April 24, 2008

Mr. Andrew Fitzpatrick
Plant Manager
Clinton Water District
P.O. Box 358
Clinton, Maine 04927

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101699
Maine Waste Discharge License (WDL) Application #W002589-5L-E-R
Final MEPDES Permit Renewal

Dear Mr. Fitzpatrick:

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

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

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

Sincerely,

Bill Hinkel
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.

pc: Beth DeHaas, DEP
Lori Mitchell, DEP
Sandy Lao, USEAP
File #2589

IN THE MATTER OF

CLINTON WATER DISTRICT	)	MAINE POLLUTANT DISCHARGE
CLINTON, KENNEBEC COUNTY	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
#ME0101699	)	WASTE DISCHARGE LICENSE
#W002589-5L-E-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the *Federal Water Pollution Control Act*, Title 33 USC, §1251, *Conditions of licenses*, 38 M.R.S.A. § 414-A, and applicable regulations, the Maine Department of Environmental Protection (Department) has considered the application of CLINTON WATER DISTRICT (CWD), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The CWD has applied to the Department for a renewal of Waste Discharge License (WDL) #W000478-5L-C-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101699, which was issued on February 14, 2003, and expired on February 14, 2008. The 2/14/03 MEPDES permit authorized the monthly average discharge of up to 0.35 million gallons per day (MGD) of secondary treated municipal wastewater from a publicly owned treatment works (POTW) to Sebasticook River, Class C, in Clinton, Maine.

On June 14, 2004, the Department administratively modified the 2/14/03 permit to clarify that the discharge of wastewater is prohibited at low river flows only during the critical warm season period of June 1 through September 30 of each year.

On April 10, 2006, the Department amended the 2/14/03 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant screening level testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

PERMIT SUMMARY

This permitting action is similar to the 2/14/03 permitting action, 6/14/04 administrative modification, and 4/10/06 permit amendment in that it is:

1. Carrying forward the monthly average discharge flow limit of 0.35 MGD and the daily maximum discharge flow reporting requirement;

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

3. Carrying forward the requirements for a minimum of 85% removal of BOD_5 and TSS;

4. Carrying forward the daily maximum technology-based concentration limitation for settleable solids;

5. Carrying forward the seasonal daily maximum concentration limitation for *Escherichia coli* bacteria for Class C waters;

6. Carrying forward the pH range limitation of 6.0 to 9.0 standard units (SU);

7. Carrying forward whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements consistent with 06-096 CMR 530;

8. Carrying forward an annual certification statement requirement, Special Condition I, *Statement for Reduced/Waived Toxics Testing*; and

9. Carrying forward the minimum monitoring frequency requirements for all monitored parameters, except settleable solids and pH.

This permitting action is different from the 2/14/03 permitting action, 6/14/04 administrative modification, and 4/10/06 permit amendment in that it is:

1. Revising the summer season (June 1 – September 30) discharge restriction to prohibit discharges of wastewater regardless of receiving water flow based on a negotiated agreement between the Department and the permittee;

2. Revising the Treatment Plant Operator requirement from Grade I to Grade II, the minimum requirement for a biological treatment plant;

3. Revising the dilution factor utilized in acute evaluations from 121:1 (1Q10) to 31:1 (¼ 1Q10) based on the requirements of 06-096 CMR 530;

4. Revising the daily maximum, technology-based effluent limitation and establishing a monthly average technology-based limitations for total residual chorine (TRC) based on required changes the acute dilution factor;

5. Revising the seasonal monthly average concentration limitation for *E. coli* bacteria for Class C waters; and

6. Revising the minimum monitoring frequency requirements for settleable solids and pH.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated April 23, 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, *Classification of Maine waters*, 38 M.R.S.A. § 464(4)(F), will be met, in that:

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

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

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

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

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

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

ACTION

THEREFORE, the Department APPROVES the above noted application of the CLINTON WATER DISTRICT to discharge a monthly average flow of up to 0.35 million gallons per day of secondary treated municipal wastewater to the Sebasticook River, Class C, in Clinton, Maine, during the period of October 1 through May 31 of each year SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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

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

3. The expiration date of this permit is five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS _____DAY OF _____, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: November 29, 2007
Date of application acceptance: December 3, 2007

Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **secondary treated municipal wastewater via Outfall #001A** to Sebasticook River during the period of **October 1 through May 31** of each year. Such discharges shall be limited and monitored by the permittee as specified below[(1)]. **The discharge from the CWD is prohibited between June 1 and September 30 of each year.**

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	0.35 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Daily When Discharging *[WH/DS]*	Recorder *[RC]*
BOD_5 *[00310]*	88 lbs./day *[26]*	131 lbs./day *[26]*	146 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Grab *[GR]*
BOD_5 Percent Removal[(2)] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	88 lbs./day *[26]*	131 lbs./day *[26]*	146 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Grab *[GR]*
TSS Percent Removal[(2)] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Week *[01/07]*	Grab *[GR]*
E. coli Bacteria[(3)] (May 15 – Sept. 30) *[31633]*	---	---	---	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]*	5/Week *[05/07]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU [(6)] *[12]*	2/Week *[02/07]*	Grab *[GR]*

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

FOOTNOTES: See pages 7 through 10 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

2. Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements **(1)**.

SCREENING LEVEL **-** Beginning 12 months prior to permit expiration and lasting through 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 **(7)**						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Grab *[GR]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Grab *[GR]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Grab *[GR]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Grab *[GR]*
Analytical Chemistry **(8)** *[51168]*	---	---	---	Report ug/L *[28]*	3/Year *[03/YR]*	Grab *[GR]*
Priority Pollutant **(9)** *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Grab *[GR]*

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

FOOTNOTES: See pages 7 through 10 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES:

1. **Sampling** – Sampling and analysis must be conducted in accordance with; a) methods approved 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 Health and Human Services. Samples that are sent to a 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. See Attachment A of this permit for a list of the Department's current RLs. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the actual 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. Compliance with this permit will be evaluated based on whether or not a compound is detected at or above the Department's RL.

2. **Percent Removal –** The treatment facility shall maintain a minimum of 85 percent removal of both biochemical oxygen demand (BOD_5) and total suspended solids (TSS) for all flows receiving secondary treatment during all months that the facility discharges. Compliance with the limitation shall be based on a twelve-month rolling average. Calendar monthly average percent removal values shall be calculated based on influent and effluent concentrations. For the purposes of this permitting action, the twelve-month rolling average calculation is based on the most recent twelve-month period when the facility has discharged and the average influent concentration is >200 mg/L. The permittee shall enter "NODI-9" on the monthly Discharge Monitoring Report (DMR) and on the "49" form when the twelve-month rolling average calculation for BOD_5 and TSS for the month is less than 200 mg/L.

3. **Bacteria Limits –** *E. coli* bacteria limits and monitoring requirements are seasonal and apply between May 15 and September 30 of each year. Whereas this permitting action prohibits the discharge of wastewater during the period of June 1 – September 30 of each year, bacteria limits are only applicable for this facility from May 15 – May 31 of each year. For instances when the permittee discharges wastewater during the month of May but only prior to May 15th, the permittee shall report "NODI-9" on the monthly DMR. The Department reserves the right to reopen this permit in accordance with Special Condition L, *Reopening of Permit for Modifications*, impose year-round bacteria limitations to protect the health, safety and welfare of the public.

SPECIAL CONDITIONS

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

FOOTNOTES:

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

5. **TRC Monitoring** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. For instances when the chlorine or chlorine-based compounds have not been used for effluent disinfection for an entire reporting period, the permittee shall report "NODI-9" on the monthly DMR.

6. **pH Range Limitation** – The pH value of the effluent shall not be lower than 6.0 SU nor higher than 9.0 SU at any time unless these limitations are exceeded due to natural causes.

7. **Whole effluent toxicity (WET) testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 3.2% and 0.83%, respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable (modified) acute and chronic dilution factors of 31:1 and 121:1, respectively.

   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 WET testing at a minimum frequency of once per year for the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*).

   Pursuant to 06-096 CMR 530 surveillance level testing is waived for this facility.

   WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 3.2% and 0.83%, respectively.

SPECIAL CONDITIONS

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

FOOTNOTES:

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

a. 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.

Results of WET tests shall be reported on the "Whole Effluent Toxicity Report Fresh Waters" form included as Attachment B of this permit each time a WET test is performed. The permittee is required to analyze the effluent for the five (5) parameters specified in the WET chemistry section and the thirteen (13) parameters specified in the analytical chemistry section on the "WET and Chemical Specific Data Report Form" (including total hardness) included as Attachment A of this permit each time a WET test is performed.

8. **Analytical chemistry** – Pursuant to 06-096 CMR 530(2)(C)(4), analytical chemistry refers to a suite of thirteen (13) chemical tests that consist of: ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total hardness, total lead, total nickel, total silver, total zinc and total residual chlorine.

Screening level testing – 06-096 CMR 530 establishes default screening level analytical chemistry testing beginning 12 months prior to permit expiration and every five years thereafter at a frequency of once per calendar quarter. Whereas this permitting action prohibits discharges during the period of June 1 – September 30 of each year, the permittee shall conduct a total of three (3) analytical chemistry testing events, with one test conducted in each of the following calendar periods: January – March, April – May, and October – December.

Pursuant to 06-096 CMR 530, surveillance level testing is waived for this facility.

SPECIAL CONDITIONS

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

FOOTNOTES:

9. **Priority pollutant testing** – Priority pollutants are those parameters specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(4)(IV) (effective January 12, 2001).

   a. **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 priority pollutant testing at a minimum frequency of once per year.

   Surveillance level testing is not required pursuant to 06-096 CMR 530.

   Priority pollutant and analytical chemistry testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests when applicable. Priority pollutant and analytical chemistry 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.

   Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005). 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 to determine compliance with interim limitations established pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), 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.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The discharge shall not cause visible discoloration or turbidity in the receiving waters, which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. DISINFECTION

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

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate (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.

E. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on December 3, 2007; 2) the terms and conditions of this permit; and 3) only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

SPECIAL CONDITIONS

F. 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.

G. MONITORING AND REPORTING

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

Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333-0017

H. NOTIFICATION REQUIREMENTS

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

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

2. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system by a source introducing pollutants to the system at the time of permit issuance.

3. For the purposes of this section, adequate notice shall include information on:

   a. The quality and quantity of waste water introduced to the waste water collection and treatment system; and

   b. Any anticipated impact of the change in the quantity or quality of the waste water to be discharged from the treatment system.

SPECIAL CONDITIONS

I. STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

On or before December 31st of each year of the effective term of this permit ***[PCS Code 95799]***, the permittee shall provide the Department with statements 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.

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.

J. OPERATIONS AND MAINTENANCE (O&M) PLAN

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

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

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

SPECIAL CONDITIONS

K. WET WEATHER MANAGEMENT PLAN

The treatment facility staff shall maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall. A specific objective of the plan shall be to maximize the volume of wastewater receiving secondary treatment under all operating conditions. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures for before, during and after the events.

Once the Wet Weather Management Plan has been approved, the permittee shall review their plan at least annually and record any necessary changes to keep the plan up to date. The Department may require review and update of the plan as it is determined to be necessary.

L. REOPENING OF PERMIT FOR MODIFICATION

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

M. SEVERABILITY

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

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **APRIL 23, 2008**

PERMIT NUMBER: **#ME0101699**
WASTE DISCHARGE LICENSE: **#W002589-5L-E-R**

NAME AND ADDRESS OF APPLICANT:

CLINTON WATER DISTRICT
P.O. BOX 358
CLINTON, MAINE 04927

COUNTY: **KENNEBEC**

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

CLINTON WATER DISTRICT
P.O. BOX 358
CLINTON, MAINE 04927

RECEIVING WATER/CLASSIFICATION: **SEBASTICOOK RIVER/CLASS C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MR. ANDREW FITZPATRICK**
PLANT MANAGER
(207) 426-8039

1. APPLICATION SUMMARY

Application: The Clinton Water District (CWD) has applied to the Maine Department of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) #W000478-5L-C-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101699, which was issued on February 14, 2003, and expired on February 14, 2008. The 2/14/03 MEPDES permit authorized the monthly average discharge of up to 0.35 million gallons per day (MGD) of secondary treated municipal wastewater from a publicly owned treatment works (POTW) to Sebasticook River, Class C, in Clinton, Maine.

On June 14, 2004, the Department administratively modified the 2/14/03 permit to clarify that the discharge of wastewater is prohibited at low river flows only during the critical warm season period of June 1 through September 30 of each year.

On April 10, 2006, the Department amended the 2/14/03 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant screening level testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 2/14/03 permitting action, 6/14/04 administrative modification, and 4/10/06 permit amendment in that it is:**

1. Carrying forward the monthly average discharge flow limit of 0.35 MGD and the daily maximum discharge flow reporting requirement;

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

3. Carrying forward the requirements for a minimum of 85% removal of BOD_5 and TSS;

4. Carrying forward the daily maximum technology-based concentration limitation for settleable solids;

5. Carrying forward the seasonal daily maximum concentration limitation for *Escherichia coli* bacteria for Class C waters;

6. Carrying forward the pH range limitation of 6.0 to 9.0 standard units (SU);

7. Carrying forward whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements consistent with 06-096 CMR 530;

8. Carrying forward an annual certification statement requirement, Special Condition I, *Statement for Reduced/Waived Toxics Testing*; and

9. Carrying forward the minimum monitoring frequency requirements for all monitored parameters, except settleable solids and pH.

This permitting action is different from the 2/14/03 permitting action, 6/14/04 administrative modification, and 4/10/06 permit amendment in that it is:

1. Revising the summer season (June 1 – September 30) discharge restriction to prohibit discharges of wastewater regardless of receiving water flow based on a negotiated agreement between the Department and the permittee;

2. Revising the Treatment Plant Operator requirement from Grade I to Grade II, the minimum requirement for a biological treatment plant;

3. Revising the dilution factor utilized in acute evaluations from 121:1 (1Q10) to 31:1 (¼ 1Q10) based on the requirements of 06-096 CMR 530;

4. Revising the daily maximum, technology-based effluent limitation and establishing a monthly average technology-based limitations for total residual chorine (TRC) based on required changes the acute dilution factor; and

2. PERMIT SUMMARY (cont'd)

5. Revising the seasonal monthly average concentration limitation for *E. coli* bacteria for Class C waters; and

6. Revising the minimum monitoring frequency requirements for settleable solids and pH.

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

February 4, 1986 – The U.S. Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0101699 to the CWD for a five-year term.

May 25, 2000 – 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), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W002589-59-C-R by establishing interim monthly average and daily maximum effluent concentration limits of 4.5 parts per trillion (ppt) and 6.8 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 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.

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

February 14, 2003 – The Department issued WDL #W002589-5L-D-R / MEPDES permit #ME0101699 to the CWD for a five-year term. The 2/14/03 permit superseded WDL #W002589-59-C-R issued on May 18, 1989, WDL #W002589-45-A-R issued on September 11, 1987, and WDL #2589 issued on July 28, 1982 (earliest Order on file with the Department).

June 14, 2004 – The Department issued a letter to the CWD thereby administratively modifying the 2/14/03 MEPDES permit to clarify the discharge prohibition during low river flow conditions applied during the critical warm season of June 1 through September 30 of each year.

April 10, 2006 – The Department modified the 2/14/03 permit to incorporate testing requirements of 06-096 CMR 530.

2. PERMIT SUMMARY (cont'd)

November 29, 2007 – The CWD submitted a timely and complete General Application to the Department for renewal of the 2/14/03 MEPDES permit The application was accepted for processing on December 3, 2007, and was assigned WDL # W002589-5L-E-R / MEPDES #ME0101699.

c. Source Description: The CWD was formed in 1987 and encompasses approximately 3 square miles. The wastewater treatment facility receives sanitary wastewater flows generated by residential and commercial users within the District's boundaries. The facility serves a population of approximately 1,400 people. The permittee has indicated there are no significant industrial contributors to the system and is not required to adopt a formal pretreatment program pursuant to USEPA regulations. The CWD has not requested nor is authorized to accept septage wastes for treatment at the facility. The CWD owns and maintains the collection system that conveys the sanitary waste waters to the treatment facility. The collection system is approximately 18 miles in length, has five pump stations (all with back-up power) and no combined sewer overflow (CSO) points. A map showing the location of the treatment facility and receiving water is included as Attachment A of this fact sheet.

d. Waste Water Treatment: The facility provides a secondary level of treatment via two stabilization ponds operated in series which became operational in January of 1988. The first treatment lagoon has a surface area of approximately 12 acres and the second lagoon has a surface area of approximately 14 acres for a total area of 26 acres. The ponds provide for a detention time of approximately 180 days. Flows from the second lagoon are conveyed to a chlorine contact chamber where the treated wastewater is seasonally disinfected with sodium hypochlorite prior to discharge to the Sebasticook River. The outfall pipe for the discharge extends out into the Sebasticook River approximately 40 feet and is approximately 9 feet below the normal low water level for the river.

3. CONDITIONS OF PERMIT

Conditions of licenses, 38 M.R.S.A. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., § 420 and 06-096 CMR 530 require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants,* 06-096 CMR 584 (effective October 9, 2005), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Classification of major river basins, 38 M.R.S.A. § 467(4)(H)(1)(a) classifies the Sebasticook River at the point of discharge as Class C waters. *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(4) describes the standards for Class C waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2006 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 30.83-mile reach of the Sebasticook River below the confluent of the East and West Branches (ADB Assessment Unit ID #ME0103000309_332R) as, *"Category 5-A: Rivers and Streams Impaired by Pollutants Other than Those Listed in 5-B Through 5-D (TMDL Required)."* The Department's Division of Environmental Assessment has identified an error in the 2006 Report in that the reach of river at the point of discharge should not be listed in Category 5-A. It should be listed in *"Category 2: River and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses."* The Report also lists this segment of the river in *"Category 5-D: Rivers and Streams Impaired by Legacy Pollutants*." The Report lists all of Maine's fresh waters as, *"Category 5-C: Waters Impaired by Atmospheric Deposition of Mercury Regional or National TMDL May be Required."* Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, *"Many waters, and many fish from any given water, do not exceed the action level for mercury. However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources. The State of Maine is participating in the development of regional scale TMDLs for the control of mercury."* Pursuant to 38 M.R.S.A. § 420(1-B) (B), *"a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11."* The Department has established interim mercury limits for this facility.

The previous permitting action prohibited discharges from the CWD during the critical warm season of June 1 through September 30 when the flow at USGS gauge #01049000 located in the in the Sebasticook River at Burnham was below 65 cubic feet per second. This prohibition was established based on a determination that the Department did not have sufficient ambient water quality information to conclude that discharges when river flow was below 65 cfs would not cause or contribute to the lowering of the existing water quality. The permittee has agreed to accept a prohibition on the discharge of wastewater during the period of June 1 through September 30 of each year regardless of river flow rates. This negotiated agreement reflects the CWD's current operating practice as a "hold-and-release" facility. The CWD has had no discharges during the June – September period since at least calendar year 2002. The CWD has offered to accept this restriction in an effort to protect receiving water quality during the critical warm season and low river flow conditions.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average flow limitation of 0.35 MGD based on the design capacity of the facility, and a daily maximum discharge flow reporting requirement. The previous permitting action prohibited discharges from the CWD during the critical warm season of June 1 through September 30 when the flow at USGS gauge #01049000 located in the in the Sebasticook River at Burnham was below 65 cubic feet per second.

A summary of discharge flow data as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of September 2002 through August 2007 (no discharges occurred during the period of June – September each year) is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	0.120 MGD	0.326 MGD	0.236 MGD	29
Daily Maximum	0.187 MGD	0.350 MGD	0.297 MGD	29

The permittee has agreed to accept a prohibition on the discharge of wastewater during the period of June 1 through September 30 of each year regardless of river flow rates. This negotiated agreement reflects the CWD's current operating practice as a "hold-and-release" facility. It is noted that the CWD discharged intermittently ("hold-and-release" operation) and did not discharge during the months of June through September of any year since at least 2002. The discharge prohibition established in this permitting action is only partially water quality driven in that the Department has determined that the CWD can discharge without adverse water quality impacts at ambient river flows above 65 cfs. Therefore, the CWD may, at any time, submit an application for permit modification to revise this discharge prohibition established herein. With the current discharge prohibition in effect, this facility is considered a "hold-and-release" facility with a non-continuous discharge.

b. Dilution Factors: With regard to dilution factors, the Fact Sheet associated with the previous permit stated,

> *In a report published by the Department entitled, Sebasticook River Low Flow Report, dated August 2000, the Department reviewed low flow conditions in the river during July and August of calendar year 2000. In the report, the Department observed that the Sebasticook River was losing water between the headwater lakes Great Moose Pond and Sebasticook Lake and the [Burnham] stream gauge located just below the Burnham Dam and approximately six miles upstream of the Clinton Water District's point of discharge. The Department concluded that, under dry conditions, the river was losing water due to evaporation, wetlands storage and to ground water infiltration. In addition, the current operation of the Burnham Hydro Project (FERC No. 11472) creates a situation where the flow in the river below the Burnham Dam is significantly reduced while the impoundment is being refilled after a regeneration cycle.*

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

Subsequent to the issuance of the Department's report, the Department learned that the Town of Pittsfield drilled a new municipal water supply well in 1996, just across the town line in Burnham and approximately 600 feet from the Sebasticook River. The well is located in a high-yield sand and gravel aquifer and is rated to yield 505 gallons per minute (gpm) or 750,000 gallons per day. According to the Town of Pittsfield, 64% of the well's recharge comes from the Sebasticook River. The result of pumping from the [aquifer] will further reduce flows in the river downstream from the well.

The end result is that though the minimum flow of 65 cfs is being passed from the headwater lakes collectively, the Sebasticook River sometimes loses flow and falls below 65 cfs at the CWD's discharge point. The Department has evaluated the impact of the CWD on the Sebasticook River based on 65 cfs and determined the discharge will not cause or contribute to the lower of water quality. The Department does not have enough ambient water quality information to determine the impact of the discharge below 65 cfs. Therefore, this permitting action is prohibiting the CWD from discharging when the reading on the USGS gauge #01049000 located just below the Burnham Dam falls below 65 cfs.

Dilution factors associated with the permitted discharge flow of 0.35 MGD from the facility were derived in accordance with 06-096 CMR 530(4)(A) and were calculated as follows:

Modified Acute: ¼ 1Q10 = 16 cfs $\Rightarrow \frac{(16\ cfs)(0.6464) + (0.35\ MGD)}{(0.35\ MGD)} = 31:1$

Acute: 1Q10 = 65 cfs $\Rightarrow \frac{(65\ cfs)(0.6464) + (0.35\ MGD)}{(0.35\ MGD)} = 121:1$

Chronic: 7Q10 = 65 cfs $\Rightarrow \frac{(65\ cfs)(0.6464) + (0.35\ MGD)}{(0.35\ MGD)} = 121:1$

Harmonic Mean[1]: = 268 cfs $\Rightarrow \frac{(268\ cfs)(0.6464) + (0.35\ MGD)}{(0.35\ MGD)} = 496:1$

[1] The 7Q10 flow is prorated from the Pittsfield flow monitoring gauge.

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

06-096 CMR 530(4)(B)(1) states,

> *Analyses using numerical acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone and to ensure a zone of passage of at least 3/4 of the cross-sectional area of any stream as required by Chapter 581. Where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design flow, up to and including all of it, as long as the required zone of passage is maintained.*

The Department's Division of Environmental Assessment has determined that the discharge from CWD does not achieve complete and rapid mixing with the receiving waters; therefore, the Department is utilizing the default ¼ 1Q10 stream design flow in acute evaluations. It is noted that the previous permitting action did not utilize the default ¼ 1Q10 stream design flow in acute evaluations as required by Department rules. Application of the modified acute dilution factor of 31:1 will affect calculation of water quality-based effluent limitations, such as those for toxic pollutants.

06-096 CMR 530(4)(A) states,

> *With a non-continuous discharge (such as a lagoon which can be impounded or a continuous discharge prohibited from discharging under specified conditions), the dilution factors can be based on a guaranteed minimum stream flow or tidal stage below which a discharge will not occur. The discharger must submit a request for a license modification that reflects a different minimum stream flow. If the Department approves an alternate stream flow, the license must include a monitoring and reporting requirement, and must include an accurate means of measuring stream flow that is calibrated annually.*

Thus, the permittee has a minimum of two options at its disposal to potentially increase the dilution factors associated with the discharge. One is to conduct a Department-approved study to evaluate the mixing characteristics of the effluent with the receiving water. This investigation may result in a finding that a larger proportion of the stream design flow may be utilized in dilution evaluations. The second option is to propose a guaranteed minimum stream flow above 65 cfs in accordance with 06-096 CMR 530(4)(A) cited above.

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

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward, monthly average and weekly average technology-based concentration limits of 30 mg/L and 45 mg/L, respectively, for BOD_5 and TSS based on the secondary treatment requirements specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(3)(III) (effective January 12, 2001), and a daily maximum concentration limit of 50 mg/L, which is based on BPJ of BPT for secondary treated municipal wastewater. The technology-based monthly average, weekly average and daily maximum mass limits of 88 lbs./day, 131 lbs./day, and 146 lbs./day established in the previous permitting action for BOD_5 and TSS are also being carried forward in this permitting action.

This permitting action is carrying forward a 30-day average percent removal requirement of 85 percent for BOD_5 and TSS as required pursuant to 06-096 CMR 525(3)(III)(a&b)(3). Compliance with the limitation shall be based on a twelve-month rolling average.

This permitting action is carrying forward a minimum monitoring frequency requirement of once per week for BOD_5 and TSS based on Department guidance.

A summary of BOD_5 data as reported on the monthly DMRs for the period of September 2002 through August 2007 (no discharges occurred during the period of June – September each year) is as follows:

BOD_5	**Minimum**	**Maximum**	**Arithmetic Mean**	**# DMRs**
Monthly Average	2.5 lbs./day	82 lbs./day	33 lbs./day	29
	1 mg/L	35 mg/L	17 mg/L	29
Weekly Average	5 lbs./day	114 lbs./day	47 lbs./day	29
	2 mg/L	57 mg/L	21 mg/L	29
Daily Maximum	5 lbs./day	114 lbs./day	29 lbs./day	29
	2 mg/L	57 mg/L	22 mg/L	29

A summary of TSS data as reported on the monthly DMRs for the period of September 2002 through August 2007 (no discharges occurred during the period of June – September each year) is as follows:

TSS	**Minimum**	**Maximum**	**Arithmetic Mean**	**# DMRs**
Monthly Average	3 lbs./day	66 lbs./day	26 lbs./day	29
	1 mg/L	37 mg/L	13 mg/L	29
Weekly Average	3 lbs./day	70 lbs./day	34 lbs./day	29
	1 mg/L	46 mg/L	16 mg/L	29
Daily Maximum	3 lbs./day	70 lbs./day	33 lbs./day	29
	1 mg/L	46 mg/L	16 mg/L	29

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

The Department, in conjunction with several POTWs that utilize aerated wastewater treatment lagoons, conducted a study of 24-hour BOD_5 and TSS composite versus grab samples for lagoon wastewater treatment plants in calendar year 2003 to determine whether or not there are significant differences between the two sampling methods and, if so, which sampling method provides the most representative results. Preliminary results of the study indicate that the BOD_5 correlations demonstrate a statistically significant difference between 24-hour composite and grab samples for most of the facilities participating in the study. The results suggest that aerated, continuous discharge lagoon facilities should, as a default, collect 24-hour composite samples for BOD_5. This study, however, investigated statistically significant differences in grab versus 24-hour composite samples at aerated lagoons with continuous discharges. The CWD is not an aerated lagoon system and is a non-continuous discharge (discharges prohibited between June 1 – September 30 of each year). Therefore, the Department concludes that the findings and recommendations of the 2003 lagoon study cannot be extrapolated to this facultative, intermittent discharge lagoon system without further investigation and study. Therefore, this permitting action is carrying forward a grab sample type for all monitored parameters, except discharge flow for which this sample type is not applicable.

This permitting action is carrying forward the minimum monitoring frequency requirement of once per week for BOD_5 and TSS based on best professional judgment.

d. Settleable Solids – The previous permitting established, and this permitting action carrying forward, a daily maximum concentration limit of 0.3 ml/L, which is considered a best practicable treatment limitation (BPT) for secondary treated wastewater.

A summary of settleable solids data as reported on the monthly DMRs for the period of September 2002 through August 2007 (# DMRs = 28) indicates the daily maximum settleable solids concentration discharge has been 0.0 ml/L 100% of the time.

This permitting action is revising the minimum monitoring frequency requirement for settleable solids based from five times per week to once per week on best professional judgment.

e. *Escherichia coli* bacteria: The previous permitting action established, and this permitting action carrying forward, a seasonal (May 15-September 30 of each year) daily maximum *E. coli* bacteria concentration limit of 949 colonies/100 ml based on the State's Water Classification Program criteria for Class C waters. This permitting action is revising the monthly average (geometric mean) limitation from 142 colonies/100 ml to 126 colonies/100 ml based on the State's Water Classification Program criteria for Class C waters, which was amended in calendar year 2005 to revise the bacteria standards. It is noted that this permitting action establishes a discharge prohibition during the period of June 1 – September 30 of each year.

A summary of *E. coli* bacteria data as reported on the monthly DMRs for the period of September 2002 through August 2007 indicates the facility did not discharge wastewater during the period when seasonal bacteria limits are in effect.

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

This permitting action is carrying forward a minimum monitoring frequency requirement of once per week for *E. coli* bacteria (during the applicable period) based on best professional judgment.

f. Total Residual Chlorine (TRC): The previous permitting action established a technology-based daily maximum concentration limit of 1.0 mg/L for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department licensing/permitting actions impose the more stringent of either a water quality-based or BPT based limit.

With modified acute (¼ 1Q10) and chronic dilution factors associated with the discharge water quality-based concentration thresholds the discharge may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	Mod. A & C Dilution Factors	Calculated Acute Threshold	Calculated Chronic Threshold
0.019 mg/L	0.011 mg/L	31:1 (A) 121:1 (C)	0.6 mg/L	1.3 mg/L

It is noted that the previous permitting action utilized the entire 1Q10 stream design flow in calculating an acute dilution factor associated with the discharge. In this permitting action, the Department is utilizing the default stream design flow of ¼ 1Q10 to calculate the modified acute dilution factor as required by 06-096 CMR 530. Thus, the calculated acute TRC limit of 0.6 mg/L is more stringent than the previous limit of 1.0 mg/L.

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The daily maximum and monthly average BPT-based limits of 0.3 mg/L and 0.1 mg/L, respectively, are more stringent than the calculated daily maximum (acute) water quality-based threshold of 0.6 mg/L and are therefore being established in this permitting action.

A summary of TRC data as reported on the monthly DMRs for the period of September 2002 through August 2007 indicates the facility did not discharge wastewater during the period when seasonal bacteria limits are in effect.

This permitting action is carrying forward a minimum monitoring frequency requirement of five times per week for TRC based on best professional judgment.

g. pH: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units, which is based on 06-096 CMR 525(3)(III). The pH value of the effluent shall not be lower than 6.0 SU nor higher than 9.0 SU at any time unless these limitations are exceeded due to natural causes.

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

A summary of pH data as reported on the monthly DMRs for the period of September 2002 through August 2007 (# DMRs = 29) indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period.

This permitting action is revising the minimum monitoring frequency requirement from five times per week to twice per week for pH based on best professional judgment.

h. 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. 06-096 CMR 530 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. *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.

WET, priority pollutant and analytical chemistry testing, as required by 06-096 CMR 530, is included in this permit in order to characterize the effluent. 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 water flea (*Ceriodaphnia dubia*) and vertebrate brook trout (*Salvelinus fontinalis*). Chemical-specific monitoring is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria. Priority pollutant testing refers to the analysis for levels of priority pollutants listed in 06-096 CMR 525(4)(VI). Analytical chemistry refers to a suite of thirteen (13) chemical tests consisting of: ammonia-nitrogen, total aluminum, total cadmium, total chromium, total copper, total hardness (fresh water only), total lead, total nickel, total silver, total zinc, total arsenic, total cyanide and total residual chlorine.

06-096 CMR 530(2)(A) specifies the dischargers subject to the rule as, *"all licensed dischargers of industrial process wastewater or domestic wastes discharging to surface waters of the State must meet the testing requirements of this section. Dischargers of other types of wastewater are subject to this subsection when and if the Department determines that toxicity of effluents may have reasonable potential to cause or contribute to exceedences of narrative or numerical water quality criteria."* The CWD discharges domestic (sanitary) waste waters to surface waters and is therefore subject to the testing requirements of the toxics rule.

06-096 CMR 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*

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

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 no information on the background levels of metals in the water column in the Sebasticook River. Therefore, a default background concentration of 10% of applicable water quality criteria is being used in the calculations of this permitting action.

06-096 CMR 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 applicable water quality criteria used in the calculations of this permitting action.

06-096 CMR 530(4)(F) requires evaluation of toxic pollutant impacts on a watershed basis. This section of the rule states, "*Where there is more than one discharge into the same fresh or estuarine receiving water or watershed, the Department shall consider the cumulative effects of those discharges when determining the need for and establishment of the level of effluent limits. The Department shall calculate the total allowable discharge quantity for specific pollutants, less the water quality reserve and background concentration, necessary to achieve or maintain water quality criteria at all points of discharge, and in the entire watershed."* The Department is currently working to construct a computer program model to conduct this analysis. Until such time the model is complete and a multi-discharger statistical evaluation can be conducted, the Department is evaluating the impact of the CWD's discharge assuming it is the only discharger to the stream. Should the multi-discharger evaluation indicate there are parameters that exceed or have a reasonable potential to exceed applicable AWQC, this permit may be reopened pursuant to Special Condition L, *Reopening of Permit For Modifications,* to incorporate additional limitations and or revise monitoring requirements.

This permit 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.

06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level III dischargers are *"having a chronic dilution factor of at least 100 but less than 500 to 1, or dischargers having a chronic dilution factor of more than 500 to 1 and a permitted flow of 1 million gallons per day or greater."* The chronic dilution factor associated with the discharge from the CWD is 121 to 1.

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

Therefore, the facility is considered a Level III facility for purposes of toxics testing. 06-096 CMR 530(2)(D) specifies default WET, priority pollutant, and analytical chemistry test schedules for Level III as follows:

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

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

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

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

The previous permit established one round of screening level WET and chemical-specific testing pursuant to the toxics rule in effect at that time, Chapter 530.5. On April 10, 2006, the Department amended the 2/14/03 permit to establish testing requirements required by the new rule, 06-096 CMR 530, which became effective October 2005. The 4/10/2006 permit amendment established one round of screening level testing (one WET, one priority pollutant, and four analytical chemistry tests) consistent with those specified in the table above. The 4/10/2006 amendment waived surveillance level testing pursuant to 06-096 CMR 530.

WET Evaluation

06-096 CMR 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.*

On January 8, 2008, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the CWD in accordance with the statistical approach outlined above. **The 1/8/08 statistical evaluation indicates that the discharge does not exceed or demonstrate a reasonable potential to exceed the critical acute or chronic water quality thresholds for either the water flea or brook trout.** This permitting action is not establishing limitations for WET test species.

See Attachment B of this Fact Sheet for a summary of WET test results.

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

06-096 CMR 530(2)(D)(3)(c) states, *"dischargers in Levels III and IV may be waived from conducting surveillance testing for individual WET species or chemicals provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence."* Based on this provision and Department best professional judgment, this permitting action is waiving surveillance level WET testing for this facility.

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."

This permitting action establishes Special Condition I, *Statement for Reduced/Waived Toxics Testing*, pursuant to 06-096 CMR 530(2)(D)(4). It is noted, however, that if future WET testing indicates the discharge exceeds or demonstrates a reasonable potential to exceed the critical water quality thresholds for either test species, this permit will be reopened in accordance with Special Condition L, *Reopening of Permit For Modification,* to establish effluent limitations and revised monitoring requirements as necessary.

Priority Pollutant Evaluation

On January 8, 2008, the Department conducted a statistical evaluation on the most recent 60 months of chemical-specific tests results on file with the Department for the CWD in accordance with the statistical approach outlined above. **The 1/8/08 statistical evaluation indicates the discharge does not exceed or demonstrate a reasonable potential (RP) to exceed the acute, chronic or human health-based AWQC thresholds for any parameters tested.**

This permitting action is not establishing water quality-based effluent limitations for priority pollutants based on the results of the 1/8/08 evaluation. Based on the provisions of 06-096 CMR 530(2)(D)(3)(c), this permitting action is waiving surveillance level analytical chemistry testing for this facility. Surveillance level priority pollutant monitoring is not required for Level III facilities. 06-096 CMR 530 establishes default screening level analytical chemistry testing at a frequency of once per calendar quarter. Whereas this permitting action prohibits discharges during the period of June 1 – September 30 of each year, the permittee shall conduct a total of three (3) analytical chemistry testing events, with one test conducted in each of the following calendar periods: January – March, April – May, and October – December.

See Attachment C of this Fact Sheet for a summary of chemical-specific test dates.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

8. PUBLIC COMMENTS

Public notice of this application was made in the *Morning Sentinel* newspaper on or about December 1, 2007. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses*, 06-096 CMR 522 (effective January 12, 2001).

9. DEPARTMENT CONTACTS

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

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Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
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10. RESPONSE TO COMMENTS

During the period of March 17, 2008, through April 16, 2008, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the Town for the proposed discharge. The Department did not receive significant comments on the draft permit; thus, a response to comments was not prepared. However, the Department became aware of an error with regard to the monthly average *E. coli* bacteria limitation. Based on amendments to the State's Water Classification Program criteria for Class C waters in calendar year 2005, the monthly average limit should have been revised from 142 colonies / 100 ml to 126 colonies / 100 ml. This change has been made in the final permit without objection from the permittee.