STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAWN R. GALLAGHER
COMMISSIONER

March 16, 2004

Mr. Timothy J. LeVasseur
Kennebec Sanitary Treatment District
401 Water Street
Waterville, Maine 04901-6354

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100854
Maine Waste Discharge License (WDL) Application #W-000687-5M-F-R
Proposed Draft MEPDES permit and Maine WDL

Dear Mr. LeVasseur:

The Maine Department of Environmental Protection received authorization to administer the National Pollutant Discharge Elimination System (NPDES) permitting program on January 12, 2001. To conform with new regulations associated with the program, the Department is required to issue all proposed draft MEPDES permits for a 30-day comment period.

Enclosed is a **proposed draft** MEPDES permit and Maine WDL which the Department proposes to issue for your facility 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/license 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 **Wednesday, April 14, 2004.** 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 Resource Regulation
17 State House Station
Augusta, ME 04333-0017

The NPDES permit last issued for your facility by the U. S. Environmental Protection Agency (USEPA) on August 21, 1998 will be replaced by the MEPDES permit and Maine WDL upon issuance.

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

Sincerely,

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

Enc.

cc: Gregg Wood, DEP/CMRO
James Rogers, DEP/SMRO
Dennis Merrill, DEP/CMRO
Dave Miller, DEP/CMRO
Ted Lavery, USEPA
Doug Koopman, USEPA
Steve Timpano, IFW
Amy Fitzpatrick, DMR
Earle Shettleworth, MHPC
Norm Dube, ASC
Jay Clement, US ACE
Endangered Species Coordinator, NOAA, NMFS

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

KENNEBEC SANITARY TREATMENT DISTRICT	) MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS	) ELIMINATION PERMIT SYSTEM
WATERVILLE, KENNEBEC COUNTY	) AND
#ME0100854	) WASTE DISCHARGE LICENSE
#W000687-5M-F-R **APPROVAL**	) **RENEWAL**

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

APPLICATION SUMMARY

The applicant has applied to the Department for renewal of Waste Discharge License (WDL) #W000687-5M-E-R, which was issued on April 8, 1998, and expired on April 8, 2003. The WDL permitted the monthly average discharge of up to 12.7 million gallons per day (MGD) of secondary treated sanitary wastewater from a publicly owned treatment works (POTW) to the Kennebec River, Class C, in Waterville, Maine. The WDL also authorized the discharge of an unspecified quantity of untreated combined sanitary and storm water during wet weather events from three (3) combined sewer overflow (CSO) outfalls to the Kennebec River at locations in Waterville and Fairfield, Maine.

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On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine. From this point forward, the program will be referenced as the Maine Pollutant Discharge Elimination System (MEPDES) permit program, and permit #ME0100854 (same as NPDES permit number) will be utilized as the primary reference number.

PERMIT SUMMARY

This permitting action is similar to the 4/8/98 licensing action in that it is:

1. Carrying forward the monthly average discharge flow limitation of 12.7 MGD;

2. Carrying forward the monthly average, weekly average and daily maximum concentration limits and the daily maximum mass reporting requirements for biochemical oxygen demand (BOD_5) and total suspended solids (TSS);

3. Carrying forward the weekly average and daily maximum concentration reporting requirements for settleable solids;

4. Carrying forward the monthly average and daily maximum concentration limits for *Escherichia coli* bacteria;

5. Carrying forward the daily maximum concentration limitation of 1.0 mg/L for total residual chlorine (TRC) through August 31, 2006; and

6. Carrying forward whole effluent toxicity (WET) and chemical-specific testing requirements.

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This permitting action is different from the 4/8/98 licensing action in that it is:

1. Revising the monthly average and weekly average mass limits for BOD_5 and TSS;

2. Establishing a requirement for a minimum of 85% removal of BOD_5 and TSS;

3. Establishing a seasonal (June 1 through September 30 of each year) monitoring requirement for total phosphorous and a weekly reporting requirement for the monthly average, weekly average and daily maximum concentration and mass limits;

4. Revising the pH range limitation;

5. Revising the permittee's authorization to receive and introduce into the treatment process or solids handling stream septage from 18,000 gallons per day (GPD) to 50,000 GPD;

6. Establishing a schedule of compliance to provide for the research of alternative options to installing an effluent dechlorination system and for the completion of operational and physical modifications to the treatment system necessary to ensure consistent compliance with the more restrictive water quality-based TRC limits established in this permitting action, including an evaluation of the outfall structure design and mixing characteristics with the receiving water.

CONCLUSIONS

BASED on the findings in the attached Proposed Draft Fact Sheet dated March 16, 2004, and subject to the Conditions listed below, the Department makes the following conclusions:

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

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

3. The provisions of the State's antidegradation policy, 38 M.R.S.A. §464(4)(F), will be met, in that:

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

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

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

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

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

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

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ACTION

THEREFORE, the Department APPROVES the above noted application of the KENNEBEC SANITARY TREATMENT DISTRICT (KSTD) to discharge a monthly average of up to 12.7 MGD of secondary treated sanitary wastewater and an unspecified quantity of untreated combined sanitary and storm water during wet weather events to the Kennebec River, Class C, in Waterville, Maine SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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

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

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

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DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____, 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 14, 2003
Date of application acceptance: March 19, 2003

Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0100854 / #W000687-5M-F-R March 16, 2004

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

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]*	--	--	--	12.7 MGD *[03]*	--	--	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	3,178 lbs./day *[26]*	4,766 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	5/Week *[05/WK]*	24-Hour Composite *[24]*
BOD_5 Percent Removal[2] *[81010]*	--	--	--	85% *[23]*	--	--	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	3,178 lbs./day *[26]*	4,766 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	5/Week *[05/WK]]*	24-Hour Composite *[24]*
TSS Percent Removal[2] *[81011]*	--	--	--	85% *[23]*	--	--	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	--	--	--	--	Report ml/L *[25]*	Report ml/L *[25]*	1/Day *[01/01]*	Grab *[GR]*
***E. coli* Bacteria**[3] *[31633]*	--	--	--	142/100 ml[4] *[13]*	--	949/100 ml *[13]*	5/Week *[05/WK]*	Grab *[GR]*
Total Residual Chlorine[3] Through August 31, 2005 *[00665]*	--	--	--	--	--	1.0 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
Total Residual Chlorine[3] September 1, 2006 through permit expiration *[00665]*	--	--	--	0.1 mg/L *[19]*	--	0.3 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
Total Phosphorous[3] (June 1 through September 30) *[00665]*	Report lbs./day *[26]*	Report lbs./day *[26]*	Report lbs./day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	24-Hour Composite *[24]*
pH *[00400]*	--	--	--	--	--	6.0 – 9.0 SU *[12]*	1/Day *[01/01]*	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.

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FOOTNOTES: See Pages 7 through 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

SURVEILLANCE LEVEL TESTING - Beginning on the effective date of this permit and lasting through 12 months prior (April 2008) to permit expiration.

Whole Effluent Toxicity (WET) [5]	Daily Maximum	Minimum Frequency	Sample Type
Acute No Observed Effect Level (A-NOEL)			
Invertebrate-**Water Flea** (*Ceriodaphnia dubia*) *[TDA3B]*	Report % *[23]*	**1/Year** *[01/YR]*	Composite *[24]*
Vertebrate-**Fathead Minnows** (*Pimephales promelas*) *[TDA6C]*	Report % *[23]*	**1/Year** *[01/YR]*	Composite *[24]*
Chronic No Observed Effect Level (C-NOEL)			
Invertebrate-**Water Flea** (*Ceriodaphnia dubia*) *[TBP3B]*	Report % *[23]*	**1/Year** *[01/YR]*	Composite *[24]*
Vertebrate-**Fathead Minnows** (*Pimephales promelas*) *[TDA6C]*	Report % *[23]*	**1/Year** *[01/YR]*	Composite *[24]*
Chemical-Specific (Priority Pollutants, PP) [6]	Report ug/L *[28]*	**1/Year** *[01/YR]*	Composite/Grab *[24/GR]*

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SCREENING LEVEL TESTING - Beginning 12 months prior (April 2008) to permit expiration and lasting through permit expiration.

Whole Effluent Toxicity (WET) [5]	Daily Maximum	Minimum Frequency	Sample Type
Acute No Observed Effect Level (A-NOEL)			
Invertebrate-**Water Flea** (*Ceriodaphnia dubia*) *[TDA3B]*	Report % *[23]*	**4/Year** *[04/YR]*	Composite *[24]*
Vertebrate-**Brook Trout** (*Salvelinus fontinalis*) *[TDA6F]*	Report % *[23]*	**2/Year** *[02/YR]*	Composite *[24]*
Vertebrate-**Fathead Minnows** (*Pimephales promelas*) *[TDA6C]*	Report % *[23]*	**2/Year** *[02/YR]*	Composite *[24]*
Chronic No Observed Effect Level (C-NOEL)			
Invertebrate-**Water Flea** (*Ceriodaphnia dubia*) *[TBP3B]*	Report % *[23]*	**4/Year** *[04/YR]*	Composite *[24]*
Vertebrate-**Brook Trout** (*Salvelinus fontinalis*) *[TBQ6F]*	Report % *[23]*	**2/Year** *[02/YR]*	Composite *[24]*
Vertebrate- **Fathead Minnows** (*Pimephales promelas*) *[TBP6C]*	Report % *[23]*	**2/Year** *[02/YR]*	Composite *[24]*
Chemical-Specific (Priority Pollutants, PP) [6]	Report ug/L *[28]*	**4/Year** *[04/YR]*	Composite/Grab *[24/GR]*

FOOTNOTES: See Pages 7 through 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES:

1. **Monitoring –** All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

2. **Percent Removal -** The treatment facility shall maintain a minimum of 85 percent removal of both biochemical oxygen demand and total suspended solids for all flows receiving secondary treatment. The percent removal shall be calculated based on influent and effluent concentration values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report **"NODI-9"** on the monthly Discharge Monitoring Report (DMR).

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3. **Seasonal Limits -** *E. coli* bacteria and total residual chlorine (TRC) limits and monitoring requirements are seasonal and apply between May 15 and September 30 of each year. At no time shall the effluent TRC concentration exceed the limits established in this permitting action. The Department reserves the right to require year-round disinfection to protect the health, safety and welfare of the public. Total phosphorous monitoring is seasonal and applies between June 1 and September 30 of each year.

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

5. **Whole effluent toxicity (WET) testing** - Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical modified acute and chronic dilutions of 3.69% and 0.78% 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.

   Beginning the effective date of this permit and lasting through 12 months prior (April 2008) to permit expiration, the permittee shall conduct **surveillance level WET testing** at a minimum frequency of once per year in a different calendar quarter each year on the water flea (*Ceriodaphnia dubia*) and on the fathead minnow (*Pimephales promelas*). Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing.

SPECIAL CONDITIONS

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

Beginning 12 months prior (April 2008) to the expiration date of this permit and lasting through permit expiration, the permittee shall conduct **screening level WET testing** at a minimum frequency of once per quarter on the water flea (*Ceriodaphnia dubia*) and twice per year on the fathead minnow (*Pimephales promelas*) in the first and third calendar quarters and on the brook trout (*Salvelinus fontinalis*) in the second and fourth calendar quarters. Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing.

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.

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The permittee is also required to analyze the effluent for the parameters specified in the analytic chemistry on the form in Attachment A of this permit each and every time a WET test is performed.

6. **Priority Pollutants** - (chemical-specific testing pursuant to Department rule Chapter 530.5) are those parameters listed by the USEPA pursuant to Section 307(a) of the Clean Water Act and published at 40 CFR Part 122, Appendix D, Tables II and III.

Beginning upon issuance of this permit and lasting through 12 months prior (April 2008) to permit expiration, the permittee shall conduct **surveillance level chemical-specific testing** at a minimum frequency of once per year in a different calendar quarter each year.

Beginning 12 months prior (April 2008) to the expiration date of this permit and lasting through permit expiration, the permittee shall conduct **screening level chemical-specific testing** at a minimum frequency of once per quarter in consecutive calendar quarters.

SPECIAL CONDITIONS

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

Chemical-specific testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, when applicable. Chemical-specific 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. Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing. **For the purposes of DMR reporting, enter a "NODI-9" for *NO testing done this monitoring period* or "1" for *YES, testing done this monitoring period.***

All mercury sampling 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 USEPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.

B. NARRATIVE EFFLUENT LIMITATIONS

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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 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 fecal coliform bacteria levels to or below those specified in Special Condition A, "*Effluent Limitation and Monitoring Requirements*," above.

SPECIAL CONDITIONS

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade V** certificate pursuant to Title 32 M.R.S.A. §4171 et seq. 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. MONITORING AND REPORTING

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

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

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Additional monthly reporting requires submitting (preferably in electronic version) a *"DEP 49 – CSO Form For Use With Dedicated CSO Primary Clarifiers or DEP – 49 – CSO Form For Use With Non-Dedicated CSO Primary Clarifiers"* to:

CSO Coordinator
Department of Environmental Protection
Bureau of Land and Water Quality
Division of Engineering, Compliance and Technical Assistance
17 State House Station
Augusta, Maine 04333-0017
e-mail: CSOCoordinator@maine.gov

F. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A and three (3) combined sewer overflow outfalls listed in Special Condition L, *Combined Sewer Overflows,* of this permit. 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

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 wastewater collection and treatment system from an indirect discharger in a primary industrial category discharging process wastewater; and

2. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:

   (a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and

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

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H. OPERATION & MAINTENANCE (O&M) PLAN

On or before six months following the effective date of this permit, the permittee shall submit to the Department a current written comprehensive Operation & Maintenance (O&M) Plan ***[PCS Code 007VA]***. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

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

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

SPECIAL CONDITIONS

I. 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 50,000 gallons per day** of septage, 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.

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.

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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 that contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.

6. Holding tank waste water shall not be recorded as septage 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.

SPECIAL CONDITIONS

J. CONDITIONS FOR COMBINED SEWER OVERFLOWS (CSOs)

1. Pursuant to Chapter 570 of Department Rules, *Combined Sewer Overflow Abatement*, the permittee is authorized to discharge from the following locations of CSOs (stormwater and sanitary wastewater) subject to the conditions and requirements herein.

Outfall #	Location	Receiving Water & Class	
002	Abraham Brook Interceptor, Waterville	Kennebec River	Class C
003	Main Pump Station, Waterville	Kennebec River	Class C
005	Fairfield Pump Station, Fairfield	Kennebec River	Class C

2. Prohibited Discharges

   a) The discharge of dry weather flows is prohibited. All such discharges shall be reported to the Department in accordance with Standard Condition D (1) of this permit.

   b) No discharge shall occur as a result of mechanical failure, improper design or inadequate operation or maintenance.

   c) No discharges shall occur at flow rates below the maximum design capacities of the wastewater treatment facility, pumping stations or sewerage system.

3. Narrative Effluent Limitations

   a) The effluent shall not contain a visible oil sheen, settled substances, foam, or floating solids at any time that impair the characteristics and designated uses ascribed to the classification of the receiving waters.

   b) The effluent shall not contain materials in concentrations or combinations that are hazardous or toxic to aquatic life; or which would impair the usage designated by the classification of the receiving waters.

   c) The discharge shall not impart color, turbidity, toxicity, radioactivity or other properties that cause the receiving waters to be unsuitable for the designated uses and other characteristics ascribed to their class.

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SPECIAL CONDITIONS

J. CONDITIONS FOR COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

4. CSO Master Plan (see Sections 2 & 3 of Chapter 570 Department Rules)

   The permittee shall implement CSO control projects in accordance with an approved CSO Master Plan and abatement schedule. The CSO Master Plan entitled, *"Phase 3 Combined Sewer Overflow Report,"* dated May 1, 2001, was approved on January 14, 2002, and the abatement schedule dated June 27, 2002, was approved on July 1, 2002. The abatement schedule may be amended from time to time based on mutual agreements between the permittee and the Department. The permittee must notify the Department in writing prior to any proposed changes to the implementation schedule.

   On or before July 31, 2004, the permittee shall complete the Tier 1 CSO Mitigation Measures as specified in the CSO abatement schedule, and provide for review and approval a Status Report assessing the success of the KSTD member Tier 1 Programs and the need for Tier 2 CSO Mitigation Measures *[PCS Code 06699]*. Revisions to this date will require formal modification (submission of an application) of this permit.

5. Nine Minimum Controls (NMC) (see Section 5 Chapter 570 of Department Rules)

   The permittee shall implement and follow the Nine Minimum Controls documentation as approved by the USEPA on May 29, 1997. Work preformed on the Nine Minimum Controls during the year shall be included in the annual *CSO Progress Report* (see below).

6. CSO Compliance Monitoring Program (see Section 6 Chapter 570 of Department Rules)

   The permittee shall conduct flow monitoring according to an approved *Compliance Monitoring Program* on all CSO points, as part of the CSO Master Plan. Annual flow volumes for all CSO locations shall be determined by actual flow monitoring, by estimation using a model such as USEPA's Storm Water Management Model (SWMM) or by some other estimation technique approved by the Department.

   Results shall be submitted annually as part of the annual *CSO Progress Report* (see below), and shall include annual precipitation, CSO volumes (actual or estimated) and any block test data required. Any abnormalities during CSO monitoring shall also be reported. The results shall be reported on the Department form *"CSO Activity and Volumes"* (Attachment B of this permit) or similar format and submitted to the Department on diskette.

   CSO control projects that have been completed shall be monitored for volume and frequency of overflow to determine the effectiveness of the project toward CSO abatement. This requirement shall not apply to those areas where complete separation has been completed and CSO outfalls have been eliminated.

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SPECIAL CONDITIONS

J. CONDITIONS FOR COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

7. Additions of New Wastewater (see Section 8 Chapter 570 of Department Rules)

   Chapter 570 Section 8 lists requirements relating to any proposed addition of wastewater to the combined sewer system. Documentation of the new wastewater additions to the system and associated mitigating measures shall be included in the annual *CSO Progress Report* (see below). Reports must contain the volumes and characteristics of the wastewater added or authorized for addition and descriptions of the sewer system improvements and estimated effectiveness.

8. Annual CSO Progress Reports (see Section 7 of Chapter 570 of Department Rules)

   By March 1 of each year, the permittee shall submit *CSO Progress Reports* covering the previous calendar year (January 1 to December 31) *[PCS Code 33101]*. The CSO Progress Report shall include, but is not necessarily limited to, the following topics as further described in Chapter 570: CSO abatement projects, schedule comparison, progress on inflow sources, costs, flow monitoring results, CSO activity and volumes, nine minimum controls update, sewer extensions, and new commercial or industrial flows.

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   The CSO Progress Reports shall be completed on a standard form entitled *"Annual CSO Progress Report,"* furnished by the Department, and submitted in electronic form, if possible, to the following address:

   CSO Coordinator
   Department of Environmental Protection
   Bureau of Land and Water Quality
   Division of Engineering, Compliance and Technical Assistance
   17 State House Station
   Augusta, Maine 04333-0017
   e-mail: CSOCoordinator@maine.gov

9. Signs

   If not already installed, the permittee shall install and maintain an identification sign at each CSO location as notification to the public that intermittent discharges of untreated sanitary wastewater occur. The sign must be located at or near the outfall and be easily readable by the public. The sign shall be a minimum of 12" X 18" in size with white lettering against a green background and shall contain the following information:

   KENNEBEC SANITARY TREATMENT DISTRICT
   WET WEATHER
   SEWAGE DISCHARGE
   CSO # AND NAME

SPECIAL CONDITIONS

K. WET WEATHER FLOW MANAGEMENT PLAN

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

On or before six months following the effective date of this permit, the permittee shall submit to the Department for review and approval, a new or revised Wet Weather Management Plan ***[PCS Code 06799]***, 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.

Once the Wet Weather Management Plan has been approved, the permittee shall review their plan annually and record any necessary changes to keep the plan up to date.

L. REOPENING OF PERMIT FOR MODIFICATIONS

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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 or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information. Additionally, the Department will evaluate data submitted to the Department by the permittee pursuant to Section N of this permit, *Schedule of Compliance*, and modify the dilution factors and total residual chlorine (TRC) limits established in this permitting action, provided the data demonstrate increased dilution and or that the permittee can consistently achieve compliance with the water quality-based TRC thresholds calculated in Section 6(f) of the accompanying Fact Sheet.

M. INDUSTRIAL PRETREATMENT PROGRAM

1. Pollutants introduced into publicly owned treatment works (POTWs) by a non-domestic source (user) shall not pass-through the POTW or interfere with the operation or performance of the works.

    a. The permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW facilities or operation, are necessary to ensure continued compliance with the POTWs MEPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.

SPECIAL CONDITIONS

M. INDUSTRIAL PRETREATMENT PROGRAM (cont'd)

Within 180 days of the effective date of this permit, the permittee shall prepare and submit a written technical evaluation to the Department analyzing the need to revise local limits *[PCS Code 08799].* As part of this evaluation, the permittee shall assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, bio-monitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee shall complete the attached form (Attachment C of this permit) with the technical evaluation to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. Should the evaluation reveal the need to revise local limits, the permittee shall complete the revisions within 120 days of notification by the Department and submit the revisions to the Department for approval. The permittee shall carry out the local limits revisions in accordance with USEPA's *Guidance Manual for the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program* (December, 1987).

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2. The permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the permittee's approved Pretreatment Program, and the General Pretreatment Regulations, found at 40 CFR §403 and Department rule Chapter 528. At a minimum, the permittee must perform the following duties to properly implement the Industrial Pretreatment Program (IPP):

   a. Carry out inspection, surveillance, and monitoring procedures, which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with the Pretreatment Standards. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP but in no case less than once per year and maintain adequate records.

   b. Issue or renew all necessary industrial user control mechanisms within 90 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.

   c. Obtain appropriate remedies for noncompliance by an industrial user with any pretreatment standard and/or requirement.

   d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.

SPECIAL CONDITIONS

M. INDUSTRIAL PRETREATMENT PROGRAM (cont'd)

e. The permittee shall provide the Department with an annual report describing the permittee's pretreatment program activities for the twelve month period ending 60 days prior to the due date in accordance with federal regulation found at 40 CFR §403.12(i) and Department rule Chapter 528(12)(I). **The annual report shall be consistent with the format described in Attachment C of this permit and shall be submitted no later than December 1 of each calendar year *[PCS Code 610IL]*.**

f. The permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with federal regulation found at 40 CFR §403.18(c) and Department rule Chapter 528(18).

g. The permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the federal regulations found at 40 CFR §405 et seq.

h. The permittee must modify its pretreatment program to conform to all changes in the federal regulations and State rules that pertain to the implementation and enforcement of the industrial pretreatment program. **Within 180 days of the effective date of this permit, the permittee must provide the Department in writing, proposed changes (if applicable) to the permittee's pretreatment program *[PCS Code 50999]*** deemed necessary to assure conformity with current federal regulations and State rules. At a minimum, the permittee must address in its written submission the following areas: (1) enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The permittee will implement these proposed changes pending the Department's approval under federal regulation 40 CFR §403.18 and Department rule Chapter 528(18). This submission is separate and distinct from any local limits analysis submission described in section 1(a) above.

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N. SCHEDULE OF COMPLIANCE

The previous licensing action established a daily maximum total residual chlorine (TRC) limitation of 1.0 mg/L as a best practicable treatment (BPT) standard for facilities that utilize elemental chlorine or chlorine-based compounds in their treatment processes. In this permitting action, the Department has identified that the daily maximum water quality-based threshold for TRC is 0.52 mg/L, which is based, in part, on an existing outfall configuration that does not provide complete and rapid mixing of the effluent with the receiving water. The Department has adopted a policy that facilities with a calculated water quality-based TRC threshold below 0.8 mg/L must dechlorinate the effluent prior to discharge and has established monthly average and daily maximum BPT-based standards of 0.1 mg/L and 0.3 mg/L, respectively, for facilities that dechlorinate the effluent. The permittee requested an opportunity to evaluate their existing operational practices to determine whether or not their existing disinfection system is capable of achieving the necessary bacteria kill while maintaining compliance with the water quality-based TRC threshold of 0.52 mg/L and to evaluate the benefits of modifying (pipe extension and or installation of a diffuser) their existing outfall structure to achieve mixing of the

N. SCHEDULE OF COMPLIANCE (cont'd)

effluent with a greater portion of the receiving water, which may result in revised water quality-based or BPT-based TRC limits. Concurrent with these investigations, the KSTD also proposes to investigate the costs associated with and the physical modifications necessary to complete installation of a new dechlorination system. Therefore, the Department is establishing the following schedule of compliance

1. **Beginning on the effective date of this permit and lasting through August 31, 2006,** this permitting action is carrying forward a seasonal daily maximum concentration limit of 1.0 mg/L.

2. **On or before June 1, 2004,** the permittee shall submit to the Department, for review and approval, a proposed plan with specific dates for the commencement and completion of all activities necessary to: 1) evaluate the ability of the existing disinfection control system to simultaneously meet the *Escherichia coli* bacteria limits established in this permitting action and the calculated water quality-based TRC threshold of 0.52 mg/L (e.g. operationally manage chlorine administration); 2) investigate the mixing characteristics of the final effluent with the receiving waters (e.g. dye test) and 3) complete all physical modifications of the outfall structure to enhance mixing of the final effluent with the receiving water (e.g. installation of a diffuser) ***[PCS Code 00701]***. The plan must identify the methodology that will be employed to complete all phases of the plan and any temporary or permanent operational and physical modifications necessary to effectively execute the plan. Upon notification that the proposed plan has received Department approval, the permittee shall implement the plan in accordance with the dates specified in the proposal or as modified by the Department.

3. **On or before December 1, 2004,** the permittee shall submit to the Department, for review and approval, one or more reports summarizing the results of the disinfection control system and outfall research ***[PCS Code 50008]***. The report(s) shall identify with supporting documentation including, but not limited to, effluent monitoring and analytical results: 1) the failure or success of the existing disinfection system to achieve the necessary bacteria kill with final effluent TRC concentrations at or below 0.52 mg/L; 2) all proposed operational and physical modifications identified through the investigations that are necessary to achieve compliance with either the water quality-based TRC limit of 0.52 mg/L or the BPT-based limits of 0.1 mg/L and 0.3 mg/L (e.g. permanent operational modifications, installation of a dechlorination system); 3) all proposed physical modifications to the existing outfall structure deemed necessary to enhance mixing of the final effluent with the receiving water; and 4) specific dates for the commencement and completion of all proposed operational and physical modifications of the existing treatment system.

4. **On or before June 1, 2006,** the permittee shall initiate construction of all approved operational and physical modifications to the existing treatment system ***[PCS Code 03099]***.

5. **On or before August 15, 2006,** the permittee shall complete construction and initiate start-up of all operational and physical modifications to the treatment system ***[PCS Code 04599]***.

N. SCHEDULE OF COMPLIANCE (cont'd)

6. **Beginning on September 1, 2006, and lasting through permit expiration,** the more restrictive, seasonal water quality-based monthly average and daily maximum TRC concentration limits of 0.1 mg/L and 0.3 mg/L, respectively, take effect. If, however, the Department determines that the permittee is capable of achieving compliance with the bacteria limits and water quality-based TRC threshold solely through operational modifications, or the permittee modifies the existing outfall structure to enhance mixing of the final effluent with the receiving water, the Department will reopen this permit to modify the TRC limits accordingly.

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ATTACHMENT A

ANALYTICAL CHEMISTRY RESULTS
FRESHWATER TESTS

Date collected _____ mm/dd/yy Date analyzed _____ mm/dd/yy

Lab ID No. _____

Analyte	Report Units	Results receiving water	Results effluent	Detection level	Method
Alkalinity	mg/L			mg/L	
Ammonia nitrogen	µg/L			µg/L	
Specific conductance	µmhos			µmhos	
Total residual chlorine	mg/L			mg/L	
Total organic carbon	mg/L			mg/L	
Total solids	mg/L			mg/L	
Total suspended solids	mg/L			mg/L	
Total aluminum	µg/L			µg/L	
Total cadmium	µg/L			µg/L	
Total calcium	mg/L			mg/L	
Total chromium	µg/L			µg/L	
Total copper	µg/L			µg/L	
Total hardness	mg/L			mg/L	
Total lead	µg/L			µg/L	
Total magnesium	µg/L			µg/L	
Total nickel	µg/L			µg/L	
Total zinc	µg/L			µg/L	
other (pH)	S.U.			S.U.	
other ( )					

Comments _____

Laboratory conducting test. To the best of my knowledge this information is true, accurate, and complete

signature _____ lab name _____

printed name _____ address _____

tel. no. _____ _____

MARINE WHOLE EFFLUENT TOXICITY (WET) TEST REPORT

Facility _____ DEP License No _____ NPDES permit No _____

Contact person _____ Telephone No _____

Date initially sampled _____ (mm/dd/yy) Date tested _____ (mm/dd/yy) Chlorinated? _____

Test type screening _____ surveillance _____ Dechlorinated? _____

Test required by: DEP/EPA _____

Results % effluent

	Mysid shrimp	sea urchin	silverside
LC50			
A-NOEL			
C-NOEL			

Receiving Water Concentration

A-NOEL	
C-NOEL	

Data summary

	Mysid shrimp	sea urchin	silver side		
	% survival	% fertilized	% survival		final wt (mg)
QC standard	A>90	>70	A>90	C>80	>0.50
lab control					
receiving water contrl					
conc. 1 (%)					
conc. 2 (%)					
conc. 3 (%)					
conc. 4 (%)					
conc. 5 (%)					
conc. 6 (%)					
stat test used					

place * next to values statistically different from controls

Reference toxicant

	Mysid shrimp	sea urchin	silver side	
	LC50/A-NOEL	C-NOEL	LC50/A-NOEL	C-NOEL
toxicant /date				
limits (mg/l)				
results (mg/l)				

Salinity Adjustment

brine	
sea salt	
other	

Comments _____

Laboratory Conducting Tests. To the best of my knowledge this information is true, accurate, and complete

signature _____ company _____

printed name _____ address _____

tel. no. _____

Report analytical chemistry on reverse side.

ATTACHMENT B

ATTACHMENT B
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSO ACTIVITY AND VOLUMES

MUNICIPALITY OR DISTRICT	MEPDES / NPDES PERMIT NO.
REPORTING YEAR	SIGNED BY:
YEARLY TOTAL PRECIPITATION INCHES	DATE:

CSO EVENT NO.	START DATE OF STORM	PRECIP. DATA		FLOW DATA (GALLONS PER DAY) OR BLOCK ACTIVITY("1")							
		TOTAL INCHES	MAX. HR. INCHES	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	EVENT OVERFLOW GALLONS	EVENT DURATION HRS
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
	TOTALS										

Note 1: Flow data should be listed as gallons per day. Storms lasting more than one day should show total flow for each day.

Note 2: Block activity should be shown as a "1" if the block floated away.

ATTACHMENT C

ATTACHMENT C

MEPDES PERMIT REQUIREMENT
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

1) A narrative description **(paragraph)** of program effectiveness including the following:
- ***present and proposed changes*** to the program
  - Funding
  - Staffing
  - Ordinances
  - Regulations
  - Statutory authority
  - Other

Our pretreatment program is very effective as indicated by the SIU compliance rate and the reduction in pollutant loading to the POTW.

The program is adequately funded and staffed to provide for annual training and completion of our regulatory responsibilities.

No changes have been made, or are proposed, to _____'s Sewer Use Ordinance. The SUO provides adequate statutory authority to enforce in Local, State and Federal courts.

2) The **date** of the latest adoption of Local Limits and a statement as to whether the municipality is under a State or Federal compliance schedule that includes steps to be taken to revise Local Limits.

If yes, Compliance Schedule; if no, schedule not needed.

_____'s Local Limits were last adopted (by local authority) on _____ and _____ is under no State or Federal compliance schedule that includes steps to be taken to revise Local Limits.

3) A description of actions taken to reduce the incidence of violations by SIU's;
Example: ***Inspections – Notifications – Information/Education***

4) A description of monitoring, sewer inspections and evaluations which were done during the past year to detect Interference and Pass Through, specifying parameters and frequencies;
Example: ***Evaluations/investigations as a result of Monitoring, Sewer Inspections, and Evaluations, Influent – Effluent results, Spills, Dumps, Toxicity, or Unusual events.***

5) A detailed description of all Interference and Pass Through that occurred during the past year; **[statement of: Event, Parameter, Violation, Cause, IU, POTW action, IU action, Result (see NOV #).**

_____ experienced no events of Interference or Pass- Through in this reporting period. If "Yes" then describe.

6) A thorough description of all investigations into Interference and Pass-Through during the past year;
A paragraph: Violation, Problem, Steps to resolve, Result.

Attachment C (cont'd)

(same as 5/ or describe investigations.)

7) An updated **list** of all industrial users by category (40 CFR 403.8(f)(2)(i), *indicating compliance or non- compliance* with the following:

- baseline monitoring reporting requirements for newly promulgated industries
- compliance status reporting requirements for newly promulgated industries
- periodic (semi-annual) monitoring reporting requirements - categorical standards, and
- local limits

Example:

H. SIU	*New Promulgated*	*Cat Limits*	*Local Limits*	*Semi-annual Reports*
	BMR/Compliance	***Compliance***	***Compliance***	***Compliance***
	Y/N) (Y/N) (Y/N)	***(Y/N)***	***(Y/N)***	

8) A summary of compliance and enforcement activities during the preceding year including a:

- **list** of SIU's inspected by the POTW (dates, compliance status),
- **list** of SIU's sampled by the POTW (dates, compliance status),

Example:

SIU Inspected Sampled/self Sampled/POTW Compliance Y/N

- **list** of SIU's to which compliance schedules were issued,
  [SIU] - Violation - Compliance - Schedule
  N/A or schedule plus Progress Reporting Dates]

- **summary list** of NOV's written to SIU's by name
  [statement],
- **summary list** of AO's written to SIU's by name
  [statement],
- **list** of criminal and/or civil suits filed by SIU,
  [usually a simple statement]
- **list** of penalty amounts obtained (by SIU) **[a statement].**

NOTE: Some items in numbers 9 & 10 may be combined in a chart, or charts. Be sure that any charts are logical, not cluttered, and don't contain an unreasonable amount of information.

Any violations should be shown separately, in summary, for each item.

9) **List** of violating industries required to be published in a local newspaper (40 CFR 403.8(f)(2)(vii). **[Statement]**

10) A **summary** of all pollutant analytical results for:
- Influent **[Annual average – show violations]**
- Effluent **[Annual average – show violations]**

Attachment C (cont'd)

- Sludge **[Annual average– show violations]**
- Toxicity/Bioassay **[Annual Average – show violations]**

- comparison of influent sampling results versus threshold inhibitory concentrations for the POTW's wastewater treatment system.
- comparison of effluent sampling results versus water quality standards, considering the permitted dilution factor of the POTW.
NOTE: The sampling program shall be as described below OR any similar sampling program described in the NPDES permit.
- At a minimum, annual sampling and analysis of/ the influent and effluent of the POTW's wastewater treatment plant shall be conducted on the following pollutants:

Example:

	Influent	*Inhibition Effluent*	*AWC*	
			Acute	*Chronic*
- Total Cadmium				
- Total Chromium				
- Total Copper				
- Total Lead				
- Total Mercury (Methods 1669 & 1631)				
- Total Nickel				
- Total Silver				
- Total Zinc				
- Total Cyanide				
- Total Arsenic				

The sampling program shall consist of one 24-hour flow-proportioned composite that is representative of the flow received by the POTW.

The composite shall consist of accurately flow-proportioned grab samples taken over a discharge day if the samples are collected manually, or shall consist of a minimum of 48 accurately flow-proportioned samples if an automatic sampler is used. Sampling and preservation shall be according to 40 CFR part 136.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
WASTE DISCHARGE LICENSE

PROPOSED DRAFT FACT SHEET

Date: March 16, 2004

MEPDES PERMIT: #ME0100854
WASTE DISCHARGE LICENSE: #W000687-5M-F-R

NAME AND ADDRESS OF APPLICANT:

KENNEBEC SANITARY TREATMENT DISTRICT (KSTD)
401 Water Street
Waterville, Maine 04901-6354

COUNTY: Kennebec

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

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Kennebec Sanitary Treatment District
Treatment Plant Outfall #001A
401 Water Street
Waterville, Maine 04901-6354

AND

Combined Sewer Overflow (CSO) Outfalls:

Outfall #	Location	Receiving Water & Class	
002	Abraham Brook Interceptor, Waterville	Kennebec River	Class C
003	Main Pump Station, Waterville	Kennebec River	Class C
005	Fairfield Pump Station, Fairfield	Kennebec River	Class C

RECEIVING WATER / CLASSIFICATION: Kennebec River / Class C

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: Timothy J. LeVasseur, Superintendent
(207) 873-0611 x102

1. APPLICATION SUMMARY

Application: The applicant has applied to the Department for renewal of Waste Discharge License (WDL) #W000687-47-E-R, which was issued on April 8, 1998, and expired on April 8, 2002. The WDL permitted the monthly average discharge of up to 12.7 million gallons per day (MGD) of secondary treated sanitary wastewater from a publicly owned treatment works (POTW) and an unspecified quantity of untreated combined sanitary and storm water during wet weather events from three (3) combined sewer overflow (CSO) outfalls to the Kennebec River, Class C, in Waterville, Maine.

2. PERMIT SUMMARY

a. Regulatory: On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine. From this point forward, the program will be referenced as the Maine Pollutant Discharge Elimination System (MEPDES) permit program, and permit #ME0100854 (same as NPDES permit number) will be utilized as the primary reference number.

b. Terms and Conditions: **This permitting action is similar to the 4/8/98 licensing action in that it is:**

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1. Carrying forward the monthly average discharge flow limitation of 12.7 MGD;

2. Carrying forward the monthly average, weekly average and daily maximum concentration limits and the daily maximum mass reporting requirements for biochemical oxygen demand (BOD_5) and total suspended solids (TSS);

3. Carrying forward the weekly average and daily maximum concentration reporting requirements for settleable solids;

4. Carrying forward the monthly average and daily maximum concentration limits for *Escherichia coli* bacteria;

5. Carrying forward the daily maximum concentration limitation of 1.0 mg/L for total residual chlorine (TRC) through august 31, 2006; and

6. Carrying forward whole effluent toxicity (WET) and chemical-specific testing requirements.

2. PERMIT SUMMARY (cont'd)

This permitting action is different from the 4/8/98 licensing action in that it is:

1. Revising the monthly average and weekly average mass limits for BOD_5 and TSS;

2. Establishing a requirement for a minimum of 85% removal of BOD_5 and TSS;

3. Establishing a seasonal (June 1 through September 30 of each year) monitoring requirement for total phosphorous and a weekly reporting requirement for the monthly average, weekly average and daily maximum concentration and mass limits;

4. Revising the pH range limitation;

5. Revising the permittee's authorization to receive and introduce into the treatment process or solids handling stream septage from 18,000 gallons per day (GPD) to 50,000 GPD;

6. Establishing a schedule of compliance to provide for the research of alternative options to installing an effluent dechlorination system and for the completion of operational and physical modifications to the treatment system necessary to ensure consistent compliance with the more restrictive water quality-based TRC limits established in this permitting action, including an evaluation of the outfall structure design and mixing characteristics with the receiving water.

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c. Facility History: This section provides a summary of significant licensing/permitting actions that have been completed for KSTD.

August 23, 1984 – The U.S. Environmental Protection Agency (USEPA) approved the Pretreatment Program for KSTD.

October 9, 1996 – The USEPA approved revised technically based Local Limits superseding previous approvals on April 8, 1994, and December 3, 1991.

April 8, 1998 – The Department issued WDL #W000687-47-E-R for the continued discharge of up to 12.7 MGD of secondary treated sanitary wastewater and an unspecified quantity of untreated combined sanitary and storm water from three combined sewer overflow (CSO) outfall locations to the Kennebec River. This licensing action superseded previous WDL Modification #W000687-47-D-M issued on September 22, 1995, WDL #W000687-47-C-R issued on January 8, 1991, WDL Modification #W000687-47-B-A issued on April 23, 1987, and WDL #W000687-47-A-R issued on March 25, 1985.

2. PERMIT SUMMARY (cont'd)

August 21, 1998 – The USEPA issued NPDES permit #ME0100854 to KSTD for the discharge of an unspecified quantity of secondary treated sanitary wastewater to the Kennebec River in Waterville, Maine, which superseded previous permits issued on September 22, 1995, and September 28, 1990. Permit #ME0100854 required reporting of the monthly average and daily maximum discharge flow values and expired on March 31, 2003.

March 14, 2003 – The KSTD submitted a General Application for renewal of WDL #W000687-47-E-R. The application was accepted for processing on March 19, 2003, and assigned WDL #W000687-5M-F-R.

d. Source Description: The KSTD is a quasi-municipal wastewater treatment facility located on the western shore of the Kennebec River in Waterville, Maine, which was established in 1971 by the Towns of Waterville, Winslow, Benton and Fairfield. Construction of the treatment plant was completed in 1976 and the plant now serves a population of approximately 35,000 people with seven significant industrial users, Huhtamaki Food Service, Inc. (formerly The Chinet Company) being the largest contributor. Huhtamaki manufactures approximately 150 tons/day of molded pulp products using recycled and virgin pulp fibers and conveys approximately 3.1 MGD of process wastewater and cooling waters to the KSTD facility. Other significant sources of wastes introduced into the treatment process include leachate from a State-owned landfill located in Vassalboro, Maine; holding tank wastes generated by maintenance garages and snowmelt collection systems operated by the Maine Department of Transportation and the Maine Turnpike Authority; various types of wastewater generated by Wal-Mart Stores, Inc. located in Oxford, Maine; and wastewater generated by Liberty Graphics, a graphics printing company located in Liberty, Maine.

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The KSTD sewer collection system is approximately 11.5 miles in length and is constructed of Grade IV reinforced concrete pipe. The KSTD currently maintains 3 pump stations: 1) the Main pump station located on Water Street in Waterville; 2) the Fairfield pump station located on Water Street in Fairfield; and 3) the Benton pump station located on Bridge Street in Benton. All three pump stations currently have on-site back-up power supplies (a propane-fired back-up generator was installed at the Benton station in December 2003). The KSTD also maintains two meter pits known as the Savage pit located on Savage Street in Fairfield and another pit located on the Fairfield/Waterville town line behind the Huhtamaki building. These two meter pits are used to measure the wastewater flow being conveyed from the Town of Fairfield to the treatment facility. There are currently three (3) remaining combined sewer overflow (CSO) points associated with the collection system which are identified in Special Condition J, *Conditions For Combined Sewer Overflows (CSOs),"* of this permit. CSO #002, which is located adjacent to the Kennebec River just north of the KSTD facility, is designed as an overflow containment structure that discharges untreated combined storm and wastewater when flow to the treatment facility exceeds capacity.

Pursuant to Chapter 555, *Standards for the Addition of Septage to Waste Water Treatment Facilities,* and based on a written Septage Management Plan dated, July 12, 1999, the previous licensing action authorized the KSTD to receive up to 18,000 gallons per day (GPD) of septage wastes from local haulers. Based on a written request by the permittee, dated February 19, 2004, and in consideration that the KSTD is currently developing a revised

2. PERMIT SUMMARY (cont'd)

septage management plan, this permitting action is revising the permittee's authorization to receive and introduce into the treatment process or solids handling stream up to 50,000 GPD of septage wastes. In addition to septage, the KSTD reported that they will be receiving and treating up to 50,000 GPD of landfill leachate wastes.

Maps showing the location of the KSTD, the plant outfall and the CSO outfalls are included as Fact Sheet Attachment A.

e. Wastewater Treatment: The KSTD completed a major upgrade of the treatment facility in 1998, including construction of a new septage/leachate receiving building, a new control system, updated pump station drives, improved computer control programs and improved secondary process control methods. Other upgrades that have been completed since the issuance of the KSTD's previous WDL are listed in the "*Application Summary*" section of WDL #W000687-47-E-R. The purpose of the upgrades was to replace aging and antiquated equipment with new or more efficient equipment. The monthly average, daily maximum and peak flow design capacities for the KSTD are 12.7 MGD, 25.5 MGD and 30.0 MGD, respectively.

The KSTD provides a secondary level of wastewater treatment via an activated sludge system and secondary clarification. Flows are conveyed to an influent distribution structure via a single 54-inch diameter interceptor pipe and is distributed into three (3) 36-inch diameter pipes that are connected to three screen channels in the basement of the control building. Screen channels No. 1 and No. 3 are equipped with new mechanical climber screens, and screen channel No. 2 is equipped with a manually-cleaned bar rack. Only one of the three screen channels is utilized during normal weather conditions and all three can be utilized during wet weather events. Screenings are deposited into a portable, self-dumping screenings hopper, which washes the screenings with plant effluent (which is returned back to the raw wastewater influent line), compacts the material and packages 550-pound quantities of it into plastic bags for final disposal with household waste. After passing through the bar screens, wastewater is metered in the Parshall flumes installed in each screen channel and conveyed to two (2) 160-foot long by 50-foot wide by 8-foot deep (64,000-cubic feet) primary settling basins. Primary and secondary skimmings are returned to two (2) approximately 15,000-gallon thickened activated waste sludge holding tanks before ultimately being composted or land applied as a means of final disposal. The KSTD reported that by the beginning of calendar year 2004, the facility anticipates that 100% of waste sludge will be composted. Primary grit is conveyed to a grit hopper then to two (2) gravity thickeners and then mixed into the dewatered sludge. Wastewater flow from the primary settling basins is conveyed via a 48-inch diameter pipe to two (2) 210-foot long by 70 foot wide by 15-foot deep (combined total volume of 441,000 cubic feet) rectangular aeration basins. One of the basins utilizes diffused aeration while the other utilizes mechanical surface aerators. Following aeration, the mixed liquor flows over adjustable effluent weirs to four (4) 85-foot diameter, 14-foot deep (total combined volume of 341,000 cubic feet) circular secondary clarifiers. Skimmer blades attached to rotating arms push floating grease and solids to a scum trough, which is pumped back to the thickened activated waste sludge holding tanks. Secondary effluent from all four clarifier basins mixes together in the effluent structure of clarifier No. 4 and flows to two (2) baffled,

2. PERMIT SUMMARY (cont'd)

50-foot long by 85-foot wide by 10.5-foot deep (total combined volume of 89,775 cubic feet) rectangular chlorine contact chambers. Disinfection is accomplished by continuously feeding chlorine solution (HOCl) into a chlorine dosing manhole where the solution is diffused into the treated wastewater. The contact time at the daily average flow rate is approximately 37 minutes. The treated wastewater is collected in a 48-inch diameter reinforced concrete pipe and conveyed by gravity during normal weather conditions and by pump during high water conditions approximately 177 feet to the edge of the Kennebec River. Beyond this point, the outfall pipe is fitted with a steel reducer, which steps the pipe diameter down to 42 inches.

Final treated effluent is conveyed to the Kennebec River for discharge via a 42-inch diameter outfall pipe designated as Outfall #001A. The pipe is located approximately 77 feet into the river channel from the western shore of the river, and the end of pipe is situated approximately six (6) feet below the water surface during mean low water. The pipe rests approximately 12 inches below the river substrate and is protected with irregular-sized angular stone. The pipe is fitted with a 90-degree elbow oriented to discharge in the down-stream direction, and is not fitted with diffusers or other mechanisms which would assist in complete and rapid mixing of the effluent with the receiving waters.

Other sludge handling equipment in use at the facility and not discussed above includes four (4) cyclone separators, two (2) classifiers, one (1) rotating drum thickener, one (1) grit conveyor, and one (1) 1,200-cubic foot conical dry lime storage silo.

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A schematic of the wastewater treatment process is included as Fact Sheet Attachment B.

3. CONDITIONS OF PERMIT

Maine law, 38 M.R.S.A. §414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A. §420, and Department Rule Chapter 530.5, *Surface Water Toxics Control Program,* requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A. §467(4)(A)(10) classifies the Kennebec River at the point of discharge as a Class C waterway. Further, 38 M.R.S.A. §465(4) describes the standards for Class C waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2002 Integrated Water Quality Monitoring and Assessment Report, prepared pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 14.7-mile reach (Segment ID 339R) of the Kennebec River including and extending above and below the point of discharge as, "*Category 4B1: Rivers and Streams Impaired by Pollutants,*

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Pollution Control Requirements Reasonably Expected to Result in Attainment." Impairment in this context refers to a statewide fish consumption advisory due to the presence of dioxin. Wastewater discharged by the KSTD is not expected to contain dioxin introduced by treatment processes and the Department has no information at this time that the discharge from the KSTD causes or contributes to the non-attainment status of the Kennebec River at the point of discharge.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Dilution Factors: The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in Department Rule Chapter 530.5, *Surface Water Toxics Control Program*, October 1994. With a flow limit of 12.7 MGD the dilution factors are as follows:

Mod. Acute: ¼ Q10 = 512 cfs $\Rightarrow \frac{(512\text{ cfs})(0.6464) + 12.7\text{ MGD}}{12.7\text{ MGD}} = 27.1:1$

Acute: 1Q10 = 2,048 cfs $\Rightarrow \frac{(2{,}048\text{ cfs})(0.6464) + 12.7\text{ MGD}}{12.7\text{ MGD}} = 105.2:1$

Chronic: 7Q10 = 2,503 cfs $\Rightarrow \frac{(2{,}503\text{ cfs})(0.6464) + 12.7\text{ MGD}}{12.7\text{ MGD}} = 128.4:1$

Harmonic Mean = 4,324 cfs $\Rightarrow \frac{(4{,}324\text{ cfs})(0.6464) + 12.7\text{ MGD}}{12.7\text{ MGD}} = 221.1:1$

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Department rule Chapter 530.5(D)(4)(a) states that, *"Analyses using numerical acute criteria for aquatic life must be based on ¼ of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone, according to EPA's Mixing Zone Policy and to ensure a Zone of Passage of at least ¾ of the cross-sectional area of any steam as required by Department rule. 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 and including all of it, as long as the Zone of Passage is maintained."*

The KSTD's outfall pipe does not contain diffusers or other mechanisms that would assist in complete and rapid mixing of the effluent with the receiving waters. Further, the KSTD has not provided the Department with information as to the mixing characteristics of the discharge. Therefore, the Department is utilizing the default stream flow of ¼ of the 1Q10 in acute evaluations pursuant to Chapter 530.5. In accordance with Section N of this permit, *Schedule of Compliance*, the KSTD intends to research options for modifying the outfall structure to enhance mixing of the final effluent with the receiving water and subsequently report findings to the Department. Upon receipt of new data regarding the existing mixing characteristics, or upon completion of physical modifications of the outfall structure, the Department will reevaluate the dilution factors associated with the KSTD's discharge and reopen this permit to modify the dilution factors accordingly.

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

b. Flow: The previous licensing action established a monthly average discharge flow limitation of 12.7 MGD, which is being carried forward in this permitting action as it remains representative of the design capacity for the facility.

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous licensing action established monthly average and weekly average BOD_5 & 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 previous licensing action also established a daily maximum BOD_5 & TSS concentration limit of 50 mg/L based on a Department best professional judgement of best practicable treatment (BPT). All three concentration limits are being carried forward in this permitting action. The previous licensing action established monthly average and weekly average mass limits of 3,179 lbs./day and 4,769 lbs./day, respectively, and a daily maximum mass reporting requirement. This permitting action is revising the monthly average and weekly average mass limits to 3,178 lbs./day and 4,766 lbs./day, respectively, based on the monthly average flow limit of 12.7 MGD and the applicable concentration limits. This permitting action is carrying forward the daily maximum mass reporting requirement from the previous licensing action based on the Department's BPJ determination to eliminate the numeric limit in order to encourage the KSTD to maximum use of secondary treatment processes during wet weather events.

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This permitting action is also establishing a new requirement for a minimum of 85% removal of BOD_5 & TSS pursuant to Chapter 525(3)(III)(a)(3) and (b)(3) of the Department's rules.

This permitting action is carrying forward a minimum monitoring frequency of five times per week for BOD_5 & TSS based on Department policy for facilities with a monthly average flow equal to or greater than 5.0 MGD.

d. Settleable Solids: The previous licensing action carried forward weekly average and daily maximum concentration reporting requirements and a minimum monitoring requirement of once per day for settleable solids established by a 9/22/95 WDL Modification. Numeric limits were eliminated at that time based on a Department BPJ determination that they were not necessary to assess receiving water quality impacts caused by the discharge, given that the KSTD was then and continues to be required to conduct TSS at a minimum frequency of five (5) times per week. This permitting action is carrying forward the weekly average and daily maximum reporting requirements based on this BPJ determination, and a minimum monitoring frequency of once per day based on Department guidance.

e. *Escherichia coli* bacteria: The previous licensing action established monthly average and daily maximum concentration limits for *E. coli* bacteria of 142 colonies/100 ml (geometric mean) and 949 colonies/100 ml (instantaneous level), respectively, which were based on the State of Maine Water Classification Program criteria for Class C waters found at 38 M.R.S.A. §465(4)(B). Both concentration limits are being carried forward in this permitting action as is the minimum monitoring frequency of five times per week.

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

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

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Calculated Chronic Threshold
0.019 mg/L	0.011 mg/L	27.1:1 (Mod. A) 128.4:1 (C)	0.52 mg/L	1.41 mg/L

The Department has established a daily maximum BPT-based limitation for TRC 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-based limits of 0.3 mg/L and 0.1 mg/L, respectively. Based on the calculations above, the Department has identified that the KSTD must dechlorinate the effluent prior to discharge in order to meet the calculated water quality thresholds.

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The permittee requested an opportunity, through the establishment of a schedule of compliance, to evaluate their existing operational practices to determine whether or not their existing disinfection system is capable of achieving the necessary bacteria kill while maintaining compliance with the water quality-based TRC threshold of 0.52 mg/L and to evaluate the benefits of modifying their existing outfall structure to achieve mixing of the effluent with a greater portion of the receiving water. Therefore, the Department is carrying forward the daily maximum TRC concentration limit of 1.0 mg/L beginning on the effective date of this permit and lasting through August 31, 2006, and establishing monthly average and daily maximum BPT-based concentration limits of 0.1 mg/L and 0.3 mg/L, respectively, beginning on September 1, 2006, and lasting through permit expiration. In the interim, the KSTD will research alternative options to installation of an effluent dechlorination system, including modification of the existing disinfection system to consistently achieve the necessary bacteria kill while maintaining a maximum final effluent TRC concentration of 0.52 mg/L and researching the costs and benefits of extending or adding a diffuser to the existing outfall structure. The permittee is required to submit a report to the Department, for review and approval, summarizing the result of the investigations pursuant to Section N of this permit, *Schedule of Compliance*. If it is determined that the permittee can consistently achieve compliance with the bacteria limits and the water quality-based TRC threshold of 0.52 mg/L without installing a dechlorination system, the Department may reopen this permit to modify the TRC limits accordingly. Otherwise, the BPT-based limits remain in effect through permit expiration. This permitting action is carrying forward the minimum monitoring requirement of once per day based on Department guidance.

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

g. Total Phosphorus: This permitting action is establishing a once per week (1/Week) monitoring and reporting requirement for the monthly average, weekly average and daily maximum concentration and mass values for total phosphorus due to limited assimilative capacity of the Kennebec River for total phosphorus. Gathering such data will enable the Department to continually update the river model to predict potential algal blooms that may lead to depressed ambient dissolved oxygen conditions.

h. pH: The previous licensing action established a pH range limit of 6.0 – 8.5 standard units (SU), considered by the Department at the time as BPT for secondary treated wastewater. Pursuant to a new Department rule found at Chapter 525(3)(III)(c), the pH range limit is being revised to 6.0 – 9.0 SU, which is now considered BPT. This permitting action is carrying forward the minimum monitoring frequency of once per day based on Department guidance.

i. Whole Effluent Toxicity (WET) and Chemical Specific Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department Rules, 06-096 CMR Chapter 530.5, *Surface Water Toxics Control Program*, set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

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WET and chemical-specific (priority pollutant) testing, as required by Chapter 530.5, is included in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Chemical-specific, or "priority pollutant (PP)," testing 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.

Pursuant to criteria established in Department Rule Chapter 530.5, the KSTD has been placed in the high frequency category for WET testing as the facility is required by the USEPA to adopt a pretreatment program. The facility has been placed in the high frequency category for chemical-specific (priority pollutant) testing as the facility is required by the USEPA to adopt a pretreatment program and is licensed to discharge more than 1.0 MGD.

A recent review of the KSTD's data on file with the Department indicates that they have fulfilled the Chapter 530.5 testing requirements to date. See Attachment C of this Fact Sheet for a summary of the WET test results and Attachment D of this Fact Sheet for a summary of the chemical-specific test dates. Department Rule Chapter 530.5 and Protocol E(1) of a document entitled *Maine Department of Environmental Protection, Toxicity Program Implementation Protocols*, dated July 1998, states that statistical evaluations shall be

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

periodically performed on the most recent 60 months of WET and chemical-specific data for a given facility to determine if water quality based limitations must be included in the permit. A review of the WET and chemical-specific test results on file with the Department indicates that the KSTD has performed eight (8) acute and chronic no observed effect level (NOEL) (4 surveillance and 4 screening tests) since July 1998 and eight (8) chemical-specific tests since May 1999 for the Department. Five (5) of the WET tests performed during this period were also used to satisfy the requirements of KSTD's NPDES permit issued by the USEPA on 8/21/98.

WET Testing

On September 12, 2003, the Department conducted a statistical evaluation on the aforementioned tests results in accordance with the statistical approach outlined in the USEPA's March 1991 document entitled *Technical Support Document (TSD) for Water Quality Based Toxics Control*, Chapter 3.3.2 and Maine Department of Environmental Protection Guidance, July 1998, entitled *Toxicity Program Implementation Protocols*.

The 9/12/03 statistical evaluation indicates that the discharge does not exceed or have a reasonable potential (RP) to exceed acute or chronic critical ambient water quality criteria (AWQC) thresholds for any of the WET species tested to date.

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Based on the testing requirements for facilities classified in the high frequency category by Department rule Chapter 530.5(B)(3), the previous licensing action established surveillance level WET testing at a minimum frequency of once per year in any calendar quarter using the water flea (*Ceriodaphnia dubia*) and the fathead minnow (*Pimephales promelas*) and screening level WET testing at a minimum frequency of once per calendar quarter using the water flea and fathead minnow in two calendar quarters and the water flea and brook trout (*Salvelinus fontinalis*) in the remaining two quarters.

This permitting action is carrying forward both surveillance level and screening level testing frequencies. Surveillance level WET testing shall be conducted in a different calendar quarter each year and screening level WET testing shall be conducted in consecutive calendar quarters.

Chemical-Specific Testing

On February 19, 2004, the KSTD furnished the Department with two priority pollutant test result data sets that were missing from the Department's database. One of the data sets (November 2002) was submitted electronically and has since been entered into the Department's database. The other data set (May 2000) was not submitted electronically and has not been entered into the Department's database. Both test results, however, were included in a March 16, 2004 statistical evaluation of the chemical-specific test results. **The 3/16/04 statistical evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed critical thresholds or ambient water quality criteria for any of the pollutants tested.**

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

However, a detailed review of the priority pollutant data results suggests that a reasonable potential for arsenic to exceed the to exceed the AWQC for human health (organisms only) exists. The Department has established a Minimum Level of Detection (ML) of 0.005 mg/L for arsenic and the KSTD's previous license required that all analytical test results be reported to the Department, including those results that are detected below the ML. All reported values for arsenic are all lower than the Department's ML, do not demonstrate an upward trend and do not demonstrate significant variation from month-to-month or year-to-year. The maximum reported effluent concentration for arsenic was 0.003 mg/L. Therefore, the Department does not consider this test results to demonstrate a concern for the presence of arsenic in the KSTD's effluent and is not identifying the reported values as having a reasonable potential to exceed AWQC criteria. The Department is not establishing effluent limitations for arsenic in this permitting action.

Based on the Chapter 530.5 testing requirements for facilities classified in the high frequency category, the previous licensing action established surveillance level chemical-specific testing at a minimum frequency of once per year in any calendar quarter and screening level chemical-specific testing conducted at a minimum frequency of once per calendar quarter. **Both surveillance level and screening level chemical-specific testing at the above-described frequencies are being carried forward in this permitting action.**

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7. PRETREATMENT

The permittee is required to administer a pretreatment program based on the authority granted under Federal regulations 40 CFR §122.44(j), 40 CFR Part 403 and section 307 of the Federal Water Pollution Control Act (Clean Water Act) and Department rule Chapter 528, *Pretreatment Program*. The permittee's pretreatment program received USEPA approval on August 23, 1984, and as a result, appropriate pretreatment program requirements were incorporated into the previous National Pollutant Discharge Elimination System (NPDES) permit that were consistent with that approval and federal pretreatment regulations in effect when the permit was issued. Since issuance of the previous NPDES permit, the State of Maine has been authorized by the USEPA to administer the federal pretreatment program as part of receiving authorization to administer the NPDES program.

Upon issuance of this MEPDES permit, the permittee is obligated to modify (if applicable) its pretreatment program to be consistent with current federal regulations and State rules. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce Department-approved specific effluent limits (technically-based local limits - last approved by the USEPA on October 9, 1996); (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with federal regulations and State rules; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant non-compliance for industrial users; and (6) establish a definition of and track significant industrial users.

These requirements are necessary to ensure continued compliance with the POTWs MEPDES permit and its sludge use or disposal practices.

7. PRETREATMENT

In addition to the requirements described above, this permit requires that **within 180 days of the permit's effective date, the permittee shall submit to the Department in writing, a description of proposed changes to permittee's pretreatment program deemed necessary to assure conformity with current federal and State pretreatment regulations and rules, respectively** ***[PCS Code 50999]***. These requirements are included in the permit (Special Condition M) to ensure that the pretreatment program is consistent and up-to-date with all pretreatment requirements in effect. **By July 1 of each calendar year, the permittee must submit a pretreatment report detailing the activities of the program for the twelve-month period ending 60 days prior to the due date** ***[PCS Code 610IL].***

8. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

The Department acknowledges that the elimination of the three (3) remaining CSOs in the collection system and the secondary bypass (primary treated only) of sanitary waste water is a costly long term project. As the KSTD and the sewer collection system is upgraded and maintained in according to the CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO activities and in the wastewater receiving primary treatment only at the treatment plant, and, over time, improvement in the quality of the wastewater discharged to the receiving waters.

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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.

9. PUBLIC COMMENTS

Public notice of this application was made in the *Morning Sentinel* newspaper on or about March 7, 2003. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

10. DEPARTMENT CONTACTS

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

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

11. RESPONSE TO COMMENTS

The Department will respond to significant comments received during proposed draft review period.

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