May 30, 2008

Mr. Shawn Brown
Town of Norway
19 Danforth Street
Norway, ME. 04268

RE: Maine Pollutant Discharge Elimination System Permit #ME0100455
Maine Waste Discharge License Application #W002647-5L-E-R
Final Permit/License

Dear Mr. Brown:

Enclosed please find a copy of your **final** MEPDES permit/WDL which was approved by the Department of Environmental Protection. You must follow the conditions in the permit 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: Fred Gallant, DEP/SMRO
Sandy Lao, USEPA

IN THE MATTER OF

TOWN OF NORWAY	)	MAINE POLLUTANT DISCHARGE
NORWAY, OXFORD COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS)		AND
ME0100455	)	WASTE DISCHARGE LICENSE
W002647-5L-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 hereinafter) has considered the application of the TOWN OF NORWAY (Norway hereinafter)**,** with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

Norway has submitted an application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100455/Waste Discharge License #W002647-5L-D-R (permit hereinafter) that was issued by the Department on May 3, 2001 and expired on May 3, 2006. The permit approved the seasonal discharge of secondary treated waste water from the Norway municipal waste water treatment facility to the Little Androscoggin River, Class C, in Norway, Maine. The permit approved the monthly average discharge flow according to the following schedule:

Jan. 1 – May 15	**May 16 – June 15**	**June 16 – Aug. 31**	**Sept. 1 – Dec. 31**
0.975 MGD	0.755 MGD	No discharge	0.755 MGD
River Q $\geq$ 31 CFS	River Q $\geq$ 31 CFS	----	River Q $\geq$ 31 CFS

MODIFICATIONS REQUESTED

The permittee has requested a modification of the flow regimes cited above as follows:

1. Extend the January 1 – May 15 time frame to January 1 – May 31.

2. Shorten the May 16 – June 15 time frame to June 1 – June 15 based on extending the time frame in #1 above.

3. Increase the monthly average flow limit from 0.755 MGD to 0.975 MGD for the time frame September 1 – December 31.

The requested modifications would be as follows:

Jan. 1 – May 31	**June 1 – June 15**	**June 16 – Aug. 31**	**Sept. 1 – Dec. 31**
0.975 MGD	0.755 MGD	No discharge	0.975 MGD
River Q $\geq$ 31 CFS	River Q $\geq$ 31 CFS	----	River Q $\geq$ 31 CFS

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the previous permitting action with the following exceptions.

1. Modifying the flow regimes as requested by the permittee.

2. Reducing the monitoring frequency for settleable solids from 1/Day to 3/Week.

3. Reducing the monthly average *E. coli* bacteria limitation.

4. Modifying the whole effluent toxicity (WET) and chemical specific testing requirements to be consistent with the testing requirements specified in Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, promulgated on October 12, 2005.

5. Establishing monthly average water quality based mass and concentration limits for copper and lead.

6. Eliminating monthly average water quality based mass and concentration limits for silver.

7. Modifying the sample type for biochemical oxygen demand (BOD) and total suspended solids (TSS) from grab to 24-hour composite.

8. Requiring the submission of a toxicity reduction evaluation (TRE) for the water flea.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated April 28, 2008 and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

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

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:

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

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

    c. The standards of classification of the receiving water body are met or, 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 quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharges will be subject to effluent limitations that require application of best practicable treatment (BPT).

ACTION

THEREFORE, the Department APPROVES the application of the TOWN OF NORWAY to seasonally discharge up to a monthly average flow of 0.975 MGD of secondary treated waste waters to the Little Androscoggin River, Class C, in Norway, Maine. The discharges shall be 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 expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS ---2nd DAY OF JUNE 2008.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY:_____
David Littell, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application March 16, 2006.

Date of application acceptance March 16, 2006.

Date filed with Board of Environmental Protection _____

This Order prepared by GREGG WOOD, BUREAU OF LAND & WATER QUALITY

SPECIAL CONDITIONS

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

1. Beginning upon issuance of this permit, the permittee is authorized to discharge secondary treated waste water from **Outfall #001A** to the Little Androscoggin River. Such discharges shall be limited and monitored by the permittee as specified below. **No discharge is authorized when the flow in the Little Androscoggin River at the point of discharge is less than 31 cfs(1).**

June 1 - June 15 of each year.

Effluent Characteristic	Discharge Limitations			Minimum Monitoring Requirements				
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	0.755 MGD *[03]*	---	---	---	---	---	Continuous *[99/99]*	Recorder*[RC]*
Biochemical Oxygen Demand *[00310]*	189 lbs/day *[26]*	283 lbs/day *[26]*	315 lbs/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	2/Week *[02/07]*	24 Hour Composite *[24]*
BOD % Removal(2) *[81010]*	---	---	---	---	---	85% *[23]*	1/Month *[01/30]*	Calculate *[CA]*
Total Suspended Solids *[00530]*	189 lbs/day *[26]*	283 lbs/day *[26]*	315 lbs/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	2/Week *[02/07]*	24 Hour Composite [24]
TSS % Removal(2) *[81011]*	---	---	---	---	---	85% *[23]*	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	3/Week *[03/07]*	Grab *[GR]*
E. Coli Bacteria *[31633]* (*May 15 – September 30*) (3)	---	---	---	126/100 ml(4) *[13]*	---	949/100 ml *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine (5) *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.3 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH (Std. Unit) *[00400]*	---	---	---	---	---	6.0 – 9.0 *[12]*	1/Day *[01/01]*	Grab *[GR)*
Copper (Total) *[01042]*	0.32 #/day *[26]*	---	---	58 ug/L *[28]*	---	---	2/Year *[02/YR]*	24 Hour Composite [24]
Lead (Total) *[01051]*	0.054 #/day *[26]*	---	---	10 ug/L *[28]*	---	---	2/Year*[02/YR]*	24 Hour Composite [24]

SPECIAL CONDITIONS
A. FLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd) – OUTFALL #001B

2. Beginning upon issuance of this permit, the permittee is authorized to discharge secondary treated waste water from **Outfall #001B** to the Little Androscoggin River. Such discharges shall be limited and monitored by the permittee as specified below. **No discharge is authorized when the river flow in the Little Androscoggin River at the point of discharge is less than 31 cfs(1).**

January 1 – May 31 and September 1 - December 31 of each year.

Effluent Characteristic	Discharge Limitations			Minimum Monitoring Requirements				
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	0.975 MGD *[03]*	---	---	---	---	---	Continuous *[99/99]*	Recorder*[RC]*
Biochemical Oxygen Demand *[00310]*	244 lbs/day *[26]*	366 lbs/day *[26]*	407 lbs/day *[26]*	30 mg/L *[19]* *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	2/Week *[02/07]*	24 Hour Composite *[24]*
BOD % Removal(2) *[81010]*	---	---	---	---	---	85% *[23]*	1/Month *[01/30]*	Calculate *[CA]*
Total Suspended Solids *[00530]*	244 lbs/day *[26]*	366 lbs/day *[26]*	407 lbs/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	2/Week *[02/07]*	24 Hour Composite [24]
TSS % Removal(2) *[81011]*	---	---	---	---	---	85% *[23]*	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	3/Week *[03/07]*	Grab *[GR]*
E. Coli Bacteria *[31633]* (*May 15 – September 30*) (3)	---	---	---	126/100 ml(4) *[13]*	---	949/100 ml *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine (5) *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.3 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH (Std. Unit) *[00400]*	---	---	---	---	---	6.0 – 9.0*[12]*	1/Day *[01/01]*	Grab *[GR)*
Copper (Total) *[01042]*	0.32 #/day *[26]*	---	---	58 ug/L *[28]*	---	---	2/Year *[02/YR]*	24 Hour Composite [24]
Lead (Total) *[01051]*	0.054 #/day*[26]*	---	---	10 ug/L *[28]*	---	---	2/Year *[02/YR]*	24 Hour Composite [24]

SPECIAL CONDITIONS

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

SURVEILLANCE LEVEL - Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity **(6)**						
Acute – NOEL						
Ceriodaphnia dubia [TDA3B] *(Water flea)*	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
Salvelinus fontinalis [TDA6F] *(Brook trout)*	---	---	---	Report % [23]	1/2 Years [01/2Y]	Composite [24]
Chronic – NOEL						
Ceriodaphnia dubia [TBP3B] *(Water flea)*	---	---	---	4.6 % [23]	1/Year [01/YR]	Composite [24]
Salvelinus fontinalis [TBQ3B] *(Brook trout)*	---	---	---	Report % [23]	1/2 Years [01/2Y]	Composite [24]
Analytical chemistry **(7)** [51168]	---	---	---	Report ug/L [28]	1/2 Years [01/2Y]	Composite/Grab [24]

SPECIAL CONDITIONS

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

SCREENING LEVEL - Beginning 12 months prior to permit expiration and every five years thereafter.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity **(6)**						
Acute – NOEL						
Ceriodaphnia dubia *[TDA3B]* *(Water flea)*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis *[TDA6F]* *(Brook trout)*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia *[TBP3B]* *(Water flea)*	---	---	---	4.6 % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis *[TBQ3B]* *(Brook trout)*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Analytical chemistry **(7)** *[51168]*	---	---	---	Report ug/L *[28]*	3/Year *[03/YR]*	Composite/Grab *[24]*
Priority Pollutant **(8)** *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

SPECIAL CONDITIONS

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

Footnotes:

Sampling –Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

All detectable 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. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the detection limit achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit.

1. **Discharge dates** - During the period June 16 – August 31, the Department may authorize a discharge on a day-by-day basis in order to protect the integrity of the treatment lagoons during those periods when the river flow is below 31 cfs at the point of discharge. **The permittee must obtain authorization in writing from the Department prior to discharging under these circumstances**.

2. **Percent removal** – The facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS. Compliance with the limitation is based on a twelve-month rolling average. Calendar monthly average percent removal values shall be calculated based on influent and effluent concentrations. The percent removal is not applicable when the monthly average influent concentration is less than 200 mg/L and shall not be included in the rolling average calculations. For the purposes of this permitting action, the twelve-month rolling average calculation is based on the most recent twelve-month period. The permittee is required to report the percent removal values on the monthly discharge monitoring report (DMR) and on the DEP "49" form.

SPECIAL CONDITIONS

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

Footnotes:

3. ***E. coli.* bacteria** - Limits are seasonal and apply between May 15 and September 30 of each calendar year. The Department reserves the right to require year-round disinfection to protect the health and safety and welfare of the public.

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

5. **Total Residual Chlorine (TRC)** – Limitations and monitoring requirements are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The EPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (most current approved edition), Method 4500-CL-E and Method 4500-CL-G or U.S.E.P.A. Manual of Methods of Analysis of Water and Wastes.

6. **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 water quality thresholds of 4.6% - mathematical inverse of the acute and chronic dilution factor of 21.6:1), 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.

    a. **Surveillance level testing** - Beginning upon issuance of this permit and last through 12 months prior to the expiration date of the permit, the permittee shall conduct surveillance level WET testing at a minimum frequency of once per year (1/Year) on the water flea (*Ceriodaphnia dubia*) and once per two years (1/2 Years) for the brook trout (*Salvelinus fontinalis*). Testing for both species shall be conducted in a different calendar quarter of each year and testing on the water flea shall conducted with at least three months between testing events.

SPECIAL CONDITIONS

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

Footnotes:

b. **Screening level testing** – Beginning 12 months prior to the expiration date of the permit and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level WET testing at a minimum frequency of two times per year (2/Year) with at least three months between each testing event. Testing shall be conducted on the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*).

WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days after receiving the test results from the laboratory conducting the testing before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 4.6%.

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

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

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

Each time a WET test is performed, the permittee shall sample and analyze for the nine (9) parameters in the WET Chemistry and the twelve (12) parameters in the Analytical Chemistry sections of the Department form entitled, *Maine Department of Environmental Protection, WET and Chemical Specific Data Report Form*. See Attachment A of this permit.

7. **Analytical chemistry** – Refers to a suite of chemical tests that include ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total lead, total nickel, total silver, total zinc and total residual chlorine.

a. **Surveillance level testing** – Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration, the permittee shall conduct surveillance level analytical chemistry testing at a minimum frequency of once every other year (1/2 Years). Testing shall be conducted in a different calendar quarter of each year.

SPECIAL CONDITIONS

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

Footnotes:

b. **Screening level testing** - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level analytical chemistry testing at a minimum frequency of three per year (3/Year).

8. **Priority pollutant** testing – Priority pollutants are those parameters listed by Department rule, Chapter 525, Section 4(IV). Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year). Surveillance level priority pollutant testing is not required by this permitting action pursuant to Chapter 530 testing requirements.

   Analytical chemistry and priority pollutant testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, when applicable. Testing shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department. See Attachment A of this Fact Sheet for a list of the Department's reporting limits. 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 ten (10) business days after receiving the test results from the laboratory conducting the testing before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in Department rule Chapter 584. For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

   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, *Effluent Mercury Test Report*, of this permit for the Department's form for reporting mercury test results.

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 usage's 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 usage's 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

Disinfection shall be used to reduce the concentration of bacteria to or below the level specified in the "*Effluent Limitations and Monitoring Requirements*" section of this permit. If chlorination is used as the means of disinfection, an approved chlorine detention must be utilized. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The final effluent concentration of total residual chlorine, prior to dechlorination if present, must at all times be maintained at a concentration greater than test method detection limits in order to provide effective reduction of bacteria to levels below those specified in Special Condition A, "*Effluent Limitations and Monitoring Requirements"*.

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a **Grade II** certificate (or Registered Maine Professional Engineer) pursuant to *Sewerage Treatment Operators*, Title 32 M.R.S.A., Sections 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.

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.

SPECIAL CONDITIONS

F. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on March 16, 2006; 2) the terms and conditions of this permit; and 3) only from Outfall #00. 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)(*Bypass*) of this permit.

G. NOTIFICATION REQUIREMENT

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

1. Any introduction of pollutants into the waste water collection and treatment system from an indirect discharger in a primary industrial category discharging process waste water; and

2. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system 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 waste water introduced to the waste water collection and treatment system; and

   (b) any anticipated impact caused by the change in the quantity or quality of the waste water to be discharged from the treatment system.

H. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

The permittee is not authorized to receive septage from commercial septage haulers without a formal modification of this permit to do so. The permittee is authorized to accept holding tank wastes which is considered influent to the waste water treatment facility.

SPECIAL CONDITIONS

I. WET WEATHER FLOW MANAGEMENT PLAN

The permittee shall maintain an up-to-date 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. **The permittee shall review their plan annually** and record any necessary changes to keep the plan up to date.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit an updated O&M Plan to their Department inspector for review and comment. 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 and within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

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

On or before December 31 of each year ***[PCS code 959799]*** the permittee is required to file a statement with the Department describing the following.

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; and

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

Further, the Department may require that annual testing be re-instituted if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

SPECIAL CONDITIONS

K. TOXICITY REDUCTION EVALUATION (TRE)

Within forty-five (45) days of the effective date of this permit, ***[PCS code 02199]*** the permittee shall submit to the Department for review and approval, a TRE plan which outlines a strategy to identify the source(s) and action items to be implemented to mitigate or eliminate exceedences of the critical chronic ambient water quality threshold of 4.6% associated with the water flea.

L. OPERATION & MAINTENANCE (O&M) PLAN

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

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

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

M. MONITORING AND REPORTING

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

Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
312 Canco Road
Portland, Maine 04103

SPECIAL CONDITIONS

N. 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.

O. 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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **April 28, 2008**

PERMIT NUMBER: **ME0100455**
LICENSE NUMBER: **W002647-5L-E-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF NORWAY
19 Danforth Street
Norway, ME. 04268

COUNTY**:** **Oxford County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

43 Brown Street
Norway, Maine

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

COGNIZANT OFFICIAL AND TELEPHONE NUMBER**:** **Mr. Shawn Brown, Supt.**
(207) 743-5304
email: sbrown@megalink.net

1. APPLICATION SUMMARY

The Town of Norway has submitted an application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100455/Waste Discharge License #W002647-5L-D-R (permit hereinafter) issued by the Department on May 3, 2001 and expired on May 3, 2006. The permit approved the seasonal discharge of secondary treated waste water from the Norway municipal waste water treatment facility to the Little Androscoggin River, Class C, in Norway, Maine. See Attachment A of this Fact Sheet for a location map. The permit approved the monthly average discharge according to the following schedule:

Jan. 1 – May 15	May 16 – June 15	June 16 – Aug. 31	Sept. 1 – Dec. 31
0.975 MGD	0.755 MGD	No discharge	0.755 MGD
River Q $\geq$ 31 CFS	River Q $\geq$ 31 CFS	----	River Q $\geq$ 31 CFS

2. MODIFICATIONS REQUESTED

The permittee has requested a modification of the flow regimes cited above as follows:

a. Extend the January 1 – May 15 time frame to January 1 – May 31.

b. Shorten the May 16 – June 15 time frame to June 1 – June 15 based on extending the time frame in #1 above.

c. Increase the monthly average flow limit from 0.755 MGD to 0.975 MGD for the time frame September 1 – December 31.

The requested modifications would be as follows:

Jan. 1 – *May 31*	***June 1* – June 15**	**June 16 – Aug. 31**	**Sept. 1 – Dec. 31**
0.975 MGD	0.755 MGD	No discharge	*0.975 MGD*
River Q $\geq$ 31 CFS	River Q $\geq$ 31 CFS	----	River Q $\geq$ 31 CFS

3. PERMIT SUMMARY

a. Terms and Conditions – This permitting action is carrying forward all the terms and conditions of the previous permitting action with the following exceptions.

1. Modifying the flow regimes as requested by the permittee.

2. Reducing the monitoring frequency for settleable solids from 1/Day to 3/Week.

3. Reducing the monthly average *E. coli* bacteria limitation.

4. Modifying the whole effluent toxicity (WET) and chemical specific testing requirements to be consistent with the testing requirements specified in Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, promulgated on October 12, 2005.

5. Establishing monthly average water quality based mass and concentration limits for copper and lead.

6. Eliminating monthly average water quality based mass and concentration limits for silver.

7. Modifying the sample type for biochemical oxygen demand (BOD) and total suspended solids (TSS) from grab to 24-hour composite.

8. Requiring the submission of a toxicity reduction evaluation (TRE) for the water flea.

3. PERMIT SUMMARY (cont'd)

b. History: Relevant regulatory actions for the Town of Norway's waste water treatment facility include the following:

September 28, 1994 – The Department issued WDL #W002647-46-C-R for a five-year term.

August 20, 1999 – The U.S. Environmental Protection Agency (EPA) issued a renewal of National Pollutant Discharge Elimination System (NPDES) permit #ME0100455 for a five-year term.

May 23, 2000 – The Department administratively modified the 9/28/94 WDL by establishing interim average and maximum concentration limits for the discharge of mercury from the waste water treatment facility.

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

May 3, 2001 – The Department issued combination MEPDES permit #ME0100455/WDL #W002647-5L-D-R for a five-year term.

March 16, 2006 – The Town of Norway submitted a timely and complete application to the Department to renew the MEPDES permit/WDL.

April 10, 2006 – The Department initiated a modification of the 5/3/01 MEPDES permit by revising the whole effluent toxicity (WET) testing and chemical specific testing requirements based on revised Department regulations entitled, Chapter 530, *Surface Water Toxics Control Program,* and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants,* both promulgated on October 12, 2005.

c. Source Description: The facility located on Brown Street in Norway (See Attachment A of this Fact Sheet for a location map), treats domestic, industrial and commercial waste waters from the surrounding town. There are no significant industrial users contributing flows greater than 10% of Norway's influent flow. Norway maintains separate sanitary and stormwater collection systems. The waste water treatment facility does not accept septage.

The sanitary sewer collection system is approximately 25 miles in length with 9 pump stations. All pump stations have receptacles whereby portable generators are used to provide back-up power during a power outage.

3. PERMIT SUMMARY (cont'd)

d. Waste Water Treatment: Screenings and grit are removed at the headworks by means of an automatic bar rack and aerated grit chamber. Biological treatment is accomplished by two aerated lagoons each with a volume of approximately 26 million gallons for a total of 52 million gallons. Secondary effluent is chlorinated in a contact tank and dechlorinated prior to being discharged to the Little Androscoggin River through an outfall pipe measuring 18 inches in diameter without a diffuser but has been determined by the Department to receive rapid and complete mixing with the receiving waters. See Attachment B of this Fact Sheet for a schematic of the waste water treatment facility.

4. CONDITIONS OF PERMITS

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

5. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 467 (1) (B) indicates that the Little Androscoggin River from the Maine Central Railroad bridge in South Paris to its confluence with the Androscoggin River is classified as a Class C waterway. Maine law 38 M.R. S.A. Section 465 (4) describes the classification standards for Class C waters.

6. RECEIVING WATER QUALITY CONDITIONS

A document entitled, 2006 Integrated Water Quality Monitoring And Assessment Report, (referred to as the 305b Report) published by the Department pursuant to Section 305(b) of the Federal Water Pollution Control Act lists two segments of the Little Androscoggin River, Class C, (totaling 37 miles) beginning below the Rt. 26 bridges in Paris to its confluence with the Androscoggin River in a category entitled; *Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information For Other Uses*. In addition, all freshwaters in Maine are listed in a category entitled, *Category 5-C: Waters Impaired By Atmospheric Deposition of Mercury. Regional or National TMDL May Be Required*. The impairment is the designated use of fishing (consumption) as the result of a fish consumption advisory due to elevated levels of mercury in fish tissue.

7. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Flow - The following table and text are excerpted from the May 3, 2001 MEPDES permit:

"A waste load allocation report prepared by the MDEP prior to the 1994 permit re-issuance recommended that the loading of phosphorus in the receiving water should be significantly reduced to meet the dissolved oxygen (D.O.) standards. Phosphorus enrichment allows benthic algae to thrive. An overabundance of oxygen consuming blue-green algae depresses D.O. in the receiving waters. Withholding plant effluent flows during summer months deprives benthic algae of a key nutrient and prevents excessive growth. Effluent limits have been carried forward during this reissuance which limit the plant discharge on a seasonal and stream flow magnitude basis, in order for the Class C dissolved oxygen water quality standard to be maintained."

Discharge is prohibited from June 16 through August 31 and when the river flow is less than 20 cfs at the West Paris Gage station. A flow of 20 cfs at West Paris translates to a flow of 31 cfs (20 MGD) at Norway after taking into consideration the additional drainage between the gage and the point of discharge. Effluent limits are commensurately increased during other times of the year (see table below).

Jan. 1 – May 15	***May 16 – June 15***	***June 16 – Aug. 31***	***Sept. 1 – Dec. 31***
0.975 MGD	*0.755 MGD*	*No discharge*	*0.755 MGD*
River Q ≥ 31 CFS	*River Q ≥ 31 CFS*	*----*	*River Q ≥ 31 CFS*

It is noted the previous permitting action increased the period in which the plant may discharge at a rate of 0.975 MGD by 15 days (from April 30 to May 15) after consideration by the Department's staff responsible for water quality evaluations. The additional 15 days of discharge at the higher rate allows the plant to release an additional 3.3 million gallons from the lagoon system when the receiving water is least at risk of being negatively impacted by the discharge, lowers pond levels and improves plant performance. The Department concluded that the extended high flow period will have no adverse effect on river water quality. Therefore, the flow regime cited above is being carried forward in this permitting action.

The permittee has requested the Department modify the discharge flow regime in accordance with see Section 2, *Modifications Requested*, of this Fact Sheet. The Department is granting the requested modifications to give the facility greater flexibility in discharging greater quantities of waste water during the limited time the flow in the Little Androscoggin River is greater than or equal to 31 cfs at the point of discharge. Therefore, the flow regime established in this permit is as follows:

Jan. 1 – May 31	**June 1 – June 15**	**June 16 – Aug. 31**	**Sept. 1 – Dec. 31**
0.975 MGD	0.755 MGD	No discharge	0.975 MGD
River Q ≥ 31 CFS	River Q ≥ 31 CFS	----	River Q ≥ 31 CFS

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

A review of the Discharge Monitoring Report (DMR) data for the period January 2005 through April 2007 indicates seasonal flows discharged have been reported as follows:

Flow – January - June

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.975	0.296 – 0.939	0.55
Daily Maximum	Report	0.303 – 0.995	0.77

Flow – September - December

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.755	0.378 – 0.826	0.62
Daily Maximum	Report	0.675 – 0.965	0.77

b. Dilution Factors: The dilution factors associated with the discharge from the Norway waste water treatment facility were derived in accordance with freshwater protocols established in Department Regulation Chapter 530, *Surface Water Toxics Control Program*, October 2005. Being that this permit authorizes seasonal flow limitations (0.775 MGD and 0.975 MGD) the Department has chosen the most conservative approach to determine dilution factors by utilizing the monthly average flow limitation of 0.975 MGD and the receiving water trigger flow of 31 cfs for discharge. With a monthly average treatment plant design flow of 0.975 MGD, dilution calculations are as follows:

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

$$\text{Acute Dilution} = \frac{(31\ \text{cfs}^{(1)})(0.6464) + 0.975\ \text{MGD}}{0.975\ \text{MGD}} = 21.6{:}1$$

$$\text{Chronic Dilution} = \frac{(31\ \text{cfs})(0.6464) + 0.975\ \text{MGD}}{0.975\ \text{MGD}} = 21.6{:}1$$

$$\text{Harmonic Dilution}^{(2)} = \frac{(105\ \text{cfs})(0.6464) + 0.975\ \text{MGD}}{0.975\ \text{MGD}} = 70.6{:}1$$

Footnotes:

1. A flow of 20 CFS at the U.S. Geological Survey gauge in West Paris (Snow Falls) translates to a flow of 31 CFS (20 MGD) at Norway. A flow of 31 cfs is the minimum river flow at which the facility may discharge and is therefore substituted for the actual 1Q10 and 7Q10 river flows. Department staff have determined that the effluent received "rapid and complete mixing" pursuant to Chapter 530(4)(B)(1)based on observations from a dye study conducted in 1998.

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

Footnotes (cont'd)

2. The harmonic mean dilution is a long-term average dilution and the receiving water flow in the calculation is based on a statistical evaluation of the long term flow data from the West Paris Gage.

All water quality based limits in this permit have been derived using the dilution factors above.

c. Biochemical Oxygen Demand & Total Suspended Solids - The monthly and weekly average biochemical oxygen demand (BOD5) and total suspended solids (TSS) concentration limits of 30 mg/L and 45 mg/L respectively, are based on secondary treatment requirements found in Department rule, 06-096 CMR Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L are based on a Department best professional judgment of best practicable treatment (BPT). All BOD5 and TSS mass limitations are calculated based on the monthly average design flow capacity of 0.755 MGD and 0.975 MGD and the corresponding monthly average, weekly average and daily maximum concentration limits.

BOD and TSS mass loading calculations at 0.755 MGD:

Monthly average = (30 mg/L) (0.755 MGD) (8.34) = 189 lbs./Day
Weekly average = (45 mg/L) (0.755 MGD) (8.34) = 283 lbs./Day
Daily maximum = (50 mg/L) (0.755 MGD) (8.34) = 315 lbs./Day

A review of the DMR data for the period January 2005 through April 2007 indicates seasonal BOD and TSS discharged have been reported as follows:

January - May

BOD mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	189	25 - 213	97
Daily Maximum	315	31 – 325	150

BOD concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	10 - 37	19
Daily Maximum	50	4 – 33	24

TSS mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	189	15 – 242	65
Daily Maximum	315	26 – 338	121

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

January - May

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	6 -34	13
Daily Maximum	50	7 - 42	19

BOD and TSS mass loading calculations at 0.975 MGD:

Monthly average = (30 mg/L) (0.975 MGD) (8.34) = 244 lbs./Day
Weekly average = (45 mg/L) (0.975 MGD) (8.34) = 366 lbs./Day
Daily maximum = (50 mg/L) (0.975 MGD) (8.34) = 407 lbs./Day

A review of the DMR data for the period January 2005 through April 2007 indicates seasonal BOD & TSS discharged have been reported as follows:

June - December

BOD mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	244	84 - 206	131
Daily Maximum	407	106 – 301	172

BOD concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	13 – 34	24
Daily Maximum	50	17 – 39	29

TSS mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	244	17 – 76	45
Daily Maximum	407	31 - 138	72

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	4 - 22	9
Daily Maximum	50	5 – 25	12

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

d. Settleable Solids - The previous permitting action established a daily maximum concentration limit of 0.3 ml/L that is considered a BPT limitation and is being carried forward in this permitting action. A review of the DMR data for the period January 2005 – April 2007 indicates the permittee has reported a daily maximum result of 0.1 ml/L for every month of said period. As a result of this compliance record, the Department is reducing the monitoring frequency from 1/Day to 3/Week in this permit.

e. *E. coli* bacteria: The previous permitting action established seasonal (May 15 – September 30) monthly average and daily maximum *E. coli* bacteria limits of 142 colonies/100 ml and 949 colonies/100 ml respectively, and were based on the State of Maine Water Classification Program criteria for Class C waters pursuant to Maine law, 38 M.R.S.A., §465. It is noted that during calendar year 2005, Maine's Legislature approved new monthly average and daily maximum water quality standards of 126 colonies/100 ml and 236 colonies/100 ml respectively, for water bodies designated as Class B and Class C. This permitting action is reducing the monthly average limit accordingly (126 colonies/100 ml) but carrying forward the daily maximum limit from the previous permitting action as a best professional judgment of BPT and the limits are protective of the newer water quality standards given the dilution factors associated with the discharge.

A review of the DMR data for the period January 2005 – April 2007 indicates the permittee has reported *E. coli* bacteria results as follows:

***E. coli.* bacteria**

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	142	14 - 30	20
Daily Maximum	949	20 -34	26

f. Total Residual Chlorine (TRC): The previous permitting action established monthly average and daily maximum technology based limits of 0.1 mg/L and 0.3 mg/L respectively, that being carried forward in this permitting action. Limits on TRC are specified to ensure attainment of the ambient water quality criteria (AWQC) for levels of chlorine and that the BPT is used to abate the discharge of chlorine. The more stringent of the two limits is established in this permit.

Water quality based total residual chlorine thresholds may be calculated as follows:

Maximum Daily = (freshwater acute criteria)(acute dilution)
(0.019 mg/L)(21.6) = 0.41 mg/L

Monthly Average = (freshwater chronic criteria)(chronic Dilution)
(0.011 mg/L)(21.6) = 0.24 mg/L

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

To meet the water quality based thresholds calculated above, the permittee must dechlorinate the effluent prior to discharge. The Department has established a daily maximum BPT limitation of 0.3 mg/L for facilities that need to dechlorinate their effluent unless calculated water quality based thresholds are lower than 0.3 mg/L. In the case of Norway, the acute water quality based threshold calculated above is higher than 0.3 mg/l, thus the BPT limitation of 0.3 mg/L is imposed. As for the monthly average limitation, the Department's BPT limitation is 0.1 mg/L. Being that the calculated water quality based limit is higher than 0.1 mg/L, the BPT limitation is imposed.

g. pH - The pH range limitation of 6.0 – 9.0 standard units in the previous permitting action is being carried forward in this permitting action and is a BPT based limit pursuant to Department regulation, 06-096 CMR, Chapter 525(3)(III)(c).

Monitoring frequencies for BOD, TSS, *E. coli*. bacteria, TRC and pH are consistent with Department guidance for test frequencies recommended for facilities with a monthly average flow between 0.5 and 1.5 MGD.

h. 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 Rules, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET, priority pollutant and analytical chemistry testing, as required by Chapter 530, is included in this permit in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

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

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

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

Surveillance level testing – Beginning upon issuance of the permit

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	1 per year	None required	2 per year

Screening level testing – Beginning 12 months prior to permit expiration

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

A review of the data on file with the Department for the Norway facility indicates that to date, Norway has fulfilled the WET and chemical-specific testing requirements of the former Chapter 530.5. 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.

WET Evaluation

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.*"

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

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."*

On April 28, 2008, a statistical evaluation was conducted on the most current 60 months of WET tests results on file at the Department. The statistical evaluation indicates the discharge from the Norway waste water treatment facility has two WET test results (11/30/03 and 3/8/04) of 4.6% for the water flea that have a reasonable potential to exceed the critical chronic no observed effect level (C-NOEL) water quality threshold of 4.6 % (mathematical inverse of the acute and chronic dilution factor of 21.6:1) and one test result of 2.3% (10/22/07) that exceeds the C-NOEL threshold of 4.6%. Therefore, a numeric C-NOEL limitation for the water flea is being established in this permitting action.

As for testing frequencies Chapter 530(2)(D)(3)(c) states in part that for Level II facilities "*…may reduce WET and chemical testing to once every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedences.*" Based on the results of the 4/28/08 statistical evaluation, the Department has made the determination the permittee qualifies for the testing reduction for the brook trout but not the water flea. This permitting action is establishing surveillance level WET testing as follows:

Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration surveillance level .

Level	WET Testing
II	1 per 2 years for the brook trout 1 per year for the water flea

Chapter 530 (2)(D) states:

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

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

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

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

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

Special Condition J, *Chapter 530 (2)(D)(4) Certification,* of this permitting action requires the permittee to file an annual certification with the Department.

Chapter 530 §3(C) states in part *"If these data indicate that the discharge is causing an exceedence of applicable water quality criteria, then: (1) the licensee must, within 45 days of becoming aware of an exceedence, submit a TRE plan for review and approval and implement the TRE after Department approval; and (2) the Department must, within 180 days of the Department's written approval of the TRE plan, modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutants and meet receiving water classification standards."* Being that the 10/22/07 C-NOEL WET test result of 2.3% exceeds the critical chronic threshold of 4.6%, Special Condition L, *Toxicity Reduction Evaluation (TRE),* of this permit requires the permittee to submit a TRE plan to the Department for review and approval.

Beginning 12 months prior to the expiration date of the permit and every five years thereafter, the permittee shall conduct screening level WET testing as follows:

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

Chemical specific evaluation

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

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

The 4/28/08 statistical evaluation indicates the discharge has one test result of 22 ug/L (2/13/06) for copper and three test results 4 ug/L (3/8/04), 10 ug/L (10/30/06) and 6 ug/L (2/26/07) for lead that have a reasonable potential to exceed the chronic AWQC of 2.36 ug/L and 0.41 ug/L respectively. Therefore, monthly average water quality based mass and concentration limits for copper and lead were derived as follows:

Copper (Total):

Chronic AWQC = 2.36 ug/L
Chronic dilution factor = 21.6:1

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
EOP = [21.6 x 0.75 x 2.36 ug/L] + [0.25 x 2.36 ug/L] = 39 ug/L

Based on a permitted flow of 0.975 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Daily Max. Mass Limit
Copper	39 ug/L	0.32 lbs/day

Example Calculation: Copper - $\frac{(39\ ug/L)(8.34)(0.975\ MGD)}{1000\ ug/mg} = 0.32$ lbs/day

Lead (Total):

Chronic AWQC = 0.41 ug/L
Chronic dilution factor = 21.6:1

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
EOP = [21.6 x 0.75 x 0.41 ug/L] + [0.25 x 0.41 ug/L] = 6.7 ug/L

Based on a permitted flow of 0.975 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Daily Max. Mass Limit
Lead	6.7 ug/L	0.054 lbs/day

Example Calculation: Lead - $\frac{(6.7\ ug/L)(8.34)(0.975\ MGD)}{1000\ ug/mg} = 0.054$ lbs/day

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

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 factor of 1.5. Therefore, concentration limits for the parameter of concern in this permit are as follows:

Parameter	Calculated EOP Concentration	Monthly Avg. Conc. Limit
Copper	39 ug/L	58 ug/L
Lead	6.7 ug/L	10 ug/L

Chapter 530 does not establish specific monitoring frequencies for parameters that exceed or have a reasonable to exceed AWQC. This permitting action is establishing the monitoring frequencies for copper and lead based on a best professional judgment given the timing, frequency and severity of the exceedence or reasonable to exceed AWQC. To be consistent with the default surveillance level monitoring requirements in Chapter 530, the Department is establishing a monitoring frequency of 2/Year for both copper and lead.

As for testing frequencies Chapter 530 (2)(D)(3)(c) states in part that for Level II facilities "*…may reduce WET and chemical testing to once every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedences."* It is noted Chapter 530 (2)(D)(1) does not require priority pollutant testing during the surveillance level testing years. Based on the results of the 4/28/08 statistical evaluation, the Department has determined the permittee qualifies for the reduced testing. Therefore, surveillance level analytical chemistry is being established as beginning upon issuance of this permit and lasting through 12 months prior to permit expiration.

Surveillance level testing – Beginning 12 months prior to permit expiration.

Level	Priority pollutant testing	Analytical chemistry
II	Not required	1/2 Years

As with WET testing, Special Condition J, *Chapter 530 (2)(D)(4) Certification,* of this permitting action requires the permittee to file an annual certification with the Department.

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

For screening level testing, Chapter 530(2)(D)(1) requires that beginning 12 months prior to permit expiration and every five years thereafter, chemical testing shall be conducted at a frequency of 1/Year for priority pollutant testing and 1/Quarter for analytical chemistry. Chapter 530 (2)(D)(3)(a) states, *"The Department may reduce testing requirements for dischargers that discharge less than 12 months per year in proportion to the actual number of months discharged, but to not less than one test per year where testing would otherwise be required. The Department may adjust test schedules to provide the most representative sampling program."* Therefore, this permitting action is establishing screening level analytical chemistry testing at a frequency 3/Year given the facility does not generally discharge during the summer months.

Therefore, screening level testing is being established as follows:

Screening level testing – Beginning 12 months prior to permit expiration

Level	Priority pollutant testing	Analytical chemistry
II	1 per year	3 per year

It is noted however that if WET or chemical testing conducted during the term of this permit indicates the discharge exceeds critical water quality thresholds or AWQC, this permit will be reopened pursuant to Special Condition N, *Reopening of Permit For Modification*, of this permit to establish applicable limitations and monitoring requirements.

i. Mercury - Pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420 and *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), on May 20, 2003, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W002647-46-C-R by establishing interim average and maximum effluent concentration limits of 14.7 parts per trillion (ppt) and 22.1 ppt, respectively, and a minimum monitoring frequency requirement of three (3) tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A.§ 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the ambient water quality criteria 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 2001 – April 2007 indicates mercury test results have ranged from 3.3 ppt to 14 ppt with an arithmetic mean of 7.8 (n=20) ppt.

8. 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 C classification.

9. PUBLIC COMMENTS

Public notice of this application was made in the Advertiser Democrat newspaper on or about April 1, 2006. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

10. DEPARTMENT CONTACTS

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

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-3901
E-mail: gregg.wood@maine.gov

11. RESPONSE TO COMMENTS

During the period of April 28, 2008, 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 Town of Norway'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.