STATE OF MAINE

Department of Environmental Protection

Paul R. LePage
GOVERNOR

Patricia W. Aho
COMMISSIONER

December 9, 2011

Mr. Alan Hitchcock, P.E.
Caribou Utilities District
176 Limestone Street
P.O. Box 879
Caribou, Maine 04736

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100145
Maine Waste Discharge License (WDL) Application #W001001-6D-G-R
Final MEPDES Permit

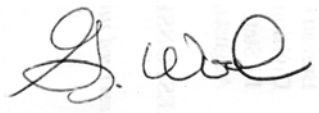
Dear Mr. Hitchcock:

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

CARIBOU UTILITIES DISTRICT	)	MAINE POLLUTANT DISCHARGE
CARIBOU, AROOSTOOK COUNTY	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
ME0100145	)	WASTE DISCHARGE LICENSE
W001001-6D-G-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 CARIBOU UTILITIES DISTRICT (CUD/permittee hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The CUD has submitted a timely and complete application to the Department for the renewal of Waste Discharge License (WDL) #W001001-5L-F-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100145 (permit hereinafter), which was issued by the Department on December 22, 2006, and is due to expire on December 26, 2011. The 12/22/06 permit authorized the monthly average discharge of up to 1.71 million gallons per day (MGD) of secondary treated municipal wastewater (sanitary, industrial and commercial wastes) from a publicly owned treatment works (POTW) to the Aroostook River, Class C, in Caribou, Maine.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the 12/22/06 permit except that this permit;

1. Eliminating the monitoring and reporting requirements for total phosphorus and ortho-phosphorus based on the consistency of the results from September 2002 to the present.

2. Increasing the monthly average, weekly average and daily maximum technology based mass and concentration limits for biochemical oxygen demand (BOD) to be consistent with the limitations for total suspended solids (TSS).

3. Establishing monthly average and or daily maximum water quality based mass and concentration limitations for total aluminum and total copper as test results for the most recent 60 months indicates the discharge has a reasonable potential to exceed applicable ambient water quality criteria.

PERMIT SUMMARY (cont'd)

4. Recalculating the critical low flows (1Q10, 7Q10 and harmonic mean) for the Aroostook River based on updated statistical evaluation utilizing river flows recorded from 1931 – 2011 at the Washburn gage.

5. Establishing a more stringent water quality based monthly average total residual chlorine concentration limit based on the revised chronic dilution factor.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 7, 2011, 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

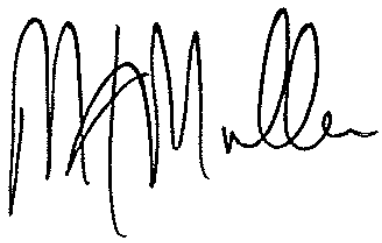
THEREFORE, the Department APPROVES the above noted application of the CARIBOU UTILITIES DISTRICT to discharge up to a monthly average of 1.71 MGD of secondary treated waste waters to the Aroostook River, Class C, in Caribou, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and 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) 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



This permit is digitally signed by Michael Mullen on behalf of Commissioner Patricia Aho. It is digitally signed pursuant to 10 M.R.S.A. § 9418. It has been filed with the Board of Environmental Protection as of the signature date.
2011.12.12 17:31:31 -05'00'

Date of initial receipt of application: August 26, 2011.
Date of application acceptance: August 26, 2011.

This Order prepared by Gregg Wood, BUREAU OF LAND & WATER QUALITY
ME0100145 2011 12/9/11

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **secondary treated municipal wastewater via Outfall #001A** to the Aroostook River at Caribou. 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]*	1.71 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	642 lbs./day *[26]*	856 lbs./day *[26]*	927 lbs./day *[26]*	45 mg/L *[19]*	60 mg/L *[19]*	65 mg/L *[19]*	2/Week *[02/07]*	24-Hour Composite *[24]*
BOD_5 Percent Removal[(2)] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	642 lbs./day *[26]*	856 lbs./day *[26]*	927 lbs./day *[26]*	45 mg/L *[19]*	60 mg/L *[19]*	65 mg/L *[19]*	2/Week *[02/07]*	24-Hour Composite *[24]*
TSS Percent Removal[(2)] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Week *[01/07]*	Grab *[GR]*
***E. coli* Bacteria[(3)] (May 15 – Sept. 30)** *[31633]*	---	---	---	142/100 ml[(4)] *[13]*	---	949/100 ml *[13]*	2/Week *[02/07]*	Grab *[GR]*
Total Residual Chlorine[(5)] *[50060]*	---	---	---	0.68 mg/L *[19]*	---	1.0 mg/L *[19]*	5/Week *[05/07]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	5/Week *[05/07]*	Grab *[GR]*
Aluminum *[01105]*	6.1 lbs./day *[26]*	---	---	855 ug/L *[28]*	---	---	1/Year *[01/YR]*	24-Hour Composite *[24]*
Copper (Total) *[01042]*	0.33 lbs./day *[26]*	---	0.36 lbs./day *[26]*	46 ug/L *[28]*	---	50 ug/L *[28]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Mercury (Total)[(6)] *[50286]*	---	---	---	0.018 ug/L *[28]*	---	0.028 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. **SURVEILLANCE LEVEL TESTING.** B**eginning upon permit issuance and lasting through 12 months prior to permit expiration,** the permittee shall be limited and monitored as follows:

WHOLE EFFLUENT TOXICITY (WET) [7]	**Daily Maximum**	**Minimum Frequency**	**Sample Type**
Acute No Observed Effect Level (A-NOEL)			
Water Flea (*Ceriodaphnia dubia)* *[TDA3B]*	Report % *[23]*	1/2 Years *[01/2Y]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TDA6F]*	Report % *[23]*	1/2 Years *[01/2Y]*	24-Hour Composite *[24]*
Chronic No Observed Effect Level (C-NOEL)			
Water Flea (*Ceriodaphnia dubia)* *[TBP3B]*	Report % *[23]*	1/2 Years *[01/2Y]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TBQ6F]*	Report % *[23]*	1/2 Years *[01/2Y]*	24-Hour Composite *[24]*
Analytical Chemistry[8] [10] *[51168]*	Report µg/L *[28]*	1/2 Years *[01/2Y]*	24-Hour Composite/Grab *[24/GR]*

SPECIAL CONDITIONS

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

3. **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 monitored as follows:

WHOLE EFFLUENT TOXICITY (WET) [7]	**Daily Maximum**	**Minimum Frequency**	**Sample Type**
Acute No Observed Effect Level (A-NOEL)			
Water Flea (*Ceriodaphnia dubia*) *[TDA3B]*	Report % *[23]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TDA6F]*	Report % *[23]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
Chronic No Observed Effect Level (C-NOEL)			
Water Flea (*Ceriodaphnia dubia*) *[TBP3B]*	Report % *[23]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
Brook Trout (*Salvelinus fontinalis*) *[TBQ6F]*	Report % *[23]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
Analytical Chemistry [8] [10] *[51168]*	Report µg/L *[28]*	1/Quarter *[01/90]*	24-Hour Composite/Grab *[24/GR]*
Priority Pollutant [9] [10] *[50008]*	Report µg/L *[28]*	1/Year *[01/YR]*	24-Hour Composite/Grab *[24/GR]*

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. **Percent Removal –** The treatment facility shall maintain a minimum of 85 percent removal of BOD_5 and TSS for all flows receiving secondary treatment. The percent removal shall be calculated based on influent and effluent concentration values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report "*NODI-9*" on the monthly Discharge Monitoring Report.

3. **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 impose year-round bacteria limitations to protect the health, safety and welfare of the public.

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

5. **TRC Monitoring** – Limitations and monitoring requirements are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. The permittee shall utilize approved test methods that are capable of bracketing the limitations in this permit.

SPECIAL CONDITIONS

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

Footnotes:

6. **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 B** for a Department report form for mercury test results.

7. **Whole effluent toxicity (WET) testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 1.9% and 1.6% 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 56.8:1 and 66.6:1, respectively.

   a. **Surveillance level testing - Beginning upon issuance of this permit and lasting through twelve months prior to permit expiration,** the permittee shall initiate surveillance level WET testing at a minimum frequency of once every two years for the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*) in a different calendar quarter for each test event.

   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 twice per year. Acute and chronic testing shall be conducted on the water flea and the brook trout. One test shall be conducted during the period of January – June and the other test shall be conducted six months later.

      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 1.9% and 1.6%, respectively.

SPECIAL CONDITIONS

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

Footnotes:

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 Organism*s, 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 Organism*s, 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).

Results of WET tests shall be reported on the "WET Results Report – Fresh Waters" form included as **Attachment C** 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.

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

a. **Surveillance level testing** – Beginning upon permit issuance and lasting through twelve months prior to the expiration date of this permit, the permittee shall conduct surveillance level analytical chemistry testing at a minimum frequency of once every other year (1/2 Years).

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.

SPECIAL CONDITIONS

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

Footnotes:

9. **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.

10. **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.

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.

SPECIAL CONDITIONS

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 September 6, 2011; 2) the terms and conditions of this permit; and 3) only from Outfall #001A. 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.

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.

SPECIAL CONDITIONS

G. OPERATIONS AND MAINTENANCE (O&M) PLAN

This facility shall maintain 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, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

H. WET WEATHER MANAGEMENT PLAN

The treatment facility staff shall maintain a 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.

SPECIAL CONDITIONS

I. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to receive **a daily maximum of 30,000 gallons per day** and introduce **a daily maximum of 14,000 gallons per day of transported** and to receive and introduce **a daily maximum of up to 200,000 gallons per day of landfill leachate** into the treatment process or solids handling stream, subject to the following terms and conditions:

1. **"**Transported wastes" means any liquid non-hazardous waste delivered to a wastewater treatment facility by a truck or other similar conveyance that has different chemical constituents or a greater strength than the influent described on the facility's application for a waste discharge license. Such wastes may include, but are not limited to septage, industrial wastes or other wastes to which chemicals in quantities potentially harmful to the treatment facility or receiving water have been added.

2. The character and handling of all transported wastes received must be consistent with the information and management plans provided in application materials submitted to the Department.

3. At no time shall the addition of transported wastes cause or contribute to effluent quality violations. Transported wastes may not cause an upset of or pass through the treatment process or have any adverse impact on the sludge disposal practices of the wastewater treatment facility.

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

4. The permittee shall maintain records for each load of transported wastes in a daily log which shall include at a minimum the following.

   (a) The date;
   (b) The volume of transported wastes received;
   (b) The source of the transported wastes;
   (d) The person transporting the transported wastes;
   (e) The results of inspections or testing conducted;
   (f) The volumes of transported wastes added to each treatment stream; and
   (g) The information in (a) through (d) for any transported wastes refused for acceptance.

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

SPECIAL CONDITIONS

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

5. The addition of transported wastes into the treatment process or solids handling stream shall not cause the treatment facility's design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of transported wastes into the treatment process or solids handling stream shall be reduced or terminated in order to eliminate the overload condition.

6. Holding tank wastewater from domestic sources to which no chemicals in quantities potentially harmful to the treatment process have been added shall not be recorded as transported wastes but should be reported in the treatment facility's influent flow.

7. During wet weather events, transported wastes may be added to the treatment process or solids handling facilities only in accordance with a current Wet Weather Flow Management Plan approved by the Department that provides for full treatment of transported wastes without adverse impacts.

8. In consultation with the Department, chemical analysis is required prior to receiving transported wastes from new sources that are not of the same nature as wastes previously received. The analysis must be specific to the type of source and designed to identify concentrations of pollutants that may pass through, upset or otherwise interfere with the facility's operation.

9. Access to transported waste receiving facilities may be permitted only during the times specified in the application materials and under the control and supervision of the person responsible for the wastewater treatment facility or his/her designated representative.

10. The authorization is subject to annual review and, with notice to the permittee and other interested parties of record, may be suspended or reduced by the Department as necessary to ensure full compliance with Chapter 555 of the Department's rules and the terms and conditions of this permit.

SPECIAL CONDITIONS

J. 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 F** 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.

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 (13^{th}) 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 (15^{th}) 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

SPECIAL CONDITIONS

K. MONITORING AND REPORTING

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.

L. REOPENING OF PERMIT FOR MODIFICATION

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

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

Printed 1/22/2009

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

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

Licensed Flow (MGD)		**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]**		
			Acute	Chronic			WET Result, % Do not enter % sign	Reporting Limit Check	Acute	Chronic	
	WHOLE EFFLUENT TOXICITY										
	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
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	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
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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
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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

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 C

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

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

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

Chlorinated? _____ Dechlorinated? _____

Results	**% effluent**	
	water flea	**trout**
A-NOEL		
C-NOEL		

Effluent Limitations	
A-NOEL	
C-NOEL	

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

place * next to values statistically different from controls

for trout show final wt and % incr for both controls

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

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

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

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **November 7, 2011**

PERMIT NUMBER: **ME0100145**
WASTE DISCHARGE LICENSE: **W001001-6D -G-R**

NAME AND ADDRESS OF APPLICANT:

CARIBOU UTILITIES DISTRICT
P.O. Box 879
176 Limestone Street
Caribou, Maine 04736

COUNTY: **Aroostook**

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

363 Grimes Road
Caribou, Maine 04736

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

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Alan Hitchcock, P.E.**
General Manager
(207) 496-0911
e-mail: cud@gwi.net

1. APPLICATION SUMMARY

a. Application: The Caribou Utilities District (CUD/permittee hereinafter) has applied to the Maine Department of Environmental Protection (Department hereinafter) for renewal of Waste Discharge License (WDL) #W001001-5L-F-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100145 (permit hereinafter), which was issued by the Department on December 22, 2006, and is due to expire on December 26, 2011. The 12/22/06 permit authorized the monthly average discharge of up to 1.71 million gallons per day (MGD) of secondary treated municipal wastewater (sanitary, industrial and commercial wastes) from a publicly owned treatment works (POTW) to the Aroostook River, Class C, in Caribou, Maine.

1. APPLICATION SUMMARY (cont'd)

b. Source Description: The Caribou Utilities District, a quasi-municipal organization located on Grimes Road in Caribou, receives residential, industrial, and commercial wastes from customers within the Town of Caribou. The facility commenced operation in 1984 and is designed to treat 1.71 million gallons per day (MGD) of municipal/industrial sanitary wastewater. A map created by the Department showing the location of the treatment facility and receiving water is included as Fact Sheet **Attachment A**.

There are no significant industrial users connected to the CUD treatment system and no combined sewer overflow (CSO) points associated with the collection system. However, the CUD stated that new industry may open within the effective term of this permit and modification of this permit may be necessary to adjust effluent limitations for new industrial loadings. Maine law, 38 M.R.S.A. §414-A sub§5.B. states that a "request for modification of a license may be made by the licensee for any valid cause or changed circumstance."

The CUD has submitted an updated Septage Management Plan as part of their August 26, 2011, renewal application, which has been reviewed and approved by the Department. The septage plan is consistent with the requirements of Department rule Chapter 555, *Regulations Relating To The Addition of Transported Wastes Into Waste Water Treatment Facilities.* This permitting action is carrying forward authorization for the facility to receive up to 30,000 gallons per day and introduce up to 14,000 gallons per day of septage into the treatment process, and to receive and introduce into the treatment process a daily maximum of up to 200,000 GPD of landfill leachate from the Tri-Community Landfill. Also see Special Condition I, *Disposal of Transported Waste In Waste Water Treatment Facility* of this permit.

b. Wastewater Treatment: The CUD provides a secondary level of wastewater treatment via three aerated lagoons. Primary treatment, which is accomplished at the primary plant located at 176 Limestone Street, consists of solids screening and grit removal. A pumping station adjacent to the primary plant is used to convey the influent approximately 2.5-miles to the secondary treatment facility.

Primary treated wastewater is pumped to three aerated lagoons operated in series. The first lagoon measures 729 feet long by 201 feet wide, has a volume of 18 million gallons (MG) and a surface area of 3.36 acres. The second lagoon measures 345 feet long by 345 feet wide, has a volume of 10 MG, and has a surface area of 2.73 acres. The third lagoon measures 220 feet long by 345 feet wide, has a volume of 10 MG, and a surface area of 1.74 acres. The total volume provided by the lagoon system is 38 MG and total lagoon area is 7.83 acres.

The facility currently maintains 45 miles of gravity sewer and 14 pump stations. Each of the 14 pump stations is equipped with dedicated or portable back-up power sources. The collection system is 100% separated and there are no combined sewer overflow (CSO) points associated with the system. The CUD has submitted an updated Wet Weather Management Plan as part of their August 26, 2011, renewal application, which has been reviewed and approved by the Department.

1. APPLICATION SUMMARY (cont'd)

During the summer months the CUD pumps sludge from the lagoons to two reed beds, which each measure 40 feet wide by 200 feet long.

Final effluent is conveyed for discharge to the Aroostook River via an 24-inch diameter, reinforced concrete, gravity flow outfall pipe designated as Outfall #001A. The end of the outfall pipe is fitted with a concrete box structure designed to enhance mixing of the treatment plant discharge with the receiving waters. See **Attachment B** of this Fact Sheet for a schematic of the treatment process.

2. PERMIT SUMMARY

a. Terms and Conditions - This permitting action is carrying forward all the terms and conditions of the 12/22/06 permit except that this permit;

1. Eliminating the monitoring and reporting requirements for total phosphorus and ortho-phosphorus based on the consistency of the results fro September 2002 to the present.

2. Increasing the monthly average, weekly average and daily maximum technology based mass and concentration limits for biochemical oxygen demand (BOD) to be consistent with the limitations for total suspended solids (TSS).

3. Establishing monthly average and or daily maximum water quality based mass and concentration limitations for total aluminum and total copper as test results for the most recent 60 months indicates the discharge has a reasonable potential to exceed applicable ambient water quality criteria.

4. Recalculating the critical low flows (1Q10, 7Q10 and harmonic mean) for the Aroostook River based on updated statistical evaluation utilizing river flows recorded from 1931 – 2011 at the Washburn gage.

5. Establishing a more stringent water quality based monthly average total residual chlorine concentration limit based on the revised chronic dilution factor.

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

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 #W001001-47-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 18.3 parts per trillion (ppt) and 27.5 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury.

2. PERMIT SUMMARY (cont'd)

June 16, 2000 – The USEPA issued a renewal of National Pollutant Discharge Elimination System (NPDES) permit #ME0100145 to the CUD. The 6/16/00 permit superseded the NPDES permits issued to the CUD by the USEPA on June 2, 1994, and June 30, 1988 (earliest NPDES permit on file with the Department).

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

August 14, 2001 – The Department issued WDL #W001001-5L-D-R / MEPDES permit #ME0100145 to the CUD for a five-year term. The 8/14/01 permit superseded WDL #W001001-47-B-R issued on July 25, 1996, and WDL #W001001-47-A-R issued on December 18, 1984 (earliest Order on file with the Department).

June 23, 2003 – The Department issued MEPDES permit modification #W001001-5L-E-M to the CUD thereby modifying the 8/14/01 MEPDES permit to authorize the CUD to receive up to 30,000 gallons per day (GPD) of septage and to introduce up to 14,000 GPD of septage into its treatment process.

March 25, 2004 – The Department provided written authorization for the CUD to receive and treat up to 100,000 GPD of landfill leachate from the Tri-Community Landfill.

December 22, 2006 – The Department issued combination MEPDES permit #ME0100145/Maine WDL #ME00100-5L-F-R for a five-year term.

August 26, 2011 – The CUD submitted a timely and complete application to the Department to renew the 12/22/06 MEPDES permit/WDL.

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., §465(4) establishes the classification standards for Class C waters as follows:

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

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

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

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

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

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

Between May 15th and September 30th, the number of Escherichia coli bacteria of human and domestic animal origin in Class C waters may not exceed a geometric mean of 126 per 100 milliliters or an instantaneous level of 236 per 100 milliliters. In determining human and domestic animal origin, the department shall assess licensed and unlicensed sources using available diagnostic procedures. The board shall adopt

4. RECEIVING WATER QUALITY STANDARDS (cont'd)

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

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 monthly average and daily maximum mercury concentration limits for this facility. See the discussion in section 6(i) of this Fact Sheet.

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

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established a monthly average discharge flow limitation of 1.71 MGD based on the monthly average dry weather design capacity of the facility. This permitting action is carrying forward the monthly average limit along with a daily maximum discharge flow reporting requirement to assist in compliance evaluations and a continuous monitoring requirement in this permitting action.

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

A review of the monthly average Discharge Monitoring Reports (DMRs) submitted to the Department for the period January 2008 – July 2011 indicate values have been reported as follows:

Flow (DMRs = 42)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	1.71	0.23 – 3.94	1.20
Daily maximum	Report	0.55 – 5.6	2.05

b. Dilution Factors: Dilution factors associated with the monthly average dry weather design criterion for the facility of 1.71 MGD 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: 1Q10 = 133.6 cfs $\Rightarrow \frac{(133.6 \text{ cfs})(0.6464) + 1.71 \text{ MGD}}{1.71 \text{ MGD}} = 51.5:1$

Chronic: 7Q10 = 159.1 cfs $\Rightarrow \frac{(159.1 \text{ cfs})(0.6464) + 1.71 \text{ MGD}}{1.71 \text{ MGD}} = 61.4:1$

Harmonic Mean = 1,046 cfs $\Rightarrow \frac{(1{,}046 \text{ cfs})(0.6464) + 1.71 \text{ MGD}}{1.71 \text{ MGD}} = 396:1$

The Department has determined that the outfall structure associated with the CUD's discharge provides complete and rapid mixing of the effluent with the receiving waters. The critical low flows cited above for the Aroostook River were recalculated by the Department on November 3, 2001, based on the Washburn gage data for the period 1931 – 2011.

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS):

The Fact Sheet of the 12/22/06 permit contained the following italicized text:

The monthly average and daily maximum secondary treatment requirements for BOD_5 and TSS of 30 mg/L and 45 mg/L, respectively, are specified at Department rule, 06-096 CMR Chapter 525(3)(III). The Department has established a daily maximum BOD_5 and TSS concentration limit of 50 mg/L based on best professional judgment (BPJ) of best practicable treatment (BPT). The CUD provided the Department with results of effluent BOD_5 and TSS data analyses for the period of January 2003 through August 2006 which indicates that the facility cannot consistently achieve compliance with the secondary treatment standards for TSS 95% of the time. The CUD reported that during said period, the facility would have been in compliance with the monthly average limit of 30 mg/L 86% of the time and with the weekly average limit of 45 mg/L 89% of the time. As a result, the CUD has requested that the monthly average, weekly average and daily

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

maximum TSS concentration limits be set at 45 mg/L, 60 mg/L and 65 mg/L, respectively, based on recommendations provided in Design, Operation and Regulation of Aerated Facultative Lagoon s in Maine, prepared by the Maine Lagoon Task Force and as provided for under treatment equivalent to secondary treatment pursuant to Department rule Chapter 525 Section 3 sub-section VI (b). The rule states that facilities "shall be eligible for consideration for effluent limitations described for treatment equivalent to secondary treatment (subsection VI), if:

(1) The BOD-5 and SS effluent concentrations consistently achievable through proper operation and maintenance (paragraph (f)) of the treatment works exceed the minimum level of the effluent quality set forth in Subsections III(a) and (b),
(2) A trickling filter or waste stabilization pond is used as the principal process, and
(3) The treatment works provide significant biological treatment of municipal wastewater."

Based on best professional judgment and demonstration by the CUD, the Department concludes that the CUD qualifies for treatment equivalent to secondary pursuant to Chapter 525 of the Department's rules as the facility cannot consistently achieve compliance with the secondary treatment requirements through proper operation and maintenance of the treatment works, utilizes a waste stabilization pond as the principal treatment process, and will provide significant biological treatment of municipal waste waters. For facilities that quality for treatment equivalent to secondary, Chapter 525 Section 3 sub-section VI (b) provides that the 30-day average shall not exceed 45 mg/L and the 7-day average shall not exceed 65 mg/L. Therefore, this permitting action is granting the CUD's request to establish monthly average and weekly average TSS concentration limits of 45 mg/L and 60 mg/L, respectively. This permitting action is also granting the CUD's request to establish a daily maximum TSS concentration limit of 65 mg/L based on an evaluation of the effluent TSS data and ability to consistently achieve compliance with this limitation.

The CUD does not seek alternate BOD_5 limits as the facility anticipates that it will be able to consistently achieve compliance with the monthly average, weekly average and daily maximum technology-based standards of 30 mg/L, 45 mg/L, and 50 mg/L, which are being established in this permitting action.

It is noted that Maine law, 38 M.R.S.A. §414-A sub§5.B. allows a permittee to request a permit modification for any valid cause or changed circumstance, such as the establishment or reopening of an industry that discharges waste water to the CUD facility.

Department rule 06-096 CMR Chapter 523 Section 6.f. states that all pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass. Technology-based monthly average, weekly average and daily maximum mass limitations for BOD_5 and TSS are being established in this permitting action and were derived using the design capacity criterion for the facility of 1.71 MGD and the applicable concentration limits as follows:

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

TSS

Monthly Average Mass Limit: (45 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 642 lbs./day
Weekly Average Mass Limit: (60 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 856 lbs./day
Daily Maximum Mass Limit: (65 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 927 lbs./day

BOD_5

Monthly Average Mass Limit: (30 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 428 lbs./day
Weekly Average Mass Limit: (45 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 642 lbs./day
Daily Maximum Mass Limit: (50 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 713 lbs./day

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, which is being established in this permitting action.

A review of the monthly average Discharge Monitoring Reports (DMRs) submitted to the Department for the period January 2008 – July 2011 indicate values have been reported as follows:

BOD mass (DMRs = 43)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	428	52 - 417	191
Weekly Average	642	70 - 922	289
Daily Maximum	713	91 - 978	320

BOD concentration (DMRs = 43)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	9 – 30	22
Weekly Average	45	11 – 41	26
Daily Maximum	50	13 - 45	29

TSS mass (DMRs = 43)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Monthly Average	642	21 - 275	134
Weekly Average	856	26 – 648	205
Daily Maximum	927	36 - 710	229

TSS concentration (DMRs = 43)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	45	6 – 30	15
Weekly Average	60	7 – 37	21
Daily Maximum	65	7 - 38	23

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

The technology based mass and concentration limits for TSS established in the previous permitting action along with a minimum monitoring frequency requirement of twice per week (2/Week) are being carried forward in this permitting action. The permittee has requested an increase in the technology based mass and concentration limitations for BOD to be consistent with the limitations established for TSS. The permittee has indicated that the hardpiping of landfill leachate from the Tri-Community Landfill to the CUD treatment plant will increase the BOD loading to the plant thus, increase the mass and concentration in the effluent, assuming percent removals remain as they have been historically.

The Department has evaluated the increase in the BOD discharged to the Aroostook River and determined there will not be a significant impact to the dissolved oxygen (DO) levels in the receiving water. Therefore, the Department is granting the increase in the technology based mass and concentration for BOD as follows:

BOD

Value	Limit (mg/L)	Range (lbs/day)
Monthly Average	45	642
Weekly Average	60	856
Daily Maximum	65	927

Monthly Average Mass Limit: (45 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 642 lbs./day
Weekly Average Mass Limit: (60 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 856 lbs./day
Daily Maximum Mass Limit: (65 mg/L)(8.34 lbs./gallon)(1.71 MGD) = 927 lbs./day

It is noted the Department will be updating its water quality model on the Aroostook River during calendar year 2012. If the Department determines the discharge of BOD or TSS from the CUD facility is causing or contributing excursions of ambient water quality standards, this permit may be reopened pursuant to Special Condition L, *Reopening of Permit For Modifications*, of this permit to establish more stringent for one or both of the parameters.

c. Settleable Solids: The previous permitting action established 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 along with a monitoring frequency of 5/Week.

A review of the monthly Discharge Monitoring Report (DMR) data for the period January 2008 – July 2011 indicates settleable solids have been reported as follows:

Settleable solids concentration (DMRs 42)

Value	Limit (ml/L)	Range (ml/L)	Average (ml/L)
Daily Maximum	0.3	<0.1 – 0.1	<0.1

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

d. *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(4)(B). Subsequent to issuance of the previous permit, the State Legislature adopted more stringent AWQC for *E. coli* bacteria. The newer criteria for Class B waters are 126 colonies/100 ml as a monthly average and 236 colonies/100 ml as a daily maximum. Therefore the monthly average limitation is being reduced from 142 colonies/100 ml to 126 colonies/100 ml. As for the daily maximum, the Department has made the determination that after taking into consider the dilution associated with the discharge, the former limit of 949 colonies/100 ml established in the previous permitting action are protective of the newer AWQC for bacteria. Therefore, the daily maximum concentration limitation of 949 colonies/100 ml is being carried forward in this permitting action.

A review of the monthly Discharge Monitoring Report (DMR) data for the period May 2008 – July 2011 indicates *E. coli* bacteria values have been reported as follows:

***E coli*. bacteria (DMRs = 17)**

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	142	1 - 67	30
Daily Maximum	949	2 - 509	105

e. Total Residual Chlorine: The previous permitting action established a monthly average water quality-based concentration limit of 0.73 mg/L, and a daily maximum technology-based concentration limit of 1.0 mg/L, and a minimum monitoring frequency requirement of once per day for TRC. 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:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Calculated Chronic Threshold
0.019 mg/L	0.011 mg/L	51.5:1 (A) 61.4:1 (C)	0.98 mg/L	0.68 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. The daily maximum technology-based standard of 1.0 mg/L is more stringent than the calculated acute water quality-based threshold of 1.1 mg/L and is therefore being carried forward in this permitting action.

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

A review of the monthly Discharge Monitoring Report (DMR) data for the period May 2008 – July 2011 indicates TRC values have been reported as follows:

Total residual chlorine (DMRs = 17)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	0.73	0.09 – 0.26	0.16
Daily Maximum	1.0	0.21 – 0.65	0.35

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). This permitting action is revising the minimum monitoring frequency to once per day based on best professional judgment.

A review of the daily maximum data as reported on the Discharge Monitoring Reports submitted to the Department for the period January 2008 – July 2011 indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period (n=43).

h. Total Phosphorus (total-P) and Orthophosphate (ortho-P): The previous permitting action established seasonal (June 1 – September 30 of each year) weekly average and daily maximum concentration and mass reporting requirements and minimum monitoring frequency requirement of twice per month (2/Month) for total-P and ortho-P. The monitoring requirement was established based on past in-stream sampling results for phosphorus, modeling efforts by the Department for the Aroostook River, and Department experience with dissolved oxygen deficits on other waterbodies in the State associated with the discharge of phosphorus at low dilutions.

A review of the daily maximum data as reported on the Discharge Monitoring Reports submitted to the Department for the period September 2002 – July 2011 indicates the facility has reported values as follows

Total phosphorus – mass (DMRs = 13)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Weekly Average (n=35)	Report	3.2 – 26.5	11.6
Daily Maximum (n=18)	Report	8.24 – 38.8	18.2

Total phosphorus – concentration (DMRs = 13

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Weekly Average (n=34)	Report	0.89 – 2.9	1.8
Daily Maximum (n=18)	Report	1.04 – 3.02	2.3

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

Ortho-phosphorus – mass (DMR = 18)

Value	Limit (lbs/day)	Range (lbs/day)	Mean (lbs/day)
Weekly Average	Report	1.5 – 18.7	8.6
Daily Maximum	Report	1.8 – 27.7	11.5

Ortho-phosphorus – concentration (DMRs = 18)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Weekly Average	Report	0.5 – 2.2	1.4
Daily Maximum	Report	0.7 – 2.3	1.6

Based on the consistency of the monitoring results above, the Department is eliminating the monitoring and reporting requirements.

i. 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 May 23, 2000, to the permittee thereby administratively modifying WDL #W001001-47-B-R by establishing interim average and maximum effluent concentration limits of 18.3 parts per trillion (ppt) and 27.5 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 January 2007 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	18.3 – 27.5	2.5 – 12.8	5.5

As a result of the excellent compliance history, this permitting action is reducing the monitoring frequency to 1/Year.

h. 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

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

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.

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 II frequency category as the facility has a chronic dilution factor of ≥20:1 but <100:1. 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
II	2 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
II	1 per year	None required	2 per year

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

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

Chapter 530(3)(E) states "*For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an 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 10/17/11, 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 criteria (AWQC) thresholds (1.9% and 1.6% – mathematical inverse of the acute dilution factor 52:1 and the chronic dilution factor 61:1).

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 J, *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.

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

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*

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.

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

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.

See **Attachment E** 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 10/17/11 statistical evaluation (Report ID #410), the pollutants of concern for the CUD (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."*

As not to penalize the permittee for operating at flows less than the permitted flow, the Department is establishing concentration limits based on a back calculation from the mass limit utilizing a multiplier of 2.0.

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

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

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=7) = 144 ug/L or 0.144 mg/L
Permit flow limit = 1.71 MGD
Historical average mass = (0.144 mg/L)(8.34)(1.71 MGD) = 2.05 lbs/day

The 10/17/11 statistical evaluation indicates the historical average mass of aluminum discharged by the permittee's facility is 10.67% of the aluminum discharged by the facilities on the Aroostook River and its tributaries. The Department has calculated a chronic assimilative capacity 57.0 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%), critical low flows (1Q10 = 158.9 cfs, 7Q10 = 190.1 cfs) less the assimilative capacity allocated to the Little Madawaska (critical low flows 1Q10 = 26 cfs, 7Q10 = 28 cfs) to account for the discharge from the Limestone Water & Sewer District (LWSD). The calculations for aluminum are 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

7Q10 at LWSD = 28 cfs or 18.1 MGD
AWQC = 87 ug/L
87 ug/L(0.75) = 65.25 ug/L or 0.06525 mg/L

Chronic AC = (122.9 MGD – 18.1 MGD)(8.34 lbs/gal)(0.06525 mg/L) = 57.0 lbs/day

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

Monthly average: (Chronic assimilative capacity mass)(% of total aluminum discharged)
(57.0 lbs/day)(0.1067) = 6.1 lbs/day

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

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.

Therefore, this permitting action is establishing concentration limitations that are two (2) times higher than the calculated end-of-pipe concentrations. The permittee must keep in mind, if flows greater than 50% of the permitted flow are realized, the concentration in the effluent must be reduced proportionally to maintain compliance with the mass limitations.

Concentration limits:

Monthly average mass limit = 6.1 lbs/day

$$\frac{(6.1 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(1.71 \text{ MGD})} = 0.43 \text{ mg/L}$$

(0.43 mg/L)(1,000 ug/mg)(2) = 855 ug/L

Copper

Mass limits

Mean concentration (n=7) = 12.14 ug/L or 0.01214 mg/L
Permit flow limit = 1.71 MGD
Historical average mass = (0.01214 mg/L)(8.34)(1.71 MGD) = 0.17 lbs/day

The 10/5/11 statistical evaluation indicates the historical average mass of copper discharged by the permittee's facility is 21.68% of the copper discharged by the facilities on the Aroostook River and its tributaries. The Department has calculated an acute assimilative capacity of 1.65 lbs/day and a chronic assimilative capacity 1.55 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) less the assimilative capacity allocated to the Little Madawaska (critical low flows 1Q10 = 26 cfs, 7Q10 = 28 cfs) to account for the discharge from the Limestone Water & Sewer District (LWSD). The calculations for copper are as follows:

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

Acute:

1Q10 @ Fort Fairfield = 158.9 cfs or 102.7 MGD
AWQC = 3.07 ug/L
3.07 ug/L(0.75) = 2.3 ug/L or 0.0023 mg/L

1Q10 at LWSD = 26 cfs or 16.8 MGD
AWQC = 3.07 ug/L
3.07 ug/L(0.75) = 2.3 ug/L or 0.0023 mg/L

Acute AC = (102.7 MGD – 16.8 MGD)(8.34 lbs/gal)(0.0023 mg/L) = 1.65 lbs/day

Chronic:

7Q10 @ Fort Fairfield = 190.1 cfs or 122.9 MGD
AWQC = 2.36 ug/L
2.36 ug/L(0.75) = 1.77 ug/L or 0.00177 mg/L

7Q10 at LWSD = 28 cfs or 18.1 MGD
AWQC = 2.36 ug/L
2.36 ug/L(0.75) = 1.77 ug/L or 0.00177 mg/L

Chronic AC = (122.9 MGD – 18.1 MGD)(8.34 lbs/gal)(0.00177 mg/L) = 1.55 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)
(1.65 lbs/day)(0.2168) = 0.36 lbs/day

Monthly average: (Chronic assimilative capacity mass)(% of total copper discharged)
(1.54 lbs/day)(0.2168) = 0.33 lbs/day

As with aluminum, this permitting action is establishing concentration limitations that are two (2) times higher than the calculated end-of-pipe concentrations. The permittee must keep in mind, if flows greater than 50% of the permitted flow are realized, the concentration in the effluent must be reduced proportionally to maintain compliance with the mass limitations.

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

Concentration limits:

Daily mass limit = 0.36 lbs/day

$$\frac{(0.36 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(1.71 \text{ MGD})} = 0.0252 \text{ mg/L}$$

(0.0252 mg/L)(1,000 ug/mg)(2) = 50 ug/L

Monthly average mass limit = 0.33 lbs/day

$$\frac{(0.33 \text{ lbs/day})}{(8.34 \text{ lbs/gal})(1.71 \text{ MGD})} = 0.0231 \text{ mg/L}$$

(0.00047 mg/L)(1,000 ug/mg)(2) = 46 ug/L

7. ANTI-DEGREDATION - IMPACT ON RECEIVING WATER QUALITY

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

This permitting action revises previously established effluent limitations and monitoring requirements for BOD. The rationale for these actions is contained in Section 6 of this Fact Sheet. Based on the information provided in the referenced section, the Department has made the determination that the discharge approved by this permit will not result in a significant lowering of water quality. As permitted, the Department has determined the existing and designated water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the Aroostook River to meet standards for Class C classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the *Aroostook Republican News* newspaper on August 17, 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 Fax: (207) 287-3435
e-mail: gregg.wood@maine.gov

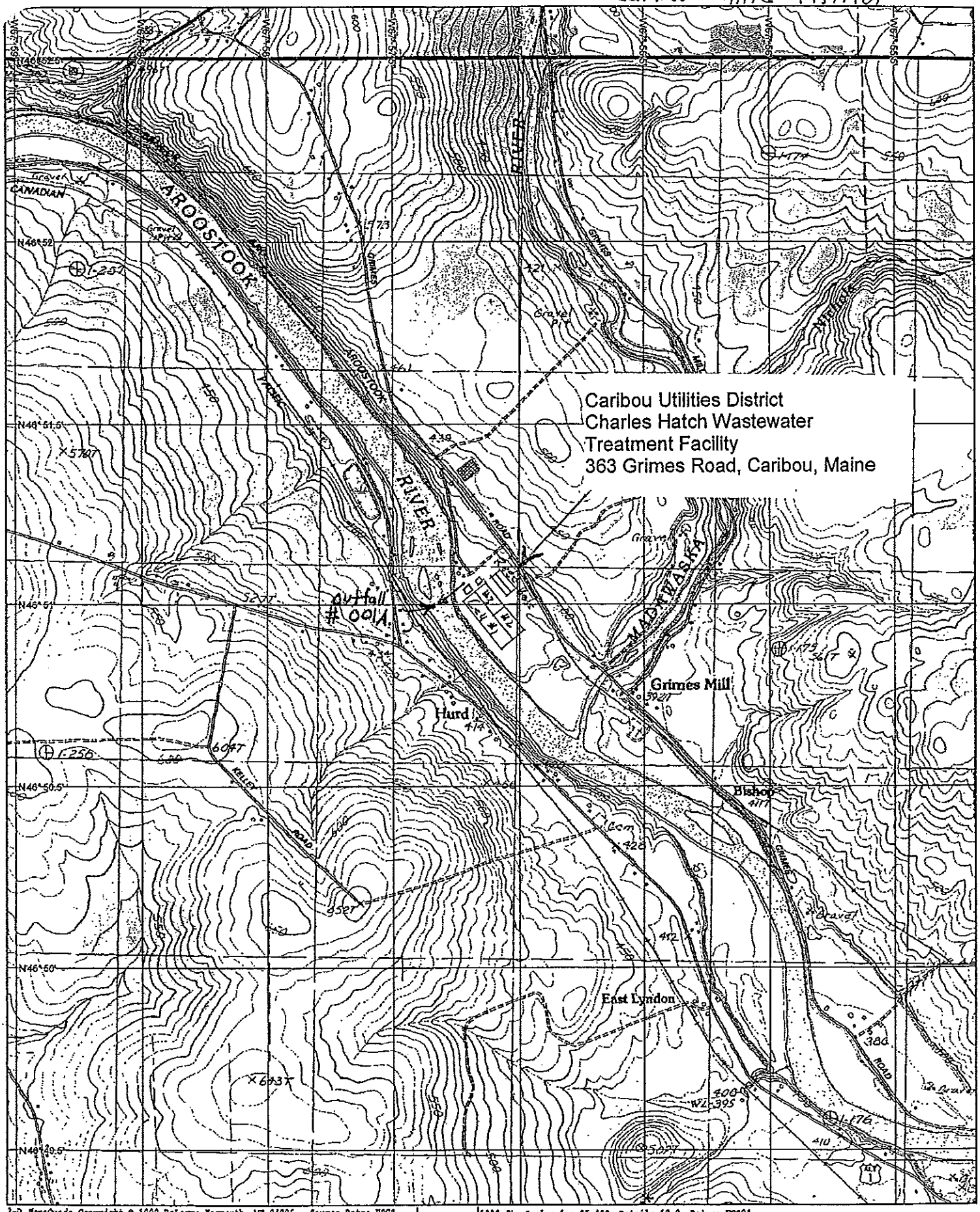
10. RESPONSE TO COMMENTS

During the period of November 7, 2011, 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

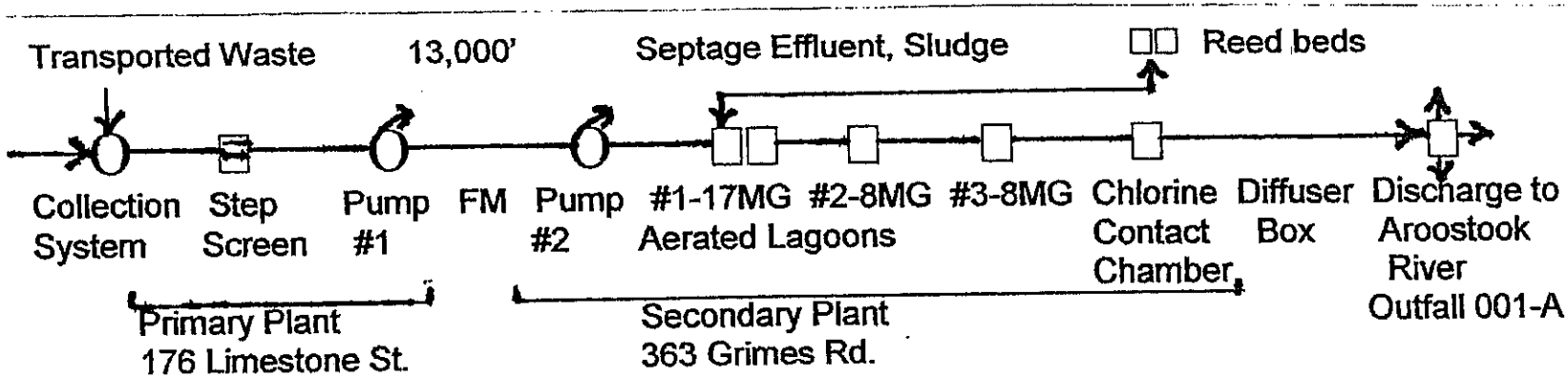
Attachment #1A

Caribou Utilities District



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 1000 ft Scale: 1 : 25,000 Detail: 13-0 Datum: WGS84

ATTACHMENT B


Transported Waste
13,000'
Septage Effluent, Sludge
Reed beds
Collection System
Step Screen
Pump #1
FM
Pump #2
#1-17MG Aerated Lagoons
#2-8MG
#3-8MG
Chlorine Contact Chamber
Diffuser Box
Discharge to Aroostook River Outfall 001-A
Primary Plant
176 Limestone St.
Secondary Plant
363 Grimes Rd.

ATTACHMENT C

WET TEST REPORT

Data for tests conducted for the period

07/Nov/2006 -07/Nov/2011

CARIBOU NPDES= ME010014 Effluent Limit: Acute (%) = 1.788 Chronic (%) = 1.521

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	100	05/08/2007	1.788		
TROUT	A_NOEL	100	10/13/2009	1.788		
TROUT	A_NOEL	100	01/18/2011	1.788		
TROUT	A_NOEL	50	07/19/2011	1.788		
TROUT	C_NOEL	100	05/08/2007	1.521		
TROUT	C_NOEL	100	10/13/2009	1.521		
TROUT	C_NOEL	50	01/18/2011	1.521		
TROUT	C_NOEL	50	07/19/2011	1.521		
WATER FLEA	A_NOEL	100	05/08/2007	1.788		
WATER FLEA	A_NOEL	100	02/03/2008	1.788		
WATER FLEA	A_NOEL	100	10/13/2009	1.788		
WATER FLEA	A_NOEL	100	07/21/2010	1.788		
WATER FLEA	A_NOEL	100	01/18/2011	1.788		
WATER FLEA	A_NOEL	100	07/19/2011	1.788		
WATER FLEA	C_NOEL	100	05/08/2007	1.521		
WATER FLEA	C_NOEL	100	02/03/2008	1.521		
WATER FLEA	C_NOEL	25	10/13/2009	1.521		
WATER FLEA	C_NOEL	100	07/21/2010	1.521		
WATER FLEA	C_NOEL	100	01/18/2011	1.521		
WATER FLEA	C_NOEL	10	07/19/2011	1.521		

ATTACHMENT D

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 11/Oct/2006-11/Oct/2011

Facility Name: **CARIBOU** NPDES: **ME0100145**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
05/08/2007	1.19	1.45	21	10	0	0	0	11	0	F	0
02/03/2008	0.76	0.82	21	10	0	0	0	11	0	F	0
10/13/2009	0.72	0.67	21	10	0	0	0	11	0	F	0
07/21/2010	1.11	1.09	21	10	0	0	0	11	0	F	0
01/18/2011	0.64	0.58	133	14	28	46	25	9	11	F	0
05/17/2011	1.58	0.89	11	10	0	0	0	1	0	F	0
07/19/2011	2.05	1.00	21	10	0	0	0	11	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

FACILITY CHEMICAL DATA REPORT

Data Date Range: 07/Nov/2006-07/Nov/2011

Facility name: **CARIBOU** Permit Number: **ME0100145**

Parameter: ALUMINUM	Test date	Result (ug/l)	Lsthan
	05/08/2007	130.000	N
	02/03/2008	94.000	N
	10/13/2009	41.000	N
	07/21/2010	85.000	N
	01/18/2011	157.000	N
	05/17/2011	50.000	N
	07/19/2011	451.000	N
Parameter: AMMONIA	**Test date**	**Result (ug/l)**	**Lsthan**
	05/08/2007	5020.000	N
	02/03/2008	7200.000	N
	10/13/2009	280.000	N
	07/21/2010	140.000	N
	01/18/2011	9200.000	N
	05/17/2011	3380.000	N
	07/19/2011	10300.000	N
Parameter: BIS(2-ETHYLHEXYL)PHTH.	**Test date**	**Result (ug/l)**	**Lsthan**
	01/18/2011	2.000	N
Parameter: CALCIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	05/08/2007	82000.000	N
	02/03/2008	86000.000	N
	10/13/2009	94500.000	N
	07/21/2010	72000.000	N
	01/18/2011	72100.000	N
	07/19/2011	66700.000	N
Parameter: COPPER	**Test date**	**Result (ug/l)**	**Lsthan**
	05/08/2007	8.000	N
	02/03/2008	14.000	N
	10/13/2009	12.000	N
	07/21/2010	9.000	N
	01/18/2011	17.000	N
	05/17/2011	11.000	N
	07/19/2011	14.000	N
Parameter: MAGNESIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	05/08/2007	9400.000	N
	02/03/2008	12500.000	N
	10/13/2009	14000.000	N
	07/21/2010	8100.000	N
	01/18/2011	7500.000	N
	07/19/2011	6900.000	N
Parameter: MERCURY	**Test date**	**Result (ug/l)**	**Lsthan**
	01/08/2007	0.005	N

03/12/2007	0.009	N
05/24/2007	0.004	N
07/26/2007	0.005	N
10/09/2007	0.005	N
01/08/2008	0.004	N
05/07/2008	0.004	N
09/03/2008	0.013	N
11/17/2008	0.012	N
02/11/2009	0.007	N
05/19/2009	0.003	N
10/21/2009	0.003	N
01/26/2010	0.004	N
04/22/2010	0.003	N
07/21/2010	0.003	N
10/19/2010	0.010	N
01/18/2011	0.004	N
05/17/2011	0.005	N
08/10/2011	0.003	N

Parameter: NICKEL

Test date	Result (ug/l)	Lsthan
10/13/2009	10.000	N
07/21/2010	6.000	N

Parameter: TOC

Test date	Result (ug/l)	Lsthan
07/21/2010	10900.000	N
07/19/2011	10100.000	N

Parameter: TSS

Test date	Result (ug/l)	Lsthan
07/21/2010	22000.000	N
07/19/2011	16000.000	N

Parameter: ZINC

Test date	Result (ug/l)	Lsthan
05/08/2007	15.000	N
02/03/2008	22.000	N
10/13/2009	17.000	N
07/21/2010	8.000	N
01/18/2011	21.000	N
05/17/2011	11.000	N
07/19/2011	19.000	N

ATTACHMENT E

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.*

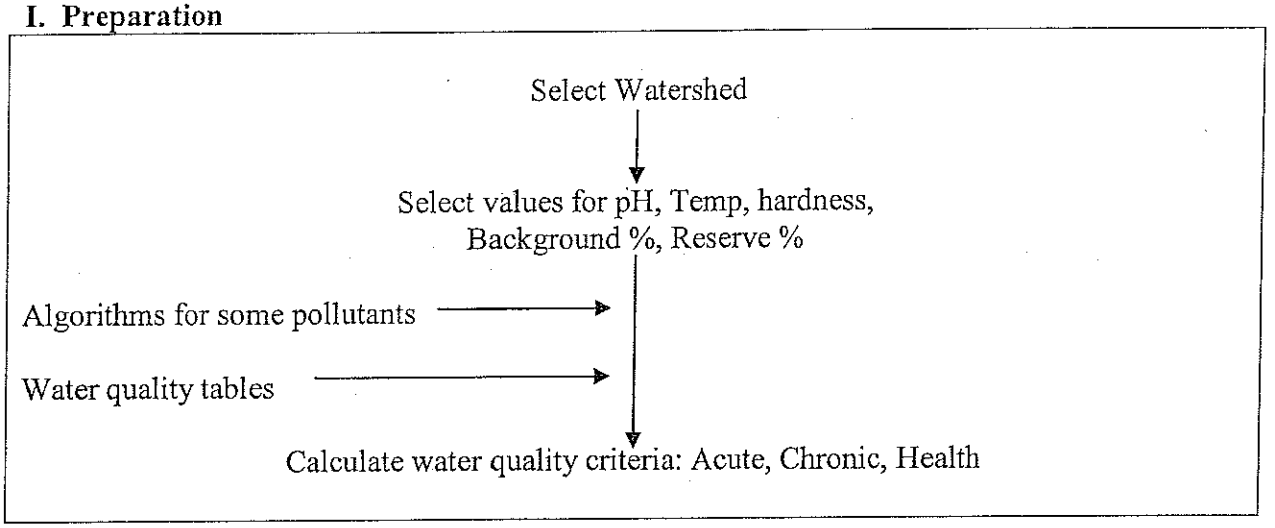
Segment allocation. One of three ways of developing an *allocation.* The amount is set by multiplying a facility's *historical discharge percentage* for a specific pollutant by the *assimilative capacity* for that pollutant and criterion. A facility will have different allocation percentages for each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

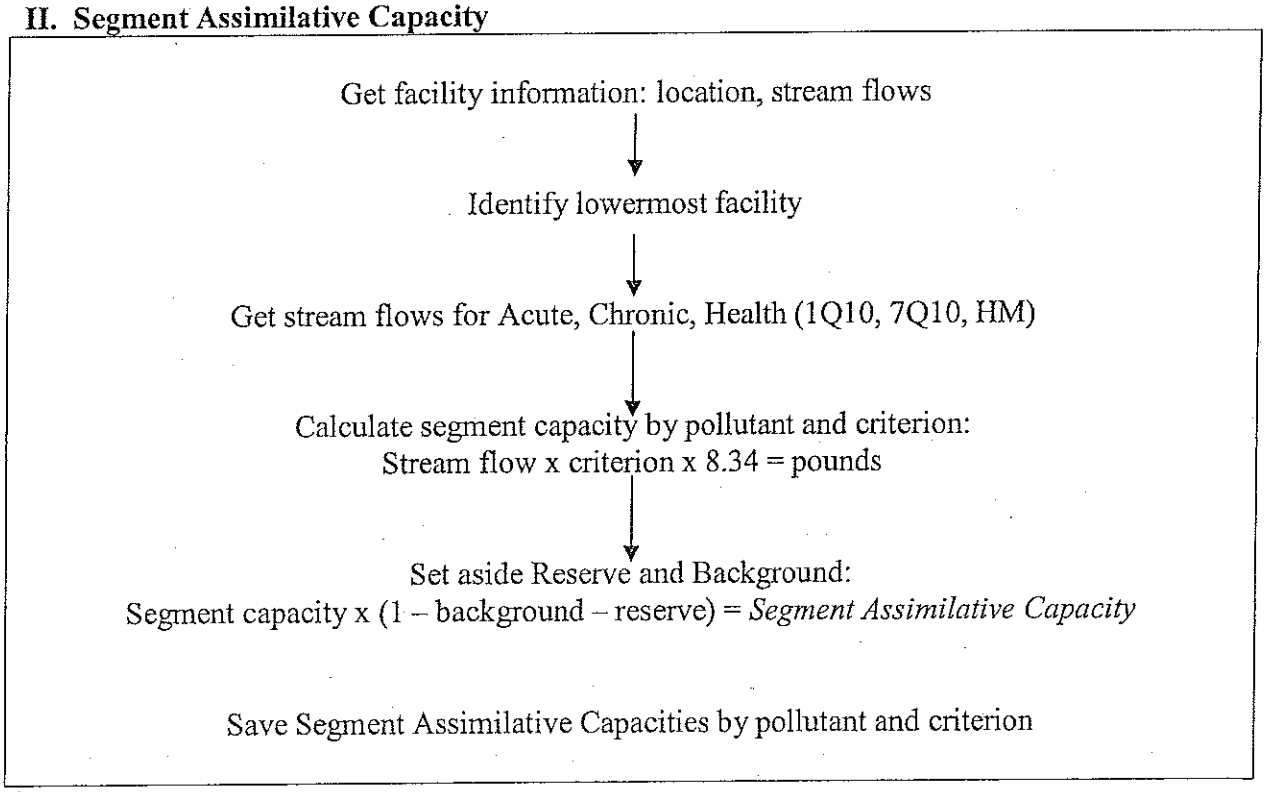
Water quality criteria. Standards for acceptable in-stream or ambient levels of pollutants. These are established in the Department's Chapter 584 and are expressed as concentrations in ug/L. There may be separate standards for acute and chronic protection aquatic life and/or human health. Each criterion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

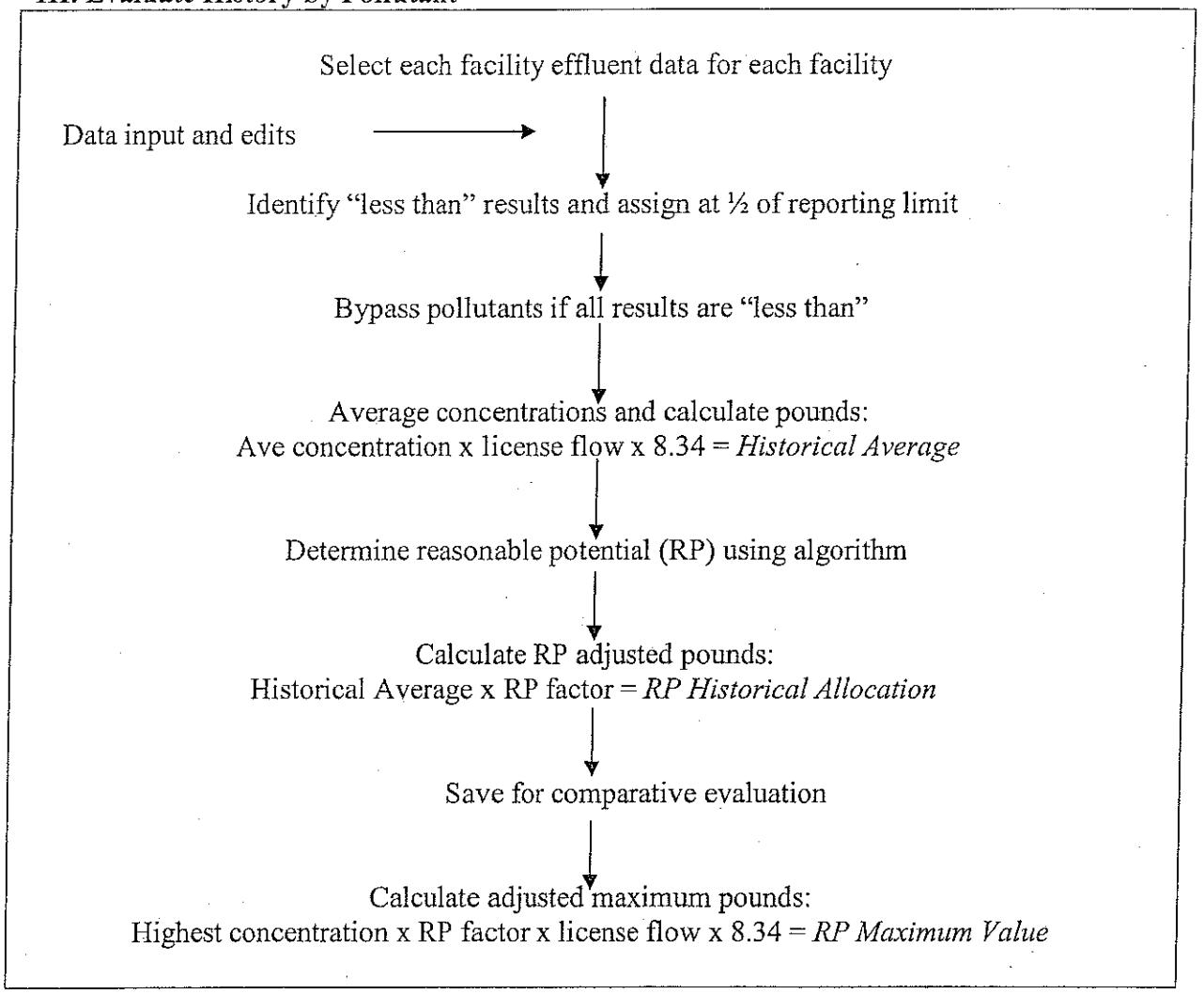


II. Segment Assimilative Capacity

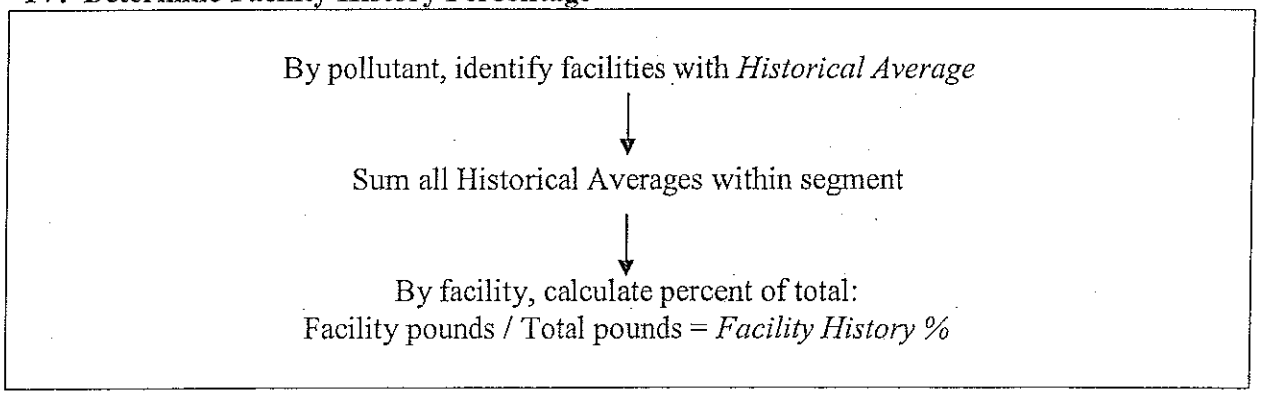


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant



IV. Determine Facility History Percentage



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

ATTACHMENT F

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.

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 Commissioner's Licensing Decision

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

SUMMARY

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

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

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

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

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

HOW TO SUBMIT AN APPEAL TO THE BOARD

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

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

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

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

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

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

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

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

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

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

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

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

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

II. APPEALS TO MAINE SUPERIOR COURT

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

ADDITIONAL INFORMATION

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

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