September 29, 2008

Mr. Mitchell Cole
Town of Norridgewock
P.O. Box 7
Norridgewock, ME 04957

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME1012334
Maine Waste Discharge License (WDL) Application #W007742-5L-F-R
Proposed Draft-Town of Norridgewock

Dear Mr. Cole:

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

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

All comments must be received in the Department of Environmental Protection office on or before the close of business **Tuesday, October 28, 2008.** Failure to submit comments in a timely fashion will result in the final document being issued as drafted. Comments in writing should be submitted to my attention at the following address:

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

If you have any questions regarding the matter, please feel free to call me at 287-7658 or contact me via email at: Phyllis.A.Rand@maine.gov.

Sincerely,

Phyllis Arnold Rand
Division of Water Quality Management
Bureau of Land and Water Quality

Enclosure

cc: Lori Mitchell, DEP/CMRO
Beth DeHaas, DEP/CMRO
Barry Mower, DEP/CMRO
Dennis Merrill, DEP/CMRO
Roger Janson, USEPA

October 29, 2008

Mr. Mitchell Cole
Town of Norridgewock
P.O. Box 7
Norridgewock, ME 04957

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102334
Maine Waste Discharge License (WDL) Application #W007742-5L-F-R
Final Permit/License - Town of Norridgewock

Dear Mr. Cole:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the permit/license 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 287-7658.

Sincerely,

Phyllis Arnold Rand
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

cc: Beth DeHaas, DEP/CMRO
Roger Janson, USEPA

IN THE MATTER OF

TOWN OF NORRIDGEWOCK		)	MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS		)	ELIMINATION SYSTEM PERMIT
NORRIDGEWOCK, SOMERSET COUNTY		)	AND
ME0102334		)	WASTE DISCHARGE LICENSE
W007742-5L-F-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 (the Department) has considered the application of the TOWN OF NORRIDGEWOCK (TOWN), with its supportive data, agency review comments, and other related material on file and finds the following facts:

APPLICATION SUMMARY

The applicant has applied to the Department for renewal of MEPDES Permit #ME0102334/ Waste Discharge License (WDL) #W007742-5L-E-R ("permit" hereinafter) which was issued on November 19, 2003 and is due to expire on November 19, 2008. The 11/19/03 permit authorized the discharge of up to a monthly average flow of 0.193 million gallons per day (MGD) of secondary treated sanitary waste water to the Kennebec River, Class B, in Norridgewock, Maine.

PERMIT SUMMARY

This permitting action is <u>similar to</u> the November 19, 2003 permit in that it is:

1. Carrying forward the monthly average flow limit of 0.193 MGD.

2. Carrying forward the monthly average and weekly average technology based mass and concentration limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS).

3. Carrying forward the monthly average and daily maximum water quality-based seasonal concentration limits for <u>E. coli</u> bacteria.

4. Carrying forward the daily maximum technology-based concentration limit for total residual chlorine.

5. Carrying forward the daily maximum technology-based concentration limit for settleable solids.

PERMIT SUMMARY (cont'd)

6. Carrying forward the technology-based pH range limit.

7. Carrying forward the requirements to maintain an up-to-date Operations and Maintenance Plan and a Wet Weather Flow Management Plan.

This permitting action is <u>different from</u> the November 19, 2003 permit in that it is:

1. Correcting a mathematical error in the calculation of daily maximum pounds of BOD_5 and TSS from 80 to 81 pounds per day.

2. Establishing revised daily maximum technology-based mass limits for BOD_5 and TSS.

3. Establishing conditions for reduced/waived toxics testing.

4. Including a reference to the facility's Septage Management Plan.

5. Changing the Total Residual Chlorine minimum measurement frequency from 1/Day to 5/Week for consistency with other monitoring requirements.

6. Establishing annual certification requirements for dischargers having waived or reduced testing under the Department's Surface Water Toxics Control Program.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated September 29, 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 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 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.

ACTION

THEREFORE, the Department APPROVES the application of the TOWN OF NORRIDGEWOCK to discharge up to a monthly average flow of 0.193 million gallons per day (MGD) of secondary treated sanitary waste water to the Kennebec River, Class B, in Norridgewock, Maine. The discharges shall be subject to the attached conditions and all applicable standards and regulations:

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 __30th____ DAY OF _October_ 2008.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY:_____

David P. Littell, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application _____9/08/08_____.

Date of application acceptance _____9/08/08_____.

Date filed with Board of Environmental Protection ____10/31/08_____

This Order prepared by PHYLLIS A. RAND, BUREAU OF LAND AND WATER QUALITY
ME0102334 2008 10/28/08

SPECIAL COONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning the effective date of the permit, the permittee is authorized to discharge secondary treated waste water to the Kennebec River. Such treated waste water discharges shall be limited and monitored by the permittee as specified below.

SECONDARY TREATED WASTE WATER - OUTFALL #001

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]*	0.193 MGD*[03]*	---	Report (MGD)	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
Biochemical Oxygen Demand (BOD_5) ***[00310]***	48 lbs/Day *[26]*	72 lbs/Day *[26]*	81 lbs/Day*[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
BOD_5 Percent Removal (1) ***[81010]***	85 % *[23]*	---	---	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
Total Suspended Solids (TSS) *[00530]*	48 lbs/Day *[26]*	72 lbs/Day *[26]*	81 lbs/Day*[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
TSS Percent Removal (1) *[81011]*	85 % *[23]*	---	---	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 mL/L *[25]*	5/Week *[05/07]*	Grab *[GR]*
E. coli Bacteria (2) ***(May 15- September 30) [31633]***	---	---	---	64/100 mL(2) *[13]*	---	427/100 mL(2) *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine(3) ***[50060]***	---	---	---	---	---	1.0 mg/L *[19]*	5/Week *[05/07]*	Grab *[GR]*
pH (Standard Units) *[00400]*	---	---	---	---	---	6.0-9.0 *[12]*	5/Week *[05/07]*	Grab *[GR]*

SPECIAL CONDITIONS

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

Footnotes:

Sampling Locations – Influent sampling for BOD_5 and TSS shall be sampled after the grit channel. For the purposes of this permitting action, BOD_5 and TSS samples taken at this location will serve as the influent values for calculating percent removals for secondary treated waste water. Effluent receiving secondary treatment (Outfall #001) shall be sampled after the chlorine contact chamber. Any change in sampling location must be reviewed and approved by the Department in writing.

Sampling and analysis must be conducted in accordance with; a) EPA-approved methods in Title 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, 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. **Percent removal** - The treatment facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS. The percent removal shall be based on a monthly average calculation using influent and effluent concentrations. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report "NODI-9" on the monthly Discharge Monitoring Report.

2. **E. coli bacteria** - Limits apply on a seasonal basis between May 15 and September 30 of each calendar year. The monthly E. coli average limitation is a **geometric mean** limitation and results shall be calculated and reported as such.

3. **Total Residual Chlorine (TRC)** – Limitations and monitoring requirements for TRC are applicable whenever elemental chlorine or chlorine-based compounds are being utilized

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

to disinfect the discharge. The Department reserves the right to require disinfection on a year-round basis to protect the health and welfare of the public.

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 discharges 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 a 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 total residual chlorine (TRC) cannot be met 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 shall be sufficient to leave a TRC concentration that will effectively reduce bacteria to levels below those specified in Special Condition A, *"Effluent Limitations and Monitoring Requirements,"* above.

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a Maine **Grade II** Waste Water Treatment Plant Operator Certificate (or Registered Maine Professional Engineer) pursuant to *Sewerage Treatment Operators*, 32 M.R.S.A. §§ 4171-4182 and *Regulations for Wastewater Operator Certification*, 06-096 CMR 531 (effective May 8, 2006). All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

SPECIAL CONDITIONS

E. LIMITATIONS FOR INDUSTRIAL USERS

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

F. 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 9/08/08 and 2) only from Outfall #001. Discharges of waste water from any other point source(s) 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. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff shall maintain a Wet Weather Flow Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The most recent revision of the facility's Wet Weather Flow Management Plan was in August 2008. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

SPECIAL CONDITIONS

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

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

I. OPERATION & MAINTENANCE (O&M) PLAN

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

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

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

J. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to receive and introduce into the treatment process or solids handling stream up to **a maximum of 2,000 gallons**
per day of septage, subject to treatment processes following the required methods to be employed in accordance with the Septage Management Plan, submitted to the Department and subject to the following terms and conditions:

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 the addition of septage cause or contribute to effluent quality violations. If such conditions do exist, the introduction of septage into the treatment process or solids handling stream shall be suspended until effluent quality can be maintained.

SPECIAL CONDITIONS

J. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY (cont'd)

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 water treatment influent and test results.

4. The addition of septage into the treatment process or solids handling stream shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of septage into the treatment process or solids handling stream 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 which 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 but should be reported in the treatment facility's influent flow.

7. During wet weather flows, no septage shall be added to the treatment process or solids handling facilities.

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

On or before December 31 of each year ***[PCS code 95799]*** 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 WET or priority pollutant 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

L. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **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
Central Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
State House Station 17
Augusta, Maine 04333

M. 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 anytime and with notice to the permittee, modify this permit to; 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded, (2) require additional effluent and/or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

N. SEVERABILITY

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

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **September 29, 2008**

PERMIT NUMBER: **ME0102334**
LICENSE NUMBER: **W007742-5L-F-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF NORRIDGEWOCK
P.O. Box 7
Norridgewock, Maine 04957

COUNTY: **Somerset County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

33 Willow Street
Norridgewock, Maine 04957

RECEIVING WATER/CLASSIFICATION: **Kennebec River, Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Mitchell Cole**
(207) 634-4738

1. APPLICATION SUMMARY

a. Application – The Town of Norridgewock ("The Town" hereinafter) has submitted a complete and timely application to the Department for renewal of Maine Pollutant Discharge Elimination System (MEPDES) permit # ME0102334/Maine Waste Discharge License (WDL) # W007742-5L-E-R ("permit" hereinafter) which was issued on November 19, 2003 and is due to expire on November 19, 2008. The 11/19/03 permit authorized the discharge of up to a monthly average flow of 0.193 million gallons per day (MGD) of secondary treated sanitary waste water from the municipal waste water treatment facility to the Kennebec River, Class B, in Norridgewock, Maine.

1. APPLICATION SUMMARY (cont'd)

b. Source Description – The waste water treatment facility receives sanitary waste water from approximately 390 residential and commercial entities within the Town of Norridgewock. The collection system is a separated system approximately 10 miles in length with three pump stations and no combined sewer overflows (CSOs). The pump stations are equipped with electrical hook-ups such that back-up power can be provided by a portable generator. In addition, the facility's sludge truck is available to transport waste water from the pump stations if necessary. The facility experiences high flows approximately 10 days per year in the spring and fall. Since issuance of the 11/19/03 permit, the facility has replaced the bridge crossing of the main sewer line with a dual-siphon river crossing.

Septage at this location is collected in the facility's sludge holding tank. The liquid decanted from the septage is sent through the facility for treatment. The concentrated septage is land-applied at a site next to the Norridgewock Airport during the summer. The facility has a Maine DEP land application license #S-22044-SC-A-N. There are no significant industrial sources contributing waste water to the treatment facility.

c. Waste Water Treatment – The waste water treatment facility provides a secondary level of treatment via a mechanically cleaned bar rack, a grit removal channel, a Parshall flume, two circular package treatment plants operated in parallel and a chlorine contact chamber for disinfection using sodium hypochlorite. The facility is equipped for dechlorination using sodium metabisulfite if necessary. The outfall pipe for the treatment plant extends out into the Kennebec River approximately 100 feet with approximately six feet of water over the top of the pipe during normal low flow conditions.

See **Attachment A** of this Fact Sheet for a schematic of the waste water treatment plant processes.

2. PERMIT SUMMARY

a. Terms and Conditions – This permitting action is similar to the previous permitting action in that it is:

1. Carrying forward the monthly average flow limit of 0.193 MGD.

2. Carrying forward the monthly average and weekly average technology-based mass and concentration limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS).

3. Carrying forward the monthly average and daily maximum water quality-based seasonal concentration limits for E. coli bacteria.

PERMIT SUMMARY (cont'd)

4. Carrying forward the daily maximum technology-based concentration limit for total residual chlorine.

5 Carrying forward the daily maximum technology-based concentration limit for settleable solids.

6. Carrying forward the technology-based pH range limit.

7. Carrying forward the requirements to maintain an up-to-date Operations and Maintenance Plan and a Wet Weather Flow Management Plan.

This permitting action is different from the November 19, 2003 permit in that it is:

1. Correcting a mathematical error in the calculation of daily maximum pounds of BOD_5 and TSS from 80 to 81 pounds per day.

2. Establishing revised daily maximum technology-based mass limits for BOD_5 and TSS.

3. Establishing conditions for reduced/waived toxics testing.

4. Including a reference to the facility's Septage Management Plan.

5. Changing the Total Residual Chlorine minimum measurement frequency from 1/Day to 5/Week for consistency with other monitoring requirements.

6. Establishing annual certification requirements for dischargers having waived or reduced testing under the Department's Surface Water Toxics Control Program.

b. History: The most current regulatory actions include the following:

September 14, 1992 – The EPA issued NPDES permit #ME0102334 for a five-year term.

March 17, 1997 – The Town submitted an application to the EPA to renew NPDES permit #ME0102334 that was due to expire on September 14, 1997. The application was deemed by the EPA to be complete for processing. The application was never acted on by the EPA.

April 3, 1997 – The Department issued WDL #W007742-59-D-R for a five-year term.

May 25, 2000 – The Department administratively modified WDL #W007742-5L-D-R by establishing interim limits for the discharge of mercury.

PERMIT SUMMARY (cont'd)

January 12, 2001 – The Department received authorization from the U.S. Environmental Protection Agency to administer the National Pollutant Discharge Elimination System (NPDES) permitting program in Maine.

November 19, 2003 – The Department issued MEPDES Permit # ME0102334/ WDL # W007742-5L-F-R for a five-year term.

April 10, 2006 – The Department issued a permit modification for testing requirements for the Surface Water Toxics Control Program.

September 8, 2008 – The Town of Norridgewock filed a timely and complete application with the Department to renew the MEPDES permit.

3. CONDITIONS OF PERMITS

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

4. RECEIVING WATER STANDARDS

Maine law, 38 M.R.S.A., Section 467(4)(A)(9) indicates the Kennebec River at the point of discharge is classified as a Class B waterway. Maine law, 38 M.R.S.A., Section 465(3) describes standards for classification of Class B waters.

5. RECEIVING WATER CONDITIONS

In a table entitled, *"Category 4B: Rivers and Streams Impaired By Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment,"* within a Department document entitled, 2008 Integrated Water Quality Monitoring and Assessment Report, the table indicates that the Kennebec River from the Carrabassett River to the Fairfield-Skowhegan boundary (22.8 miles) is not attaining the designation use of fishing, more specifically fish consumption. The impairment is due to historic discharges of dioxin. It is noted the Norridgewock facility is located approximately eight (8) river miles below the Madison Paper ground wood fiber pulp and paper mill and twelve (12) river miles above the SAPPI kraft pulp and paper mill in Skowhegan. The Department has no information on file that indicates the Norridgewock facility is causing or contributing to the impairment.

5. RECEIVING WATER CONDITIONS (cont'd)

It is also noted the Department published a document entitled Kennebec River Modeling Report, February 2000. The Executive Summary of the report indicates that dissolved oxygen criteria are attained at all locations under existing discharge permits and nonpoint loading,

although there is only marginal attainment at the lower end of the upper Class B segment (below Skowhegan). The summary states that in general, the major impacts to the non-tidal river in order of significance are plants/nutrients, point sources, sediment oxygen demand (SOD) and nonpoint sources. The majority of the phosphorus loading to the river is from point sources. These are indications that nutrient loading may become a major water quality issue in the future, however, the phosphorus loading associated with the Norridgewock waste water treatment facility is only approximately 0.1% of the total phosphorus loading to the river. As a result, this permitting action is not establishing any limitations or monitoring requirements for total phosphorus at this time.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Flow: The monthly average flow limitation of 0.193 MGD in the previous permitting action is being carried forward in this permitting action and is considered to be representative of the monthly average design flow for the waste water treatment facility. A review of the DMR data for the period April 2005 – April 2008 indicates the following:

Flow

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.193	0.033 – 0.123	0.068

b. Dilution Factors – Dilution factors associated with the discharge from the town were derived in accordance with freshwater protocols established in Department Regulation Chapter 530, *Surface Water Toxics Control Program*, October 2005.

With a maximum monthly flow limit of 0.193 MGD, the dilution calculations are based on the following formula:

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

Chronic: 7Q10 = 2356 cfs $\Rightarrow \frac{(2356 \text{ cfs})(0.6464) + (0.193 \text{ MGD})}{(0.193 \text{ MGD})} = 7892{:}1$

Acute: 1Q10 = 1920 cfs $\Rightarrow \frac{(1920 \text{ cfs})(0.6464) + (0.193 \text{ MGD})}{(0.193 \text{ MGD})} = 6432{:}1$

Acute ¼ of $1Q10^{(1)}$ = 480 cfs $\Rightarrow \frac{(480 \text{ cfs})(0.6464) + (0.193 \text{ MGD})}{(0.193 \text{ MGD})} = 1609{:}1$

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

Harmonic Mean: = 3952 cfs $\Rightarrow \frac{(3952 \text{ cfs})(0.6464) + (0.193 \text{ MGD})}{(0.193 \text{ MGD})} = 13{,}237{:}1$

Footnote:

(1) Chapter 530.5 (D)(4)(a) states that analyses using numeric acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The 1Q10 is the lowest one day flow over a ten-year recurrence interval. The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it. The Department has made the determination that the discharge does not receive rapid and complete mixing. Therefore, the default stream flow of ¼ of the 1Q10 is applicable in acute statistical evaluations.

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS) – The previous permitting action established monthly and weekly average BOD_5 and TSS concentration limits of 30 mg/L and 45 mg/L respectively, that 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 Chapter 525(3)(III). The maximum daily BOD_5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of best practicable permitting treatment (BPT). All three concentration limits are being carried forward in this action. The monthly and weekly average maximum technology-based mass limitations are being carried forward in this permitting action and are based on a monthly flow limit of 0.193 MGD. The daily maximum technology-based mass limitation is being changed in this permitting action in order to correct a mathematical error in the previous permit. The mass limits were derived as follows:

Monthly average: (0.193 MGD)(8.34)(30 mg/L) = 48 lbs/day
Weekly average: (0.193 MGD)(8.34)(45 mg/L) = 72 lbs/day
Daily maximum: (0.193 MGD)(8.34)(50 mg/L) = 81 lbs/day

A review of the DMR data for the period April 2005 – April 2008 indicates the monthly average and daily maximum mass and concentration values have been reported as follows:

BOD_5 Mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	48	2 – 31	7
Daily Maximum	80	2 – 74	12

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

BOD_5 Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	4.9 – 21.9	15.1
Daily Maximum	50	2.1 – 43.1	18.5

TSS mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	48	1 – 32	4
Daily Maximum	80	2 – 85	8

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	1.1 – 20.6	6.0
Daily Maximum	50	4.0 – 38.6	10.5

Monitoring frequencies for BOD_5 and TSS of 1/week are being carried forward in this permitting action and are based on Department policy for facilities with a monthly average flow greater than 0.10 MGD but less than 0.50 MGD.

d. Settleable Solids – A review of the DMR data for the period April 2005 – April 2008 indicates the daily maximum settleable solids concentration has been reported as 0.10 mL/L. This permit is carrying forward a daily maximum concentration limit of 0.3 mL/L for settleable solids and is considered by the Department as a best professional judgement of BPT for secondary treated waste water.

e. *Escherichia coliform* bacteria – The monthly average and daily maximum *E. coli* bacteria limits of 64 colonies/100 mL and 427 colonies/100 mL in the previous permitting action are being carried forward in this permitting action and were based on the State of Maine Water Classification Program criteria for Class B waters at that time. Subsequent to issuance of the 11/19/03 permit, the State Legislature adopted more stringent AWQC for *E. coli* bacteria. The newer criteria for Class B waters are 64 colonies/100 mL as a monthly average and 236 colonies/100 mL as a daily maximum. The Department has made the determination that after taking into consideration the dilution associated with the discharge, the BPT limits of 64 colonies/100 mL and 427 colonies/100 mL being carried forward in this permitting action are protective of the newer AWQC for bacteria.

A review of the DMR data for the period April 2005 – April 2008 indicates E. coli values have been reported as follows:

E. coli bacteria

Value	Limit (col/100 mL)	Range (col/100 mL)	Mean (col/100 mL)
Monthly Average	64	0 – 10	4
Daily Maximum	427	0 – 500	64

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

f. Total Residual Chlorine (TRC) – This permitting action is reducing the TRC minimum measurement frequency from 1/Day to 5/Week in order to maintain consistency with the measurement frequencies of 5/Week for E. coli, pH, and settleable solids analyses.

Analyses using numeric 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. The Department has investigated the mixing characteristics of the discharge and is utilizing the ¼ of 1Q10 in acute evaluations pursuant to Chapter 530. Licensing/permitting actions by the Department impose the more stringent of water quality or technology-based limits.

End-of-pipe water quality based concentration thresholds may be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	19 ug/L	11 ug/L	1609:1	7892:1	31 mg/L	87 mg/L

Example calculations: Acute Limit ⇒ 0.019 mg/L (1609) = 31 mg/L
Chronic Limit ⇒ 0.011 mg/L (7892) = 87 mg/L

In the case of the Norridgewock facility, the calculated acute water quality-based threshold is higher than 1.0 mg/l, thus the BPT limit of 1.0 mg/L is imposed as a daily maximum limit.

A review of the DMR data for the period April 2005 – April 2008 indicates TRC values were reported as follows:

Total residual chlorine

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	1.0	0.03 – 1.17	0.52

g. pH – A review of the DMR data for the period April 2005 – April 2008 indicates pH values have been reported as follows:

pH

Value	Limit (SU)	Range (SU)	Mean (SU)
Daily Maximum	6.0 – 9.0	7.1 – 7.9	7.3

This permitting action is carrying forward the pH range limit of 6.0-9.0 standard units pursuant to Department rule found in Chapter 525(3)(III)(c). The limits are considered BPT.

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

h. Mercury - May 25, 2000 – Pursuant to *Certain deposits and discharges prohibited*, Maine law, 38 M.R.S.A. § 420 and *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W007742-5L-D-R by establishing interim monthly average and daily maximum effluent concentration limits of 4.5 parts per trillion (ppt) and 6.75 ppt, respectively, and a minimum monitoring frequency requirement of two (2) 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 action.

Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the AWQC for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413, subsection 11. A review of the Department's database for the period February 2004 through the present indicates mercury test results reported have ranged from <1.0 ppt to 2.1 ppt with an arithmetic mean (n=8) of 1.5 ppt.

i. Septage– The previous permitting action authorized the Town to receive and treat up to 2,000 gpd of septage from local septage haulers. Department rule Chapter 555, *Addition of Septage To Waste Water Treatment Facilities*, limits the quantity of septage treated at a facility to 1% of the design capacity of treatment facility. In their application for permit renewal, the Town has requested the Department carry forward the daily quantity of septage it is authorized to receive and treat (up to 2,000 gpd).

With a design capacity of 0.193 MGD, 2,000 gpd represents 1.0 % of said capacity. The permittee has submitted an up-to-date Septage Management Plan as an exhibit to their 2008 application for permit renewal.

The Department has reviewed and approved said plan and determined that under normal operating conditions, the addition of 2,000 gpd of septage to the facility will not cause or contribute to upset conditions of the treatment process.

j. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: 38 M.R.S.A. § 414-A and 38 M.R.S.A. § 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 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic

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

pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

Surface Water Quality Criteria for Toxic Pollutants, 06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level IV dischargers are *"those dischargers having a chronic dilution factor of at least 500 to 1 and a permitted flow of less than 1 million gallons per day."* The chronic dilution factor associated with the discharge from the Town is 7892 to 1. Therefore, the facility is considered a Level IV facility for purposes of toxics testing. 06-096 CMR 530(D)(1) states that *"routine testing requirements for Level IV are waived, except that the Department shall require an individual discharger to conduct testing under the following conditions:*

(a) The discharger's permit application or information available to the Department indicate that toxic compounds may be present in toxic amounts; or,
(b) Previous testing conducted by the discharger or similar dischargers indicates that toxic compounds may be present in toxic amounts."

The 4/10/06 permit amendment waived testing for this facility. Previous toxics testing conducted by this facility indicates the discharge did not exceed the critical ambient water
quality standards for test organisms or chemical compounds. Therefore, this permitting action is carrying forward the toxics testing waiver pursuant to 06-096 CMR 530 and Department best professional judgment.

06-096 CMR 530(2)(D)(4) states, *"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."

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

This permitting action is establishing Special Condition K, Chapter 530(2)(D)(4) Certification pursuant to 06-096 CMR 530(2)(D)(4). It is noted, however, that if future WET or chemical-specific testing indicates the discharge exceeds or demonstrates a reasonable potential to exceed applicable critical water quality thresholds, this permit will be reopened in accordance with Special Condition M, *Reopening of Permit For Modification,* to establish effluent limitations and revised monitoring requirements as necessary.

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. PUBLIC COMMENTS

Public notice of this application was made in the *Morning Sentinel* newspaper on or about 9/04/08. 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.

9. DEPARTMENT CONTACTS

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

Phyllis A. Rand
Maine Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333-0017
e-mail: Phyllis.A.Rand@maine.gov
Telephone (207) 287-7658

10. RESPONSE TO COMMENTS

During the period of September 29, 2008 through the issuance date of the permit, the Department solicited comments on the proposed draft permit to be issued for the discharge(s) from the Town of Norridgewock'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.