STATE OF MAINE

Department of Environmental Protection

Paul R. LePage
GOVERNOR

Patricia W. Aho
COMMISSIONER

March 6, 2012

Mr. Rodney L. Deschaine
General Manager
Fort Fairfield Utility District
P.O. Box 267, 100 High Street
Fort Fairfield, Maine 04742

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100226
Maine Waste Discharge License (WDL) Application #W000694-6C-E-R
Final Permit

Dear Mr. Deschaine:

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

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

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

Sincerely,

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

Enc.
cc: William Sheehan, DEP/NMRO
Sandy Mojica, USEPA

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

DEPARTMENT ORDER

IN THE MATTER OF

FORT FAIRFIELD UTILITY DISTRICT	)	MAINE POLLUTANT DISCHARGE
FORT FAIRFIELD, AROOSTOOK COUNTY	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
ME0100226	)	WASTE DISCHARGE LICENSE
W000694-6C-E-R **APPROVAL**	)	**RENEWAL**

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

APPLICATION SUMMARY

The FFUD has submitted a timely and application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100226/Maine Waste Discharge License (WDL) #W000694-5M-D-R (permit hereinafter), which was issued by the Department on May 8, 2007, and is scheduled to expire on May 8, 2012. The May 8, 2007, permit authorized the discharge of up to a monthly average flow of 0.6 million gallons per day of combined secondary treated sanitary wastewater and industrial wastewater to the Aroostook River, Class C, in Fort Fairfield, Maine.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the previous permitting action except that this permit is;

1. Incorporating the interim average and maximum numeric limitations for mercury into the permit and reducing the monitoring frequency from 4/Year to 1/Year based on a revision to State law.

2. Eliminating the tiered approach to discharge limitations to simplify the permit.

3. Reducing the monthly average water quality based limit for *E. coli* bacteria from 142 colonies/100 ml to 126 colonies/100 ml based on a revision to State law.

PERMIT SUMMARY (cont'd)

4. Establishing monthly average and/or daily maximum mass and concentration limitations for total aluminum, inorganic arsenic and total copper as test results for said parameters have a reasonable potential to exceed applicable ambient water quality criteria pursuant to Department rule, 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants.*

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated February 3, 2012, 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 M.R.S.A. §464(4)(F), will be met, in that:

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

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

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

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

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

4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in Maine law, 38 M.R.S.A., §414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of the FORT FAIRFIELD UTILITY DISTRICT to discharge a monthly average flow of up to 0.600 million gallons per day of secondary treated municipal waste waters to the Aroostook River, Class C, in Fort Fairfield, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*," revised July 1, 2002, copy attached.

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

3. This permit becomes effective upon the date of signature below and expires at midnight five (5) years after that date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of the this permit, the terms and conditions of the 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 20TH DAY OF MARCH 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
FOR Patricia W. Aho, Commissioner

Date of initial receipt of application: November 17, 2011.

Date of application acceptance: November 21, 2011.

Filed
MAR 2 1 2012
State of Maine
Board of Environmental Protection

Date filed with Board of Environmental Protection _____

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

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **secondary treated waste waters from Outfall #001** to the Aroostook River at Fort Fairfield. Such discharges shall be limited and monitored by the permittee as specified below[1]:

	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	0.600 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	424 lbs./day *[26]*	---	853 lbs./day *[26]*	127 mg/L *[19]*	---	256 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS *[00530]*	418 lbs./day *[26]*	---	822 lbs./day *[26]*	125 mg/L *[19]*	---	247 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	3/Week *[03/07]*	Grab *[GR]*
***E. coli* Bacteria**[2] **(May 15 – Sept. 30)** *[31633]*	---	---	---	126/100 ml[3] *[13]*	---	949/100 ml *[13]*	2/Week *[02/07]*	Grab *[GR]*
Total Residual Chlorine[4] *[50060]*	---	---	---	---	---	0.83 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	1/Day *[01/01]*	Grab *[GR]*
Orthophosphate[5] **(June 1 – Sept. 30)** *[04175]*	Report lbs./day *[26]*	---	Report lbs./day *[26]*	Report mg/L *[19]*	---	Report mg/L *[19]*	2/Month *[02/30]*	24-Hour Composite *[24]*
Total Phosphorus[6] **(June 1 – Sept. 30)** *[00665]*	Report lbs./day *[26]*	---	Report lbs./day *[26]*	Report mg/L *[19]*	---	Report mg/L *[19]*	2/Month *[02/30]*	24-Hour Composite *[24]*

Footnotes: See Pages 7 through 10 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **secondary treated waste waters from Outfall #001** to the Aroostook River at Fort Fairfield. Such discharges shall be limited and monitored by the permittee as specified below[1]:

	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Aluminum (Total) *[01902]*	1.5 lbs./day *[26]*	---	---	600 ug/L *[28]*	---	---	1/Year *[01/YR]*	24-Hour Composite *[24]*
Arsenic (Total) [7] *[01002] Upon permit issuance*	Report lbs/day *[26]*	---	---	Report ug/L *[28]*	---	---	1/Year *[01/YR]*	24-Hour Composite *[24]*
Arsenic (Inorganic) [8] *[01252] Upon EPA test method approval*	0.004 lbs./day *[26]*	---	---	0.8 ug/L *[28]*	---	---	1/Year *[01/YR]*	24-Hour Composite *[24]*
Copper (Total) *[01042]*	0.58 lbs./day *[26]*		0.66 lbs./day *[26]*	232 ug/L *[28]*		264 ug/L *[28]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Mercury (Total) [9] *[71900]*	---	---	---	0.0493 ug/L *[28]*	---	0.074 ug/L *[28]*	1/Year *[01/YR]*	Grab *[GR]*

Footnotes: See Pages 7 through 10 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

2. **SCREENING LEVEL TESTING.** During the period **beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter,** the permittee shall be limited and monitor **Outfall #001** as follows:

WHOLE EFFLUENT TOXICITY (WET) (10)	Daily Maximum	Minimum Frequency	Sample Type
Acute No Observed Effect Level (A-NOEL)			
Water Flea (*Ceriodaphnia dubia*) *[TDA3B]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TDA6F]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Chronic No Observed Effect Level (C-NOEL)			
Water Flea (*Ceriodaphnia dubia*) *[TBP3B]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TBQ6F]*	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Analytical Chemistry (11) (13) *[51477]*	Report µg/L *[28]*	1/Quarter *[01/90]*	24-Hour Composite/Grab *[24/GR]*
Priority Pollutant (12) (13) *[50008]*	Report µg/L *[28]*	1/Year *[01/YR]*	24-Hour Composite/Grab *[24/GR]*

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

Footnotes: **See Pages 7 through 10 of this permit for applicable footnotes.**

SPECIAL CONDITIONS

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

Footnotes:

1. **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.

2. **Bacteria Limits** – *E. coli* bacteria limits and monitoring requirements are seasonal and apply between May 15 and September 30 of each year. The Department reserves the right to require year-round bacteria limits to protect the health, safety and welfare of the public.

3. **Bacteria Reporting** – The monthly average *E. coli* bacteria limitation is a geometric mean limitation and sample results shall be calculated and reported as such.

4. **TRC Monitoring** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. For instances when a facility has not disinfected with chlorine-based compounds for an entire reporting period, the facility shall report "NODI-9" for this parameter on the monthly DMR. The permittee shall utilize approved test methods that are capable of bracketing the TRC limitation in this permit.

SPECIAL CONDITIONS

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

Footnotes:

5. **Orthophosphate** – Orthophosphate monitoring shall be performed in accordance with **Attachment B** of this permit, *Protocol For Orthophosphate Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits – Finalized May 2006,* unless otherwise specified by the Department.

6. **Total Phosphorus** – Total phosphorus monitoring shall be performed in accordance with **Attachment B** of this permit entitled, *Protocol For Total P Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits – Finalized May 2006*, and dated unless otherwise specified by the Department

7. **Arsenic (Total)– Beginning the effective date of this permit and lasting through EPA approval of a test method for inorganic arsenic**, the permittee shall conduct 1/Year testing for total arsenic and report the monthly average mass and concentration limits on the applicable DMR's. All detectable analytical test results shall be reported to the Department including results which are detected below the Department's RL of 5 ug/L. If the concentration result is at or above RL, the concentration and corresponding mass shall be reported at those levels.

8. **Arsenic (Inorganic)** - The limitations and monitoring requirements are not in effect until the USEPA approves of a test method for inorganic arsenic. Once effective, compliance will be based on a 12-month rolling average basis beginning 12 months after the effective date of the limits. Following USEPA approval of a test method for inorganic arsenic and based on recent available data, the permittee may request that the Department reopen this permit in accordance with Special Condition L, *Reopening on Permit For Modifications*, of this permit to establish a schedule of compliance for imposition of the numeric inorganic arsenic limitations.

9. **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.

SPECIAL CONDITIONS

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

Footnotes:

10. **Whole effluent toxicity (WET) testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 2.3% and 0.49% respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 44:1 and 206:1, respectively.

    a. **Surveillance level testing** – Waived pursuant Department rule 06-096 CMR, Chapter 530, *Surface water Toxics Control Program*, §2(D)(3)(b).

    b. **Screening level testing** - Beginning twelve months prior to the expiration date of the permit and every five years thereafter, the permittee shall initiate screening level WET testing at a minimum frequency of once per year (1/Year). Acute and chronic testing shall be conducted on the water flea and the brook trout.

    WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 2.3% and 0.49%, respectively.

    Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals.

    a. U.S. Environmental Protection Agency. 2002. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th ed. EPA 821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual).

    b. U.S. Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, 4th ed. EPA 821-R-02-013. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the freshwater chronic method manual).

SPECIAL CONDITIONS

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

Results of WET tests shall be reported on the "WET Results Report – Fresh Waters" form included as **Attachment D** of this permit each time a WET test is performed. The permittee is required to analyze the effluent for the parameters specified on the "WET and Analytical Chemistry Results – Fresh Waters" form included as **Attachment A** of this permit each time a WET test is performed.

11. **Analytical Chemistry** – Refers to a suite of chemicals in **Attachment A** of this permit.

    a. **Surveillance level testing** – Waived pursuant Department rule 06-096 CMR, Chapter 530, Surface water Toxics Control Program, §2(D)(3)(b).

    b. **Screening level testing** - Beginning twelve months prior to the expiration date of this permit and every five years thereafter, the permittee shall conduct screening level analytical chemistry testing at a minimum frequency of four times per year (4/Year) in successive calendar quarters.

    Analytical chemistry and/or priority pollutant 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 on the form entitled, "Maine Department of Environmental Protection WET and Chemical-Specific Data Report Form" included as **Attachment A** of this permit.

12. **Priority Pollutant Testing** – Priority pollutant testing refers to a suite of chemicals in **Attachment A** of this permit.

    a. **Surveillance level testing** - Priority pollutant testing is not required for this facility pursuant to Department rule Chapter 530, § 2(D)(1).

    b. **Screening level testing** - Beginning twelve months prior to the expiration date of this permit and every five years thereafter, the permittee shall conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year) in any calendar quarter provided the sample is representative of the discharge and any seasonal or other variations in effluent quality.

13. **Analytical chemistry and priority pollutant tests** - Results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health ambient water quality criteria (AWQC) as established in Department rule 06-096 CMR Chapter 584.

    For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

SPECIAL CONDITIONS

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

D. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on November 21, 2011; 2) the terms and conditions of this permit; and 3) only from Outfall #001. 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.

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 license cycle. 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 CWA, 40 CFR Part 403, or 06-096 CMR Chapter 528 Pretreatment Program.

SPECIAL CONDITIONS

F. NOTIFICATION REQUIREMENTS

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 by a source introducing pollutants to the system at the time of permit issuance.

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.

G. 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.

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.

SPECIAL CONDITIONS

H. SCHEDULE OF COMPLIANCE – INORGANIC ARSENIC

This permitting action is establishing a schedule of compliance for the monthly average mass and concentration limits for inorganic arsenic as follows:

Beginning upon issuance of this permit and lasting through EPA approval of a test method for inorganic arsenic, the permittee shall conduct 1/Year testing for total arsenic and report the mass and concentration on the applicable DMR's.

Beginning 12 months after EPA approval of a test method for inorganic arsenic, the permittee shall be in compliance with the 12-month rolling average mass and concentration limits of 0.004 lbs/day and 0.8 ug/L respectively, for inorganic arsenic.

Note: The applicable ambient water quality criteria for arsenic is currently undergoing review by the Department and other regulatory authorities. Should the criteria be changed during the term of this permit, the permit may be reopened and amended accordingly.

I. OPERATIONS AND 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 treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee 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 (excepting the current yet to be completed substantial upgrade), the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

SPECIAL CONDITIONS

J. WET WEATHER MANAGEMENT PLAN

The treatment facility staff shall have a current written Wet Weather 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. A specific objective of the plan shall be to maximize the volume of wastewater receiving secondary treatment under all operating conditions. 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. The Department may require review and update of the plan as it is determined to be necessary.

K. 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 postmarked on or before the thirteenth (13th) day of the month or hand-delivered 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
Northern Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
1235 Central Park Drive - Skyway Park
Presque Isle, Maine 04769

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 postmarked 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

L. REOPENING OF PERMIT FOR MODIFICATION

Upon evaluation of the tests results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at 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.

M. SEVERABILITY

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

ATTACHMENT A

Maine Department of Environmental Protection
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 #** _____ **Pipe #** _____ Facility Representative Signature _____
To the best of my knowledge this information is true, accurate and complete.

Licensed Flow (MGD) | **Flow for Day (MGD)[1]** | **Flow Avg. for Month (MGD)[2]**
Acute dilution factor
Chronic dilution factor | **Date Sample Collected** | Date Sample Analyzed
Human health dilution factor
Criteria type: M(arine) or F(resh)

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

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.

			Effluent Limits, %			Receiving Water or Ambient	**Effluent Concentration (ug/L or as noted)**		Possible Exceedence [7]		
	WHOLE EFFLUENT TOXICITY		Acute	Chronic			WET Result, % Do not enter % sign	Reporting Limit Check	Acute	Chronic	
	Trout - Acute										
	Trout - Chronic										
	Water Flea - Acute										
	Water Flea - Chronic										
	WET CHEMISTRY										
	pH (S.U.) (9)					(8)					
	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 Acute[6]	Chronic[6]	Health[6]			Reporting Limit Check	Possible Exceedence [7] 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	5				(8)					
M	LEAD	3				(8)					
M	NICKEL	5				(8)					
M	SILVER	1				(8)					
M	ZINC	5				(8)					

Maine Department of Environmental Protection
WET and 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	3									
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	10									
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	2									
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	3									
BN	BENZO(G,H,I)PERYLENE	5									
BN	BENZO(K)FLUORANTHENE	3									
BN	BIS(2-CHLOROETHOXY)METHANE	5									
BN	BIS(2-CHLOROETHYL)ETHER	6									
BN	BIS(2-CHLOROISOPROPYL)ETHER	6									
BN	BIS(2-ETHYLHEXYL)PHTHALATE	3									
BN	BUTYLBENZYL PHTHALATE	5									
BN	CHRYSENE	3									
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									

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.

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

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.

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.

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

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

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

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

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

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

Comments:

ATTACHMENT B

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

Approved Analytical Methods: EPA 365.1 (Rev. 2.0), 365.3, 365.4; SM 4500-P B.5, 4500-P E, 4500-P F; ASTM D515-88(A), D515-88(B); USGS I-4600-85, I-4610-91; OMAAOAC 973.55, 973.56

Sample Collection: The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates 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. Commercially purchased, pre-cleaned sample containers are an acceptable alternative. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved using H_2SO_4 to obtain a sample pH of <2 su and refrigerated at 0-6 degrees C (without freezing). The holding time for a preserved sample is 28 days.

Note: Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

Laboratory QA/QC: Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods.

Sampling QA/QC: If a composite sample is being collected using an automated sampler, then once per month run a blank on the composite sampler. 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 analyze for total phosphorus. Preserve this sample as described above.

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

Maine Department of Environmental Protection

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

Sampling Location:

Weather Conditions: _____

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

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

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

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory: _____

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

Please Enter Effluent Limits for your facility

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

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

CERTIFICATION

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

By: _____ Date: _____

Title: _____

PLEASE MAIL THIS FORM TO YOUR ASSIGNED INSPECTOR

ATTACHMENT 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**

	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

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

place * next to values statistically different from controls

for trout show final wt and % incr for both controls

Reference toxicant water flea trout

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

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

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

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: February 3, 2012

PERMIT NUMBER: **ME0100226**
WASTE DISCHARGE LICENSE: **W000694-6C-E-R**

NAME AND ADDRESS OF APPLICANT:

FORT FAIRFIELD UTILITY DISTRICT
P.O. Box 267, 100 High Street
Fort Fairfield, Maine 04742

COUNTY: **Aroostook**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

96 High Street
Fort Fairfield, Maine 04742

RECEIVING WATER/CLASSIFICATION: **Aroostook River/Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Rodney L. Deschaine**
Operations Manager
(207) 472-1391
e-mail: rldeschaine@maine.rr.com

1. APPLICATION SUMMARY

a. Application: The Fort Fairfield Utility District (FFUD/permittee hereinafter) has submitted a timely and application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100226/Maine Waste Discharge License (WDL) #W000694-5M-D-R (permit hereinafter), which was issued by the Department on May 8, 2007, and is scheduled to expire on May 8, 2012. The May 8, 2007, permit authorized the discharge of up to a monthly average flow of 0.6 million gallons per day of combined secondary treated sanitary wastewater and industrial wastewater to the Aroostook River, Class C, in Fort Fairfield, Maine. See **Attachment A** of this Fact Sheet for a location map.

1. APPLICATION SUMMARY (cont'd)

b. Source Description: The FFUD is a quasi-municipal organization that receives residential, commercial and industrial wastewater from customers within the District's boundaries. The FFUD reports wastewater flows from food processing facilities are as described in Table 1 below.

Table 1. Food processing facility production figures and discharges to the FFUD treatment facility.

Facility Information		Pounds per day Processed		Processing period each year		Daily effluent flows	
Facility	Product	Average lbs./day	Maximum Lbs./day	#weeks/year	Months processing	Average	Maximum
Aroostook Starch	Food and paper grade starch	165,347	253,532	52	Jan-Dec	0.052 MGD	0.247 MGD
HSF Foods	Potato flakes and flour	50,000	60,000	43	Jan-Jun; Sep-Dec	0.023 MGD	0.105 MGD

In the Fact Sheet of the previous permit, the FFUD stated that production figures for Aroostook Starch and HSF Foods were actual figures for the three year period through 2005. FFUD has indicated these levels remain representative of current production figures. Both facilities are processing as of the date of this permitting action.

Atlantic Custom Processors was considered as a potential industrial input into the FFUD waste water treatment facility but the facility has not processed any potatoes since 2001. Since issuance of the previous permit all production facilities have been dismantled and the lot remains vacant at the time of this permitting action.

Septic tank waste (septage) is not accepted at the facility, but instead is delivered to Tri-Community Landfill for treatment. The FFUD has authorized the Tri-Community Landfill to convey a daily maximum flow of up to 70,000 gallons per day of landfill leachate to the treatment facility as a back-up plan. Since late summer 2011, the landfill leachate has been hard-piped to the Caribou Utility District for treatment.

There are no combined sewer overflow points associated with the FFUD collection system. A map created by the Department showing the location of the treatment facility and receiving water is included as Fact Sheet **Attachment A.**

c. Wastewater Treatment: Industrial and sanitary wastewater flows generated within the District's boundaries enter the treatment facility separately, but are combined for treatment. The industrial influent, which consists of approximately 0.048 MGD, enters the plant through a 16-inch diameter pipe to a pump station and is then pumped to a 2.7 million gallon (MG) anaerobic digester. The FFUD reports that under average industrial flow conditions of approximately 0.225 MGD, the digester has a hydraulic retention time of 12 days. The industrial flow is then conveyed to a reaeration tank with a volume of 0.144 MG and a hydraulic retention time of 15.4 hours under average flow conditions. The industrial flow is then conveyed to rotating biological contactor (RBC) units for further treatment.

1. APPLICATION SUMMARY (cont'd)

The municipal influent, which consists of approximately 0.402 MGD, enters the plant through an 18-inch diameter pipe and flows over a bar rack and through a Pista grit removal system before entering the RBC units.

The combined average wastewater flow (0.454 MGD) is treated using five rotating biological contactor units followed by secondary clarification in two clarifiers, which each has an approximate volume of 0.037 MG. Waste water then flows to two chlorine contact chambers with a combined capacity of 0.024 MG.

Final effluent is conveyed for discharge to the Aroostook River via an 18-inch diameter outfall designated Outfall #001A in this permitting action. The outfall pipe is shared with Boralex Fort Fairfield, Inc. a steam electric power generating station, through a January 1987 joint use agreement. The pipe is submerged to a depth of approximately four feet at mean low water conditions. The pipe is not fitted with diffusers or other structures intended to enhance mixing of the effluent with the receiving waters.

The sludge from both clarifiers is pumped into the anaerobic digester and is wasted from the digester every summer at a Department approved land spreading site. If needed, the FFUD also has two 1.0 MG lagoons that may be used for sludge storage during the winter months. See **Attachment B** of this Fact Sheet for a schematic of the waste water treatment facility.

2. PERMIT SUMMARY

a. Terms and Conditions: This permitting action is carrying forward all the terms and conditions of the previous permitting action except that this permit is;

1. Incorporating the interim average and maximum numeric limitations for mercury into the permit and reducing the monitoring frequency from 4/Year to 1/Year based on a revision to State law.

2. Eliminating the tiered approach to discharge limitations to simplify the permit.

3. Reducing the monthly average water quality based limit for *E. coli* bacteria from
142 colonies/100 ml to 126 colonies/100 ml based on a revision to State law.

4. Establishing monthly average and/or daily maximum mass and concentration limitations for total aluminum, inorganic arsenic and total copper as test results for said parameters have a reasonable potential to exceed applicable ambient water quality criteria pursuant to Department rule, 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants.*

2. PERMIT SUMMARY (cont'd)

b. History: This section provides a summary of significant licensing/permitting actions and milestones that have been completed for the WWSD facility.

September 4, 1991 - The Department issued WDL #W000694-47-B-R, for a five-year term.

May 23, 2000 – Pursuant to Maine law, 38 M.R.S.A. §420 and §413 and Department rule, 06-096 CMR Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W000694-47-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 49.3 parts per trillion (ppt) and 74.0 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

June 8, 2000 – The U.S. Environmental Protection Agency (USEPA) issued a renewal of National Pollutant Discharge Elimination System (NPDES) permit #ME0100226 to the FFUD. The 6/8/00 permit superseded the NPDES permit issued to the FFUD by the USEPA on September 30, 1991 (earliest NPDES permit on file with the Department).

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From this point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program.

April 26, 2001 – The Department issued combination WDL #W000694-5M-C-R / MEPDES permit #ME0100226 to the FFUD for a five-year term. The 4/26/01 permit superseded WDL #W000694-47-B-R issued on September 24, 1991, and WDL #W000694-45-A-R issued on March 11, 1986 (earliest Order on file with the Department).

2. PERMIT SUMMARY (cont'd)

September 8, 2005 – The Board of Environmental Protection ratified an Administrative Consent Agreement and Enforcement Order for the FFUD. The Consent Agreement and Enforcement Order resolved violations of effluent limitations established for discharge flow, BOD, TSS, and pH, and violations of Special Conditions established in the 4/26/01 MEPDES permit, as well as violations of Maine law, 38 M.R.S.A §414(5). The Enforcement Order required several corrective actions to be completed to ensure future compliance, payment of a monetary penalty, and participation in a railroad tie disposal program. The Enforcement Order also required the FFUD to submit to the Department documentation that all of the pretreatment program requirements specified by the Department's pretreatment coordinator have been met; required several treatment plant evaluations to be completed by a Maine registered professional engineer; and required the facility to hire a treatment plant operator of at least a Grade IVB certification level.

April 10, 2006 – The Department modified the 4/26/01 permit to incorporate testing requirements of Department rule Chapter 530 (the toxics rule).

May 8, 2007 – The Department issued combination MEPDES permit #ME0100226/WDL #W000694-5M-D-R for a five-year term.

October 17, 2011 – The FFUD submitted a timely and complete application to the Department for renewal of the 5/8/07 MEPDES permit. The application was accepted for processing on November 21, 2011 and was assigned WDL # W000694-6C-E-R / MEPDES #ME0100226.

3. CONDITIONS OF PERMIT

Maine law, 38 M.R.S.A. §414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., §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. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 467(C)(1)(f) classifies the Aroostook River at the point of discharge as Class C waters. Maine law, 38 M.R.S.A., Section 465(4) describes the standards for Class C waters as follows:

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

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

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

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

(b) A discharge or a hydropower project was in existence on March 16, 2005 and required but did not have a license or water quality certificate other than a general permit for the Class C water. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

(2) In Class C waters not governed by subparagraph (1), dissolved oxygen may not be less than 6.5 parts per million as a 30-day average based upon a temperature of 24 degrees centigrade or the ambient temperature of the water body, whichever is less. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004. The department may negotiate and enter into agreements with licensees and water quality certificate holders in order to provide further protection for the growth of indigenous fish. Agreements entered into under this paragraph are enforceable as department orders according to the provisions of sections 347-A to 349.

4. RECEIVING WATER QUALITY STANDARDS (cont'd)

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 ~~(cont'd)~~

The State of Maine 2010 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists all of Maine's fresh waters as, "*Category 4-A: Waters Impaired With Impaired Use, TMDL Completed, waters Impaired by Atmospheric Deposition of Mercury*. 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.

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(h) of this Fact Sheet.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Current Water Quality Assessment/Modeling

The Aroostook River Basin is the largest sub-basin of the St. John River lying almost entirely within the State of Maine. The river segment of interest on the Aroostook begins in Ashland and flows to Washburn, Presque Isle, Caribou, Fort Fairfield and eventually the international border. In this segment of interest, there are seven point source discharges licensed to discharge organic waste loads to the Aroostook River: Ashland Water and Sewer District (AWSD), Town of Washburn, Presque Isle Sewer District (PISD), Caribou Utilities District (CUD), Limestone Water & Sewer District (LWSD), Fort Fairfield Utilities District (FFUD), and McCain Foods, USA, Inc. (McCain). Additionally, two dams significantly impound water in this river segment. The Caribou dam is located approximately 15 river miles upstream of the international border and impounds water 4.5 river miles upstream of the international border. The Tinker dam is located in Canada, but impounds water 5 river miles upstream of the international border.

A study of the Aroostook River from Ashland to the United States-Canadian border (58 miles) began in the summer of 2001 involving the Department and a number of stakeholders. Two data sets were collected in August of 2001 to calibrate and verify a water quality model, and in September 2004, the Department summarized the findings in a report entitled, *Aroostook River Modeling Report, Final Sept 2004* ("Modeling Report").

It is appropriate to note at this point that the Department has not established numeric nutrient criteria at this time, specifically for phosphorous. The Department is in the process of developing nutrient criteria (as required by the USEPA), methodologies for quantitatively evaluating benthic-attached algae, and developing water classification specific (Class A, Class B, and Class C) chlorophyll-a standards for Maine waters. These criteria and standards are anticipated to be finalized during calendar year 2013. At the time that the Department's Division of Environmental Assessment (DEA) evaluated the 2001 Aroostook River data, calibrated and verified the Aroostook River water quality model, and published the 2004 Modeling Report, certain assumptions were incorporated into the model to predict water quality conditions, such as utilizing a range of 8 to 12 ug/L for chlorophyll-a as the likely threshold level for algae blooms. Additionally, "there is currently no precedent on threshold levels of benthic algae where designated uses become inhibited, but it is likely that this could also be an issue on the Aroostook River after the nutrient criteria are developed...."

Due to uncertainties in final nutrient criteria and how these final criteria will affect the 2004 Modeling Report results and the variability in the seasonal total phosphorus and ortho-phosphorus data collected during the term of the previous permit, this permitting action is carrying forward the seasonal (June 1 – September 30) monthly average and daily maximum reporting requirement along with a monitoring frequency requirement of twice per month to assist in evaluating the impact of the discharge on receiving water quality.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

The Department has no information at this time that the discharge from the FFUD will cause or contribute to the failure of the receiving water to meet the designated uses of its assigned classification.

6. EFFLUNT LIMITATIONS AND MONITORING REQUIREMENTS

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average discharge flow limitation of 0.600 MGD based on the monthly average dry weather design capacity of the facility along with a daily maximum discharge flow reporting requirement to assist in compliance evaluations.

A review of the monthly average flow data as reported on the monthly Discharge Monitoring Reports (DMRs) submitted to the Department for the period January 2008 – September 2011 indicates the permittee has been in compliance with the monthly average flow limit 94% of the time (2 excursions) as values have been reported as follows:

Flow (DMRs = 45)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.600	0.160 – 1.089	0.319
Daily maximum	Report	0.237 – 1.831	0.454

b. Dilution Factors: Dilution factors associated with the permitted discharge flow of 0.600 MGD from the facility were derived in accordance with Department rule, 06-096 CMR, Chapter 530 Section 4.A *Surface Water Toxics Control Program* and were calculated as follows:

Acute ¼ 1Q10[(1)] = 39.7 cfs $\Rightarrow \frac{(39.7 \text{ cfs})(0.6464) + 0.6 \text{ MGD}}{0.6 \text{ MGD}} = 43.8{:}1$

Acute: 1Q10 = 158.9 cfs $\Rightarrow \frac{(158.9 \text{ cfs})(0.6464) + 0.6 \text{ MGD}}{0.6 \text{ MGD}} = 172.2{:}1$

Chronic: 7Q10 = 190.1 cfs $\Rightarrow \frac{(190.1 \text{ cfs})(0.6464) + 0.6 \text{ MGD}}{0.6 \text{ MGD}} = 205.8{:}1$

Harmonic Mean = 571.5 cfs[(2)] $\Rightarrow \frac{(571.5 \text{ cfs})(0.6464) + 0.6 \text{ MGD}}{0.6 \text{ MGD}} = 616.7{:}1$

Footnotes:

(1) Department rule Chapter 530 Section 4.B.1 states,

Analyses using numerical acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone and to ensure a zone of passage of at least 3/4 of the cross-

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

sectional area of any stream as required by Chapter 581. Where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design flow, up to and including all of it, as long as the required zone of passage is maintained.

The FFUD has not provided the Department with information as to the actual mixing characteristics of the discharge; therefore, the Department is utilizing the default stream flow of ¼ of the 1Q10 in acute evaluations.

(2) The harmonic mean dilution factor is approximated by multiplying the 7Q10 value by a factor of three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the U.S. EPA publication, "*Technical Support Document for Water Quality-Based Toxics Control*" (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous permitting action established three tiers of permit limits for BOD and TSS. In cases where the flow or loading of BOD_5 and TSS introduced by an industrial category exceeds 10 percent of the design flow or loading of a publicly owned treatment works (POTW), the secondary treatment requirements (30-day average of 30 mg/L and 7-day average of 45 mg/L) for these pollutants, as defined in Department rule Chapter 525(3)(III)(a), may be adjusted upward provided they meet the criteria outlined in Department rule Chapter 525(3)(IV)(b). The rule states that the monthly average and weekly average limits may be adjusted upwards provided the permitted discharge of BOD_5 and TSS, attributable to the industrial category, would not be greater than that which would be permitted under Section 306 of the Clean Water Act (CWA) if such industrial category were to discharge directly into navigable waters. At that time, the Department made the determination that the food process waste waters were subject to Title 40 of the Federal Code of Regulations (CFR), Part 407, *Canned and Preserved Fruits and Vegetables Processing Point Source Category*, Subpart D, *Frozen Potato Products Subcategory*. The landfill leachate conveyed to FFUD treatment facility was subject to Title 40 Part 445, *Landfill Point Source Category*, Section 445.1. The BOD and TSS limits in the May 7, 2007, MEPDES permit were based on the following waste streams:

Tier I – Residential and commercial sanitary flows at 0.402 MGD + Landfill leachate at 0.070 MGD + Food processing at an average production level of 215,347 lbs/day (165,347 lbs./day from Aroostook Starch and 50,000 lbs./day from Canusa Foods).

Tier II – Residential and sanitary flows at 0.600 MGD. No industrial flows.

Tier III – Residential and commercial sanitary flows at 0.402 MGD + Landfill leachate at 0.070 MGD + Food processing at maximum production level of 475,347 lbs/day (365,066 lbs./day from Aroostook Starch and 110,280 lbs./day from HSF Foods).

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

More than 90% of the biochemical oxygen demand (BOD_5,) and total suspended solids (TSS) loading and approximately 11% of all waste water flows conveyed to the FFUD originate from the processing of raw vegetables (potatoes, broccoli, and cauliflower) and fruit (blueberries and cranberries) at Atlantic Custom Processors located in Fort Fairfield. When processing at the rates described in Section 2(c) Table 1 of this fact sheet, HSF Foods contributes approximately 4% of the influent flow and Aroostook Starch contributes approximately 9% of the influent flow."

In the November 17, 2011, application for permit renewal, the permittee has stated the Atlantic Custom Processors facility did not operate during the five-year term of the previous permit and has processing buildings have since been dismantled. As with the previous permit, this facility is not being taken into consideration in establishing limitations in this permit.

To simplify this permit, the Department is carrying forward the Tier I limitations for BOD and TSS and eliminating Tiers II and III. Tier II was established in the event all of the food processing facilities were eliminated and the landfill leachate waste stream was eliminated. The two processing facilities factored into the calculations for limits in the previous permitting action are still viable industrial facilities operating at average production levels and the permittee has a valid contract with the Tri-Community Landfill to accept landfill leachate on an as needed basis. Tier III was established based on maximum production levels at the food processing facilities. The maximum production levels have never been or expected to be realized during term of this permit. Therefore, Tier III limits for BOD and TSS are being eliminated.

According to the Fact Sheet of the May 7, 2007, MEPDES permit Tier I technology based limits ere calculated as follows:

TIER I Limits

Tier I BOD_5 and TSS limits are based on the combined long-term average production figure of 215,347 lbs/day (165,347 lbs./day from Aroostook Starch and 50,000 lbs./day from HSF Foods) as reported on Department form DEPLW0104, Food Processing Facilities, submitted to the Department on April 5, 2006 (for HSF) and on November 20, 2006 (for Aroostook Starch), as supplemental information to the FFUD's 2/7/06 application for permit renewal. The permitee has indicated these average production levels remain representative of normal operating conditions at the two food processing facilities.

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

BOD_5 and TSS Allowable Loading Formula –Food Processor Portion:

(Average Production Rate)(BPT-based Effluent Guideline)

The food processing portion of the BOD_5 and TSS mass limits was derived as follows:

Monthly Average Mass Portion: (215,347 lbs./day)(1.40 lbs./1,000 lbs.) = 301 lbs./day
Daily Maximum Mass Portion: (215,347 lbs./day)(2.80 lbs./1,000 lbs.) = 603 lbs./day

BOD_5 and TSS Allowable Loading Formula –Landfill Leachate Portion:

(BPT-based Effluent Guideline)(Conversion Factor)(Average Leachate Flow)

The landfill leachate portion of the BOD_5 mass limits was derived as follows:
Monthly Average Mass Portion: (37 mg/L)(8.34 lbs./gallon)(0.070 MGD) = 22 lbs./day
Daily Maximum Mass Portion: (140 mg/L)(8.34 lbs./gallon)(0.070 MGD) = 82 lbs./day

The landfill leachate portion of the TSS mass limits was derived as follows:
Monthly Average Mass Portion: (27 mg/L)(8.34 lbs./gallon)(0.070 MGD) = 16 lbs./day
Daily Maximum Mass Portion: (88 mg/L)(8.34 lbs./gallon)(0.070 MGD) = 51 lbs./day

BOD_5 and TSS Allowable Loading Formula –Sanitary Portion:

(BPT-based Effluent Guideline)(Conversion Factor)(Average Sanitary Flow)

The sanitary portion of the BOD_5 and TSS mass limits was derived as follows:

Monthly Average Mass Portion: (30 mg/L)(8.34 lbs./gallon)(0.402 MGD) = 101 lbs./day
Daily Maximum Mass Portion: (50 mg/L)(8.34 lbs./gallon)(0.402 MGD) = 168 lbs./day

Monthly average and daily maximum end-of-pipe effluent BOD_5 and TSS limitations are the sum of the allowable food processing, sanitary, and landfill leachate portions as calculated above.

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

TIER I Limits (cont'd)

BOD_5 Mass Limitations
Monthly Average BOD_5 Limit: 301 lbs./day + 22 lbs./day + 101 lbs./day = ***424 lbs./day***
Daily Maximum BOD_5 Limit: 603 lbs./day + 82 lbs./day + 168 lbs./day = ***853 lbs./day***

TSS Mass Limitations
Monthly Average TSS Limit: 301 lbs./day + 16 lbs./day + 101 lbs./day = ***418 lbs./day***
Daily Maximum TSS Limit: 603 lbs./day + 51 lbs./day + 168 lbs./day = ***822 lbs./day***

Department rule Chapter 523, Waste Discharge License Conditions, Section 6, Calculating NPDES permit conditions, sub-section f(2) states that "...pollutants limited in terms of mass additionally may be limited in terms of other units of measurement and the permit shall require the permittee to comply with both limitations." To ensure best practicable treatment is being applied to the discharge from the FFUD at all times, the Department has made a best professional judgment determination that establishing monthly average and daily maximum technology-based concentrations limits for BOD_5 and TSS is appropriate. The concentration limits were derived by back-calculating values from the applicable mass limits calculated above and the monthly average flow limit established in Section 6(b) of this Fact Sheet. Department rule Chapter 530 §(3)(D)(1) states, "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." The monthly average flow data as reported on the Discharge Monitoring Reports submitted to the Department for the period January 2003 – December 2005 indicates the monthly average flow has an arithmetic mean of 0.412 MGD, which is less than the design capacity of 0.6 MGD. As not to penalize the permittee for operating at flows less than the permitted flow and to encourage water conservation at the food processors, the Department is establishing concentration limits based on a factor of 1.5. Therefore, the monthly average and daily maximum BOD_5 and TSS concentration limits may be calculated as follows:

BOD_5 Concentration Limitations

Monthly Average: $\frac{424 \text{ lbs/day}}{(8.34 \text{ lbs./gallon})(0.6 \text{ MGD})} = 84.7 \text{ mg/L} \times 1.5 =$ ***127 mg/L***

Daily Maximum: $\frac{853 \text{ lbs/day}}{(8.34 \text{ lbs./gallon})(0.6 \text{ MGD})} = 170.5 \text{ mg/L} \times 1.5 =$ ***256 mg/L***

TSS Concentration Limitations

Monthly Average: $\frac{418 \text{ lbs/day}}{(8.34 \text{ lbs./gallon})(0.6 \text{ MGD})} = 83.5 \text{ mg/L} \times 1.5 =$ ***125 mg/L***

Daily Maximum: $\frac{822 \text{ lbs/day}}{(8.34 \text{ lbs./gallon})(0.6 \text{ MGD})} = 164.3 \text{ mg/L} \times 1.5 =$ ***247 mg/L***

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

TIER I Limits (cont'd)

Department rule Chapter 525 (3)(III) provides secondary treatment effluent standards for BOD_5 and TSS in terms of monthly average and weekly average concentration limitations. The national effluent guideline limitations regulate the discharge of BOD_5 and TSS in terms of mass and do not include weekly average standards. The Department is making a best professional judgment determination that regulating the discharge of BOD_5 and TSS in terms of weekly average limitations for Tier I and Tier III conditions is not appropriate for this facility given the significant industrial influent loadings.

Department rule Chapter 525(3)(III)(b)(3) specifies a requirement to achieve a minimum 30-day average removal of 85 percent for BOD_5 and TSS for secondary treated wastewaters. The Department is making a best professional judgment determination that the percent removal requirement is not applicable for Tier I and Tier III conditions due to the significant industrial wastewater characteristic of the effluent. The exclusion of a numeric percent removal limitations for Tier I and Tier III scenarios shall in no way be construed to mean the facility is not required to be maintained and operated in such a manner as to maximum BOD_5 and TSS removal.

A review of the monthly average flow data as reported on the monthly DMRs submitted to the Department for the period January 2008 – September 2011 indicates values have been reported as follows:

BOD mass (DMRs = 45)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	424	37 – 493	142
Daily Maximum	853	70 – 1,336	427

BOD concentration (DMRs = 45)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	127	21 - 128	52
Daily Maximum	256	34 - 495	137

TSS mass (DMRs = 45)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	418	19 - 342	85
Daily Maximum	822	48 – 2,040	302

TSS concentration (DMRs = 45)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	125	13 – 50	20
Daily Maximum	247	26 - 295	85

The monitoring frequency of 3/week in the previous permitting action is being carried forward in this permitting action.

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

d. Settleable Solids: The previous permitting action established, and this permitting action is carrying forward, a technology-based daily maximum concentration limit of 0.3 ml/L for settleable solids, which is considered a best practicable treatment limitation (BPT) for secondary treated wastewater, and a minimum monitoring frequency requirement of 3/Week. The limitation and monitoring frequency are being carried forward in this permitting action.

A review of the monthly DMR data for the period January 2008 – September 2011 indicates settleable solids have been reported as follows:

Settleable solids concentration (DMRs 18)

Value	Limit (ml/L)	Range (ml/L)	Average (ml/L)
Daily Maximum	0.3	0.1 - 0.2	0.12

e. *Escherichia coli* Bacteria: The pervious permitting action established seasonal (May 15–September 30) monthly average and daily maximum concentration limits for *E. coli* bacteria of 142 colonies/100 ml (geometric mean) and 949 colonies/100 ml (instantaneous level), respectively, which were based on the State of Maine Water Classification Program criteria for Class C waters found at 38 M.R.S.A. §465(3)(B), and a minimum monitoring frequency requirements of twice per week. Subsequent to issuance of the previous permit, the State Legislature adopted more stringent AWQC for *E. coli* bacteria. The newer criteria for Class C waste are 126 colonies/100 ml as a monthly average and 236 colonies/100 ml as a daily maximum. The Department has made the determination that after taking into consider the dilution associated with the discharge, the daily maximum BPT limit established in the previous permitting action is protective of the newer AWQC for bacteria. Therefore, this permitting action is reducing the monthly average limitation to 126 colonies/100 ml and carrying forward the daily maximum limitation of 949 colonies/100 mL.

A review of the monthly DMR data for the period May 2008 – September 2011 indicates *E. coli* bacteria values have been reported as follows:

***E coli.* bacteria (DMRs = 20)**

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	126	<6 - 97	13
Daily Maximum	949	30 -630	172

f. Total Residual Chlorine: The previous permitting action established a daily maximum water quality-based concentration limit of 0.83 mg/L for TRC and a minimum monitoring frequency requirement of once per day. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department licensing/permitting actions impose the more stringent of either a water quality-based or BPT based limit. End-of-pipe acute and chronic water quality based concentration thresholds may be calculated as follows:

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

Acute (A) Criterion	Chronic (C) Criterion	Modified A & C Dilution Factors	Calculated Acute Threshold	Calculated Chronic Threshold
0.019 mg/L	0.011 mg/L	43.8:1 (Mod. A) 205.8:1 (C)	0.83 mg/L	2.3 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge in order to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The FFUD does not dechlorinate the effluent prior to discharge in order to consistently achieve compliance with the water quality-based thresholds. The calculated acute water quality-based threshold of 0.83 mg/L is more stringent than the daily maximum technology-based standard of 1.0 mg/L and is therefore being carried forward in this permitting action.

A review of the monthly DMR data for the period January 2008 – September 2011 indicates TRC values have been reported as follows:

Total residual chlorine (DMRs = 120)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	1.0	0.62 – 0.81	0.64

g. pH: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units, which is based on Department rule, 06-096 CMR Chapter 525(3)(III), and a minimum monitoring frequency requirement of once per day (1/Day), which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD. It is noted that 40 CFR, Part 407, *Canned and Preserved Fruits and Vegetables Processing Point Source Category*, Subpart D, *Frozen Potato Products Subcategory*, applicable to the discharge from the FFUD regulates the pH range at 6.0 – 9.0 SU as well. This permitting action is carrying forward the minimum monitoring frequency of once per day (1/Day), which is based on Department guidance for POTWs permitted to discharge between 0.5 and 1.5 MGD. The DMR data indicate the facility has been in compliance with the pH range limitation 100% of the time for the period January 2008 – September 2011 indicates pH values have been reported as follows:

pH (DMRs = 18)

Value	Limit (su)	Minimum (SU)	Maximum (su)
Range	6.0 – 9.0	6.0	8.2

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

h. 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* on June 27, 2000, to the permittee thereby administratively modifying WDL #W000694-5M-D-R by establishing interim average and maximum effluent concentration limits of 49.3 parts per trillion (ppt) and 74 ppt, respectively, and a minimum monitoring frequency requirement of four (4) tests per year for mercury.

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 data base for the period December 2006 through the present indicates the permittee has been in compliance with the interim limits for mercury as results have been reported as follows;

Mercury (n = 19)

Value	Limit (ng/L)	Range (ng/L)	Mean (ng/L)
Average, Maximum	49.3 / 74	3.8 – 24	10.0

Pursuant to Maine law 38, M.R.S.A. §420, sub-§1-B, ¶F, this permitting action is reducing 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 permitte has been monitoring mercury at frequency of 4/Year since June 2000 or 11 years.

i. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: Maine law, 38 M.R.S.A., §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* sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. Department rule 06-096 CMR Chapter 584, Surface *Water Quality Criteria for Toxic Pollutants*, sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

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 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 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 Chapter 530 criteria, the permittee's facility falls into the Level III frequency category as the facility has a chronic dilution factor of ≥100:1 but <500:1. Chapter 530(1)(D)(1) specifies that routine screening and surveillance level testing requirements are as follows:

Screening level testing – Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter.

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

Surveillance level testing – Beginning upon issuance of the permit and lasting through 12 months prior to permit expiration.

Level	WET Testing	Priority pollutant testing	Analytical chemistry
III	1 per year	None required	1 per year

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

Department rule Chapter 530(D)(3)(b) states in part, *Dischargers in Levels III and IV may be waived from conducting surveillance testing for individual WET species or chemicals provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).*

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

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.*"

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 1/18/12, the Department conducted a statistical evaluation on the most recent 60 months of WET data that indicates that the discharge does not exceed or have a reasonable potential (RP) to exceed the acute or chronic critical ambient water quality thresholds (2.3% and 0.49% – mathematical inverse of the modified acute dilution factor 44:1 and the chronic dilution factor 206:1).

Given the absence of exceedences or reasonable potential to exceed critical WET thresholds, the permittee meets the surveillance level monitoring frequency waiver criteria found at Department rule Chapter 530(D)(3)(b). Therefore, this permit is establishing a requirement for the permittee to only conduct screening level testing for both the water flea and the brook trout that shall be conducted in the 12-month period prior to the expiration date of this permit and every five years thereafter.

In accordance with Department rule Chapter 530(2)(D)(4) and Special Condition G, *06-096 CMR 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing* of this permit, the permittee must annually submit to the Department a written statement evaluating its current status for each of the conditions listed.

Chemical evaluation

Chapter 530 (promulgated on October 12, 2005) §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*

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

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 Aroostook 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.

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."* Therefore, the Department is reserving 15% of the applicable water quality criteria in the calculations of this permitting action.

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."*

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)

In a letter dated September 21, 2000, to the Department, the Presque Isle Sewer District submitted eight and a half years (1990-1999) of quarterly test results (by season) of the background hardness of Presque Isle Stream in an effort have the Department consider a site specific hardness for hardness dependent metals. The arithmetic mean of the seasonal data points are as follows: Winter (62 mg/L), Spring (34 mg/L), Summer (66 mg/L) and Fall (40 mg/L). The Department took the data submitted by the PISD into consideration and made the determination that for hardness dependent metals, the applicable acute hardness for Presque Isle Stream at the point of discharge is 33 mg/L and the chronic hardness is 40 mg/L, and applicable limits for hardness dependent metals were established in PISD's September 30, 2002, MEPDES permit.

The Department has made a best professional judgment that the hardness data for Presque Isle Stream is a conservative assumption for the background hardness in the Aroostook River and is therefore being utilized for establishing limits for hardness dependent metals for dischargers in the Aroostook River watershed. Because only one hardness value can be entered into the Department DETOX program for statistically evaluating chemical specific test results and establishing limitations for pollutant that have a reasonable potential or exceed AWQC, the Department is utilizing a watershed hardness value of 37 mg/L. The value is the arithmetic mean of the acute and chronic hardness values established for PISD's September 30, 2002, MEPDES permit.

See **Attachment F** of this Fact Sheet for Department guidance that establishes protocols for establishing waste load allocations. The guidance states that the most protective of water quality becomes the facility's allocation. According to the 1/18/12 statistical evaluation (Report ID #422), the pollutants of concern for the FFUD (aluminum and copper) are to be limited based on the segment allocation method.

Chapter 530 §(3)(D)(1) states "*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.*"

Since the adoption of Chapter 530, the Department has a developed a policy for establishing equitable concentration limits in permits that are greater than calculated end-of-pipe concentrations. In general, most dischargers subject to the Chapter 530 testing requirements are discharging at or about 50% of the flow limitations established in their permits. This provides the Department with the flexibility to establish higher concentration limits in the permit while still maintaining compliance with the water quality based mass limitations. With an actual discharge flow at ½ (0.5) of permitted flow rate, a concentration limit of two times (mathematical inverse of 0.5) the calculated end-of-pipe concentration, will maintain compliance with water quality based mass limits.

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

Segment allocation methodology

Historical Average:

For the segment allocation methodology, the historical average quantity (mass) for each pollutant of concern for each facility is calculated utilizing the arithmetic mean of the concentrated values reported for each pollutant, a conversion factor of 8.34 lbs/gallon and the monthly average permit limit for flow. The historical mass discharged for each pollutant for each facility is mathematically summed to determine the total mass discharged for each pollutant in the watershed. Based on the individual dischargers historical average each discharger is assigned a percentage of the whole which is then utilized to determine the percent of the segment allocation for each pollutant for each facility. For the permittee's facility, historical averages for aluminum and copper were calculated as follows:

Aluminum

Mass limits

Mean concentration (n=4) = 92.3 ug/L or 0.0923 mg/L
Permit flow limit = 0.600 MGD
Historical average mass = (0.0923 mg/L)(8.34)(0.600 MGD) = 0.462 lbs/day

The 1/18/12 statistical evaluation indicates the historical average mass of aluminum discharged by the permittee's facility is 2.24% of the aluminum discharged by the facilities on the Aroostook River and its tributaries. Therefore, the permittee's segment allocation for aluminum is calculated as 2.24% of the chronic assimilative capacity of the river at Fort Fairfield, the most downstream facility on the Aroostook River. The Department has calculated a chronic assimilative capacity 66.8 lbs/day of aluminum at Fort Fairfield, the most downstream discharger on the Aroostook River. The chronic assimilative capacity (AC) at Fort Fairfield was calculated based on 75% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 15% reduction for reserve, totaling 25%) and the critical low flow (7Q10 = 190.1 cfs). The calculation for aluminum is as follows:

Chronic:

7Q10 @ Fort Fairfield = 190.1 cfs or 122.9 MGD
AWQC = 87 ug/L
87 ug/L(0.75) = 65.25 ug/L or 0.06525 mg/L

Chronic AC = (122.9 MGD)(8.34 lbs/gal)(0.06525 mg/L) = 66.8 lbs/day

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

Segment allocation methodology

Therefore, the mass segment allocation for aluminum for the permittee can be calculated as follows:

Monthly average: (Chronic assimilative capacity mass)(% of total aluminum discharged)
(66.8 lbs/day)(0.0224) = **1.50 lbs/day or 1.5 lbs/day**

Concentration limits:

Monthly average mass limit = 1.50 lbs/day

$$\frac{(1.5 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(0.600 \text{ MGD})} = 0.30 \text{ mg/L}$$

(0.300 mg/L)(1,000 ug/mg)(2) = **600 ug/L**

Arsenic (inorganic)

Mass limits

Mean concentration (n=4) = 8.1 ug/L or 0.0081 mg/L
Permit flow limit = 0.600 MGD
Historical average mass = (0.0081 mg/L)(8.34)(0.600 MGD) = 0.0406 lbs/day

The 1/18/12 statistical evaluation indicates the historical average mass of arsenic discharged by the permittee's facility is 14.5% of the arsenic discharged by the facilities on the Aroostook River and its tributaries. Therefore, the permittee's segment allocation for arsenic is calculated as 14.5% of the harmonic mean assimilative capacity of the river at Fort Fairfield, the most downstream facility on the Aroostook River. The Department has calculated a human health (water & organisms) assimilative capacity 0.0277 lbs/day of arsenic at Fort Fairfield, the most downstream discharger on the Aroostook River. The human health assimilative capacity (AC) at Fort Fairfield was calculated based on 75% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 15% reduction for reserve, totaling 25%), critical low flow (harmonic mean = 571.5 cfs). The calculations for arsenic are as follows:

Chronic:

HM @ Fort Fairfield = 571.5 cfs or 369.4 MGD
AWQC = 0.012 ug/L
0.012 ug/L(0.75) = 0.0090 ug/L or 0.000009 mg/L

HM AC = (369.4 MGD)(8.34 lbs/gal)(0.000009 mg/L) = 0.0277 lbs/day

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

Segment allocation methodology

Therefore, the mass segment allocation for arsenic for the permittee can be calculated as follows:

Monthly average (harmonic mean) mass limitation for arsenic is calculated as follows:

Monthly average: (Harmonic mean assimilative capacity mass)(% of total arsenic discharged)

(0.0277 lbs/day)(0.1452) = 0.0277 lbs/day or **0.0040 lbs/day**

Concentration limits

Monthly average concentration for inorganic arsenic;

$$\frac{0.0040 \text{ lbs/day}}{(0.600 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.00080 \text{ mg/L or } \mathbf{0.80 \text{ ug/L}}$$

Department rule Chapter 530 (C)(6) states:

All chemical testing must be carried out by approved methods that permit detection of a pollutant at existing levels in the discharge or that achieve detection levels as specified by the Department. When chemical testing results are reported as less then, or detected below the Department's specified detection limits, those results will be considered as not being present for the purposes of determining exceedences of water quality criteria.

The USEPA has not approved a test method for inorganic arsenic as of the date of issuance of this permit. Therefore, there is no way for the permittee to formally demonstrate compliance with the monthly average water quality based mass and concentration limits for inorganic arsenic established in this permitting action. Therefore, beginning upon issuance of this permit and lasting through the date in which the USEPA approves a test method for inorganic arsenic the permittee is being required to monitor for total arsenic. Once a test method is approved, the Department will notify the permittee in writing and the limitations and monitoring requirements for inorganic arsenic become effective thereafter.

As of the date of this permitting action, the Department has limited data on the percentage of inorganic arsenic (approximately 50%) in total arsenic test results. Based on a literature search conducted by the Department, the inorganic fraction can range from 1% - 99% depending on the source of the arsenic. Generally speaking, ground water supplies derived from bedrockwells will likely tend to have higher fractions of inorganic arsenic (As^{+3}-arsentite and/or As^{+5}- arsenate) than one may find in a food processing facility where the inorganic fraction is low and the organic fraction (arsenobetaine, arsenoribosides) is high. Until the Department and the regulated community in Maine develop a larger database to establish statistically defensible ratios of inorganic and organic fractions in total arsenic test results, the Department is making a rebuttable presumption that the effluent contains a ratio of 50% inorganic arsenic and 50% organic arsenic in total arsenic results.

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

Segment allocation methodology

Being that the only approved test methods for compliance with arsenic limits established in permits is for total arsenic, the Department converted the water quality based end-of pipe monthly average concentration value of 0.8 ug/L for inorganic arsenic calculated on the previous page of this Fact Sheet into an equivalent total arsenic threshold (assuming 50% of the total arsenic is inorganic arsenic). This results in a total arsenic end-of-pipe monthly average concentration threshold of 1.6 ug/L. The calculation is as follows:

$$\frac{\text{0.8 ug/L inorganic arsenic}}{\text{0.5 ug/L inorganic arsenic/ 1.0 ug/L total arsenic}} = \text{1.6 ug/L total arsenic}$$

Therefore, a total arsenic value greater than 1.6 ug/L is potentially exceeding the water quality based end-of pipe monthly average concentration value of 0.8 ug/L for inorganic arsenic. Only the results greater than the total arsenic threshold of 1.6 ug/L will be considered a potential exceedence of the inorganic limit of 0.8 ug/L. It is noted the Department's current RL for total arsenic is 5.0 ug/L.

If a test result is determined to be a potential exceedence, the permittee shall submit a toxicity reduction evaluation (TRE) to the Department for review and approval within 45 days of receiving the test result of concern from the laboratory. Contact the Department's compliance inspector for a copy of the Department's December 2007 guidance on conducting a TRE for arsenic.

Maine law, 38 M.R.S.A., §414-A(2), Schedules of Compliance states "*Within the terms and conditions of a license, the department may establish a schedule of compliance for a final effluent limitation based on a water quality standard adopted after July 1, 1977. When a final effluent limitation is based on new or more stringent technology-based treatment requirements, the department may establish a schedule of compliance consistent with the time limitations permitted for compliance under the Federal Water Pollution Control Act, Public Law 92-500, as amended. A schedule of compliance may include interim and final dates for attainment of specific standards necessary to carry out the purposes of this subchapter and must be as short as possible, based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards.*" Special Condition G, *Schedule of Compliance – Inorganic Arsenic*, of this permit establishes a schedule as follows:

> *Beginning upon issuance of this permit modification and lasting through a date on which the USEPA approves a test method for inorganic arsenic, the limitations and monitoring requirements for inorganic are not in effect. During this time frame, the permittee is required by Special Condition A, Effluent Limitations and Monitoring Requirements, of this permit to conduct 1/Year sampling and analysis for total arsenic.*

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

Segment allocation methodology

Upon receiving written notification by the Department that a test method for inorganic arsenic has been approved by the USEPA, the limitations and monitoring requirements for inorganic arsenic become effective and enforceable and the permittee is relieved of their obligation to sample and analyze for total arsenic.

The schedule of compliance reserves the final date for compliance with the limit for inorganic arsenic. This reservation stems from the fact the EPA has no schedule for approving a test method for inorganic arsenic nor does the Department have any authority to require the EPA to do so. Therefore, the Department considers the aforementioned schedule for inorganic arsenic to be as short as possible given the technological (or lack thereof) issue of not being able to sample and analyze for inorganic arsenic with an approved method.

Department rule Chapter 523, Waste Discharge License Conditions, § Section 7, *Schedules of Compliance* sub-§3, *Interim dates*, states in part, "*if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.*

(i) The time between interim dates shall not exceed 1 year, except that in the case of a schedule for compliance with standards for sewage sludge use and disposal, the time between interim dates shall not exceed six months.

(ii) If the time necessary for completion of any interim requirement (such as the construction of a control facility) is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

Special Condition A, *Effluent Limitations and Monitoring Requirements*, of this permit requires that beginning upon issuance of this permit and lasting through USEPA approval of a test method for inorganic arsenic, the permittee shall conduct 1/Year monitoring for total arsenic. Should the test method approval for inorganic arsenic extend more than one year from the date of the issuance of this permit the sampling and analysis for total arsenic will serve to satisfy the interim requirements specified by Department rule, Chapter 523, *Waste Discharge License Conditions*, Section 7, *Schedules of Compliance*, Sub-section 3, *Interim dates.*

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

Segment allocation methodology

> Chapter 530 §(3)(D)(1) states "*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.*"

It is noted the calculations for establishing limitations for inorganic arsenic in this Fact Sheet do not increase the EOP concentration for inorganic arsenic by a factor of 2.0 due to uncertainty of the ratio between organic and inorganic fractions of total arsenic. However, the Department has given the permittee some flexibility by evaluating possible exceeedences using the rebuttable presumption that the effluent contains a ratio of 50% inorganic arsenic and 50% organic arsenic in total arsenic results. In other words, the equivalent total arsenic concentration threshold has been increased by a factor of 2.0.

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 a frequency of 1/Year specified in Chapter 530.

Copper

Mass limits

Mean concentration (n=4) = 30.6 ug/L or 0.0306 mg/L
Permit flow limit = 0.600 MGD
Historical average mass = (0.0306 mg/L)(8.34)(0.600 MGD) = 0.153 lbs/day

The 1/18/12 statistical evaluation indicates the historical average mass of copper discharged by the permittee's facility is 18.84% of the copper discharged by the facilities on the Aroostook River and its tributaries. Therefore, the permittee's segment allocation for copper is calculated as 18.84% of the acute and chronic assimilative capacities of the river at Fort Fairfield, the most downstream facility on the Aroostook River. The Department has calculated an acute assimilative capacity of 1.97 lbs/day and a chronic assimilative capacity 1.81 lbs/day of copper at Fort Fairfield, the most downstream discharger on the Aroostook River. The acute and chronic assimilative capacities (AC) at Fort Fairfield were calculated based on 75% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 15% reduction for reserve, totaling 25%), critical low flows (1Q10 = 158.9 cfs, 7Q10 = 190.1 cfs). The calculations

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

Segment allocation methodology

Acute:

1Q10 @ Fort Fairfield = 158.9 cfs or 102.7 MGD
AWQC = 5.486 ug/L (based on watershed specific hardness of 37 mg/L)
5.486 ug/L(0.75) = 4.114 ug/L or 0.00411 mg/L

Acute AC = (102.7 MGD)(8.34 lbs/gal)(0.00411 mg/L) = 3.52 lbs/day

Chronic:

7Q10 @ Fort Fairfield = 190.1 cfs or 122.9 MGD
AWQC = 3.98896 ug/L (based on watershed specific hardness of 37 mg/L)
3.98896 ug/L(0.75) = 2.99 ug/L or 0.00299 mg/L

Chronic AC = (122.9 MGD)(8.34 lbs/gal)(0.00299 mg/L) = 3.06 lbs/day

Therefore, the mass segment allocations for copper for the permittee can be calculated as follows:

Daily maximum: (Acute assimilative capacity mass)(% of total copper discharged)
(3.52 lbs/day)(0.1884) = **0.66 lbs/day**

Monthly average: (Chronic assimilative capacity mass)(% of total copper discharged)
(3.06 lbs/day)(0.1884) = **0.58 lbs/day**

Concentration limits:

Daily mass limit = 0.66 lbs/day

$$\frac{(0.66 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(0.600 \text{ MGD})} = 0.132 \text{ mg/L}$$

(0.132 mg/L)(1,000 ug/mg)(2) = **264 ug/L**

Monthly average mass limit = 0.58 lbs/day

$$\frac{(0.58 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(0.600 \text{ MGD})} = 0.116 \text{ mg/L}$$

(0.116 mg/L)(1,000 ug/mg)(2) = **232 ug/L**

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

Segment allocation methodology

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action is carrying forward the waived surveillance level reporting and monitoring frequency for analytical chemistry and priority pollutant testing. As with reduced WET testing, the permittee must file an annual certification with the Department pursuant to Chapter 530 §2(D)(4) and Special Condition G, *06-096 CMR 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing* of this permit.

Beginning 12 months prior to the expiration date of the permit, the permittee shall conduct routine screening level analytical chemistry testing at 1/Quarter and priority pollutant testing of 1/Year.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

8. PUBLIC COMMENTS

Public notice of this application was made in the Bangor Daily News newspaper on or about November 18, 2011. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

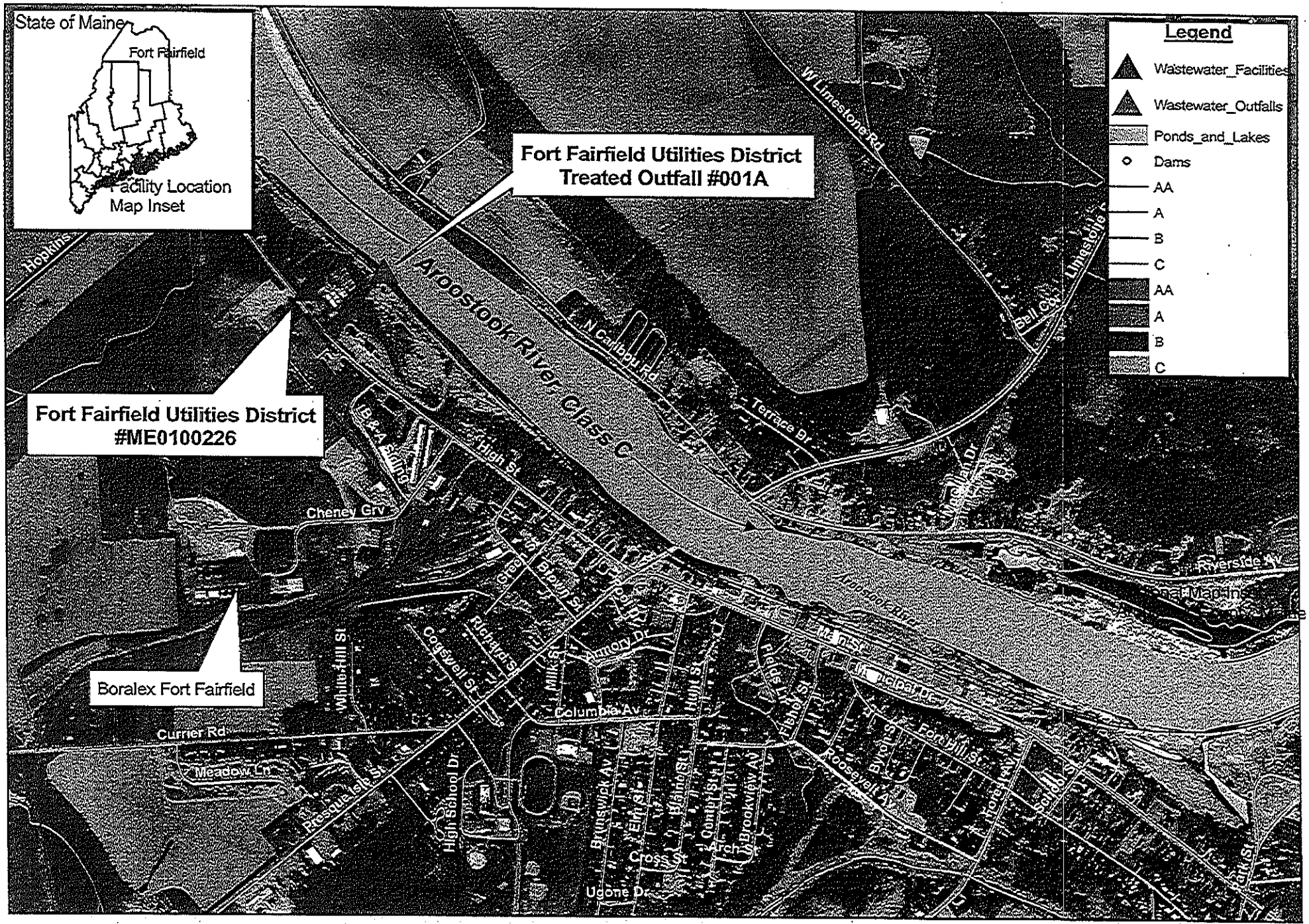
Additional information concerning this permitting action may be obtained from, and written comments sent to:

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

10. RESPONSE TO COMMENTS

During the period of March 5, 2012, through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the permittee's facility. The Department did not receive comments from the permittee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit. Therefore, the Department has not prepared a Response to Comments.

ATTACHMENT A



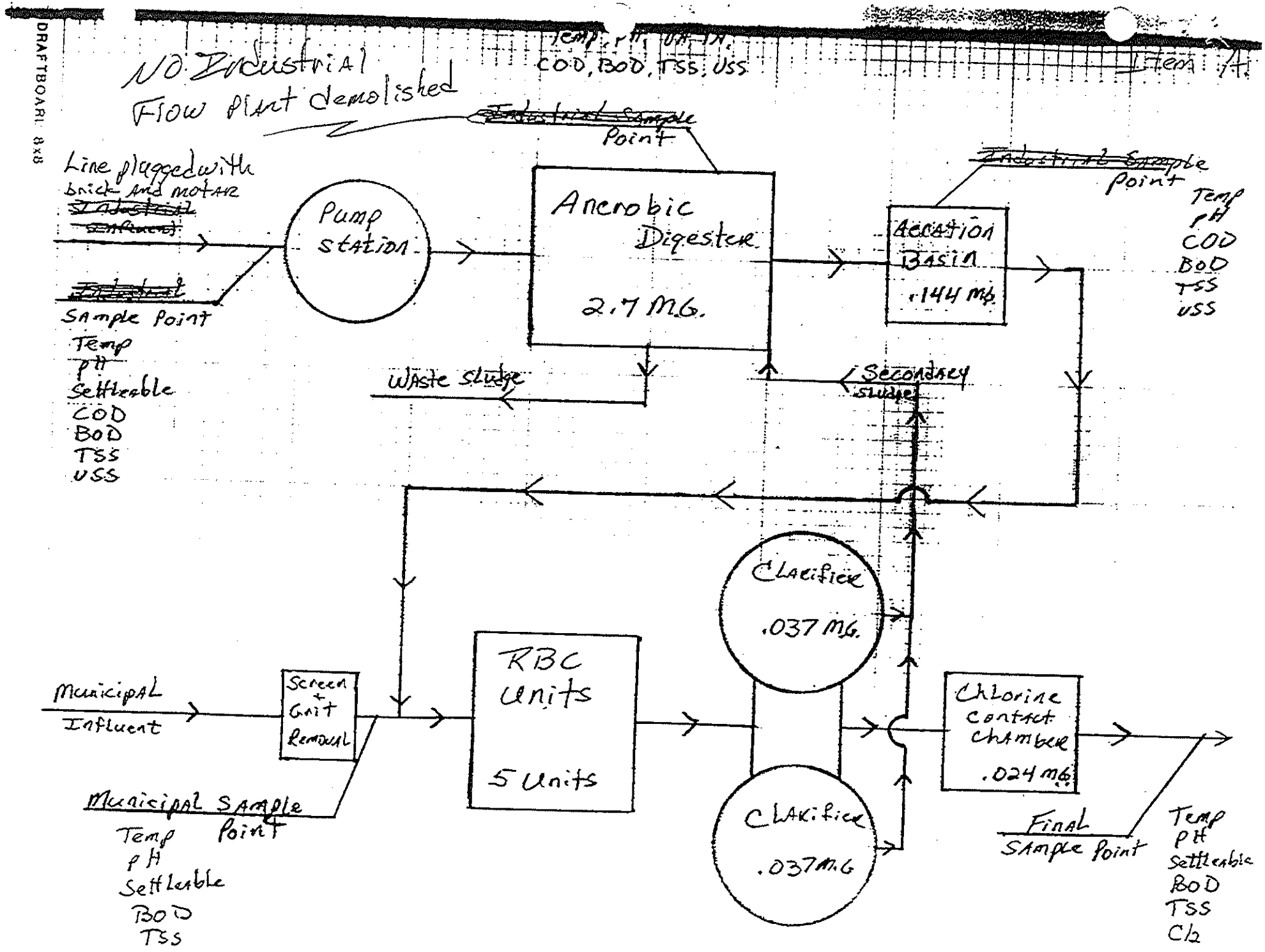
0 0.2 0.4 0.8 Miles

N
W E
S

Fort Fairfield Utilities District at Fort Fairfield, Maine

Map created by Maine DEP
February 28, 2006

ATTACHMENT B


NO Industrial Flow plant demolished
Temp, pH, Settleable, COD, BOD, TSS, VSS
Item 4
Industrial Sample Point
Line plugged with brick and mortar
Industrial Influent
Industrial
SAmple Point
Temp
pH
Settleable
COD
BOD
TSS
VSS
Pump station
Anerobic Digester
2.7 M.G.
Industrial Sample Point
Temp
pH
COD
BOD
TSS
VSS
Aeration Basin
.144 MG
WAste sludge
Secondary sludge
Clarifier
.037 M.G.
Municipal Influent
Screen + Grit Removal
RBC Units
5 Units
Chlorine contact chamber
.024 MG
Municipal SAmple Point
Temp
pH
Settleable
BOD
TSS
CLArifier
.037 M.G
Final SAmple Point
Temp
pH
Settleable
BOD
TSS
Cl2

ATTACHMENT C

WET TEST REPORT

Data for tests conducted for the period
03/Feb/2007 - 03/Feb/2012

FORT FAIRFIELD NPDES= ME010022 Effluent Limit: Acute (%) = 0.581 Chronic (%) = 0.486

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	100	09/12/2011	0.581		
TROUT	C_NOEL	100	09/12/2011	0.486		
WATER FLEA	A_NOEL	100	09/12/2011	0.581		
WATER FLEA	C_NOEL	100	09/12/2011	0.486		

ATTACHMENT D

Date Range: 03/Feb/2007 - 03/Feb/2012

Facility Name: **FORT FAIRFIELD** NPDES: **ME0100226**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
02/15/2011	0.16	0.15	11	10	0	0	0	1	0	F	0
06/22/2011	0.49	0.42	11	10	0	0	0	1	0	F	0
09/12/2011	0.26	0.25	133	14	28	46	25	9	11	F	0
12/07/2011	0.21	0.19	11	10	0	0	0	1	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

FACILITY CHEMICAL DATA REPORT

Data Date Range: 03/Feb/2007-03/Feb/2012

Facility name: **FORT FAIRFIELD** Permit Number: **ME0100226**

Parameter: ALUMINUM	Test date	Result (ug/l)	Lsthan
	02/15/2011	63.000	N
	06/22/2011	140.000	N
	09/12/2011	87.000	N
	12/07/2011	79.000	N
Parameter: AMMONIA	**Test date**	**Result (ug/l)**	**Lsthan**
	02/15/2011	780.000	N
	06/22/2011	25400.000	N
	09/12/2011	980.000	N
	12/07/2011	810.000	N
Parameter: ANTHRACENE	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y
Parameter: ANTIMONY	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	5.000	Y
Parameter: ARSENIC	**Test date**	**Result (ug/l)**	**Lsthan**
	02/15/2011	5.000	Y
	06/22/2011	5.000	Y
	09/12/2011	25.000	N
	12/07/2011	1.000	Y
Parameter: B-BHC	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	0.050	Y
Parameter: B-ENDOSULFAN	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	0.050	Y
Parameter: BENZENE	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	1.000	Y
Parameter: BENZIDINE	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	20.000	Y
Parameter: BENZO(A)ANTHRACENE	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y
Parameter: BENZO(A)PYRENE	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y
Parameter: BENZO(G,H,I)PERYLENE	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y
Parameter: BENZO(K)FLUORANTHENE	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y
Parameter: BERYLLIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y
Parameter: BIS(2-CHLOROETHOXY)M	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y
Parameter: BIS(2-CHLOROETHYL)ETH	**Test date**	**Result (ug/l)**	**Lsthan**
	09/12/2011	2.000	Y

ATTACHMENT E

CHAPTER 530(2)(D)(4) CERTIFICATION

MEPDES# _____ Facility Name _____

Since the effective date of your permit have there been:	NO	YES (Describe in Comments)
1. 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?		
2. changes in the operation of the treatment works that may **increase** the toxicity of the discharge?		
3. changes in industrial manufacturing processes contributing wastewater to the treatment works that may **increase** the toxicity of the discharge?		

COMMENTS:

Name(print) _____

Signature _____ Date _____

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

This form may be used to meet the requirements of Chap 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.

ATTACHMENT F

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 that a minimum number of tests. It is generally to a facility's long-term benefit to have more tests on file since their RP factor will be reduced.

Maine Department of Environmental Protection

Working Definitions of Terms Used in the DeTox System.

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

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

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

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

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

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

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

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

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

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

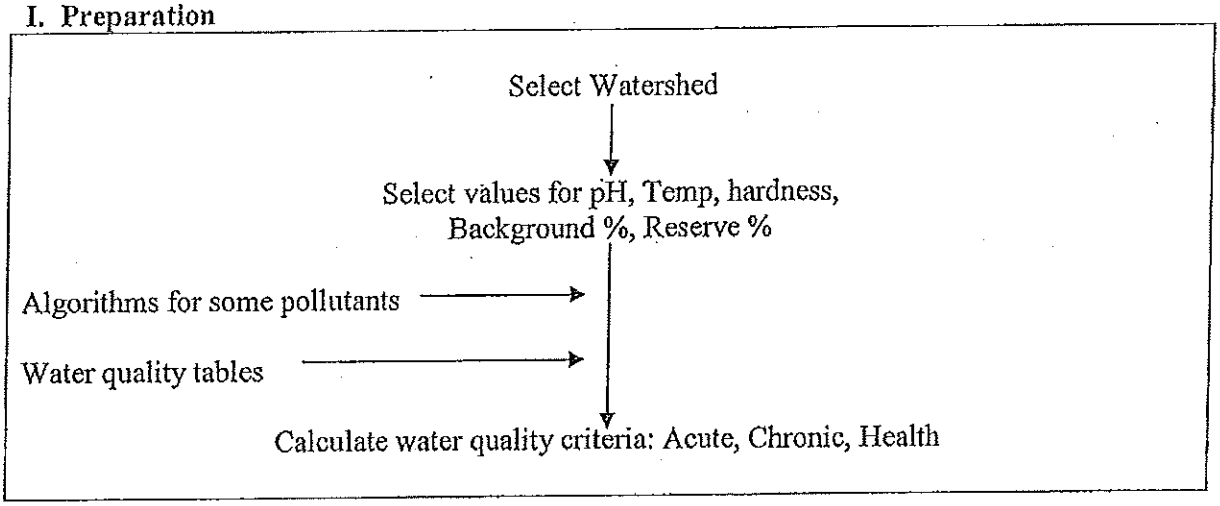
Segment allocation. One of three ways of developing an *allocation.* The amount is set by multiplying a facility's *historical discharge percentage* for a specific pollutant by the *assimilative capacity* for that pollutant and criterion. A facility will have different allocation percentages for each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

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

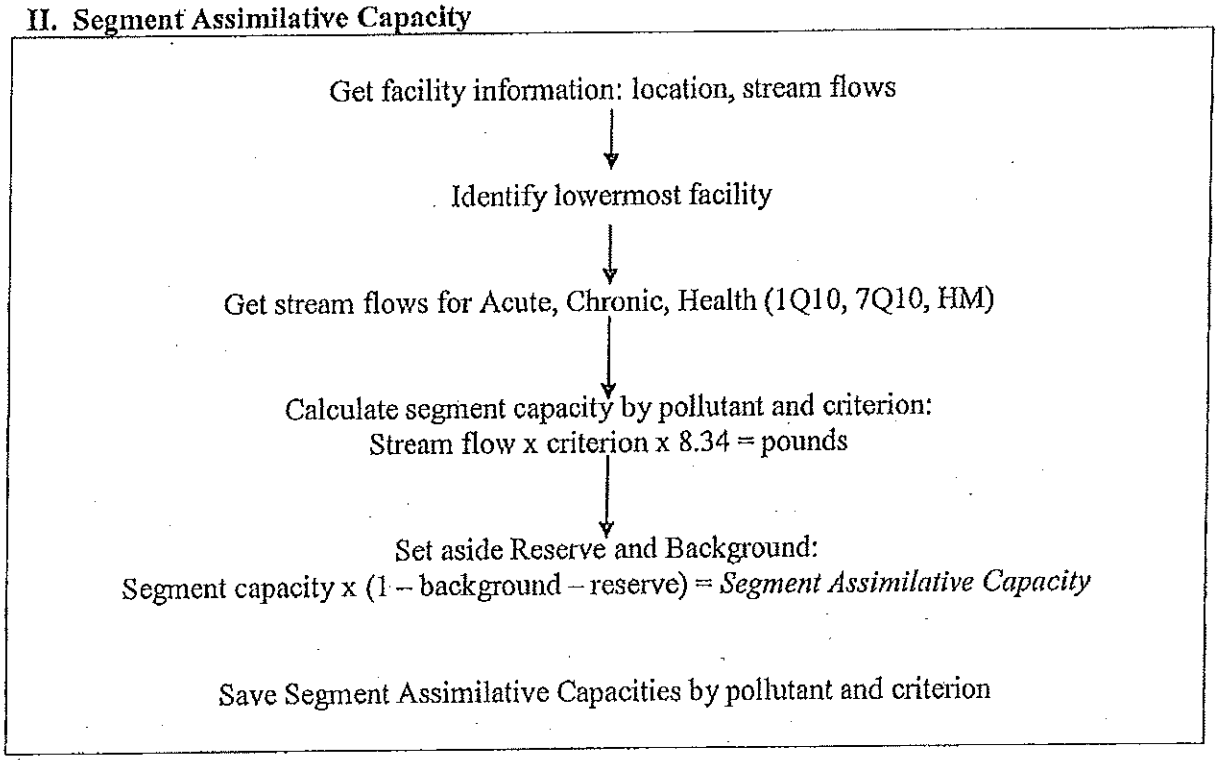
Water quality criteria. Standards for acceptable in-stream or ambient levels of pollutants. These are established in the Department's Chapter 584 and are expressed as concentrations in ug/L. There may be separate standards for acute and chronic protection aquatic life and/or human health. Each criterion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

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

I. Preparation

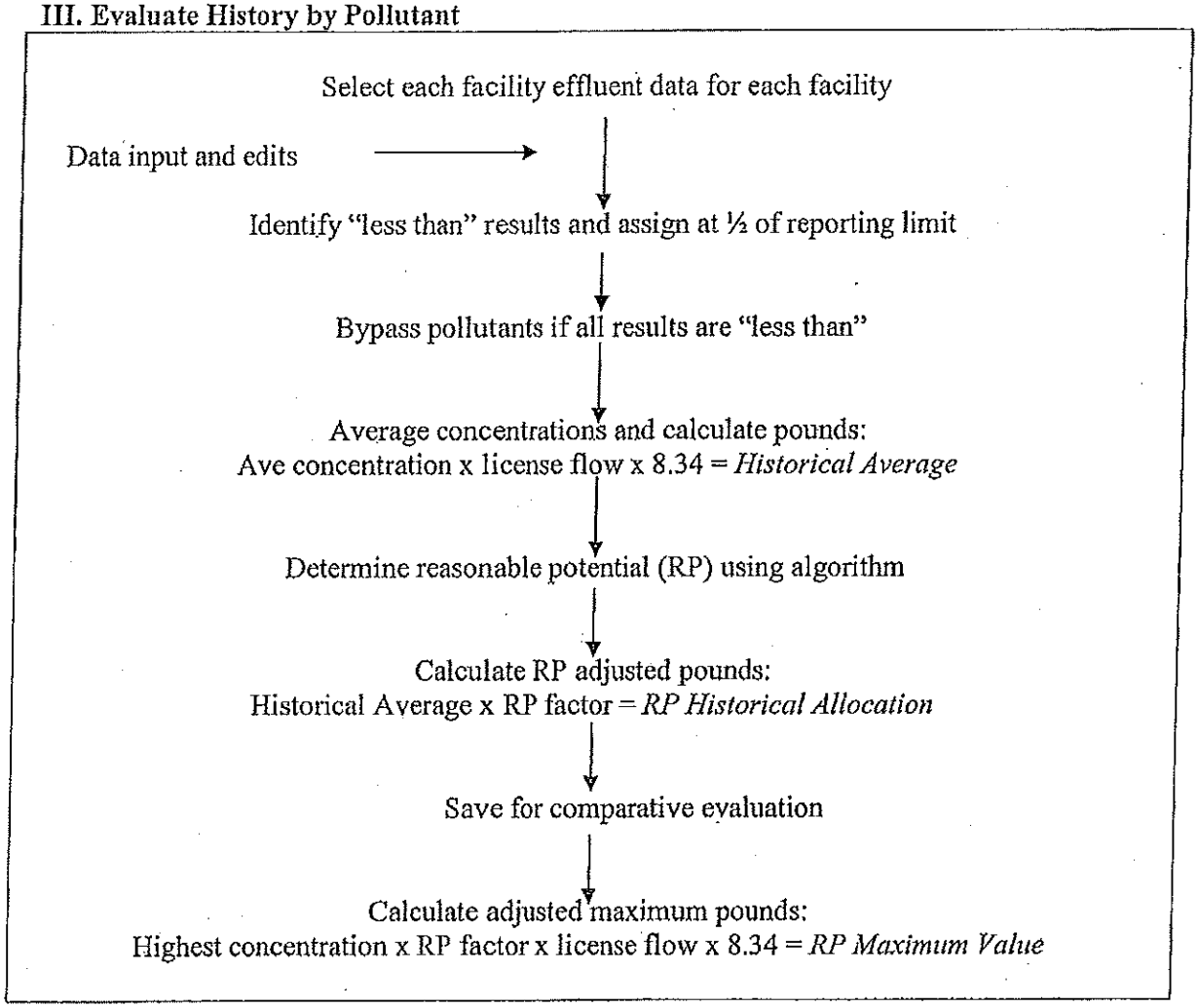


II. Segment Assimilative Capacity

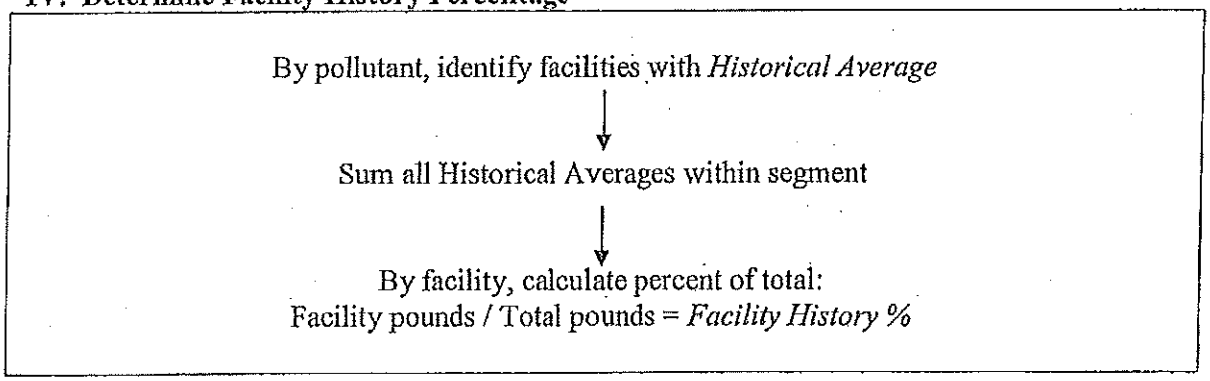


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant



IV. Determine Facility History Percentage



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

V. Segment Allocation

By pollutant and criterion, select *Segment Assimilative Capacity*

↓

Select individual *Facility History %*

↓

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

↓

Save for comparative evaluation

VI. Individual Allocation

Select individual facility and dilution factor (DF)

↓

Select pollutant and water quality criterion

↓

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

↓

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

↓

Save for comparative evaluation

VII. Make Initial Allocation

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

↓

Compare allocation and select the smallest

↓

Save as *Facility Allocation*

VIII. Evaluate Need for Effluent Limits

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

↓

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

↓

Save *Effluent Limit* for comparison

IX. Reallocation of Assimilative Capacity

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

↓

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

↓

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

↓

Save difference

↓

Select next facility downstream

↓

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

↓

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

↓

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

↓

Repeat process for each facility downstream in turn

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

A. GENERAL PROVISIONS

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

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

(a) They are not

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

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

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

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

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

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

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

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

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

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

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

5. Bypasses.

(a) Definitions.

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

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

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

(c) Notice.

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

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

(d) Prohibition of bypass.

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

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

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

6. Upsets.

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

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

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

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

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

C. MONITORING AND RECORDS

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

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

3. Monitoring and records.

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

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

(c) Records of monitoring information shall include:

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

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

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

D. REPORTING REQUIREMENTS

1. Reporting requirements.

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

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

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

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

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

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

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

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

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

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

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

(f) Twenty-four hour reporting.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5. Publicly owned treatment works.

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

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

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

E. OTHER REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Maximum daily discharge limitation means the highest allowable daily discharge.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

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

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

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

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

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

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

HOW TO SUBMIT AN APPEAL TO THE BOARD

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

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

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

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

Other Considerations in Appealing a Decision to the Board

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

What to Expect Once You File a Timely Appeal with the Board

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

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

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

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

ADDITIONAL INFORMATION

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

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