



STATE OF MAINE
Department of Environmental Protection

Paul R. LePage
GOVERNOR

Patricia W. Aho
COMMISSIONER

June 19, 2014

Mr. Steven Arnold
Paris Utility District
1 Paris Hill Road
P.O. Box 154
South Paris, ME. 04281

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100951
Maine Waste Discharge License (WDL) Application #W000632-6C-I-R
Proposed Draft Permit

Dear Mr. Arnold:

Enclosed is a **proposed draft** MEPDES permit and Maine WDL (permit hereinafter) which the Department proposes to issue as a final document after opportunity for your review and comment. By transmittal of this letter you are provided with an opportunity to comment on the proposed draft permit and its conditions (special conditions specific to this permit are enclosed; standard conditions applicable to all permits are available upon request). If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies and from any other parties who have notified the Department of their interest in this matter.

All comments must be received in the Department of Environmental Protection office on or before the close of business **Monday, July 21, 2014**. Failure to submit comments in a timely fashion will result in the final document being issued as drafted. Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection
Bureau of Land & Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-3901 FAX: (207) 287-3435
RAY BLDG., HOSPITAL ST.

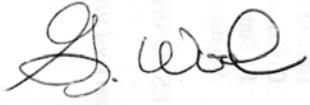
BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-6477 FAX: (207) 764-1507

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

Sincerely,

A handwritten signature in black ink, appearing to read "G. Wood". The signature is fluid and cursive, with the first letter "G" being particularly large and stylized.

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

Enc.

cc: Cynthia Bertocci, BEP Analyst
Stuart Rose, DEP/SMRO
Barry Mower, DEP/CMRO
John Glowa, DEP/CMRO
David Breau, DEP/CMRO
David Webster, USEPA
Alex Rosenberg, USEPA
David Pincumbe, USEPA
Ellen Weitzler, USEPA
Maine Department of Marine Resources
Maine Department of Inland Fisheries & Wildlife
Ivy Frignoca, CLF



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

DEPARTMENT ORDER

IN THE MATTER OF

PARIS UTILITY DISTRICT)	MAINE POLLUTANT DISCHARGE
PARIS, OXFORD COUNTY, MAINE)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS)	AND
ME0100951)	WASTE DISCHARGE LICENSE
W000632-6C-I-R)	RENEWAL
		APPROVAL

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et seq., and Maine Law 38 M.R.S.A., Section 414-A et seq., and applicable regulations the Department of Environmental Protection (Department hereinafter) has considered the application of the PARIS UTILITY DISTRICT (PUD/permittee hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The PUD submitted a timely and complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100951/Waste Discharge License #W000632-5L-G-R (permit hereinafter) that was issued by the Department on August 21, 2001, and expired on August 21, 2006. The permit approved a monthly average discharge of up to 0.65 million gallons per day (MGD) of secondary treated waste water and an unspecified quantity of untreated combination storm water and sanitary waste waters from a combined sewer overflow (CSO) from the PUD waste water treatment facility, to the Little Androscoggin River, Class C, in Paris, Maine.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the previous permitting action with the following exceptions as this permit;

1. Establishes whole effluent toxicity (WET), analytical chemistry and priority pollutant testing pursuant to Department rule, 06-096 CMR Chapter 530.
2. Establishes water quality based mass limitations for copper, lead and zinc as test results for said parameters exceeded or have a reasonable potential to exceed ambient water quality criteria (AWQC) established in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*.
3. Incorporating the average and maximum concentration limits for total mercury that were originally established in a waste discharge license modification dated May 23, 2000.

PERMIT SUMMARY (cont'd)

4. Eliminates the water quality based limitations for ammonia as test results indicate there is no longer a reasonable potential to exceed applicable AWQC for ammonia.
5. Establishes a requirement to eliminate Outfall #002, the CSO at the treatment plant.
6. Establishes a more stringent monthly average water quality based limitation for *E. coli* bacteria as a result of a legislative change to the water quality standards for Class C waters subsequent to the previous permitting action.
7. Reduces the monitoring frequencies for settleable solids and orthophosphate based on the most current historical compliance record for said parameters.

CONCLUSIONS

BASED on the findings in the attached **PROPOSED DRAFT** Fact Sheet dated June 19, 2014, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.
3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:
 - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
 - (b) Where high quality waters of the State constitute an outstanding natural resource, that water quality will be maintained and protected;
 - (c) The standards of classification of the receiving water body are met or not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
 - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

CONCLUSIONS (cont'd)

- (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
- 4. The discharges (including the CSO) will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of the PARIS UTILITY DISTRICT to discharge up to a monthly average flow of 0.65 MGD of secondary treated waste waters water and an unspecified quantity of untreated combined storm water and sanitary waste waters from a combined sewer overflow (CSO) to the Little Androscoggin River, Class C, 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 April 1, 2003)].

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____ 2014.
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For Patricia W. Aho, Commissioner

Date of initial receipt of application _____ March 11, 2014 _____.
Date of application acceptance _____ March 17, 2014 _____.

Date filed with Board of Environmental Protection _____

This Order prepared by Gregg Wood, BUREAU OF LAND & WATER QUALITY
PUD 6-19-14 Proposed Draft Permit & FS 6/19/14

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS – OUTFALL #001A

- Beginning the effective date of this permit, the permittee is authorized to discharge secondary treated waste waters from **Outfall #001** to the Little Androscoggin River. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations						Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow [50050]	0.65 MGD [03]	---	Report (MGD) [03]	---	---	---	Continuous [99/99]	Recorder [RC]
BOD₅ [00310] June 1 – August 31 September 1 – May 31	113 163 lbs/Day [26]	169 244 lbs/Day [26]	188 271 lbs/Day [26]	30 mg/L 30 mg/L [19]	45 mg/L 45 mg/L [19]	50 mg/L 50 mg/L [19]	2/Week 2/Week [02/07]	Composite Composite [24]
BOD₅ % Removal ⁽¹⁾ [81010]	---	---	---	85% [23]	---	---	1/Month [01/30]	Calculate [CA]
TSS [00530] June 1 – August 31 September 1 – May 31	113 163 lbs/Day [26]	169 244 lbs/Day [26]	188 271 lbs/Day [26]	30 mg/L 30 mg/L [19]	45 mg/L 45 mg/L [19]	50 mg/L 50 mg/L [19]	2/Week 2/Week [02/07]	Composite Composite [24]
TSS % Removal ⁽¹⁾ [81011]	---	---	---	85% [23]	---	---	1/Month [01/30]	Calculate [CA]
Settleable Solids [00545]	---	---	---	---	---	0.3 ml/L [25]	5/Week [05/07]	Grab [GR]
E. coli Bacteria ⁽²⁾ [31633] (May 15 – September 30)	---	---	---	126/100 ml ⁽³⁾ [13]	---	949/100 ml [13]	2/Week [02/07]	Grab [GR]
Total Residual Chlorine ⁽⁴⁾ [50060]	---	---	---	0.06 mg/L [19]	---	0.08 mg/L [19]	5/Week [05/07]	Grab [GR]
pH (Std. Units) [00400]	---	---	---	---	---	6.0-9.0 [12]	1/Day [01/01]	Grab [GR]

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS – OUTFALL #001A (cont'd)

Effluent Characteristic	Discharge Limitations						Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Total Orthophosphate ⁽⁵⁾ [70507] (June 1 – August 31)	2.0 lbs/Day [26]	---	---	Report mg/L [19]	---	---	1/Week [01/07]	Composite [24]
Total Phosphorus (background) [00665] (June 1 – August 31, 2016) ⁽⁶⁾	---	---	---	Report mg/L [19]	---	Report mg/L [19]	1/Week [01/07]	Grab [GR]
Stream Flow (Mean daily) ⁽⁷⁾ [00061]	---	---	---	---	---	Report (cfs) [08]	1/Week [01/07]	Measure
Copper (Total) [01042]	0.17 lbs/Day [26]	---	0.22 lbs/Day [26]	Report ug/L [26]	---	Report ug/L [26]	1/Quarter [01/90]	Composite [24]
Lead (Total) [01051]	0.01 lbs/Day [26]	---	---	Report ug/L [26]	---	---	1/Quarter [01/90]	Composite [24]
Mercury (Total) ⁽⁸⁾ [71900]	---	---	---	16.5 ng/L [3M]	---	24.8 ng/L [3M]	1/Year [01/YR]	Grab [GR]
Zinc (Total) [01092]	0.76 lbs/Day [26]	---	0.61 lbs/Day [26]	Report ug/L [26]	---	Report ug/L [26]	1/Quarter [01/90]	Composite [24]

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd) – OUTFALL #001A

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 shall conduct surveillance level testing as follows:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
<u>Whole Effluent Toxicity(WET)</u> ⁽⁹⁾								
<u>A-NOEL</u>								
<i>Ceriodaphnia dubia</i> [TDA3B]	---	---	---	---	---	Report % [23]	2/Year [02/YR]	Composite [24]
<i>Salvelinus fontinalis</i> [TDA6F]	---	---	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
<u>C-NOEL</u>								
<i>Ceriodaphnia dubia</i> [TBP3B]	---	---	---	---	---	20% [23]	2/Year [02/YR]	Composite [24]
<i>Salvelinus fontinalis</i> [TBQ6F]	---	---	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
Analytical chemistry ^(10,12) [51168]	---	---	---	---	---	Report ug/L [28]	1/Year [01/YR]	Composite/ Grab [24/GR]

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd) – OUTFALL #001A

SCREENING LEVEL TESTING – During the period 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 be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Minimum Monitoring Requirements		
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity (WET) ⁽⁹⁾								
A-NOEL								
<i>Ceriodaphnia dubia</i> [TDA3B]	---	---	---	---	---	Report % [23]	1/Quarter [01/90]	Composite [24]
<i>Salvelinus fontinalis</i> [TDA6F]	---	---	---	---	---	Report % [23]	1/Quarter [01/90]	Composite [24]
C-NOEL								
<i>Ceriodaphnia dubia</i> [TBP3B]	---	---	---	---	---	20% [23]	1/Quarter [01/90]	Composite [24]
<i>Salvelinus fontinalis</i> [TBQ6F]	---	---	---	---	---	Report % [23]	1/Quarter [01/90]	Composite [24]
Analytical chemistry ^(10,12) [51168]	---	---	---	---	---	Report ug/L [28]	1/Quarter [01/90]	Composite/ Grab [24/GR]
Priority Pollutant ^(11,12) [50008]	---	---	---	---	---	Report ug/L [28]	1/Year [01/YR]	Composite/ Grab [24/GR]

SPECIAL CONDITIONS

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

Footnotes:

Sampling – Sampling and analysis must be conducted in accordance with; a) methods approved in 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 Human Services. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 or laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

All analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods. See **Attachment A** of this permit for a list of the Department’s RLs. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the RL achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL or reporting an estimated value (“J” flagged) is not acceptable and will be rejected by the Department. Reporting analytical data and its use in calculations must follow established Department guidelines specified in this permit or in available Department guidance documents.

1. **Percent Removal** - The treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand for all flows receiving secondary treatment. The percent removal shall be calculated based on influent and effluent concentration values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report “*NODI-9*” on the monthly Discharge Monitoring Report.
2. ***E. coli* bacteria** - Limits are seasonal and apply between May 15th and September 30th of each calendar year. The Department reserves the right to require disinfection on a year-round basis to protect the health and welfare of the public.
3. ***E. coli* bacteria** – The monthly average limitation is a geometric mean limitation and shall be calculated and reported as such.
4. **Total Residual Chlorine (TRC)** – Limitations and monitoring requirements are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. The permittee shall utilize approved test methods that are capable of bracketing the limitations in this permit.

SPECIAL CONDITIONS

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

Footnotes:

5. **Ortho-Phosphorus** – Ortho phosphorus monitoring shall be performed in accordance with **Attachment B** of this permit, *Protocol For Ortho-Phosphorous Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits, Finalized April, 2008*, unless otherwise specified by the Department. – Sampling for total phosphorus shall be conducted with at least 3 days separating sampling events.
6. **Total phosphorus** - Receiving water samples shall be collected below the Route 119 bridge over the Little Androscoggin River.
7. **Stream flow** - Measurements shall recorded on the same day as background total phosphorus samples are collected. Flows are to be obtained from USGS Gauge #01057000 referred to as “Little Androscoggin – Near South Paris”.
8. **Mercury** - All mercury sampling required by this permit or required to determine compliance with interim limitations established pursuant to Department rule Chapter 519, shall 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 analysis shall be conducted in accordance with EPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry. See **Attachment C** for a Department report form for mercury test results.

The limitation in the monthly average column in table Special Condition A of this permit is defined as the arithmetic mean of all the mercury tests ever conducted for the facility utilizing sampling Methods 1669 and analysis Method 1631E.

9. **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 dilutions of 4.0:1 and 5.0:1 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. 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 after receiving the results from the laboratory conducting the testing before submitting them. The permittee shall evaluate test results being submitted and identify to the

SPECIAL CONDITIONS

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

Footnotes:

Department possible exceedences of the critical acute and chronic water quality thresholds of 25% and 20% respectively. See **Attachment D** of this permit for the Department's WET reporting form.

- 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 shall conduct surveillance level WET testing. Testing on the water flea (*Ceriodaphnia dubia*) shall be conducted at a frequency of 2/Year testing on the brook trout (*Salvelinus fontinalis*) shall be conducted at the frequency of 1/Year. Testing shall be conducted in different calendar quarters such that at least one test is conducted in each calendar quarter of the year for each test species during surveillance level testing.
- 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 shall conduct screening level testing for a one year period at a frequency of once per calendar quarter (1/Quarter) for both the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*).

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following U.S.E.P.A. methods manuals.

- 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.

Each time a WET test is performed, the permittee shall 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 A** of this permit.

SPECIAL CONDITIONS

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

Footnotes:

10. **Analytical chemistry** – Refers to a suite of parameters in **Attachment A** 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 shall conduct surveillance level testing at a frequency of 1/Year.
- 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 shall conduct screening level testing at a frequency of 1/Quarter.

11. **Priority pollutant testing** – Refers to a suite of parameters in **Attachment A** of this permit

- a. **Surveillance level testing** - Department rule Chapter 530, *Surface Water Toxics Control Program*, does not establish routine surveillance level testing priority pollutant testing.
- 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 shall conduct screening level testing at a frequency of 1/Year.

12. **Priority pollutant and analytical chemistry testing** – Testing shall 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 shall 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. See **Attachment A** of this permit for a list of the Department's reporting levels (RLs) of detection. 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

SPECIAL CONDITIONS

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

Footnotes:

after receiving the results from the laboratory conducting the testing before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in Department rule Chapter 584 *Surface Water Quality Criteria for Toxic Pollutants*. For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usage's designated for the classification of the receiving waters.
2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usage's designated for the classification of the receiving waters.
3. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated for the classification of the receiving waters.
4. Notwithstanding specific conditions of this 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.

C. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade III** 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.

SPECIAL CONDITIONS

D. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following.

1. Any introduction of pollutants into the waste water collection and treatment system from an indirect discharger in a primary industrial category discharging process waste water; and
2. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system.
3. For the purposes of this section, adequate notice shall include information on:
 - (a) the quality and quantity of waste water introduced to the waste water collection and treatment system; and
 - (b) any anticipated impact of the change in the quantity or quality of the waste water to be discharged from the treatment system.

E. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the waste water collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system. The licensee shall conduct an Industrial Waste Survey (IWS) at any time a new industrial user proposes to discharge within its jurisdiction, an existing user proposes to make a significant change in its discharge, or, at an alternative minimum, once every permit cycle, and submit the results to the Department. The IWS shall identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of the federal Clean Water Act, 40 CFR Part 403 (general pretreatment regulations) or Department rule, 06-096 CMR 528 (last amended March 17, 2008).

F. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on March 17, 2014; 2) the terms and conditions of this permit; and 3) from Outfall #001 and one (1) combined sewer overflow outfall (Outfall 002) listed in Special Condition J, *Combined Sewer Overflows*, of this permit. Discharges of waste water from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

SPECIAL CONDITIONS

G. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to receive and introduce into the treatment process or solids handling stream up to **a maximum of 35,000 gallons per week** of transported wastes, subject to the following terms and conditions.

1. "Transported wastes" means any liquid non-hazardous waste delivered to a wastewater treatment facility by a truck or other similar conveyance that has different chemical constituents or a greater strength than the influent described on the facility's application for a waste discharge license. Such wastes may include, but are not limited to septage, industrial wastes or other wastes to which chemicals in quantities potentially harmful to the treatment facility or receiving water have been added.
2. The character and handling of all transported wastes received must be consistent with the information and management plans provided in application materials submitted to the Department.
3. At no time shall the addition of transported wastes cause or contribute to effluent quality violations. Transported wastes may not cause an upset of or pass through the treatment process or have any adverse impact on the sludge disposal practices of the wastewater treatment facility.

Wastes that contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation must be refused. Odors and traffic from the handling of transported wastes may not result in adverse impacts to the surrounding community. If any adverse effects exist, the receipt or introduction of transported wastes into the treatment process or solids handling stream shall be suspended until there is no further risk of adverse effects.

4. The permittee shall maintain records for each load of transported wastes in a daily log which shall include at a minimum the following.
 - (a) The date;
 - (b) The volume of transported wastes received;
 - (b) The source of the transported wastes;
 - (d) The person transporting the transported wastes;
 - (e) The results of inspections or testing conducted;
 - (f) The volumes of transported wastes added to each treatment stream; and
 - (g) The information in (a) through (d) for any transported wastes refused for acceptance.

These records shall be maintained at the treatment facility for a minimum of five years.

SPECIAL CONDITIONS

G. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY (cont'd)

5. The addition of transported wastes into the treatment process or solids handling stream shall not cause the treatment facility's design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of transported wastes into the treatment process or solids handling stream shall be reduced or terminated in order to eliminate the overload condition.
6. Holding tank wastewater from domestic sources to which no chemicals in quantities potentially harmful to the treatment process have been added shall not be recorded as transported wastes but should be reported in the treatment facility's influent flow.
7. During wet weather events, transported wastes may be added to the treatment process or solids handling facilities only in accordance with a current Wet Weather Flow Management Plan approved by the Department that provides for full treatment of transported wastes without adverse impacts.
8. In consultation with the Department, chemical analysis is required prior to receiving transported wastes from new sources that are not of the same nature as wastes previously received. The analysis must be specific to the type of source and designed to identify concentrations of pollutants that may pass through, upset or otherwise interfere with the facility's operation.
9. Access to transported waste receiving facilities may be permitted only during the times specified in the application materials and under the control and supervision of the person responsible for the wastewater treatment facility or his/her designated representative.
10. The authorization in the Wet Weather Management Plan is subject to annual review and, with notice to the permittee and other interested parties of record, may be suspended or reduced by the Department as necessary to ensure full compliance with Chapter 555 of the Department's rules and the terms and conditions of this permit.

H. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff shall maintain a current written Wet Weather Flow Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

SPECIAL CONDITIONS

H. WET WEATHER FLOW MANAGEMENT PLAN (cont'd)

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit to the Department for review and approval, a new or revised Wet Weather Management Plan which conforms to Department guidelines for such plans. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

Once the Wet Weather Management Plan has been approved, **the permittee shall review their plan at least annually** and record any necessary changes to keep the plan up to date.

I. OPERATION & MAINTENANCE (O&M) PLAN

This facility shall have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of transport, 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, and within 90 days of any process changes or minor equipment upgrades, the permittee shall 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 shall be kept on-site at all times and made available to Department and EPA personnel upon request.

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

J. LIMITATIONS AND CONDITIONS FOR COMBINED SEWER OVERFLOWS

Pursuant to Chapter 570 of Department Rules, *Combined Sewer Overflow Abatement*, the permittee is authorized to discharge from the following locations of combined sewer overflows (CSO's) (stormwater and sanitary wastewater) subject to the conditions and requirements herein.

- 1. CSO locations

<u>Discharge Number</u>	<u>Regulator Location</u>	<u>Receiving Water & Class</u>
002	Treatment Plant	Little Androscoggin River, Class C

SPECIAL CONDITIONS

J. COMBINED SEWER OVERFLOWS (CSO's)(cont'd)

2. Prohibited Discharges

- a) The discharge of dry weather flows is prohibited. All such discharges shall be reported to the Department in accordance with Standard Condition D (1) of this permit.
- b) No discharge shall occur as a result of mechanical failure, improper design or inadequate operation or maintenance.
- c) No discharges shall occur at flow rates below the maximum design capacities of the wastewater treatment facility, pumping stations or sewerage system.

3. Narrative Effluent Limitations

- a) The effluent shall not contain a visible oil sheen, settled substances, foam, or floating solids at any time that impair the characteristics and designated uses ascribed to the classification of the receiving waters.
- b) The effluent shall not contain materials in concentrations or combinations that are hazardous or toxic to aquatic life; or which would impair the usage designated for the classification of the receiving waters.
- c) The discharge shall not impart color, turbidity, toxicity, radioactivity or other properties that cause the receiving waters to be unsuitable for the designated uses and other characteristics ascribed to their class.

4. CSO Master Plan (see Sections 2 & 3 of Chapter 570 Department Rules)

On or before September 1, 2014, (ICIS Code 81699), the permittee shall submit to the Department for review and approval, an updated CSO Long Term Control Plan that will eliminate CSO #002 on or before May 31, 2019.

On or before May 31, 2019, (ICIS Code 75305), the permittee shall eliminate the discharge of untreated storm water and sanitary wastewater through CSO #002 and submit a certification of completion to the Department.

Beginning June 1, 2019, discharge(s) from CSO #002 are no longer authorized by this permit. **On or before June 1, 2019**, the permittee shall install electronic flow estimation systems on CSO #002 to record frequency, duration and quantity of flow in the event of an unanticipated discharge. An electronic device utilized to measure levels in the wet well and measure duration of the overflow is an acceptable methodology for determining quantity. Discharges from the pump stations shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

SPECIAL CONDITIONS

J. COMBINED SEWER OVERFLOWS (CSO's)(cont'd)

5. Nine Minimum Controls (NMC) (see Section 5 Chapter 570 of Department Rules)

The permittee shall implement and follow the Nine Minimum Control documentation as approved by EPA on May 29, 1997. Work performed on the Nine Minimum Controls during the year shall be included in the annual CSO Progress Report (see below).

6. CSO Compliance Monitoring Program (see Section 6 Chapter 570 of Department Rules)
The permittee shall conduct block testing or flow monitoring according to an approved *Compliance Monitoring Program* on all CSO points, as part of the CSO Master Plan.

Annual flow volumes for all CSO locations shall be determined by actual flow monitoring, or by estimation using a model such as EPA's Storm Water Management Model (SWMM). Results shall be submitted annually as part of the annual *CSO Progress Report* (see below), and shall include annual precipitation, CSO volumes (actual or estimated) and any block test data required. Any abnormalities during CSO monitoring shall also be reported. The results shall be reported on the Department form "*CSO Activity and Volumes*" (**Attachment E** of this permit) or similar format and submitted to the Department in electronic form. CSO control projects that have been completed shall be monitored for volume and frequency of overflow to determine the effectiveness of the project toward CSO abatement. This requirement shall not apply to those areas where complete separation has been completed and CSO outfalls have been eliminated.

7. Additions of New Wastewater (see Section 8 Chapter 570 of Department Rules)

Chapter 570 Section 8 lists requirements relating to any proposed addition of wastewater to the combined sewer system. Documentation of the new wastewater additions to the system and associated mitigating measures shall be included in the annual *CSO Progress Report* (see below). Reports must contain the volumes and characteristics of the wastewater added or authorized for addition and descriptions of the sewer system improvements and estimated effectiveness.

8. Annual CSO Progress Reports (see Section 7 of Chapter 570 of Department Rules)

By March 1 (ICIS Code 11099), of each year the permittee shall submit *CSO Progress Reports* covering the previous calendar year (January 1 to December 31). The CSO Progress Report shall include, but is not necessarily limited to, the following topics as further described in Chapter 570: CSO abatement projects, schedule comparison, progress on inflow sources, costs, flow monitoring results, CSO activity and volumes, nine minimum controls update, sewer extensions, and new commercial or industrial flows.

SPECIAL CONDITIONS

J. COMBINED SEWER OVERFLOWS (CSO's)(cont'd)

The CSO Progress Reports shall be completed on a standard form entitled “*Annual CSO Progress Report*”, furnished by the Department, and submitted in electronic form to the following address:

CSO Coordinator
Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333
e-mail: CSOCoordinator@maine.gov

9. Definitions

For the purposes of this permitting action, the following terms are defined as follows:

- a. Combined Sewer Overflow - a discharge of excess waste water from a municipal or quasi-municipal sewerage system that conveys both sanitary wastes and storm water in a single pipe system and that is in direct response to a storm event or snowmelt.
- b. Dry Weather Flow - flow in a sewerage system that occurs as a result of non-storm events or is caused solely by ground water infiltration.
- c. Wet Weather Flow - flow in a sewerage system that occurs as a direct result of a storm event, or snowmelt in combination with dry weather flows.

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

By December 31 of each calendar year, the permittee shall provide the Department with a certification describing any of the following that have occurred since the effective date of this permit [*PCS Code 95799*]: See **Attachment E** of the Fact Sheet 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.

SPECIAL CONDITIONS

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

In addition, in the comments section of the certification form, the permittee shall provide the Department with statements describing;

- (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 reserves the right to reinstate annual (surveillance level) testing or other toxicity testing if new information becomes available that indicates the discharge may cause or have a reasonable potential to cause exceedences of ambient water quality criteria/thresholds.

L. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and mailed on or before the thirteenth (13th) day of the month or mailed to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the Department's compliance inspector (unless otherwise specified) at the following address:

Department of Environmental Protection
Southern Maine Regional Office
Bureau of Land and Water Quality
312 Canco Road
Portland, Maine 04103

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 15th day of the month following the completed reporting period. Hard Copy documentation submitted in support of the eDMR must be mailed on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15th) 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 15th day of the month following the completed reporting period.

SPECIAL CONDITIONS

M. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of test results required by the Special Conditions of this permit, new site specific information or any other pertinent information gathered during the term of this permit, the Department may, at anytime 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.

N. SEVERABILITY

In the event that any provision(s), 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

WET and Chemical Specific Data Report Form

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

Facility Name _____ MEPDES # _____ Facility Representative Signature _____
 Pipe # _____ 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)

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 - April 24, 2014

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	Reporting Limit	Effluent Limits, %			Receiving Water or Ambient	Effluent Concentration (ug/L or as noted)	WET Result, % Do not enter % sign	Reporting Limit Check	Possible Exceedence ⁽⁷⁾		
		Acute	Chronic	Health					Acute	Chronic	Health
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⁾											
Also do these tests on the effluent with WET. Testing on the receiving water is optional	Reporting Limit	Effluent Limits, ug/L						Reporting Limit Check	Possible Exceedence ⁽⁷⁾		
		Acute ⁽⁶⁾	Chronic ⁽⁶⁾	Health ⁽⁶⁾					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)						

WET and Chemical Specific Data Report Form

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						

WET and Chemical Specific Data Report Form

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

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.

Printed 5/5/2014

Maine Department of Environmental Protection

WET and Chemical Specific Data Report Form

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

Comments:

ATTACHMENT B

Protocol for Orthophosphate Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 300.0 (Rev. 2.1), 300.1 (Rev. 1.0), 365.1 (Rev. 2.0), 365.3; SM 4110 B, 4110 B-00, 4500-P E, 4500-P F; ASTM D515-88(A), D4327-97, 03; D6508 (Rev. 2); USGS I-4601-85; OMAAOAC 973.55, 973.56, 993.30

Sample Collection: The Maine DEP is requesting that orthophosphate analysis be conducted on composite effluent samples unless a facility's Permit specifically indicates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed. Commercially purchased, pre-cleaned sample containers and or syringe type filtering apparatus are acceptable. If bench top filtering apparatus is being used this should be cleaned, as described above, before each use.

Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). The sample must be filtered immediately (within 15 minutes) after collection using a pre-washed 0.45-um membrane filter. Be sure to follow one of the pre-washing procedures described in the approved methods unless your commercial lab is providing you with pre-washed filters and filtering apparatus. If the sample is being sent to a commercial laboratory or analysis cannot be performed within 2 hours after collection then the sample must be kept at 0-6 degrees C (without freezing). There is a 48-hour holding time for this sample although analysis should be done sooner, if possible.

Laboratory QA/QC: Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods. Additionally, laboratories providing filters or filter apparatus for sampling are required to submit blank data for each lot of filters/filtering apparatus to the facility.

Sampling QA/QC:

Filter Blank- if a facility is using a pre-cleaned filter and or filtering apparatus provided by a commercial laboratory then the commercial laboratory must run a filter/filtering apparatus blank on each lot. The results of that analysis must be provided to the facility.

If a facility is using their own filters and filtering apparatus then a filter blank must be included with every sample set that does not include a composite sampler (composite jug and sample line) blank.

Composite Sampler Blank- If a composite sample is being collected using an automatic composite sampler, then once per month run a blank on the composite sampler. A separate filter blank does not have to be done along with the composite sampler blank. When running a composite sampler blank, automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then filter and analyze for orthophosphate. Preserve these samples as described above.

ATTACHMENT C

Effluent Mercury Test Report

Name of Facility: _____ Federal Permit # ME _____
Pipe # _____

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

SAMPLE COLLECTION INFORMATION

Sampling Date:	<input type="text"/> <input type="text"/> <input type="text"/>	Sampling time:	<input type="text"/> AM/PM
	mm dd yy		
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	<input type="text"/> mg/L	Sample type:	<input type="text"/> Grab (recommended) or <input type="text"/> Composite

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory:	_____		
Date of analysis:	<input type="text"/>	Result:	<input type="text"/> ng/L (PPT)
Please Enter Effluent Limits for your facility			
Effluent Limits:	Average = <input type="text"/> ng/L	Maximum = <input type="text"/> 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 certify 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 D

**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 _____ Date Tested _____
mm/dd/yy mm/dd/yy

Chlorinated? _____ Dechlorinated? _____

Results	% effluent		Effluent Limitations	
	water flea	trout	A-NOEL	C-NOEL
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 E

**MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSO ACTIVITY AND VOLUMES**

MUNICIPALITY OR DISTRICT				MEPDES / NPDES PERMIT NO.							
REPORTING YEAR				SIGNED BY:							
YEARLY TOTAL PRECIPITATION				INCHES							
CSO EVENT NO.	START DATE OF STORM	PRECIP. DATA		FLOW DATA (GALLONS PER DAY) OR BLOCK ACTIVITY("1")						EVENT OVERFLOW GALLONS	EVENT DURATION HRS
		TOTAL INCHES	MAX. HR. INCHES	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:		
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
TOTALS											

Note 1: Flow data should be listed as gallons per day. Storms lasting more than one day should show total flow for each day.

Note 2: Block activity should be shown as a "1" if the block floated away.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

SECTION	TOPIC	PAGE
A	GENERAL PROVISIONS	
1	General compliance	2
2	Other materials	2
3	Duty to Comply	2
4	Duty to provide information	2
5	Permit actions	2
6	Reopener clause	2
7	Oil and hazardous substances	2
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MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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).

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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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 of 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 MAINTENANCE 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

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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- 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.

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- (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.

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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.

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STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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

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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).

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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- (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.

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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 contaminants 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.

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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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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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: **June 19, 2014**

PERMIT NUMBER: **ME0100951**

LICENSE NUMBER: **W00632-6C-I-R**

NAME AND ADDRESS OF APPLICANT:

**PARIS UTILITY DISTRICT
P.O. Box 154
South Paris, ME. 04281**

COUNTY: **Oxford County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**PARIS UTILITY DISTRICT
C.N. Brown Way
Paris, ME. 04281**

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

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Steven Arnold, Supt.
(207) 743-6251
e-mail: parisutility1@myfairpoint.net**

1. APPLICATION SUMMARY

- a. Application: The Paris Utility District (PUD) has submitted a timely and complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100951/Waste Discharge License #W000632-5L-G-R (permit hereinafter) that was issued by the Department on August 21, 2001, and expired on August 21, 2006. The license approved a monthly average discharge of 0.65 millions gallons per day (MGD) of secondary treated waste water and an unspecified quantity of untreated combination storm water and sanitary waste waters from a combined sewer overflow (CSO) from the PUD waste water treatment facility, to the Little Androscoggin River, Class C, in Paris, Maine. See **Attachment A** of this Fact Sheet for a location map.

1. APPLICATION SUMMARY (cont'd)

- b. Source Description: The facility located on C.N. Brown Way in Paris treats domestic, light industrial and commercial waste waters within the District's boundaries. There are no significant industrial users contributing flows or pollutant loading greater than 10% of PUD's influent. The PUD maintains both a separate sanitary and combined sanitary/storm water collection systems. As a result, the facility has one combined sewer overflow (CSO) point located at the treatment facility. In an effort to minimize/mitigate discharges from the CSO, the PUD filed a high flow (wet weather) management plan with the Department in August of 1995. Overflows receive treatment via screening, grit removal and seasonal disinfection prior to being discharged to the receiving water. The waste water treatment facility is authorized to receive up to 35,000 gallons per week of transported wastes from local septage haulers.
- c. Waste Water Treatment – The PUD treatment system provides a secondary level of treatment via an activated sludge process. The treatment system as described under the previous licensing action has been entirely modified so that the then existing secondary treatment aeration (6 tanks) and 2 clarification units have become stormwater storage totaling 1.79 Million gallons and the dual chlorine contact (disinfection) basins have been eliminated. The existing headworks and tannery pretreatment system have been entirely retrofitted as the new preliminary and secondary treatment process consisting of new screenings and grit removal systems, stormwater flow diversion system, 2 diffused air mixing basins, 2 new clarifiers, and disinfection tank. After disinfection within the chlorine contact tank treated effluent is dechlorinated prior to discharge to the Little Androscoggin River via an outfall pipe without a diffuser. Other components of the treatment plant include 2 new mechanically mixed sludge holding tanks, sludge dewatering equipment, geothermal heating systems and septage receiving equipment.

The facility does have additional waste water treatment and pre-treatment technology that are independent of the secondary treatment process described above. The pre-treatment equipment includes two equalization tanks, two primary clarifiers, two up-flow clarifiers and a carbonization tank. These treatment components were dedicated to pre-treat waste waters from a tannery that has since closed but have since been incorporated into the facilities wet weather management plan as part of the facility upgrade completed in June of 2011.

2. PERMIT SUMMARY

- a. Terms and Conditions - This permitting action is carrying forward all the terms and conditions of the previous permitting action with the following exceptions as this permit;
1. Establishes whole effluent toxicity (WET), analytical chemistry and priority pollutant testing pursuant to Department rule, 06-096 CMR Chapter 530.
 2. Establishes water quality based mass limitations for copper, lead and zinc as test results for said parameters exceeded or have a reasonable potential to exceed ambient water quality criteria (AWQC) established in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*.

2. PERMIT SUMMARY (cont'd)

3. Incorporating the average and maximum concentration limits for total mercury that were originally established in a waste discharge license modification dated May 23, 2000.
4. Eliminates the water quality based limitations for ammonia as test results indicate there is no longer a reasonable potential to exceed applicable AWQC for ammonia.
5. Establishes a requirement to eliminate Outfall #002, the CSO at the treatment plant.
6. Establishes a more stringent monthly average water quality based limitation for *E. coli* bacteria as a result of a legislative change to the water quality standards for Class C waters subsequent to the previous permitting action.
7. Reduces the monitoring frequencies for settleable solids and orthophosphate based on the most current historical compliance record for said parameters.

b. History: The most recent licensing/permitting actions include the following:

February 13, 1995 - The Department issued WDL #W000632-46-C-R for five-year term.

August 11, 1997 – The Department issued WDL modification #W000632-46-D-M which removed the limitations for aluminum, modified the whole effluent toxicity (WET) testing requirements and required the PUD to submit a toxicity reduction evaluation (TRE) plan to the Department by September 1, 1997.

August 27, 1997 - The PUD submitted a TRE plan which satisfied Special Condition B of WDL Modification #W000632-46-D-M issued on 8/11/97.

February 23, 1999 – The Department issued WDL modification #W000632-46-E-M which established limitations for various metals and WET species that exceeded or had a reasonable potential to exceed ambient water quality criteria/thresholds. Special Condition B of the license modification established a three-year schedule of compliance for the PUD facility to come into compliance with the new water quality based limits for copper and lead and required the PUD to submit an updated TRE plan by November 1, 1999.

August 4, 1999- The U.S. Environmental Protection Agency (EPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0100951 for a five-year term.

December 10, 1999 – The PUD submitted an up-dated TRE plan that fulfilled their obligation to do so as required in WDL modification #W000632-46-E-M dated 2/23/99.

February 17, 2000 – The Department issued a letter to the PUD that administratively modified the WDL by reducing the testing frequency for lead based on an up-to-date statistical evaluation of the lead results on file at the Department.

2. PERMIT SUMMARY (cont'd)

May 23, 2000 – The Department issued a modification of the 2/13/95 WDL by establishing interim average and maximum concentration limits for mercury.

June 8, 2000 - The Department issued a letter to the PUD that modified the WET testing requirements of the WDL as a result of testing conducted as part of the on-going TRE. The letter also agreed to round off the daily maximum total chlorine residual (TRC) of 0.048 mg/L to 0.050 mg/L in the next WDL renewal.

January 12, 2001 - The State of Maine received authorization from the EPA to administer the NPDES permitting program in Maine. From that date forward, the permitting program has been referred to as the MEPDES permit program.

August 21, 2001 – The Department issued combination MEPDES permit #ME0100951/WDL #W000632-5L-G-R for a five-year term.

July 12, 2002 – The Department issued a modification of the 8/21/01 permit by modifying Special Condition J, *Schedule of Compliance*, for copper, added six compliance milestones and extended the effective date for copper limits from February 22, 2002 to December 31, 2004.

October 25, 2002 – The Department issued a modification of the 8/21/01 permit by modifying Special Condition J, *Schedule of Compliance* for copper, by extending each of the six compliance milestones by six months and extending the effective date for copper limits six months to June 30, 2005.

April 10, 2006 – The Department issued a modification of the 8/21/01 permit by incorporating whole effluent toxicity (WET) and chemical specific testing requirements pursuant to Department rule, 06-096 CMR, Chapter 530, *Surface Water Toxics Control Program*, promulgated on October 12, 2005.

June 28, 2006 – The PUD submitted a timely and complete application to the Department to renew the 8/21/01 permit.

September 2009 – The PUD and the State of Maine entered into a Consent Agreement to resolve violations of toxic pollutant limits established in the 8/21/01 MEPDES permit.

February 6, 2012 - The Department issued a modification of WDL #W00632-5L-G-R / MEPDES Permit #ME0100951 for reduction of mercury testing frequency from 4/Year to 1/Year based on *Certain deposits and discharges prohibited*, 38 M.R.S.A., § 420 sub-§1-B(F).

April 2, 2013 – The Department issued a modification of WDL #W00632-5L-G-R / MEPDES Permit #ME0100951 that modified the whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements based on a statistical evaluation of WET and chemical specific data on file at the Department.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 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, 38 M.R.S.A., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, 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. WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., §467(B)(1)(b) states that at the point of discharge the Little Androscoggin River is classified as a Class C waterway. Maine law, 38 M.R.S.A., §465(4) contains the classification 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.*
- 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.*

4. WATER QUALITY STANDARDS

(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.

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

A document entitled, The 2012 Integrated Water Quality Monitoring and Assessment Report, [often referred to as the 305(b) Report] published by the Department lists a 37-mile segment of the Little Androscoggin River, Class C, from the Rt. 26 bridge in Paris to a point 25 miles below the Rt. 121 bridge in Oxford in a table entitled, *Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses*.

All freshwaters in the State of Maine are listed in the table entitled, *Category 4-A: Rivers and Streams with Impaired Use, TMDL Completed, Waters Impaired by Atmospheric Deposition of Mercury* of the 305(b) report. The report states the impairment is 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 Health and 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

Pursuant to Maine law, 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 average and maximum mercury concentration limits for this facility. See the discussion in section 6(j) of this Fact Sheet.

The Department has no information at this time that the discharge from the permittee’s facility will cause or contribute to the failure of the receiving water to meet the designated uses of its ascribed classification.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- a. Flow: The monthly average flow limitation of 0.65 MGD in the previous permitting action is being carried forward in this permitting action and is considered to be representative of the monthly average design flow for the waste water treatment facility. A review of the monthly Discharge Monitoring Report (DMR) data for the period June 2011 – January 2014 indicates flows have been reported (n= 38) as follows;

Flow (DMRs=32)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.65	0.21 – 0.61	0.30
Daily Maximum	Report	0.26 – 1.0	0.556

- b. Dilution Factors: The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in Department rule 06-096 CMR, Chapter 530, *Surface Water Toxics Control Program*, October 2005. With a monthly average treatment plant design flow of 0.65 MGD, dilution calculations are as follows:

Acute: 1Q10 = 3.0 cfs ⇒
$$\frac{(3.0 \text{ cfs})(0.6464) + 0.65 \text{ MGD}}{0.65 \text{ MGD}} = 3.98:1$$

Chronic: 7Q10 = 4.0 cfs ⇒
$$\frac{(4.0 \text{ cfs})(0.6464) + 0.65 \text{ MGD}}{0.65 \text{ MGD}} = 4.98:1$$

Harmonic Mean: 41.8 cfs ⇒
$$\frac{(41.8 \text{ cfs})(0.6464) + 0.65 \text{ MGD}}{0.65 \text{ MGD}} = 42.57:1$$

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

- c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS) – The previous permitting action established seasonal BOD5 and TSS limitations based on water quality considerations (dissolved oxygen) in the Little Androscoggin River during the summer months. The limitations are being carried forward in this permitting action. The monthly and weekly average BOD5 and TSS concentration limits of 30 mg/L and 45 mg/L respectively, are based on secondary treatment requirements pursuant to Department Rule, 06-096 CMR, Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L are based on a Department best professional judgment of best practicable treatment (BPT).

The mass limits for BOD5 and TSS for the period June 1 – August 31 were calculated based on a summertime treatment plant flow of 0.45 MGD and the corresponding monthly average, weekly average and daily maximum concentration limits. For the period September 1 – May 31, the mass limits were based on the treatment facility's monthly average design capacity (and permit limit) of 0.65 MGD and the corresponding monthly average, weekly average and daily maximum concentration limits. The seasonal mass limits were derived as follows:

June 1 – August 31

Monthly average = (30 mg/L) (0.45 MGD) (8.34) = 113 lbs/Day.

Weekly average = (45 mg/L) (0.45 MGD) (8.34) = 169 lbs/Day.

Daily maximum = (50 mg/L) (0.45 MGD) (8.34) = 188 lbs/Day.

September 1 – May 31

Monthly average = (30 mg/L) (0.65 MGD) (8.34) = 163 lbs/Day.

Weekly average = (45 mg/L) (0.65 MGD) (8.34) = 244 lbs/Day.

Daily maximum = (50 mg/L) (0.65 MGD) (8.34) = 271 lbs/Day.

This permitting action is carrying forward a monthly average percent removal of 85 percent for BOD and TSS pursuant to Department rule Chapter 525(3)(III)(a&b)(3).

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

A review of the monthly DMR data for the period June 2011 – January 2014 indicates year-round BOD and TSS values have been reported as follows:

BOD Mass (DMRs=32)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	113/163	4 - 24	12
Weekly Average	244	--	--
Daily Maximum	188/271	7 - 97	25

BOD Concentration (DMRs=32)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	2 - 8	5
Weekly Average	45	3 - 19	7
Daily Maximum	50	3 - 28	8

TSS mass (DMRs=32)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	113/163	2 - 22	11
Weekly Average	244	---	---
Daily Maximum	Report	5 - 100	28

TSS concentration (DMRs=32)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	1 - 8	4
Weekly Average	45	2 - 20	7
Daily Maximum	50	2 - 37	10

Monitoring frequencies for BOD and TSS of 2/Week are being carried forward from the previous permitting action and are based on a long standing Department guidance document for facilities with a monthly average flow greater than 0.10 MGD and 1.0 MGD.

- d. Settleable Solids - The previous permit established a daily maximum concentration limit of 0.3 ml/L that is considered a BPT limitation. A review of the monthly DMR data for the period June 2011 – January 2014 indicates settleable solids have been reported as 0.1 ml/L for every month during said period.
- e. E. coli Bacteria The previous permitting action established seasonal (May 15 – September 30) monthly average and daily maximum *E. coli* bacteria limits of 142 colonies/100 ml and 949 colonies/100 ml respectively, based on the State of Maine Water Classification Program criteria for Class C waters found at Maine law, 38 MRSA, §465(4). During calendar year 2005, Maine’s Legislature approved new monthly average and daily maximum water quality standards of 126 colonies/100 ml and 236 colonies/100 ml respectively, for water bodies designated as Class C.

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

This permitting is establishing the new monthly average limit of 126 colonies/100 ml and carrying forward the daily maximum limit of 949 colonies/100 ml given the acute dilution associated with the discharge is 4.0:1 resulting in an in-stream bacteria count of <236 colonies/100 ml.

A review of the monthly DMR data for the period June 2011 – September 2013 indicates *E. coli*. bacteria values have been reported as follows:

***E. coli*. bacteria (DMRs=14)**

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	142	1 – 20	4
Daily Maximum	949	1 – 194	95

- f. Total Residual Chlorine (TRC): Limits on TRC are specified to ensure attainment of the ambient water quality criteria (AWQC) for levels of chlorine and that the BPT is used to abate the discharge of chlorine. The more stringent of the two limits is established in permits. The previous permitting action established water quality based monthly average and daily maximum concentration limits of 0.05 mg/L and 0.074 mg/L respectively and were calculated as follows:

$$\begin{aligned} \text{Maximum Daily} &= (\text{freshwater acute criteria})(\text{acute dilution}) \\ &= (0.019\text{mg/L})(3.9) = 0.074 \text{ mg/L} \end{aligned}$$

$$\begin{aligned} \text{Monthly Average} &= (\text{freshwater chronic criteria})(\text{chronic Dilution}) \\ &= (0.011\text{mg/L})(4.4) = 0.048 \text{ mg/L} \end{aligned}$$

With revised dilution factors new water quality based total residual chlorine limits may be calculated as follows:

$$\begin{aligned} \text{Daily maximum} &= (\text{freshwater acute criteria})(\text{acute dilution}) \\ &= (0.019 \text{ mg/L})(4.0) = 0.076 \text{ mg/L or } 0.08 \text{ mg/L} \end{aligned}$$

$$\begin{aligned} \text{Monthly average} &= (\text{freshwater chronic criteria})(\text{chronic Dilution}) \\ &= (0.011 \text{ mg/L})(5.0) = 0.055 \text{ mg/L or } 0.06 \text{ mg/L} \end{aligned}$$

To meet the water quality based thresholds calculated above, the permittee must dechlorinate the effluent prior to discharge. The Department has established a daily maximum BPT limitation of 0.3 mg/L for facilities that need to dechlorinate their effluent unless calculated water quality based thresholds are lower than 0.3 mg/L. In the case of the PUD, the acute water quality based threshold calculated above is lower than 0.3 mg/l, thus the water quality based limitation of 0.08 mg/L (rounded up from 0.076 mg/L) is being imposed. As for the monthly average limitation, the Department’s BPT limitation is 0.1 mg/L. Being that the calculated water quality based limit is lower than 0.1 mg/L, the water quality based limitation of 0.06 mg/L (rounded up from 0.055 mg/L) is being imposed.

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

A review of the monthly DMR data for the period June 2011 – September 2013 indicates both monthly average and daily maximum TRC values have been reported as <0.05 mg/L for the entire period.

- g. pH - The previous permitting action established a technology based BPT pH range limitation of 6.0 –9.0 standard units pursuant to Department Rule, 06-096 CMR, Chapter 525(3)(III)(c). The limitation is being carried forward in this permitting action. A review of the monthly DMR data for the period June 2011 – January 2013 indicates all pH values reported to the Department were between 6.0 – 8.1 standard units.
- h. Total Orthophosphate – The previous permitting action established a seasonal (June 1 – August 31) monthly average mass limit of 2.0 lbs/day. The mass limit was based on water quality considerations to mitigate the algal growth in the Little Androscoggin River which in turn contributes to dissolved oxygen depletion in the receiving water. The water quality based mass limit is being carried forward in this permitting action.

A review of the monthly DMR data for the period June 2011 – August 2013 indicates the monthly average mass and concentration of orthophosphate have been reported s follows;

Orthophosphate Mass (DMRs=9)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	2.0	0.13 – 1.26	0.9

Orthophosphate Concentration (DMRs=9)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	Report	0.16 – 0.52	0.32

- i. Whole Effluent Toxicity (WET) & Chemical-Specific Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit 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. Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* 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 06-096 CMR 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.

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

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 AWQC as established in 06-096 CMR Chapter 584.

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

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

Department rule 06-096 CMR Chapter 530 (1)(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 06-096 CMR Chapter 530 criteria, the PUD facility falls into the Level I frequency category as the facility has a chronic dilution factor of <20:1. 06-096 CMR Chapter 530(1)(D)(1) specifies that routine screening and surveillance level testing requirements are as follows:

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.

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

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),

Level	WET Testing	Priority pollutant testing	Analytical chemistry
I	2 per year	None required	4 per year

A review of the data on file with the Department indicates that to date, PUD has fulfilled the WET and chemical-specific testing requirements of Chapter 530. See **Attachment B** of this Fact Sheet for a summary of the WET test and **Attachment C** of this Fact Sheet for chemical-specific test dates and results of parameters of concern.

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

Department rule 06-096 CMR Chapter 530(D)(3)(c) states in part *“Dischargers in Level I may reduce surveillance testing to one WET or specific chemical series per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).”*

Department rule 06-096 CMR 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 exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.”*

Department rule 06-096 CMR 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.”*

WET Evaluation

On February 4, 2014, the Department conducted a statistical evaluation on the four WET test results conducted after the completion of the upgrade at the treatment facility (June 2011). The statistical evaluation indicates the discharge from the PUD waste water treatment facility has only one C-NOEL test result for the water flea that has a reasonable potential to exceed the critical chronic water quality threshold of 20%. As a result, this permitting action is establishing a C-NOEL limit of 20% for the water along with routine surveillance level testing frequency of 2/Year. As for the brook trout, the permittee qualifies for reduced testing pursuant to 06-096 CMR Chapter 530. Therefore, this permit establishes a reduced surveillance level testing frequency of 1/Year. Testing shall be conducted in different calendar quarters such that at least one test is conducted in each calendar quarter of the year for each test species during surveillance 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 shall conduct screening level testing at a frequency of 1/Quarter.

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

Analytical chemistry & priority pollutant testing evaluation

The previous permitting action established water quality based monthly average and or daily maximum mass and concentration limits for ammonia (seasonal), arsenic, copper, lead and zinc. The justification for the water quality based limitations was based on a statistical evaluation of the tests results for the 60-month period prior to the 8/21/01 permitting action.

Department rule 06-096 CMR 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 limited information on the background levels of metals in the water column in the Little Androscoggin River in the vicinity of the permittee’s outfall. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

Department rule 06-096 CMR 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.”* However, in May 2012, Maine law 38 M.R.S.A. §464, ¶¶ J was enacted which reads as follows, *“For the purpose of calculating waste discharge license limits for toxic substances, the department may use any unallocated assimilative capacity that the department has set aside for future growth if the use of that unallocated assimilative capacity would avoid an exceedance of applicable ambient water quality criteria or a determination by the department of a reasonable potential to exceed ambient water quality criteria..”*

On April 8, 2014, the Department conducted statistical evaluations based on 15% of the ambient water quality criteria reserve being withheld (Report ID 457) and 0% of the reserve of the criteria being withheld (Report ID 659) 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 659 indicates Mechanic Falls no longer has a reasonable potential to exceed the chronic ambient water quality criteria for aluminum or zinc

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

and North Jay no longer has a reasonable potential to exceed the chronic ambient water quality criteria for lead. 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 Androscoggin River watershed.

Department rule 06-096 CMR 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 exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

Department rule 06-096 CMR Chapter 530 §(3)(D) states "*Expression of effluent limits. Where the need for effluent limits has been determined, limits derived from acute water quality criteria must be expressed as daily maximum values. Limits derived from chronic or human health criteria must be expressed as monthly average values.*"

Department rule 06-096 CMR 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 AND MONITORING REQUIREMENTS (cont'd)

The Little Androscoggin River is a tributary to the Androscoggin River. Three municipal waste water treatment facilities that are subject to the Department's 06-096 CMR Chapter 530 testing requirements discharge to the Little Androscoggin River. The waste water treatment facilities are the Paris Utility District, Town of Norway and the Mechanic Falls Sewer District. The Paris Utility District facility is the most upstream facility and the Mechanic Falls facility is the most downstream facility. As previously cited, 06-096 CMR Chapter 530 requires that AWQC must be met at the confluence of the Little Androscoggin River and the Androscoggin River as well as at the individual discharge points on the Little Androscoggin River after taking into consideration historic discharge levels for all three facilities as well as an allocation dedicated to background (10% of AWQC) and a reserve (0% of AWQC).

As with WET test results, the Department conducted a statistical evaluation on 4/8/14 (report ID #659) on the analytical chemistry and priority pollutant data on file at the Department conducted subsequent to the completion of the June 2011 facility upgrade. The statistical evaluation indicates the PUD facility has test results that exceed or have a reasonable potential to exceed the acute and or chronic AWQC for copper, lead, and zinc.

The Department has prepared guidance that establishes protocols for establishing waste load allocations. See **Attachment D** of this Fact Sheet. The guidance states that the most protective of water quality becomes the facility's allocation. According to the 4/8/14 statistical evaluation, copper, lead and zinc are to be limited based on the individual allocation method due the low dilution factors associated with the facility.

06-096 CMR Chapter 530 §(3)(D)(1) stated *“For specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded. With regard to concentration limits, the Department may review past and projected flows and set limits to reflect proper operation of the treatment facilities that will keep the discharge of pollutants to the minimum level practicable.”* However, 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 for discharges from publicly owned treatment works. Therefore, concentration limits for pollutants identified in Report ID 659 that exceed or have a reasonable potential to exceed applicable ambient water quality criteria are not being established in this permitting action.

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

Individual allocation

Copper (Total)

The August 21, 2001 permit and April 2, 2013, permit modification established monthly average and daily maximum water quality based mass limitations of 0.07 lbs/day and 0.08 lbs/day respectively, for total copper along with monthly average and daily maximum reporting requirements for concentration. The limitations were calculated as follows:

Given:

- Permitted flow: 0.65 MGD
- Acute dilution factor: 3.9:1
- Acute AWQC: 3.89 ug/L
- Chronic dilution factor: 4.4:1
- Chronic AWQC 2.99 ug/L

Daily maximum limit: $(0.00389 \text{ mg/L})(3.9)(8.34 \text{ lbs/gal})(0.65 \text{ MGD}) = 0.08 \text{ lbs./day}$
 Monthly average limit: $(0.00299 \text{ mg/L})(4.4)(8.34 \text{ lbs/gal})(0.65 \text{ MGD}) = 0.07 \text{ lbs./day}$

A review of the monthly DMR data for the period June 2011 – October 2013 indicates total copper values have been reported as follows:

Total copper (DMRs=25) Mass

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	0.07	0.02 – 0.07	0.04
Daily Maximum	0.08	0.02 – 0.07	0.04

Total copper (DMRs=25) Concentration

Value	Limit (ug/L)	Range (ug/L)	Mean (ug/L)
Monthly Average	Report	< 1.0 - 37	16
Daily Maximum	Report	< 1.0 - 37	16

In the individual allocation, the Department continues to utilize the formula it has used in permitting actions since October 2005 taking into consideration background (10% of AWQC) and a reserve (0% of AWQC). The formula is as follows:

$$\text{EOP concentration} = [\text{Dilution factor} \times 0.90 \times \text{AWQC}] + [0.10 \times \text{AWQC}]$$

$$\text{Mass limit} = (\text{EOP concentration in mg/L})(8.34 \text{ lbs/gal})(\text{Permit flow limit in MGD})$$

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

Copper (Total):

Acute AWQC = 10.85 ug/L^(*)

Acute dilution factor = 3.98:1

EOP concentration = [Dilution factor x 0.90 x AWQC] + [0.10 x AWQC]

EOP = [3.98 x 0.90 x 10.85 ug/L] + [0.10 x 10.85 ug/L] = 39.9 ug/L

Based on a permitted flow of 0.65 MGD, EOP mass limits are as follows:

<u>Parameter</u>	<u>Calculated EOP Concentrations</u>	<u>Daily Max. Mass Limit</u>
Copper	39.9 ug/L	0.22 lbs/day

Example Calculation: Copper - $\frac{(39.9 \text{ ug/L})(8.34)(0.65 \text{ MGD})}{1,000 \text{ ug/mg}} = \mathbf{0.22 \text{ lbs/day}}$

(*) Site-specific AWQC for total copper for the Little Androscoggin River was approved by the Maine Board on Environmental Protection on _____, 2014 and the USEPA on _____ 2014. See the **Attachment F** of this Fact Sheet for the derivation of said AWQC and Section 7, *Antibacksliding*, of this Fact Sheet.

Chronic AWQC = 6.78 ug/L^(*)

Chronic dilution factor = 4.98:1

EOP concentration = [Dilution factor x 0.90 x AWQC] + [0.10 x AWQC]

EOP = [4.98 x 0.90 x 6.78 ug/L] + [0.10 x 6.78 ug/L] = 31.1 ug/L

Based on a permitted flow of 0.65 MGD, EOP mass limits are as follows:

<u>Parameter</u>	<u>Calculated EOP Concentrations</u>	<u>Monthly Avg. Mass Limit</u>
Copper	31.1 ug/L	0.17 lbs/day

Example Calculation: Copper - $\frac{(31.1 \text{ ug/L})(8.34)(0.65 \text{ MGD})}{1,000 \text{ ug/mg}} = \mathbf{0.17 \text{ lbs/day}}$

(*) Site-specific AWQC for total copper for the Little Androscoggin River was approved by the Maine Board on Environmental Protection on _____, 2014 and the USEPA on _____ 2014. See the **Attachment F** of this Fact Sheet for the derivation of said AWQC and Section 7, *Antibacksliding*, of this Fact Sheet.

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

Lead (Total)

The August 21, 2001 permit and April 2, 2013, permit modification established a monthly average water quality based mass limitation of 0.010 lbs/day for total lead along with a monthly average reporting requirement for concentration. The limitation was calculated as follows:

Given:

Permitted flow: 0.65 MGD
Chronic dilution factor: 4.4:1
Chronic AWQC 0.41 ug/L

Monthly average limit: $(0.41 \text{ mg/L})(4.4)(8.34 \text{ lbs/gal})(0.65 \text{ MGD}) = 0.010 \text{ lbs./day}$

A review of the monthly DMR data for the period June 2011 – October 2013 indicates total lead values have been reported as follows:

Total lead (DMRs=11) Mass

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	0.010	<0.010 – 0.094	0.016

Total lead (DMRs=11) Concentration

Value	Limit (ug/L)	Range (ug/L)	Mean (mug/L)
Monthly Average	Report	< 1.0 – 5.0	2.0

In the individual allocation, the Department continues to utilize the formula it has used in permitting actions since October 2005 taking into consideration background (10% of AWQC) and a reserve (0% of AWQC). The formula is as follows:

$$\text{EOP concentration} = [\text{Dilution factor} \times 0.90 \times \text{AWQC}] + [0.10 \times \text{AWQC}]$$

$$\text{Mass limit} = (\text{EOP concentration in mg/L})(8.34 \text{ lbs/gal})(\text{Permit flow limit in MGD})$$

Chronic AWQC = 0.41 ug/L
Chronic dilution factor = 4.98:1

$$\text{EOP concentration} = [\text{Dilution factor} \times 0.90 \times \text{AWQC}] + [0.90 \times \text{AWQC}]$$

$$\text{EOP} = [4.98 \times 0.90 \times 0.41 \text{ ug/L}] + [0.10 \times 0.41 \text{ ug/L}] = 1.88 \text{ ug/L}$$

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

Based on a permitted flow of 0.65 MGD, EOP mass limits are as follows:

<u>Parameter</u>	<u>Calculated EOP Concentrations</u>	<u>Monthly Avg. Mass Limit</u>
Lead	1.88 ug/L	0.010 lbs/day

Example Calculation: Lead - $\frac{(1.88 \text{ ug/L})(8.34)(0.65 \text{ MGD})}{1,000 \text{ ug/mg}} = 0.010 \text{ lbs/day}$

Zinc (Total)

The August 21, 2001 permit and April 2, 2013, permit modification established monthly average and daily maximum water quality based mass limitations of 0.64 lbs/day and 0.63 lbs/day respectively, for total zinc along with monthly average and daily maximum reporting requirements for concentration. The limitations were calculated as follows:

Given:

Permitted flow: 0.65 MGD
Acute dilution factor: 3.9:1
Acute AWQC: 29.92 ug/L
Chronic dilution factor: 4.4:1
Chronic AWQC 27.1 ug/L

Daily maximum limit: $(0.02992 \text{ mg/L})(3.9)(8.34 \text{ lbs/gal})(0.65 \text{ MGD}) = 0.63 \text{ lbs./day}$
Monthly average limit: $(0.0271 \text{ mg/L})(4.4)(8.34 \text{ lbs/gal})(0.65 \text{ MGD}) = 0.64 \text{ lbs./day}$

A review of the monthly DMR data for the period June 2011 – October 2013 indicates total zinc values have been reported as follows:

Total zinc (DMRs=7) Mass

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	0.64	0.14 – 0.42	0.18
Daily Maximum	0.63	0.14 – 0.42	0.18

Total zinc (DMRs=7) Concentration

Value	Limit (ug/L)	Range (ug/L)	Mean (ug/L)
Monthly Average	Report	38 - 126	67
Daily Maximum	Report	38 - 126	67

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

In the individual allocation, the Department continues to utilize the formula it has used in permitting actions since October 2005 taking into consideration background (10% of AWQC) and a reserve (0% of AWQC). The formula is as follows:

$$\text{EOP concentration} = [\text{Dilution factor} \times 0.90 \times \text{AWQC}] + [0.10 \times \text{AWQC}]$$

$$\text{Mass limit} = (\text{EOP concentration in mg/L})(8.34 \text{ lbs/gal})(\text{Permit flow limit in MGD})$$

Acute AWQC = 30.6 ug/L (Revised in October 2005)

Acute dilution factor = 3.98:1

$$\text{EOP concentration} = [\text{Dilution factor} \times 0.90 \times \text{AWQC}] + [0.10 \times \text{AWQC}]$$

$$\text{EOP} = [3.98 \times 0.90 \times 30.6 \text{ ug/L}] + [0.10 \times 30.6 \text{ ug/L}] = 113 \text{ ug/L}$$

Based on a permitted flow of 0.65 MGD, EOP mass limits are as follows:

<u>Parameter</u>	<u>Calculated EOP Concentrations</u>	<u>Daily Max. Mass Limit</u>
Zinc	113 ug/L	0.61 lbs/day

$$\text{Example Calculation: Zinc} - \frac{(113 \text{ ug/L})(8.34)(0.65 \text{ MGD})}{1,000 \text{ ug/mg}} = \mathbf{0.61 \text{ lbs/day}}$$

Chronic AWQC = 30.6 ug/L (Revised in October 2005)

Chronic dilution factor = 4.98:1

$$\text{EOP concentration} = [\text{Dilution factor} \times 0.90 \times \text{AWQC}] + [0.10 \times \text{AWQC}]$$

$$\text{EOP} = [4.98 \times 0.90 \times 30.6 \text{ ug/L}] + [0.10 \times 30.6 \text{ ug/L}] = 140 \text{ ug/L}$$

Based on a permitted flow of 0.65 MGD, EOP mass limits are as follows:

<u>Parameter</u>	<u>Calculated EOP Concentrations</u>	<u>Monthly Avg. Mass Limit</u>
Zinc	140 ug/L	0.76 lbs/day

$$\text{Example Calculation: Zinc} - \frac{(140 \text{ ug/L})(8.34)(0.65 \text{ MGD})}{1,000 \text{ ug/mg}} = \mathbf{0.76 \text{ lbs/day}}$$

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

Based on the timing, severity and frequency of occurrences of the exceedences or reasonable potential to exceed applicable critical water quality thresholds, this permitting action is making a best professional judgment to establish the monitoring frequencies for the parameters of concern at the routine surveillance level frequency of 1/Quarter specified in Chapter 530.

As for the remaining parameters, monitoring frequencies for priority pollutant and analytical chemistry testing established in this permitting action are based on the Chapter 530 rule. Chapter 530(2)(D)(3)(d) states in part that for Level I facilities "... *may reduce surveillance testing to one WET or specific chemical series per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E)*". With the exception of copper, lead and zinc, the permittee qualifies for the reduced testing. Therefore, surveillance level analytical chemistry has been established at a frequency of 1/Year.

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 shall conduct surveillance level testing as follows:

Level	Priority pollutant testing	Analytical chemistry
I	N/A	1/Year

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 shall be limited and monitored by the permittee as specified below:

Level	Priority pollutant testing	Analytical chemistry
I	1/Quarter	1/Quarter

- j. Mercury: Pursuant to *Certain deposits and discharges prohibited*, Maine law, 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 on May 23, 2000, thereby administratively modifying MEPDES #ME0100951/WDL # W000632-5L-G-R by establishing interim monthly average and daily maximum effluent concentration limits of 16.5 parts per trillion (ppt) and 24.8 ppt, respectively, and a minimum monitoring frequency requirement of four (4) tests per year for mercury.

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

Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the AWQC for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413, subsection 11. A review of the Department's database for the previous 60-month period indicates mercury test results reported have ranged from 0.5 ppt to 15.2 ppt with an arithmetic mean (n=18) of 4.9 ppt.

Pursuant to Maine law 38, M.R.S.A. §420, sub-§1-B, ¶F, on February 6, 2012, the Department modified the August 21, 2001, permitting action that reduced the monitoring frequency for mercury from 4/Year to 1/Year given the permittee has maintained at least 5 years of mercury testing data. In fact, the permittee has been monitoring mercury at a frequency of 4/Year since May 2000 or 11 years.

- k. Septage/Transported Wastes – The previous permitting action authorized the District to receive up to 35,000 gpd (5,000 gpd) of septage.. Department rule Chapter 555, *Standards For The Addition of Transported Wastes to Wastewater Treatment Facilities*, limits the quantity of septage received at a facility to 1% of the design capacity of treatment facility if the facility utilizes a side stream or storage method of introduction into the influent flow, or 0.5% of the design capacity of the facility if the facility does not utilize the side stream or storage method of introduction into the influent flow. A facility may receive more than 1% of the design capacity on a case-by-case basis. The permittee has requested the Department carry forward the daily quantity of septage it is authorized to receive and treat (up to 5,000 gpd) as it does utilize the side stream/storage method of metering septage into the facility's influent flow. With a design capacity of 0.65 MGD, 5,000 gpd only represents 0.77% of said capacity.

The permittee has submitted an up-to-date Septage Management Plan to the Department. The Department has reviewed and approved said plan and determined that under normal operating conditions, the receipt and treatment of 5,000 gpd of septage/transported waste at the facility will not cause or contribute to upset conditions of the treatment process.

- l. Combined Sewer Overflows (CSOs) - The Department acknowledges that the elimination of the remaining CSO at the treatment plant has been a costly long term project. With the implementation of the CSO Master Plan and Nine Minimum Controls over the years, the permittee has made significant progress in the reduction in the frequency and volume of CSO activities over time and improvement in the quality of the waste water discharge to the receiving waters. Special Condition K(4) of this permitting action requires the CSO at the treatment facility be structurally/physically eliminated on or before May 31, 2019.

7. 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 monthly average and daily maximum water quality based mass limits for total copper based on new information that was not available at the time of the previous licensing action. In October 2005, Department rule 06096 CMR Chapter 584 promulgated statewide acute and chronic AWQC of 3.89 ug/L and 2.99 ug/L respectively for total copper. Between July and November 2009 and May and November 2010, the permittee conducted Biotic Ligand Modeling (BLM) for copper to quantify the relationship between the ambient water chemistry of the Little Androscoggin River and the toxicity of the copper being discharged from the PUD facility.

The permittee recommended a site specific acute dissolved copper AWQC of 12.1 ug/L and a chronic dissolved copper AWQC of 7.5 ug/L based on a measure of central tendency (geometric mean) of the 12 BLM results. The Department recommended a site specific acute dissolved copper AWQC of 10.42 ug/L and a chronic dissolved copper AWQC of 6.51 ug/L based on a probability distribution approach of the 12 BLM results in which applicable criteria would only be exceeded one time in three years. See **Attachment F** of this Fact Sheet for a more in-depth discussion on the permittee's derivation of the proposed site specific AWQC. **Attachment F** also contains a letter dated May 21, 2014, from the USEPA with its evaluation of the permittee's and Department's proposed criteria. The USEPA's letter states that the Department's probability distribution approach is more defensible than the permittee's central tendency approach as it reduces bias created by using averages and is based on sound scientific rationale, is as protective as federal water quality criteria and is protective of the most sensitive designated uses.

Department rules expressly state that limits for toxic pollutants must be expressed as total not dissolved fractions. Therefore, utilizing EPA's translator of 0.96 for copper, the acute and chronic site-specific AWQC for total copper in this permitting action are 10.85 ug/L and 6.78 ug/L respectively. These AWQC were used to calculate water quality based mass limits for total copper in this permit.

8. ANTI-DEGRADATION - 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 water quality based effluent limitations and monitoring requirements for total copper. The rationale for these actions is contained in Section 7 and Attachment F 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 Little Androscoggin River to meet standards for Class C classification.

9. PUBLIC COMMENTS

Public notice of this application was made in the Sun Journal on or about March 10, 2014, and again on March 21, 2014. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

10. DEPARTMENT CONTACTS

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

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
e-mail: gregg.wood@maine.gov

Telephone (207) 287-7693

11. RESPONSE TO COMMENTS

Reserved until the close of the 30-day comment period.

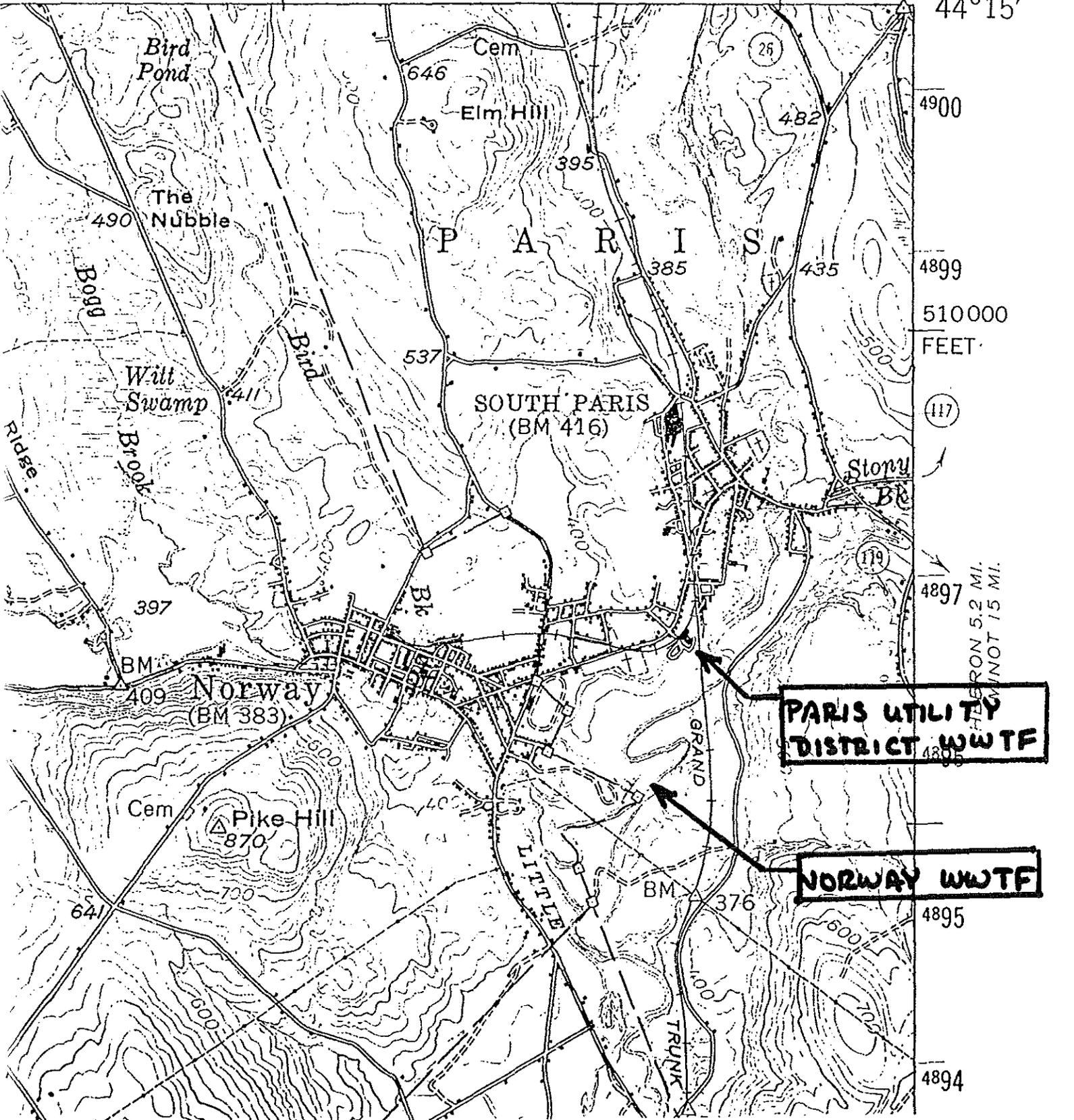
ATTACHMENT A

DEPARTMENT OF THE ARMY
ENGINEERING CENTER
WATERWAYS DIVISION

NORWAY QUADRANGLE MAINE 15 MINUTE SERIES (TOPOGRAPHIC)

(BL)

375 376 377 378 410000 FEET 70°30' 44°15'



ATTACHMENT B

5/6/2014

WET TEST REPORT

Data for tests conducted for the period

01/June/2011 - 06/May/2014



PARIS

NPDES= ME010095

Effluent Limit: Acute (%) = 25.104

Chronic (%) = 20.089

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	100	06/05/2011	25.104		
TROUT	A_NOEL	100	08/07/2011	25.104		
TROUT	A_NOEL	100	10/16/2011	25.104		
TROUT	A_NOEL	100	03/18/2012	25.104		
TROUT	A_NOEL	100	06/23/2013	25.104		
TROUT	C_NOEL	100	06/05/2011	20.089		
TROUT	C_NOEL	100	08/07/2011	20.089		
TROUT	C_NOEL	100	10/16/2011	20.089		
TROUT	C_NOEL	100	03/18/2012	20.089		
TROUT	C_NOEL	100	06/23/2013	20.089		
WATER FLEA	A_NOEL	100	06/05/2011	25.104		
WATER FLEA	A_NOEL	100	08/07/2011	25.104		
WATER FLEA	A_NOEL	100	10/16/2011	25.104		
WATER FLEA	A_NOEL	100	03/18/2012	25.104		
WATER FLEA	A_NOEL	100	06/17/2012	25.104		
WATER FLEA	A_NOEL	100	09/23/2012	25.104		
WATER FLEA	A_NOEL	100	10/28/2012	25.104		
WATER FLEA	A_NOEL	100	03/03/2013	25.104		
WATER FLEA	A_NOEL	100	06/23/2013	25.104		
WATER FLEA	C_NOEL	50	06/05/2011	20.089		
WATER FLEA	C_NOEL	100	08/07/2011	20.089		
WATER FLEA	C_NOEL	20.10	10/16/2011	20.089		
WATER FLEA	C_NOEL	50	03/18/2012	20.089		
WATER FLEA	C_NOEL	100	06/17/2012	20.089		
WATER FLEA	C_NOEL	50	09/23/2012	20.089		
WATER FLEA	C_NOEL	100	09/23/2012	20.089		
WATER FLEA	C_NOEL	100	10/28/2012	20.089		
WATER FLEA	C_NOEL	5	03/03/2013	20.089	Y	
WATER FLEA	C_NOEL	50	06/23/2013	20.089		

ATTACHMENT C

5/6/2014

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 01/June/2011-06/May/2014



Facility Name: PARIS

NPDES: ME0100951

Test Date	Monthly (Flow MGD)	Daily	Total Test Number	Test # By Group						Clean	Hg
				M	V	BN	P	O	A		
06/05/2011	0.29	0.31	23	10	0	0	0	13	0	F	0
07/12/2011	0.24	0.21	2	1	0	0	0	1	0	F	0
08/07/2011	0.26	0.21	21	10	0	0	0	11	0	F	0
09/07/2011	0.28	0.33	1	1	0	0	0	0	0	F	0
10/16/2011	0.31	0.27	24	10	0	0	0	14	0	F	0
11/08/2011	0.32	0.26	1	1	0	0	0	0	0	F	0
12/06/2011	0.36	0.39	1	1	0	0	0	0	0	F	0
01/12/2012	0.27	0.23	1	1	0	0	0	0	0	F	0
02/15/2012	0.24	0.23	1	1	0	0	0	0	0	F	0
03/18/2012	0.35	0.40	24	10	0	0	0	14	0	F	0
04/11/2012	0.30	0.25	1	1	0	0	0	0	0	F	0
05/21/2012	0.38	0.31	1	0	0	0	0	1	0	F	0
05/24/2012	NR	NR	1	1	0	0	0	0	0	F	0

Key:

A = Acid O = Others P = Pesticides
 BN = Base-Neutral M = Metals V = Volatiles

5/6/2014

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 01/June/2011-06/May/2014

Facility Name: **PARIS**NPDES: **ME0100951**

Test Date	Monthly (Flow MGD)	Daily	Total Test Number	Test # By Group						Clean	Hg
				M	V	BN	P	O	A		
06/17/2012	0.61	0.47	21	10	0	0	0	11	0	F	0
07/10/2012	0.29	0.31	1	1	0	0	0	0	0	F	0
07/23/2012	0.29	0.25	1	0	0	0	0	1	0	F	0
08/14/2012	0.25	0.21	1	1	0	0	0	0	0	F	0
09/23/2012	0.24	0.22	132	14	28	45	25	9	11	F	0
10/28/2012	0.24	0.26	21	10	0	0	0	11	0	F	0
11/07/2012	0.23	0.25	1	1	0	0	0	0	0	F	0
12/06/2012	0.29	0.23	1	1	0	0	0	0	0	F	0
01/02/2013	0.27	0.28	1	1	0	0	0	0	0	F	0
02/05/2013	0.24	0.24	1	1	0	0	0	0	0	F	0
03/03/2013	0.33	0.25	21	10	0	0	0	11	0	F	0
06/23/2013	NR	NR	22	10	0	0	0	12	0	F	0
09/16/2013	0.32	0.32	11	10	0	0	0	1	0	F	0

Key:

A = Acid O = Others P = Pesticides
 BN = Base Neutral M = Metals V = Volatiles

5/6/2014

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 01/June/2011-06/May/2014



Facility Name: PARIS

NPDES: ME0100951

Test Date	Monthly (Flow MGD)	Daily	Total Test Number	Test # By Group						Clean	Hg
				M	V	BN	P	O	A		
10/27/2013	0.32	0.20	11	10	0	0	0	1	0	F	0

Test Date	Monthly (Flow MGD)	Daily	Total Test Number	Test # By Group						Clean	Hg
				M	V	BN	P	O	A		
03/18/2014	0.26	0.24	11	10	0	0	0	1	0	F	0

Key:

- A = Acid
- BN = Base Neutral
- M = Metals
- O = Others
- P = Pesticides
- V = Volatiles

5/6/2014

FACILITY PRIORITY POLLUTANT DATA REPORT

Data Date Range: 01/June /2011-06/May/2014



Facility name: PARIS

Permit Number: ME0100951

Parameter: COPPER

Test date	Result (ug/l)	Lsthan
06/05/2011	16.000	N
07/12/2011	28.000	N
08/07/2011	11.000	N
09/07/2011	10.000	N
10/16/2011	9.000	N
11/08/2011	13.000	N
12/06/2011	12.000	N
01/12/2012	10.000	N
02/15/2012	15.000	N
03/18/2012	10.000	N
04/11/2012	9.000	N
05/24/2012	11.000	N
06/17/2012	14.000	N
07/10/2012	26.000	N
08/14/2012	12.000	N
09/23/2012	11.000	N
10/28/2012	1.000	Y
11/07/2012	20.000	N
12/06/2012	26.000	N
01/02/2013	21.000	N
02/05/2013	18.000	N
03/03/2013	24.000	N
06/23/2013	9.000	N
09/16/2013	20.000	N
10/27/2013	37.000	N
03/18/2014	21.000	N

Facility name: PARIS

Permit Number: ME0100951

Parameter: LEAD

Test date	Result (ug/l)	Lsthan
06/05/2011	3.000	N
08/07/2011	1.000	Y
10/16/2011	5.000	N
03/18/2012	1.000	Y
06/17/2012	3.000	N
09/23/2012	1.000	Y
10/28/2012	1.000	Y
03/03/2013	1.000	N
06/23/2013	5.000	N
09/16/2013	4.000	N
10/27/2013	0.100	Y
03/18/2014	1.000	Y

Facility name: **PARIS**Permit Number: **ME0100951**

Parameter: ZINC

Test date

Result (ug/l)

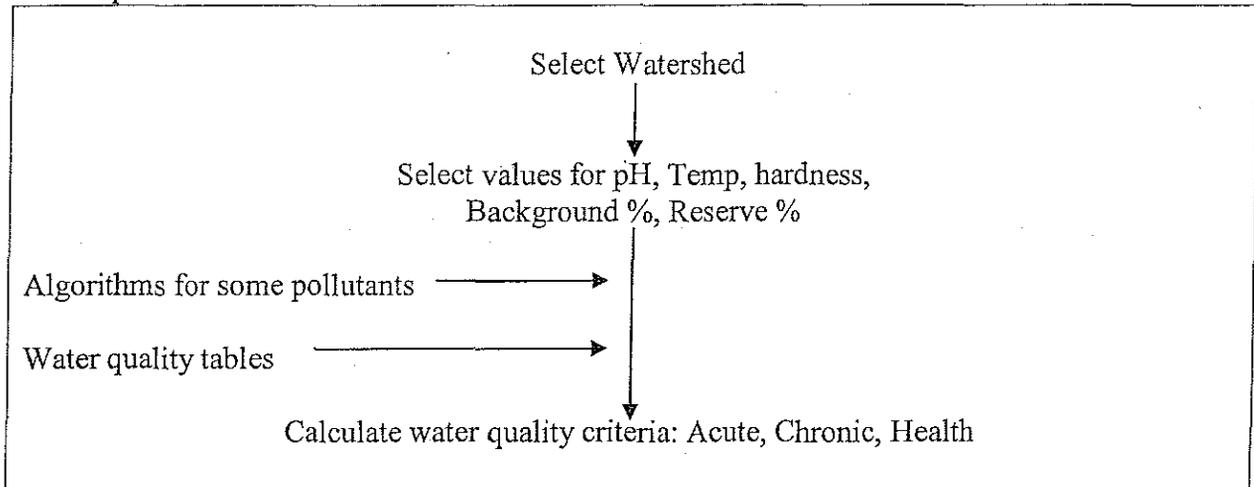
Lsthan

06/05/2011	59.000	N
08/07/2011	49.000	N
10/16/2011	61.000	N
03/18/2012	126.000	N
06/17/2012	38.000	N
09/23/2012	48.000	N
10/28/2012	10.000	N
03/03/2013	94.000	N
06/23/2013	53.000	N
09/16/2013	50.000	N
10/27/2013	65.000	N
03/18/2014	101.000	N

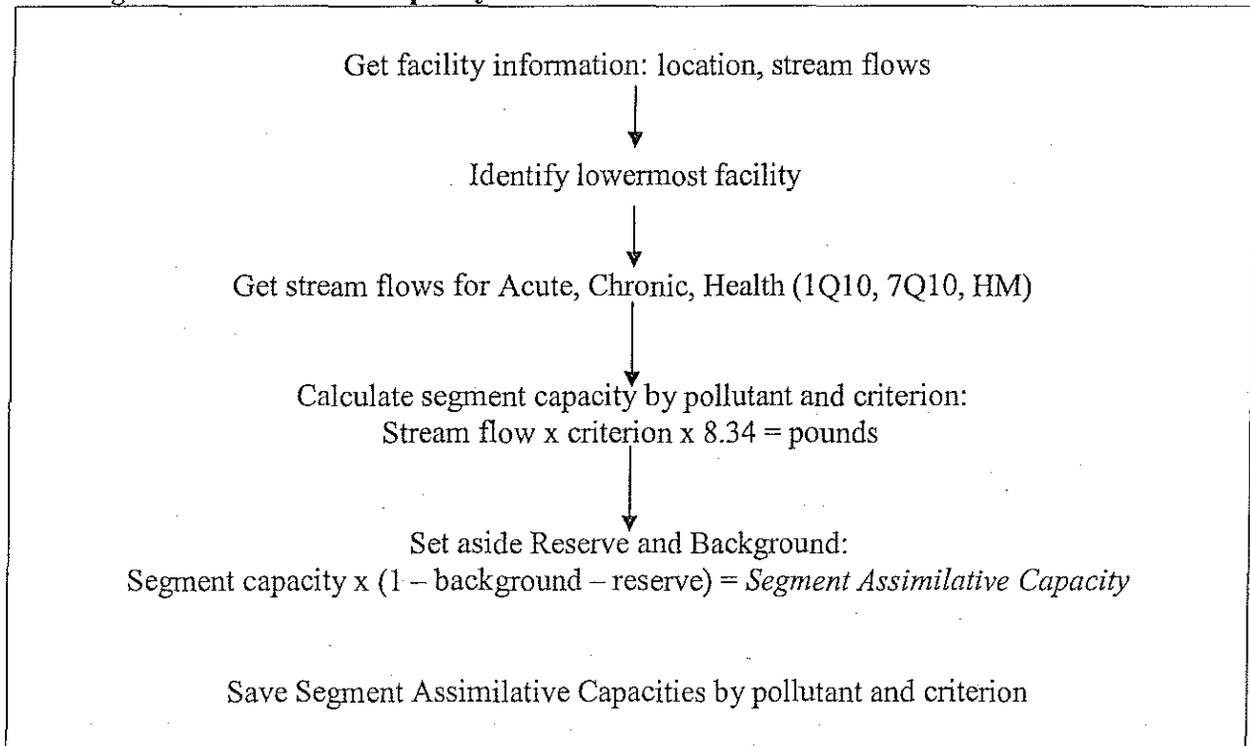
ATTACHMENT D

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

I. Preparation

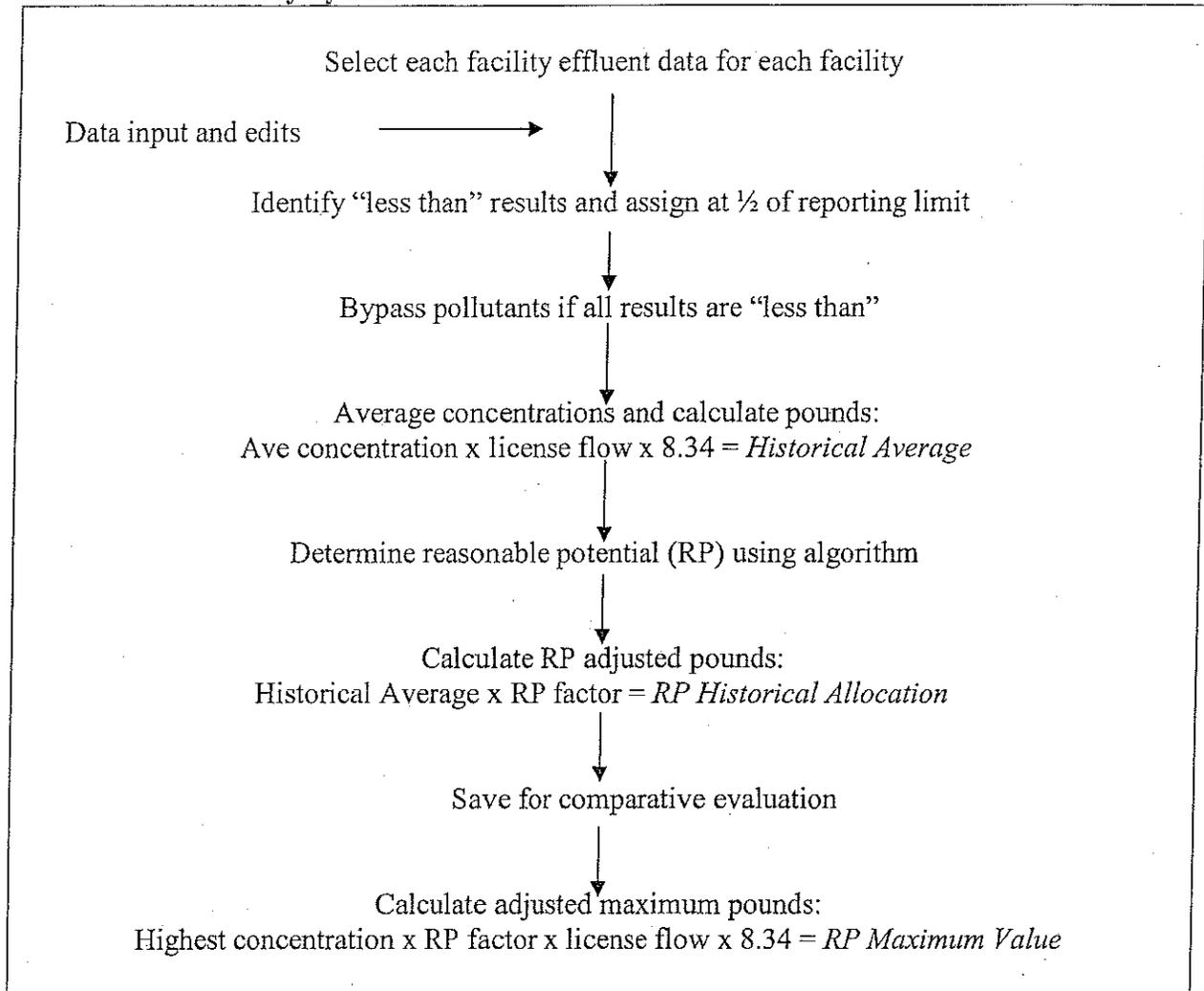


II. Segment Assimilative Capacity

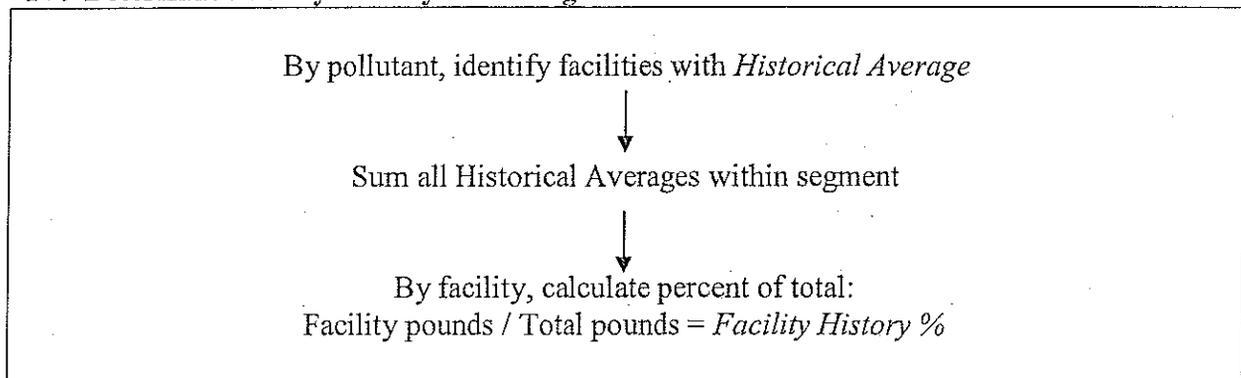


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant

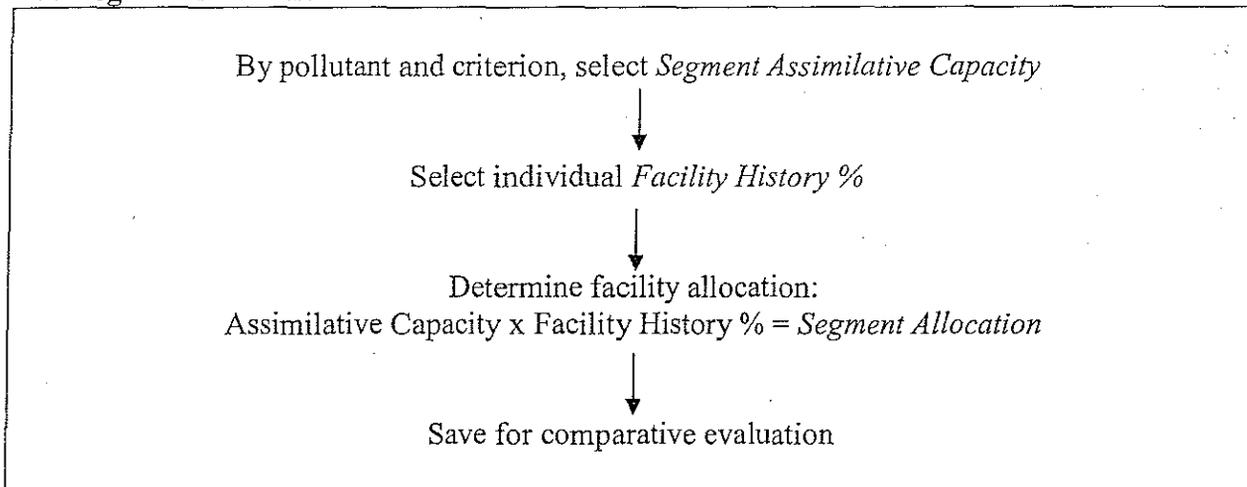


IV. Determine Facility History Percentage

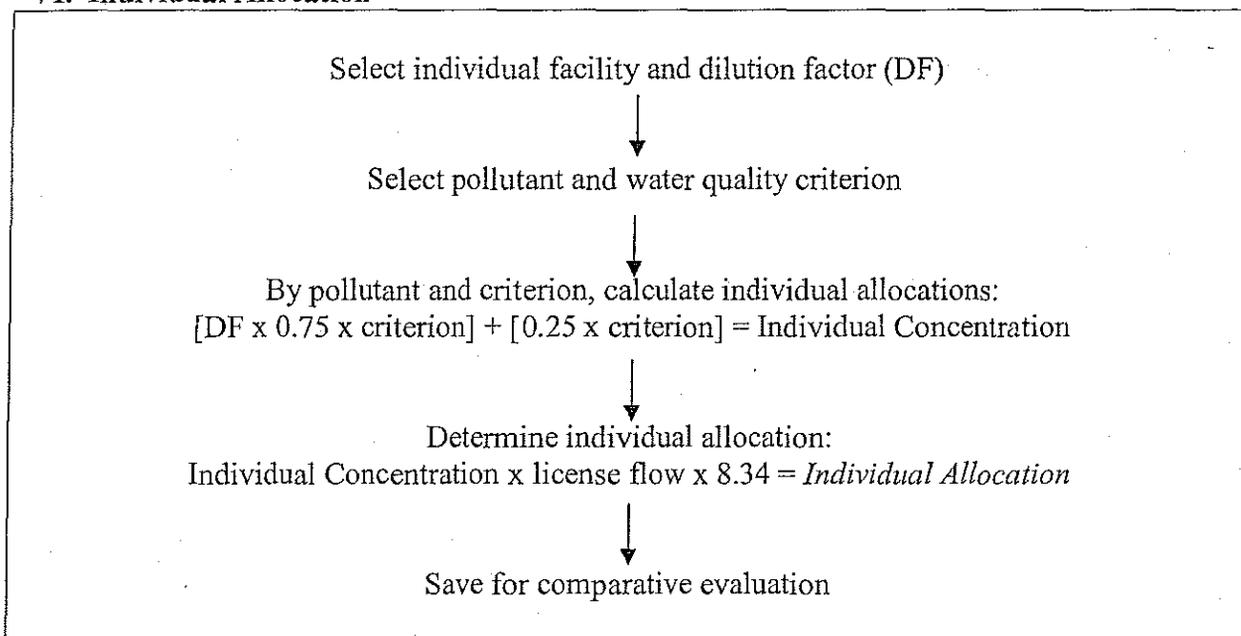


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

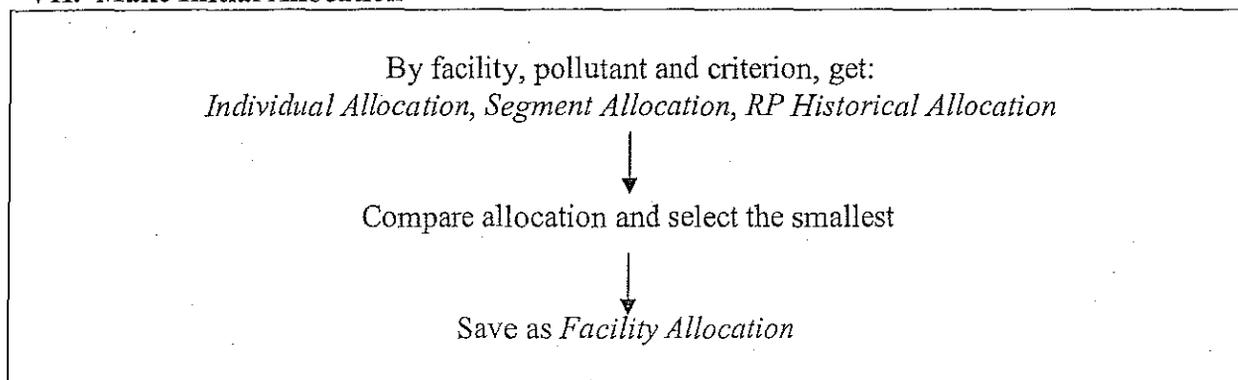
V. Segment Allocation



VI. Individual Allocation

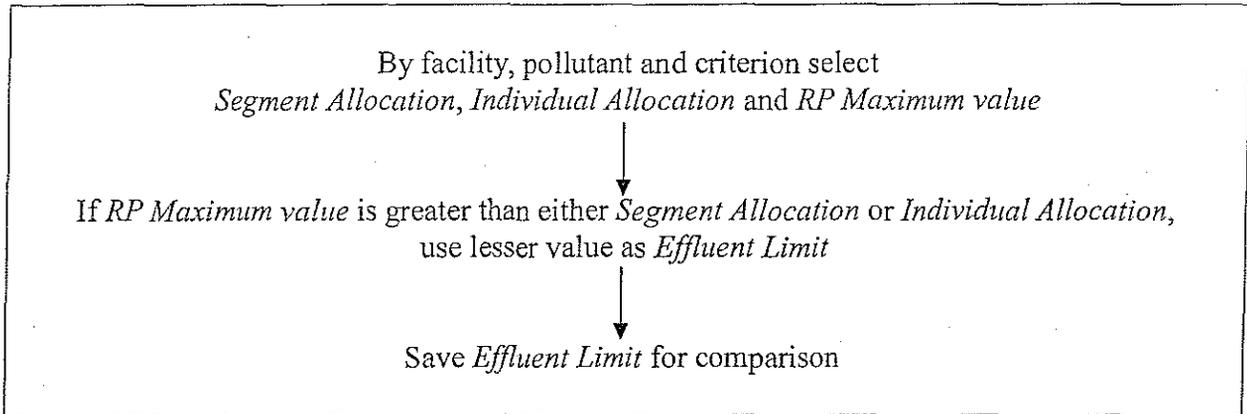


VII. Make Initial Allocation

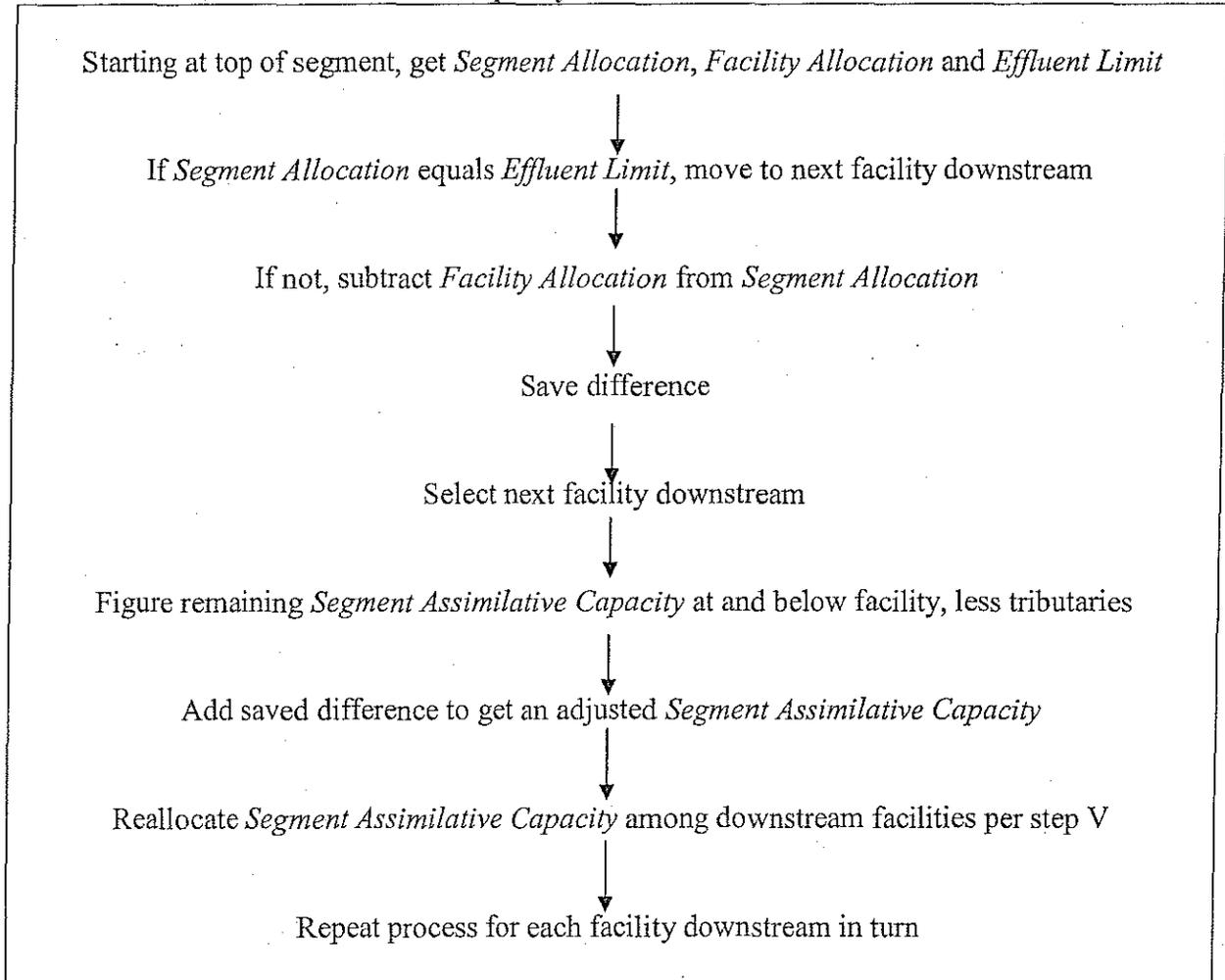


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

VIII. Evaluate Need for Effluent Limits



IX. Reallocation of Assimilative Capacity



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

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 than 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.

ATTACHMENT E



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 530.2(D)(4) CERTIFICATION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
Commissioner

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?	<input type="checkbox"/>	<input type="checkbox"/>
2	Changes in the condition or operations of the facility that may increase the toxicity of the discharge?	<input type="checkbox"/>	<input type="checkbox"/>
3	Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge?	<input type="checkbox"/>	<input type="checkbox"/>
4	Increases in the type or volume of hauled wastes accepted by the facility?	<input type="checkbox"/>	<input type="checkbox"/>

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	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
WET Testing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Priority Pollutant Testing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analytical Chemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other toxic parameters ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 760-3143

ATTACHMENT F



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square

BOSTON, MA 02109-3912

May 21, 2014

Mr. Gregg Wood
Maine Department of Environmental Protection
Bureau of Land & Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333

Dear Mr. Wood,

The Environmental Protection Agency (EPA) recently reviewed the proposed site specific copper criteria, for the protection of aquatic life, included in the preliminary draft Maine Pollution Discharge Elimination System/Waste Discharge License (hereafter preliminary draft permit) which was submitted to EPA for review on May 13, 2014. Based on that review, we are concerned that the proposed site specific copper criteria will not be consistent with the state and federal requirements that numerical criteria, including site specific criteria, be based on sound scientific rationale, be as protective as federal water quality criteria and be protective of the most sensitive designated uses.¹

The proposed site specific copper criteria was derived using the EPA recommended Biotic Ligand Model (BLM) methodology which accounts for the impacts that ambient water chemistry has on copper toxicity to aquatic life. In this approach ambient water chemistry is analyzed during different seasons to capture the variation in water chemistry over time. Each sampling event provides a data set from which instantaneous acute and chronic criteria are calculated using the BLM calculator. To be consistent with 40 CFR 131.11(a), states must choose a site specific criteria from these instantaneous criteria that will be protective of designated uses.

Integral Consulting Inc. (Integral), on behalf of Paris Utility District (PUD), conducted a study of ambient water chemistry in the waters of the Little Androscoggin River downstream of the Paris PUD discharge which included 12 monthly sampling events from July through November 2009 and May through November 2010. From the resulting sampling event data sets, Integral calculated 12 instantaneous acute and chronic copper criteria which are summarized in a 2011 BLM report prepared for PUD by Integral.²

As explained in Attachment F of the preliminary draft permit fact sheet³, Integral used a measure of central tendency (geometric mean) of the copper BLM instantaneous criteria to derive the draft proposed site-specific Criteria Maximum Concentration (CMC or acute) and Criteria Chronic

¹ Maine Department of Environmental Protection Regulations Chapter 584 Part 3.B and 40 CFR 131.11(a).

² Integral Consulting, *Biotic Ligand Modeling to Derive Acute and Chronic Site Specific Water Quality Criteria for Copper in the Little Androscoggin River*, prepared for Paris Utility District, February 11, 2011.

³ Integral Consulting Inc., Memo to Steve Arnold, Paris Utility District, regarding "Biotic Ligand Modeling – Response 2011 DEP Comments", February 1, 2012.

Concentration (CCC or chronic) criteria (12.1 ug/L and 7.5 ug/L respectively) for the protection of aquatic life. The use of the central tendency does not consider fully the exceedance frequency or how many times the criteria can be exceeded and still provide the protection intended for the designated aquatic life use of the waterbody.

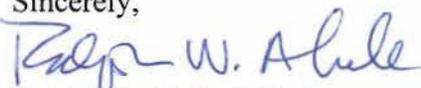
In communications to EPA⁴, Maine Department of Environmental Protection (DEP) provided alternative site specific criteria that DEP had developed using a probability distribution approach. The probability distribution approach used by DEP for the approved water quality standard for copper is appropriate for protecting the designated use and minimizing the potential exceedance of the allowed frequency (one exceedance in three years), considering the variability of the copper discharge concentration. That is a probability of 0.913 or, viewed the other way, the criteria will not be exceeded 99.087% of the time. Using this approach with the PUD data, the resulting CMC would be 10.42 ug/L and the CCC would be 6.51 ug/L, as dissolved copper (corresponding to CMC of 10.85 and CCC of 6.78 ug/L, as total copper). We believe this method of considering exceedance frequency is more defensible than the central tendency (geometric mean) approach proposed in the preliminary draft permit, uses all monitoring data collected, and reduces bias created by just using averages.

EPA strongly recommends that DEP reconsider the adoption of the site specific copper criteria derived using the geometric mean of the BLM instantaneous criteria. As an alternative we recommend the probability distribution approach described above, or other method that is based on sound scientific rationale, is as protective as federal water quality criteria, and is protective of the most sensitive designated uses.

As a reminder, in accordance with the Clean Water Act, water quality based effluent limits must be based on EPA approved water quality standards. Therefore, the permit may not be finalized until the site specific copper criteria have been adopted, submitted to EPA for review and approved by EPA. The site specific copper criteria must be adopted or established as a legally binding provision pursuant to state law as well as federal rules at 40 CFR 131. These rules include a requirement that a public hearing be held with appropriate public notice.

We look forward to continued cooperation with DEP in developing and finalizing site specific copper criteria and other revisions to Maine's surface water quality standards, as part of our responsibilities under the Clean Water Act. Please contact Ellen Weitzler at 617-918-1582 or weitzler.ellen@epa.gov if you have any questions concerning our comments.

Sincerely,



Ralph W. Abele, Chief
Water Quality Branch

cc. Brian Kavanah, DEP
Mark Margerum, DEP
Susanne Meidel, DEP

⁴ Gregg Wood, DEP, March 17, 2014 email to David Webster, David Pincumbe and Ellen Weitzler, regarding "Paris Utility District - Renewal Application and Site Specific AWQC for Copper".



Integral Consulting Inc.
45 Exchange Street
Suite 200
Portland, ME 04101

telephone: 207.874.9000
facsimile: 207.874.7800
www.integral-corp.com

MEMORANDUM

To: Steve Arnold, Paris Utility District
From: Patrick Gwinn
Date: February 1, 2012
Subject: Biotic Ligand Modeling – Response to 2011 DEP Comments
Project No.: C727-0001

In DEP's April 13, 2011 review memorandum of the *Biotic Ligand Modeling to Derive Acute and Chronic Site-specific Water Quality Criteria for Copper in the Little Androscoggin River* and the July 12, 2011 email from Barry Mower to Brian Kavanah, DEP comments on the biotic ligand modeling report prepared by Integral Consulting on behalf of the Paris Utility District (PUD) in February 2011.

In the February 2011 report, Integral and PUD proposed the use of the arithmetic mean of all downstream criteria values generated by the biotic ligand model (BLM). However, at the September 8, 2011 meeting with DEP, the Department said their current view was that the lowest BLM values should be used. DEP also downplayed the importance of supporting data brought to light by PUD and Integral (e.g., WET testing, biomonitoring, etc.). Subsequent to that meeting, DEP provided PUD the aforementioned DEP comments on the BLM modeling. This response focuses on the following aspects of DEP's comments and concerns voiced at the September 8, 2011 meeting and provided in the written comments:

1. What is the appropriate metric of BLM values to use for a site-specific criterion (e.g., minimum, 5th percentile, average, geometric mean)?
2. Should WET test, biological monitoring and other data be considered in the determination of a site-specific criteria (i.e., can an independent applicability approach be used to support BLM data)?

The following responses attempt to address these concerns raised by DEP.

Appropriate BLM Site-Specific Criteria Metric

In the April review, Mr. Mower states that it is the DEP's policy to use the lowest value calculated for the Criterion Maximum Concentration (CMC) and other measurements (e.g., mean, seasonal value, or lower 95th percentile) for calculating the Criterion Continuous Concentration (CCC). However, the approach described by DEP is specifically for determining changes in surface water quality standards based solely on hardness¹ and is not relevant to this evaluation. The Total Hardness Protocol referred to by Mr. Mower in the April review memo also points out the distinct differences between a hardness-based modification to the water quality criteria and a water effects ratio (WER) method, stating that, "Recalculation of a SWQC based on an alternate hardness for chemicals one at a time does not integrate the combined effects of all chemicals in the discharge as does the WER approach. For that reason, DEP feels the need to be more conservative with [the hardness] recalculation." The BLM modeling performed by PUD used water collected downstream of the discharge, so these samples do take into account the combined input from upstream water and effluent. Additionally, as discussed below, the BLM has been demonstrated to accurately predict laboratory-derived WERs for copper. Consequently, the extreme approach suggested by Mr. Mower in the April 2011 memo (i.e., use of a minimum value) does not appear consistent with the department's written policy and is not warranted for this situation.

In the July 2011 email, the Mr. Mower refers to Training material related to the use of the USEPA Copper BLM, and specifically references Data Requirement, Section 1.7 of the training material. Mr. Mower uses information in the training material along with a broad opinion regarding a lack of seasonal variability to form the opinion that the 5th percentile BLM output should be used to form the basis for the site-specific criteria (SSC) for copper in the Little Androscoggin River.

However, the cited training material states that "if the water quality parameters and BLM-derived copper criteria are relatively constant over a range of seasonal and flow conditions...then using a geometric mean of all instantaneous criteria may be appropriate." Mr. Mower did not provide an assessment of the variability of BLM output in his email, nor does the training material cited by Mr. Mower provide specific guidance on determining what constitutes a high or low level of variability.

An evaluation of the BLM output for the downstream sampling location (Table 4-1 of the February 2011 report²) indicates that the absolute difference between the minimum and

¹ See Maine Department of Environmental Protection Total Hardness Protocol, March 5, 2001.

² The report cited report is entitled "Biotic Ligand Modeling to Derive Acute and Chronic Site-specific Water Quality Criteria for Copper in the Little Androscoggin River" prepared by Integral Consulting.

maximum BLM CMC³ output values is only a factor of 4.2. Put another way, the maximum and minimum values are approximately within a factor of 2 from the midpoint of the distribution of values. According to additional USEPA BLM training material⁴, replicate LC₅₀ values determined from copper water-effects ratio laboratory tests show similar variability (i.e., replicate values are expected to be within a factor of 2 from the midpoint). Therefore, the BLM output for the present study, which is essentially being used to compute a BLM-based WER (BLM output/default AWQC) is within the range of variability expected by EPA for WERs developed in the laboratory.

The relative standard deviation (RSD), sometimes referred to as the coefficient of variance, of the BLM-computed downstream CMC and CCC values shown in Table 4-1 of the February 2011 report is 48%⁵. The RSD is a measure of the precision or repeatability of a series of values, such as the BLM output, and is computed as the standard deviation divided by the mean, converted to a percentage by multiplying by 100.

To put this RSD into perspective, a review of the precision for copper-related analyses found acceptable by USEPA was undertaken. The USEPA's Method 220.1, which is an atomic adsorption spectroscopy method for accurately determining copper in water or wastewater, shows that inter-laboratory variability in copper analysis results, as measured by RSD, range from 18% to 63% over concentrations ranging from 7.5 µg/l to 333 µg/l. Similarly, USEPA SW-846 Method 6010C for analysis of copper (and other metals) in environmental samples (including water and wastewater) identifies demonstrated RSDs ranging from 5.1% to 40% for copper, and USEPA's 1991 document, *Technical Support Document for Water Quality-Based Toxics Control*, shows in Table 1-3 an inter-laboratory RSD of 36% for copper analysis. The concentrations tested to derive the inter-laboratory RSDs for USEPA Methods 220.1 and SW-846 Method 6010C are within the range of CMC and CCC concentrations computed by the BLM, and the inter-laboratory RSD values are similar to the RSD computed from the BLM output data (48%).

The input parameters that have the most influence on the BLM model, pH and dissolved organic carbon (DOC), also demonstrated some variability from sample to sample. The maximum absolute difference (calculated as the max value/min value) for the pH data is 1.2 (i.e., the max pH is only 20% greater than the minimum pH) and the comparable

³ CMC – Criterion Maximum Concentration

⁴ See slide number 15 at:

http://water.epa.gov/learn/training/standardsacademy/upload/2008_08_20_standards_academy_special_blm_presentation.pdf

⁵ The RSD for the BLM Criterion Continuous Concentration (CCC) values are equal to those of the CMC cited in the text.

value is 3 for the DOC data⁶. The RSD for pH and DOC are approximately 3.7% and 38%, respectively. Most of the other, less influential measurements had similar variability. The exceptions were chloride and sulfate, which demonstrated a higher degree of variability (i.e., maximum absolute difference >10, and RSD > 70%).

Some amount of variability is expected in any set of repeated measurement due to a wide variety of factors (e.g., actual variability in concentration, sampling variability, analytical variability, etc.). Though variability is inevitable, some measure must be deemed acceptable for the purposes of evaluating environmental sampling data. Examples of acceptable levels of variable are demonstrated with USEPA's approval of the analytical method for copper, discussed above. EPA made a determination to accept the noted levels of variability with these analytical procedures despite the RSD being as high as 63% for copper. Accordingly, the input and output from the BLM also should be described as having an 'acceptably low variability'.

As stated above, the absolute difference between the minimum and maximum BLM output values are within the range expected for WER results, and the RSD of the BLM results and input parameters are within the range deemed acceptable to the USEPA for copper analysis in water. Hence, though variable, the data do not demonstrate a high level of variability. According to the training materials cited by DEP, low variability output from the BLM can be reduced to a single value by use of the geometric mean⁷. The geometric mean of the BLM output is 12.1 µg/l and 7.5 µg/l for the downstream CMC and CCC, respectively. These concentrations are similar, though somewhat lower, to those recommended for the CMC and CCC in the February, 2011 report (13.4 µg/l and 8.3 µg/l, respectively).

Another line of evidence supporting the use of a central tendency value of the distribution of BLM output values is provided in USEPA's *Streamlined Water-Effect Ratio Procedure for Discharges of Copper* (EPA-882-R-01-005) and other BLM training material. This streamlined WER procedure prescribes the use of the geometric mean of two or more WERs to determine site-specific criteria for copper. The guidance document also states that the BLM is ultimately intended to replace the WER toxicity test procedures for copper.

⁶ DOC = dissolved organic carbon

⁷

http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/pollutants/copper/upload/2007_04_11_criteria_copper_faq_data-requirements.pdf

Comparisons of the laboratory-derived WER and the WER computed from the BLM are shown in training material on USEPA's Standards Academy website⁸. The BLM-based WER (BLM x SWQC) was very well matched to laboratory-based WERs (LC₅₀ site/LC₅₀ lab) in 14 of 15 cases, and in the one case with a significant mismatch, the BLM-based WER was lower than the laboratory-based WER. These cases demonstrate that the BLM can be used to effectively replace the laboratory-based WER procedure. Because of the similarities in the laboratory- and BLM-based WERs, the USEPA's recommendation to use the geometric mean of the laboratory-based WER test results in the streamlined procedure should transfer to the BLM-based values as well.

DEP also states in July 12, 2011 email comments that "I believe my proposal is better as, based on the data, it supposedly would protect 95% of the genera at all times, although given the relatively small sample size and variability, it may not be protective year after year." However, USEPA guidance for copper WERs indicates that these values can be set with as few as two results⁹. PUD has collected data and computed twelve BLM/WER results representing all seasons, which is six times the number of results prescribed by the USEPA guidance for copper WERs. Also, as mentioned above, DEP's comment about "variability" is made devoid of any real analysis to support such a statement. Additionally, regarding the statement about "not being protective year after year," even Maine DEP has set site-specific water quality criteria for rivers (e.g., St. Croix) based on temporally finite data. Monitoring of effluent does not cease with the acceptance of a site-specific criterion; WET testing, chemical analysis of effluent, and in-stream biomonitoring will continue into the future to ensure that the effluent from PUD will be protective of the environment year after year.

Use of Supporting Data in Site-Specific Criteria Development

Regarding this point, it is important and relevant to note that other New England states have adopted site-specific criteria for certain streams (effluent dominated, like the Little Androscoggin below PUD), without any site-specific WER data collection. For those streams, an 'independent applicability' approach was used as the basis for adoption of site-specific criteria.

For example, the Rhode Island Department of Environmental Management (RIDEM) adopted (and USEPA approved) site-specific copper ambient water quality criteria for several effluent-dominated streams in Rhode Island. RIDEM based their site-specific

⁸See pages 36 and 42 at:

http://water.epa.gov/learn/training/standardsacademy/upload/2008_08_20_standards_academy_special_blm_presentation-notes.pdf

⁹See *Streamlined Water-Effect Ratio Procedure for Discharges of Copper* (EPA-882-R-01-005).

value on WERs for copper computed for streams in Connecticut and Massachusetts. RIDEM did not conduct site-specific WER testing of their rivers prior to adoption and USEPA approval, but relied on comparisons of stream chemistry and IWCs to demonstrate that the WERs determined for Connecticut rivers were acceptable for use in Rhode Island. Their analysis was also supported by evaluations of WET testing and in stream biomonitoring results¹⁰.

Also relevant to the Little Androscoggin case is the fact that the site-specific criteria applied by RIDEM was adjusted to river-specific hardness levels prior to applying the WER of 2.92 derived for Connecticut rivers. Though outside of the USEPA guidance for setting site-specific criteria (i.e., the USEPA 1994 Interim WER guidance or the 2001 WER guidance for copper), the USEPA approved of RIDEM's recommended site-specific criteria for copper. This demonstrates that USEPA Region 1 has approved site-specific criteria for copper based, in part, on an independent applicability approach. Further supporting this approach is the Audubon Society or Rhode Island's praise of RIDEM for the development of these site-specific criteria for copper¹¹.

Closing

This information, in conjunction with the information on whole effluent toxicity testing of PUD effluent, biomonitoring results, fish population results, and sediment chemistry tests for the areas downstream of the PUD plant discharge all support the use of central tendency BLM value. Though our February 2011 report suggests the use of an arithmetic mean, the use of the geometric mean is supported by the USEPA training materials and guidance. The geometric mean CMC and CCC from the BLM is 12.1 µg/l and 7.5 µg/l, respectively, for downstream water. These are submitted along with the foregoing supporting rationale as the revised proposed site-specific copper criteria for the Little Androscoggin River.

¹⁰ <http://www.dem.ri.gov/programs/benviron/water/quality/surfwa/pdfs/suppdoc.pdf>
and

<http://www.dem.ri.gov/pubs/regs/regs/water/h2oq10.pdf>

¹¹ <http://www.dem.ri.gov/programs/benviron/water/quality/surfwa/pdfs/response.pdf>

STATE OF MAINE
BOARD OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

Robert A. Foley, Chair

Cynthia S. Bertocci
Executive Analyst

Ruth Ann Burke
Board Clerk

June 19, 2014

RE: Paris Utility District Application for Renewal of Maine Pollutant Discharge Elimination System Permit (MEPDES) #ME0100951 / Maine Waste Discharge License (WDL) #W000632-6C-I-R and Request for Site Specific Criteria for Copper
Notice of Availability of Draft MEPDES Permit for Comment and Opportunity to Intervene in Licensing Hearing

Dear Interested Person:

Please be advised that the Board of Environmental Protection voted on June 19, 2014 to assume jurisdiction over, and hold a public hearing on, the application by Paris Utility District for renewal of its wastewater discharge license including a request for site specific criteria for copper. The enclosed "Notice of Availability of Draft MEPDES Permit for Comment and Opportunity to Intervene in Licensing Hearing" will be published in the Lewiston Sun Journal on Tuesday, June 24, 2014. The public hearing is tentatively scheduled for September 4, 2014. When the hearing date is finalized, notice of the hearing time and location will be published in accordance with provisions of the Maine Administrative Procedure Act and Department of Environmental Protection Rules.

Please consult the enclosed notice for information regarding opportunity to comment on the application and draft MEPDES permit, and opportunity to intervene in the licensing hearing and associated deadline. If you have questions, I can be reached at (207) 287-2452 or Cynthia.s.bertocci@maine.gov.

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in cursive script that reads "Cynthia S. Bertocci".

Cynthia S. Bertocci, Executive Analyst
Board of Environmental Protection

enclosure

BOARD OF ENVIRONMENTAL PROTECTION
NOTICE OF AVAILABILITY OF DRAFT MEPDES PERMIT FOR COMMENT
AND OPPORTUNITY TO INTERVENE IN LICENSING HEARING

PARIS UTILITY DISTRICT
Maine Waste Discharge License / Maine Pollutant Discharge
Elimination System Permit Application
South Paris, Oxford County, Maine

Pursuant to the Federal Clean Water Act, Title 33 USC, section 1251 et seq.; Maine Law 38 M.R.S. § 413, § 414 and § 414-A; and 06-096 CMR 522 of the Department's rules, the Paris Utility District (PUD) of 1 Paris Hill Road, South Paris, Maine filed an application for renewal of its permit to discharge waste water to the Little Androscoggin River including a request pursuant to 38 M.R.S. § 420(2)(B) for site specific ambient water quality criteria for copper. On June 19, 2014, the Board of Environmental Protection assumed licensing jurisdiction over the application in accordance with 38 M.R.S. § 341-D(2) and § 420(2), voted to hold a public hearing on the application, and authorized issuance of the draft MEPDES permit for public comment. The public hearing is tentatively scheduled for September 4, 2014.

Draft MEPDES Permit for Comment: A copy of the draft MEPDES permit (#ME0100951/WDL#W000632-6C-I-R) is available on the Board's webpage at www.maine.gov/dep/bep under featured links. A copy of the draft MEPDES permit may also be obtained by contacting Gregg Wood at (207) 287-7693 or Gregg.wood@maine.gov. The complete application is available for inspection at DEP's Augusta office during normal business hours. The application may also be viewed at the municipal office in the Town of Paris.

Written comment on the draft MEPDES permit will be accepted until the close of the hearing record, but persons are encouraged to submit written comments within 30 calendar days of the draft permit being made available for comment. Comments should be sent to: Gregg Wood, P.E., Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; phone 207-287-7693; Gregg.wood@maine.gov.

Opportunity to Intervene in Hearing: Members of the general public are not required to file a petition to intervene in order to provide oral testimony at the hearing. However, any individual, partnership, corporation, government entity, association, or public or private organization that wants to bring witnesses and/or cross examine the witnesses of other parties must file a petition for leave to intervene. In accordance with 06-096 CMR 3 *Rules Governing the Conduct of Licensing Hearings*, the petition must include: identification of the petitioner, a description of the effect of the proposed activity on the petitioner, specific contentions regarding the subject matter of the hearing and the relevant statutory or regulatory criteria, the name of the spokesperson for the petitioner, and a statement regarding the ability of the petitioner to participate in the proceeding. If the petitioner is a group or organization, the petition must include a general description of the purpose and membership of the group or organization. In order to be granted, a petition to intervene must demonstrate that the petitioner is or may be, or is a member of a class that is or may be, substantially and directly affected by the proceeding.

Petitions for leave to intervene in this proceeding must be **RECEIVED** by the Board of Environmental Protection no later than **5:00 p.m. on Monday, July 7, 2014**. The petitions will be considered by the Board at its meeting on July 17, 2014. A petition that is not timely filed will be denied unless the petitioner shows good cause for failure to file on time. A petition to intervene may be filed by electronic mail or facsimile if followed by receipt of an original document within five working days.

A petition to intervene should be addressed to: Robert A. Foley, Chair, Board of Environmental Protection, c/o Ruth Ann Burke, 17 State House Station, Augusta, Maine 04333; Ruth.a.burke@maine.gov , or facsimile number (207) 287-2814. Questions regarding petitions to intervene should be directed to Cynthia Bertocci at (207) 287-2452 or Cynthia.s.bertocci@maine.gov or Scott Boak, Assistant Attorney General, at (207) 626-8566.

Robert A. Foley, Chair
Board of Environmental Protection