

September 21, 2005

Mr. Robert Gundersen
Superintendent, Wastewater Treatment Plant
Town of Bethel
199 Main Street
P.. Box 1660
Bethel, ME 04217

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101176
Maine Waste Discharge License (WDL) Application #W002595-5L-E-R
Final Permit/License

Dear Mr. Gundersen:

Enclosed, please find a copy of your **final** MEPDES permit and Maine WDL, which was approved by the Department of Environmental Protection. This permit/license for your facility replaces Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0101176 last issued for your facility by the Department on March 3, 1994. 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.*"

We would like to make you aware of the fact that your monthly Discharge Monitoring Reports (DMRs) may not reflect the revisions in this permitting action for several months however, you are required to report applicable test results for parameters required by this MEPDES permit/WDL that do not appear on the DMR. Please see attached April 2003 O&M Newsletter article regarding this matter.

If you have any questions regarding the matter, please feel free to call me at 287-7659.

Sincerely,

Bill Hinkel
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc. cc: Stuart Rose, DEP Roger Janson, USEPA

DMR Lag

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months.

This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.
2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.

3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.

Phil Garwood

IN THE MATTER OF

TOWN OF BETHEL)	MAINE POLLUTANT DISCHARGE
BETHEL, OXFORD COUNTY, MAINE)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS)	AND
#ME0101176)	WASTE DISCHARGE LICENSE
#W002595-5L-E-R)	
APPROVAL)	RENEWAL

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

APPLICATION SUMMARY

The Town has applied for renewal of Waste Discharge License #W002595-5L-D-R, which was issued on December 8, 2000, and is scheduled to expire on December 8, 2005. The WDL authorized the monthly average discharge of up to 0.34 million gallons per day (MGD) of secondary treated wastewater to the Androscoggin River, Class B, in Bethel, Maine.

PERMIT SUMMARY

On 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) permit program, and permit #ME0101176 (same as NPDES permit number) will be utilized as the primary reference number.

PERMIT SUMMARY (cont'd)

This permitting action is similar to the 12/8/00 licensing action in that it is:

1. Carrying forward the monthly average discharge flow limit of 0.34 MGD;
2. Carrying forward technology-based monthly average, weekly average and daily maximum concentration limits for biochemical oxygen demand (BOD₅) and total suspended solids (TSS);
3. Carrying forward the daily maximum, technology-based concentration limit of 0.3 ml/L for settleable solids;
4. Carrying forward the monthly average and daily maximum concentration limits for *Escherichia coli* bacteria for Class B waters;
5. Carrying forward the daily maximum, technology-based concentration limit of 1.0 mg/L for total residual chlorine (TRC); and
6. Carrying forward the minimum monitoring frequency requirements for all monitored parameters.

This permitting action is different from the 12/8/00 licensing action in that it is:

1. Establishing a daily maximum discharge flow reporting requirement;
2. Revising (increasing) the monthly average and daily maximum mass limits for BOD₅ and TSS based on the effluent discharge flow limit of 0.34 MGD;
3. Establishing a requirement to achieve a minimum of 85% removal for BOD₅ and TSS;
4. Establishing seasonal (June 1 through September 30) monthly average concentration and mass reporting requirements for total phosphorus and orthophosphate through the effective term of this permit;
5. Establishing seasonal (June 1 through September 30) weekly average concentration and mass reporting requirements for total phosphorus and orthophosphate during the calendar year 2006 season only; and
6. Revising the pH range limit from 6.0 – 8.5 standard units (SU) to 6.0 – 9.0 SU.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated September 21, 2005, 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 national resource, that water quality will be maintained and protected;
 - (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
 - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
 - (e) Where a discharge will result in lowering the existing 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 TOWN OF BETHEL to discharge a monthly average flow of up to 0.34 MGD of secondary treated wastewater to the Androscoggin River, Class B, 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. The expiration date of this permit is five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____, 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 17, 2005

Date of application acceptance: May 17, 2005

Date filed with Board of Environmental Protection: _____.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period **beginning the effective date of this permit and lasting through permit expiration**, the permittee is authorized to discharge secondary treated sanitary wastewater from **Outfall #001A** to the Androscoggin River. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
	as specified	as specified	as specified	as specified	as specified	as specified	as specified	as specified
Flow [50050]	0.34 MGD [03]	--	Report MGD [03]	--	--	--	Continuous [99/99]	Recorder [RC]
BOD₅ [00310]	85 lbs./day [26]	128 lbs./day [26]	142 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Week [01/07]	Composite [24]
BOD₅ Percent Removal⁽²⁾ [81010]	---	---	---	85% [23]	---	---	1/Month [01/30]	Calculate [CA]
TSS [00530]	85 lbs./day [26]	128 lbs./day [26]	142 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Week [01/07]	Composite [24]
TSS Percent Removal⁽²⁾ [81011]	---	---	---	85% [23]	---	---	1/Month [01/30]	Calculate [CA]
Settleable Solids [00545]	--	--	--	--	--	0.3 ml/L [25]	1/Day [01/01]	Grab [GR]
<i>E. coli</i> Bacteria⁽³⁾ [31633]	--	--	--	64./100 ml ⁽⁴⁾ [13]	--	427 /100 ml [13]	1/Week [01/07]	Grab [GR]
Total Residual Chlorine⁽⁵⁾ [50060]	--	--	--	--	--	1.0 mg/L [19]	1/Day [01/01]	Grab [GR]
pH [00400]	--	--	--	--	--	6.0 – 9.0 SU [12]	1/Day [01/01]	Grab [GR]
Orthophosphate (June 1 – Sept. 30)⁽⁶⁾ • Through 9/30/06 • 6/1/07 through permit expiration [04175]	Report lbs./day Report lbs./day [26]	Report lbs./day --- [26]	---	Report mg/L Report mg/L [19]	Report mg/L --- [19]	---	1/Week [01/07] 2/Month [02/30]	Composite [24]
Total Phosphorous (June 1 – Sept. 30)⁽⁷⁾ • Through 9/30/06 • 6/1/07 through permit expiration [00665]	Report lbs./day Report lbs./day [26]	Report lbs./day --- [26]	---	Report mg/L Report mg/L [19]	Report mg/L -- [19]	---	1/Week [01/07] 1/Month [01/30]	Composite [24]

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

FOOTNOTES: See Page 6 of this permit for applicable footnotes

SPECIAL CONDITIONS

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

FOOTNOTES:

1. **Monitoring** – All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.
2. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both biochemical oxygen demand and total suspended solids 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.
3. **Seasonal 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 limits 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** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. For instances when a facility has not disinfected with chlorine-based compounds for an entire reporting period, the facility shall report "NODI-9" for this parameter on the monthly DMR.
6. **Total Phosphorus** – Total phosphorus monitoring shall be performed in accordance with Attachment A of this permit, *Protocol For Total P Sample Collection and Analysis* unless otherwise specified by the Department.
7. **Orthophosphate** – Orthophosphate monitoring shall be performed in accordance with Attachment B of this permit, *Protocol For Orthophosphate Sample Collection and Analysis* unless otherwise specified by the Department.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by 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 by 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 by the classification of the receiving waters.
4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. DISINFECTION

If chlorination is used as the means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized followed by a dechlorination system if the imposed total residual chlorine (TRC) limit cannot be achieved by dissipation in the detention tank. The TRC in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied, if necessary, shall provide a TRC concentration that will effectively reduce *E. coli* bacteria levels to or below those specified in Special Condition A, "*Effluent Limitation and Monitoring Requirements*," above.

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate pursuant to Title 32 M.R.S.A., Section 4171 et seq. All proposed contracts for facility operation by any person must be approved by the Department before the licensee may engage the services of the contract operator.

E. MONITORING AND REPORTING

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

Department of Environmental Protection
Southern Maine Regional Office
Bureau of Land and Water Quality
Division of Engineering, Compliance and Technical Assistance
312 Canco Road
Portland, ME 04103

SPECIAL CONDITIONS

F. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the wastewater collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system.

G. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, **the permittee is authorized to receive a maximum of 5,000 gallons of septage per day** into its wastewater treatment facility. Receipt of holding tank wastewaters is authorized and shall be recorded as holding tank wastewaters and shall be reported in the treatment facility's influent flow.

- 1) This approval is limited to methods and plans described in the application and supporting documents. Any variations are subject to review and approval prior to implementation.
- 2) At no time shall addition of septage cause or contribute to effluent quality violations. If such conditions do exist, receipt of septage shall be suspended until effluent quality can be maintained.
- 3) The permittee shall maintain records which shall include, as a minimum, the following by date: volume of septage received, source of the septage (name of municipality), the hauler transporting the septage, the dates and volume of septage added to the waste treatment influent and test results.
- 4) Addition of septage shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment facility becomes overloaded, receipt of septage shall be reduced or terminated in order to eliminate the overload condition.
- 5) Septage known to be harmful to the treatment processes shall not be accepted. Wastes that contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.
- 6) Holding tank waste water shall not be recorded as septage and should be reported in the treatment facility's influent flow.

H. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

SPECIAL CONDITIONS

I. NOTIFICATION REQUIREMENT

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

1. Any introduction of pollutants into the wastewater collection and treatment system from an indirect discharger in a primary industrial category discharging process wastewater; and
2. Any substantial change (increase or decrease) in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:
 - (a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and
 - (b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment system.

J. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff shall develop and 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. 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 annually and record any necessary changes to keep the plan up to date.

K. OPERATION & MAINTENANCE (O&M) PLAN

The permittee shall maintain a current written comprehensive Operation & Maintenance (O&M) Plan at the facility. 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 wastewater 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 USEPA personnel upon request.

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

SPECIAL CONDITONS

L. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in 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 effluent or ambient water quality 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 respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

Attachment A

Protocol for Total P Sample Collection and Analysis

Approved Analytical Methods: EPA 365.2, SM 4500-P B.5 E.

Sample Collection: The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-4 degrees C. If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved by the addition of 2 mls of concentrated H₂SO₄ per liter and refrigerated at 0-4 degrees C. The holding time for a preserved sample is 28 days

QA/QC: Run a distilled water blank and at least 2 standards with each series of samples. If standards do not agree within 2% of the true value then prepare a new calibration curve.

Every month run a blank on the composite jug and sample line. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

April 2004

Attachment B

Protocol for Orthophosphate Sample Collection and Analysis

Approved Analytical Methods: EPA 365.2, SM 4500-P.E.

Sample Collection: The Maine DEP is requesting that orthophosphate analysis be conducted on composite effluent samples. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-4 degrees C. The sample must be filtered immediately (within 15 minutes) after collection using a pre-washed 0.45-um membrane filter. Be sure to follow one of the pre-washing procedures described in the approved methods. Also, be aware that you will likely want to use a separate suction hose and collection container for the orthophosphate filtering process. If the sample is being sent to a commercial laboratory or analysis cannot be performed within 2 hours after collection then the sample must be kept at 0-4 degrees C. There is a 48-hour holding time for this sample although analysis should be done sooner, if possible.

QA/QC: Same as described in Total P Protocol.

April 2004

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE**

FACT SHEET

DATE: SEPTEMBER 21, 2005

PERMIT NUMBER: #ME0101176

LICENSE NUMBER: #W002595-5L-E-R

NAME AND ADDRESS OF APPLICANT:

**TOWN OF BETHEL
P.O. BOX 1660
BETHEL, ME 04217**

COUNTY: OXFORD

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**TOWN OF BETHEL
11 WALKERS MILLS ROAD
BETHEL, ME 04217**

RECEIVING WATER/CLASSIFICATION: ANDROSCOGGIN RIVER/CLASS B

**COGNIZANT OFFICIAL AND TELEPHONE NUMBER: MR. ROBERT GUNDERSEN
(207) 824-2105**

1. APPLICATION SUMMARY

Application: The Town of Bethel (Town) has applied for renewal of Waste Discharge License #W002595-5L-D-R, which was issued on December 8, 2000 and is scheduled to expire on December 8, 2005. The WDL authorized the monthly average discharge of up to 0.34 million gallons per day (MGD) of secondary treated wastewater to the Androscoggin River, Class B, in Bethel, Maine.

2. PERMIT SUMMARY

- a. Regulatory: On 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. On October 30, 2003, after consultation with the U.S. Department of Justice, the USEPA extended Maine's NPDES program delegation to all but tribally owned lands. In those areas, the Department maintains the authority to issue WDLs pursuant to Maine law. The extent of Maine's delegated authority is under appeal at the time of this permitting action. From this point forward, the program will be referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program and permit #ME0101176 will be utilized as the primary reference number for the Town's MEPDES permit. NPDES permit #ME0101176, last issued by the USEPA on March 3, 1994, will be replaced by the final MEPDES permit upon issuance. Once the MEPDES permit has been issued, all terms and conditions of the NPDES become null and void.

- b. Terms and Conditions: **This permitting action is similar to the 12/8/00 licensing action in that it is:**
 1. Carrying forward the monthly average discharge flow limit of 0.34 MGD;
 2. Carrying forward technology-based monthly average, weekly average and daily maximum concentration limits for biochemical oxygen demand (BOD₅) and total suspended solids (TSS);
 3. Carrying forward the daily maximum, technology-based concentration limit of 0.3 ml/L for settleable solids;
 4. Carrying forward the monthly average and daily maximum concentration limits for *Escherichia coli* bacteria for Class B waters;
 5. Carrying forward the daily maximum, technology-based concentration limit of 1.0 mg/L for total residual chlorine (TRC); and
 6. Carrying forward the minimum monitoring frequency requirements for all monitored parameters.

2. PERMIT SUMMARY (cont'd)

This permitting action is different from the 12/8/00 licensing action in that it is:

1. Establishing a daily maximum discharge flow reporting requirement;
2. Revising (increasing) the monthly average and daily maximum mass limits for BOD₅ and TSS based on the effluent discharge flow limit of 0.34 MGD;
3. Establishing a requirement to achieve a minimum of 85% removal for BOD₅ and TSS;
4. Establishing seasonal (June 1 through September 30) monthly average concentration and mass reporting requirements for total phosphorus and orthophosphate through the effective term of this permit;
5. Establishing seasonal (June 1 through September 30) weekly average concentration and mass reporting requirements for total phosphorus and orthophosphate during the calendar year 2006 season only; and
6. Revising the pH range limit from 6.0 – 8.5 standard units (SU) to 6.0 – 9.0 SU.

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

March 3, 1994 – The USEPA issued NPDES permit #ME0101176 to the Town, which superseded the previous NPDES permit issued on October 8, 1986. The 3/3/94 NPDES permit expired five years from the date of issuance.

May 25, 1994 – The Department issued WDL #W002595-59-C-R to the Town for the monthly average discharge of up to 0.30 MGD of secondary treated wastewater to the Androscoggin River in Bethel. The 5/25/94 WDL superseded WDL #W002595-45-B-R issued on October 6, 1986.

February 15, 1995 – The Department issued a letter to the Town informing that the facility qualifies for an exemption from toxics testing pursuant to Department rule, 06-096 CMR, Chapter 530.5 as the facility has a chronic dilution ratio of at least 1,000:1.

July 10, 2000 – The Department administratively modified WDL #W002595-59-C-R by establishing interim monthly average and daily maximum concentration limits of 10.2 parts per trillion (ppt) and 15.2 ppt, respectively, for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring requirements have been subject to numerous modifications in recent years. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

December 8, 2000 – The Department issued WDL #W002595-5L-D-R to the Town for monthly average discharge of up to 0.34 MGD of secondary treated wastewater to the Androscoggin River in Bethel. The 12/8/00 WDL superseded 5/25/94 WDL.

2. PERMIT SUMMARY (cont'd)

January 3, 2005 – The Department issued a draft document entitled, Androscoggin River Total Maximum Daily Load, Gulf Island Pond, Livermore Falls Impoundment, December 2004, for public comment.

May 17, 2005 – The Town submitted a General Application for renewal of WDL #W002595-5L-D-R. The application was accepted for processing on May 17, 2005, and was assigned WDL #W002595-5L-E-R/MEPDES #ME0101176.

May 2005 – The Department submitted the Androscoggin River Total Maximum Daily Load, Gulf Island Pond, Livermore Falls Impoundment, December 2004 to the USEPA.

July 18, 2005 – The USEPA approved a total maximum daily load (TMDL) entitled, May 2005 TMDL, Final for the Androscoggin River.

- c. Source Description: The wastewater treatment facility receives sanitary wastewater generated by 408 residential connections and 70 commercial connections located within the town of Bethel. The collection system is approximately seven miles in length and contains four pump stations, which are located on Vernon Street, Mill Hill, Bridge Street, and Telstar-Route 26. The permittee has indicated that there are no combined sewer overflow (CSO) points associated with the collection system and the facility does not receive more than 10% of its flow from industrial users of the system. The previous licensing action authorized the facility to accept a daily maximum of 5,000 gallons per day (GPD) of septage wastes from local haulers and to introduce a daily maximum of up to 3,000 GPD into the wastewater stream. Based on a written septage management plan, dated March 31, 2005, which was submitted with the Town's application, this permitting action is revising this authorization to receive 8,000 and introduce into the treatment works a daily maximum of up to 5,000 GPD.
- d. Wastewater Treatment: The facility provides a secondary level of treatment via an oxidation ditch and secondary clarification. Raw sewerage is conveyed to the facility headworks building where screenings are, washed and dewatered and grit is removed. Septage wastes are delivered to an 8,000-gallon septic pretreatment tank by truck before being conveyed into the headworks. Flow is conveyed to two 6,000-gallon wet wells in the headworks building and is then pumped to a concrete, oval 280,000-gallon, 65-foot by 80-foot oxidation ditch for aeration and primary treatment. Primary treated wastewater from the oxidation ditch is conveyed by gravity to two 24-foot diameter, 48,000-gallon circular secondary clarifiers for additional treatment. Clarifier supernatant is conveyed through a two-chamber 79-foot by 3-foot by 2-foot 8-inch deep chlorine contact chambers with flash mixers in each chamber. Each chamber has a capacity of 4,700 gallons. The chamber used for dechlorination has a capacity of 1,100 gallons. The facility is equipped with the ability to dechlorinate effluent flows prior to discharge, but reports that dechlorination is not necessary to achieve compliance with the total residual chlorine effluent limit associated with this permit, and thus, does not utilize the system.

2. PERMIT SUMMARY (cont'd)

Return activated sludge (RAS) is pumped from the secondary clarifiers to the oxidation ditch to optimize system performance and efficiency. Excess sludge is wasted by either pumping from the secondary clarifiers to two 30,000-gallon settling tanks and then to two 160,000-gallon aerobic digesters, or by wasting directly from the clarifiers to the digesters. From the digesters, sludge treatment consists of lime stabilization and trucks subsequently haul the sludge off-site for land application, or the sludge is pumped to one of the four (4) on-site reed beds. The reed beds occupy a total combined area of approximately 11,640 square feet and contains an underdrain system that conveys flow back into the facility headworks building for treatment. The facility also contains a 10,500 square foot paved pad for sludge composting, which is also designed to drain back into the facility headworks. On March 27, 1988, the Town received approval in Department Order S-007175-61-A-R to land apply sludge at the Town Farm. The most recent renewal (Department Order #S-007175-SO-B-N) was issued on June 8, 2001.

Final effluent is conveyed for discharge to the Androscoggin River via a 18-inch diameter outfall system that is stepped down to a 12-inch outfall pipe extending out into the receiving water approximately 8 feet to a depth of approximately 8 feet below the surface of the water during low flow conditions. The outfall pipe is not fitted with diffusers or other structures designed to enhance mixing of the effluent with the receiving waters.

3. CONDITIONS OF PERMITS

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 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 530.5, *Surface Water Toxics Control Program*, require the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Waters Act.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 467(1)(A)(1) classifies the Androscoggin River at the point of discharge as a Class B waterway. Maine law, 38 M.R.S.A., Section 465(3), describes the standards for Class B waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 31.0-mile reach of the Androscoggin River, main stem, above Rumford Point (Hydrologic Unit Code #ME0104000202/Waterbody ID #421R), which includes the receiving water at the point of discharge, as, "Category 4-B-1: Rivers and Streams Impaired by Pollutants, Pollution Control Requirements Reasonably Expected to Result in Attainment." Impairment in this context refers to a statewide fish consumption advisory due to the presence of dioxin.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

In addition, the Report lists all freshwaters in Maine as “*Category 5-C: Waters Impaired by Atmospheric Deposition.*” Impairment in this context refers to the designated use of recreational fishing due to elevated levels of mercury in some fish caused by atmospheric deposition. As a result, the State has established a fish consumption advisory for all freshwaters in Maine. 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.

In addition, the Report identifies a 4.0-mile reach of the Androscoggin River, main stem, four miles upstream of the Gulf Island Dam (HUC #ME0104000208/Waterbody ID #424R) as, “*Category 5-A: Rivers and Streams Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D (TMDL Required).*” Impairment in this context refers to dissolved oxygen criteria for Class C waters, which is discussed further in the following paragraphs.

Current Water Quality Assessment/Modeling

Two segments of the Androscoggin River are on Maine’s 303d list as bodies of water that do not attain Class C water quality standards. According to the total maximum daily load (TMDL) entitled, *Androscoggin River Total Maximum Daily Load Gulf Island Pond, Livermore Falls Impoundment, May, 2005*, prepared by the Department, Gulf Island Pond (GIP) does not attain Class C minimum and monthly average dissolved oxygen (DO) criteria in a four-mile segment directly above Gulf Island Dam, primarily in deeper areas of the water column from 30 to 80 feet of depth. In addition, algae blooms occur from excessive amounts of phosphorus discharged to the river flowing into the pond preventing attainment of the designated uses of water contact recreation. In addition to GIP, the Livermore Falls impoundment just below the International Paper (IP) mill does not attain Class C aquatic life criteria, as indicated by recent water quality evaluations utilizing macro-invertebrate sampling and the use of a linear discriminate modeling.

The pollutants of concern are carbonaceous biochemical oxygen demand (CBOD), orthophosphate (ortho-P), total phosphorus (total-P), and total suspended solids (TSS). Reduction of phosphorus is needed to eliminate algae blooms in Gulf Island Pond. Reduction of CBOD, TSS, and phosphorus is needed to improve DO levels to attainment of Class C criteria. In addition, an in-stream oxygen injection system currently located five miles above Gulf Island Dam needs to be re-designed to inject an additional quantity of oxygen into the pond.

Discharges from paper mills located in Berlin, New Hampshire, Rumford, Maine, and Jay, Maine are the major sources of most of the pollutants affecting GIP water quality. Municipal point sources are located in Berlin, New Hampshire, Gorham, New Hampshire, Bethel, Maine, Rumford-Mexico, Maine, and Livermore Falls, Maine.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

TSS and algae contribute to sediment oxygen demand (SOD), a major source of oxygen depletion in the deeper areas of Gulf Island Pond. The Department investigated the importance of SOD, oxygen injection, and paper mill BOD input levels on dissolved oxygen levels and summarized the findings in a report entitled, *Androscoggin River Modeling Report and Alternative Analysis, June 2002*. Sediment oxygen demand was found to be the most important factor since the model prediction of DO changed the most within given percentages of change for SOD. Varying oxygen injection rates resulted in the second largest response to model prediction of DO and the amounts input for the paper mill BOD inputs resulted in the lowest response of the model DO. This is a useful exercise in showing that reducing pollutants that contribute to SOD (algae, TSS) and oxygen injection are more efficient remediation actions than reducing paper mill BOD. TSS is the major cause of non-attainment of Class C aquatic life criteria in the Livermore Falls impoundment.

Component analysis and river modeling indicate that the municipal sources of total-P and ortho-P from the Berlin, Gorham, Bethel and Rumford-Mexico POTWs have a *de-minimis* contribution to algae growth in Gulf Island Pond. However, all municipal point sources are included in the TMDL. The component analysis of phosphorus loads discharged in 2004 (Figure 10 of the TMDL) indicates that paper mills are still the largest source of phosphorus and account for about 70% of the total-P and 80% of the ortho-P entering the pond. International Paper is the largest single source accounting for 45% of the total-P and 57% of the ortho-P entering the pond. The Rumford Paper Company is the second largest single source of phosphorus, accounting for about 14% of the total-P and 21% of the ortho-P entering the pond. The Fraser Paper mill in Berlin, New Hampshire accounts for about 11% of the total-P entering the pond, but only 2% of the ortho-P entering the pond. All of the municipal discharges are an insignificant percentage of the total phosphorus entering the pond. The Bethel facility accounts for 0.4% of total phosphorus loads and 1.2% of ortho-P loads at the Gulf Island Pond entrance and is considered to be an insignificant contributor of ortho-P and total-P to the pond. Department modeling also demonstrates that the discharge of BOD and TSS from the Bethel facility is insignificant to SOD levels in and DO depletion of Gulf Island Pond. The Androscoggin River TMDL recommends total-P and ortho-P monitoring for the Bethel facility to assure phosphorus contributions do not increase significantly with time and evaluation of monitoring data upon completion of the initial phase of the TMDL to determine whether numeric limits are appropriate.

The rapid loss of ortho-P in the 2004 ambient data in the river from Berlin, New Hampshire to Jay, Maine implies a high ortho-P assimilation rate. The ortho-P appears to remain nearly constant from Jay to Turner, Maine implying a low ortho-P assimilation rate. The difference is likely because the Androscoggin River is shallower and more free-flowing from Berlin to Jay as opposed to below Jay, which is impounded and deep. Shallower water is more suited to growth of bottom-attached plants which uptake ortho-P. The Department's experience modeling ortho-P uptake in other rivers indicates that as ortho-P concentrations increase, the rate of assimilation of ortho-P also increases.

The threshold for phosphorus in the TMDL is to maintain the pond averaged chlorophyll-a to under 10 parts per billion (ppb). There are different combinations of total-P and ortho-P that could result in obtaining this goal.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Gulf Island Dam contributes to non-attainment of DO criteria and the growth of algae blooms by creating an environment of low water movement and low vertical mixing within the water column. Modeling also indicates that the presence of the dam accounts for about 20% of the algae levels in Gulf Island Pond with the TMDL implemented. Non-attainment of Class C DO criteria in deeper portions of the pond is predicted by the water quality model, even if point source discharges are eliminated, due to sediment oxygen demand from natural and non-point sources of pollution. There are limited opportunities for the control of significant amounts of non-point source pollution given the relatively undeveloped nature of this large watershed.

Based on identification through component analysis and river modeling that the Bethel wastewater treatment plant is not a significant source of phosphorus loading to Gulf Island Pond, this permitting action is establishing monitoring requirements for ortho-P and total-P, rather than numeric limitations, to facilitate the collection of data for continued evaluation of receiving water quality conditions. Additional discussion of phosphorus monitoring is included in Section 6(g) of this fact sheet.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

- a. Flow: The previous licensing action established a monthly average discharge flow limit of 0.34 million gallons per day (MGD) based on the design capacity of the treatment facility, which is being carried forward in this permitting action. This permitting action is also carrying forward the continuous recorder monitoring requirement for discharge flow and establishing a daily maximum discharge flow reporting requirement to assist in the evaluation of effluent data.
- b. Dilution Factors: Dilution factors associated with the discharge from the Bethel wastewater treatment plant were derived in accordance with freshwater protocols established in Department Regulation Chapter 530.5, *Surface Water Toxics Control Program*, October 1994. With a monthly average treatment plant design flow of 0.34 MGD, dilution calculations are as follows:

$$\text{Acute: } 1\text{Q}10 = 1,593 \text{ cfs} \quad \Rightarrow \frac{(1,593 \text{ cfs})(0.6464) + 0.34 \text{ MGD}}{0.34 \text{ MGD}} = 3,030:1$$

$$\text{Modified Acute: } \frac{1}{4} 1\text{Q}10 = 398 \text{ cfs} \quad \Rightarrow \frac{(398 \text{ cfs})(0.6464) + 0.34 \text{ MGD}}{0.34 \text{ MGD}} = 758:1$$

$$\text{Chronic: } 7\text{Q}10 = 1,593 \text{ cfs} \quad \Rightarrow \frac{(1,593 \text{ cfs})(0.6464) + 0.34 \text{ MGD}}{0.34 \text{ MGD}} = 3,030:1$$

$$\text{Harmonic Mean} = 2,129 \text{ cfs} \quad \Rightarrow \frac{(2,129 \text{ cfs})(0.6464) + 0.34 \text{ MGD}}{0.34 \text{ MGD}} = 4,049:1$$

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

Department rule Chapter 530.5 states:

Analysis using numerical acute criteria for aquatic life must be based on ¼ of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone, according to EPA's Mixing Zone Policy and to ensure a Zone of Passage of at least ¾ of the cross-sectional area of any stream as required by Department rule. Where it can be demonstrated that a discharge achieves complete and rapid mixing with the receiving water, by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design flow, up to and including all of it, as long as the required Zone of Passage is maintained.

The Town has not submitted site-specific information or data to the Department to demonstrate the mixing characteristics of the effluent with the receiving waters. Therefore, the Department is utilizing the default stream flow of ¼ 1Q10 in acute evaluations in accordance with Chapter 530.5.

- c. Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS): The previous licensing action established monthly average and weekly average BOD₅ & TSS concentration limits of 30 mg/L and 45 mg/L, respectively, which were based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B) as defined in 40 CFR 133.102 and Department rule 06-096 CMR Chapter 525(3)(III). The previous licensing action also established daily maximum BOD₅ & TSS concentration limits of 50 mg/L based on a Department best professional judgment (BPJ) of best practicable treatment (BPT). All three technology-based concentration limits are being carried forward in this permitting action.

Department rule 06-096 CMR Chapter 523(6)(f) states that all pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass. The previous licensing action established monthly average, weekly average and daily maximum technology-based mass limits of 75 lbs./day, 113 lbs./day, and 125 lbs./day, respectively. The previous licensing action states that the mass limits were derived using the monthly average discharge flow limit of 0.34 MGD; however, this permitting action is identifying that the mass limits were derived in error based on the previous flow limit of 0.30 MGD associated with the 5/25/94 licensing action. Generally, anti-backsliding provisions found in Chapter 523(5)(1) of the Department's rules prohibit the Department from reissuing a permit with less stringent limitations than the previous license/permit. Department rule Chapter 523(5)(1)(2) state, "*In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued or modified on the basis of effluent guidelines promulgated under section 304(b) of the CWA subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.*" Chapter 523(5)(1)(2)(i)(B)(1) of the Department's rules does, however, authorize backsliding if the Department determines that "*technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b) of the*

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

CWA.” In the case of the Town of Bethel and WDL #W002595-5L-D-R, the Department is identifying that a technical error was made in establishing BOD₅ & TSS mass effluent limits based on a discharge flow limit of 0.30 MGD. Therefore, the anti-backsliding provisions of the Department’s rules have been sufficiently satisfied in that revising (increasing) the monthly average, weekly average and daily maximum mass limits for BOD₅ & TSS to 85 lbs./day, 128 lbs./day and 142 lbs./day, respectively, based on the permitted discharge flow limit of 0.34 MGD is appropriate and justified at this time. BOD₅ & TSS mass limits were derived as follows:

Monthly Average Mass Limit: $(30 \text{ mg/L})(8.34 \text{ lbs./gallon})(0.34 \text{ MGD}) = 85 \text{ lbs./day}$
Weekly Average Mass Limit: $(45 \text{ mg/L})(8.34 \text{ lbs./gallon})(0.34 \text{ MGD}) = 128 \text{ lbs./day}$
Daily Maximum Mass Limit: $(50 \text{ mg/L})(8.34 \text{ lbs./gallon})(0.34 \text{ MGD}) = 142 \text{ lbs./day}$

This permitting action is establishing a new requirement for a minimum of 85% removal of BOD₅ & TSS pursuant to Department rule 06-096 CMR Chapter 525(3)(III)(a)(3) and (b)(3).

This permitting action is carrying forward the minimum monitoring frequency requirement of once per week (1/Week) based on Department guidance for POTWs permitted to discharge between 0.1 and 0.5 MGD, and a 24-hour composite sample type for BOD₅ & TSS.

- d. Settleable Solids: The previous licensing action established a daily maximum technology-based concentration limit of 0.3 ml/L for settleable solids and a minimum monitoring frequency requirement of once per day (1/Day), which are being carried forward in this permitting action. The daily maximum concentration limit of 0.3 ml/L is based on a Department BPJ determination that this limit provides sufficient information to assess whether the treatment facility is providing BPT, and the minimum monitoring frequency requirement is based on Department guidance for POTWs permitted to discharge between 0.1 and 0.5 MGD.
- e. Escherichia coli: The previous licensing action established, and this permitting action is carrying forward, seasonal (May 15 – September 30) monthly average and daily maximum concentration limits for *E. coli* bacteria of 64 colonies/100 ml (geometric mean) and 427 colonies/100 ml (instantaneous level), respectively, which are based on the State of Maine Water Classification Program criteria for Class B waters found at 38 M.R.S.A. §465(3)(B), and a minimum monitoring frequency requirement of once per week (1/Week) based on Department guidance for POTWs permitted to discharge between 0.1 and 0.5 MGD. Although *E. coli* bacteria limits are seasonal and apply between May 15 and September 30 of each year, the Department reserves the right to impose year-round bacteria limits if deemed necessary to protect the health, safety and welfare of the public.

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

- f. Total Residual Chlorine (TRC): The previous licensing action established a daily maximum technology-based concentration limit of 1.0 mg/L for TRC and a minimum monitoring frequency requirement of once per day. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department licensing/permitting actions impose the more stringent of either a water quality-based or BPT based limit. End-of-pipe acute and chronic water quality based concentration thresholds may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	Modified A & C Dilution Factors	Calculated	
			Acute Threshold	Chronic Threshold
0.019 mg/L	0.011 mg/L	758:1 (Mod. A) 3,030:1 (C)	14.4 mg/L	33.3 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. The BPT-based limit of 1.0 mg/L is more stringent than the calculated acute water quality-based threshold of 14.4 mg/L and is therefore being carried forward in this permitting action. This permitting action is carrying forward the minimum monitoring frequency once per day (1/Day) based on Department guidance for POTWs permitted to discharge between 0.1 and 0.5 MGD. TRC monitoring must be performed during any period in which chlorine-based compounds are in for effluent disinfection. For instances when chlorine-based compounds are not used for disinfection during an entire reporting period, the facility shall report “**NODI-9**” for this parameter on the monthly Discharge Monitoring Report (DMR).

- g. Total Phosphorus (Total-P) and Orthophosphate (Ortho-P): The previous licensing action did not establish phosphorus limits or monitoring requirements for the Bethel wastewater treatment plant discharge. As discussed in Section 5 of this Fact Sheet, *Receiving Water Quality Conditions*, component analysis and river modeling performed by the Department indicates that the Town’s discharge does not constitute a significant source of phosphorus loading to the Androscoggin River and Gulf Island Pond. However, the TMDL recommends phosphorus monitoring at the Bethel facility to assure phosphorus contributions do not increase significantly with time. Therefore, this permitting action is:
 - 1) Establishing monthly average concentration and mass reporting requirements for total-P and ortho-P between June 1 and September 30 of each year;
 - 2) Establishing weekly average concentration and mass reporting requirements for total-P and ortho-P during the period of June 1, 2006 through September 30, 2006;
 - 3) Establishing a minimum monitoring frequency requirement of once per week (1/Week) for total-P and ortho-P through September 30, 2006;
 - 4) Revising the minimum monitoring frequency requirement for total-P from once per week to once per month (1/Month) beginning June 1, 2007 and lasting through permit expiration;

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

- 5) Revising the minimum monitoring frequency requirement for ortho-P from once per week to twice per month (2/Month) beginning June 1, 2007 and lasting through permit expiration;
- 6) Eliminating weekly average concentration and mass reporting requirements for total-P and ortho-P upon completion of calendar year 2007 phosphorus monitoring.

In accordance with Special Condition M of this permit, the Department reserves the right to re-open this permit at any time, with notice to the permittee, to revise the monitoring frequencies and/or establish effluent limits for phosphorus based on the final Androscoggin River TMDL. Total P and ortho-P sampling and analysis shall be performed in accordance with Attachments A and B of this permit, respectively, unless otherwise specified by the Department.

- h. pH: The previous licensing action established a pH range limit of 6.0 – 8.5 standard units (SU), which was based on a Department BPJ of BPT for secondary treated wastewater at that time, and a minimum monitoring frequency requirement of once per week. Pursuant to a new Department rule found at Chapter 525(3)(III)(c), this permitting action is revising the pH range limitation to 6.0 – 9.0 SU, which is now considered BPT for secondary treated wastewater. This permitting actions carrying forward the minimum monitoring frequency requirement of once per day (1/Day) based on Department guidance for POTWs permitted to discharge between 0.1 and 0.5 MGD.
- i. Whole Effluent Toxicity (WET) & Chemical-Specific Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department rule 06-096 CMR Chapter 530.5, *Surface Water Toxics Control Program* (“toxics rule”), set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

The toxics rule contains provision at Chapter 530.5(B)(7)(d) for the exemption of certain municipal discharges from testing requirements. The rule states, “*Discharges from publicly owned treatment works which are not classified by USEPA as major and which discharge to receiving waters with a dilution factor of at least 1000:1, provided that the POTW receives no process wastes from sources for which pretreatment standards have been promulgated by the USEPA*” are exempt from testing requirements of the toxics rule. The chronic dilution factor associated with the discharge from the Bethel wastewater treatment plant is greater than 1,000:1, the facility is not categorized as a major facility by the USEPA, and the facility does not receive process wastewater from sources for which pretreatment standards have been promulgated by the USEPA. Therefore, this permitting action is identifying that the Town is exempt from the testing requirements established in Chapter 530.5 of the Department’s rules.

The Department does, however, reserve the right to impose toxics testing pursuant to Chapter 530.5 at any time, with notice to the permittee, if deemed necessary and appropriate to protect water quality and designated uses of the receiving waters.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

8. ANTI-BACKSLIDING

This permitting action is revising (increasing) the monthly average, weekly average and daily maximum mass limits for BOD₅ and TSS from the limits established in the previous licensing action based on a technical error that was made in establishing the previous limits. The rationale for revising the mass limits is contained in Fact Sheet Section 6, *Effluent Limitations and Monitoring Requirements*. Department rule Chapter 523(5)(1) contains the criteria for what is often referred to as the anti-backsliding provisions of the Federal Water Pollution Control Act (Clean Water Act). In general, the rule authorizes a permit to be reissued with less stringent limitations if “*the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b) of the CWA .*” The action to revise the BOD₅ and TSS mass limits is consistent with the allowable exemptions to the anti-backsliding provisions.

9. PUBLIC COMMENTS

Public notice of this application was made in the *Bethel Citizen* newspaper on or about May 13, 2005 and in the *Lewiston Sun* newspaper on or about May 19, 2005. 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.

10. DEPARTMENT CONTACTS

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

William Hinkel
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-7659

11. RESPONSE TO COMMENTS

During the period of May 13, 2005 through June 13, 2005, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the Town. No significant comments were received during the public comment period; therefore, a response to comments was not prepared.