STATE OF MAINE

Department of Environmental Protection

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

June 7, 2010

Mr. Kenneth Gallant
Environmental Manager
Verso Androscoggin LLC
P.O. Box 20
300 Riley Road
Jay, ME. 04239

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0001937
Maine Waste Discharge License (WDL) Application #W000623-5N-K-M
Final Modification

Dear Mr. Gallant:

Enclosed please find a copy of your **final** Maine MEPDES/WDL **modification** which was approved by the Department of Environmental Protection. Please read the permit modification and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision*."

If you have any questions regarding the matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

cc: Service List

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

DEPARTMENT ORDER

IN THE MATTER OF

VERSO ANDROSCOGGIN LLC	)	MAINE POLLUTANT DISCHARGE
JAY, FRANKLIN COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PULP & PAPER MANUFACTURING FACILITY	)	AND
ME0001937	)	WASTE DISCHARGE LICENSE
W000623-5N-K-M **APPROVAL**	)	**MODIFICATION**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq., and Maine Law 38 M.R.S.A., Section 414-A et. seq., including all applicable regulations, and the Board of Environmental Protection's February 7, 2008 Findings of Fact and Order on Appeal and Maine Pollutant Discharge Elimination System (MEPDES) permit ME0001937/Maine Waste Discharge License #W000623-5N-F-R issued by the Department on September 21, 2005, the Department makes the following findings of fact, conclusions, and decision.

MODIFICATIONS REQUESTED

The Department has initiated a process to modify the oxygen injection requirements and final effluent limit for ortho-phosphorus for the Verso Jay pulp and paper mill based on the re-calibration of the water quality model for Gulf Island Pond following correction of an error relating to dispersive mixing and a recalculation of the sediment area that is contributing phosphorus to the pond.

In addition, the permittee has requested the Department modify the oxygen injection requirements in Special Condition A, *Effluent Limitations and Monitoring Requirements* of the February 7, 2008 Board Order and Special Condition K, *Gulf Island Pond Oxygen Injection Operation*, of the September 21, 2005 MEPDES permit (permit hereinafter), as modified on appeal, to reflect new oxygen injection rates proposed by the Gulf Island Pond Oxygenation Project (GIPOP) Partnership.[1]

Finally, the permittee has requested the Department reduce the final summer (June 1 – Sept. 30) monthly average biochemical oxygen demand (BOD) effluent limitation of 4,500 lbs/day of the February 7, 2008 Board Order to 4,400 lbs/day.

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

MODIFICATIONS APPROVED

1) This order eliminates the numeric oxygen injection requirements in Special Condition A of the September 21, 2005 permit, as previously modified on appeal.

2) This order increases the final summer (June 1 – Sept 30) monthly average ortho-phosphorus effluent limitation in Special Condition A of the September 21, 2005 permit, as previously modified on appeal, from 22 lbs/day to 28 lbs/day.

3) This order eliminates the operational plan specified in Special Condition K(a) and modifies the oxygen injection requirements in Special Condition K(b) of the September 21, 2005 permit, as previously modified on appeal, by requiring Verso Paper, in partnership with Rumford Paper, FPL Energy, 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 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.

4) This order reduces the final summer (June 1 – Sept. 30) monthly average BOD effluent limitation in Special Condition A of the September 21, 2005 permit, as previously modified, from 4,500 lbs/day to 4,400 lbs/day.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated June 7, 2010 and subject to the terms and conditions contained herein, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A., Section 464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department hereby modifies the final summer monthly average ortho-phosphorus and summer monthly average BOD effluent limitations and the oxygen injection requirements in Special Condition A, *Effluent Limitations and Monitoring Requirements* in February 7, 2008 Board of Environmental Protection Appeal Order and Special Condition K, *Gulf Island Pond Oxygen Injection Operation*, of the September 21, 2005 MEPDES permit, as previously modified on appeal, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including;

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits,*" revised July 1, 2002, copy attached to the 9/21/05 MEPDES permit.

2. The attached Special Conditions, including effluent limitations and monitoring requirements.

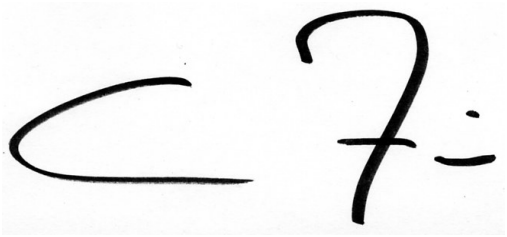
3. All other terms and conditions of the September 21, 2005 MEPDES permit, the February 7, 2008 Board of Environmental Protection Order, the July 21, 2008, December 29, 2008, May 8, 2009, and January 27, 2010 minor revisions not modified by this order remain in effect and enforceable.

4. **This modification expires on September 21, 2010**, concurrent with the September 21, 2005 MEPDES permit.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of the request January 5, 2010 .

Date of acceptance of the request January 5, 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 08:18:57 -04'00'

This order prepared by GREGG WOOD, BUREAU OF LAND AND WATER QUALITY

ME0001937 MR5 2010

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge treated process wastewaters, treated sanitary wastewaters, treated landfill leachate, general housekeeping wastewaters, storm water, contact and non-contact cooling waters from **Outfall #001** and bleach plant effluents (internal waste streams consisting of three points, the 15, 35 and 45 stages in each bleach plant) from **Outfall #100 and Outfall #200**, to the Androscoggin River. Such discharges shall be limited and monitored by the permittee as specified below. [The *italicized* numeric values in brackets in the table below and the tables that follow are not limitations but are code numbers used by Department personnel to code Discharge Monitoring Reports (DMR's).]

OUTFALL #001A & #001B[(1)] – Secondary treated waste waters **with** Wausau-Mosinee's wastewater contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	Report MGD *[03]*	---	51 MGD*[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*								
(June 1 – September 30)	4,400 #/day	6,400 #/day	8,000 #/day	---	---	---	1/Day	Composite
(October 1 – May 31)	7,400 #/day *[26]*	11,100 #/day *[26]*	13,875 #/day *[26]*	---	---	---	1/Day *[01/01]*	Composite *[26]*

Footnotes:

(1) Outfall #001 - Outfall 001A is a 36" diameter pipe which is normally utilized to convey the treated process wastewaters from the wastewater treatment plant from the mill to the Androscoggin River. During periods of high storm water runoff events due to precipitation or snow melt events, most common in the spring and fall, discharges from Outfall 001A are hydraulically limited. As a result, the wastewater treatment facility experiences hydraulic limitations and best practicable treatment of the wastewater is jeopardized. This permit authorizes the facility to discharge from Outfall 001B, a 14" diameter pipe located adjacent to Outfall 001A. The discharges from Outfall 001B will receive the same degree of treatment as discharges from Outfall 001A and all flows discharged through the secondary outfall are measured and included in analysis for all effluent samples and calculations for compliance purpose.

SPECIAL CONDITIONS

A(1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated wastewaters **with** Wausau-Mosinee's wastewater contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
TSS *[00530]*								
(June 1 – Sept 30)	12,000 #/day	---	22,300 #/day	---	---	---	1/Day *[01/01]*	Composite *[24]*
	12,000 #/day(2)	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	25,000 #/day	---	44,600 #/day *[26]*	---	---	---	5/Week *[05/07]*	Composite *[24]*
	17,557 #/day(3a) *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*
TSS *[00530]* *(June 1 – Sept 30)*								
Beginning June 1, 2010	12,000 #/day	---	22,300 #/day	---	---	---	1/Day *[01/01]*	Composite *[24]*
	10,000 #/day(2)	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	25,000 #/day	---	44,600 #/day *[26]*	---	---	---	5/Week *[05/07]*	Composite *[24]*
Beginning Jan. 1, 2010	14,738 #/day(3b) *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. The 60-day rolling average limit of 12,000 lbs/day becomes effective on June 1, 2006.

(3a) Annual average defined as January 1st – December 31st of each year beginning calendar year 2006.

(3b) Annual average defined as January 1st – December 31st of each year beginning calendar year 2010.

SPECIAL CONDITIONS

A(1) EFFLUENT LIMITATIONS AND MONITORI)NG REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated wastewaters **with** Wausua-Mosinee's wastewater contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Total Phosphorus *[00665]* *(June 1 – September 30)*								
Begin upon issuance	150 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2010	130 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*
Ortho-phosphorus *[70507]* *(June 1 – September 30)*								
Begin upon issuance	33 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2010	28 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*

Footnotes:

(4) Report two (2) significant figures.

SPECIAL CONDITIONS

A EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. The permittee is authorized to discharge treated process waste waters, treated sanitary wastewaters, treated landfill leachate, general housekeeping wastewaters, storm water, contact and non-contact cooling waters from **Outfall #001** to the Androscoggin River. The limitations in the table below and tables that follow become effective upon permanent cessation of process wastewater generated by the (N/F) Wausau – Mosinee facility being conveyed to and treated by the permittee's waste water treatment facility [see Special Condition S of this permit as modified on appeal]. Such discharges shall be limited and monitored by the permittee as specified below.

OUTFALL #001A & #001B(1) – Secondary treated waste waters **without** Wausau-Mosinee's wastewater contribution.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Flow *[50050]*	Report MGD *[03]*	---	51 MGD*[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*								
(June 1 – September 30)	4,150 #/day	5,900 #/day	7,376 #/day	---	---	---	1/Day	Composite
(October 1 – May 31)	6,823 #/day *[26]*	10,234 #/day *[26]*	12,793 #/day *[26]*	---	---	---	1/Day *[01/01]*	Composite *[24]*

Footnotes:

(1) Outfall #001 - Outfall 001A is a 36" diameter pipe which is normally utilized to convey the treated process wastewaters from the wastewater treatment plant from the mill to the Androscoggin River. During periods of high storm water runoff events due to precipitation or snow melt events, most common in the spring and fall, discharges from Outfall 001A are hydraulically limited. As a result, the wastewater treatment facility experiences hydraulic limitations and best practicable treatment of the wastewater is jeopardized. This permit authorizes the facility to discharge from Outfall 001B, a 14" diameter pipe located adjacent to Outfall 001A. The discharges from Outfall 001B will receive the same degree of treatment as discharges from Outfall 001A and all flows discharged through the secondary outfall are measured and included in analysis for all effluent samples and calculations for compliance purpose.

SPECIAL CONDITIONS

A(2) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters **without** Wausau-Mosinee's wastewater contribution

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Upon cessation								
TSS *[00530]*								
(June 1 – Sept 30)	11,580 #/day	---	21,520 #/day	---	---	---	1/Day *[01/01]*	Composite *[24]*
	11,580 #/day[(2)]	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	24,125 #/day	---	43,039 #/day *[26]*	---	---	---	5/Week *[05/07]*	Composite *[24]*
	16,942 #/day[(3a)] *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*
TSS *[00530]* *(June 1 – Sept 30)*								
Beginning June 1, 2010	11,580 #/day	---	21,520 #/day	---	---	---	1/Day *[01/01]*	Composite *[24]*
	9,650 #/day[(2)]	---	---	---	---	---	1/Day *[01/01]*	Calculate *[CA]*
(Oct 1 – May 31)	24,125 #/day	---	43,039 #/day *[26]*	---	---	---	5/Week *[05/07]*	Composite *[24]*
Beginning Jan. 1, 2010	14,222 #/day[(3b)] *[26]*	---	---	---	---	---	1/Year *[01/YR]*	Calculate *[CA]*

Footnotes:

(2) 60–day rolling average defined as the average of sixty consecutive daily TSS discharges between June 1st and September 30th to be reported in the July, August, and September DMRs. The 60-day rolling average limit of 11,580 lbs/day becomes effective on June 1, 2006.

(3a) Annual average defined as January 1st – December 31st of each year beginning calendar year 2006.

(3b) Annual average defined as January 1st – December 31st of each year beginning calendar year 2010.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

OUTFALL #001A & #001B – Secondary treated waste waters **without** Wausau-Mosinee's wastewater contribution

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Monthly Average** as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Measurement Frequency** as specified	**Sample Type** as specified
Total Phosphorus *[00665]* *(June 1 – September 30)*								
Begin upon issuance	148 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2010	128 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*
Ortho-phosphorus *[70507]* *(June 1 – September 30)*								
Begin upon issuance	33 #/day	---	Report #/day	Report mg/L[(4)]	---	Report mg/L[(4)]	3/Week	Composite
Beginning June 1, 2010	28 #/day *[26]*	---	Report #/day *[26]*	Report mg/L[(4)] *[19]*	---	Report mg/L[(4)] *[19]*	3/Week *[03/07]*	Composite *[24]*

Footnotes:

(4) Report two (2) significant figures.

SPECIAL CONDITIONS

K. GULF ISLAND POND OXYGEN INJECTION OPERATION

1. Verso Paper shall, in partnership with FPL Energy, 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.

2. Verso Paper shall, in partnership with FPL Energy, 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 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.

3. By May 1, 2010, Verso Paper shall, in partnership with FPL Energy, 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.

4. Verso Paper shall, in partnership with FPL Energy, 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.

5. 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 Verso Paper and opportunity for hearing, the Department reserves the right to re-open and modify the terms of this permit to change the rates of oxygen injection specified herein.

SPECIAL CONDITIONS

K. GULF ISLAND POND OXYGEN INJECTION OPERATION

6. Verso Paper shall, in partnership with FPL Energy, 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 Verso Paper, FPL Energy, 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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: June 7, 2010

PERMIT NUMBER: **ME0001937**
LICENSE NUMBER: **W000623-5N-K-M**

NAME AND ADDRESS OF APPLICANT:

VERSO ANDROSCOGGIN LLC
Androscoggin Mill
Jay, Maine 04239

COUNTY: **Franklin County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Androscoggin Mill
Jay, Maine 04239

RECEIVING WATER AND CLASSIFICATION: **Androscoggin River/ Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Kenneth Gallant, Mgr. Env. Services**
(207) 897-1633
kenneth.gallant@versopaper.com

1. MODIFICATIONS REQUESTED

The Department has initiated a process to modify the oxygen injection requirements and final effluent limit for ortho-phosphorus for the Verso Jay pulp and paper mill based on the re-calibration of the water quality model for Gulf Island Pond following correction of an error relating to dispersive mixing and a recalculation of the sediment area that is contributing phosphorus to the pond.

In addition, the permittee has requested the Department modify the oxygen injection requirements in Special Condition A, *Effluent Limitations and Monitoring Requirements* of the February 7, 2008 Board Order and Special Condition K, *Gulf Island Pond Oxygen Injection Operation*, of the September 21, 2005 MEPDES permit (permit hereinafter), as modified on appeal, to reflect new oxygen injection rates proposed by the Gulf Island Pond Oxygenation Project (GIPOP) Partnership.[2]

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

Finally, the permittee has requested the Department reduce the final summer (June 1 – Sept. 30) monthly average biochemical oxygen demand (BOD) effluent limitation of 4,500 lbs/day of the February 7, 2008 Board Order to 4,400 lbs/day.

2. MODIFICATIONS APPROVED

a. This order eliminates the numeric oxygen injection requirements in Special Condition A of the September 21, 2005 permit, as previously modified on appeal.

b. This order increases the final summer (June 1 – Sept 30) monthly average ortho-phosphorus effluent limitation of Special Condition A of the September 21, 2005 permit, as previously modified on appeal, from 22 lbs/day to 28 lbs/day.

c. This order eliminates the operational plan specified in Special Condition K(a) and modifies the oxygen injection requirements in Special Condition K(b) of the September 21, 2005 permit, as previously modified on appeal, by requiring Verso Paper, in partnership with Rumford Paper, FPL Energy, 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 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.

d. This order reduces the final summer (June 1 – Sept 30) monthly average BOD effluent limitation in Special Condition A of the September 21, 2005 permit, as previously modified, from 4,500 lbs/day to 4,400 lbs/day.

3. SOURCE DESCRIPTION

The Jay (Androscoggin) pulp and paper mill is an integrated pulp and paper manufacturing plant, owned and operated by Verso Paper Corp. (previously International Paper). The mill produces an average of 1,840 tons per day of fine coated and specialty papers.

4. PROCEDURAL HISTORY

By Order dated September 21, 2005, the Department issued permit #ME0001937/W000623-5N-F-R for the discharge of up to a daily maximum of 51 million gallons per day (MGD) of treated process waste waters, treated sanitary waste waters, contact and non-contact cooling waters, treated landfill leachate, treated stormwater runoff and general housekeeping waste waters associated with a kraft pulp and papermaking facility to the Androscoggin Rivers. The conditions of the permit 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]

[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.

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

Following a public hearing on these and related appeals of the waste water discharge permits for Rumford Paper's Rumford pulp and paper mill and the water quality certification for FPL Energy's Gulf Island-Deer Rips Hydro Project, on February 7, 2008, the Board of Environmental Protection issued appeal Orders establishing additional oxygen injection requirements,[4] 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.

5. EFFLUENT LIMITATIONS AND OTHER REQUIREMENTS

a. Current effluent limits. Special Condition A(1), *Effluent Limitations and Monitoring Requirements*, as revised by the Board in its February 7, 2008 appeal order, established summer (June 1 – Sept 30) monthly average and weekly average mass BOD effluent limitations of 4,500 lbs/day and 6,400 lbs/day respectively, for BOD.

Special Condition A(1), *Effluent Limitations and Monitoring Requirements*, as revised by the Board in its February 7, 2008 appeal order also established summer (June 1 – Sept 30) monthly average mass effluent limitations for ortho-phosphorus as follows:

- 33 lbs/day beginning June 1, 2008 and lasting through May 31, 2010; and
- 22 lbs/day beginning June 1, 2010.

b. Current oxygen injection requirements. Special Condition K(a), *Gulf Island Pond Oxygen Injection Operation,* of the September 21, 2005 permit reads as follows:

[4] By these Orders, FPL Energy, Verso Paper, and Rumford Paper were each required to inject specified amounts of additional oxygen into Gulf Island Pond.

K. GULF ISLAND POND OXYGEN INJECTION OPERATION

a. **Beginning the effective date of this permit**, IP, either individually or in combination with Florida Power Light & Energy (FPLE), Rumford Paper Company and Fraser Paper NH LLC shall operate the Gulf Island Pond Oxygenation Project (GIPOP) located at Upper Narrows in accordance with the following:

Begin GIPOP at Upper Narrows operation when the 3-day average temperature[(1)] at the Turner Bridge is greater than 18°C in June.

Oxygen Injection Thresholds	% Normal Capacity	Oxygen Injection* (lb/day)
Q[(2)] > 3500 cfs	Idle	8,000
T<24°C & 3,000 < Q ≤ 3,500	50%	36,500
T<24°C & 2,500 < Q ≤ 3,000	75%	54,750
T<24°C & Q < 2,500	100%	73,000
T≥24°C & Q ≤ 3,500	125%	91,000

* Or equivalent amount injected into the water column at an improved efficiency.

End GIPOP at Upper Narrows operation when 3-day average temperature at Turner Bridge is less than 21°C in September.

The oxygenation system plenum shall be installed and available for operation on June 1 of each year or as soon thereafter as river flows recede to 5,000 cfs or less (to allow for safe installation of the system). Once begun, GIPOP at Upper Narrows operation shall continue, with oxygen injected in accordance with the above requirements, until operation is ended in September, as specified above. Once ended, GIPOP at Upper Narrows operation shall not begin again until the following June, as specified above.

Footnotes:

(1) All temperature measurements shall be obtained from the continuous temperature monitor at Turner Bridge and shall be expressed as a 3-day rolling average. Because the monitor records maximum and minimum temperatures for a given day, the daily average temperature will be defined as the arithmetic mean of the maximum and minimum temperatures for any given day. The 3-day rolling average is defined as the arithmetic mean of three daily average temperature values.

(2)All flow measurements shall be obtained from the USGS gage at Rumford and shall be expressed as a 3-day rolling average. The flow gage does record average daily flows thus the 3-day rolling average is defined as the arithmetic mean of the three daily average flow values.

Failures shall be reported orally to the Department as soon as possible. Written notification shall be submitted to the Department within five days.

For the months of June, July, August and September of each calendar year, the permittee shall submit a spreadsheet (similar in format to the example below) to the Department as an attachment to the respective monthly Discharge Monitoring Report (DMR).

Date	Temperature (°C)	River Flow (cfs)	Oxygen Injected (lbs/day)
6/1	23°C	3,200 cfs	38,000 lbs/day
--	--	--	--
6/30	25°C	2,900 cfs	92,150 lbs/day

Special Condition K(b), as revised by the Board in its February 7, 2008 appeal order, reads as follows:

a. The permittee shall, independently or in cooperation with FPL Energy Maine Hydro LLC, 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.

b. By June 1, 2008, the permittee shall, independently or in cooperation with FPL Energy Maine Hydro LLC, 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.

c. By June 1, 2009, the permittee shall, independently or in cooperation with FPL Energy Maine Hydro LLC, Rumford Paper and 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 the permittee's wastewater discharge on dissolved oxygen levels in the pond. The plan shall provide that, beginning no later than June 1, 2010, the permittee shall inject oxygen at the rate of up to 63,956 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 the 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 Daily Maximum Load (TMDL) Report, and after notice to the permittee and opportunity for hearing, the Department reserves the right to re-open and modify the terms of this permit to change the rates of oxygen injection specified above.

d. The permittee shall be responsible for taking such actions as are needed to meet Class C dissolved oxygen standards in Gulf Island Pond, insofar as the permittee's wastewater discharge 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 Daily Maximum 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 Order to require reduced effluent limitations and/or 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 permittee's wastewater discharge, either by itself or in combination with other discharges, does not cause or contribute to the violation of Class C water quality standards in Gulf Island Pond.

c. Current monitoring requirements. Special Condition M, *Ambient Water Quality Monitoring*, as revised by the Board in its February 7, 2008 appeal order, reads as follows:

M. AMBIENT WATER QUALITY MONITORING

By March 1, 2008, the permittee shall, independently or in cooperation with FPL Energy Maine Hydro LLC, 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.

d. Permit reopener for modification of phosphorus limits. Special Condition P, *Reopening of Permit for Modification*, as revised by the Board in its February 7, 2008 appeal order, reads in part as follows:

P. REOPENING OF PERMIT FOR MODIFICATION

After revision of the water quality model for Gulf Island Pond to recalculate the area of sediment in contact with the pond, 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 permittee and opportunity for hearing, the Department reserves the right to re-open and modify the terms of this permit to change the final effluent limitations for total phosphorus and/or ortho-phosphorus specified in this permit.

e. Hydro-dynamic modeling. Special Condition R, *Hydro-Dynamic Modeling*, as added by the Board in its February 7, 2008 appeal order, reads as follows:

R. HYDRO-DYNAMIC MODELING

By March 1, 2008, the permittee 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 the permittee 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 the permittee and opportunity for public hearing, the Department reserves the right to re-open and modify the terms of this permit to require changes in final effluent limitations and/or changes in oxygen injections system(s) and/or oxygen injection rates, or changes in other equivalent measures, as may be deemed necessary to ensure that permittee's wastewater discharge, either by itself or in combination with other discharges, does not cause or contribute to the violation of Class C water quality standards in Gulf Island Pond.

6. ACTIONS SINCE ISSUANCE OF APPEAL ORDERS

a. 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.

b. 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.

c. Upgrade of oxygen injection system. In its February 7, 2008 appeal orders, the Board included a condition that, by June 1, 2008, Verso Paper, Rumford Paper or FPL Energy, 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.

d. 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.

e. Renewal of Fraser Paper waste water 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.[5]

f. 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.

g. 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 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.

[5] 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.

h. 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.

i. Conceptual Plan for additional oxygen. In its February 7, 2008 appeal orders, the Board included a condition that, by June 1, 2009, Verso Paper, Rumford Paper or FPL Energy, 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 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.

j. Department 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,[6] and an increase in the final effluent limit for ortho-phosphorus from the Verso mill, that would meet water quality standards without the need for additional oxygen injection.

[6] 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.

k. 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.

l. 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%,[7] 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.

In a letter dated January 5, 2010 to the Department, the permittee proposed a reduction in the monthly average BOD mass limitation to 4,400 lbs/day that is being incorporated into this permit modification.

This permit modification is increasing the final ortho-phosphorus limit to 28 lbs/day based on results of an April 2, 2009 report to the Department, by HydroAnalysis, Inc. stating that 6 pounds of ortho-phosphorus from point sources to Gulf Island Pond could be allocated without causing algal blooms. All 6 pounds are being allocated to Verso Paper as it has the most stringent ortho-phosphorus limits of any point source discharger and it is the only discharge currently operating with an interim ortho-phosphorus limit.

m. Request For Modification. By letter dated January 5, 2010, Verso Paper requested that the terms and conditions of the 9/21/05 MEPDES permit be modified to reflect the new oxygen injection rates proposed by the GIPOP Partnership.

[7] 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.

n. Notification to Verso Paper. By letter dated January 29, 2010, the Department notified Verso Paper that, pursuant to Special Conditions K(b) and P of the September 21, 2005 permit for the Jay pulp and paper mill, as modified on appeal by the Board, and in response to Verso Paper's request, the Department intended to modify the existing permit to change the specified rates of oxygen injection and final effluent limits for BOD and ortho-phosphorus. In this letter, the Department also notified Verso Paper of its opportunity to request a hearing prior to final action by the Department on this matter.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the waterbody to meet standards for Class C classification.

8. PUBLIC COMMENTS

The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

Telephone (207) 287-7693
Fax (207) 287-3435
email: gregg.wood@maine.gov

10. 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.

11. 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.

12. 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 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.[8]

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.

[8] 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.

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 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.

NRCM states in its comments that existing case law brings into question whether the proposed relaxation of Verso's final ortho-phosphorus limit will violate the antidegradation provisions of the Clean Water Act.

ARA states in its comments that excessive phosphorus discharges are currently impacting attainment of designated uses on the river even without an algal bloom occurring, and that there is no legally valid reason for relaxing the final ortho-phosphorus limit.

In response to NRCM's comments, the Department has based the proposed final ortho-phosphorus limit of 28 lbs/day for Verso's Jay mill on the results of water quality modeling that predicts that chlorophyll-a concentrations in Gulf Island Pond will remain below the threshold conditions for algal blooms with an increase of 6 lbs/day in allowable ortho-phosphorus point source loading to the pond, as compared to the final ortho-phosphorus limits established in the Board's February 8, 2008 appeal Orders. This modeling was conducted after the Department's water quality model was revised and recalibrated following the recalculation of the sediment area that is contributing phosphorus to the pond, as directed by the Board.

In its appeal Orders for the Verso and Rumford mills, the Board included a condition providing that, after revision of the water quality model for Gulf Island Pond to recalculate the area of sediment in contact with the pond, the Department reserves the right to re-open and modify the terms of the permits to change the final effluent limits for total phosphorus and/or ortho-phosphorus specified in the permits. In proposing this modification for the Verso mill, the Department is simply exercising its authority pursuant to this condition to revise the ortho-phosphorus limit in accordance with the recalibrate model.

In response to ARA's comments, in its May 2005 TMDL, the Department concluded that, based on the available monitoring data, a pond-averaged chlorophyll-a concentration of 10 ppb appears to be a good predictor of algal blooms that would impair the designated uses of Gulf Island Pond. As stated above, the Department has based the proposed final ortho-phosphorus limit of 28 lbs/day for Verso's Jay mill on the results of water quality

modeling that predicts that chlorophyll-a concentrations in Gulf Island Pond will remain below the threshold conditions for algal blooms with an increase of 6 lbs/day in allowable ortho-phosphorus point source loading to the pond, as compared to the final ortho-phosphorus limits established in the Board's February 8, 2008 appeal Orders. This modeling was conducted after the Department's water quality model was revised and recalibrated following the recalculation of the sediment area that is contributing phosphorus to the pond, as directed by the Board.

In its appeal Orders, the Board rejected Verso's arguments that the Department had failed to establish a reasonable measure for algae blooms, and that the correlation between chlorophyll-a, algae blooms and phosphorus assumed by the Department is scientifically unsupported. ARA does not offer a scientific basis for any alternative phosphorus limits or chlorophyll-a concentrations. In addition, water quality monitoring indicates that no algae blooms have been observed in Gulf Island Pond during the past five summers.

Therefore, there is no basis in this record to revisit the Board's prior conclusions on this issue, and the final summer ortho-phosphorus limit set forth in the January 29, 2010 draft Order is retained in the final modification Order for the Verso mill.

The Department notes that the September 21, 2005 permit for the Verso mill contains a condition under which the Department may modify the permit to, among other things, change effluent limitations based on new information considering ambient water quality conditions. This authority to modify the Verso permit extends to modifying the final phosphorus limits for the Verso mill in the event that water quality monitoring reveals that these limits are not sufficient to control algae blooms and thus are not sufficient to bring Gulf Island Pond into compliance with Class C water quality standards. This condition is not affected by this modification Order.

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.