STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

VIA ELECTRONIC MAIL

June 7, 2010

Chad P. Clark
Vice President
FPL Energy Maine Hydro LLC
26 Katherine Drive
Hallowell, ME 04347

RE: Water Quality Certification—Modification
Gulf Island-Deer Rips Hydro Project
DEP Order #L-17100-33-T-M

Dear Chad:

Attached is a copy of the final Department Order modifying the water quality certification for the Gulf Island-Deer Rips Hydro Project. This modification is issued pursuant to Condition 5(E) of the Department's September 21, 2005 order approving water quality certification for the project, as modified on appeal by the Board of Environmental Protection on February 8, 2008, and in response to your January 5, 2010 request.

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

Sincerely,

Dana Paul Murch
Dams & Hydropower Specialist

Attachment

cc: Service List

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

DEPARTMENT ORDER

IN THE MATTER OF

FPL ENERGY MAINE HYDRO LLC	)	WATER QUALITY CERTIFICATION
Lewiston, Auburn, Turner, Greene, Leeds, and	)	
Livermore, Androscoggin County	)	
GULF ISLAND-DEER RIPS HYDRO PROJECT	)	
#L-17100-33-T-M (Approval)	)	MODIFICATION

Pursuant to the provisions of the *Water Classification Program*, 38 M.R.S.A. §§ 464–470, the *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2 (effective April 1, 2003), Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), and the Board of Environmental Protection's February 7, 2008 Findings of Fact and Order on Appeal of Department Order #L-17100-33-O-N dated September 21, 2005, the Department of Environmental Protection makes the following findings of fact, conclusions, and decision.

1. MODIFICATION SUMMARY

By this Order, the Department is modifying the oxygen injection requirements for the Gulf Island-Deer Rips Hydro Project based on the re-calibration of the water quality model for Gulf Island Pond following correction of an error relating to dispersive mixing. The Department is also modifying the oxygen injection requirements for the project to reflect new oxygen injection rates proposed by the Gulf Island Pond Oxygenation Project (GIPOP) Partnership.[1]

2. PROJECT DESCRIPTION

The Gulf Island-Deer Rips Hydro Project consists of two dams (Gulf Island Dam and Deer Rips Dam) and associated impoundments, three powerhouses, and appurtenant facilities, all located on the Androscoggin River in the Cities of Lewiston and Auburn and the Towns of Turner, Greene, Leeds and Livermore, Androscoggin County, Maine. The project has a total installed generating capacity of 36.467 megawatts[2] and is operated to provide power to the interstate electricity transmission and distribution system.

[1] The GIPOP Partnership consists of FPL Energy Maine Hydro LLC (FPL Energy), Verso Paper, Rumford Paper, and Fraser Paper.

[2] At the time of the Department's September 21, 2005 Order, the total installed generating capacity of the Gulf Island-Deer Rips Project, as licensed by the Federal Energy Regulatory Commission, was 32.717 megawatts. The generating capacity of the project has since been increased as a result of turbine and generator upgrades at the Gulf Island powerhouse.

Gulf Island Dam is a concrete gravity and earthen fill dam with a total length of 2,488 feet and a maximum height of 92 feet. The dam creates an impoundment, known as Gulf Island Pond, with a surface area of about 2,862 acres at a normal full pond elevation of 262 feet msl. Gulf Island Pond extends upstream almost 15 miles, to the vicinity of the Route 219 bridges across the river between Turner and Leeds.

3. PROCEDURAL HISTORY

On December 3, 1991, Central Maine Power (predecessor-in-interest to FPL Energy), filed an application with the Department for water quality certification for the continued operation of the existing Gulf Island-Deer Rips Hydro Project. Certification was requested in conjunction with the proposed relicensing of the project by the Federal Energy Regulatory Commission.

By Order #L-17100-33-O-N dated September 21, 2005, the Department issued water quality certification for the continued operation of the Gulf Island-Deer Rips Hydro Project, subject to a number of conditions. These conditions included, among other things, a requirement for the injection of specified amounts of addition oxygen into Gulf Island Pond to meet applicable Class C dissolved oxygen standards.[3]

On October 21, 2005, timely appeals of the Department's September 21, 2005 decision were filed by FPL Energy, the Conservation Law Foundation, Maine Rivers, Androscoggin River Alliance, and Androscoggin Lake Improvement Association.[4]

Following a public hearing on these and related appeals of the wastewater discharge permits for Verso Paper's Jay pulp and paper mill and Rumford Paper's Rumford pulp and paper mill, on February 7, 2008, the Board of Environmental Protection issued appeal Orders establishing additional oxygen injection requirements,[5] water quality monitoring requirements, and final pulp and paper mill effluent limits needed to meet Class C water quality standards in Gulf Island Pond based on the Department's 2005 Androscoggin River Total Maximum Daily Load (TMDL) report. The Board also directed the Department to revise and re-calibrate its water quality model following the correction of a dispersive mixing error (which could affect additional oxygen injection requirements) and a recalculation of the sediment area that is contributing phosphorus to the pond (which could affect final effluent limits for total phosphorus and/or ortho-phosphorus).

Independently, the Department agreed to evaluate FPL Energy's contention that the Department's water quality model held FPL Energy responsible for mitigating the impact of discharges from upstream municipal wastewater treatment plants on dissolved oxygen levels in Gulf Island Pond.

[3] The Gulf Island Pond Oxygenation Project (GIPOP) has been in place since June 1, 1992, and is operated to inject oxygen into Gulf Island Pond at a site called Upper Narrows, located about 5 miles upstream of Gulf Island Dam.
[4] An additional appeal filed by the Towns of Livermore Falls and Jay was subsequently withdrawn.
[5] By these Orders, FPL Energy, Verso Paper, and Rumford Paper were each required to inject specified amounts of additional oxygen into Gulf Island Pond.

4. CURRENT OXYGEN INJECTION REQUIREMENTS

As revised by the Board, the oxygen injection requirements contained in Condition 5 ("GULF ISLAND POND OXYGENATION") of the water quality certification for the Gulf Island-Deer Rips Hydro Project read as follows:

"A. The applicant shall, effective on the date of issuance of this certification, continue to participate in the partnership with Fraser Paper, Rumford Paper Company, and International Paper, or their successors in interest, as described in section 4(c) of this certification, to operate and maintain an oxygen injection system at Upper Narrows in such manner as is currently approved by the Department.

B. By March 1, 2008, the applicant shall, independently or in cooperation with Verso Paper, Rumford Paper and Fraser Paper, or their successors-in-interest, submit a plan for conducting ambient water quality monitoring to determine compliance with Class C dissolved oxygen standards in Gulf Island Pond under current and future conditions. This monitoring shall provide sufficient data to determine the point of thermal stratification in the pond and shall begin no later than June 1, 2008. This plan shall be reviewed by and must receive the approval of the Department.

C. The applicant shall, independently or in cooperation with Verso Paper, Rumford Paper and Fraser Paper, or their successors-in-interest, operate an upgraded oxygen injection system at Upper Narrows and an additional oxygen injection system at Lower Narrows in Gulf Island Pond, according to a plan approved by the Department, as is further described below.

D. By June 1, 2008, the applicant shall, independently or in cooperation with Verso Paper, Rumford Paper and Fraser Paper, or their successors-in-interest, submit a plan and schedule for upgrading the existing Gulf Island Pond oxygen injection system to increase the oxygen transfer efficiency of the system and thereby increase dissolved oxygen levels in the pond. The upgraded oxygen injection system shall be operational no later than June 1, 2009. The plan and schedule shall be reviewed by and must receive the approval of the Department.

E. By June 1, 2009, the applicant shall, independently or in cooperation with Verso Paper, Rumford Paper or Fraser Paper, or their successors-in-interest, submit a plan and schedule for injecting sufficient oxygen into Gulf Island Pond to mitigate the impact of Gulf Island Dam on dissolved oxygen levels in the pond. The plan shall provide that, beginning no later than June 1, 2010, the applicant shall inject oxygen at the rate of up to 105,000 pounds per day at Upper Narrows in Gulf Island Pond, at an oxygen transfer efficiency of 33%, or equivalent rates at higher transfer efficiencies and/or other locations, or take other equivalent measures as may be approved by the Department. The plan and schedule for injecting oxygen into Gulf Island Pond shall be reviewed by and must receive the approval of the Department.

After re-calibration of the water quality model for Gulf Island Pond following correction of an error relating to dispersive mixing, as well as any other future modifications to the model and revisions to the Department's May 2005 Androscoggin River Total Maximum Daily Load (TMDL) Report, and after notice to the applicant and opportunity for hearing, the Department reserves the right to re-open and modify the terms of this certification to change the rates of oxygen injection specified above.

F. By March 1, 2008, Verso or Rumford Paper may, independently or in cooperation with other parties, provide sufficient funding to the Department for the development and use of a hydro-dynamic model to determine mixing and transport within Gulf Island Pond. This model shall be developed by the Department or by a third party under contract to the Department and must be supported by the Environmental Protection Agency. A final modeling report must be provided to FPLE and other interested parties no later than November 1, 2009. After reviewing the report on the results of any hydro-dynamic model developed for Gulf Island Pond, and after notice to FPLE and opportunity for public hearing, the Department reserves the right to re-open and modify the terms of this certification to require changes in oxygen injection system(s) and/or oxygen injection rates, or changes in other equivalent measures, as may be deemed necessary to ensure that Gulf Island Dam does not cause or contribute to the violation of Class C dissolved oxygen standards in Gulf Island Pond.

G. The applicant shall be responsible for taking such actions as are needed to meet Class C dissolved oxygen standards in Gulf Island Pond, insofar as Gulf Island Dam causes or contributes to a violation of these standards. After reviewing the results of monitoring following the implementation of all additional oxygen injection or other equivalent measures and all reductions in point source discharges required pursuant to the Department's May 2005 Androscoggin River Total Maximum Daily Load (TMDL) Report and any future revisions thereto, and after notice to the applicant and opportunity for hearing, the Department reserves the right to reopen and modify the terms of this certification to require reasonable changes in oxygen injection system(s) and/or oxygen injection rates, or changes in other equivalent measures, as may be deemed necessary to ensure that Gulf Island Dam does not cause or contribute to the violation of Class C dissolved oxygen standards in Gulf Island Pond."

5. HYDRO-DYNAMIC MODEL

In its February 7, 2008 appeal orders, the Board concluded that the development and use of a hydro-dynamic model to determine mixing and transport within Gulf Island Pond may more accurately predict water quality conditions than does the Department's current model, and may result in changes to the effluent limits and additional oxygen injection needed to meet water quality standards in Gulf Island Pond. In its order, the Board included a condition that, by March 1, 2008, Verso Paper or Rumford Paper may, independently or in cooperation with other parties, provide sufficient funding to the Department for the development and use of a hydro-dynamic model.

Neither Verso Paper nor Rumford Paper provided funding for development of a hydro-dynamic model by the March 1, 2008 deadline. As a result, the Department has continued to use its existing QUAL2E and WASP models to predict dissolved oxygen levels in Gulf Island Pond under various pollutant loading and oxygen injection conditions.

6. WATER QUALITY MONITORING PLAN

In its February 7, 2008 appeal orders, the Board included a condition that, by March 1, 2008, FPL Energy, Verso Paper or Rumford Paper, independently or in cooperation with each other, submit a plan for conducting ambient water quality monitoring, beginning no later than June 1, 2008, to determine compliance with Class C dissolved oxygen standards in Gulf Island Pond, and that this monitoring provide sufficient data to determine the point of thermal stratification in the pond.

On March 1, 2008, FPL Energy submitted a water quality monitoring plan for Gulf Island Pond. This plan included provisions to monitor dissolved oxygen and temperature at one meter intervals from top to bottom at the deepest point in the pond. On March 24, 2008, the Department issued an order approving the monitoring plan as submitted.

7. UPGRADE OF OXYGEN INJECTION SYSTEM

In its February 7, 2008 appeal orders, the Board included a condition that, by June 1, 2008, FPL Energy, Verso Paper or Rumford Paper, independently or in cooperation with each other and Fraser Paper, submit a plan and schedule for upgrading the existing oxygen injection system, located at Upper Narrows in Gulf Island Pond, to increase the oxygen transfer efficiency of the system, thereby increasing dissolved oxygen levels in Gulf Island Pond, and that the upgraded oxygen injection system be operational no later than June 1, 2009.

On May 30, 2008, on behalf of the GIPOP Partnership, FPL Energy submitted a plan and schedule to replace the existing in-stream oxygenation diffuser system with a new line diffuser system designed to improve the oxygen transfer efficiency of the oxygen injection system from 33% to 54%. On June 23, 2008, the Department issued an order approving the plan with a condition requiring that the upgraded oxygen injection system continue to be operated in accordance with the approved June 1999 operational plan.

The upgraded system was installed and began operation in June of 2009.

8. REVIEW OF ZERO POINT-SOURCE MODEL SIMULATIONS

As agreed, the Department asked its contract modeler, HydroAnalysis, Inc., to determine whether nor not all municipal wastewater treatment plant discharges upstream of Gulf Island Pond were set to zero in the “point sources at zero discharge” model runs included in the 2005 TMDL.

In a June 11, 2008 report to the Department, HydroAnalysis, Inc. determined that the “point sources at zero discharge” model runs had, in fact, set all upstream municipal wastewater

treatment plant discharges, as well as all upstream industrial point source discharges, at zero. This means that, in calculating FPL Energy's oxygen injection requirements, the Department did not hold FPL Energy responsible for mitigating the impact of any upstream point source discharge on dissolved oxygen levels in Gulf Island Pond.

9. RENEWAL OF FRASER PAPER WASTEWATER DISCHARGE PERMIT

On September 30, 2008, EPA renewed the wastewater discharge permit for Fraser Paper's Gorham, New Hampshire paper mill, subject to reduced effluent limits and increased oxygen injection requirements, based on the Department's 2005 TMDL.[6]

10. GULF ISLAND POND MODEL RECALIBRATION

As directed by the Board, the Department asked its contract modeler, HydroAnalysis, Inc., to re-calibrate the Department's water quality model for Gulf Island Pond following (1) the correction of a dispersive mixing error and (2) the recalculation of the sediment area that is contributing phosphorus to the pond.

In an October 31, 2008 report to the Department, as modified on December 18, 2008, HydroAnalysis, Inc. submitted the results of the recalibration work. The recalibrated model increased the vertical dispersion in the pond, thus increasing modeled dissolved oxygen levels in the deeper portions of the pond, in order to more closely match measured dissolved oxygen levels. This in turn would reduce the amount of oxygen injection needed to meet standards. In addition, the recalibrated model decreased the benthic phosphorus loading to the pond, which would allow for an increase in phosphorus loading from point sources without causing algal blooms in the pond.

11. ASSESSMENT OF ZERO-DISCHARGE OXYGEN INJECTION REQUIREMENTS AND ALLOWABLE PHOSPHORUS LOAD

The Department then asked its contract modeler, HydroAnalysis, Inc., to run the recalibrated water quality model to determine (1) how much oxygen injection would be required to meet dissolved oxygen standards in Gulf Island Pond with all upstream point sources set to zero discharge, and (2) how much phosphorus loadings from point sources could be increased without causing algal blooms.

In an April 2, 2009 report to the Department, HydroAnalysis, Inc. submitted the results of the requested model runs. The results were as follows:

- Oxygen Injection. The recalibrated model predicts that, under low flow conditions and with (1) all upstream point source discharges set to zero and (2) the upgraded oxygen

[6] In total, the members of the GIPOP Partnership are currently required to inject up to 258,460 pounds per day of oxygen at Upper Narrows, at an oxygen transfer efficiency of 33%, or equivalent rates at higher transfer efficiencies and/or other locations. Oxygen injection begins no earlier than June 1 and ends no later than September 30 annually.

injection system operating at its expected oxygen transfer efficiency of 54%, oxygen injection requirements would be reduced from the 105,000 pounds per day originally predicted by the Department's 2005 model results to 45,000 pounds per day.

- Phosphorus Limits. The recalibrated model predicts that chlorophyll-a concentrations in the pond would remain below the threshold conditions for algal blooms with either (A) an increase of 6 pounds per day in allowable ortho-phosphorus point source loading to the pond, or (B) an increase of 21 pounds per day in allowable organic-phosphorus point source loading to the pond.

12. ASSESSMENT OF OXYGEN INJECTION REQUIREMENTS UNDER LICENSED DISCHARGE CONDITIONS

The Department then asked its contract modeler, HydroAnalysis, Inc., to run the recalibrated water quality model to determine how much oxygen injection would now be required to meet dissolved oxygen standards in Gulf Island Pond with all upstream point sources discharging at their license limits.

In an April 13, 2009 report to the Department, HydroAnalysis, Inc. submitted the results of the requested model runs. The results were that, under low flow conditions and with (1) all upstream point source discharging at final license limits and (2) the upgraded oxygen injection system operating at its expected oxygen transfer efficiency of 54%, a total oxygen injection rate of 94,000 pounds a day at Upper Narrows would be needed to meet standards.

Since the existing oxygen injection system has a nominal design capacity of only 73,000 pounds per day, the Department determined that further reductions in effluent limits and/or additional oxygen injection would be needed to meet standards.

13. CONCEPTUAL PLAN FOR ADDITIONAL OXYGEN INJECTION

In its February 7, 2008 appeal orders, the Board included a condition that, by June 1, 2009, FPL Energy, Verso Paper or Rumford Paper, independently or in cooperation with each other and Fraser Paper, submit a plan and schedule for injecting sufficient oxygen into Gulf Island Pond to mitigate the impact of Gulf Island Dam and the Verso and Rumford wastewater discharges on dissolved oxygen levels in the pond, based on the Department's 2005 TMDL, and that the required oxygen injection be provided no later than June 1, 2010. A similar condition was included in EPA's September 30, 2008 wastewater discharge permit for Fraser Paper's Gorham, New Hampshire paper mill.

On May 26, 2009, on behalf of the GIPOP Partnership, FPL Energy submitted a conceptual plan to inject sufficient oxygen to meet standards in Gulf Island Pond using the existing oxygen injection supply infrastructure and an additional liquid oxygen storage tank and/or vaporizer and additional diffusers, as required.

In a letter dated May 27, 2009, the Department accepted the GIPOP conceptual plan as fulfilling the filing requirements of the Board's appeal orders and EPA permit, pending

further discussions with the GIPOP Partnership regarding options for meeting water quality standards without additional oxygen injection.

14. DEP PROPOSAL FOR MODIFIED EFFLUENT LIMITS

In an effort to meet water quality standards without the need for additional oxygen injection, by letter dated August 4, 2009, the Department proposed reductions in final effluent limits for biochemical oxygen demand (BOD) for the Verso, Rumford, and Fraser mills,[7] and an increase in the final effluent limit for ortho-phosphorus from the Verso mill.

15. GIPOP PARTNERSHIP PROPOSAL FOR NEW OXYGEN INJECTION RATES AND BOD LIMITS

In lieu of the reductions in BOD limits proposed by the Department, on November 20, 2009, the GIPOP Partnership proposed to install two new supply lines and diffusers and to re-distribute oxygen injection in Gulf Island Pond, with oxygen injection rates at Upper Narrows and Lower Narrows (about 2 miles downstream of Upper Narrows and about 3 miles upstream of Gulf Island Dam) sufficient to meet dissolved oxygen standards in the pond. Capital and operation and maintenance costs for the re-configured oxygen injection system are to be allocated per a contractual agreement among the Partnership members.

In addition, Verso proposed to reduce its final summer monthly average BOD limit from 4500 lbs/day to 4400 lbs/day.

16. REVIEW OF GIPOP PARTNERSHIP PROPOSAL

The Department asked its contract modeler, HydroAnalysis, Inc., to run the recalibrated water quality model to determine oxygen injection requirements with diffusers at Upper Narrows and Lower Narrows, as proposed by the GIPOP Partnership, and the reduced BOD limit proposed by Verso.

In a December 1, 2009 report to the Department, HydroAnalysis, Inc. submitted the results of the requested model run. The results were that, with an oxygen injection rate of 23,300 lbs/day at Upper Narrows, at an oxygen transfer efficiency of 54%, and an oxygen injection rate of 32,800 lbs/day (rounded up from 32,769 lbs/day), at an oxygen transfer efficiency of 75%,[8] Class C dissolved oxygen standards will be met in Gulf Island Pond to a depth of 60 feet under critical conditions (i.e., high temperature and low flow) and with all upstream point source discharges at their license limits. The proposed total oxygen injection rate of 56,100 lbs/day is well within the 73,000 lbs/day design capacity of the oxygen injection system.

[7] The Department proposed to reduce summer monthly average BOD limits as follows: for Verso, from 4500 lbs/day to 5150 lbs/day; for Rumford, from 8330 lbs/day to 4150 lbs/day; and for Fraser, from 9149 lbs/day to 5500 lbs/day.
[8] The Department has reviewed and concurred with the estimate of oxygen transfer efficiency for the new Lower Narrows diffusers provided by Mobley Engineering. The increased transfer efficiency is due to the oxygen being injected at greater depth.

17. REQUEST FOR MODIFICATION

By letter dated January 5, 2010, FPL Energy requested that the terms and conditions of the water quality certification for the Gulf Island-Deer Rips Project be modified to reflect the new oxygen injection rates proposed by the GIPOP Partnership.

18. NOTIFICATION TO FPL ENERGY

By letter dated January 29, 2010, the Department notified FPL Energy that, pursuant to Condition 5(E) of the water quality certification for the Gulf Island-Deer Rips Project, as modified by the Board in its February 8, 2008 appeal Order, and in response to FPL Energy's request, the Department intended to modify the existing water quality certification to change the specified rates of oxygen injection. In this letter, the Department also notified FPL Energy of its opportunity to request a hearing prior to final action by the Department on this matter.

19. DRAFT MODIFICATION ORDERS AND ADDENDUM TO TMDL

On January 29, 2010, the Department issued draft Orders modifying the Department's September 21, 2005 water quality certification for the Gulf Island-Deer Rips Hydro Project and the Department's September 21, 2005 wastewater discharge permits for Verso Paper's Jay pulp and paper mill and Rumford Paper's Rumford pulp and paper mill, as modified by the Board in its February 8, 2008 appeal Orders. Comments on the draft Orders were invited from the members of the GIPOP Partnership and other parties to the appeal proceeding. The deadline for comments was 5 P.M. on March 1, 2010.

On March 23, 2010, the Department issued a draft addendum to the approved 2005 Androscoggin River TMDL. This draft addendum reflected the revision and recalibration of the underlying water quality model for Gulf Island Pond following the correction of a dispersive mixing error and the recalculation of the sediment area that is contributing phosphorus to the pond, as discussed above. Comments on the draft addendum were invited from the members of the GIPOP Partnership, other parties to the appeal proceeding, and the general public. The deadline for comments was 5 P.M. on April 22, 2010.

20. EPA APPROVAL OF ADDENDUM TO TMDL

On May 13 and May 24, 2010, the Department submitted a final addendum to the 2005 Androscoggin River TMDL to the U.S. Environmental Protection Agency for review and approval. By letter dated June 1, 2010, EPA approved the TMDL addendum.

21. RESPONSE TO COMMENTS

Comments on the draft Orders were received from FPL Energy, Verso Paper, Rumford Paper, the GIPOP Partnership, the Natural Resources Council of Maine, and the Androscoggin River Alliance.

Procedural, legal, and factual issues raised in the comments received on the draft Orders, as well as changes based on the approved addendum to the 2005 TMDL, are discussed below.

a. TMDL Margin of Safety. In preparing the addendum to the Androscoggin River TMDL, the Department determined that a margin of safety had to be added to the draft modification Orders.

The Clean Water Act and EPA's regulations require that a TMDL include a margin of safety to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality. The 2005 TMDL included an explicit 10% margin of safety for point source BOD loading, with no margin of safety for oxygen injection rates. With BOD limits for the Verso, Rumford and Fraser mills now fixed by the Board's February 8, 2008 appeal orders and EPA's September 30, 2008 permitting action, as discussed above, the Department has elected to include an explicit 10% margin of safety for oxygen injection rates in the final modification orders, such that the final modification orders require oxygen injection rates of up to 24,279 lbs/day at Upper Narrows and up to 34,490 lbs/day, or 33, 691 lbs/day if wastewater from the Wausau-Mosinee Otis mill is no longer sent to the Verso mill for treatment, at Lower Narrows.[9]

b. Schedule for Installation and Operation of the New Diffuser System at Lower Narrows. FPL Energy, Verso Paper, and Rumford Paper individually, and the GIPOP Partnership collectively, have all commented on the Department's proposed deadline of June 1, 2010 for the installation and operation of the new oxygen diffuser system at Lower Narrows. All of the commenting parties state that, based on the time required for final design, materials purchase and delivery, and on-site assembly, the new system will not be available for start up and testing until approximately the first week of July. FPL Energy further comments that this schedule assumes timely regulatory approvals from the DEP and FERC and appropriate weather and flow conditions. Finally, the GIPOP Partnership notes that June has historically been a month with lower oxygen injection rates (than is true in later months) due to higher river flows and cooler water temperatures, and that, starting June 1, the existing oxygen injection system will be operated in accordance with the approved operating plan until the new system is ready for begin operation.

In response, the Department notes that, under the terms of the January 29, 2010 draft modification Orders, the new oxygen injection system "shall be installed and operational by June 1, 2010, unless extraordinary river conditions or other circumstances beyond the control of the [GIPOP Partnership] preclude installation and operation of the system by that date, in which case the system shall be installed and operated as soon as practicable thereafter." This language is sufficient to address the concerns raised by the commenting parties, and has been retained in all three final modification Orders. In the event that the new system is not installed and operational by June 1, 2010, it will be up to the Department to determine whether the failure to meet this deadline will be considered a

[9] These final oxygen injection rates were derived by running the recalibrated water quality model to determine the amount of additional oxygen injection needed at Upper Narrows and Lower Narrows to meet Class C dissolved oxygen standards in Gulf Island Pond with a 10% increase in BOD loading to the pond.

violation of the terms and conditions of the final Orders and what, if any, enforcement action should be taken.

c. Compliance Schedule for Oxygen Injection. The Androscoggin River Alliance (ARA) has commented on the schedule of compliance for oxygen injection. ARA states that any modification to the oxygenation system cannot, as a matter of law, extend the schedule of compliance established in the original permits.

In response, the Department notes that, in its February 8, 2008 appeal Orders, the Board rejected ARA's argument that any compliance schedule for additional oxygen injection was illegal as a matter of state and federal law. In its appeal Orders, the Board found that schedules of compliance are inherent in the concept of phased implementation as envisioned in the Department's 2005 Androscoggin River Total Maximum Daily Load (TMDL) report. The Board further found that the schedule of compliance for additional oxygen injection is as short as possible, based on consideration of the technological, economic and environmental impact of the steps necessary to attain water quality standards in Gulf Island Pond. ARA has not presented any new evidence or arguments on this point that warrant reconsideration of the Board's conclusions relating to the issue of compliance schedules in its February 8, 2008 appeal Orders. Therefore, the existing compliance schedule for additional oxygen injection has been retained in all three final modification Orders.

d. New BOD Limits. Verso Paper has commented on the Department's proposed BOD limits for the Jay mill. In its comments, Verso states that, while it has proposed to voluntarily reduce its final summer monthly average BOD limit from 4500 lbs/day to 4400 lbs/day, it has not proposed to reduce its final summer weekly average BOD limit by an equivalent amount, as proposed in the draft permit. Verso further states that it is hesitant to agree to lower its weekly average BOD limit provided there are other viable options that remain protective of attainment of dissolved oxygen standards in Gulf Island Pond. Finally, Verso notes that the reduction in the weekly average BOD limit modeled by the Department reduces the oxygen injection rate by less than 1 percent.

In response, the Department understands that Verso is voluntarily proposing to reduce its final summer monthly average BOD limit and not its weekly average BOD limit. Consequently, the final modification Order for the Jay mill has been revised to retain the existing final summer weekly average BOD limit of 6400 lbs/day (instead of 6258 lbs/day), and all three modification Orders have been revised to require that oxygen be injected at Lower Narrows at a rate of up to 33,100 lbs/day (instead of 32,800 lbs/day), with an added 10% margin of safety, as discussed above.

e. Oxygenation Requirements. The Natural Resources Council of Maine (NRCM) has objected to the Department's proposed oxygenation requirements. NRCM states that the proposed modifications to the oxygenation requirement represents a less stringent condition than was in the original orders, and that the fact that the Department is relaxing oxygen injection requirements in the absence of any actual data showing that attainment of Class C standards can still be achieved is unacceptable.

In response, the Department has based the oxygen injection requirements set forth in the draft Orders on the results of water quality modeling that predicts attainment of Class C dissolved oxygen standards under the effluent loading conditions contained in the Department's September 21, 2005 permits, as modified by the Board in its February 8, 2008 appeal Orders. This modeling was conducted after the Department's water quality model was revised and recalibrated following the correction of an error relating to dispersive mixing, as directed by the Board.

In its appeal Orders, the Board included a condition providing that, after re-calibration of the water quality model for Gulf Island Pond following correction of an error relating to dispersive mixing, the Department reserves the right to re-open and modify the terms of the certification/permits to change the specified rates of oxygen injection. In proposing this modification, the Department is simply exercising its authority pursuant to this condition to revise oxygen injection requirements for Gulf Island Pond to reflect the correction of this modeling error.

The Department notes that both the 2009 upgrade to the existing oxygen injection system and the proposed 2010 redistribution of oxygen injection from Upper Narrows to Lower Narrows will have the effect of dramatically increasing the amount of oxygen that is actually transferred to the water column in Gulf Island Pond, as compared to pre-2009 conditions. This increase in oxygen transfer efficiency will result in less total oxygen being injected—and wasted—while bringing Gulf Island Pond into compliance with Class C standards. This fact has been confirmed by the Department's modeling, as discussed above. NRCM does not offer a scientific basis for any alternative oxygen injection requirements. It is the Department's position that the oxygen injection requirements set forth in the January 29, 2010 draft Orders are based on sound science and, as such, are being retained in all three final modification Orders, subject to the revisions discussed in paragraphs a and d above.

The Department notes that all three final modification Orders contain a condition in which the Department reserves the right to reopen and modify the terms of the relevant permits and certification to, among other things, require changes in oxygen injection system(s) and/or oxygen injection rates, or other equivalent measures, as may be deemed necessary to ensure that Gulf Island Dam and wastewater discharges from the upstream paper mills do not cause or contribute to the violation of Class C dissolved oxygen standards in Gulf Island Pond.

f. Ortho-Phosphorus Limits. Both NRCM and ARA have objected to the Department's proposed relaxation of the final ortho-phosphorus limit for Verso Paper's Jay mill. These comments are not relevant to the proposed modification of the certification for the Gulf Island-Deer Rips Hydro Project, and so are not discussed here.

g. Miscellaneous. In response to comments from FPL Energy, the Department has made several minor editorial corrections and additions to the January 29, 2010 draft Order modifying the water quality certification for the Gulf Island-Deer Rips Hydro Project.

Based on the above Findings of Fact and the evidence in the record, the Department concludes that there is a reasonable assurance that the continued operation of the Gulf Island-Deer Rips Hydro Project will not violate applicable water quality standards provided that oxygen is injected into Gulf Island Pond by the GIPOP Partnership at Upper Narrows and Lower Narrows in the amounts prescribed by this Order.

THEREFORE, the Department hereby MODIFIES Condition 5 of Department Order #L-17100-33-O-N, as modified on appeal by the Board of Environmental Protection in an Order dated February 7, 2008, to read as follows:

5. GULF ISLAND POND OXYGENATION

A. FPL Energy shall, in partnership with Verso Paper, Rumford Paper, and Fraser Paper, or their successors-in-interest, operate and maintain a system to inject oxygen into Gulf Island Pond at Upper Narrows and Lower Narrows in such quantities and in such manner as described in this condition. This system shall be installed and operational by June 1, 2010, unless extraordinary river conditions or other circumstances beyond the control of the parties preclude installation and operation of the system by that date, in which case the system shall be installed and operated as soon as practicable thereafter. Any activities associated with the installation of the system that require a permit under the Natural Resources Protection Act shall receive prior review and approval by the Department.

B. FPL Energy shall, in partnership with Verso Paper, Rumford Paper, and Fraser Paper, or their successors-in-interest, inject oxygen at Upper Narrows at a rate of up to 24,279 lbs/day at an oxygen transfer efficiency of 54%, and at Lower Narrows at a rate of up to 34,490 lbs/day, or 33,691 lbs/day if the wastewater from the Wausau-Mosinee Otis mill is no longer sent to the Verso mill for treatment, at an oxygen transfer efficiency of 75%, or at equivalent rates and efficiencies.

C. By May 1, 2010, FPL Energy shall, in partnership with Verso Paper, Rumford Paper and Fraser Paper, or their successors-in-interest, submit an operational plan to inject oxygen at Upper Narrows and Lower Narrows in compliance with the terms of this condition. This plan shall be designed to deliver sufficient oxygen to meet dissolved oxygen standards in Gulf Island Pond between June 1 and September 30 annually with all upstream point sources discharging at their final license limits. This plan shall be reviewed by and must receive approval of the Department prior to commencement of system operation.

D. FPL Energy shall, in partnership with Verso Paper, Rumford Paper and Fraser Paper, or their successors-in-interest, conduct and submit the results of annual ambient water quality monitoring to determine compliance with Class C dissolved oxygen standards in Gulf Island Pond, in accordance with the plan currently approved by the Department, and any subsequent amendments or modifications thereto.

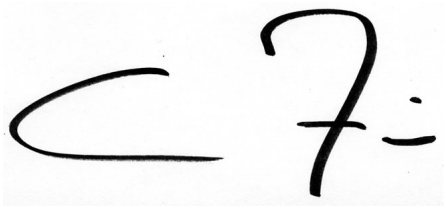
E. Based on any future revisions to the Department's water quality model for the Androscoggin River and Gulf Island Pond and/or any future modifications to the Department's May 2005 Androscoggin River Total Maximum Daily Load (TMDL) Report, and after notice to FPL Energy and opportunity for hearing, the Department reserves the right to re-open and modify the terms of this certification to change the rates of oxygen injection specified herein.

F. FPL Energy shall, in partnership with Verso Paper, Rumford Paper and Fraser Paper, or their successors-in-interest, be responsible for taking such actions as are needed to meet Class C dissolved oxygen standards in Gulf Island Pond, insofar as Gulf Island Dam and wastewater discharges from the upstream paper mills cause or contribute to a violation of these standards. After reviewing the results of monitoring following the installation and operation of the oxygen injection system as required above and the implementation of all upstream point source final effluent limits, and after notice to FPL Energy, Verso Paper, Rumford Paper and Fraser Paper, or their successors-in-interest, and opportunity for hearing, the Department reserves the right to reopen and modify the terms of the relevant permits and certification to require reduced effluent limitations and/or changes in oxygen injection system(s) and/or oxygen injection rates, or other equivalent measures, as may be deemed necessary to ensure that Gulf Island Dam and wastewater discharges from the upstream paper mills do not cause or contribute to the violation of Class C dissolved oxygen standards in Gulf Island Pond.

All other terms and conditions of the September 21, 2005 water quality certification, as modified by the February 7, 2008 Board of Environmental Protection Order on Appeal, remain in effect and enforceable.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 01/05/2010
Date application accepted for processing: 01/06/2010



This permit has been digitally signed by Andrew C. Fisk on behalf of Commissioner David P. Littell. It is digitally signed pursuant to authority under 10 M.R.S.A. § 9418. It has been filed with the Board of Environmental Protection as of the signature date.
2010.06.08 08:06:34 -04'00'

This Order prepared by Dana March, Bureau of Land and Water Quality.

DEP INFORMATION SHEET

Appealing a Commissioner's Licensing Decision

Dated: May 2004 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) in an administrative process before the Board of Environmental Protection (Board); or (2) in a judicial process before Maine's Superior Court. This INFORMATION SHEET, in conjunction with consulting statutory and regulatory provisions referred to herein, can help aggrieved persons with understanding their rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

DEP's *General Laws*, 38 M.R.S.A. § 341-D(4), and its *Rules Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 CMR 2.24 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written notice of appeal within 30 calendar days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner and the applicant a copy of the documents. All the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

The materials constituting an appeal must contain the following information at the time submitted:

1. *Aggrieved Status*. Standing to maintain an appeal requires the appellant to show they are particularly injured by the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.

6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.

7. *New or additional evidence to be offered.* The Board may allow new or additional evidence as part of an appeal only when the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or show that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2, Section 24(B)(5).

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license file is public information made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.

3. *The filing of an appeal does not operate as a stay to any decision.* An applicant proceeding with a project pending the outcome of an appeal runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge initiation of the appeals procedure, including the name of the DEP project manager assigned to the specific appeal, within 15 days of receiving a timely filing. The notice of appeal, all materials accepted by the Board Chair as additional evidence, and any materials submitted in response to the appeal will be sent to Board members along with a briefing and recommendation from DEP staff. Parties filing appeals and interested persons are notified in advance of the final date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision. The Board will notify parties to an appeal and interested persons of its decision.

II. APPEALS TO MAINE SUPERIOR COURT

Maine law allows aggrieved persons to appeal final Commissioner licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2.26; 5 M.R.S.A. § 11001; & MRCivP 80C. Parties to the licensing decision must file a petition for review within 30 days after receipt of notice of the Commissioner's written decision. A petition for review by any other person aggrieved must be filed within 40-days from the date the written decision is rendered. The laws cited in this paragraph and other legal procedures govern the contents and processing of a Superior Court appeal.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, contact the DEP's Director of Procedures and Enforcement at (207) 287-2811.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.