign

Portage Directional Sign



View of Downstream Put-In

APPENDIX G-2
GILMAN HYDROELECTRIC PROJECT RECREATIONAL ACCESS REVIEW
STATE OF VERMONT DEPARTMENT OF FOREST PARKS AND RECREATION
DTD MARCH 8, 2012

Subject: RE: Gilman Hydro, Connecticut River - Gilman, VT, Dalton, NH - Request for LIHI review
From: "Oleary, Ed" <Ed.Oleary@state.vt.us>
Date: 3/8/2012 12:57 PM
To: 'Stephen Hickey' <sjh@essexhydro.com>

Stephen:

I have reviewed the material you provided and I am satisfied that "the project permits public access for recreational purposes within a safe distance of the project works, and all such access is provided free of charge.

Ed O'Leary

-----Original Message-----
From: Stephen Hickey [mailto:sjh@essexhydro.com]
Sent: Wednesday, March 07, 2012 3:30 PM
To: Oleary, Ed
Subject: Gilman Hydro, Connecticut River - Gilman, VT, Dalton, NH - Request for LIHI review

Dear Mr. O'Leary,

Hydro Management Group, LLC as the authorized agent for Ampersand Gilman Hydro, LP owner and operator of the Gilman hydroelectric project (FERC Project No. 2392) is hereby notifying you of its intent to submit the Gilman hydroelectric project located on the Connecticut River in Gilman, Essex County, Vermont and Dalton, Coos County, New Hampshire to the Low Impact Hydropower Institute (http://www.lowimpacthydro.org/) for certification as a low impact facility. As a component of its application, Worcester Hydro Co. Inc. is required to seek comment from the relevant hydroelectric agencies regarding the project's compliance with the terms and conditions of its Exemption from Licensing (5MW of less) dated April 13, 1994 and attached for your reference. Please note that the project permits public access for recreational purposes within a safe distance of the project works. All such access is provided free of charge. The project does not occupy any federal lands. Hydro Management Group LLC on behalf of Ampersand Gilman Hydro, LP would appreciate to hear from you regarding any comments you may or may not have regarding the projects operation and its proposed application to LIHI for certification.

Thank you and please feel free to contact me if you have any questions or need any additional information.

Stephen Hickey
Hydro Management Group, LLC
as authorized agent for Ampersand Gilman Hydro, LP
55 Union Street, 4th Floor
Boston, MA 02108
tel: 617-367-0032
fax: 617-367-3796