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January 18, 2010

Mr. Fred Ayer, Executive Director
Low Impact Hydropower Institute
34 Providence St.
Portland, ME 04103

RE: Application Reviewer Report for the Four
Verso Androscoggin Maine Facilities: Jay,
Livermore, Otis and Riley

Dear Fred:

Attached please find my reviewer's report on the application to the Low Impact Hydropower Institute (LIHI) by Verso Androscoggin LLC for certification of their four Androscoggin River, Maine facilities. Please contact me with any questions or concerns.

Sincerely,

s// Ron

Ronald A. Kreisman

Attachment

REVIEW OF APPLICATION TO LOW IMPACT HYDROPOWER INSTITUTE FOR CERTIFICATION OF FOUR VERSO ANDROSCOGGIN LLC FACILITIES (JAY, LIVERMORE, OTIS & RILEY)

Introduction

This report reviews the application submitted by Verso Androscoggin LLC (Verso)¹ to the Low Impact Hydropower Institute (LIHI) for Low Impact Hydropower Certification for the applicants' four hydropower facilities (Jay, Livermore Falls, Otis & Riley) located on the Androscoggin River in Maine. The four facilities, situated one after the other, are in the towns of Jay, Livermore Falls, Livermore, and Canton, Maine.

The most downriver of the four projects -- the Livermore Falls Dam -- is located approximately 53 miles upriver from the confluence of the Androscoggin River and Merrymeeting Bay, a large freshwater/saltwater bay area connected to the Atlantic Ocean into which Maine's third and second largest rivers -- the Androscoggin and the Kennebec -- discharge. The next upriver Verso facility is Otis, followed by Jay and then Riley.

In September 1998 FERC issued new, 50-year licenses for these four facilities, following issuance in May 1998 of water quality certifications for each of the facilities from the Maine Department of Environmental Protection. Issuance of these licenses followed a five-year, collaborative, and in many ways groundbreaking settlement process between Verso's predecessor, International Paper, federal and state resource agencies, three regional and/or national NGOs, and local municipalities. This collaborative process included applicant-funded but neutral technical experts, and culminated in the submittal to FERC and Maine DEP of an applicant-prepared Environmental Assessment that was supported by all parties, and license applications to FERC and Maine DEP that were similarly endorsed.

Project and Site Characteristics

Project Characteristics

- *The Riley facility* is the most upstream of the four facilities, and consists of a dam, impoundment, forebay and powerhouse. The dam is a concrete capped, rock-filled timber crib structure with a maximum height of 19.2 feet, and consists of an L-shaped spillway in two sections for a total length of 649 feet, a sluiceway section, a contiguous 108-foot long intake section, and retaining walls, and 50-inch-high wooden flashboards. The facility creates a 7.3-mile-long impoundment with a surface area of 578 acres. Its hydropower capacity is 7.8 MW.

¹ Verso acquired these four facilities, and the accompanying paper mill, from International Paper several years ago and subsequent to the issuance of the 1998 FERC licenses and Maine water quality certification. For reasons of simplicity, in this review I will describe all compliance/implementation actions taken by the applicant as taken by Verso, although many of the actions were taken by International Paper prior to Verso's acquisition of the properties.

- *The Jay facility* is the next downstream facility, and consists of a dam, impoundment, forebay and powerhouse. The dam is a concrete gravity structure of varying height, and consists of three non-contiguous spillway sections separated by islands, a long sluice, an intake section, and abutments and retaining walls. The total length of the spillway is 893 feet; two of the sections contain 32-inch-high flashboards. The facility creates a 1.5 mile-long impoundment with a surface area of 206 acres, and extends up to base of the Riley dam. Its hydropower capacity is 3.1 MW.
- *The Otis facility* is the next downstream facility, and consists of a dam, impoundment, forebay and powerhouse. The dam is a 577-foot long L-shaped concrete gravity structure consisting of a non-overflow section, a 1988-foot-long eastern spillway section with 27-inch flashboards, and a 3790 foot long western spillway section with 24-inch flashboards, plus a sluiceway and intake section, all averaging about 15 feet in height. The facility creates a 2.5 mile-long impoundment with a surface area of 115 acres, and extends up to base of the Jay dam. Its hydropower capacity is 10.4 MW.
- *The Livermore Falls facility* is the most downstream facility, and consists of a dam, impoundment, forebay, powerhouse and tailrace. The dam is a 849-foot long L-shaped concrete gravity structure consisting of two spillway sections with an average height of 9.5 feet with 28-inch flashboards. The facility creates a .75 mile-long impoundment with a surface area of 46 acres, and extends up to base of the Otis dam. Its hydropower capacity is 7.8 MW.

The power generated from these projects is provided to Verso's paper mill.

Site characteristics

These four facilities are located in the mid-section of the Androscoggin River. Starting with the most upriver project, their relative locations on the Androscoggin and to each other are shown below.

Facility	Distance to Merrymeeting Bay	Distance to next downstream project
Riley	62 miles	5 miles
Jay	57 miles	3 miles
Otis	54 miles	1 mile
Livermore Falls	53 miles	25 miles (Gulf Island dam)

Downriver of Verso's Livermore Falls Dam on the Androscoggin River before it discharges into Merrymeeting Bay are six hydropower facilities that are not owned or controlled by Verso. The furthest downriver is the Brunswick facility, located essentially at the confluence of the Androscoggin and Merrymeeting Bay. The other five downriver non-Verso facilities are located at river mile 5 (Pejepscot), mile 8 (Worumbo), mile 23 (Lewiston Falls), mile 26 (Deer Rips) and mile 27 (Gulf Island).

Environmental, Recreational, Cultural Issues

Because (1) the collaborative process leading up to the 1998 licensing appears to have been extensive, thorough in the scope of issues discussed and diverse in the make-up of the participants, (2) the licensing process (FERC and Maine DEP) embodied all terms and conditions thereof, addressed all concerns of the parties who supported the new licenses, and specifically addressed all of LIHI's criteria, and (3) the post-licensing process over the last 10+ years has not revealed (a) dissatisfaction with the results, (b) dissatisfaction with Verso's compliance with license terms, or (c) significant new issues of relevance to LIHI's criteria (all as revealed from both my review of the pre- and post-licensing FERC² and DEP records and extensive discussion with various contacts), the analysis I provide below focuses on the terms to emerge from the licensing process and the current implementation status of these terms.

A brief overview of key license terms and post-licensing experience follows.

- Water flows:

- (1) the projects operate in a run-of-river mode with a target elevation of within one foot of the top of the flashboards or within one foot of the crest of the dam when flashboards are not in place;

- (2) specified minimum flows below the Jay facility and in the bypassed reach downstream of the Livermore Falls development to create fishery habitat; and

- (3) stream flow gaging and flow monitoring for these requirements. These systems are in place and the FERC record shows good compliance.

- Water quality:

- (1) dissolved oxygen and temperature monitoring to ensure standards of classification are achieved. This monitoring occurred for a number of years after license issuance and demonstrated that standards were being met, after which DEP suspended further monitoring;

- (2) macroinvertebrate monitoring to ensure standards of classification are met. This monitoring has occurred for a number of years after license issuance and demonstrated that standards have been met at the high river flows that have been experienced. Ongoing monitoring during low flow conditions is still required (see comments of Dana Murch, Maine DEP, attached); and

- (3) fish tissue sampling to evaluate whether the facilities are causing or contributing to any fish consumption advisories that now or may in the future exist in the area of the facilities. Such sampling is ongoing with prior (2003) results providing an inconclusive answer; more testing was conducted in 2009 and results therefrom are expected shortly.

² Including a FERC-conducted "Environmental Inspection Report" site visit and inspection conducted in July 2007 showing good compliance.

(See comments of Barry Mower and Dana Murch, Maine DEP, attached.)

- Fish passage and protection:

(1) the right for the US FWS to timely prescribe upstream and downstream fishways for any species, and for the Maine DEP to order fishways for Atlantic salmon were established in the licenses, although all the fisheries agencies have determined that such fish passage is not appropriate at this time.

(2) Verso cooperated with Maine Inland Fisheries and Wildlife and US FWS in attempting to introduce a “put and grow” brown trout fishery downstream of the Livermore Falls development. It was not successful. (See comments by Steve Timpano, Maine IF&W, attached.)

- Cultural resource protection:

(1) implementing a 1998 programmatic agreement executed by the applicant with FERC, the Advisory Council on Historic Preservation and the Maine State Historic Preservation Officer, which has been accomplished.

- Recreation:

(1) constructing new, or enhancing and/or maintaining existing recreational facilities, including constructing a canoe portage and a take-out facility at the Riley dam, constructing a walk-in angler access trail at the Livermore bypassed reach and improving the existing access trail and boat launch downstream of the tailrace, and maintaining several miles of existing trails including a 13.5 mile multi-use trail.

(2) monitoring and evaluating recreation use and need, to determine whether existing recreation facilities are meeting recreation needs. The evaluation, filed with FERC in July 2009 and following development of its methodology in consultation with agencies, NGOs and municipalities, showed no need for additional recreational facilities. None of the consulting parties disagreed with this conclusion³; and

Public Comment and Agency Letters

LIHI received no public comments.

General Conclusions and Recommendation

With two qualifications related to LIHI’s water quality criteria, the four Verso facilities in my view currently satisfy all of LIHI’s certification criteria. The first qualification has to do with the fact that DEP cannot say definitively at this time that in low-flow situations the standards in

³ See Verso Paper Company, FERC Form 80 Recreation Report, 2000-2008, April 2009.

Maine's Class C water quality classification for macroinvertebrates will be met, because since the recent, significant reduction in total suspended solids in Verso's waste discharge a low-flow test year has not occurred. Because DEP believes that such compliance will occur, because there have been no exceedances of standards, because a post-licensing system is in place to require compliance should exceedances occur, and because this issue (if it is indeed an issue) can be revisited on re-certification, I do not recommend that certification should be conditioned or denied for this reason.

The second qualification has to do with the issue of fish sampling and the fact that the most recent sampling (2003) required by the FERC and Maine DEP licenses shows elevated levels of contaminants in fish existing in the impoundment behind the Otis project and an "inconclusive" determination by Maine DEP as to whether the facilities are causing or contributing to this situation. However, as explained extensively in certain contact records (See Maine DEP, Barry Mower and Dana Murch, attached), re-sampling was conducted in 2009, and results and analysis are due from Maine DEP by the end of March, 2010. This updated information should prove very useful. Until that information has been received and reviewed by LIHI, I do not believe that it can be stated one way or the other as to whether the facilities are complying with all aspects of LIHI's water quality criteria.

Recommendation. Based on my review of information submitted by the applicant, my review of additional documentation noted herein, and my consultations with various resource agencies and other entities, I recommend that the four Verso facilities be certified to be in compliance with LIHI's criteria ***conditioned upon a finding by the Maine DEP that either 2009 sampled fish in the Otis impoundment and below the Livermore Falls dam do not have elevated levels of contamination or that any elevated levels found are not caused or contributed to by one or more of the four facilities.*** I further recommend that the LIHI Board delegate a determination of whether this condition has been met to its Executive Director and that should DEP's expected March 2010 report be inconclusive, the Executive Director return this matter to the Board for further review.

Low Impact Certification Criteria

A. Flows

- 1) **Is the Facility in Compliance with Resource Agency Recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the tailrace and all bypassed reaches?**

YES

If YES, go to B.

If NOT APPLICABLE, go to A2.

If NO, project fails.

- 2) **If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or “good” habitat flow standards calculated using the Montana-Tennant method?**

If YES, go to B

If NO, go to A3.

- 3) *If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?*

If YES, go to B

If NO, project fails.

PASS

B. Water Quality

- 1) **Is the Facility either:**

- a) **In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or**
- b) **In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?**

CONDITIONALLY YES, IN THAT (1) ALL CONDITIONS EXCEPT THOSE FOR MACROINVERTEBRATES AND FISH TISSUE HAVE BEEN FULLY AND FINALLY RESOLVED AS BEING IN COMPLIANCE, (2) NO EXCEEDANCES OF MACROINVERTEBRATE STANDARDS HAVE OCCURRED IN THE IMMEDIATE PAST, AND (3) NO DETERMINATION HAS BEEN MADE REGARDING WHETHER FISH TISSUE CONTAMINATION IS EITHER ONGOING OR CAUSED/CONTRIBUTED TO BY THE FOUR FACILITIES.

*If YES, go to B2.
If NO, project fails.*

- 2) **Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?**

YES

*If YES, go to B3.
If NO, go to C.*

- 3) **If the answer to question B.2 is yes, has there been a determination that the Facility is not a cause of that violation?**

YES, FOR DISSOLVED OXYGEN, SUCH DETERMINATION HAS BEEN MADE.

INCONCLUSIVE, FOR FISH TISSUE CONTAMINATION

*If YES, go to C.
If NO, project fails.*

CONDITIONALLY PASS, depending on upcoming DEP report

C. Fish Passage and Protection

- 1) Is the Facility in Compliance with *Mandatory Fish Passage Prescriptions* for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?**

NOT APPLICABLE.

If YES, go to C5.

If NOT APPLICABLE, go to C2.

If NO, project fails.

- 2) Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish run is extinct)?**

YES

If YES, go to C2a.

If NO, go to C3.

- a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility?**

NOT APPLICABLE

If YES, go to C2b.

If NOT APPLICABLE, go to C2b.

If NO, project fails.

- b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?**

YES

If YES, go to C5.

If NOT APPLICABLE, go to C3.

If NO, project fails.

- 3) **If, since December 31, 1986:**
- a) **Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C2a above), and**
 - b) **The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,**
 - c) **Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?**

If NO, go to C5.

If NOT APPLICABLE, go to C4.

If YES, project fails.

- 4) **If C3 was not applicable:**
- a) **Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or**
 - b) **If the Facility is unable to meet the fish passage standards in 4.a., has the Applicant demonstrated, and obtained a letter from the US Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource?**

If YES, go to C5.

If NO, project fails.

- 5) **Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of *Riverine* fish?**

NOT APPLICABLE

If YES, go to C6.

If NOT APPLICABLE, go to C6.

If NO, project fails.

- 6) **Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?**

NOT APPLICABLE

If YES or NOT APPLICABLE, go to D
If NO, project fails.

PASS

D. Watershed Protection

- 1) **Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the high water mark in an average water year around 50 - 100% of the impoundment, and for all of the undeveloped shoreline**

NO

If YES = Pass, go to E and receive 3 extra years of certification
If NO = go to D2

- 2) **Has the facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1., and 2) has the agreement of appropriate stakeholders and state and federal resource agencies?**

NO

If YES = Pass, go to E and receive 3 extra years of certification
If NO = go to D3

- 3) **Has the facility owner/operator established through a settlement agreement with appropriate stakeholders and that has state and federal resource agencies agreement an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)**

NO

If YES = Pass, go to E
If NO = go to D4

- 4) **Is the facility in compliance with both state and federal resource agencies**

recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.

YES

If YES = Pass, go to E
If No = Fail

PASS

E. Threatened and Endangered Species Protection

- 1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?**

NO

If YES, go to E2.
If NO, go to F.

- 2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?**

NOT APPLICABLE; RECOVERY PLAN BEING DEVELOPED

If YES or NOT APPLICABLE, go to E3.
If NO, project fails.

- 3) If the Facility has received authority to incidentally *Take* a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?**

NOT APPLICABLE

If YES, go to E4.

*If NOT APPLICABLE, go to E5.
If NO, project fails.*

- 4) **If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:**
- a) **The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or**
 - b) **The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or**
 - c) **There is no recovery plan for the threatened or endangered species under active development by the relevant Resource Agency? Or**
 - d) **The recovery plan under active development will have no material effect on the Facility's operations?**

NOT APPLICABLE

*If YES, go to F
If NO, project fails.*

- 5) **If E.2. and E.3. are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?**

YES

*If YES, go to F.
If NO, project fails.*

PASS

F. Cultural Resource Protection

- 1) **If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?**

YES

*If YES, go to G.
If NOT APPLICABLE, go to F.2*

- 2) **If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or *Native American***

Tribe, or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility?

If YES, go to G.
If NO, project fails.

PASS

G. Recreation

- 1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?**

YES

If YES, go to G3.
If NOT APPLICABLE, go to G2.
If NO, project fails.

- 2) If not FERC-regulated, does the Facility provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?**

If YES, go to G3.
If NO, project fails.

- 3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?**

YES

If YES, go to H.
If NO, project fails.

PASS

H. Facilities Recommended for Removal

- 1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?**

NO

***If NO, facility is low impact.
If YES, the project fails.***

PASS

FACILITY IS *CONDITIONALLY* LOW IMPACT

**INDEX OF PRIMARY CONTACT INFORMATION ON
FOR LIHI CRITERIA**

LIHI CRITERION	PRIMARY CONTACT INFORMATION*
River Flows	Dana Murch, Maine DEP; Steve Timpano, Maine IF&W;
Water Quality	Kenneth Kimball, AMC Barry Mower and Dana Murch, Maine DEP
Fish Passage & Protection	Steve Timpano, Maine IF&W Various staff, Maine Department of Marine Resources; Jeff Murphy, NMFS Fred Seavey, USFWS
Watershed Protection	Dana Murch, Maine DEP
Threatened & Endangered Species	Steve Timpano, Maine IF&W Various staff, Maine Department of Marine Resources; Jeff Murphy, NMFS Fred Seavey, USFWS
Cultural Resources Protection	(relied on filings at FERC)
Recreation	Kenneth Kimball, AMC Shiloh Ring, Town of Jay
Facilities Recommended for Removal	Various staff, Maine Department of Marine Resources; Jeff Murphy, NMFS Fred Seavey, USFWS

**See "Area of Expertise" information below for secondary sources*

RECORD OF CONTACTS

(in alphabetical order by agency or entity name)

Date: January 4, 2010
Contact Person: John Seebach, Director, Hydropower Reform Initiative, American Rivers
Contact Information: 202.347.7550, jseebach@americanrivers.org
Area of Expertise: All criteria

I contacted John, and we discussed these facilities, in his capacity as American River's current representative on the "Collaborative Team" assembled by Verso to consult and oversee implementation of the 1998 settlement agreement, FERC license and water quality certification. American Rivers was involved in the settlement agreement. John was not at American Rivers in 1998 and has not closely followed implementation and compliance issues, so he discussed these facilities with Andrew Fahlund, AR's vice president, who had more familiarity with them. Andrew told John that AR did not have "any outstanding concerns" with the facilities.

Date: January 5, 2010
Contact Person: Kenneth Kimball, Director of Research, Appalachian Mountain Club
Contact Information: 603.466.2721, kimball@outdoors.org
Area of Expertise: All criteria

I contacted Ken, and we discussed these facilities, in his capacity as AMC's representative on the "Collaborative Team" assembled by Verso to consult and oversee implementation of the 1998 settlement agreement, FERC license and water quality certification, and because Ken was actively involved, as AMC's representative in the 1998, in the collaborative settlement process leading up to the 1998 FERC license and water quality certification. Ken is very familiar with the four facilities.

Ken does not believe there are any issues with these projects and believes they are the "poster child" for good hydro and the kind that should be certified. On all of LIHI's criteria, he believes the requirements in Verso's FERC licenses and the water quality certification meet or exceed each criteria, and that Verso's implementation of the license requirements has been good. On the open question of whether one or more of the dams are trapping toxic sediment and causing fish contamination, Ken's view is that while he believes that LIHI certification should not go into effect until the results from the 2009 fish tissue testing are received and analyzed and shown to be either at acceptable levels or, if not acceptable, not caused or impacted by the four facilities, also in his view the dams are almost certainly not causing mercury contamination, since he believes the retention time in each impoundment is very short and there are no major drawdowns of water leaving sediment exposed on the banks and then re-watered.

Date: January 4, 2010
Contact Person: Sean Mahoney, VP and Director, Maine office of Conservation Law Foundation
Contact Information: 207.210.6439, smahoney@clf.org
Area of Expertise: All criteria

I contacted Sean because he is CLF's representative on the "Collaborative Team" assembled by Verso to consult and oversee implementation of the 1998 settlement agreement, FERC license and water quality certification, and because CLF was actively involved, with AMC, in the collaborative settlement process leading up to the 1998 FERC license and water quality certification. He stated that hydropower is not the focus for CLF that it once was, and he has not been actively involved since he came to CLF.

Date: October 29, 2009 and January 5, 2010
Contact Person: Dana Murch, hydropower coordinator, Maine Department of Environmental Protection
Contact Information: 207.287.7784
Area of Expertise: River flows, water quality, watershed protection

I first spoke at length to Dana about these four facilities in late October 2009, as I was beginning my review, in order to gain an overview of the issues with the projects that he saw. Dana was the person at Maine DEP in charge of drafting the water quality certification in 1998, and because he has overseen implementation and enforcement of the requirements in that certification. After my first discussion with Dana, I requested and was provided the opportunity to study Dana's extensive and well-organized water quality post-licensing implementation files on the four projects, which Dana has maintained to monitor compliance with the sixteen terms and conditions contained in the water quality certification. I selectively photocopied documents contained therein. Dana was also heavily involved in the recent wastewater discharging re-licensing of Verso's Jay paper mill, and is very familiar with the administrative record in that proceeding, and especially the issue of how Verso's operations -- both its hydropower operations and its discharge of organic waste from the paper making process -- may be creating areas of low dissolved oxygen in the impoundment behind the Gulf Island Pond dam, located approximately 25 miles downriver of Verso's Livermore Falls facility. Following my review and discussions with certain other contacts I had a second extensive conversation with Dana. From these conversations and my review of the files I learned the following:

First, Verso has complied in a timely way with all filing and all operational requirements contained in the 1998 certification. From Maine DEP's standpoint, there are no compliance issues; Verso's compliance record is "fine."

Second, Dana's overall reaction was that "if LIHI certified and re-certified Worumbo, which it did, the only difference with these four projects is the absence of fish passage at them, but unlike Worumbo, there is no active sea-run fish restoration occurring immediately downstream of these facilities right now or in the foreseeable future."

Third, I asked Dana about the relationship between these four facilities and the low dissolved oxygen found in the next downriver impoundment, Gulf Island Dam. DEP does not believe based upon its modeling that Verso's four hydroelectric facilities cause or contribute to the low dissolved oxygen found

in the Gulf Island Dam impoundment (because, the theory might be, less-oxygenated water created by the four impoundments vs. what would occur in a free-flowing river is affecting the Gulf Island Dam impoundment), and there is no evidence in the wastewater discharge administrative record that Dana remembers (which included extensive administrative hearings) that suggests otherwise. Dana stated that Gulf Island Dam is so far downstream of Verso's projects that re-oxygenation of the water after being impounded behind the four facilities is surely occurring. Rather, the problem (and what the new DEP license is addressing) is the organic matter settling in the Gulf Island Dam impoundment discharged by Verso and other sources, as well as the dam itself at Gulf Island retaining this sediment in the impoundment. Dana referred me to Jerry Reid, head of the Natural Resources Section of Maine's Office of Attorney General, to confirm his understanding of the administrative record, and the non-involvement of the four facilities in the downriver oxygen problem. (See this contact information below.)

Fourth, from carefully going over the status of the sixteen water quality certification conditions with Dana, there are two conditions that have not yet been fully satisfied: (1) improvement in the macroinvertebrate communities in the project impoundments such that these communities are meeting the standards for classification, and (2) fish tissue sampling for contaminants. Regarding the macroinvertebrate issue, the communities have improved significantly since Verso was required in a new waste discharge license to dramatically reduce its discharge of total suspended solids, and over the last three years the standards for classification have been met. However, because this compliance has been accomplished during years with particularly high flows of water, DEP is not yet absolutely convinced that compliance will also be achieved during low flow years, although it believes that this will happen. But Dana contends that a mechanism and process is in place to monitor this situation, and that if there also is not compliance in low flow situations then the TSS levels can be further reduced to ensure this compliance occurs.

Regarding fish tissue sampling for contaminants, Dana referred me to Barry Mower after outlining the situation to me. See contact with Barry below. His outline was identical to what Barry stated, including Dana's recommendation, like Barry's, that LIHI should wait to finalize its certification until the 2009 tissue samples are all received and analyzed. See discussion below.

Date:	January 5, 2010
Contact Person:	Barry Mower, biologist, Maine Department of Environmental Protection
Contact Information:	207.287.7777, barry.mower@maine.gov
Area of Expertise:	Water quality

I called Barry Mower to get further information on the status of fish contamination on the Androscoggin River in the vicinity of the four facilities, and to find out when the results of fish tissue samples collected by Verso in 2009 as part of its water quality certification requirements would be received and evaluated by Maine DEP. Barry oversees the DEP's Surface Water Ambient Toxics Monitoring Program.

Barry stated that there is a river-specific "advisory" on consuming more than certain amounts of freshwater fish for the entire Androscoggin River in Maine related to contamination of fish from dioxin and PCB compounds, and there is a statewide advisory regarding consumption of more than certain amounts of freshwater fish due to mercury contamination. Regarding Verso's previous testing/sampling as required, Barry stated that the results from testing in 2000 and 2003 were "inconclusive" as to whether the four facilities are causing or contributing to established elevated levels of contamination in smallmouth bass and white suckers. The testing/sampling in these years, as well as in 2009, took place in the impoundment behind the Otis facility and downriver of the Livermore Falls facility, with the idea being to test fish living in an impoundment and in the free-flowing stretch below the impoundment where sediments would not be trapped. If levels of fish contamination in the Otis impoundment are high, Barry

stated these same concerns would exist in the other impoundments, both those below Verso's waste discharge outfall and even above this discharge point, in the impoundment above the Riley facility, due to sediment that might be trapped by the Riley facility that could be discharged from an upstream paper mill in Rumford.

Barry further stated that the 2009 fish tissue sampling information is coming into Maine DEP currently, and that he expects DEP's report on contamination levels and, if they are elevated, the role of the four Verso facilities, to be completed by the end of March 2010. I asked Barry if he had an opinion on these issues and he stated that he did not. He further stated that he could not definitively know at this time whether the four facilities were having any impact on this issue, since he didn't even know if sampling would show elevated contamination levels, but that he would know more after reviewing and analyzing the 2009 data.

Date: January 7, 2010
Contact Person: Steve Timpano, Licensing Coordinator, Maine Department of Inland Fisheries and Wildlife
Contact Information: 207.287.5258, steve.timpano@maine.gov
Area of Expertise: River flows, fish passage and protection, threatened and endangered species, recreation

Steve stated that he was "deeply involved" in the settlement leading up to the 1998 license and has kept "close tabs" on the situation since then. He further stated that as far as Maine IF&W was concerned, "I think we have finally resolved all of the issues after the settlement with Verso," and that Verso "has done what they can given the existence of four dams the middle of the Androscoggin there." He said Verso's compliance record on matters of concern to Maine IF&W, particularly bypass flows and minimum flows to create freshwater fish habitat, has been good. These flows are now adequate and a modest smallmouth bass fishery habitat has been established. Regarding the water quality certification condition that required Verso to experiment with the creation of a brown trout fishery in the impoundments and the failure of that fishery to establish itself, Steve said that IF&W was never the protagonist for that condition and never held out much hope that this fishery could be established. He further said that recreational access for anglers in the area of the facilities is "as good as it needs to be." Finally, regarding passage for Atlantic salmon, Steve confirmed what US FWS, Maine DMR and NMFS were reporting to me: that passage was not yet timely. But he added that the flows downriver of each facility are, in his opinion, now what they need to be to attract salmon once the time is right.

Date: December 21, 2009
Contact Person: -- Mike Brown, marine scientist, Maine Department of Marine Resources
-- Paul Christman, biologist, Maine Department of Marine Resources
-- Melissa Laser, biologist, Maine Department of Marine Resources
-- Gail Wippelhauser, marine scientist, Maine Department of Marine Resources
-- Patrick Keliher, Director, Bureau of Sea Run Fisheries and Habitat, Maine Department of Marine Resources
Contact Information: 207.287.9972
Area of Expertise: Fish passage and protection; threatened and endangered species

Because of close geographic proximity, I traveled to Maine DMR's central office and met (in one meeting) with all of the DMR personnel involved in both Atlantic salmon and American eel restoration on

the Androscoggin River. The meeting was arranged by Patrick Keliher. The DMR personnel present stated the following:

1. The Lewiston Falls dam, approximately 30 miles south of Verso's Livermore Falls Dam, was historically the most upriver limit on the range of all sea-run anadromous and catadromous species except for Atlantic salmon, American eel, and likely sea lamprey. Thus, DMR's concerns with fish passage and protection at the four facilities is limited to these three species.
2. Based on fairly extensive and recent electrofishing work in the Deer Rips impoundment -- the second dam downstream from Livermore Falls dam, approximately 26 miles), none of these three species is present in that impoundment. Currently, there are confirmed reports of Atlantic salmon as far upriver as the Worumbo dam, the third dam upriver and the most upriver dam with fish passage currently installed, and American eel in a lake (Sabattus) upriver of Worumbo, at the headwaters of a tributary.
3. DMR is working now on an inter-agency Androscoggin River Management Plan that will focus "much needed attention" on restoring sea-run species to the Androscoggin, which once had a "huge" sea-run fishery. DMR expects priorities for attention in the next decade will be on the lower Androscoggin, well below the four facilities, and specifically on poorly-functioning fish passage at the first dam on the river (Brunswick), and on getting fish passage on the dams in the Little Androscoggin River. Right now, Atlantic salmon can only get upriver as far as the Lewiston Falls dam, although American eel "somehow" make it around this dam in small numbers.
4. Until there is fish passage at Lewiston Falls, Deer Rips and Gulf Island Pond, there is no reason for fishways for salmon or eel at the four facilities.

Date:	December 23, 2009
Contact Person:	Jeff Murphy, biologist, National Marine Fisheries Service, NE Region
Contact Information:	207.866.7379
Area of Expertise:	Threatened and endangered species

Because NMFS the lead federal agency on the recent listing of Atlantic salmon under the ESA, and because its listing defined the historic range for Atlantic salmon to both include and then extend upriver of the four facilities (limit to the range occurring at Rumford Falls)⁴, I wanted to hear the views of NMFS on the impact of these four facilities on Atlantic salmon. Jeff is the person at NMFS in Maine in charge of conducting Section 7 ESA biological opinions.

Jeff stated that none of the four projects occur in critical habitat, and no Atlantic salmon are found now in the project areas. While NMFS is now developing a recovery plan and therefore it is too early to speculate on what NMFS will officially conclude *vis a vis* the four facilities and he was not prepared to give a definitive opinion, the absence of both critical habitat and any of the species being near the four facilities is likely to mean that the facilities will be found to be operating, for now, in compliance with the ESA and that upstream passage or other recovery measures will not be required in the near term. Jeff stated that there appear to be enough critical habitat units well downstream of the facilities, and therefore this is not a priority area.

⁴ See Federal Register, June 19, 2009, 50 CFR Part 226

Date: November 5, 2009
Contact Person: Gerald Reid, Esq., chief of Natural Resources Section, Office of
Attorney General, State of Maine
Contact Information: 207.626.8545, jerry.reid@maine.gov
Area of Expertise: water quality, licensing requirements

I called Jerry Reid to double-check on Dana Murch's understanding regarding any evidence in the administrative record of the Verso waste discharge licensing proceeding regarding potential impact from the four Verso facilities on dissolved oxygen problems in Gulf Island Pond. (See discussion above in Dana Murch contact information.) Jerry confirmed that he was very involved in these proceedings representing the Maine DEP, and that there was no such evidence in the record and that the matter, as far as he knew, never came up. He believed that if the four facilities might be having any cause-or-contribute impact on the low dissolved oxygen levels in Gulf Island Pond that argument would have been raised in the multi-party proceedings, since several non-Verso parties were actively engaged in trying to place as much liability as possible for the Gulf Island Pond situation on Verso.

Date: January 7, 2010
Contact Person: Shiloh Ring, Code Enforcement Office, Town of Jay
Contact Information: 207.897.6785; jceo@jay-maine.org
Area of Expertise: Recreation

Shiloh is the contact person for the Town of Jay for these facilities, and is part of the "Collaborative Team" involved in implementing the terms of the 1998 license and settlement. Jay was a signatory to the settlement, and has been, according to Shiloh, the most active of the municipalities regarding the four facilities. Jay's focus here has been on recreation and access issues, and that she has received positive feedback from residents on the recreation improvements made by Verso. Shiloh reports that Verso's compliance and cooperation on these issues has been fine, that Jay has not had problems, and that the facilities from her point of view are "run as well as they can be run."

Date: December 18, 2009
Contact Person: Fred Seavey, biologist, Maine hydropower coordinator, US Fish and
Wildlife Service, Orono, Maine
Contact Information: 207.866.3344, fred.seavey@fws.gov
Area of Expertise: Fish passage and protection; threatened and endangered species

Fred stated that he "has not focused a lot of attention on these projects" because, until anadromous and catadromous fish passage becomes timely because fish passage on all six non-Verso downstream projects has been triggered, the fishery issues are really freshwater issues that are overseen by Maine IF&W. Fred states that the USFWS is not interested in constructing upstream or downstream fishways at these four facilities at this time because the next three dams downstream of the projects (Gulf Island, Deer Rips and Lewiston Falls) do not have fishways, and that when it is timely the FERC licenses can be re-opened and fish passage prescribed by the USFWS. He believes that the two target species will be American eel and Atlantic salmon, whose historical range went up to and beyond these facilities. Fred also stated that Maine DMR and NMFS would also be very involved in such a decision and recommended that I talk to

them, as these two agencies were taking the lead on the listing under the ESA of Atlantic salmon. Fred said that he otherwise has not heard any questions or complaints about Verso's operation of the four facilities.