STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

AVERY T. DAY
ACTING COMMISSIONER

December 2, 2015

Mr. Thomas Griffin
Environmental Manager
S.D. Warren Company
1329 Waterville Road
Skowhegan, ME 04976
e-mail: thomas.griffin@sappi.com

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0021521
Maine Waste Discharge License (WDL) #W000385-5N-L-R
Final Permit

Dear Mr. Griffin:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL **renewal** which was approved by the Department of Environmental Protection. Please read this permit/license renewal 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 Water Quality

Enc.
cc: Denise Behr, DEP/EMRO
Olga Vergara, USEPA
Sandy Mojica, USEPA
Marelyn Vega, USEPA

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

DEPARTMENT ORDER

IN THE MATTER OF

S. D. WARREN COMPANY	)	MAINE POLLUTANT DISCHARGE
SKOWHEGAN, SOMERSET COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PULP & PAPER MANUFACTURING FACILITY	)	AND
ME0021521	)	WASTE DISCHARGE LICENSE
W000385-5N-L-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the *Federal Water Pollution Control Act*, Title 33 USC, §1251, *Conditions of licenses*, 38 M.R.S.A. § 414-A, and applicable regulations, the Maine Department of Environmental Protection (Department hereinafter) has considered the application of the S.D. WARREN COMPANY d/b/a Sappi North America (SDW/permittee hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

SDW has submitted a timely and complete application to the Department for the renewal of Waste Discharge License (WDL) #W000385-5N-J-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0021521, (permit hereinafter) which was issued by the Department for SDW's Somerset Operations mill on January 23, 2009 for a five-year term. The permit authorized the discharge of 1) up to a monthly average of 46.5 million gallons per day (MGD) of secondary treated process and other miscellaneous low volume waste waters associated with the pulp and papermaking process including but not limited to, treated sanitary waste waters, cooling waters, treated landfill leachate from SDW's on site landfill, treated residuals storage pad leachate, up to 0.40 MGD of treated leachate from Waste Management's Crossroad commercial landfill in Norridgewock, treated waste water from an on-site precipitated calcium carbonate plant to the Kennebec River, Class C, in Fairfield, Maine and, 2) a unspecified quantity of backwash waters from the river intake debris screen to the Kennebec River, Class B, in Skowhegan, Maine.

The 1/23/09 permit also authorized the discharge of an unspecified quantity of storm water runoff via five (5) outfall points (Outfalls #002A, #003A, and #004A to the Kennebec River, #005 to Cragin Brook and Outfall #007A to an unnamed tributary to the Kennebec River).

PERMIT SUMMARY

This permit is carrying forward all the terms and conditions of the 1/23/09 permit except that this permit is:

Outfall #001A – Secondary Treated Waste Water

1. Eliminating authorization to discharge storm water runoff Outfalls #002A, #003A, #004A, #005A and Outfall #007A. The permittee is seeking authorization to discharge the storm water runoff from these outfalls via *MEPDES Multi-Sector General Permit – Stormwater Discharge Associated With Industrial Activity*, dated April 26, 2011.

2. Incorporating the interim average and maximum concentration limitations for total mercury that were originally established in a May 23, 2000, permit modification.

3. Eliminating Special Condition K, *Color,* of the previous permit as footnote 4 of this permit contains sufficient information to determine on-going compliance with the quarterly average limitation.

4. Eliminating the water quality based mass and concentration limitations for bis (2-ethylhexyl) phthalate as the most current statistical evaluation of analytical chemistry results on file at the Department indicates the discharge no longer has a reasonable potential to exceed the chronic AWQC for bis (2-ethylhexyl) phthalate.

5. Increasing the water quality based mass limitation for total aluminum given the most current statistical evaluation of analytical chemistry results on file at the Department utilizing the 15% reserve capacity allocation results in a higher allocation of aluminum to SDW.

6. Eliminating the concentration limit for total aluminum pursuant to Maine law 38 MRSA §464(k) that states in part "*...any limitations for metals in a waste discharge license may be expressed only as mass-based limits.*"

7. Increasing the technology based mass limitation for adsorbable organic halides (AOX) as a result of a slight increase in production of unbleached kraft pulp from 1620 tons/day to 1,672 tons/day since issuance of the previous permit.

8. Eliminating the seasonal monthly average and daily maximum mass and concentration reporting requirements for total phosphorus as the discharge does not have a reasonable potential to exceed the U.S. Environmental Protection Agency's ambient water quality goal of 0.100 mg/L.

9. Authorizing the permittee to convey methanol storage tank bottom waters to the waste water treatment facility.

PERMIT SUMMARY (cont'd)

Outfall #100 (Bleach plant effluent– internal waste stream)

10. Increasing the technology based mass limitations for chloroform as a result of a slight increase in production of unbleached kraft pulp from 1620 tons/day to 1,672 tons/day since issuance of the previous permit.

11. Eliminating the need to monitor and report flow on the bleach plant effluent on a daily basis when the permittee is not sampling for the chloroform or the 12 phenolic compounds.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated October 23, 2015, and subject to the Conditions listed below, the Department makes the following conclusions:

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

2. The discharges, either individually 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, *Classification of Maine waters*, 38 M.R.S.A. § 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) Where the standards of classification of the receiving water bodies are not met, the discharges will not cause or contribute to the failure of the water bodies 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

CONCLUSIONS (cont'd)

(e) Where a discharge will result in lowering the existing water 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 discharges will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S.A. § 414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of the S.D. WARREN COMPANY to discharge: 1) up to a monthly average of 46.5 million gallons per day (MGD) of secondary treated process and other miscellaneous low volume waste waters associated with the pulp and papermaking process including but not limited to, treated sanitary waste waters, cooling waters, treated landfill leachate from SDW's on site landfill, treated residuals storage pad leachate, treated leachate from Waste Management's Crossroad commercial landfill in Norridgewock, treated waste water from an on-site precipitated calcium carbonate plant, treated storm water from the mill's wood yard and treated methanol tank bottoms to the Kennebec River, Class C in Fairfield and, 2) a unspecified quantity of backwash waters from the river intake debris screen to the Kennebec River, Class B, in Skowhegan, Maine, 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.

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

3. This permit becomes effective upon the date of signature below and expires at midnight five (5) years after that date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S.A. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (effective October 19, 2015)].

ACTION (cont'd)

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS 4th DAY OF December, 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Michael Kulus
For Avery T. Day, Acting Commissioner

Date of initial receipt of application: December 6, 2013

Date of application acceptance: December 9, 2013

Filed
DEC 04 2015
State of Maine
Board of Environmental Protection

Date filed with Board of Environmental Protection _____

This Order prepared by Gregg Wood, BUREAU OF LAND & WATER QUALITY

ME0021521 2015 11/25/15

SPECIAL CONDITION

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge secondary treated waste waters, including bleach plant effluent (internal waste stream) to the Kennebec River via **Outfall #001A**. Such discharges shall be limited and monitored by the permittee as specified below[(1)]:

OUTFALL #001A – Secondary treated waste waters

Effluent Characteristic	Discharge Limitations					Minimum Monitoring Requirements	
	Monthly 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]*	46.5 MGD *[03]*	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder*[RC]*
BOD_5 *[00310]*							
June 1 – September 30	9,400 lbs./day	16,600 lbs./day	---	---	---	3/Week *[03/07]*	Composite *[24]*
October 1 – May 31	14,850 lbs./day *[26]*	32,670 lbs./day *[26]*	---	---	---		
TSS *[00530]*							
June 1 – September 30	30,000 lbs./day	50,000 lbs./day	---	---	---	3/Week *[03/07]*	Composite *[24]*
October 1 – May 31	41,820 lbs./day *[26]*	77,850 lbs./day *[26]*	---	---	---		
Temperature *[00011]*							
June 1 – September 30	---	---	---	---	105°F *[15]*	1/Day *[01/01]*	Measure *[MS]*
October 1 – May 31	---	---	---	---	Report °F *[15]*	1/Week *[01/07]*	
Temperature Difference *[70013]* *June 1 – September 30*	---	---	---	0.4°F[(2)] *[15]*	0.5°F[(3)] *[15]*	1/Day*[01/01]*	Calculate *[CA]*
pH *[00400]*	---	--	---	---	5.0 – 9.0 SU *[12]*	1/Day *[01/01]*	Grab *[GR]*

The italicized numeric values bracketed in the table above and subsequent tables are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 11-15 of this permit for the applicable footnotes.

SPECIAL CONDITIONS

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

OUTFALL #001A – Secondary treated waste waters (cont'd)

Effluent Characteristic	Discharge Limitations					Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
	as specified	as specified	as specified	as specified	as specified	as specified	as specified
Color[4] *[00084]*	175 lbs./ton *[42]*	---	---	---	---	3/Week *[03/07]*	Calculate *[CA]*
Adsorbable Organic Halides[5] (AOX) *[03594]*	2,083 lbs./day *[26]*	3,180 lbs./day *[26]*	---	---	---	1/Week *[01/07]*	Composite *[24]*
Chemical Oxygen Demand (COD) *[81017]*	Report lbs./day *[26]*	Report lbs./day *[26]*	---	---	---	1/Week *[01/07]*	Composite *[24]*
Mercury (Total) [6] *[71900]*			28.5 ng/L *[3M]*	---	42.7 ng/L *[3M]*	1/Year *[01/YR]*	Grab *[GR]*

FOOTNOTES: See Pages 11-15 of this permit for the applicable footnotes.

SPECIAL CONDITIONS

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

2. Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements for **Outfall #001A** [1].

SURVEILLANCE LEVEL - Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit), the permittee shall conduct surveillance level testing as follows:

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity [7]						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Analytical Chemistry [8,10] *[51477]*	---	---	---	Report ug/L *[28]*	1/2 Years *[01/2Y]*	Composite / Grab *[24/GR]*
Priority Pollutant [9,10] *[50008]*	---	---	---	---	---	---
Aluminum (Total) *[01105]*	994 lbs./day *[26]*	---	Report mg/L *[19]*	---	2/Year *[02/YR]*	Composite *[24]*

FOOTNOTES: See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

3. Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements for **Outfall #001A** [(1)].

SCREENING LEVEL - Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee shall conduct screening level testing as follows.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity [(7)]						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Analytical Chemistry [(8,10)] *[51477]*	---	---	---	Report ug/L *[28]*	1/ Quarter *[01/90]*	Composite / Grab *[24/GR]*
Priority Pollutant [(9)] *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite / Grab *[24/GR]*
Aluminum (Total) *[01105]*	994 lbs./day *[26]*	---	Report mg/L *[19]*	---	1/Quarter *[01/90]*	Composite *[24]*

FOOTNOTES: See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

4. The permittee is authorized to discharge bleach plant effluent via **Outfall #100** (internal waste stream) to the secondary treatment system for discharge to the Kennebec River via Outfall #001A. Such internal waste stream discharges shall be limited and monitored by the permittee as specified below[1]:

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	---	Report MGD *[03]*	---	---	1/Day [11] *[01/01]*	Measure *[MS]*
2,3,7,8 TCDD (Dioxin) [12] *[34675]*	---	---	---	<10 pg/L [13] *[3L]*	1/Year *[01/YR]*	Composite *[24]*
2,3,7,8 TCDF (Furan) [12] *[38691]*	---	---	---	<10 pg/L [13] *[3L]*	1/Year *[01/YR]*	Composite *[24]*
Trichlorosyringol [14] *[73054]*	---	---	---	<2.5 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
3,4,5-Trichlorocatechol [14] *[73037]*	---	---	---	<5.0 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
3,4,,6- Trichlorocatechol [14] *[51024]*	---	---	---	<5.0 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
3,4,5-Trichloroguaiacol [14] *[61024]*	---	---	---	<2.5 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
3,4,6-Trichloroguaiacol [14] *[51022]*	---	---	---	<2.5 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
4,5,6-Trichloroguaiacol [14] *[73088]*	---	---	---	<2.5 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
2,4,5-Trichlorophenol [14] *[61023]*	---	---	---	<2.5 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
2,4,6-Trichlorophenol [14] *[34621]*	---	---	---	<2.5 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
Tetrachlorocatechol [14] *[79850]*	---	---	---	<5.0 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
Tetrachloroguaiacol [14] *[73047]*	---	---	---	<5.0 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
2,3,4,6-Tetrachlorophenol [14] *[77770]*	---	---	---	<2.5 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
Pentachlorophenol [14] *[39032]*	---	---	---	<5.0 ug/L [13] *[28]*	2/Year *[02/YR]*	Composite *[24]*
Chloroform [15] *[32106]*	13.8 lbs./day *[26]*	23.1 lbs./day *[26]*	---	---	1/Quarter *[01/90]*	Grab *[24]*

FOOTNOTES: See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

Footnotes:

Outfall #001A – Secondary Treated Waste Water

1. **Sampling** – Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services for waste water. Samples that are sent to a POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (effective April 1, 2010). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report.

2. **Temperature Difference** (Increase of the ambient receiving water temperature) – This is a weekly rolling average limitation when the receiving water temperature is ≥66°F and <73°F. See Special Condition I, *Temperature Difference*, of this permit for the equation to calculate the river temperature increase (RTI).

3. **Temperature Difference** (Increase of the ambient receiving water temperature) – This is a daily maximum limitation when the receiving water temperature is ≥73°F. See Special Condition I, *Temperature Difference,* of this permit for the equation to calculate the RTI.

4. **Color** – The limitation is a calendar quarterly average limitation. Quarterly results must be reported in the monthly Discharge Monitoring Reports (DMRs) for the months of March, June, September and December of each calendar year. The permittee must monitor the true color (at a pH of 7.6 SU) in the effluent from Outfall #001A at a minimum of three (3) times per week. The calculated specific mass discharged, expressed as lbs./ton of unbleached pulp produced, must be based on air-dried tons of brown stock entering the bleach plant. A color pollution unit is equivalent to a platinum cobalt color unit as described in NCASI Technical Document #253. The mass discharge of color is defined as the number of color pollution units (cpu) multiplied by the volume of effluent discharged in million gallons per day multiplied by 8.34.

SPECIAL CONDITIONS

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

Footnotes:

Outfall #001A – Secondary Treated Waste Water

5. **AOX** – The analytical method to be used to determine adsorbable organic halides shall be USEPA Method 1650 for which a ML (Minimum Level) of 20 ug/l shall be attained. The ML is defined as the level at which the analytical system gives recognizable signals and an acceptable calibration point. The specific mass discharged must be based on air-dried tons of brown stock entering the bleach plant at the stage where chlorine-based compounds are first added.

6. **Mercury** – All mercury sampling (1/Year) required to determine compliance with interim limitations established pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001) must be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analyses must be conducted in accordance with EPA Method 1631E, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry. See **Attachment A,** *Effluent Mercury Test Report*, of this permit for the Department's form for reporting mercury test results.

   Compliance with the monthly average limitation established in this permit will be based on the cumulative arithmetic mean of all mercury tests results that were conducted utilizing sampling Methods 1669 and analysis Method 1631E on file with the Department for this facility.

7. **Whole effluent toxicity (WET) testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 3.7% and 3.0%, respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 27.1:1 and 33.2:1. respectively, for Outfall #001A.

   a. **Surveillance level testing** – Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit), the permittee must conduct surveillance level WET testing at a minimum frequency of once every two years (reduced testing) for the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*). Tests must be conducted in different calendar quarters.

SPECIAL CONDITIONS

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

Footnotes:

Outfall #001A – Secondary Treated Waste Water

b. **Screening level testing** – Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee must conduct screening level WET testing at a minimum frequency of twice per year for the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*). Screening tests must be conducted with one test in January to June and one test 6 months later pursuant to 06-096 CMR 530(2)(D)(2).

WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee must evaluate test results being submitted and identify to the Department possible exceedances of the critical acute and chronic water quality thresholds specified above.

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals as modified by Department protocol for salmonids. See **Attachment B** of this permit for the Department protocol.

a. Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002, EPA-821-R-02-013.

b. Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002, EPA-821-R-02-012.

Results of WET tests must be reported on the "*Whole Effluent Toxicity Report Fresh Waters*" form included as **Attachment C** of this permit each time a WET test is performed. Each time a WET test is performed, the permittee must sample and analyze for the parameters in the WET Chemistry and the Analytical Chemistry sections of the Department form entitled, *Maine Department of Environmental Protection, WET and Chemical Specific Data Report Form*. See **Attachment D** of this permit.

SPECIAL CONDITIONS

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

Footnotes:

Outfall #001A – Secondary Treated Waste Water

8. **Analytical chemistry** – Refers to a suite of chemicals in **Attachment D** of this permit.

   a. **Surveillance level testing** – Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit), the permittee must conduct analytical chemistry testing at a minimum frequency of once every two years (reduced testing), except for those analytical chemistry parameter(s) otherwise regulated in this permit. Tests must be conducted in different calendar quarters.

   b. **Screening level testing** – Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement the permittee must conduct analytical chemistry testing at a minimum frequency of once per calendar quarter for four consecutive calendar quarters, except for those analytical chemistry parameter(s) otherwise regulated in this permit.

9. **Priority pollutant testing** – Refers to a suite of chemicals in **Attachment D** of this permit.

   a. **Surveillance level testing** - Not required pursuant to 06-096 CMR 530.

   b. **Screening level testing** – Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee must conduct screening level priority pollutant testing at a minimum frequency of once per year, except for those analytical chemistry parameter(s) otherwise regulated in this permit.

10. **Priority pollutant and analytical chemistry** - Testing must be conducted on samples collected at the same time as those collected for whole effluent toxicity tests when applicable. Priority pollutant and analytical chemistry testing must be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department.

SPECIAL CONDITIONS

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

Footnotes:

Outfall #001A – Secondary Treated Waste Water

Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee must evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005). For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "N9" monitoring not required this period.

Outfall #100 – Bleach Plant

11. **Flow - 1/Day Sampling** – The permittee is only required to calculate and report flows on days when sampling is being conducted for chloroform and or the 12 phenolic compounds.

12. **2,3,7,8 TCDD (Dioxin) and 2,3,7,8 TCDF (Furan)** – The analytical method to be used to determine the concentrations of dioxin and furan shall be USEPA Method 1613B.

13. **Minimum Levels (MLs)** – The limitations established in this permitting action for dioxin, furan and the 12 chlorinated phenolic compounds are equivalent to the MLs established for USEPA Methods 1613B and 1653 respectively. Compliance will be based on the MLs as listed in Special Condition A of this permit. Any level of TCDD/TCDF reported below the ML is not quantifiable and is considered an estimate.

14. **12 Chlorinated phenolic compounds** – The analytical method to be used to determine the concentrations of these compounds shall be USEPA Method 1653.

15. **Chloroform** – The preferred analytical method to be used for chloroform is USEPA Method 1624B for which a ML of 20 ug/l shall be attained. Other approved USEPA methods are 601 and 624, and Standard Method 6210B and 6230B. The permittee must collect separate grab samples from the acid and alkaline bleach plant filtrates for chloroform analysis. Samples to be analyzed for chloroform may be taken over a 32-hour period where a minimum of six (6) grab samples are collected, each grab sample being at least four (4) hours apart but no more than 16 hours apart.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent must not contain a visible oil sheen, foam, or floating solids at any time which would impair the uses designated for the classification of the receiving waters.

2. The effluent must not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the uses designated for the classification of the receiving waters.

3. The effluent must not cause visible discoloration or turbidity in the receiving water which would impair the uses designated for the classification of the receiving waters.

4. Notwithstanding specific conditions of the permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

5. The permittee must not use chlorophenolic-containing biocides.

C. TREATMENT PLANT OPERATOR

The person who has the management responsibility over the treatment facility must hold a Maine **Grade V** certificate (or Registered Maine Professional Engineer) pursuant to *Sewerage Treatment Operators*, 32 M.R.S.A. §§ 4171-4182 and *Regulations for Wastewater Operator Certification*, 06-096 CMR 531 (effective May 8, 2006). All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

D. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only: 1) in accordance with the permittee's General Application for Waste Discharge License, accepted for processing on December 9, 2013; and any supplemental materials filed with the Department after December 9, 2013, 2) in accordance with the terms and conditions of this permit; 3) via Outfall #001A (secondary treated waste waters); and 4) Outfall #006A (backwash water from the river water intake debris screen). Discharges of wastewater from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty four hour reporting*, of this permit.

SPECIAL CONDITIONS

E. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee must notify the Department of the following:

1. Any substantial change (realized or anticipated) in the volume or character of pollutants being introduced into the waste water collection and treatment system.

2. For the purposes of this section, adequate notice must include information on:

   a. The quality and quantity of waste water introduced to the waste water collection and treatment system; and

   b. Any anticipated change in the quality and quantity of the waste water to be discharged from the treatment system.

F. OPERATIONS AND MAINTENANCE (O&M) PLAN

This facility must have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan must provide a systematic approach by which the permittee must at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee must evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan must be kept on-site at all times and made available to Department and USEPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee must submit the updated O&M Plan to their Department inspector for review and comment.

SPECIAL CONDITIONS

G. 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

By December 31 of each calendar year, the permittee must provide the Department with a certification describing any of the following that have occurred since the effective date of this permit *[ICIS Code 75305]*: See **Attachment F** of the Fact Sheet of this permit for an acceptable certification form to satisfy this Special Condition.

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

(d) Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge.

(e) Increases in the type or volume of hauled wastes accepted by the facility.

The Department may require that annual surveillance level toxicity testing be re-instated if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

H. DIOXIN/FURAN CERTIFICATION

In lieu of 1/Month monitoring of the bleach plant waste stream for 2,3,7,8 TCDD (dioxin) and 2,3,7,8 TCDF (furan) (40 CFR Part 430), **by December 31 of each calendar year** the permittee must sample (1/Year) and report the results for said parameters and provide the Department with a certification stating:

a. Elemental chlorine gas or hypochlorite was not used in the bleaching of pulp.

b. The chlorine dioxide (ClO2) generating plant has been operated in a manner which minimizes or eliminates byproduct elemental chlorine generation per the manufacturers/suppliers recommendations.

c. Purchasing procedures are in place for the procurement of defoamers or other additives without elevated levels of known dioxin precursors.

d. Fundamental design changes to the ClO2 plant and/or bleach plant operation have been reported to the Department and said reports explained the reason(s) for the change and any possible adverse consequences if any.

SPECIAL CONDITIONS

I. TEMPERATURE DIFFERENCE

During the period June 1 to September 30, when the ambient receiving water temperature is ≥66°F and <73°F, the permittee is limited to a thermal discharge that will not increase the ambient receiving water temperature by more than 0.4°F based on a weekly (7 days) rolling average calculation. When the ambient receiving water temperature is ≥73°F, the permittee is limited to a thermal discharge that will not increase the ambient receiving water temperature by more than 0.5°F based on a daily calculation. For each operating day during the applicable limitation period, the permittee shall calculate the River Temperature Increase (RTI) associated with the thermal discharge from Outfall #001A according to the following equation:

$$RTI\ (^{\circ}F) = \frac{Qe\ (Te - Tr)}{Qr}$$

where,

Qr = Ambient receiving water flow in gpd or MGD (must be like units as Qe)
Qe = Effluent flow in gpd or MGD (must be like units as Qr)
Te = Effluent temperature in °F
Tr = Ambient receiving water (mill intake) temperature in °F

Receiving water flow estimates (Qr) must be obtained calculated by taking the average daily flow of the Kennebec River at Madison (USGS gauge #01047150), add the average daily flow of the Sandy River at Mercer (USGS gauge 01048000) times 1.29 and then add the average daily flow of the East Branch of the Wesserunsett near Athens (USGS gauge 01048220) times 7.7. The permittee must adhere to mathematical protocols for significant figures and rounding the calculated RTI values. All RTI values reported to the Department on the monthly Discharge Monitoring Reports (DMRs) for compliance with the weekly rolling average and daily maximum ΔT limitations of 0.4°F and 0.5°F, respectively, must be rounded to the nearest 0.1°F.

Between June 1 and September 30 of each year, the permittee must monitor the discharge from Outfall #001A and the ambient receiving waters on a daily basis for the parameters in the equation on the previous page. The daily recorded and calculated values must be reported to the Department as an attachment to the DMRs for the months of June, July, August and September of each year.

Example DMR Reporting Form Attachment

Date	Qr (MGD)	Qe (MGD)	Tr(°F)	Te(°F)	RTI(°F)
6/1/02	1,544	25.2	67	91	0.4
6/2/02	1,710	23.8	67	89	0.3

SPECIAL CONDITIONS

J. LANDFILL LEACHATE

The permittee is authorized to accept a maximum of 0.400 MGD of landfill leachate and floor drain water from the Waste Management Disposal Services of Maine's facility in Norridgewock, Maine into the waste water treatment facility. Tests must be conducted on samples representative of leachate and floor drain waters accepted at the mill **at a minimum frequency of three times per year** (a minimum of one test in each of the following periods: March – April, July – August, and November – December, unless otherwise specified by the Department) and must include the following parameters: pH, oil & grease, total suspended solids, BOD, cadmium, chromium copper, lead, mercury, nickel, zinc, arsenic, barium, selenium, silver, chemical oxygen demand and *E. coli* bacteria.

The permittee must submit test results of leachate analysis as an attachment to the corresponding Discharge Monitoring Report. As an attachment to the test results submitted with the DMR, the permittee must report the daily maximum and monthly average volumes of leachate received from Waste Management Disposal Services for the corresponding time frame.

K. BEST MANAGEMENT PRACTICES PLAN

1. SPECIALIZED DEFINITIONS

   a. **Action Level:** A daily pollutant loading that when exceeded triggers investigative or corrective action. Mills determine action levels by a statistical analysis of six months of daily measurements collected at the mill. For example, the lower action level may be the 75th percentile of the running seven-day averages (that value exceeded by 25 percent of the running seven-day averages) and the upper action level may be the 90th percentile of the running seven-day averages (that value exceeded by 10 percent of the running seven-day averages).

   b. **Equipment Items in Spent Pulping Liquor, Soap, and Turpentine Service:** Any process vessel, storage tank, pumping system, evaporator, heat exchanger, recovery furnace or boiler, pipeline, valve, fitting, or other device that contains, processes, transports, or comes into contact with pulping liquor, soap, or turpentine. Sometimes referred to as "equipment items."

   c. **Immediate Process Area:** The location at the mill where pulping, screening, knotting, pulp washing, pulping liquor concentration, pulping liquor processing, and chemical recovery facilities are located, generally the battery limits of the aforementioned processes. "Immediate process area" includes spent pulping liquor storage and spill control tanks located at the mill, whether or not they are located in the immediate process area.

SPECIAL CONDITIONS

K. BEST MANAGEMENT PRACTICES PLAN (cont'd)

d. **Intentional Diversion**: The planned removal of spent pulping liquor, soap, or turpentine from equipment items in spent pulping liquor, soap, or turpentine service by the mill for any purpose including, but not limited to, maintenance, grade changes, or process shutdowns.

e. **Mill**: The owner or operator of a direct or indirect discharging pulp, paper, or paperboard manufacturing facility subject to this section.

f. **Senior Technical Manager**: The person designated by the mill manager to review the BMP Plan. The senior technical manager shall be the chief engineer at the mill, the manager of pulping and chemical recovery operations, or other such responsible person designated by the mill manager who has knowledge of and responsibility for pulping and chemical recovery operations.

g. **Soap**: The product of reaction between the alkali in kraft pulping liquor and fatty acid portions of the wood, which precipitate out when water is evaporated from the spent pulping liquor.

h. **Spent Pulping Liquor**: For kraft and soda mills "spent pulping liquor" means black liquor that is used, generated, stored, or processed at any point in the pulping and chemical recovery processes. For sulfite mills "spent pulping liquor" means any intermediate, final, or used chemical solution that is used, generated, stored, or processed at any point in the sulfite pulping and chemical recovery processes (e.g., ammonium-, calcium-, magnesium-, or sodium-based sulfite liquors.

i. **Turpentine**: A mixture of terpenes, principally pinene, obtained by the steam distillation of pine gum recovered from the condensation of digester relief gases from the cooking of softwoods by the kraft pulping process. Sometimes referred to as sulfate turpentine.

2. REQUIREMENT TO IMPLEMENT BEST MANAGEMENT PRACTICES

The permittee must implement the Best Management Practices (BMPs) specified in paragraphs 2(a) through 2(j) (below). BMPs must be developed according to best engineering practices and must be implemented in a manner that takes into account the specific circumstances at each mill. The BMPs are as follows:

a. The permittee must return spilled or diverted spent pulping liquors, soap, and turpentine to the process to the maximum extent practicable as determined by the mill, recover such materials outside the process, or discharge spilled or diverted material at a rate that does not disrupt the receiving wastewater treatment system.

SPECIAL CONDITIONS

K. BEST MANAGEMENT PRACTICES PLAN (cont'd)

b. The permittee must establish a program to identify and repair leaking equipment items. This program must include:

(i) Regular visual inspections (e.g., once per day) of process areas with equipment items in spent pulping liquor, soap, and turpentine service;

(ii) Immediate repairs of leaking equipment items, when possible. Leaking equipment items that cannot be repaired during normal operations must be identified, temporary means for mitigating the leaks must be provided, and the leaking equipment items repaired during the next maintenance outage;

(iii) Identification of conditions under which production will be curtailed or halted to repair leaking equipment items or to prevent pulping liquor, soap, and turpentine leaks and spills; and

(iv) A means for tracking repairs over time to identify those equipment items where upgrade or replacement may be warranted based on frequency and severity of leaks, spills, or failures.

c. The permittee must operate continuous, automatic monitoring systems that the mill determines are necessary to detect and control leaks, spills, and intentional diversions of spent pulping liquor, soap, and turpentine. These monitoring systems should be integrated with the mill process control system and may include, e.g., high level monitors and alarms on storage tanks; process area conductivity (or pH) monitors and alarms; and process area sewer, process wastewater, and wastewater treatment plant conductivity (or pH) monitors and alarms.

d. The permittee must establish a program of initial and refresher training of operators, maintenance personnel, and other technical and supervisory personnel who have responsibility for operating, maintaining, or supervising the operation and maintenance of equipment items in spent pulping liquor, soap, and turpentine service. The refresher training must be conducted at least annually and the training program must be documented and made available to Department and USEPA personnel for inspection upon request.

e. The permittee must prepare a brief report that evaluates each spill of spent pulping liquor, soap, or turpentine that is not contained at the immediate process area and any intentional diversion of spent pulping liquor, soap, or turpentine that is not contained at the immediate process area. The report must describe the equipment items involved, the circumstances leading to the incident, the effectiveness of the corrective actions taken to contain and recover the spill or intentional diversion, and plans to develop changes to equipment and operating and maintenance practices as necessary to prevent recurrence. The reports shall be made available to Department and USEPA personnel for inspection upon request. Discussion of the reports must be included as part of the annual refresher training.

SPECIAL CONDITIONS

K. BEST MANAGEMENT PRACTICES PLAN (cont'd)

f. The permittee must establish a program to review any planned modifications to the pulping and chemical recovery facilities and any construction activities in the pulping and chemical recovery areas before these activities commence. The purpose of such review is to prevent leaks and spills of spent pulping liquor, soap, and turpentine during the planned modifications, and to ensure that construction and supervisory personnel are aware of possible liquor diversions and of the requirement to prevent leaks and spills of spent pulping liquors, soap, and turpentine during construction.

g. The permittee must install and maintain secondary containment (i.e., containment constructed of materials impervious to pulping liquors) for spent pulping liquor bulk storage tanks equivalent to the volume of the largest tank plus sufficient freeboard for precipitation. An annual tank integrity testing program, if coupled with other containment or diversion structures, may be substituted for secondary containment for spent pulping liquor bulk storage tanks.

h. The permittee must install and maintain secondary containment for turpentine bulk storage tanks.

i. The permittee must install and maintain curbing, diking or other means of isolating soap and turpentine processing and loading areas from the wastewater treatment facilities.

j. The mill must conduct wastewater monitoring to detect leaks and spills, to track the effectiveness of the BMPs, and to detect trends in spent pulping liquor losses. Such monitoring must be performed in accordance with paragraph 7.

3. AMENDMENT OF BMP PLAN

a. The permittee must amend its BMP Plan whenever there is a change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, turpentine, or soap from the immediate process areas.

b. **The permittee must complete a review and evaluation of the BMP Plan five years after the first BMP Plan is prepared and, except as provided in paragraph 3.a. (of this section above), once every five years thereafter.** As a result of this review and evaluation, the permittee must amend the BMP Plan within three months of the review if the mill determines that any new or modified management practices and engineered controls are necessary to reduce significantly the likelihood of spent pulping liquor, soap, and turpentine leaks, spills, or intentional diversions from the immediate process areas, including a schedule for implementation of such practices and controls.

SPECIAL CONDITIONS

K. BEST MANAGEMENT PRACTICES PLAN (cont'd)

4. REVIEW AND CERTIFICATION OF BMP PLAN

The BMP Plan, and any amendments, must be reviewed by the senior technical manager at the mill and approved and signed by the mill manager. Any person signing the BMP Plan or its amendments must certify to the Permitting Authority under penalty of law that the BMP Plan (or its amendments) has been prepared in accordance with good engineering practices and in accordance with this regulation. The mill is not required to obtain approval from the Permitting Authority of the BMP Plan or any amendments.

5. RECORD KEEPING REQUIREMENTS

a. The permittee must maintain on its premises a complete copy of the current BMP Plan and the records specified in paragraph 5(b) (below) and must make such BMP Plan and records available to the Permitting Authority or his or her designee for review upon request.

b. The mill must maintain the following records for three years from the date they are created:

(i) Records tracking the repairs performed in accordance with the repair program described in paragraph 2(b);

(ii) Records of initial and refresher training conducted in accordance with paragraph 2(d);

(iii) Reports prepared in accordance with paragraph 2(e) of this section; and

(iv) Records of monitoring required by paragraphs 2(j) and 7.

6. ESTABLISHMENT OF WASTEWATER TREATMENT SYSTEM INFLUENT ACTION LEVELS

a. The permittee must conduct a monitoring program, described in paragraph 6(b), for the purpose of defining wastewater treatment system influent characteristics (or action levels), described in paragraph 6(c), that will trigger requirements to initiate investigations on BMP effectiveness and to take corrective action.

SPECIAL CONDITIONS

K. BEST MANAGEMENT PRACTICES PLAN (cont'd)

b. The permittee must employ the following procedures in order to develop the required action levels:

(i) Monitoring parameters. The permittee must collect 24-hour composite samples and analyze the samples for a measure of organic content [e.g., Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC)]. Alternatively, the permittee may use a measure related to spent pulping liquor losses measured continuously and averaged over 24 hours (e.g., specific conductivity or color). **[Note: The permittee must receive Department approval prior to using these alternative monitoring parameters (e.g., specific conductivity, color, etc.)]**

(ii) Monitoring locations. The permittee shall select monitoring point(s) in order to isolate possible sources of spent pulping liquor, soap, or turpentine from other possible sources of organic wastewaters that are tributary to the wastewater treatment facilities (e.g., bleach plants, paper machines and secondary fiber operations). The permittee shall maintain an up-to-date schematic depicting the monitoring locations for Department and USEPA personnel upon request.

c. The permittee must complete an initial six-month monitoring program using the procedures specified in paragraph 6(b) and must establish initial action levels based on the results of that program. A wastewater treatment influent action level is a statistically determined pollutant loading determined by a statistical analysis of six months of daily measurements. The action levels must consist of a lower action level, which if exceeded will trigger the investigation requirements described in paragraph 7, and an upper action level, which if exceeded will trigger the corrective action requirements described in paragraph 7.

d. The permittee must complete a second six-month monitoring program using the procedures specified in paragraph 6(b) of this section and must establish revised action levels based on the results of that program. The initial action levels shall remain in effect until replaced by revised action levels.

e. Action levels developed under this paragraph must be revised using six months of monitoring data after any change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, soap, or turpentine from the immediate process areas.

SPECIAL CONDITIONS

K. BEST MANAGEMENT PRACTICES PLAN (cont'd)

7. MONITORING, CORRECTIVE ACTION, AND REPORTING REQUIREMENTS

   a. The permittee must conduct daily monitoring of the influent to the wastewater treatment system in accordance with the procedures described in paragraph 6(b) for the purpose of detecting leaks and spills, tracking the effectiveness of the BMPs, and detecting trends in spent pulping liquor losses.

   b. Whenever monitoring results exceed the lower action level for the period of time specified in the BMP Plan, the permittee must conduct an investigation to determine the cause of such exceedence. Whenever monitoring results exceed the upper action level for the period of time specified in the BMP Plan, the permittee must complete corrective action to bring the wastewater treatment system influent mass loading below the lower action level as soon as practicable.

   c. Although exceedence of the action levels will not constitute violations of the permit, failure to take the actions required by paragraph 7(b) as soon as practicable will be a violation.

   d. The permittee must report to the Department the results of the daily monitoring conducted pursuant to paragraph 7(a). Such reports must include a summary of the monitoring results, the number and dates of exceedence(s) of the applicable action levels, and brief descriptions of any corrective actions taken to respond to such exceedence. **The reports shall be submitted to the Department no later than January 31 of the following year.**

L. REOPENING OF PERMIT FOR MODIFICATION

Upon evaluation of the tests results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

SPECIAL CONDITIONS

M. MONITORING AND REPORTING

Monitoring results obtained during the previous month must be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and must be postmarked by the thirteenth (13^{th}) day of the month or hand-delivered to a Department Regional Office such that the DMRs are received by the Department by the fifteenth (15^{th}) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein must be submitted, unless otherwise specified, to the Department's facility inspector at:

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

Alternatively, if you are submitting an electronic DMR (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory not later than close of business on the 15^{th} day of the month following the completed reporting period. Hard Copy documentation submitted in support of the eDMR must be postmarked on or hand-delivered to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15^{th}) day of the month following the completed reporting period. Electronic documentation in support of the eDMR must be submitted not later than close of business on the 15^{th} day of the month following the completed reporting period.

N. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

Maine Department of Environmental Protection

Effluent Mercury Test Report

Name of Facility: _____ Federal Permit # ME _____

Purpose of this test:
- ☐ Initial limit determination
- ☐ Compliance monitoring for: year _____ calendar quarter _____
- ☐ Supplemental or extra test

SAMPLE COLLECTION INFORMATION

Sampling Date: ___ ___ ___ (mm dd yy) Sampling time: _____ AM/PM

Sampling Location:

Weather Conditions: _____

Please describe any unusual conditions with the influent or at the facility during or preceding the time of sample collection:

Optional test - not required but recommended where possible to allow for the most meaningful evaluation of mercury results:

Suspended Solids _____ mg/L Sample type: _____ Grab (recommended) or _____ Composite

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory: _____

Date of analysis: _____ **Result:** _____ **ng/L (PPT)**

Please Enter Effluent Limits for your facility

Effluent Limits: **Average =** _____ ng/L **Maximum =** _____ ng/L

Please attach any remarks or comments from the laboratory that may have a bearing on the results or their interpretation. If duplicate samples were taken at the same time please report the average.

CERTIFICATION

I certifiy that to the best of my knowledge the foregoing information is correct and representative of conditions at the time of sample collection. The sample for mercury was collected and analyzed using EPA Methods 1669 (clean sampling) and 1631 (trace level analysis) in accordance with instructions from the DEP.

By: _____ Date: _____

Title: _____

PLEASE MAIL THIS FORM TO YOUR ASSIGNED INSPECTOR

ATTACHMENT B

Salmonid Survival and Growth Test

The Salmonid survival and growth test must follow the procedures for the fathead minnow larval survival and growth tests detailed in USEPA's freshwater acute and chronic methods manuals with the following Department modifications:

Species - Brook Trout, *Salvelinus fontinalis*, or other salmonid approved by the Department.

Age - Less than six months old for the first test each year and less than twelve months for subsequent tests.

Size - The largest fish must not be greater than 150% of the smallest.

Loading Rate - < 0.5 g/l/day

Feeding rate - 5% of body weight 3 times daily (15%/day)

Temperature - 12° ± 1°C

Dissolved Oxygen - 6.5 mg/l ,aeration if needed with large bubbles (> 1 mm diameter) at a rate of <100/min

Dilution Water - Receiving water upstream of discharge (or other ambient water approved by the Department)

Dilution Series - A minimum of 5 effluent concentrations (including the instream waste concentrations bracketing acute and chronic dilutions calculated pursuant to Section D); a receiving water control; and control of known suitable water quality

Duration - Acute = 48 hours
- Chronic = 10 days minimum

Test acceptability - Acute = minimum of 90% survival in 2 days
- Chronic = minimum of 80% survival in 10 days; minimum growth of 20 mg/gm/d dry weight in controls, (individual fish weighed, dried at 100°C to constant weight and weighed to 3 significant figures)

ATTACHMENT C

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate, and complete.

Facility Telephone # _____ Date Collected _____ (mm/dd/yy) Date Tested _____ (mm/dd/yy)

Chlorinated? _____ Dechlorinated? _____

Results **% effluent**

	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

	water flea			trout		
	% survival		no. young	% survival		final weight (mg)
QC standard	A>90	C>80	>15/female	A>90	C>80	> 2% increase
lab control						
receiving water control						
conc. 1 (%)						
conc. 2 (%)						
conc. 3 (%)						
conc. 4 (%)						
conc. 5 (%)						
conc. 6 (%)						
stat test used						

place * next to values statistically different from controls

for trout show final wt and % incr for both controls

Reference toxicant

	water flea		trout	
	A-NOEL	C-NOEL	A-NOEL	C-NOEL
toxicant / date				
limits (mg/L)				
results (mg/L)				

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

Report WET chemistry on DEP Form "ToxSheet (Fresh Water Version), March 2007."

ATTACHMENT D

Maine Department of Environmental Protection

WET and Chem

This form is for reporting laboratory data and facility information. Official compliance reviews will be done by DEP.

Facility Name _____ MEPDES # _____ Pipe # _____ Facility Representative Signature _____
To the best of my knowledge this information is true, accurate and complete.

Licensed Flow (MGD)	
Acute dilution factor	
Chronic dilution factor	
Human health dilution factor	
Criteria type: M(arine) or F(resh)	f

Flow for Day (MGD)[1] _____ Flow Avg. for Month (MGD)[2] _____

Date Sample Collected _____ Date Sample Analyzed _____

Laboratory _____ Telephone _____
Address _____
Lab Contact _____ Lab ID # _____

Last Revision July 1, 2015

ERROR WARNING ! Essential facility information is missing. Please check required entries in bold above.

FRESH WATER VERSION

Please see the footnotes on the last page.

	WHOLE EFFLUENT TOXICITY		Effluent Limits, %			Receiving Water or Ambient	Effluent Concentration (ug/L or as noted)		Possible Exceedence [7]		
			Acute	Chronic			WET Result, % Do not enter % sign	Reporting Limit Check	Acute	Chronic	
	Trout - Acute										
	Trout - Chronic										
	Water Flea - Acute										
	Water Flea - Chronic										
	WET CHEMISTRY										
	pH (S.U.) (9)										
	Total Organic Carbon (mg/L)					(8)					
	Total Solids (mg/L)										
	Total Suspended Solids (mg/L)										
	Alkalinity (mg/L)					(8)					
	Specific Conductance (umhos)										
	Total Hardness (mg/L)					(8)					
	Total Magnesium (mg/L)					(8)					
	Total Calcium (mg/L)					(8)					

	ANALYTICAL CHEMISTRY [3]		Effluent Limits, ug/L					Possible Exceedence [7]		
	Also do these tests on the effluent with WET. Testing on the receiving water is optional	Reporting Limit	Acute[6]	Chronic[6]	Health[6]		Reporting Limit Check	Acute	Chronic	Health
	TOTAL RESIDUAL CHLORINE (mg/L) (9)	0.05				NA				
	AMMONIA	NA				(8)				
M	ALUMINUM	NA				(8)				
M	ARSENIC	5				(8)				
M	CADMIUM	1				(8)				
M	CHROMIUM	10				(8)				
M	COPPER	3				(8)				
M	CYANIDE, TOTAL	5				(8)				
	CYANIDE, AVAILABLE [3a]	5				(8)				
M	LEAD	3				(8)				
M	NICKEL	5				(8)				
M	SILVER	1				(8)				
M	ZINC	5				(8)				

Maine Department of Environmental Protection
WET and Chem
This form is for reporting laboratory data and facility information. Official compliance reviews will be done by DEP.

	PRIORITY POLLUTANTS [4]		Effluent Limits					Reporting Limit Check	Possible Exceedence [7]		
		Reporting Limit	Acute[6]	Chronic[6]	Health[6]				Acute	Chronic	Health
M	ANTIMONY	5									
M	BERYLLIUM	2									
M	MERCURY (5)	0.2									
M	SELENIUM	5									
M	THALLIUM	4									
A	2,4,6-TRICHLOROPHENOL	5									
A	2,4-DICHLOROPHENOL	5									
A	2,4-DIMETHYLPHENOL	5									
A	2,4-DINITROPHENOL	45									
A	2-CHLOROPHENOL	5									
A	2-NITROPHENOL	5									
A	4,6 DINITRO-O-CRESOL (2-Methyl-4,6-dinitrophenol)	25									
A	4-NITROPHENOL	20									
A	P-CHLORO-M-CRESOL (3-methyl-4-chlorophenol)+B80	5									
A	PENTACHLOROPHENOL	20									
A	PHENOL	5									
BN	1,2,4-TRICHLOROBENZENE	5									
BN	1,2-(O)DICHLOROBENZENE	5									
BN	1,2-DIPHENYLHYDRAZINE	20									
BN	1,3-(M)DICHLOROBENZENE	5									
BN	1,4-(P)DICHLOROBENZENE	5									
BN	2,4-DINITROTOLUENE	6									
BN	2,6-DINITROTOLUENE	5									
BN	2-CHLORONAPHTHALENE	5									
BN	3,3'-DICHLOROBENZIDINE	16.5									
BN	3,4-BENZO(B)FLUORANTHENE	5									
BN	4-BROMOPHENYLPHENYL ETHER	5									
BN	4-CHLOROPHENYL PHENYL ETHER	5									
BN	ACENAPHTHENE	5									
BN	ACENAPHTHYLENE	5									
BN	ANTHRACENE	5									
BN	BENZIDINE	45									
BN	BENZO(A)ANTHRACENE	8									
BN	BENZO(A)PYRENE	5									
BN	BENZO(G,H,I)PERYLENE	5									
BN	BENZO(K)FLUORANTHENE	5									
BN	BIS(2-CHLOROETHOXY)METHANE	5									
BN	BIS(2-CHLOROETHYL)ETHER	6									
BN	BIS(2-CHLOROISOPROPYL)ETHER	6									
BN	BIS(2-ETHYLHEXYL)PHTHALATE	10									
BN	BUTYLBENZYL PHTHALATE	5									
BN	CHRYSENE	5									
BN	DI-N-BUTYL PHTHALATE	5									
BN	DI-N-OCTYL PHTHALATE	5									
BN	DIBENZO(A,H)ANTHRACENE	5									
BN	DIETHYL PHTHALATE	5									
BN	DIMETHYL PHTHALATE	5									
BN	FLUORANTHENE	5									

Maine Department of Environmental Protection

WET and Chem

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BN	FLUORENE	5									
BN	HEXACHLOROBENZENE	5									
BN	HEXACHLOROBUTADIENE	5									
BN	HEXACHLOROCYCLOPENTADIENE	10									
BN	HEXACHLOROETHANE	5									
BN	INDENO(1,2,3-CD)PYRENE	5									
BN	ISOPHORONE	5									
BN	N-NITROSODI-N-PROPYLAMINE	10									
BN	N-NITROSODIMETHYLAMINE	5									
BN	N-NITROSODIPHENYLAMINE	5									
BN	NAPHTHALENE	5									
BN	NITROBENZENE	5									
BN	PHENANTHRENE	5									
BN	PYRENE	5									
P	4,4'-DDD	0.05									
P	4,4'-DDE	0.05									
P	4,4'-DDT	0.05									
P	A-BHC	0.2									
P	A-ENDOSULFAN	0.05									
P	ALDRIN	0.15									
P	B-BHC	0.05									
P	B-ENDOSULFAN	0.05									
P	CHLORDANE	0.1									
P	D-BHC	0.05									
P	DIELDRIN	0.05									
P	ENDOSULFAN SULFATE	0.1									
P	ENDRIN	0.05									
P	ENDRIN ALDEHYDE	0.05									
P	G-BHC	0.15									
P	HEPTACHLOR	0.15									
P	HEPTACHLOR EPOXIDE	0.1									
P	PCB-1016	0.3									
P	PCB-1221	0.3									
P	PCB-1232	0.3									
P	PCB-1242	0.3									
P	PCB-1248	0.3									
P	PCB-1254	0.3									
P	PCB-1260	0.2									
P	TOXAPHENE	1									
V	1,1,1-TRICHLOROETHANE	5									
V	1,1,2,2-TETRACHLOROETHANE	7									
V	1,1,2-TRICHLOROETHANE	5									
V	1,1-DICHLOROETHANE	5									
V	1,1-DICHLOROETHYLENE (1,1-dichloroethene)	3									
V	1,2-DICHLOROETHANE	3									
V	1,2-DICHLOROPROPANE	6									
V	1,2-TRANS-DICHLOROETHYLENE (1,2-trans-dichloroethene)	5									
V	1,3-DICHLOROPROPYLENE (1,3-dichloropropene)	5									
V	2-CHLOROETHYLVINYL ETHER	20									
V	ACROLEIN	NA									
V	ACRYLONITRILE	NA									
V	BENZENE	5									

V	BROMOFORM	5									
V	CARBON TETRACHLORIDE	5									
V	CHLOROBENZENE	6									
V	CHLORODIBROMOMETHANE	3									
V	CHLOROETHANE	5									
V	CHLOROFORM	5									
V	DICHLOROBROMOMETHANE	3									
V	ETHYLBENZENE	10									
V	METHYL BROMIDE (Bromomethane)	5									
V	METHYL CHLORIDE (Chloromethane)	5									
V	METHYLENE CHLORIDE	5									
V	TETRACHLOROETHYLENE (Perchloroethylene or Tetrachloroethene)	5									
V	TOLUENE	5									
V	TRICHLOROETHYLENE (Trichloroethene)	3									
V	VINYL CHLORIDE	5									

Notes:

(1) Flow average for day pertains to WET/PP composite sample day.

(2) Flow average for month is for month in which WET/PP sample was taken.

(3) Analytical chemistry parameters must be done as part of the WET test chemistry.

(3a) Cyanide, Available (Cyanide Amenable to Chlorination) is not an analytical chemistry parameter, but may be required by certain discharge permits .

(4) Priority Pollutants should be reported in micrograms per liter (ug/L).

(5) Mercury is often reported in nanograms per liter (ng/L) by the contract laboratory, so be sure to convert to micrograms per liter on this spreadsheet.

(6) Effluent Limits are calculated based on dilution factor, background allocation (10%) and water quality reserves (15% - to allow for new or changed discharges or non-point sources).

(7) Possible Exceedence determinations are done for a single sample only on a mass basis using the actual pounds discharged. This analysis does not consider watershed wide allocations for fresh water discharges.

(8) These tests are optional for the receiving water. However, where possible samples of the receiving water should be preserved and saved for the duration of the WET test. In the event of questions about the receiving water's possible effect on the WET results, chemistry tests should then be conducted.

(9) pH and Total Residual Chlorine must be conducted at the time of sample collection. Tests for Total Residual Chlorine need be conducted only when an effluent has been chlorinated or residual chlorine is believed to be present for any other reason.

Comments:

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

A. GENERAL PROVISIONS

1. **General compliance.** All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

2. **Other materials.** Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

(a) They are not

(i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
(ii) Known to be hazardous or toxic by the licensee.

(b) The discharge of such materials will not violate applicable water quality standards.

3. **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
(b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

4. **Duty to provide information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

5. **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. **Reopener clause.** The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

7. Oil and hazardous substances. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

8. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Confidentiality of records. 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

10. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

11. Other laws. The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee if its obligation to comply with other applicable Federal, State or local laws and regulations.

12. Inspection and entry. The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

(a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

(b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.

(c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.

(d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.

(e) The permittee shall install flow measuring facilities of a design approved by the Department.

(f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

2. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypasses.

(a) Definitions.

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

(c) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).

(d) Prohibition of bypass.

(i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(C) The permittee submitted notices as required under paragraph (c) of this section.

(ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

6. Upsets.

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;
(ii) The permitted facility was at the time being properly operated; and
(iii) The permittee submitted notice of the upset as required in paragraph D(1)(f) , below. (24 hour notice).
(iv) The permittee complied with any remedial measures required under paragraph B(4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING AND RECORDS

1. General Requirements. This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

2. Representative sampling. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

3. Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

(c) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;
(ii) The individual(s) who performed the sampling or measurements;
(iii) The date(s) analyses were performed;
(iv) The individual(s) who performed the analyses;
(v) The analytical techniques or methods used; and
(vi) The results of such analyses.

(d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.

(e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

D. REPORTING REQUIREMENTS

1. Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(B) Any upset which exceeds any effluent limitation in the permit.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

2. Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

3. Availability of reports. Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

4. Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 ug/l);
(ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following ``notification levels":

(i) Five hundred micrograms per liter (500 ug/l);
(ii) One milligram per liter (1 mg/l) for antimony;
(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

5. Publicly owned treatment works.

(a) All POTWs must provide adequate notice to the Department of the following:

(i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
(ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

(a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.

(b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

2. Spill prevention. (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminates and shall specify means of disposal and or treatment to be used.

3. **Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

4. **Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

F. DEFINITIONS. For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

Average weekly discharge limitation means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Composite sample means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

Continuous discharge means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Flow weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab sample means an individual sample collected in a period of less than 15 minutes.

Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum daily discharge limitation means the highest allowable daily discharge.

New source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

Pass through means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR parts 122, 123 and 124. Permit includes an NPDES general permit (Chapter 529). Permit does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

Person means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

Point source means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

Septage means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

Time weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

Toxic pollutant includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **October 23, 2015**

PERMIT NUMBER: **ME0021521**
LICENSE NUMBER: **W000385-5N-L-R**

NAME AND ADDRESS OF APPLICANT

S.D. WARREN COMPANY
255 State Street
Boston, Massachusetts 02109

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

S.D. WARREN - SOMERSET MILL
1329 Waterville Street
Skowhegan, Maine 04976

COUNTY: **Somerset County**

RECEIVING WATERS/CLASSIFICATIONS:

Kennebec River / Class B & Class C

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Thomas Griffin, Env. Manager**
Tel: (207) 238-3128
e-mail: thomas.griffin@sappi.com

1. APPLICATION SUMMARY

a. Application – S.D. Warren Company d/b/a Sappi North America (SDW/permittee hereinafter) has submitted a timely and complete application to the Department for the renewal of Waste Discharge License (WDL) #W000385-5N-J-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0021521, (permit hereinafter) which was issued by the Department for SDW's Somerset Operations mill on January 23, 2009 for a five-year term. The permit authorized the discharge of 1) up to a monthly average of 46.5 million gallons per day (MGD) of secondary treated process and other miscellaneous low volume waste waters associated with the pulp and papermaking process including but not limited to, treated sanitary waste waters, cooling waters, treated

1. APPLICATION SUMMARY (cont'd)

landfill leachate from SDW's on site landfill, treated residuals storage pad leachate, up to 0.40 MGD of treated leachate from Waste Management's Crossroad commercial landfill in Norridgewock, treated waste water from an on-site precipitated calcium carbonate plant, and treated storm water from the mill's wood yard to the Kennebec River, Class C, in Fairfield, Maine and, 2) a unspecified quantity of backwash waters from the river intake debris screen to the Kennebec River, Class B, in Skowhegan, Maine.

The 1/23/09 permit also authorized the discharge of an unspecified quantity of storm water runoff via five (5) outfall points (Outfalls #002A, #003A and #004A to the Kennebec River, #005A to Cragin Brook and Outfall #007A to an unnamed tributary to the Kennebec River). The permitting of said storm water discharges is being removed from this permit as the permittee has filed a Notice of Intent (NOI) to have these discharges covered under the Department's *Maine Pollutant Discharge Elimination System Multi-Sector General Permit Stormwater Associated With Industrial Activity,* issued on April 26, 2011.

b. Source Description: The SDW mill, located in both the Town's of Skowhegan and Fairfield, Maine (with the discharge in Fairfield), manufactures bleached kraft pulp and bleached kraft fine paper. A map showing the location of the mill and receiving waters is included as **Attachment A** of this fact sheet. SDW has previously been authorized and has requested to renew authorization to discharge a monthly average of up to 46.5 million gallons per day (MGD) of secondary treated process and other waste waters associated with the pulp and papermaking process, including but not limited to, treated sanitary waste waters, cooling waters, treated landfill leachate, treated residuals storage pad leachate, leachate from Waste Management's Crossroad commercial landfill in Norridgewock, waste from an on-site precipitated calcium carbonate (PCC) plant, and storm water from various areas of the mill complex to the Kennebec River.

The SDW mill produces approximately 2,350 tons/day of fine bleached kraft paper from hardwood and softwood pulp.

SDW provided the following average production figures for Sappi's fiscal (October – September) years 2012-2014:

Bleached Pulp Production: 1,588 ADT*/day
Market Bleached Kraft Pulp: 122 ADT/day
Unbleached Pulp Production: 1,672 ADT/day
Bleached Kraft Fine Paper Production: 2,570 (Reel) MDT*/day
Non-integrated Fine Paper: 414 (Reel) MDT/day
* ADT/day = air-dry-tons/day MDT/day = machine dry tons/day

1. APPLICATION SUMMARY (cont'd)

c. Wastewater Treatment: Treatment prior to discharge via Outfall #001A is provided by primary clarification, an extended aeration biological treatment system followed by a polishing pond. Sanitary wastewaters from the mill receive treatment in a package treatment plant followed by disinfection and discharge to the polishing pond. In addition to process wastewater, the treatment system receives, but is not limited to; 1) leachate from the company landfill, 2) leachate and floor drain water from the Waste Management Disposal Services of Maine's Crossroads landfill facility in Norridgewock Maine, 3) cooling water consisting primarily of condensing water from the evaporator's surface condensers, turbine condenser cooling water and small quantities of cooling tower and boiler blowdown from the company's steam electric power generation facilities and 4) waste waters from an onsite precipitated calcium carbonate plant that was constructed and started up in 1998 and, 5) treated residuals storage pad leachate and storm water from various areas at the mill complex and, 6) miscellaneous non-process waste waters including methanol storage tank bottom waste waters.

Pulp mill primary sludge, paper mill primary sludge and secondary sludge are blended together and dewatered using screw presses. The dewatered sludge is burned in the hogged fuel boilers and is also disposed of in the company owned landfill.

Final effluent is conveyed for discharge to the Kennebec River via a 40-inch diameter outfall pipe that is submerged to a depth of approximately 20 feet at mean low water. Effluent is dispersed through multiple four inch diameter diffusers as well as a diffuser installed at the end of the outfall pipe.

SDW's schematic of the wastewater treatment system is included as **Attachment B** of this fact sheet.

2. PERMIT SUMMARY

a. Terms & Conditions - This permit is carrying forward all the terms and conditions of the 1/23/09 permit except that this permit is

Outfall #001A – Secondary Treated Waste Water

1. Eliminating authorization to discharge storm water runoff Outfalls #002A, #003A, #004A, #005A and Outfall #007A. The permittee is seeking authorization to discharge the storm water runoff via *MEPDES Multi-Sector General Permit – Stormwater Discharge Associated With Industrial Activity*, dated April 26, 2011.

2. Incorporating the interim average and maximum concentration limitations for total mercury that were originally established in a May 23, 2000, permit modification.

3. Eliminating Special Condition K, *Color,* of the previous permit as footnote 4 of this permit contains sufficient information to determine on-going compliance with the quarterly average limitation.

2. PERMIT SUMMARY (cont'd)

4. Eliminating the water quality based mass and concentration limitations for bis (2-ethylhexyl) phthalate as the most current statistical evaluation of analytical chemistry results on file at the Department indicates the discharge no longer has a reasonable potential to exceed the chronic AWQC for bis (2-ethylhexyl) phthalate.

5. Increasing the water quality based mass limitation for total aluminum given the most current statistical evaluation of analytical chemistry results on file at the Department utilizing the 15% reserve capacity allocation results in a higher allocation of aluminum to SDW.

6. Eliminating the concentration limit for total aluminum pursuant to Maine law 38 MRSA §464(k) that states in part "*...any limitations for metals in a waste discharge license may be expressed only as mass-based limits.*"

7. Increasing the technology based mass limitation for adsorbable organic halides (AOX) as a result of a slight increase in production of unbleached kraft pulp from 1620 tons/day to 1,672 tons/day since issuance of the previous permit.

8. Eliminating the seasonal monthly average and daily maximum mass and concentration reporting requirements for total phosphorus as the discharge does not have a reasonable potential to exceed the U.S. Environmental Protection Agency's ambient water quality goal of 0.100 mg/L.

9. Authorizing the permittee to convey methanol storage tank bottom waters to the waste water treatment facility.

Outfall #100 (Bleach plant effluent – internal waste stream)

10. Increasing the technology based mass limitations for chloroform as a result of a slight increase in production of unbleached kraft pulp from 1620 tons/day to 1,672 tons/day since issuance of the previous permit.

11. Eliminating the need to monitor and report flow on the bleach plant effluent on a daily basis when the permittee is not sampling for the chloroform or the 12 phenolic compounds.

b. History: This section provides a summary of recent, relevant licensing/permitting actions that have been completed for the SDW facility. Additional history is provided in the fact sheet associated with the 9/12/03 permit, which is maintained on record at the Department's Augusta office.

September 24, 1987 – The USEPA issued a renewal of NPDES permit #ME0021521.

2. PERMIT SUMMARY (cont'd)

May 25, 1990 – The USEPA issued a modification of NPDES permit #ME0021521 to accommodate the increase in paper production from #3 paper machine. The SDW requested an evidentiary hearing on various limitations in the permit modification that resulted in the appealed conditions being stayed.

January 14, 1994 – The USEPA issued a renewal of NPDES permit #ME0021521. The SDW appealed a number of conditions in the permit.

May 23, 2000 – Pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420 and *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W000385-44-C-R by establishing interim monthly average and daily maximum effluent concentration limits of 28.5 parts per trillion (ppt) and 42.7 ppt, respectively, and a minimum monitoring frequency requirement of four (4) tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A. § 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

July 14, 2000 – The USEPA withdrew the NPDES permit issued on 1/14/94 permit which resulted in the 9/24/87 being the most current NPDES.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From that point forward, the program has been referred to as the MEPDES program, and MEPDES permit #ME0021521 has been utilized as the primary reference number for the SDW facility.

September 12, 2003 – The Department issued MEPDES permit #ME0021521 / WDL #W000385-5N-G-R to the SDW for a five-year terms. The 9/12/03 WDL superseded WDL Modification #W000385-44-F-M issued on October 21, 1998, WDL Modification #W000385-44-E-M issued on March 19, 1996, WDL Modification #W000385-44-D-M issued on 12/29/95, and WDL #W000385-44-C-R issued on May 1, 1995.

April 10, 2006 - The Department amended the 9/12/03 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

February 26, 2008 – SDW submitted notification to the Department, as required by Special Condition D of the 9/12/03 permit, that the Recovery Boiler and Evaporators were going to be upgraded.

2. PERMIT SUMMARY (cont'd)

June 27, 2008 - The Department issued minor permit revision #W000385-5N-I-M, to the SDW to reduce the minimum monitoring frequency requirements for 1) adsorbable organic halides (AOX) from 3/week to 1/week; 2) chloroform from 1/week to 1/ quarter; and 3) chlorinated phenolics from 1/month to 2/year. These reductions in monitoring were based on available data and the USEPA's guidance on performance-based reduction of permit monitoring requirements.

January 23, 2009 – The Department issued MEPDES permit #ME0021521 / WDL #W000385-5N-J-R for a five-year term.

December 6, 2013 – SDW submitted a timely and complete General Application to the Department for renewal of the 1/23/09 MEPDES permit. The application was accepted for processing on December 9, 2013, and was assigned WDL #W000385-5N-L-R / MEPDES #ME0021521.

3. CONDITIONS OF PERMITS

Conditions of licenses, 38 M.R.S.A. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, *Certain deposits and discharges prohibited*, 38 M.R.S.A., § 420 and 06-096 CMR 530 require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Classification of major river basins, 38 M.R.S.A. § 467(4)(A)(10) classifies the Kennebec River, from the Fairfield-Skowhegan boundary to its confluence with Shawmut dam (the reach that Outfall #001A discharges into) as a Class C waters. *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(4) describes the standards for Class C waters as follows:

A. *Class C waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as a habitat for fish and other aquatic life.*

4. RECEIVING WATER QUALITY STANDARDS (cont'd)

B. The dissolved oxygen content of Class C water may be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained. In order to provide additional protection for the growth of indigenous fish, the following standards apply.

(1) The 30-day average dissolved oxygen criterion of a Class C water is 6.5 parts per million using a temperature of 22 degrees centigrade or the ambient temperature of the water body, whichever is less, if:

(a) A license or water quality certificate other than a general permit was issued prior to March 16, 2004 for the Class C water and was not based on a 6.5 parts per million 30-day average dissolved oxygen criterion; or

(b) A discharge or a hydropower project was in existence on March 16, 2005 and required but did not have a license or water quality certificate other than a general permit for the Class C water.

This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

(2) In Class C waters not governed by subparagraph (1), dissolved oxygen may not be less than 6.5 parts per million as a 30-day average based upon a temperature of 24 degrees centigrade or the ambient temperature of the water body, whichever is less. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

The department may negotiate and enter into agreements with licensees and water quality certificate holders in order to provide further protection for the growth of indigenous fish. Agreements entered into under this paragraph are enforceable as department orders according to the provisions of sections 347-A to 349.

Between May 15th and September 30th, the number of Escherichia coli bacteria of human and domestic animal origin in Class C waters may not exceed a geometric mean of 126 per 100 milliliters or an instantaneous level of 236 per 100 milliliters. In determining human and domestic animal origin, the department shall assess licensed and unlicensed sources using available diagnostic procedures. The board shall adopt rules governing the procedure for designation of spawning areas. Those rules must include provision for periodic review of designated spawning areas and consultation with affected persons prior to designation of a stretch of water as a spawning area.

4. RECEIVING WATER QUALITY STANDARDS (cont'd)

C. Discharges to Class C waters may cause some changes to aquatic life, except that the receiving waters must be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community. This paragraph does not apply to aquatic pesticide or chemical discharges approved by the department and conducted by the department, the Department of Inland Fisheries and Wildlife or an agent of either agency for the purpose of restoring biological communities affected by an invasive species.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2012 Integrated Water Quality Monitoring and Assessment Report, (Report) prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the segment of the Kennebec River that contains the discharge from the SDW as *"Category 4-B: Rivers and Streams Impaired by Pollutants - Pollution Control Requirements Reasonably Expected to Result in Attainment."* Impairment in this context refers to a fish consumption advisory due to the presence of dioxin (including 2,3,7,8-TCDD). The 2012 Report states that new dioxin sources have been removed and the river is expected to attain its ascribed standards. Compliance is measured by (1) no detection of dioxin in any internal waste stream (at 10 pg/l detection limit); and (2) no detection in fish tissue sampled below a mill's outfall greater than upstream reference. This and previous permitting actions require the SDW to monitor the bleach plant effluent for dioxin to demonstrate that the mill processes and discharges do not contribute dioxin to the river.

The 2012 Report also lists this segment of the Kennebec River as *"Category 5-D: Rivers and Streams Impaired by Legacy Pollutants."* Impairment in this context refers to the presence of polychlorinated biphenyls (PCBs) in some fish tissues. The presence of PCBs is not typically associated with any identifiable source but is rather a legacy of practices that predate the national ban on the use of PCB in 1979. The Department has no information that the discharge from the SDW as permitted causes or contributes to this non-attainment status.

The 2012 Report also lists Maine's fresh waters as *"Category 4-A: Rivers and Streams with Impaired Use, TMDL Completed."* All freshwaters formerly listed in Category 5-C are moved to Category 4-A (TMDL Completed) due to US EPA approval of a Regional Mercury TMDL. Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, *"Impairment caused by atmospheric deposition of mercury; a regional scale TMDL has been approved. Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many waters, and many fish from any given water, do not exceed the action level for mercury. However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources."*

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Pursuant to 38 M.R.S.A. § 420(1-B)(B), *"a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11."* The Department has established interim monthly average and daily maximum mercury concentration limits and reporting requirements for this facility pursuant to 06-096 CMR 519.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Regulatory Basis: The discharge from SDW's Somerset facility is subject to National Effluent Guidelines (NEG) found in 40 Code of Federal Regulations (CFR) Part 430 – *Pulp, Paper and Paperboard Manufacturing Point Source Category*. The regulation was revised on April 15, 1998 and reorganized 26 sub-categories in the previous regulation into 12 sub-categories by grouping mills with similar processes. Applicable Subparts of the new regulation for the SDW facility are limited to Subpart B, *Bleached Papergrade and Soda*. The NEGs establish applicable limitations representing; 1) best practicable control technology currently available (BPT) for toxic and conventional pollutants for existing dischargers, 2) best conventional pollutant technology economically achievable (BCT) for conventional pollutants for existing dischargers, and 3) best available technology economically achievable (BAT) for toxic and non-conventional pollutants for existing dischargers. The regulation establishes limitations and monitoring requirements on the final outfall to the receiving waterbody as well as internal waste stream(s) such as the bleach plant effluent. The regulation also establishes limitations based on several methodologies including monthly average and or daily maximum mass limits based on production of pulp and paper produced or concentration limitations based on BPT, BCT or BAT.

Outfall #001A

b. Production: SDW provided the following average production figures for Sappi's fiscal (October – September) years 2012 - 2014:

Bleached Pulp Production: 1,588 ADT/day
Market Bleached Kraft Pulp: 122 ADT/day
Unbleached Pulp Production: 1,672 ADT/day
Bleached Kraft Fine Paper Production: 2,570 (Reel) MDT/day
Non-integrated Fine Paper: 414 (Reel) MDT/day

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

The corresponding mass effluent limits based on BPT standards found in federal regulation 40 CFR Part 430 may be calculated as follows:

2012-2014 (t/d)	Subpart	BOD Avg.		BOD Max		TSS Avg.		TSS Max	
		lbs/ton	lbs/day	lbs/ton	lbs/day	lbs/ton	lbs/day	lbs/ton	lbs/day
2,570	B-Kraft Fine	11.0	28,270	21.2	54,484	23.8	61,166	44.3	113,851
414	K-NI Fine	8.5	3,519	16.4	6,790	11.8	4,885	22.0	9,108
122	B-Mkt Bl Kft	16.1	1,964	30.9	3,770	32.8	4,002	60.8	7418
	Totals		33,753		65,044		70,053		130,377

c. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average discharge flow limitation of 46.5 MGD for Outfall #001A based on the average design criterion for the treatment system, and a daily maximum discharge flow reporting requirement to assist in compliance evaluations.

A summary of the discharge flow data as reported on the Discharge Monitoring Reports (DMRs) submitted to the Department for Outfall #001A for the period January 2012 through July 2015 is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	20.4 MGD	30.8 MGD	26.2 MGD	43
Daily Maximum	25.9 MGD	33.0 MGD	29.7 MGD	43

d. Dilution Factors: Dilution factors associated with the average design flow of 46.5 MGD were derived in accordance with 06-096 CMR 530(4)(A)(1)(a) and were calculated as follows::

$$\text{Dilution Factor} = \frac{\text{River Flow (cfs)(Conv. Factor)}}{\text{Plant Flow}}$$

Mod. Acute: ¼ Q10 = 487 cfs $\Rightarrow \frac{(487 \text{ cfs})(0.6464)}{46.5 \text{ MGD}} = 6.8{:}1$

Acute: 1Q10 = 1,947 cfs $\Rightarrow \frac{(1{,}947 \text{ cfs})(0.6464)}{46.5 \text{ MGD}} = 27.1{:}1$

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

Chronic: 7Q10 = 2,388 cfs $\Rightarrow \frac{(2{,}388 \text{ cfs})(0.6464)}{46.5 \text{ MGD}}$ = 33.2:1

Harmonic Mean: = 4,034 cfs $\Rightarrow \frac{(4{,}034 \text{ cfs})(0.6464)}{46.5 \text{ MGD}}$ = 56.1:1

06-096 CMR 530(4)(B)(1) states,

Analyses using numerical acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone and to ensure a zone of passage of at least 3/4 of the cross-sectional area of any stream as required by Chapter 581. Where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design flow, up to and including all of it, as long as the required zone of passage is maintained.

The Department has determined that the discharge via Outfall #001A does achieve complete and rapid mixing with the receiving waters. Thus, the Department is utilizing the full 1Q10 stream flow in acute evaluations pursuant to 06-096 CMR 530.

e. Biochemical oxygen demand (BOD_5) & Total suspended solids (TSS): The previous permitting action established the following separate "summer season" (June 1 – September 30) and "winter season" (October 1 – May 31) mass effluent limitations for BOD_5 and TSS. The 40 CFR Part 430 technology-based effluent thresholds for each pollutant are provided for comparison purposes.

1/23/09 Permit Limits	Monthly Average	Daily Maximum
BOD_5 Summer	9,400 lbs./day	16,600 lbs./day
BOD_5 Winter	14,850 lbs./day	32,670 lbs./day
Technology-based (BPT) Effluent Thresholds for BOD_5	29,199 lbs./day	56,267 lbs./day
TSS Summer	30,000 lbs./day	50,000 lbs./day
TSS Winter	41,820 lbs./day	77,850 lbs./day
Technology-based (BPT) Effluent Thresholds for TSS	60,200 lbs./day	112,037 lbs./day

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

The fact sheet associated with the previous permitting action stated that these limitations were carried forward from the May 1, 1995 WDL and that the summer limits were based on consideration of current discharge levels, the existing state of technology, including process and treatment methods at the mill, and the impact of the discharge on receiving water quality. The 5/1/95 WDL stated that the winter BOD limits were established in an August 15, 1990 Administrative Order (AO) issued by the USEPA settling an appeal of a final NPDES permit decision dated September 24, 1987.

Department licensing/permitting actions impose the more stringent of either a water quality-based, BPT-based, or in this case, previous permit limit (to satisfy the anti-backsliding provisions of *Waste Discharge License Conditions*, 06-096 CMR 523 (effective January 12, 2001). Whereas the technology-based effluent thresholds specified above are less stringent than the previous permit limits and the Department's Division of Environmental Assessment has not recommended more stringent water quality-based limits for BOD_5 and TSS, this permitting action is carrying forward the seasonal monthly average and daily maximum mass effluent limitations for BOD_5 and TSS that are more stringent than the technology based standards.

A summary of the effluent BOD_5 and TSS data as reported on the DMRs submitted to the Department for the period January 2012 through July 2015 is as follows:

BOD_5	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	2,368 lbs./day	4,920 lbs./day	3,509 lbs./day	43
Daily Maximum	3,588 lbs./day	11,484 lbs./day	6,157 lbs./day	43

TSS	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	2,324 lbs./day	5,950 lbs./day	3,647 lbs./day	43
Daily Maximum	3,745 lbs./day	10,839 lbs./day	6,532 lbs./day	43

This permitting action is carrying forward the minimum monitoring frequency requirements of 3/Week (reduced from 1/Day to 3/Week in the previous permit) based on Department best professional judgment of a monitoring frequency adequate to determine on-going compliance with the permit limitations for BOD and TSS.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

f. Temperature: The previous permitting action established, and this permitting action is carrying forward, a daily maximum effluent temperature reporting requirement for the "winter season" period of October 1 – May 31 and a daily maximum effluent temperature limitation of 105° F during the "summer season" period of June 1 – September 30 to ensure that the discharge complied with the requirements of *Regulations Relating to Temperature*, 06-096 CMR 582 (last amended February 18, 1989). Additional discussion related to temperature is provided in Section 6.g.

A summary of the effluent temperature data as reported on the DMRs submitted to the Department for the period January 2012 through July 2015 is as follows:

Temperature	Minimum	Maximum	Arithmetic Mean	# DMRs
Summer Season	89° F	94° F	92° F	14
Winter Season	72° F	89° F	79° F	29

This permitting action is carrying forward the minimum monitoring frequency requirements of once per day during the summer season and once per week during the winter season based on Department best professional judgment of a monitoring frequency adequate to determine on-going compliance with the permit limitations for temperature.

g. Temperature Difference: The previous permitting action established, and this permitting action is carrying forward, weekly rolling average and daily maximum temperature difference limitations of 0.4° F and 0.5° F, respectively.

06-096 CMR 582 states that no discharge of pollutants shall cause the ambient temperature of any freshwater body, as measured outside a mixing zone, to be raised more than 5 degrees Fahrenheit. The rule also limits a discharger to an in-stream temperature increase (ΔT) of 0.5° F above the ambient receiving water temperature when the weekly average temperature of the receiving water is greater than or equal to 66° F or when the daily maximum temperature is greater than or equal to 73° F. The temperature thresholds are based on USEPA water quality criterion for the protection of brook trout and Atlantic salmon. The weekly average temperature threshold of 66° F was derived to protect for normal growth of the brook trout and the daily maximum temperature threshold of 73° F protects for the survival of juveniles and adult Atlantic salmon during the summer months. As a point of clarification, the Department interprets the term "weekly average temperature" to mean a seven (7) day rolling average. To promote consistency, the Department also interprets the ΔT of 0.5° F as a weekly rolling average criterion when the receiving water temperature is $\geq$66° F and <73° F. When the receiving water temperature is $\geq$73°F, compliance with the ΔT of 0.5° F is evaluated on a daily

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

basis. Compliance with the weekly rolling average and daily maximum ΔT limits of 0.5° F is determined by calculating the river temperature increase (RTI) based on the ambient river flow, ambient river temperature, actual discharge flow and actual discharge temperature from the mill.

See Special Condition I, *Temperature Difference*, of this permit for the equation to calculate the RTI.

Enforcement generally, 38 M.R.S.A. § 451 states,

After adoption of any classification by the Legislature for surface waters or tidal flats or sections thereof, it is unlawful for any person, firm, corporation, municipality, association, partnership, quasi-municipal body, state agency or other legal entity to dispose of any pollutants, either alone or in conjunction with another or others, in such manner as will, after reasonable opportunity for dilution, diffusion or mixture with the receiving waters or heat transfer to the atmosphere, lower the quality of those waters below the minimum requirements of such classifications, or where mixing zones have been established by the department, so lower the quality of those waters outside such zones, notwithstanding any exemptions or licenses which may have been granted or issued under sections 413 to 414-B.

38 M.R.S.A. § 451 also states that, after opportunity for hearing, the Department may establish by order a mixing zone with respect to any discharge for which a license has been issued pursuant to *Applications for licenses,* 38 M.R.S.A. § 414.

38 M.R.S.A. § 451 states,

The purpose of a mixing zone is to allow a reasonable opportunity for dilution, diffusion or mixture of pollutants with the receiving waters before the receiving waters below or surrounding a discharge will be tested for classification violations. In determining the extent of any mixing zone to be established under this section, the department may require from the applicant testimony concerning the nature and rate of the discharge; the nature and rate of existing discharges to the waterway; the size of the waterway and the rate of flow therein; any relevant seasonal, climatic, tidal and natural variations in such size, flow, nature and rate; the uses of the waterways in the vicinity of the discharge, and such other and further evidence as in the department's judgment will enable it to establish a reasonable mixing zone for such discharge. An order establishing a mixing zone may provide that the extent thereof varies in order to take into account seasonal, climatic, tidal and natural variations in the size and flow of, and the nature and rate of, discharges to the waterway.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

On June 26, 1995, emergency legislation, 38 M.R.S.A. § 464(4)(I), was enacted that provided a mechanism by which the Department was to develop in consultation with affected dischargers, facility specific solutions to comply with the State statutes, rules and regulations regarding thermal impact and, no later than January 1, 1996, develop appropriate amendments to the dischargers licenses. The legislation also provided for a three-year schedule of compliance to develop the facility specific solutions during which time interim thermal load limitations would be applicable. The law had a sunset provision and was repealed on January 1, 1999.

38 M.R.S.A. § 464(4)(I) stated in part that dischargers must demonstrate to the satisfaction of the Department that they are unable to meet the standards in the existing temperature rule after application of best practicable treatment (BPT). In a letter dated August 29, 1995, to the Department, the SDW identified numerous temperature reduction projects such as paper machine cooling towers, a turbine condenser cooling tower, surface condenser modifications and a polishing pond that had been undertaken since 1975 to reduce heat loading to the river. In addition, several projects were completed to increase the efficiency of internal processes resulting in thermal reductions. These measures were determined by the Department to be satisfactory in the application of best practicable treatment.

38 M.R.S.A. § 464(4)(I) also stated the quantity of heat discharged during a 7-day period may not exceed the maximum heat discharged in any 7-day period between January 1, 1989 and January 11, 1995 and that the amount of heat discharged on any single day may not exceed 1.15 times the maximum 7-day average. The 7-day maximum quantity of heat discharged must protect existing uses.

On December 29, 1995, the Department issued WDL Modification #W000385-44-D-M to satisfy 38 M.R.S.A. § 464(4)(I), by carrying forward the daily maximum thermal load limitation established in the May 1, 1995 WDL renewal and required the SDW Somerset mill to conduct a thermal study in Kennebec River to determine compliance with 06-096 CMR 582.

Under a study plan entitled Study Plan For Delineation of Mixing Zone and Assessment of Kennebec Characteristics, S.D. Warren – Somerset Mill, Skowhegan, Maine dated May 1996 and approved by the Department on June 11, 1996, the SDW conducted a thermal survey of the Kennebec River. The study area covered approximately 10.5 miles ranging from 5.5 miles upstream of the mill's Outfall #001A to 5 miles downstream to a point 500 feet below the Shawmut Dam. The time frame selected (June 1 – September 30) to study the receiving waters was chosen as it was thought to be the period most representative of when the river would reach its maximum temperatures and thus have the greatest impact on cold water fisheries.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

The report concluded that based on the data collected in the study, complete mixing of the mill effluent with the receiving water occurred approximately 5.5 miles downstream of Outfall #001A at the Shawmut Dam but was inconclusive as to whether the thermal discharge complied with 06-096 CMR 582 at the Shawmut Dam.

On December 18, 2001, the SDW submitted calculations that indicated the highest 7-day heat load rejected to the river during the June 1 – September 30 time frame for calendar year 1999, 2000 and 2001 was 6.8×10^9 BTUs/Day with a mean summer thermal load discharge of approximately 4.4×10^9 BTUs/Day.

This permitting action is carrying forward from the previous permitting action a daily maximum water quality based ΔT limit of 0.5°F pursuant to 06-096 CMR 582 and carrying forward a negotiated weekly rolling average ΔT limit of 0.4°F. Compliance with these limitations is based on the equation found in Special Condition I of this permit. The permittee shall adhere to mathematical protocols for significant figures and rounding the calculated RTI values. All RTI values reported to the Department on the monthly Discharge Monitoring Reports (DMRs) for compliance with the weekly rolling average and daily maximum ΔT limitations shall be rounded to the nearest 0.1°F. For example, values between

$\geq$0.350°F - $\leq$0.450°F shall be rounded off to 0.4°F and values between
>0.450°F - <0.550°F shall be rounded off to 0.5°F.

A summary of the temperature difference data as reported on the DMRs submitted to the Department for the period January 2012 through July 2015 is as follows:

Temperature Difference	Minimum	Maximum	Arithmetic Mean	# DMRs
Weekly Average	0.1° F	0.2° F	0.2° F	14
Daily Maximum	0.1° F	0.3° F	0.2° F	14

h. pH Range: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 5.0 – 9.0 standard units, which is based on 40 CFR, Part 430, and a minimum monitoring frequency requirement of once per day based on best professional judgment of a monitoring frequency adequate to determine on-going compliance with the permit limitations for pH.

A summary of pH data as reported on the monthly DMRs for the period of January 2012 through July 2015 (# DMRs = 43) indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

i. Color: The previous permitting action established, and this permitting action is carrying forward, a calendar quarterly average effluent color limitation of 175 lbs./ton. For the SDW Somerset mill, applicable sections of *Color pollution control*, 38 M.R.S.A. § 414-C state that:

2. Best practicable treatment; color pollution. For the purposes of section 414-A, subsection 1, paragraph D, "best practicable treatment" for color pollution control for discharges of color pollutants from the kraft pulping process is:

A. For discharges licensed and in existence prior to July 1, 1989:

(1) On July 1, 1998 and until December 31, 2000, 225 pounds or less of color pollutants per ton of unbleached pulp produced, measured on a quarterly average basis; and
(2) On and after January 1, 2001, 150 pounds or less of color pollutants per ton of unbleached pulp produced, measured on a quarterly average basis; and

A discharge from a kraft pulp mill that is in compliance with this subsection is exempt from the provisions of subsection 3.

3. Instream color pollution standard. An individual waste discharge may not increase the color of any water body by more than 20 color pollution units. The total increase in color pollution units caused by all waste discharges to the water body must be less than 40 color pollution units. This subsection applies to all flows greater than the minimum 30-day low flow that can be expected to occur with a frequency of once in 10 years. A discharge that is in compliance with this subsection is exempt from the provisions of subsection 2, paragraph A. Such a discharge may not exceed 175 pounds of color pollutants per ton of unbleached pulp produced after January 1, 2001.

The 1/23/09 permit established a technology-based limit of 175 pounds per ton of unbleached pulp. A summary of quarterly average effluent color data for the period of January 2012 through July 2015 is as follows:

Color	Minimum	Maximum	Arithmetic Mean	# DMRs
Quarterly Avg.	94 cu	147 cu	118 cu	14

j. Adsorbable organic halides (AOX): The previous permitting action established monthly average and daily maximum effluent AOX mass limitations of 2,019 lbs./day and 3,081 lbs./day, respectively. These AOX limits are based on federal regulation found at 40 CFR Part 430 and an unbleached kraft pulp production value of 1,620 tons/day at that time. The regulation establishes production-based BAT monthly average and daily maximum allowances of 0.623 and 0.951 kg/kkg (same as lbs. per 1000 pounds) of unbleached pulp production. With a 3% increase in unbleached kraft pulp production, a value of 1,672 tons/day the limits are calculated as follows:

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

[1,672 tons/day] [0.623 lbs./1000 lbs] [2000 lbs./ton] = 2,083 lbs./day
[1,672 tons/day] [0.951 lbs./1000 lbs] [2000 lbs./ton] = 3,180 lbs./day

A summary of the effluent AOX data as reported on the DMRs submitted to the Department for the period January 2012 through July 2015 is as follows:

AOX	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	329 lbs./day	1,274 lbs./day	753 lbs./day	43
Daily Maximum	375 lbs./day	1,320 lbs./day	885 lbs./day	43

This permitting action is carrying forward the minimum monitoring frequency requirement of once per week for AOX as the monitoring frequency was reduced from 3/Week to 1/Week in the previous permitting action.

k. Chemical Oxygen Demand (COD): The previous permitting action established, and this permitting action is carrying forward, monthly average and daily maximum monitoring and mass reporting requirements for COD. The federal regulation at 40 CFR Part 430 has reserved promulgation of numeric effluent limits for COD at this time but proposes to do so at a later date through rulemaking.

A summary of the effluent COD data as reported on the DMRs submitted to the Department for the period January 2012 through July 2015 is as follows:

COD	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	62,602 lbs./day	136,818 lbs./day	111,362 lbs./day	43
Daily Maximum	119,663 lbs./day	194,669 lbs./day	146,807 lbs./day	43

This permit is carrying forward the minimum monitoring frequency requirement of once per week for COD.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

1. Total Phosphorous (Total-P): The previous permitting action established, a seasonal (June 1 – September 30 of each year) monthly average and daily maximum concentration and mass reporting requirements for total-P with a minimum monitoring frequency requirement of once per week. The monitoring requirement was based on Department best professional judgment in consideration of a report entitled, *Kennebec River Modeling Report, Final April 2000* (Report), prepared by the Department. The Department concluded in the Report's executive summary that, *"The majority of the phosphorous loading to the river is from point sources. There are indications that nutrient loading may become a major water quality issue in the future"* and *"the paper mills are the major source of phosphorous. [The Department] should work with the paper mills to investigate methods to reduce phosphorous loading through process controls. Investigation of nutrient reduction may have to be extended to municipal plants as well."* The Report states, *"Plant growth is a function of available light and nutrients. Light limitation is a function of bank cover (for narrow streams) and water clarity. The nutrients of concern include nitrogen and phosphorous. In general it has been found that in fresh water systems phosphorous is the growth limiting nutrient while in marine systems nitrogen is the limiting nutrient."*

   The Report did not contain final recommendations for establishment of total-P effluent limitations for the SDW. A summary of the seasonal effluent total-P data as reported on the DMRs submitted to the Department for the period June 2012 through July 2015 is as follows:

Total-P	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	18 lbs./day	92 lbs./day	55 lbs./day	14
	0.07 mg/L	0.39 mg/L	0.23 mg/L	14
Daily Maximum	33 lbs./day	190 lbs./day	82 lbs./day	14
	0.13 mg/L	0.78 mg/L	0.34 mg/L	14

   Waste Discharge License Conditions, 06-096 CMR 523 specifies that water quality based limits are necessary when it has been determined that a discharge has a reasonable potential to cause or contribute to an excursion above any State water quality standard including State narrative criteria.[1] In addition, 06-096 CMR 523 specifies that water quality based limits may be based upon criterion derived from a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents.[2]

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[1] *Waste Discharge License Conditions,* 06-096 CMR 523(5)(d)(1)(i) (effective date January 12, 2001)
[2] 06-096 CMR 523(5)(d)(1)(vi)(A)

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

USEPA's Quality Criteria for Water 1986 (Gold Book) puts forth an in-stream phosphorus concentration goal of less than 0.100 mg/L in streams or other flowing waters not discharging directly to lakes or impoundments, to prevent nuisance algal growth. The use of the 0.100 mg/L Gold Book goal is consistent with the requirements of 06-096 CMR 523 noted above for use in a reasonable potential (RP) calculation.

Based on the above rationale, the Department has chosen to utilize the Gold Book goal of 0.100 mg/L. It is the Department's intent to continue to make determinations of actual attainment or impairment based upon environmental response indicators from specific water bodies. The use of the Gold Book goal of 0.100 mg/L for use in the RP calculation will enable the Department to establish water quality-based limits in a manner that is reasonable and that appropriately establishes the potential for impairment, while providing an opportunity to acquire environmental response indicator data, numeric nutrient indicator data, and facility data as needed to refine the establishment of site-specific water quality-based limits for phosphorus. Therefore, this permit may be reopened during the term of the permit to modify any reasonable potential calculation, phosphorus limits, or monitoring requirements based on site-specific data.

For the background concentration in the Kennebec River just upstream of the SDW discharge, the Department collected three test results during summer of 2014 and the highest result was 0.015 mg/L which is being utilized in reasonable potential calculations in this Fact Sheet.

To be conservative, the Department is utilizing the maximum background concentration in determining whether the discharge has a reasonable potential to exceed the AWQ goal of 0.100 mg/L and the mean effluent concentration of 0.32 mg/L.

Using the following calculation and criteria, the SDW facility does not have a reasonable potential to exceed the EPA's Gold Book goal of 0.100 mg/L for phosphorus or a reasonable potential to exceed the Department's 06-096 CMR Chapter 583 draft criteria of 0.033 mg/L for Class C waters. The calculations are as follows:

$$Cr = \frac{QeCe + QsCs}{Qr}$$

Qe = effluent flow i.e. facility design flow	=	46.5 MGD
Ce = effluent pollutant concentration	=	0.32 mg/L
Qs = 7Q10 flow of receiving water	=	1,544 MGD
Cs = upstream concentration	=	0.015 mg/L
Qr = receiving water flow	=	1,544 MGD
Cr = receiving water concentration	=	?

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

$$Cr = \frac{(46.5\ MGD \times 0.32\ mg/L) + (1{,}525\ MGD \times 0.015\ mg/L)}{1{,}544\ MGD} = 0.024\ mg/L$$

$Cr = 0.024\ mg/L < 0.1\ mg/L \Rightarrow$ **No Reasonable Potential**
$Cr = 0.024\ mg/L < 0.033\ mg/L \Rightarrow$ **No Reasonable Potential**

Therefore, the monitoring requirements for total phosphorus established in the previous permit are no being carried forward in this permit.

m. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibits the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. The previous permitting action contained WET and chemical specific testing requirements pursuant to Department rule Chapter 530.5, *Surface Water Toxics Control Program*, promulgated in October1995. The rule was subsequently revised and promulgated as Department Rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* in October 2005 and set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters. WET, priority pollutant and analytical chemistry testing as required by Chapter 530 is included in this permit in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the waste water, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Priority pollutant and analytical chemistry testing is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria as established in Chapter 584.

Chapter 530 establishes four categories of testing requirements based predominately on the chronic dilution factor. The categories are as follows:

Level I – chronic dilution factor of <20:1.
Level II – chronic dilution factor of ≥20:1 but <100:1.
Level III – chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD.
Level IV – chronic dilution >500:1 and Q ≤1.0 MGD.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

Department rule Chapter 530 (2)(D) specifies the criteria to be used in determining the minimum monitoring frequency requirements for WET, priority pollutant and analytical chemistry testing. Based on the Chapter 530 criteria, the permittee's facility falls into the Level II frequency category as the facility has a chronic dilution factor ≥20:1 but <100:1. Chapter 530(2)(D)(1) specifies that routine surveillance and screening level testing requirements are as follows:

Screening level testing

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	2 per year	1 per year	4 per year

Surveillance level testing

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	1 per year	Not required	2 per year

Chapter 530(2)(D)(3)(c) states in part that Dischargers in Level II *"...may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedance as calculated pursuant to section 3(E).*

Chapter 530 §(3)(E) states "*For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedance of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

Chapter 530 §3 states, "*In determining if effluent limits are required, the Department shall consider all information on file and effluent testing conducted during the preceding 60 months. However, testing done in the performance of a Toxicity Reduction Evaluation (TRE) approved by the Department may be excluded from such evaluations.*"

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

WET Evaluation

On September 15, 2015, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department in accordance with the statistical approach in Chapter 530. See **Attachment C** of this Fact Sheet for a summary of the WET tests evaluated. The statistical evaluation indicates the discharge from the permittee's waste water treatment facility does not have any WET test results for the water flea or the brook trout that exceed or have a reasonable potential to exceed the critical acute or chronic water quality thresholds of 3.7% and 3.0 % respectively. The critical thresholds are calculated as the mathematical inverse of the applicable dilution factors of 27:1 as an acute and 33:1 as a chronic.

Based on the results of the 9/15/15 statistical evaluation, the permittee continues to qualify for the Chapter 530(2)(D)(3)(c) testing reduction for WET test species. Therefore, this permit action reduces surveillance level testing to 1/2Years for the first three years and the fifth year of the term of the permit.

Chapter 530 §(2)(D) states:

(4) All dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

Special Condition G, *06-096 CMR 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing,* of this permitting action requires the permittee to file an annual certification with the Department.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

Department rule Chapter 530 (2)(D)(1) specifies that screening level testing is to be established beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee shall initiate screening level as follows;

Level	WET Testing
II	2 per year for the water flea 2 per year for the brook trout

Analytical chemistry & priority pollutant testing evaluation

See **Attachment D** of this Fact Sheet for a summary of chemical-specific test dates and results for the pollutants of concern that exceed or have a reasonable potential to exceed applicable AWQC.

Chapter 530 §3 states, "*In determining if effluent limits are required, the Department shall consider all information on file and effluent testing conducted during the preceding 60 months. However, testing done in the performance of a Toxicity Reduction Evaluation (TRE) approved by the Department may be excluded from such evaluations.*"

Chapter 530 §4(C), states "*The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department shall use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions." The Department shall use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations.* The Department has very limited information on the background levels of metals in the water column of the Kennebec River. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

Chapter 530 4(E), states "*In allocating assimilative capacity for toxic pollutants, the Department shall hold a portion of the total capacity in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The unallocated reserve must be reviewed and restored as necessary at intervals of not more than five years. The water quality reserve must be not less than 15% of the total assimilative quantity*".

Chapter 530 §(3)(E) states *"... that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedance of water quality criteria, appropriate water quality-based limits must be established in any licensing action."*

Chapter 530 §4(F) states in part "*Where there is more than one discharge into the same fresh or estuarine receiving water or watershed, the Department shall consider the cumulative effects of those discharges when determining the need for and establishment of the level of effluent limits. The Department shall calculate the total allowable discharge quantity for specific pollutants, less the water quality reserve and background concentration, necessary to achieve or maintain water quality criteria at all points of discharge, and in the entire watershed. The total allowable discharge quantity for pollutants must be allocated consistent with the following principles.*

Evaluations must be done for individual pollutants of concern in each watershed or segment to assure that water quality criteria are met at all points in the watershed and, if appropriate, within tributaries of a larger river.

The total assimilative capacity, less the water quality reserve and background concentration, may be allocated among the discharges according to the past discharge quantities for each as a percentage of the total quantity of discharges, or another comparable method appropriate for a specific situation and pollutant. Past discharges of pollutants must be determined using the average concentration discharged during the past five years and the facility's licensed flow.

The amount of allowable discharge quantity may be no more than the past discharge quantity calculated using the statistical approach referred to in section 3(E) [Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control"] of the rule, but in no event may allocations cause the water quality reserve amount to fall below the minimum referred to in 4(E) [15% of the total assimilative capacity]. Any difference between the total allowable discharge quantity and that allocated to existing dischargers must be added to the reserve.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #001A

The Kennebec River has multiple dischargers that are subject to the Department's Chapter 530 testing requirements above and below the SDW facility. The Richmond facility is the most downstream discharger in the watershed that is dominated by fresh water flow.

On May 11, 2015 and August 25, 2015, respectively, the Department conducted statistical evaluations based on 15% of the ambient water quality criteria reserve being withheld (Report ID 782) and 0% of the reserve of the criteria being withheld (Report ID 800) to determine if the unallocated assimilative capacity would avoid an exceedance or avoid a reasonable potential to exceed applicable ambient water quality criteria for toxic pollutants. Report ID 800 indicates the SDW facility would no longer has a reasonable potential to exceed the chronic ambient water quality criteria for copper. Therefore, the Department is utilizing the full 15% of the unallocated assimilative capacity in the statistical evaluation when establishing limits for toxic pollutants in waste discharge licenses for facilities in the Kennebec River watershed.

The 8/25/15, statistical evaluation (Report ID 800) indicates the discharge from the SDW facility has two test results that have a reasonable potential to exceed the chronic AWQC for total aluminum.

The 8/25/15 statistical evaluation indicates five facilities have discharged detectable levels of aluminum that have a reasonable potential to exceed the acute and or chronic AWQC for aluminum. Department guidance that establishes protocols for establishing waste load allocations (mass) can be found as **Attachment E** of this Fact Sheet. The guidance states that the most protective of water quality becomes the facility's allocation. According to the 8/25/15 statistical evaluation, aluminum is to be limited based on the segment allocation method.

In May 2012, Maine law 38 M.R.S.A. §464, ¶¶ K was enacted which reads as follows, "*Unless otherwise required by an applicable effluent limitation guideline adopted by the department, any limitations for metals in a waste discharge license may be expressed only as mass-based limits.*" There are no applicable effluent limitation guidelines adopted by the Department or the USEPA for metals from a publicly owned treatment works.

Segment allocation methodology

Historical Average:

For the segment allocation methodology, the historical average quantity (mass) for each pollutant of concern for each facility is calculated utilizing the arithmetic mean of the concentrated values reported for each pollutant, a conversion factor of 8.34 lbs/gallon and the monthly average permit limit for flow. For the SDW facility, the historical average for aluminum can be calculated as follows:

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

Outfall #001A

Aluminum (chronic)

Mean concentration = 1,160 ug/L or 1.16 mg/L
Permit flow limit = 46.5 MGD
Historical average mass = (1.16 mg/L)(8.34)(46.5 MGD) = 450 lbs/day

The 8/25/15 statistical evaluation indicates the historical average mass of aluminum discharged by SDW is 95.6% of the aluminum discharged by all facilities on the main stem of the Kennebec River. Therefore, SDW's segment allocation for aluminum is calculated as 95.6% of the chronic assimilative capacity of the river at Richmond, the most downstream discharger on the main stem of the Kennebec River. The assimilative capacity at Richmond is calculated as follows:

7Q10 @Richmond = 2,560 cfs (0.6464) = 1,655 MGD

With a chronic ambient water quality criteria (AWQC) of 0.087 mg/L for total aluminum and withholding 10% for background, the assimilative capacity for aluminum for the Kennebec River watershed at Richmond can be calculated as follows:

(1,655 MGD)(8.34 lbs/gal)(0.087 mg/L)(0.90) = 1,081 lbs/day

Given there are three major tributaries of the Kennebec River that have waste water treatment plants, an assimilative capacity for each of the tributaries must be allocated and subtracted from the assimilative capacity at Richmond. They are the Sebasticook River, Sandy River and Wilson Stream. The 7Q10 low flows for each tributary are as follows:

Sebasticook River at Clinton = 65 cfs or 42 MGD
Sandy River at Farmington = 27 cfs or 17 MGD
Wilson Stream at Wilton = 7.5 cfs or 4.8 MGD

The assimilative capacities for aluminum for each tributary can be calculated as follows:

Seabasticook River: (42 MGD)(8.34 lbs/day)(0.087 mg/l)(0.90) = 27 lbs/day
Sandy River: (17 MGD)(8.34 lbs/day)(0.087 mg/l)(0.90) = 11 lbs/day
Wilson Stream: (4.8 MGD)(8.34 lbs/day)(0.087 mg/l)(0.90) = 3 lbs/day

Therefore, the adjusted assimilative capacity for aluminum for the main stem of the Kennebec River can be calculated as follows:

1,081 lbs/day – 27 lbs/day – 11 lbs/day – 3 lbs/day = 1,040 lbs/day

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

Outfall #001A

Monthly average (chronic) mass limitations for aluminum are calculated as follows:

Monthly average: (Chronic assimilative capacity mass)(% of total aluminum discharged)
(1,040 lbs/day)(0.956) = **994 lbs/day**

Chapter 530 does not establish monitoring frequencies for parameters that exceed or have a reasonable potential to exceed AWQC. Monitoring frequencies are established on case-by-case basis given the timing, severity and frequency of occurrences of the exceedences or reasonable potential to exceed applicable critical water quality thresholds. Therefore, this permitting action is making a best professional judgment to establish the monitoring frequency for aluminum at the routine surveillance level frequency of 2/Year specified in Chapter 530.

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action is carrying forward a reduced surveillance level reporting and monitoring frequency of 1/2Years for analytical chemistry testing beginning upon issuance of the permit and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit)
and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit). As with reduced WET testing, the permittee must file an annual certification with the Department pursuant to Chapter 530 §2(D)(3) and Special Condition G, *06-096 CMR 530(2)(D)(4), Statement For Reduced/Waived Toxics Testing* of this permit.

Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement the permittee shall conduct routine screening level analytical chemistry testing at 1/Quarter and priority pollutant testing of 1/Year. Surveillance and screening level testing is summarized as follows;

Surveillance level testing

Level	Priority pollutant testing	Analytical chemistry
II	---	1/2 years

Screening level testing

Level	Priority pollutant testing	Analytical chemistry
II	1/Year	4/Year (1/Quarter)

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

Outfall #001A

It is noted however that if future WET or other chemical specific test results indicates the discharge exceeds critical water quality thresholds or AWQC, this permit will be reopened pursuant to Special Condition L, *Reopening of Permit For Modification*, of this permit to establish applicable limitations and monitoring requirements.

Outfall #100 (Bleach Plant)

In accordance with federal regulation 40 CFR Part 430, this permitting action is carrying forward from the previous permitting action limitations and monitoring requirements for an internal point source, the combined bleach plant filtrate effluents.

n. Flow: The previous permitting action established a monthly average and daily maximum reporting requirements for flow from the bleach plant along with a 1/Day monitoring requirement.

A summary of the discharge flow data as reported on the Discharge Monitoring Reports (DMRs) submitted to the Department for Outfall #100 for the period January 2012 through July 2015 is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	1.93 MGD	9.35 MGD	5.50 MGD	43
Daily Maximum	4.72 MGD	10.16 MGD	6.74 MGD	43

This permitting action is eliminating the requirement to measure flow for this internal waste stream on a daily basis as it is an unnecessary expense given others parameters are only monitored on 2/Year or 1/Quarter basis. This permit is only requiring flow measurement and reporting on days in which sampling for other parameters limited for Outfall #100 is required.

o. 2,3,7,8-TCDD (Dioxin): The previous permitting action established, and this permitting action is carrying forward, a daily maximum concentration limit of <10 ppq (pg/L) for 2,3,7,8-TCDD (Dioxin) with a minimum monitoring frequency requirement of 1/Year. The numeric limitation is based on 38 M.R.S.A. § 420 and 40 CFR Part 430. The limit of 10 pg/L is also the ML (Minimum Level - the level at which the analytical system gives recognizable signals and an acceptable calibration point) for USEPA Method 1613B. On July 12, 2005, the Department administratively modified the 9/12/03 permit to reduce the minimum monitoring frequency requirement from once per month to once per year. This reduction was based on the provision in 40 CFR Part 430 that authorizes the permitting

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

Outfall #100 (Bleach Plant)

authority to modify the monitoring frequency for dioxin and furans after five years of monitoring data (60 data points) for dioxin and furan has been collected. SDW had been monitoring the bleach plant effluent for dioxin and furan since 1997 which resulted in more than 60 data points. The data collected to date indicates dioxin and furan has been less than the respective MLs of 10 ppq since the transition to the elimination of elemental chlorine from the bleaching process was completed in 1997. Therefore, the Department reduced the monitoring frequency to once per year and established (Special Condition H) a dioxin and furan certification requirement that requires the permittee to submit an annual certification indicating the bleaching process has not fundamentally changed from previous practices and therefore the formation of dioxin/furan compounds is highly unlikely.

A summary of 2,3,7,8-TCDD (Dioxin) data as reported to the Department for the period of January 2012 through July 2015 (n = 3) indicates this compound has not been detected at or above 10 pg/L.

It is noted that the previous permit specified that all detectable analytical test results for dioxin, furan and the 12 chlorophenolic compounds discussed below – including those results below the respective ML for each parameter – must be reported to the Department, but that compliance shall be based on the ML. All reported test results on file with the Department during said monitoring period for dioxin are below the ML and represent the detection level achieved by the laboratory for that particular parameter and analysis.

p. 2,3,7,8 TCDF (Furan): The previous permitting action established, and this permitting action is carrying forward, a daily maximum concentration limit of <10 ppq (pg/L) for 2,3,7,8 TCDF (Furan) with a minimum monitoring frequency requirement of once per year. 40 CFR Part 430 establishes a daily maximum concentration limit of 31.9 pg/L; however, 38 M.R.S.A. § 420 contains the more stringent limitation of <10 pg/L and is therefore being carried forward in this permitting action. The limit of 10 pg/L is also the ML (Minimum Level - the level at which the analytical system gives recognizable signals and an acceptable calibration point) for USEPA Method 1613B. On July 12, 2005, the Department administratively modified the 9/12/03 permit to reduce the minimum monitoring frequency requirement from once per month to once per year based on test results and provision in 40 CFR Part 430. (See discussion in related dioxin section above.)

A summary of 2,3,7,8 TCDF (Furan) data as reported to the Department for the period of January 2012 through July 2015 (n = 3) indicates this compound has not been detected at or above 10 pg/L.

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

Outfall #100 (Bleach Plant)

q. Twelve Chlorophenolics: The previous permitting action established, and this permitting action is carrying forward, daily maximum concentration limits for the twelve chlorophenolic compounds specified at 40 CFR Part 430.24. The limitations are either 2.5 ug/L or 5.0 ug/L, depending on the parameter, and are equivalent to the respective ML for each parameter using USEPA Method 1653. The 9/12/03 permit established a minimum monitoring frequency requirement of once per month for each compound based on the federal regulation. On June 27, 2008, the Department issued a minor permit revision to the 9/12/03 permit to reduce the minimum monitoring frequency requirement for the twelve chlorophenolic compounds to twice per year based on the test results on file and USEPA guidance for performance-based reduction in monitoring frequencies. (See WDL #W000385-5N-I-M for additional details.)

A review of the Outfall #100 chlorophenolic monitoring results submitted to the Department for the period of January 2012 through July 2015 indicates that the facility has been in compliance with the respective limitations 100% of the time during said reporting period.

r. Chloroform: The previous permitting action established monthly average and daily maximum mass limitations of 12.6 lbs./day and 21.1 lbs./day, respectively, for chloroform based on federal regulation found at 40 CFR Part 430 and an unbleached kraft pulp production value of 1,620 tons/day. The regulation establishes production-based BAT monthly average and daily maximum allowances of 4.14 and 6.92 g/kkg of unbleached pulp production. With a 3% increase in unbleached kraft production to 1,672 tons/day the limits are calculated as follows:

[1,672 tons/day] [4.14 g/kkg] [0.907 kkg/ton] [1.0 lbs/ 454g] = 13.8 lbs /day
[1,672 tons/day] [6.92 g/kkg] [0.907 kkg/ton] [1.0 lbs/ 454g] = 23.1 lbs /day

A summary of the Outfall #100 chloroform data as reported on the DMRs submitted to the Department for the period January 2012 through July 2015 is as follows:

Chloroform	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	1.0 lbs./day	2.6 lbs./day	1.86 lbs./day	14
Daily Maximum	1.0 lbs./day	2.6 lbs./day	1.86 lbs./day	14

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Outfall #006A (Backwash waters)

s. River Water Intake Backwash: The previous permitting action authorized, as is this permitting action, the discharge of river water intake backwash via Outfall #006A without specific effluent limitations or monitoring requirements. Water for the mill is supplied from the Kennebec River pump house. At the pump house, water is drawn in from the river through two bar screens which prevent large debris from entering with the water. The water then passes through two vertical traveling screens which remove smaller material that could plug the lift pumps. River water is then pumped to the mill's water treatment plant. The traveling screens are ¼ to ½ inch square mesh screens that are self-cleaning. River water from the lift pumps is used to back flush these screens. The backwash is returned to the river through a pipe in the inlet structure. The backwash waters do not come into contact with any mill processes that would potentially contaminate the backwash waters. The permittee has indicated that the discharge rate associated with this activity is approximately 50 gallons per minute.

7. BEST MANAGEMENT PRACTICES PLAN

Best Management Practices (BMPs) applicable to this facility are specified at 40 CFR 430.03. The primary objective of the Best Management Practices is to prevent leaks and spills of spent pulping liquors, soap, and turpentine. The secondary objective is to contain, collect, and recover at the immediate process area, or otherwise control, those leaks, spills, and intentional diversions of spent pulping liquor, soap and turpentine that do occur. Toward those objectives, the permittee must implement the Best Management Practices (BMPs) specified in 40 CFR 430.03(c).

8. 316(b) – COOLING WATER INTAKE STRUCTURES

Pursuant to 40 CFR, Part 125.9, Sub-Part J, *Requirements Applicable To Cooling Water Intake Structures For Existing Facilities Under Section 316(b) of the Clean Water Act*, the owner or operator of an existing facility that uses or proposes to use intake structures with a cumulative design intake of greater than 2 million gallons per day to withdraw water from waters of the U.S. and 25% or more of the water withdrawn actually is used exclusively for cooling purposes is subject to the rule. On February 27, 2012, the USEPA issued a letter to SDW requesting information on water withdrawal and cooling water needs at the Somerset mill. In a letter of response to the USEPA dated May 17, 2012, SDW stated it does withdraw more than 2.0 million gallons per day of water from the Kennebec River but only utilizes 7% of the water for the exclusive use for cooling water purposes. As a result, the SDW facility is not categorically subject to the regulation.

9. ANTI-BACKSLIDING

Federal regulation 40 CFR, §122(l) contains the criteria for what is often referred to as the anti-backsliding provisions of the Federal Water Pollution Control Act (Clean Water Act). In general, the regulation states that except for provisions specified in the regulation, effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit. Applicable exceptions include (1) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation and (2) information is available which was not available at the time of the permit issuance (other than revised regulations, guidance or test methods) and which would justify the application of less stringent effluent limitations at the time of permit issuance.

This permitting action is establishing less stringent technology based mass limitations for AOX and chloroform based on new information (3% increase in unbleached kraft pulp production) cited by the permittee.

10. ANTI-DEGREDATION - IMPACT ON RECEIVING WATER QUALITY

Maine's anti-degradation policy is included in 38 M.R.S.A., Section 464(4)(F) and addressed in the *Conclusions* section of this permit. Pursuant to the policy, where a new or increased discharge is proposed, the Department shall determine whether the discharge will result in a significant lowering of existing water quality. Increased discharge means a discharge that would add one or more new pollutants to an existing effluent, increase existing levels of pollutants in an effluent, or cause an effluent to exceed one or more of its current licensed discharge flow or effluent limits, after the application of applicable best practicable treatment technology.

This permitting action revises previously established technology based mass limitations for AOX and chloroform. The rationale for these actions is contained in Section 6 of this Fact Sheet. Based on the information provided in the referenced section, the Department has made the determination that the discharge approved by this permit will not result in a significant lowering of water quality. As permitted, the Department has determined the existing and designated water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the Kennebec River to meet standards for Class B or Class C classifications. In addition, the Department has made the determination that water quality standards established in State law are protective of all cold water fish populations and that effluent monitoring of the discharge and ambient water quality monitoring of the receiving waters required by this permit serve as an interim Habitat Conservation Plan (HCP).

11. PUBLIC COMMENTS

Public notice of this application was made in the *Morning Sentinel* newspaper on or about December 5, 2013. The Department receives public comments on an application until the date a final agency action is taken on the 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 *Application Processing Procedures for Waste Discharge Licenses,* 06-096 CMR 522 (effective January 12, 2001).

12. DEPARTMENT CONTACTS

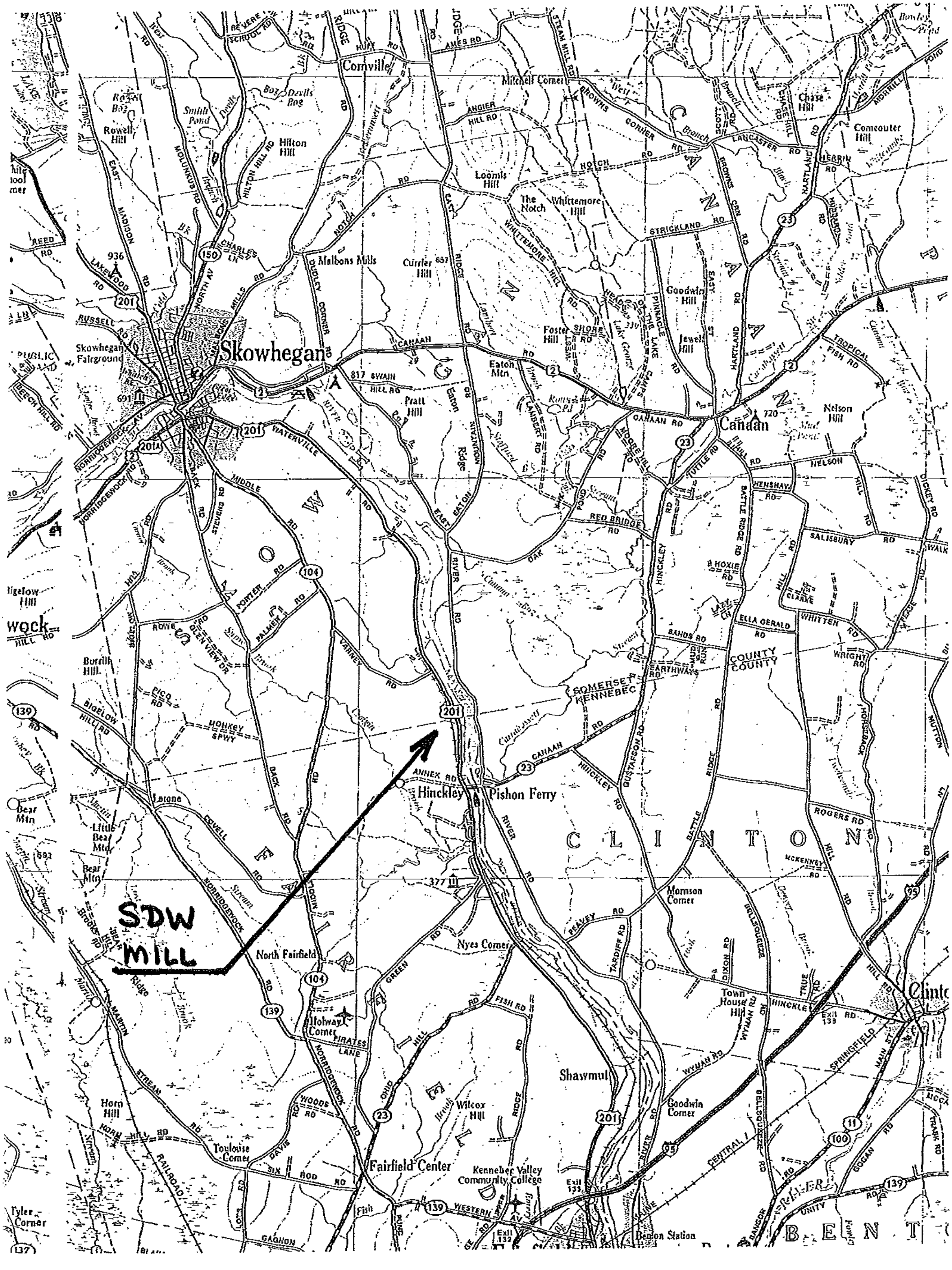
Additional information concerning this permitting action may be obtained from, and written comments sent to:

Gregg Wood
Division of Water Quality Management
Bureau of Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7693 Fax: (207) 287-3435
e-mail: gregg.wood@maine.gov

13. RESPONSE TO COMMENTS

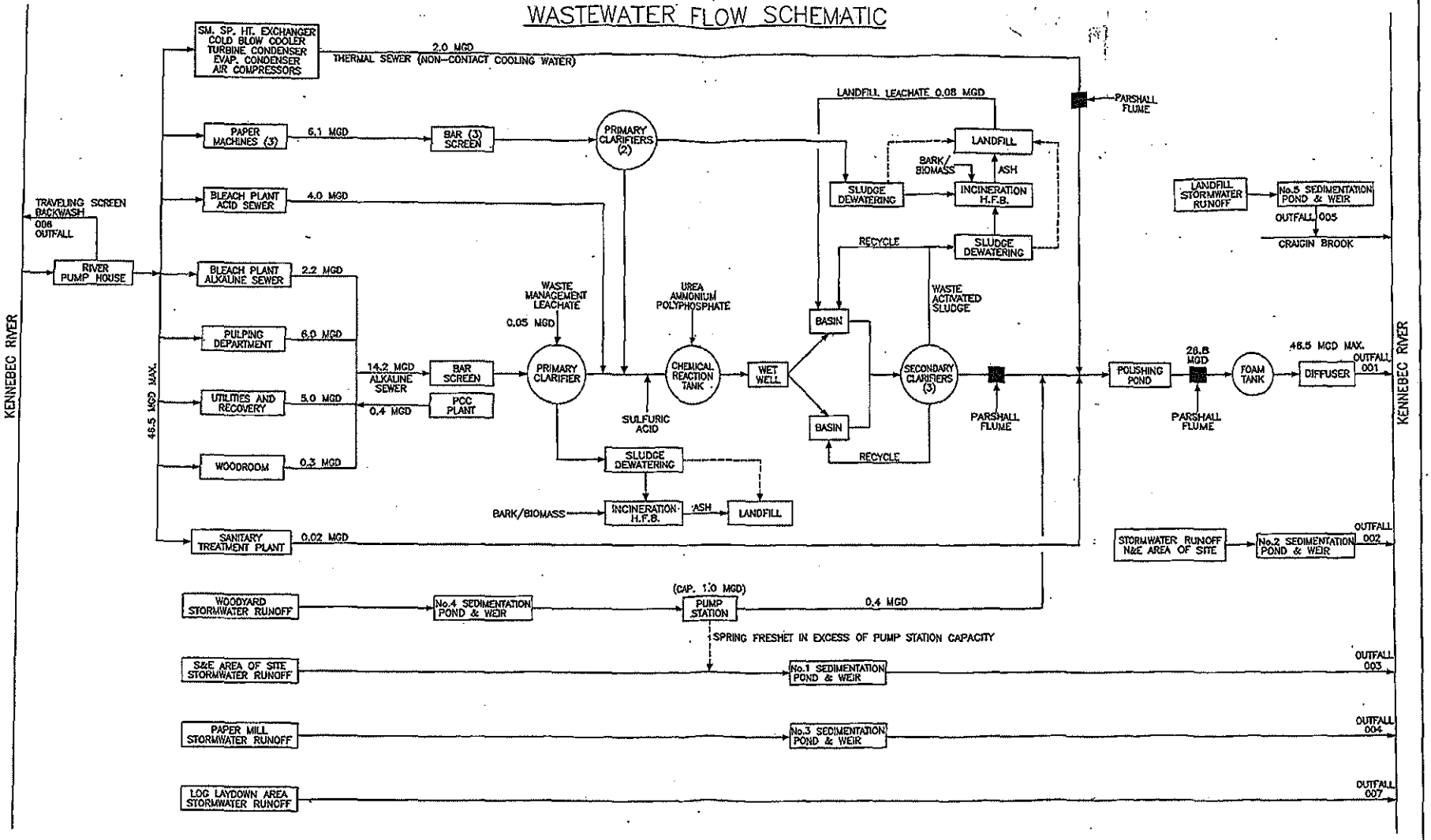
During the period of October 22, 20105, through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the permittee's facility. The Department did not receive comments from the permittee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit. Therefore, the Department has not prepared a Response to Comments.

ATTACHMENT A


SDW
MILL
Skowhegan
Skowhegan Fairground
Cornville
Mitchell Corner
Malbons Mills
Loomis Hill
The Notch
Whittemore Hill
Currier Hill
Hilton Hill
Smith Pond
Devils Bog
Rowell Hill
Chase Hill
Comeauter Hill
Goodwin Hill
Jewell Hill
Foster Hill
Eaton Mtn
Pratt Hill
Eaton Ridge
Canaan
Nelson Hill
Hinckley
Pishon Ferry
Latone
Bear Mtn
Little Bear Mtn
Burrill Hill
Bigelow Hill
North Fairfield
Nyes Corner
Morrison Corner
Town House Hill
Holway Corner
Shawmut
Goodwin Corner
Horn Hill
Wilcox Hill
Toulouse Corner
Fairfield Center
Kennebec Valley Community College
Benton Station
Tyler Corner
SOMERSET
KENNEBEC
COUNTY
COUNTY
CLINTON
CANAAN
BENT
Clinto

ATTACHMENT B

WASTEWATER FLOW SCHEMATIC



REV	DESCRIPTION	DATE	BY	APP.
01	GENERAL UPDATE	10/29/13	URS	RN

CAPITAL PROJECT

ENGINEERING PROJECT

BY	JCR	DWG	11-3-08
CHK'D	RN	ISSUED	NONE
APP'D		JOB NO.	15500

sappi — SOMERSET PLANT — SKOWHEGAN, MAINE

LOCATION: WASTE TREATMENT

DESCRIPTION: WASTEWATER FLOW SCHEMATIC

DETAIL: LAYOUT — DWG. 12266D-155-F

ATTACHMENT C

WET TEST REPORT

Data for tests conducted for the period

15/Sep/2010 - 15/Sep/2015

SD WARREN (K) NPDES= ME002152 Effluent Limit: Acute (%) = 3.695 Chronic (%) = 3.012

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	100	04/09/2013	3.695		
TROUT	A_NOEL	100	10/01/2013	3.695		
TROUT	C_NOEL	50	04/09/2013	3.012		
TROUT	C_NOEL	100	10/01/2013	3.012		
WATER FLEA	A_NOEL	100	04/09/2013	3.695		
WATER FLEA	A_NOEL	100	10/01/2013	3.695		
WATER FLEA	C_NOEL	25	04/09/2013	3.012		
WATER FLEA	C_NOEL	50	10/01/2013	3.012		

ATTACHMENT D

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 15/Sep/2010 - 15/Sep/2015

Facility Name: **SD WARREN (K)** NPDES: **ME0021521**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
09/30/2010	27.70	31.60	1	0	0	1	0	0	0	F	0
12/31/2010	NR	NR	1	1	0	0	0	0	0	F	0
03/31/2011	26.50	NR	1	0	0	1	0	0	0	F	0
01/31/2012	23.30	NR	1	0	0	1	0	0	0	F	0
05/31/2012	26.70	NR	1	0	0	1	0	0	0	F	0
09/11/2012	28.82	28.21	22	10	0	1	0	11	0	F	0
01/16/2013	25.91	26.60	11	10	0	0	0	1	0	F	0
04/09/2013	25.36	23.00	136	14	28	46	25	12	11	F	0
07/30/2013	28.91	29.71	11	10	0	0	0	1	0	F	0
10/01/2013	27.08	31.11	22	10	0	1	0	11	0	F	0
03/17/2014	26.70	27.79	1	0	0	1	0	0	0	F	0
07/08/2014	29.16	30.32	1	0	0	1	0	0	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

Data Date Range: 09/Oct/2010 - 09/Oct/2015

Facility name: **SD WARREN (K)** Permit Number: **ME0021521**

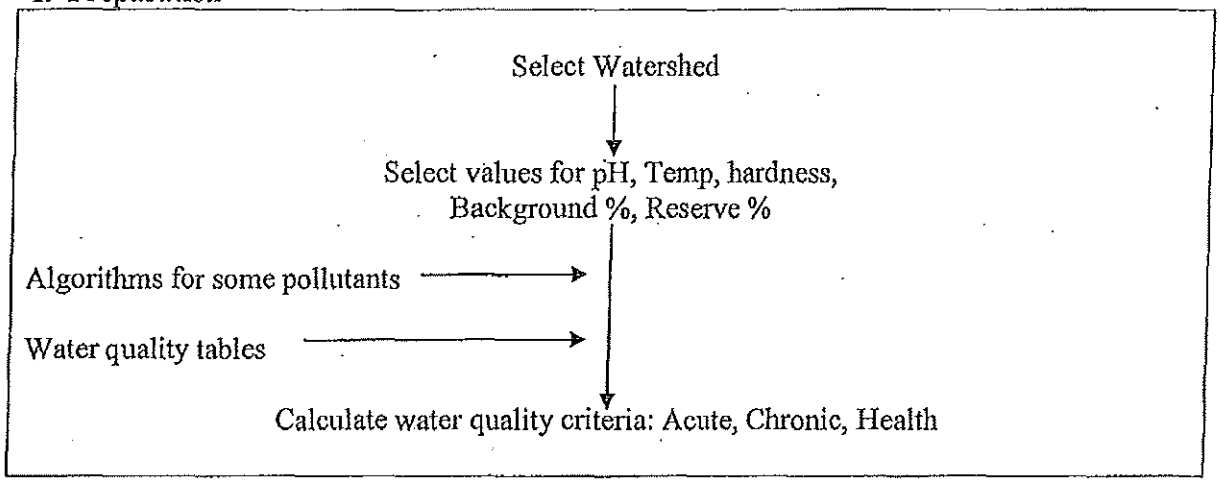
Parameter: ALUMINUM

Test date	Result (ug/l)	Lsthan
12/31/2010	600.000	N
09/11/2012	1330.000	N
01/16/2013	1320.000	N
04/09/2013	1120.000	N
07/30/2013	1060.000	N
10/01/2013	1530.000	N

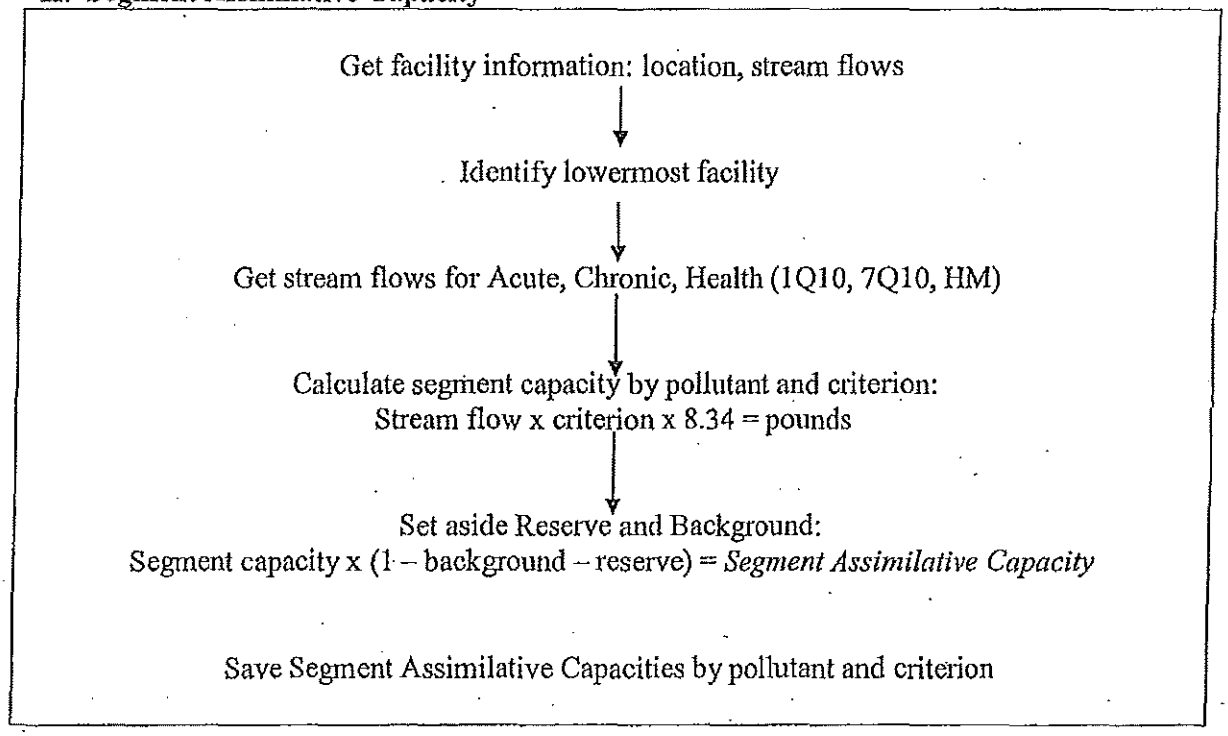
ATTACHMENT E

Maine Department of Environmental Protection
General Processing Steps in "DeTox"

I. Preparation

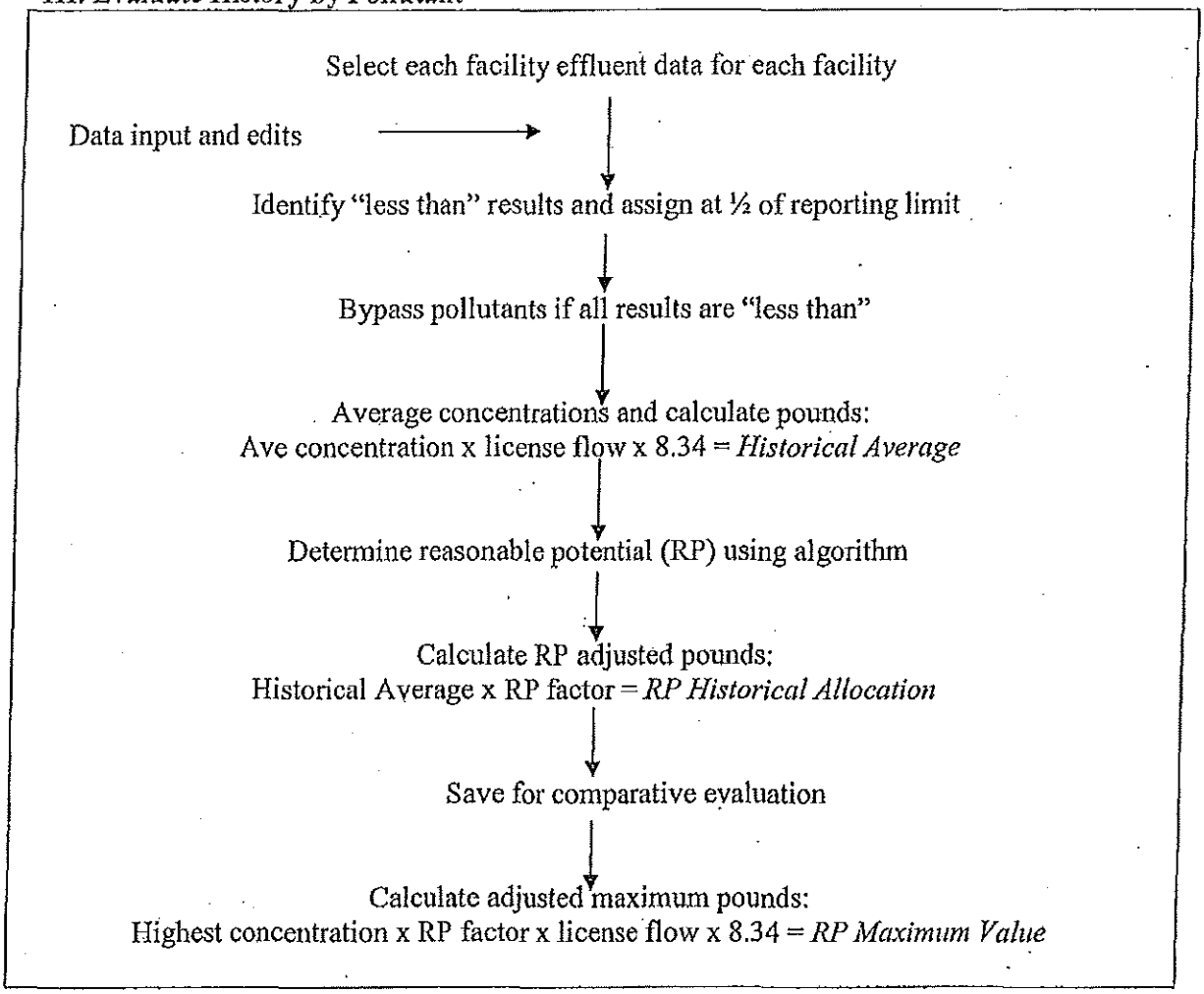


II. Segment Assimilative Capacity

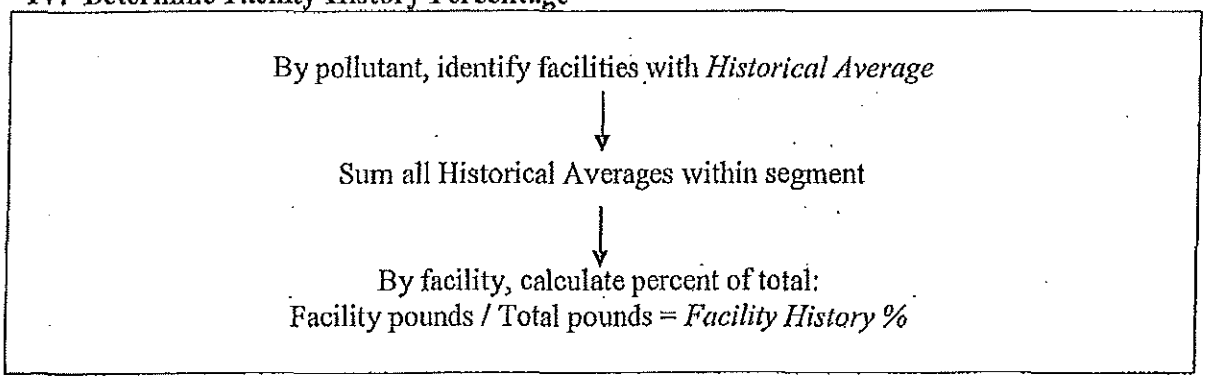


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant



IV. Determine Facility History Percentage



Maine Department of Environmental Protection
General Processing Steps in "DeTox"

V. Segment Allocation

By pollutant and criterion, select *Segment Assimilative Capacity*

↓

Select individual *Facility History %*

↓

Determine facility allocation:
Assimilative Capacity x Facility History % = *Segment Allocation*

↓

Save for comparative evaluation

VI. Individual Allocation

Select individual facility and dilution factor (DF)

↓

Select pollutant and water quality criterion

↓

By pollutant and criterion, calculate individual allocations:
[DF x 0.75 x criterion] + [0.25 x criterion] = Individual Concentration

↓

Determine individual allocation:
Individual Concentration x license flow x 8.34 = *Individual Allocation*

↓

Save for comparative evaluation

VII. Make Initial Allocation

By facility, pollutant and criterion, get:
Individual Allocation, Segment Allocation, RP Historical Allocation

↓

Compare allocation and select the smallest

↓

Save as *Facility Allocation*

VIII. Evaluate Need for Effluent Limits

By facility, pollutant and criterion select
Segment Allocation, *Individual Allocation* and *RP Maximum value*

↓

If *RP Maximum value* is greater than either *Segment Allocation* or *Individual Allocation*, use lesser value as *Effluent Limit*

↓

Save *Effluent Limit* for comparison

IX. Reallocation of Assimilative Capacity

Starting at top of segment, get *Segment Allocation*, *Facility Allocation* and *Effluent Limit*

↓

If *Segment Allocation* equals *Effluent Limit*, move to next facility downstream

↓

If not, subtract *Facility Allocation* from *Segment Allocation*

↓

Save difference

↓

Select next facility downstream

↓

Figure remaining *Segment Assimilative Capacity* at and below facility, less tributaries

↓

Add saved difference to get an adjusted *Segment Assimilative Capacity*

↓

Reallocate *Segment Assimilative Capacity* among downstream facilities per step V

↓

Repeat process for each facility downstream in turn

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

DATE: October 2008

TO: Interested Parties

FROM: Dennis Merrill, DEP

SUBJECT: DEP's system for evaluating toxicity from multiple discharges

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Following the requirements of DEP's rules, Chapter 530, section 4(F), the Department is evaluating discharges of toxic pollutants into a freshwater river system in order to prevent cumulative impacts from multiple discharges. This is being through the use of a computer program known internally as "DeTox". The enclosed package of information is intended to introduce you to this system.

Briefly, the DeTox program evaluates each wastewater facility within a watershed in three different ways in order to characterize its effluent: 1) the facility's past history of discharges, 2) its potential toxicity at the point of discharge on an individual basis, and 3) the facility's contribution to cumulative toxicity within a river segment in conjunction with other facilities. The value that is most protective of water quality becomes the value that is held in the DeTox system as an allocation for the specific facility and pollutant.

The system is not static and uses a five-year "rolling" data window. This means that, over time, old test results drop off and newer ones are added. The intent of this process is to maintain current, uniform facility data to estimate contributions to a river's total allowable pollutant loading prior to each permit renewal.

Many facilities are required to do only a relatively small amount of pollutant testing on their effluent. This means, statistically, the fewer tests done, the greater the possibility of effluent limits being necessary based on the facility's small amount of data. To avoid this situation, most facilities, especially those with low dilution factors, should consider conducting more than the minimum number of tests required by the rules.

Attached you will find three documents with additional information on the DeTox system:

- Methods for evaluating the effects of multiple discharges of toxic pollutants
- Working definitions of terms used in the DeTox system
- Reviewing DeTox Reports
- Prototype facility and pollutant reports

If you have questions as you review these, please do not hesitate to contact me at Dennis.L.Merrill@maine.gov or 287-7788.

Maine Department of Environmental Protection

Methods for evaluating the effects of multiple discharges of toxic pollutants.

Reference: DEP Rules, Chapter 530, section 4(F)

To evaluate discharges of toxic pollutants into a freshwater river system and prevent cumulative impacts from multiple discharges, DEP uses a computer program called "DeTox that functions as a mathematical evaluation tool.

It uses physical information about discharge sources and river conditions on file with the Department, established water quality criteria and reported effluent test information to perform these evaluations. Each toxic pollutant and associated water quality criterion for acute, chronic and/or human health effects is evaluated separately.

Each facility in a river drainage area has an assigned position code. This "address" is used to locate the facility on the river segment and in relation to other facilities and tributary streams. All calculations are performed in pounds per day to allow analysis on a mass balance. Pollutants are considered to be conservative in that once in the receiving water they will not easily degrade and have the potential to accumulate.

The process begins with establishing an assimilative capacity for each pollutant and water quality criterion at the most downstream point in the river segment. This calculation includes set-aside amounts for background and reserve quantities and assumed values for receiving water pH, temperature and hardness. The resulting amount of assimilative capacity is available for allocation among facilities on the river.

Each facility is evaluated to characterize its past discharge quantities. The historical discharge, in pounds per day, is figured using the average reported concentration and the facility's permitted flow. As has been past practice, a reasonable potential (RP) factor is used as a tool to estimate the largest discharge that may occur with a certain degree of statistical certainty. The RP factor is multiplied by the historical average to determine an allocation based on past discharges. The RP factor is also multiplied by the single highest test to obtain a maximum day estimate. Finally, the direct average without RP adjustment is used to determine the facility's percent contribution to the river segment in comparison to the sum of all discharges of the pollutant. This percent multiplied by the total assimilative capacity becomes the facility's discharge allocation used in evaluations of the segment loadings.

Additionally, individual facility discharges are evaluated as single sources, as they have been in the past to determine if local conditions are more limiting than a segment evaluation.

With all of this information, facilities are evaluated in three ways. The methods are:

1. The facility's past history. This is the average quantity discharged during the past five years multiplied by the applicable RP factor. This method is often the basis for an allocation when the discharge quantity is relatively small in comparison to the water quality based allocation.
2. An individual evaluation. This assumes no other discharge sources are present and the allowable quantity is the total available assimilative capacity. This method may be used when a local condition such as river flow at the point of discharge is the limiting factor.
3. A segment wide evaluation. This involves allocating the available assimilative capacity within a river segment based on a facility's percent of total past discharges. This method would be used when multiple discharges of the same pollutant to the same segment and the available assimilative capacity is relatively limited.

The value that is most protective of water quality becomes the facility's allocation that is held in the system for the specific facility and pollutant. It is important to note that the method used for allocation is facility and pollutant specific and different facilities on the same segment for the same pollutant can have different methods used depending on their individual situations.

Discharge amounts are always allocated to all facilities having a history of discharging a particular pollutant. This does not mean that effluent limits will be established in a permit. Limits are only needed when past discharge amounts suggest a reasonable potential to exceed a water quality based allocation, either on an individual or segment basis. Similar to past practices for single discharge evaluations, the single highest test value is multiplied by a RP factor and if product is greater than the water quality allowance, an effluent limit is established. It is important to remember an allocation is "banking" some assimilative capacity for a facility even if effluent limits are not needed.

Evaluations are also done for each tributary segment with the sum of discharge quantities in tributaries becoming a "point source" to the next most significant segment. In cases where a facility does not use all of its assimilative capacity, usually due to a more limiting individual water quality criterion, the unused quantity is rolled downstream and made available to other facilities.

The system is not static and uses a five-year rolling data window. Over time, old tests drop off and newer ones are added on. These changes cause the allocations and the need for effluent limits to shift over time to remain current with present conditions. The intent is to update a facility's data and relative contribution to a river's total assimilative capacity prior to each permit renewal. Many facilities are required to do only minimal testing to characterize their effluents. This creates a greater degree of statistical uncertainty about the true long-term quantities. Accordingly, with fewer tests the RP factor will be larger and result in a greater possibility of effluent limits being necessary. To avoid this situation, most facilities, especially those with relatively low dilution factors, are encouraged to conduct more that a minimum number of tests. It is generally to a facility's long-term benefit to have more tests on file since their RP factor will be reduced.

Maine Department of Environmental Protection

Working Definitions of Terms Used in the DeTox System.

Allocation. The amount of pollutant loading set aside for a facility. Separate amounts are set for each *water quality criterion.* Each pollutant having a history of being discharged will receive an allocation, but not all allocations become *effluent limits.* Allocation may be made in three ways: *historical allocation, individual allocation* or *segment allocation.*

Assimilative capacity. The amount of a pollutant that river segment can safely accept from point source discharges. It is determined for the most downstream point in a river segment using the *water quality criterion* and river flow. Separate capacities are set for acute, chronic and human health criteria as applicable for each pollutant. Calculation of this capacity includes factors for *reserve* and *background* amounts.

Background. A concentration of a pollutant that is assumed to be present in a receiving water but not attributable to discharges. By rule, this is set as a rebuttable presumption at 10% of the applicable *water quality criterion.*

Effluent limit. A numeric limit in a discharge permit specifically restricting the amount of a pollutant that may be discharged. An effluent limit is set only when the highest discharge, including an adjustment for *reasonable potential,* is greater than a facility's water quality based *allocation* for a pollutant.

Historical allocation (or *RP history*). One of three ways of developing an *allocation.* The facility's average history of discharges, in pounds at design flow, is multiplied by the appropriate *reasonable potential* factor. An allocation using this method does not become an *effluent limit.*

Historical discharge percentage. For each pollutant, the average discharge concentration for each facility in a segment is multiplied by the permitted flow (without including a *reasonable potential* factor). The amounts for all facilities are added together and a percent of the total is figured for each facility. When a facility has no detectable concentrations, that pollutant is assumed to be not present and it receives no percentage.

Individual allocation. One of three ways of developing an *allocation.* The facility's single highest discharge on record multiplied by the appropriate *reasonable potential* factor is compared to a water quality based quantity with an assumption that the facility is the only point source to that receiving water. If the RP-adjusted amount is larger, the water quality amount may become an *effluent limit.*

Less than. A qualification on a laboratory report indicating the concentration of a pollutant was below a certain concentration. Such a result is evaluated as being one half of the Department's reporting limit in most calculations.

Reasonable potential (RP). A statistical method to determine the highest amount of a pollutant likely to be present at any time based on the available test results. The method produces a value or RP factor that is multiplied by test results. The method relies on an EPA guidance document, and considers the coefficient of variation and the number of tests. Generally, the fewer number of tests, the higher the RP factor.

Reserve. An assumed concentration of a pollutant that set aside to account for non-point source of a pollutant and to allow new discharges of a pollutant. By rule this is set at 15% of the applicable *water quality criterion.*

Segment allocation. One of three ways of developing an *allocation.* The amount is set by multiplying a facility's *historical discharge percentage* for a specific pollutant by the *assimilative capacity* for that pollutant and criterion. A facility will have different allocation percentages for each pollutant. This amount may become an *effluent limit.*

Tributary. A stream flowing into a larger one. A total pollutant load is set by adding the all facilities *allocations* on the tributary and treating this totaled amount as a "point source" to the next larger segment.

Water quality criteria. Standards for acceptable in-stream or ambient levels of pollutants. These are established in the Department's Chapter 584 and are expressed as concentrations in ug/L. There may be separate standards for acute and chronic protection aquatic life and/or human health. Each criterion becomes a separate standard. Different stream flows are used in the calculation of each.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 530.2(D)(4) CERTIFICATION

MEPDES#_____Facility Name_____

Since the effective date of your permit, have there been;		NO	YES Describe in comments section
1	Increases in the number, types, and flows of industrial, commercial, or domestic discharges to the facility that in the judgment of the Department may cause the receiving water to become toxic?	☐	☐
2	Changes in the condition or operations of the facility that may increase the toxicity of the discharge?	☐	☐
3	Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge?	☐	☐
4	Increases in the type or volume of hauled wastes accepted by the facility?	☐	☐

COMMENTS:

Name (printed): _____

Signature:_____Date: _____

This document must be signed by the permittee or their legal representative.

This form may be used to meet the requirements of Chapter 530.2(D)(4). This Chapter requires all dischargers having waived or reduced toxic testing to file a statement with the Department describing changes to the waste being contributed to their system as outlined above. As an alternative, the discharger may submit a signed letter containing the same information.

Scheduled Toxicity Testing for the next calendar year

Test Conducted	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
WET Testing	☐	☐	☐	☐
Priority Pollutant Testing	☐	☐	☐	☐
Analytical Chemistry	☐	☐	☐	☐
Other toxic parameters [1]	☐	☐	☐	☐

Please place an "X" in each of the boxes that apply to when you will be conducting any one of the three test types during the next calendar year.

[1] This only applies to parameters where testing is required at a rate less frequently than quarterly.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **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. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board 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 the Board's 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 a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of 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

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of 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 on the appeal 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, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that 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 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.

Other Considerations in Appealing a Decision to the Board

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, 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.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder 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 receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the 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 or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

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.