ME0100021

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ANGUS S. KING, JR.
GOVERNOR

MARTHA KIRKPATRICK
COMMISSIONER

December 31, 2001

Scott Wilhelm
City of Bath
55 Front Street
Beth, ME 04530

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100021
Maine Waste Discharge License (WDL) Application #W002678-5L-E-M
Final Permit/License Modification

Dear Mr. Wilhelm:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL **modification** which was approved by the Department of Environmental Protection. This permit/license modification supersedes National Pollutant Discharge Elimination System (NPDES) permit #ME0100021, last issued by the Environmental Protection Agency (EPA) on September 30, 1998. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

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

If you have any questions regarding this matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc.
cc: Stuart Rose, DEP/SMRO
David Cochrane, USEPA
Susann Nachmann, USEPA

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

DEPARTMENT ORDER

IN THE MATTER OF

CITY OF BATH BATH, SAGADAHOC COUNTY, MAINE PUBLICLY OWNED TREATMENT WORKS ME0100021 W002678-5L-E-M	**APPROVAL**	MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AND WASTE DISCHARGE LICENSE **MODIFICATION**

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

APPLICATION SUMMARY

The applicant has applied for modification of Department Waste Discharge License (WDL) #W002678-5L-E-M, which was issued on October 27, 1999 and is due to expire on October 27, 2004. The WDL authorized a monthly average discharge of 3.5 million gallons per day (MGD) of treated municipal waste water from the Bath waste water treatment facility to the Kennebec River, Class SB, in Bath, Maine. The WDL also authorized the discharge of primary treated combined sanitary waste waters and storm water from a bypass structure at the waste water treatment facility and untreated combined sanitary waste waters and storm water from five combined sewer overflow (CSO) outfalls in the collection system. The permittee has requested the Department modify the WDL to incorporate the terms and conditions of the Maine Pollutant Discharge Elimination System (MEPDES) permit program.

On January 12, 2001, the Department received authorization from the Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) program in Maine. From this point forward, the program will be referenced as the MEPDES permit program and will utilize a number of #ME0100021 (same as NPDES) as a reference permit number.

PERMIT SUMMARY

This permit carries forward all terms and conditions of the October 27, 1999 WDL. This permitting action establishes a 30-day average removal of 85 percent for biochemical oxygen demand and total suspended solids pursuant to Department rule Chapter 525. The pH range limit of 6.0-8.5 standard units (SU) in the previous licensing action is being revised to 6.0-9.0 SU's pursuant to Chapter 525.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 27, 2001, 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., Section 464(4)(F), will be met, in that:

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

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

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

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

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

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

ACTION

THEREFORE, the Department APPROVES the above noted application of the CITY OF BATH, to discharge secondary and primary treated waste waters from a publicly owned treatment works to the Kennebec River, Class SB, and untreated combined sanitary waster water storm water from five (5) combined sewer overflows to the Kennebec River, Class SB, 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 January 16, 2001, copy attached.

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

3. This permit modification expires on October 27, 2004.

DONE AND DATED AT AUGUSTA, MAINE, THIS 27 DAY OF December, 2001.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 23, 2001.

Date of application acceptance: October 24, 2001.

Date files with Board of Environmental Protection _____

This order prepared by Gregg Wood, BUREAU OF LAND AND WATER QUALITY
W26785le 12/26/01

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 waste waters from OUTFALL # 001A** to the Kennebec River. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations						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]*	---	---	---	3.5 MGD *[03]*	---	---	Continuous *[CN]*	Recorder *[RC]*
Biochemical Oxygen Demand (BOD_5) (1) *[00310]*	876 #/Day *[26]*	1,314 #/Day *[26]*	Report #/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24 Hr. Composite *[24]*
BOD5 % Removal (2) *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Total Suspended Solids (TSS) (1) *[00545]*	876 #/Day *[26]*	1,314 #/Day *[26]*	Report #/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24 Hr. Composite *[24]*
TSS % Removal (2) *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Day *[01/01]*	Grab *[GR]*
Fecal Coliform Bacteria (3) *[74055]*	---	---	---	15/100 ml (4) *[13]*	---	50/100 ml *[13]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine (3,5a) *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.3 mg/L *[19]*	2/Day *[02/01]*	Grab *[GR]*
pH (Std. Units) *[00400]*	---	---	---	---	---	6.0-9.0 *[12]*	1/Day *[01/01]*	Grab *[GR]*

The italicized numeric values in brackets in the table above and that follow are not limitations, but are code numbers used by Department personnel to code Discharge Monitoring Reports (DMR's).

SPECIAL CONDITIONS

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

SURVEILLANCE LEVEL TESTING - Beginning calendar year 2002 and lasting through calendar year 2003.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(6)						
Acute – NOEL						
Mysidopsis bahia [TDM3E]	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
Menidia beryllina [TDM6B]	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
Chronic – NOEL						
Menidia beryllina [TBP6B]	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
Arbacia punctulata [TBH3A]	---	---	---	0.35 % [23]	2/Year [02/YR]	Composite [24]
Chemical Specific (7) [50008]	---	---	---	Report ug/L [28]	1/Year [01/YR]	Composite/Grab [24]

SCREENING LEVEL TESTING – Beginning twelve months prior to the expiration date of the permit.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(6)						
Acute – NOEL						
Mysidopsis bahia [TDM3E]	---	---	---	Report % [23]	2/Year [02/YR]	Composite [24]
Menidia beryllina [TDM6B]	---	---	---	Report % [23]	2/Year [02/YR]	Composite [24]
Chronic – NOEL						
Menidia beryllina [TBP6B]	---	---	---	Report % [23]	2/Year [02/YR]	Composite [24]
Arbacia punctulata [TBH3A]	---	---	---	0.35 % [23]	2/Year [02/YR]	Composite [24]
Chemical Specific (7) [50008]	---	---	---	Report ug/L [28]	4/Year [04/YR]	Composite/Grab [24]

SPECIAL CONDITIONS

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

2. Primary Treatment of CSO's: During the period effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge **primary treated and disinfected excess combined sewer waste waters** from **Outfall #002** (formerly#001D) which is then conveyed to the Kennebec River, Class SC, via **Outfall 001A**. Such discharges may only occur in response to wet weather events or snowmelt and in accordance with a Department approved High Flow Management Plan and shall be limited and monitored as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow, MGD [50050]	Report (Total MGD) [03]	Report (MGD) [03]	---	---	Continuous[CN]	Recorder[RC]
Surface Loading Rate[8] [50997]	---	Report (gpd/sf) [07]	---	---	1/Discharge Day [01/DD]	Calculate[CA]
Overflow Use, Occurrances[9] [74062]	---	---	Report (# of days) [93]	---	1/Discharge Day [01/DD]	Record Total[RT]
BOD5 % Removal [10] [81010]	Report (%)[23]	---	---	Report (mg/L) [19]	1/Discharge Day [01/DD]	Composite[24]
TSS % Removal [10] [81011]	Report (%)[23]	---	---	Report (mg/L) [19]	1/Discharge Day[01/DD]	Composite[24]
Settleable Solids [00545]	---	---	---	Report (ml/L) [25]	1/Discharge Day[01/DD]	Grab[GR]
Fecal Coliform Bacteria[3] [74055]	---	---	---	200/100 ml[25]	1/Discharge Day[01/DD]	Grab[GR]
Total Residual Chlorine[3,5b] [31633]	---	---	---	1.0 mg/L[19]	1/Discharge Day[01/DD]	Grab[GR]
pH (Standard Units) [00400]	---	---	---	6.0 –9.0[19]	1/Discharge Day[01/DD]	Grab[GR]

SPECIAL CONDITIONS

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

Footnotes:

Sampling Locations:

Effluent receiving secondary treatment shall be sampled for BOD_5, TSS, WET testing, chemical specific testing, total residual chlorine, pH, settleable solids and fecal coliform bacteria at the drop box prior to discharge to the river.

Effluent receiving primary treatment shall be sampled for BOD_5, TSS, total residual chlorine, pH, settleable solids and fecal coliform bacteria and shall be collected at the effluent end of the CSO structure, after dechlorination, but prior to combining with the final effluent.

Influent sampling for BOD_5 and TSS shall be sampled at the discharge of the headworks, after screening but before de-gritting.

Any change in sampling location(s) must be reviewed and approved by the Department in writing.

1. Monthly average and weekly average BOD and TSS limits only apply during dry weather days (when flow is less than the facilities dry weather design flow of 3.5 MGD, as opposed to wet weather days, defined as days when collection system is subject to inflow and infiltration as a result of precipitation and/or snow melt causing the 3.5 MGD dry weather design flow to be exceeded). Calculations for monthly average and weekly average BOD and TSS reported for Outfall #001A (secondary treatment limits) on discharge monitoring reports shall reflect only dry weather flow data, but all data shall be supplied on daily logs ("49-form).

2. The treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent removal shall be based on monthly average values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L.

3. Fecal coliform bacteria and total residual chlorine limits are in effect throughout the year at the request of Department of Marine Resources (as per letter on 3/29/90; yearly disinfection included in previous licensing action) in order to protect local shellfish resources.

4. To be calculated as a geometric mean.

SPECIAL CONDITIONS

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

5a. Total residual chlorine shall be tested using Amperometric Titration or to DPD Spectrophotometric Method. The EPA approved methods are found in Standard Methods for the Manual of Methods of Analysis of Water and Wastes, Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes.

5b. Total residual chlorine shall be tested using any method approved in 40 CFR Part 136.

6. Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions set at levels to bracket the acute and chronic dilution factors of 2.9% and 0.35 % 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 calendar year 2002 and lasting through calendar year 2003, the permittee shall conduct surveillance level WET testing (1/Year, with the exception of the sea urchin) in any calendar quarter. Acute tests shall be conducted on the mysid shrimp (*Mysidopsis bahia*) and the inland silverside (*Menidia berrylina*). Chronic tests shall be conducted on the inland silverside (*Menidia berrylina*) and on the sea urchin (*Arbacia punctulta*)(2/Year). Results shall be submitted as soon as they become available.

Beginning twelve months prior to the expiration date of this permit, the permittee shall conduct screening level WET testing (2/Year) in any two calendar quarters. Acute tests shall be conducted on the mysid shrimp (*Mysidopsis bahia*) and the inland silverside (*Menidia berrylina*). Chronic tests shall be conducted on the inland silverside (*Menidia berrylina*) and the sea urchin (*Arbacia punctulta*). Results shall be submitted as soon as they become available.

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.

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

a. Klemm, D.J., et al., Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Marine and Estuarine Organisms, Fourth Edition, August 1993, EPA/600/4-90/027F).

b. Weber, C.I., et al., Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms, (Second Edition), July 1994, EPA/600/4-91/003).

SPECIAL CONDITIONS

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

Footnotes:

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

   Beginning calendar year 2002 and lasting through calendar year 2003, surveillance level chemical specific testing shall be conducted at a frequency of once per year (any calendar quarter). **Beginning twelve months prior to the expiration date of the permit,** screening level chemical specific testing shall be conducted at a frequency of four per year (four consecutive calendar quarters). Chemical specific testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, where 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 reported as soon as they become available. For the purposes of DMR reporting, enter a "0" 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 EPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.

8. Surface Loading Rate is a peak hourly rate. The permittee must provide this information to establish data on generic bypass treatment effectiveness at peak flows.

9. A discharge day is any portion of a calendar day in which a discharge of treated excess combined sewer waste waters from Outfall #001D is occurring. For discharges exceeding one calendar day in duration, sampling shall be performed each day of the event according to the measurement frequency specified. For example, if a discharge event covers all or part of three calendar days, the permittee shall take three composite samples for BOD and TSS, initiating samples at the start of the discharge event and each subsequent calendar day and terminating samples at the end of the calendar day or at the end of the discharge event.

10. The permittee shall analyze both the influent and effluent of the primary clarifiers for BOD and TSS during the discharge of treated excess combined sewer waste waters from Outfall #001D and report the percent (%) removal on the monthly Discharge Monitoring Report (DMR). As an attachment to the DMR, the permittee shall report the individual BOD and TSS test results used to calculate the percent removal rates reported.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time.

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

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

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

C. DISINFECTION

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

D. TREATMENT PLANT OPERATOR

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

SPECIAL CONDITIONS

E. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report forms provide by the Department and **postmarked no later than the fifteenth day of the month** following the completed reporting period. A signed copy of the Discharge Monitoring Report and all other reports required herein shall be submitted to the following address:

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

F. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the results of testing required by the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at 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 monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

G. EMERGENCY POWER

Pursuant to Standard Condition E(1)(a) of this permit, **within thirty (30) days after the effective date of this permit**, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its waste water pumping and treatment facilities fails.

H. NOTIFICATION REQUIREMENT

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

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

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

SPECIAL CONDITIONS

H. NOTIFICATION REQUIREMENT (cont'd)

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

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

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

I. LIMITATIONS FOR INDUSTRIAL USERS

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

J. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A, #001D, #003, #004, #005, #006 and #008. Discharges of waste water from any other point source are not authorized under this permit, but shall be reported in accordance with Standards Condition B(5)(Bypass) of this permit.

K. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to introduce into the treatment process or solids handling stream a maximum of **10,000 gallons per day** of 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 addition of septage cause or contributing to effluent quality violations. If such conditions do exist, receipt of septage shall be suspended until effluent quality can be maintained.

3. The permittee shall maintain records which shall include, as a minimum, the following by date: volume of septage received, source of the septage (name of municipality), the hauler transporting the septage, the dates and volume of septage added to the waste treatment influent and test results.

SPECIAL CONDITIONS

K. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

4. Addition of septage shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment facility becomes overloaded, receipt of septage shall be reduced or terminated in order to eliminate the overload condition.

5. Septage known to be harmful to the treatment processes shall not be accepted. Wastes which contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.

6. Holding tank waste water shall not be recorder as septage and should be reported in the treatment facility's influent flow.

7. During wet weather flows, no septage shall be added to the waste water treatment system.

L. EFFLUENT LIMITATIONS AND CONDITIONS FOR COMBINED SEWER OVERFLOWS

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

1. The permittee is authorized to discharge from the following locations of CSO's (storm water/sanitary waste water) subject to the conditions and requirements contained herein:

Discharge Number	Regulator Location	Receiving Water & Class
003	Rose Street Pump Station	Kennebec River, SB
004	Pleasant Avenue Pump Station	Kennebec River, SB
005	Commercial Street Pump Station	Kennebec River, SB
006	Farrin Place Pump Station	Kennebec River, SB
008	Haward Street Pump Station	Kennebec River, SB

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.

SPECIAL CONDITIONS

L. CONDITIONS FOR COMBINED SEWER OVERFLOW (cont'd)

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.

   d) Notwithstanding specific conditions of this permit, the effluent by itself or in combination with other discharges shall 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.

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, *Facilities Planning Report Combined Sewer Overflows and Pumping Stations*, dated May 1993 and revised in a document entitled, *Supplemental Combined Sewer Overflow Facilities Plan Study*, dated September 1995 and abatement project schedule in a memorandum entitled, *Meeting Minutes Combined Sewer Overflow*, dated May 25, 1999, were approved by the Department on October 1, 1999. A revised abatement schedule was approved by the Department on January 16, 2001. **By September 30, 2003**, the permittee shall submit to the Department for review and approval an updated CSO Master Plan and abatement schedule. 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

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

   The permittee shall implement and follow the Nine Minimum Control documentation as approved by the Department on October 1, 1999. Work preformed on the Nine Minimum Controls during the year shall be included in the annual CSO Progress Report (see below).

SPECIAL CONDITIONS

L. CONDITIONS FOR COMBINED SEWER OVERFLOW (cont'd)

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

   The permittee shall conduct block testing or 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, or by estimation using a model such as EPA's Storm Water Management Model (SWMM).

   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.

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). 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.

SPECIAL CONDITIONS

L. CONDITIONS FOR COMBINED SEWER OVERFLOW (cont'd)

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
e-mail: CSOCoordinator@state.me.us

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:

CITY OF BATH
WET WEATHER
SEWAGE DISCHARGE
CSO # AND NAME

10. Definitions

For the purposes of this permitting action, the following terms are defined as follows:

a. Combined Sewer Overflow - a discharge of excess waste water from a municipal or quasi-municipal sewerage system that conveys both sanitary wastes and storm water in a single pipe system and that is in direct response to a storm event or snowmelt.

b. Dry Weather Flows - flow in a sewerage system that occurs as a result of non-storm events or are caused solely by ground water infiltration.

c. Wet Weather Flows - flow in a sewerage system that occurs as a direct result of a storm event, or snowmelt in combination with dry weather flows.

ATTACHMENT A

MARINE WHOLE EFFLUENT TOXICITY (WET) TEST REPORT

Facility _____ DEP License No _____ NPDES permit No _____

Contact person _____ Telephone No _____

Date initially sampled _____ Date tested _____ Chlorinated? _____

Test type mm/dd/yy screening _____ mm/dd/yy surveillance _____ Dechlorinated? _____

DEP/EPA Test required by: _____

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.

ANALYTICAL CHEMISTRY RESULTS
MARINE WATERS

Date collected _____ mm/dd/yy

Date analyzed _____ mm/dd/yy

Lab ID No. _____

Analyte	Report Units	Results receiving water	Results effluent	Detection level	Method
Ammonia nitrogen	µg/L			µg/L	
Salinity	ppt			ppt	
Total residual oxidants	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 chromium	µg/L			µg/L	
Total copper	µg/L			µg/L	
Total lead	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. _____

ATTACHMENT B

MUNICIPALITY OR DIS

YEA

YEARLY TOTAL PRE

CSO EVENT #	START DATE OF STORM	PRECIP. DA TOTAL INCHES	MAX INCH	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 sh

Note 2: Block activity

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **November 27, 2001**

PERMIT NUMBER: **ME0100021**
LICENSE NUMBER: **W002678-5L-E-M**

NAME AND ADDRESS OF APPLICANT:

CITY OF BATH
Publicly Owned Treatment Works
55 Front Street
Bath, Maine 04530

COUNTY: **Sagadahoc County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

109 Bowery Street
Bath, Maine 04530

RECEVING WATER/CLASSIFICATION: **Kennebec River/Class SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Scott Wilhelm**
(207) 443-8348

1. APPLICATION SUMMARY

a. Application: The applicant has applied for modification of Department Waste Discharge License (WDL) #W002678-5L-E-M, which was issued on October 27, 1999 and is due to expire on October 27, 2004. The WDL authorized a monthly average discharge of 3.5 million gallons per day (MGD) of treated municipal waste water from the Bath waste water treatment facility to the Kennebec River, Class SB, in Bath, Maine. The WDL also authorized the discharge of primary treated combined sanitary waste waters and storm water from a bypass structure at the waste water treatment facility and untreated combined sanitary waste waters and storm water from five combined sewer overflow (CSO) outfalls in the collection system. The permittee has requested the Department modify the WDL to incorporate the terms and conditions of the Maine Pollutant Discharge Elimination System (MEPDES) permit program.

1. APPLICATION SUMMARY (cont'd)

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

January 9, 1992 – The State of Maine entered into a Consent Agreement and Enforcement Order with the City of Bath. The order established a compliance schedule to evaluate and eliminate combined sewer overflows (CSO's) through the development of a CSO abatement Master Plan and associated programs. The Order also required the City to evaluate its existing waste water treatment facilities and implement various plans and programs, including a preventative maintenance plan, a pump station facilities plan, staff training and education program, a comprehensive treatment plant facilities plan, and a staffing needs evaluation.

September 1995 – A Master Plan document entitled, Supplemental Combined Sewer Overflow Facilities Plan Study" prepared by EER, Inc. was submitted to the Department and EPA. The Master Plan assessed a full range of abatement alternatives, taking into consideration technical, environmental, and economic factors, and provided for on-going compliance monitoring to be done during implementation of recommended abatement measures

September 30, 1998 – The City's National Pollutant Discharge Elimination System (NPDES) permit #ME0100021 was reissued. The permit contained limits for secondary treatment at a monthly average flow of 3.5 MGD. Flows through the CSO related primary bypass structure were not specifically authorized by the NPDES permit and no primary effluent limits were set forth for this portion of the discharge.

December 23, 1998 - The EPA issued a letter to the City that modified the permit testing frequency for BOD and TSS from 1/Day to 3/Week.

October 1, 1999 - The CSO Master Plan was approved by the Department and the EPA.

October 27, 1999 – The Department issued WDL #W002678-5L-D-R authorizing the City to discharge secondary and primary treated waste waters from the waste water treatment facility and untreated waste waters/storm water from five CSO's.

October 1999 - The upgrade for the City's waste water treatment was substantially completed.

January 12, 2001 - The Department received authorization from the EPA to administer the NPDES permit program in Maine. From this point forward, the program will be referenced as the MEPDES permit program. Upon issuance of a final MEPDES permit, NPDES permit #ME0100021 last issued by the U.S. Environmental Protection Agency on September 30, 1998, will be superseded. Once superseded, all terms and conditions of the NPDES become null and void.

1. APPLICATION SUMMARY (cont'd)

October 23, 2001 – The City of Bath submitted an application to the Department to modify WDL #W002678-5L-D-R to incorporate the terms and conditions of the MEPDES program.

c. Source Description: The facility, located at 109 Bowery Street in Bath, treats domestic, industrial, and commercial waste waters from the surrounding City. There are no industrial users contributing flow greater than 10% of the volume of waste water received by the treatment facility. There is one minor industrial waste stream from Bath Iron Works (BIW) which has been monitored by BIW and the City. The following waste water parameters have been historically sampled by and will continue to be sampled by BIW and submitted to the City and Department: copper, lead, nickel, zinc, BOD, TSS, oil and grease, pH, and temperature.

The City maintains a combined sewage collection system. The collection system does not have sufficient capacity to transport the volume of inflow and infiltration of water experienced during periods of rainfall and snow melt. During wet weather, the permittee is authorized to discharge storm water/waste water from five (currently) CSO's to the Kennebec River.

The facility is authorized to treat up to 10,000 gallons per day (GPD) of septage. The septage receiving station was upgrade as part of the waste water treatment facility. On June 21, 1999, the City provided the Department with an updated written Septage Management Plan pursuant to Chapter 555, Section 6.

d. Waste Water Treatment: The City's waste water treatment facility provides a secondary level of treatment via an activated sludge process. Screenings and grit are removed at the headworks by means of an automatic climbing rake and swirl grit chamber with grit screw apparatus. Two secondary clarifiers were retrofitted in 1999 and now serve as primary treatment clarifiers, each 50 feet in diameter and holding 157,000 gallons. Reaction is accomplished by two separate aeration trains (2 basins each); secondary clarification of the waste water is achieved by three - 180 ft. x 12 ft. rectangular clarifiers each with a capacity of 137,000 gallons. Sludge de-watering is accomplished by means of two, 2-meter belt filter presses and de-watered sludge is limed and hauled to field spreading and stacking sites by private contractors. Secondary effluent is chlorinated in detention tanks prior to being discharged to the Kennebec River through a 36" outfall pipe with a diffuser located 24 feet below mean low water. The facility has the capacity to de-chlorinate the final effluent.

The facility is designed to treat to secondary levels at an average daily flow of 3.5 MGD. The total pumping capacity to the facility is 14 MGD. As part of its CSO abatement program approved by the Department on October 1, 1999, the City is treating a portion of the excess combined sewer overflows at the waste water treatment facility. As designed, the upgraded facility can provide peak (24-48 hour) sustained secondary flow

1. APPLICATION SUMMARY (cont'd)

of 7.0 MGD and primary treated and disinfection for an additional 7.0 MGD of wet weather flow. To the extent possible, combined sewer flows receive secondary treatment along with normal dry weather flows. However, in order to prevent damage to the treatment system and upsetting the biological process, the volume of water receiving secondary treatment is limited. During storm or snow melt related events, primary treated waste water volumes in excess of 7.0 MGD peak flow can be diverted from entering the secondary treatment aeration and re-directed through a bypass structure located between the primary clarifiers. The bypassed primary treated waste water can either be diverted henceforth to empty aeration basins or, if the basins are filled or otherwise being used, to a bypass-specific chlorine detention basin equipped with a high rate disinfection system, flow measurement, and dechlorination capabilities. The bypassed water is then blended with secondary treated waste water prior to discharge to the Kennebec River. The facility treats as much combined waste water as possible, however, due to seasonal variations and the need to maintain stable treatment for dry weather flows, the amount of combined sewer overflow receiving secondary treatment may vary at any given time.

2. CONDITIONS OF PERMITS

Maine Law, 38 M.R.S.A., Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment, be consistent with the U.S. Clean Water Act, and ensure that the receiving water attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420,and Department Regulation 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

3. RECEIVING WATER QUALITY STANDARDS

Maine Law, 38 M.R.S.A., Section 465, states that the Kennebec River, Class SB, shall be suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation and navigation and as habitat for fish and other estuarine and marine life. The habitat shall be characterized as unimpaired. Discharges to Class SB waters shall not cause adverse impact to estuarine life in the receiving waters shall be of sufficient quality to support estuarine and marine species indigenous to the receiving water without detrimental changes in the resident biological community. There shall be no new discharge to Class SB waters which would cause closure of open shellfish areas by the Department of Marine Resources.

4. RECEIVING WATER QUALITY CONDITIONS

The State of Maine Water Quality Assessment Report (1998) pursuant to Section 305(b) of the Federal Water Pollution Control Act, indicates that the Kennebec River in this reach is attaining its Class SB classification.

5. EFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Dilution Factors: Department Regulation Chapter 530.5, *Surface Water Toxics Control Program*, §D(3)(b) states that for discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE or CORMIX. Using plan and profile information provided by the permittee and calculations based on interpretation of the CORMIX model whose parameters include facility effluent design flows of 7 MGD (daily maximum used for acute dilution) and 3.5 MGD (monthly average used for chronic dilution), outfall/diffuser configuration (36" outfall pipe with diffuser); and in-stream mixing characteristics (based on 15 minute travel time) determined from modeling and/or field investigation, the Department has determined the dilution factors for the discharge of 3.5 MGD from the waste water treatment facility are as follows:

Acute = 34:1 Chronic = 284:1 Harmonic mean = 852:1

a. Secondary Treated Effluent (Outfall 001A)

Flow: The monthly average flow limit of 3.5 MGD in the previous licensing action is being carried forward in this permitting action and is representative of the dry weather design capacity of the facility.

Biochemical Oxygen Demand & Total Suspended Solids – All mass and concentration limits for biochemical oxygen demand (BOD5) and total suspended solids (TSS) in the previous licensing action are being carried forward in this permitting action. The monthly and weekly average concentration limits of 30 mg/L and 45 mg/L respectively, are based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B) as defined in 40 CFR 133.102 and Department rule Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L are based on a Department best professional judgment of best practicable treatment. All BOD5 and TSS mass limitations are calculated based on the monthly average permit flow limit of 3.5 MGD and the corresponding monthly average and weekly average concentration limits. It is noted that no daily maximum mass limits for BOD and TSS have been established in this permit (or the previous license) due to the presence of CSO's in the collection system. Establishing such a limit would likely discourage the City from treating as much waste water as the plant can physically treat during wet weather events.

5. EFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

BOD and TSS mass loading calculations at 3.5 MGD are as follows:

Monthly average = (30 mg/L) (3.5 MGD) (8.34) = 876 lbs/day
Weekly average = (45 mg/L) (3.5 MGD) (8.34) = 1,314 lbs/day

The most current NPDES permit states in a footnote on page 2 of 11 that *"the monthly average flow limit of 3.5 MGD and the monthly and weekly mass BOD and TSS limits.....apply only during dry weather days. During wet weather days (days when collection system is subject to infiltration and inflow as a result of precipitation and snow melt causing the 3.5 MGD dry weather design flow to be exceeded), the permittee is to report wet weather days flow, BOD and TSS (mass and concentration) as a separate listing along with the monthly DMR and should not be included in the DMR calculations."* To maintain consistency, the above dry weather/wet weather flow dependent limits shall also apply in this permit.

Settleable Solids - The previous license established a daily maximum concentration limit 0.3 ml/L that is being carried forward in this permitting action. The daily maximum limit is considered a best practicable treatment (BPT) limitation.

Fecal Coliform Bacteria – The previous licensing action established monthly average and daily maximum limits of 15 colonies/100 ml and 50 colonies/100 ml respectively and are being carried forward in this permitting action. The limits are based on the Water Classification Program criteria for the receiving waters (including standards in the National Shellfish Sanitation Program) and requires application of the best practicable treatment. It is noted the limitations and monitoring requirements are in effect on a year-round basis.

Total Residual Chlorine - Limits on total residual chlorine (TRC) are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. The previous licensing action established daily maximum and monthly average technology based limits of 0.3 mg/L and 0.1 mg/L respectively, for the discharge and are being carried forward in this permitting action. Water quality based thresholds for TRC can be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	13 ug/L	7.5 ug/L	34:1	284:1	0.44 mg/L	2.13 mg/L

Example calculation: Acute – 0.013 mg/L (34) = 0.44 mg/L

5. EFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

pH – The previous licensing action established a pH range limitation of 6.0 - 8.5 standard units. The limits were based on Maine Board of Environmental Protection Policy regarding the certification of NPDES permits and are considered best practicable treatment limitations. This permitting action is expanding the range limit from 6.0 – 8.5 to 6.0 –9.0 standard units pursuant to a new Department regulation found at Chapter 525(3)(III)(c). The new limits are considered best practicable treatment.

Monitoring frequencies for BOD, TSS, and Fecal Coliform bacteria are 3/week according to Department guidance for facilities with a monthly average flow between 1.5 and 5.0 MGD. SS and pH are monitored daily.

Whole Effluent Toxicity (WET) and Chemical Specific Testing - The Department issued a Fact Sheet to the City of facility on 2/1/95 which outlined City's WET and chemical specific testing requirements under Department Rule Chapter 530.5, *Surface Water Toxics Control Program*. The rule placed the Bath facility in the medium frequency category for WET testing as the facility had a chronic dilution factor of greater than 20:1 but less than 100:1. The 2/1/95 Fact Sheet also outlined Bath's chemical specific (priority pollutant) testing requirement under Chapter 530.5. The rule placed the Bath facility in the high frequency category as the facility is permitted to discharge greater than 1.0 MGD.

The Department's database for WET and chemical specific test results for Bath indicates the facility has been conducting WET testing and chemical specific testing as required. See Attachment A of this Fact Sheet for a summary of the WET test results and Attachment B 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 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.

Chapter 530.5 §C(2) states when a *discharge "...contains pollutants at levels that have a reasonable potential to cause or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion, appropriate water quality based limits must be established in the permit upon issuance."*

Chapter 530.5 §C(3) also states that if data indicates that a discharge is causing an exceedence of applicable AWQC, then:*"(1) the Department must notify the licensee of the exceedence; (2) the licensee must submit a toxicity reduction evaluation (TRE) plan for review and approval within 30 days of receipt of notice and implement the TRE after Department approval; (3) the Department must modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of*

5. EFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

pollutant and meet receiving water classification standards within 180 days of the Department's approval of the TRE."

On November 15, 2001, the Department conducted a statistical evaluation on the aforementioned tests results in accordance with the statistical approach outlined in EPA'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 11/15/01 statistical evaluation indicates that a 2/7/99 WET test result of <0.63% exceeded the critical chronic ambient water quality threshold of 0.35% for the sea urchin.** Therefore, beginning calendar year 2002 and lasting through the expiration date of the permit, the permittee shall conduct surveillance level WET testing at a frequency of 1/Year for the mysid shrimp and inland silverside and a screnning level testing of 2/Year for the sea urchin. Beginning twelve months prior to the expiration date of the permit, the permittee shall revert back to a screening level testing of 2/Year for all species.

The Department and the City agreed at the time the exceedence was reported that a TRE was to continue testing on the sea urchin at a frequency of 2/Year. The additional testing was to determine whether the exceedence was an isolated incident or an on-going issue. The City has conducted four (4) additional C-NOEL test on the sea urchin subsequent to the 2/7/99 test result that do not exceed or have a reasonable potential to exceed the chronic water quality threshold. Therefore, this permitting action is not requiring the submission of a TRE.

As for chemical specific testing, the 11/15/01 statistical evaluation indicates the discharge does not exceed or have a reasonable potential to exceed acute, chronic or human health ambient water quality criteria for any of the parameters tested to date. Therefore, beginning calendar year 2002 and lasting through calendar year 2003, surveillance level chemical specific testing shall be conducted at a frequency of once per year (any calendar quarter). Beginning twelve months prior to the expiration date of the permit, screening level chemical specific testing shall be conducted at a frequency of four per year (four consecutive calendar quarters).

b. Primary Treated Effluent (Outfall 002)

For those excess combined sewer flows received at the treatment facility which are greater than that which can be treated to a secondary level of treatment, the Department has made a best professional judgement that primary treated and disinfection constitute practicable and appropriate treatment. Fecal coliform bacteria maximum daily limit of 200 colonies per 100 ml is based on a Department best practicable treatment determination for primary treated waste water. Limits on total residual chlorine are specified to ensure attainment of marine water quality criteria for levels of chlorine and that the best practicable treatment technology is utilized to abate the discharge of chlorine. The facility has the ability to de-chlorinate its primary bypass waste water, and

5. EFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

in this case, in order to set a high enough chlorine residual necessary for disinfection, the City will de-chlorinate this effluent to achieve the 1.0 mg/L TRC limit. However, the City is not required to achieve the BPT standard of 0.10 mg/L usually set for facilities using dechlorination because the calculated dilution of the effluent in the Kennebec River is substantial and should increase during wet weather when the bypass is active.

c. Combined Sewer Overflows

This permit does not contain effluent limitations on the individual outfalls. Department Regulation, Chapter 570, "Storm Water and Combined Sewer Overflows," states that for discharges from overflows from combined municipal storm and sanitary sewer systems, the requirement of "Best Practicable Treatment" specified in 38 M.R.S.A., Section 414-A-1(D) maybe met by agreement with the discharger, as a conditions of its permit, through development of a plan within a time period specified by the Department. The City of Bath has submitted a Combined Sewer Overflow Abatement Study Master Plan and subsequent amendments that have been approved by the Department on October 1, 1999. The City has been active implementing the recommendations of the Master Plan and to date has significantly reduced the volume of untreated combined sewer overflows to the receiving water.

The following are the locations for the City's CSO's:

Discharge Number	Regulator Location	Receiving Water & Class
003	Rose Street Pump Station	Kennebec River, SB
004	Pleasant Avenue Pump Station	Kennebec River, SB
005	Commercial Street Pump Station	Kennebec River, SB
006	Farrin Place Pump Station	Kennebec River, SB
008	Harvard Street Pump Station	Kennebec River, SB

6. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

7. PUBLIC COMMENTS

Public notice of this application was made in the Times Record newspaper on or about October 23, 2001. The Department receives public on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

8. DEPARTMENT CONTACTS

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

Gregg Wood
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-7693

9. RESPONSE TO COMMENTS

During the period of November 27, 2001 through December 27, 2001, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued for the discharges cited in this permit. The Department did not receive any verbal or written comments during the comment period. Therefore, no Response to Comments has been prepared.

ATTACHMENT A

BATH
KENNEBEC RIVER

Flow: 3.5 MGD
Chronic dilution: 284.0:1
Acute dilution: 34.0:1

Species	Test	Test Result %	Sample Date
MYSID SHRIMP	LC50	100	12/01/1991
SILVER SIDE	LC50	100	12/01/1991
MYSID SHRIMP	LC50	>100	06/01/1992
SILVER SIDE	LC50	>100	06/01/1992
MYSID SHRIMP	LC50	65.8	12/07/1992
SILVER SIDE	LC50	>100	12/07/1992
MYSID SHRIMP	LC50	>100	07/01/1993
SILVER SIDE	LC50	>100	07/01/1993
MYSID SHRIMP	LC50	>100	01/01/1994
SILVER SIDE	LC50	>100	01/01/1994
MYSID SHRIMP	LC50	100	07/01/1994
SILVER SIDE	LC50	100	07/01/1994
MYSID SHRIMP	A_NOEL	100	12/12/1995
MYSID SHRIMP	LC50	>100	12/12/1995
SILVER SIDE	A_NOEL	100	12/12/1995
SILVER SIDE	LC50	>100	12/12/1995
MYSID SHRIMP	A_NOEL	80	07/02/1996
MYSID SHRIMP	LC50	>100	07/02/1996
SILVER SIDE	A_NOEL	100	07/02/1996
SILVER SIDE	LC50	>100	07/02/1996
MYSID SHRIMP	A_NOEL	40	12/02/1996
MYSID SHRIMP	LC50	>100	12/02/1996
SILVER SIDE	A_NOEL	100	12/02/1996
SILVER SIDE	LC50	>100	12/02/1996
MYSID SHRIMP	A_NOEL	83.3	06/23/1997
MYSID SHRIMP	LC50	>100	06/23/1997
SILVER SIDE	A_NOEL	100	06/23/1997
SILVER SIDE	LC50	>100	06/23/1997
MYSID SHRIMP	A_NOEL	100	02/07/1999
MYSID SHRIMP	LC50	>100	02/07/1999
SEA URCHIN	C_NOEL	<0.63	02/07/1999
SILVER SIDE	A_NOEL	100	02/07/1999
SILVER SIDE	C_NOEL	100	02/07/1999
SILVER SIDE	LC50	>100	02/07/1999
MYSID SHRIMP	A_NOEL	100	05/09/1999
MYSID SHRIMP	LC50	>100	05/09/1999
SEA URCHIN	C_NOEL	50	05/09/1999
SILVER SIDE	A_NOEL	100	05/09/1999
SILVER SIDE	C_NOEL	50	05/09/1999
SILVER SIDE	LC50	>100	05/09/1999
SEA URCHIN	C_NOEL	100	07/10/2000

Species	Test	Test Result %	Sample Date
MYSID SHRIMP	A_NOEL	57.1	01/16/2001
MYSID SHRIMP	LC50	>100	01/16/2001
SEA URCHIN	C_NOEL	5.0	01/16/2001
SILVER SIDE	A_NOEL	100	01/16/2001
SILVER SIDE	C_NOEL	100	01/16/2001
SILVER SIDE	LC50	>100	01/16/2001
MYSID SHRIMP	A_NOEL	100	01/21/2001
MYSID SHRIMP	LC50	>100	01/21/2001
SEA URCHIN	C_NOEL	10	01/21/2001
SILVER SIDE	A_NOEL	100	01/21/2001
SILVER SIDE	C_NOEL	100	01/21/2001
SILVER SIDE	LC50	>100	01/21/2001
MYSID SHRIMP	A_NOEL	100	07/08/2001
MYSID SHRIMP	LC50	>100	07/08/2001
SEA URCHIN	C_NOEL	100	07/08/2001
SILVER SIDE	A_NOEL	100	07/08/2001
SILVER SIDE	C_NOEL	100	07/08/2001
SILVER SIDE	LC50	>100	07/08/2001

ATTACHMENT B

Sample Date: 08/27/1995
Plant flows not provided

Total Tests:	145		
Missing Compounds:	2		
Tests With High DL:	64		
M = 3	V = 31	A = 2	
BN = 3	P = 25	other = 0	

Sample Date: 10/01/1995
Plant flows not provided

Total Tests:	123		
Missing Compounds:	2		
Tests With High DL:	40		
M = 5	V = 5	A = 2	
BN = 3	P = 25	other = 0	

Sample Date: 02/01/1996
Plant flows not provided

Total Tests:	123		
Missing Compounds:	2		
Tests With High DL:	40		
M = 5	V = 5	A = 2	
BN = 3	P = 25	other = 0	

Sample Date: 06/24/1996
Plant flows not provided

Total Tests:	121		
Missing Compounds:	3		
Tests With High DL:	36		
M = 2	V = 4	A = 2	
BN = 3	P = 25	other = 0	

Sample Date: 12/15/1997
Plant flows not provided

Total Tests:	120		
Missing Compounds:	4		
Tests With High DL:	1		
M = 1	V = 0	A = 0	
BN = 0	P = 0	other = 0	

Sample Date: 02/07/1999
Plant flows provided

Total Tests:	130	mon.(MGD)=	1.880
Missing Compounds:	2	day(MGD)=	1.660
Tests With High DL:	0		
M = 0	V = 0	A = 0	
BN = 0	P = 0	other = 0	

Sample Date: 05/09/1999
Plant flows provided

Total Tests:	131	mon.(MGD)=	2.550
Missing Compounds:	2	day(MGD)=	1.570
Tests With High DL:	1		
M = 1	V = 0	A = 0	
BN = 0	P = 0	other = 0	

Sample Date: 01/16/2000
Plant flows provided

Total Tests:	123	mon.(MGD)=	2.300
Missing Compounds:	2	day(MGD)=	2.000
Tests With High DL:	0		
M = 0	V = 0	A = 0	
BN = 0	P = 0	other = 0	

Sample Date: 01/24/2001
Plant flows not provided

Total Tests:	129		
Missing Compounds:	1		
Tests With High DL:	0		
M = 0	V = 0	A = 0	
BN = 0	P = 0	other = 0	