STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

July 30, 2007

Mr. Jonathan Carman
Contract Operator
J.M.C. Wastewater Services
P.O. Box 397
Unity, ME 04988

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101150
Maine Waste Discharge License (WDL) Application #W000478-5L-D-R
FINAL MEPDES Permit/WDL

Dear Mr. Carman:

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

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

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

Sincerely,

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

Enc.

cc: Denise Behr, DEP
Lori Mitchell, DEP
Sandy Lao, USEPA
File #478

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

DEPARTMENT ORDER

IN THE MATTER OF

UNITY UTILITIES DISTRICT	)	MAINE POLLUTANT DISCHARGE
UNITY, WALDO COUNTY	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
#ME0101150	)	WASTE DISCHARGE LICENSE
#W000478-5L-D-R **APPROVAL**	)	**RENEWAL**

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

APPLICATION SUMMARY

The UUD has applied to the Department for a renewal of Waste Discharge License (WDL) #W000478-5L-C-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101150, which was issued on August 13, 2002, and is scheduled to expire on August 13, 2007. The 8/13/2002 MEPDES permit authorized the monthly average discharge of up to 0.5 million gallons per day (MGD) of secondary treated municipal wastewater from a publicly owned treatment works (POTW) to Twenty-Five Mile Stream, Class B, in Unity, Maine.

On February 13, 2003, the Department administratively modified the 8/13/02 permit by revising the sample type (where applicable) from 24-hour composite to grab.

On April 10, 2006, the Department amended the 8/13/02 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant screening level testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

PERMIT SUMMARY

This permitting action is similar to the 8/13/02 permitting action, 3/13/03 administrative modification, and 4/10/06 permit amendment in that it is:

1. Carrying forward the monthly average discharge flow limit of 0.5 MGD and the daily maximum discharge flow reporting requirement;

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

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

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

5. Carrying forward the seasonal monthly average and daily maximum concentration limitations for *Escherichia coli* bacteria for Class B waters;

6. Carrying forward the technology-based daily maximum concentration limitation for total residual chlorine (TRC);

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

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

9. Carrying forward the receiving water stream flow monitoring and reporting requirement; and

10. Carrying forward the minimum monitoring frequency requirements for all monitored parameters.

This permitting action is different from the 8/13/02 permitting action, 3/13/03 administrative modification, and 4/10/06 permit amendment in that it is:

1. Establishing water quality-based daily maximum effluent limitations for total copper and total zinc based on the results of facility testing;

2. Establishing an annual certification statement requirement, Special Condition I, *Surface Water Toxics Control Program Statement for Reduced/Waived Toxics Testing*; and

3. Revising the sample type for BOD_5, TSS, WET, analytical chemistry, and priority pollutant; testing from "grab" to "24-hour composite" effective September 1, 2009.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated July 26, 2007, and subject to the Conditions listed below, the Department makes the following conclusions:

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

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

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

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

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

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

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

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

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

ACTION

THEREFORE, the Department APPROVES the above noted application of the UNITY UTILITIES DISTRICT to discharge a monthly average flow of up to 0.5 million gallons per day of secondary treated municipal wastewater to the Twenty-Five Mile Stream, Class B, in Unity, 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 expiration date of this permit is five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 27TH DAY OF July, 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ FOR
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 4, 2007
Date of application acceptance: June 8, 2007

FILED
JUL 31 2007
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0101150 / #W000478-5L-D-R July 26, 2007

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Between the period of March 16 through December 15 of each year when the dilution factor associated with the discharge is at least100:1 or between the period of December 16 through March 15 when the dilution factor associated with the discharge is at least 150:1, the permittee is authorized to discharge **secondary treated municipal wastewater via Outfall #001A** to Twenty-Five Mile Stream[1]. There shall be no discharge from Outfall #001A when the flow in Twenty-Five Mile Stream is less than 15 cubic feet per second at the point of discharge. Such discharges shall be limited and monitored by the permittee as specified below[2]:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	0.5 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Daily When Discharging *[WH/DS]*	Recorder *[RC]*
BOD_5 *[00310]*	125 lbs./day *[26]*	188 lbs./day *[26]*	209 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	24-Hour Composite [3] *[24]*
BOD_5 Percent Removal[4] *[81010]*	---	---	---	85% *[23]*	---	---	---	---
TSS *[00530]*	125 lbs./day *[26]*	188 lbs./day *[26]*	209 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	24-Hour Composite [3] *[24]*
TSS Percent Removal[4] *[81011]*	---	---	---	85% *[23]*	---	---	---	---
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	5/Week *[05/07]*	Grab *[GR]*
***E. coli* Bacteria**[5] **(May 15 – Sept. 30)** *[31633]*	---	---	---	64/100 ml[6] *[13]*	---	427/100 ml *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine[7] *[50060]*	---	---	---	---	---	1.0 mg/L *[19]*	5/Week *[05/07]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU [8] *[12]*	5/Week *[05/07]*	Grab *[GR]*

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

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

SPECIAL CONDITIONS

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

1. Between the period of March 16 through December 15 of each year when the dilution factor associated with the discharge is at least100:1 or between the period of December 16 through March 15 when the dilution factor associated with the discharge is at least 150:1, the permittee is authorized to discharge **secondary treated municipal wastewater via Outfall #001A** to Twenty-Five Mile Stream[1]. There shall be no discharge from Outfall #001A when the flow in Twenty-Five Mile Stream is less than 15 cubic feet per second at the point of discharge. Such discharges shall be limited and monitored by the permittee as specified below[2] ***(cont'd)***:

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
Copper (Total) *[01042]*	---	---	1.2 lbs./day *[26]*	---	---	0.28 mg/L *[19]*	1/Year *[01/YR]*	24-Hour Composite [3] *[24]*
Zinc (Total) *[01042]*	---	---	11.7 lbs./day *[26]*	---	---	2.8 mg/L *[19]*	1/Year *[01/YR]*	24-Hour Composite [3] *[24]*

2. Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements.

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

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity [9]						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite [3] *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite [3] *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite [3] *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite [3] *[24]*
Analytical Chemistry [10] *[51168]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite [3]/Grab *[24]*
Priority Pollutant [11] *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite [3]/Grab *[24]*

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

SPECIAL CONDITIONS

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

FOOTNOTES:

1. **Minimum Dilution Required for Discharge** – The permittee is not authorized to discharge wastewater between the period of March 16 through December 15 of each year when the dilution factor associated with the discharge is less than 100:1 or between the period of December 16 through March 15 when the dilution factor associated with the discharge is less than 150:1. There shall be no discharge from Outfall #001A when the flow in Twenty-Five Mile Stream is less than 15 cubic feet per second at the point of discharge. Effluent dilution ratios shall be calculated by the permittee prior to commencing discharge each day using the following formula:

   $$\text{Dilution Ratio} = \frac{[(0.6464)(Q_s) + Q_e]}{Q_e}$$

   Where,
   Q_s = stream flow in cfs as measured with a survey rod at the reference mark consisting of a lag bolt set in the upstream concrete bridge railing by the U.S. Geological Survey; and
   Q_e = effluent flow in units of MGD.

2. **Sampling** – Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services.

   All detectable analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department. See Attachment B of this permit for a list of the Department's current RLs. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the actual detection limit achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit. Compliance with this permit will be evaluated based on whether or not a compound is detected at or above the Department's RL.

3. **24-Hour Composite Samples** – 24-hour sample types for BOD_5, TSS, WET, analytical chemistry and priority pollutants **shall become effective on September 1, 2009**. Prior to September 1, 2009, the permittee may collect "grab" sample types for said parameters.

SPECIAL CONDITIONS

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

FOOTNOTES:

4. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both biochemical oxygen demand (BOD_5) and total suspended solids (TSS) for all flows receiving secondary treatment during all months that the facility discharges. Compliance with the limitation shall be based on a twelve-month rolling average. Calendar monthly average percent removal values shall be calculated based on influent and effluent concentrations. For the purposes of this permitting action, the twelve-month rolling average calculation is based on the most recent twelve-month period. The percent removal shall be calculated based on an assumed influent concentration value of 286 mg/L or measured effluent concentration values. Percent removal limitations are not applicable if a measured influent used to calculate the removal is <200 mg/L. The permittee shall enter "NODI-9" on the monthly Discharge Monitoring Report (DMR) and on the "49" form when the twelve-month rolling average calculation for BOD_5 and TSS for the month is less than 200 mg/L.

5. **Bacteria Limits** – *E. coli* bacteria limits and monitoring requirements are seasonal and apply between May 15 and September 30 of each year. The Department reserves the right to impose year-round bacteria limitations to protect the health, safety and welfare of the public.

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

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

8. **pH Range Limitation** – The pH value of the effluent shall not be lower than 6.0 SU nor higher than 9.0 SU at any time unless these limitations are exceeded due to natural causes. The permittee shall provide oral notification of any exceedence within 24 hours from the time the permittee becomes aware of the circumstances and shall submit a written explanation of the exceedence within 5 days of the time the permittee becomes aware of the circumstances.

9. **Whole effluent toxicity (WET) testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 1.0%), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 100:1.

SPECIAL CONDITIONS

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

FOOTNOTES:

Screening level testing – Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level WET testing at a minimum frequency of once per year for the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*).

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

WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 1.0 %.

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

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

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

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

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

Screening level testing – Beginning 12 months prior to permit expiration and every five years thereafter, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per calendar quarter for four consecutive calendar quarters.

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

SPECIAL CONDITIONS

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

FOOTNOTES:

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

    a. **Screening level testing** - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level priority pollutant testing at a minimum frequency of once per year.

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

    Priority pollutant and analytical chemistry testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests when applicable. Priority pollutant and analytical chemistry testing shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department.

    Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute, chronic or human health AWQC as established in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005). For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

    All mercury sampling required to determine compliance with interim limitations established pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analysis shall be conducted in accordance with EPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

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

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

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

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

C. DISINFECTION

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

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate (or by a Maine registered professional engineer) pursuant to *Sewerage Treatment Operators*, 32 M.R.S.A. §§ 4171-4182. All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

E. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

F. LIMITATIONS FOR INDUSTRIAL USERS

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

SPECIAL CONDITIONS

G. MONITORING AND REPORTING

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

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

H. NOTIFICATION REQUIREMENTS

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

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

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

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

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

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

SPECIAL CONDITIONS

I. 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

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

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

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

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

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

J. OPERATIONS AND MAINTENANCE (O&M) PLAN

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

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

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

SPECIAL CONDITIONS

K. WET WEATHER MANAGEMENT PLAN

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

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

L. STREAM FLOW MONITORING/DILUTION

When the treatment facility is discharging, the flow in Twenty-Five Mile Stream shall be monitored daily, and the dilution of the effluent in the receiving water shall be calculated daily. Copies of the stream flow monitoring data and the effluent dilution data shall be submitted monthly with the Discharge Monitoring Report (DMR). Also, the permittee shall keep copies of the stream flow monitoring data and effluent dilution data on file for a period of at least five years.

The stream flow shall be measured with a survey rod at the reference mark consisting of a lag bolt set in the upstream concrete bridge railing by the United States Geological Survey (USGS).

The UUD contracts with the United States Geological Survey (USGS) to calibrate the rating table used in calculating the stream flow. Annually, the USGS conducts 2-3 low flow measurements at the site of interest and runs levels to verify the stability of the control points. **Within 30 days of any proposed modifications to this procedure, the permittee shall notify the Department and receive approval before implementing any proposed modifications.** The permittee shall retain copies of the stream gage rating table calibrations for a period of at least 3 years.

SPECIAL CONDITIONS

M. REOPENING OF PERMIT FOR MODIFICATION

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

N. SEVERABILITY

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

ATTACHMENT A

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate, and complete.

Facility Telephone # _____ Date Collected _____ Date Tested _____

mm/dd/yy mm/dd/yy

Chlorinated? _____ Dechlorinated? _____

Results

	% effluent	
	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary

	water flea			trout		
	% survival		no. young	% survival		final weight (mg)
QC standard	**A>90**	**C>80**	**>15/female**	**A>90**	**C>80**	**> 2% increase**
lab control						
receiving water control						
conc. 1 (%)						
conc. 2 (%)						
conc. 3 (%)						
conc. 4 (%)						
conc. 5 (%)						
conc. 6 (%)						
stat test used						

place * next to values statistically different from controls

for trout show final wt and % incr for both controls

Reference toxicant

	water flea		trout	
	A-NOEL	C-NOEL	A-NOEL	C-NOEL
toxicant / date				
limits (mg/L)				
results (mg/L)				

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

Report WET chemistry on DEP Form "ToxSheet (Fresh Water Version), March 2007."

ATTACHMENT B

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
This form is for reporting laboratory data and facility information. Official compliance reviews will be done by DEP.

Facility Name _____ **MEPDES #** _____ **Pipe #** _____ Facility Representative Signature _____
To the best of my knowledge this information is true, accurate and complete.

Licensed Flow (MGD)		**Flow for Day (MGD)[1]**	**Flow Avg. for Month (MGD)[2]**
Acute dilution factor		**Date Sample Collected**	Date Sample Analyzed
Chronic dilution factor			
Human health dilution factor			
Criteria type: M(arine) or F(resh)			

Laboratory _____ Telephone _____
Address _____
_____
Lab Contact _____ Lab ID # _____

ERROR WARNING ! Essential facility information is missing. Please check required entries in bold above.

FRESH WATER VERSION

Please see the footnotes on the last page.

			Effluent Limits, %			Receiving Water or Ambient	**Effluent Concentration** (ug/L or as noted)		Possible Exceedence [7]		
			Acute	Chronic			WET Result, % Do not enter % sign	Reporting Limit Check	Acute	Chronic	
	WHOLE EFFLUENT TOXICITY										
	Trout - Acute										
	Trout - Chronic										
	Water Flea - Acute										
	Water Flea - Chronic										
	WET CHEMISTRY										
	pH (S.U.) (9)					(8)					
	Total Organic Carbon (mg/L)					(8)					
	Total Solids (mg/L)										
	Total Suspended Solids (mg/L)										
	Alkalinity (mg/L)					(8)					
	Specific Conductance (umhos)										
	Total Hardness (mg/L)					(8)					
	Total Magnesium (mg/L)					(8)					
	Total Calcium (mg/L)					(8)					
	ANALYTICAL CHEMISTRY [3]										
	Also do these tests on the effluent with WET. Testing on the receiving water is optional	Reporting Limit	Effluent Limits, ug/L Acute[6]	Chronic[6]	Health[6]			Reporting Limit Check	Possible Exceedence [7] Acute	Chronic	Health
	TOTAL RESIDUAL CHLORINE (mg/L) (9)	0.05				NA					
	AMMONIA	NA				(8)					
M	ALUMINUM	NA				(8)					
M	ARSENIC	5				(8)					
M	CADMIUM	1				(8)					
M	CHROMIUM	10				(8)					
M	COPPER	3				(8)					
M	CYANIDE	5				(8)					
M	LEAD	3				(8)					
M	NICKEL	5				(8)					
M	SILVER	1				(8)					
M	ZINC	5				(8)					

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
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	PRIORITY POLLUTANTS [4]		Effluent Limits					Reporting Limit Check	Possible Exceedence [7]		
		Reporting Limit	Acute[6]	Chronic[6]	Health[6]				Acute	Chronic	Health
M	ANTIMONY	5									
M	BERYLLIUM	2									
M	MERCURY (5)	0.2									
M	SELENIUM	5									
M	THALLIUM	4									
A	2,4,6-TRICHLOROPHENOL	3									
A	2,4-DICHLOROPHENOL	5									
A	2,4-DIMETHYLPHENOL	5									
A	2,4-DINITROPHENOL	45									
A	2-CHLOROPHENOL	5									
A	2-NITROPHENOL	5									
A	4,6 DINITRO-O-CRESOL (2-Methyl-4,6-dinitrophenol)	25									
A	4-NITROPHENOL	20									
A	P-CHLORO-M-CRESOL (3-methyl-4-chlorophenol)+B80	5									
A	PENTACHLOROPHENOL	20									
A	PHENOL	5									
BN	1,2,4-TRICHLOROBENZENE	5									
BN	1,2-(O)DICHLOROBENZENE	5									
BN	1,2-DIPHENYLHYDRAZINE	10									
BN	1,3-(M)DICHLOROBENZENE	5									
BN	1,4-(P)DICHLOROBENZENE	5									
BN	2,4-DINITROTOLUENE	6									
BN	2,6-DINITROTOLUENE	5									
BN	2-CHLORONAPHTHALENE	5									
BN	3,3'-DICHLOROBENZIDINE	16.5									
BN	3,4-BENZO(B)FLUORANTHENE	5									
BN	4-BROMOPHENYLPHENYL ETHER	2									
BN	4-CHLOROPHENYL PHENYL ETHER	5									
BN	ACENAPHTHENE	5									
BN	ACENAPHTHYLENE	5									
BN	ANTHRACENE	5									
BN	BENZIDINE	45									
BN	BENZO(A)ANTHRACENE	8									
BN	BENZO(A)PYRENE	3									
BN	BENZO(G,H,I)PERYLENE	5									
BN	BENZO(K)FLUORANTHENE	3									
BN	BIS(2-CHLOROETHOXY)METHANE	5									
BN	BIS(2-CHLOROETHYL)ETHER	6									
BN	BIS(2-CHLOROISOPROPYL)ETHER	6									
BN	BIS(2-ETHYLHEXYL)PHTHALATE	3									
BN	BUTYLBENZYL PHTHALATE	5									
BN	CHRYSENE	3									
BN	DI-N-BUTYL PHTHALATE	5									
BN	DI-N-OCTYL PHTHALATE	5									
BN	DIBENZO(A,H)ANTHRACENE	5									
BN	DIETHYL PHTHALATE	5									
BN	DIMETHYL PHTHALATE	5									

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
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BN	FLUORANTHENE	5									
BN	FLUORENE	5									
BN	HEXACHLOROBENZENE	2									
BN	HEXACHLOROBUTADIENE	1									
BN	HEXACHLOROCYCLOPENTADIENE	10									
BN	HEXACHLOROETHANE	2									
BN	INDENO(1,2,3-CD)PYRENE	5									
BN	ISOPHORONE	5									
BN	N-NITROSODI-N-PROPYLAMINE	10									
BN	N-NITROSODIMETHYLAMINE	1									
BN	N-NITROSODIPHENYLAMINE	5									
BN	NAPHTHALENE	5									
BN	NITROBENZENE	5									
BN	PHENANTHRENE	5									
BN	PYRENE	5									
P	4,4'-DDD	0.05									
P	4,4'-DDE	0.05									
P	4,4'-DDT	0.05									
P	A-BHC	0.2									
P	A-ENDOSULFAN	0.05									
P	ALDRIN	0.15									
P	B-BHC	0.05									
P	B-ENDOSULFAN	0.05									
P	CHLORDANE	0.1									
P	D-BHC	0.05									
P	DIELDRIN	0.05									
P	ENDOSULFAN SULFATE	0.1									
P	ENDRIN	0.05									
P	ENDRIN ALDEHYDE	0.05									
P	G-BHC	0.15									
P	HEPTACHLOR	0.15									
P	HEPTACHLOR EPOXIDE	0.1									
P	PCB-1016	0.3									
P	PCB-1221	0.3									
P	PCB-1232	0.3									
P	PCB-1242	0.3									
P	PCB-1248	0.3									
P	PCB-1254	0.3									
P	PCB-1260	0.2									
P	TOXAPHENE	1									
V	1,1,1-TRICHLOROETHANE	5									
V	1,1,2,2-TETRACHLOROETHANE	7									
V	1,1,2-TRICHLOROETHANE	5									
V	1,1-DICHLOROETHANE	5									
V	1,1-DICHLOROETHYLENE (1,1-dichloroethene)	3									
V	1,2-DICHLOROETHANE	3									
V	1,2-DICHLOROPROPANE	6									
V	1,2-TRANS-DICHLOROETHYLENE (1,2-trans-dichloroethene)	5									
V	1,3-DICHLOROPROPYLENE (1,3-dichloropropene)	5									
V	2-CHLOROETHYLVINYL ETHER	20									

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
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V	ACROLEIN	NA									
V	ACRYLONITRILE	NA									
V	BENZENE	5									
V	BROMOFORM	5									
V	CARBON TETRACHLORIDE	5									
V	CHLOROBENZENE	6									
V	CHLORODIBROMOMETHANE	3									
V	CHLOROETHANE	5									
V	CHLOROFORM	5									
V	DICHLOROBROMOMETHANE	3									
V	ETHYLBENZENE	10									
V	METHYL BROMIDE (Bromomethane)	5									
V	METHYL CHLORIDE (Chloromethane)	5									
V	METHYLENE CHLORIDE	5									
V	TETRACHLOROETHYLENE (Perchloroethylene or Tetrachloroethene)	5									
V	TOLUENE	5									
V	TRICHLOROETHYLENE (Trichloroethene)	3									
V	VINYL CHLORIDE	5									

Notes:

(1) Flow average for day pertains to WET/PP composite sample day.

(2) Flow average for month is for month in which WET/PP sample was taken.

(3) Analytical chemistry parameters must be done as part of the WET test chemistry.

(4) Priority Pollutants should be reported in micrograms per liter (ug/L).

(5) Mercury is often reported in nanograms per liter (ng/L) by the contract laboratory, so be sure to convert to micrograms per liter on this spreadsheet.

(6) Effluent Limits are calculated based on dilution factor, background allocation (10%) and water quality reserves (15% - to allow for new or changed discharges or non-point sources).

(7) Possible Exceedence determinations are done for a single sample only on a mass basis using the actual pounds discharged. This analysis does not consider watershed wide allocations for fresh water discharges.

(8) These tests are optional for the receiving water. However, where possible samples of the receiving water should be preserved and saved for the duration of the WET test. In the event of questions about the receiving water's possible effect on the WET results, chemistry tests should then be conducted.

(9) pH and Total Residual Chlorine must be conducted at the time of sample collection. Tests for Total Residual Chlorine need be conducted only when an effluent has been chlorinated or residual chlorine is believed to be present for any other reason.

Comments:

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **JULY 26, 2007**

PERMIT NUMBER: **#ME0101150**
WASTE DISCHARGE LICENSE: **#W000478-5L-D-R**

NAME AND ADDRESS OF APPLICANT:

UNITY UTILITIES DISTRICT
P.O. BOX 231
UNITY, MAINE 04988

COUNTY: **WALDO**

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

UNITY UTILITIES DISTRICT
PRARIE ROAD
UNITY, MAINE 04988

RECEIVING WATER/CLASSIFICATION: **TWENTY-FIVE MILE STREAM/CLASS B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MR. JONATHAN CARMAN**
J.M.C. WASTEWATER SERVICES
(207) 948-3228

1. APPLICATION SUMMARY

Application: The Unity Utilities District (UUD) has applied to the Maine Department of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) #W000478-5L-C-R / Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101150, which was issued on August 13, 2002, and is scheduled to expire on August 13, 2007. The 8/13/2002 MEPDES permit authorized the monthly average discharge of up to 0.5 million gallons per day (MGD) of secondary treated municipal wastewater from a publicly owned treatment works (POTW) to Twenty-Five Mile Stream, Class B, in Unity, Maine.

On February 13, 2003, the Department administratively modified the 8/13/02 permit by revising the sample type (where applicable) from 24-hour composite to grab.

On April 10, 2006, the Department amended the 8/13/02 permit by incorporating the whole effluent toxicity (WET), analytical chemistry and priority pollutant screening level testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 8/13/02 permitting action, 3/13/03 administrative modification, and 4/10/06 permit amendment in that it is:**

1. Carrying forward the monthly average discharge flow limit of 0.5 MGD and the daily maximum discharge flow reporting requirement;

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

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

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

5. Carrying forward the seasonal monthly average and daily maximum concentration limitations for *Escherichia coli* bacteria for Class B waters;

6. Carrying forward the technology-based daily maximum concentration limitation for total residual chlorine (TRC);

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

8. Carrying forward whole effluent toxicity (WET), analytical chemistry and priority pollutant testing requirements consistent with the new Department rule Chapter 530;

9. Carrying forward the receiving water stream flow monitoring and reporting requirement; and

10. Carrying forward the minimum monitoring frequency requirements for all monitored parameters.

This permitting action is different from the 8/13/02 permitting action, 3/13/03 administrative modification, and 4/10/06 permit amendment in that it is:

1. Establishing water quality-based daily maximum effluent limitations for total copper and total zinc based on the results of facility testing;

2. Establishing an annual certification statement requirement, Special Condition I, *06-096 CMR 530(2)(D)(4) Statement for Reduced/Waived Toxics Testing;* and

3. Revising the sample type for BOD_5, TSS, WET, analytical chemistry, and priority pollutant; testing from "grab" to "24-hour composite" effective September 1, 2009.

2. PERMIT SUMMARY (cont'd)

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

December 31, 1986 – The U.S. Environmental Protection Agency (USEPA) issued a renewal of National Pollutant Discharge Elimination System (NPDES) permit #ME0101150 to the UUD. The 12/31/86 permit superseded the NPDES permits issued to the UUD by the USEPA on April 12, 1979 (earliest NPDES permit on file with the Department).

June 1, 2000 – Pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420 and *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W000478-59-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 4.5 parts per trillion (ppt) and 6.8 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A. § 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

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

August 13, 2002 – The Department issued WDL #W000478-5L-C-R / MEPDES permit #ME0101150 to the UUD for a five-year term. The 8/13/2002 permit superseded WDL #W000478-59-B-R issued on December 16, 1996, and WDL #W000478-59-A-R issued on June 4, 1985 (earliest Order on file with the Department).

February 14, 2003 – The Department issued a letter to the UUD thereby administratively modifying the 8/13/2002 MEPDES permit to revise the sample type for BOD_5, TSS, WET and chemical-specific testing from 24-hour composite to grab.

April 10, 2006 – The Department modified the 8/13/2002 permit to incorporate testing requirements of 06-096 CMR 530.

June 4, 2007 – The UUD submitted a timely and complete General Application to the Department for renewal of the 8/13/2002 MEPDES permit The application was accepted for processing on June 8, 2007 and was assigned WDL # W000478-5L-D-R / MEPDES #ME0101150.

2. PERMIT SUMMARY (cont'd)

c. Source Description: The UUD commenced operation in 1974 to serve residential and light commercial wastewater generated by customers in the village area of Unity, Maine. The facility currently serves approximately 1,260 users. The wastewater collection system consists of about 13,000 feet of plastic coated cement truss pipe of diameters ranging from eight to twelve inches and two pumping stations. There are no industrial users connected to the treatment system and no combined sewer overflow (CSO) points associated with the system. The UUD has not requested nor is authorized to accept septage wastes for treatment at the facility. A map showing the location of the treatment facility and receiving water is included as Attachment A of this fact sheet.

d. Waste Water Treatment: The Quaker Hill Pump Station with a reported design capacity of 290,000 gallons per day (GPD) conveys wastewater from Unity College and a few homes in the area by about 550 linear feet of six inch diameter force main under Sandy Stream to a gravity sewer on western Main Street. The Main Street collection system and the remaining sewer collection systems collect residential and commercial waste water which flows by gravity to the School Street Pump Station located on School Street next to the Sandy Stream. The School Street Pump Station, with a reported design capacity of about 860,000 GPD, includes a small headworks area consisting of a grit removal trap and a comminutor, and is the location of influent monitoring. From here the wastewater is pumped through approximately 1,500 linear feet of force main to two clay-lined wastewater stabilization ponds located off the Perry Road in Unity. Each of the two stabilization ponds has an area of 12.5 acres and a measured depth of two to nine feet with an average overall depth of six feet. Each pond is designed and constructed to have a minimum of three feet of freeboard. The water/air interface along the dikes is protected against erosion by bituminous concrete structural panels with the remainder of the dike faces covered by grass vegetation. The remainder of each dike is reported to be constructed of an eight foot wide impervious clay core that extends several feet below the bottom of each lagoon. The total estimated volume of each pond is 24.5 million gallons for a total treatment volume of 49 million gallons. While the two ponds can be run in parallel, the ponds are routinely operated in series. A chlorine contact chamber is located after the lagoons but is not typically employed in the treatment process as effluent is not discharged during the period when seasonal bacteria limits are in effect.

Final effluent flow is measured with an ultrasonic device coupled with a 90° v-notch weir and is conveyed for discharge to Twenty-Five Mile Stream via a 15-inch diameter outfall pipe.

Waste sludge has not been removed from the lagoons since commencing operation. Approximately 33 years worth of sludge is in the ponds. Sludge testing was done in November 2006, and results indicate that the arsenic level was 21 mg/kg.

A wastewater treatment schematic for the UUD is included as Attachment B of this fact sheet.

3. CONDITIONS OF PERMIT

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

4. RECEIVING WATER QUALITY STANDARDS

Classification of major river basins, 38 M.R.S.A. § 467(14)(H)(2) classifies Twenty-Five Mile Stream at the point of discharge as Class B waters. *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(4) describes the standards for Class B waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists 137.0 miles of Twenty-Five Mile Stream and its tributaries (Hydrologic Unit Code #ME0103000309 / Waterbody ID #326R) as, *"Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses."* The Report lists all of Maine's fresh waters as, *"Category 4-B-3: Waters Impaired by Atmospheric Deposition of Mercury. Regional or National TMDL may be Required."* Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, *"the impairment is presumed to be from atmospheric contamination and deposition. The advisory is based on probability data that a stream, river, or lake may contain some fish that exceed the advisory action level. Any freshwater may contain both contaminated and uncontaminated fish depending on size, age and species occurrence in that water."* Pursuant to 38 M.R.S.A. § 420(1-B) (B), *"a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11."* The Department has established interim mercury limits for this facility.

The Department has no information at this time that the discharge from the UUD will cause or contribute to the failure of the receiving water to meet the designated uses of its assigned classification.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average flow limitation of 0.5 MGD based on the design capacity of the facility, and a daily maximum discharge flow reporting requirement.

A summary of the most recent 60 months of discharge flow data as reported on the monthly Discharge Monitoring Reports (DMRs) which has been entered into the Department's compliance tracking system database as of April 2007 (data for April 2002 – December 2006 available) is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	0.327 MGD	0.497 MGD	0.455 MGD	16
Daily Maximum	0.519 MGD	0.839 MGD	0.577 MGD	16

b. Dilution Factors: The following effluent discharge conditions are carried forward from the previous permit:

1) There shall be no discharge from Outfall 001A when the flow in the Twenty-Five Mile Stream is less than 15 cubic feet per second.

2) During the period March 16 through December 15 the discharge shall be managed such that the dilution of the discharge in the receiving water is equal to or greater than 100:1.

3) During the period December 16 through March 15 the discharge shall be managed such that the dilution of the discharge in the receiving water is equal to or greater than 150:1. This requirement of a dilution of 150:1 is due to the problems associated with accurately measuring the stream flow when it is covered with ice.

06-096 CMR 530(4)(A) states, *"With a non-continuous discharge (such as a lagoon which can be impounded or a continuous discharge prohibited from discharging under specified conditions), the dilution factors can be based on a guaranteed minimum stream flow or tidal stage below which a discharge will not occur. The discharger must submit a request for a license modification that reflects a different minimum stream flow. If the Department approves an alternate stream flow, the license must include a monitoring and reporting requirement, and must include an accurate means of measuring stream flow that is calibrated annually."*

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

Below is a table of required stream flows for a given discharge to achieve the minimum dilutions of 100:1 and 150:1:

Discharge		**At 100:1 Dilution: Required Stream flow**		**At 150:1 Dilution: Required Stream flow**	
cfs	MGD	cfs	MGD	cfs	MGD
0.100	0.065	15.00	9.69	15.00	9.69
0.150	0.098	15.00	9.69	23.35	14.60
0.155	0.1	15.32	9.90	23.10	14.90
0.232	0.15	22.97	14.85	34.57	22.35
0.309	0.2	30.64	19.80	46.04	29.80
0.387	0.25	38.31	24.75	57.66	37.25
0.464	0.3	45.94	29.70	69.14	44.7
0.541	0.35	53.56	34.65	80.61	52.15
0.619	0.4	61.28	39.60	92.23	59.6
0.696	0.45	68.90	44.55	103.70	67.05
0.774	0.5	76.63	49.50	115.33	74.5

The permittee has guaranteed a minimum dilution factor of 100:1 associated with the discharge based on the stream flow and controlled effluent discharge. Therefore, this permitting action is utilizing acute and chronic dilution factors of 100:1 for purposes of calculating water quality-based thresholds. The Department is making a best professional judgment that this manner of establishing applicable dilution factors for this facility is consistent with the provisions of 06-096 CMR 530.

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward, monthly average and weekly average technology-based concentration limits of 30 mg/L and 45 mg/L, respectively, for BOD_5 and TSS based on the secondary treatment requirements specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(3)(III) (effective January 12, 2001), and a daily maximum concentration limit of 50 mg/L, which is based on BPJ of BPT for secondary treated municipal wastewater. The technology-based monthly average, weekly average and daily maximum mass limits of 125 lbs./day, 188 lbs./day, and 209 lbs./day established in the previous permitting action for BOD_5 and TSS are also being carried forward in this permitting action.

This permitting action is carrying forward a 30-day average percent removal requirement of 85 percent for BOD_5 and TSS as required pursuant to 06-096 CMR 525(3)(III)(a&b)(3). Compliance with the limitation shall be based on a twelve-month rolling average. The percent removal shall be calculated based on an assumed influent concentration value of 286 mg/L or measured effluent concentration values.

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

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

A summary of the most recent 60 months of effluent BOD_5 data as reported on the monthly DMRs and which has been entered into the Department's compliance tracking system database as of April 2007 (data for April 2002 – December 2006 available) is as follows:

BOD_5	Minimum	Maximum	Arithmetic Mean	# DMRs	Proposed Limits
Monthly Average	10 lbs./day	103 lbs./day	45 lbs./day	15	125 lbs./day
	5 mg/L	25 mg/L	12 mg/L	15	30 mg/L
Weekly Average	2 lbs./day	103 lbs./day	51 lbs./day	15	188 lbs./day
	7 mg/L	25 mg/L	13 mg/L	15	45 mg/L
Daily Maximum	2 lbs./day	103 lbs./day	51 lbs./day	15	209 lbs./day
	7 mg/L	25 mg/L	13 mg/L	15	50 mg/L

A summary of the most recent 60 months of effluent TSS data as reported on the monthly DMRs and which has been entered into the Department's compliance tracking system database as of April 2007 (data for April 2002 – December 2006 available) is as follows:

TSS	Minimum	Maximum	Arithmetic Mean	# DMRs	Proposed Limits
Monthly Average	11 lbs./day	140 lbs./day	63 lbs./day	16	125 lbs./day
	6 mg/L	34 mg/L	16 mg/L	16	30 mg/L
Weekly Average	21 lbs./day	143 lbs./day	79 lbs./day	16	188 lbs./day
	8 mg/L	34 mg/L	19 mg/L	16	45 mg/L
Daily Maximum	21 lbs./day	143 lbs./day	79 lbs./day	16	209 lbs./day
	8 mg/L	34 mg/L	19 mg/L	16	50 mg/L

This permitting action is reinstating the 24-hour composite sample type for BOD_5, TSS and other applicable parameters. The Department, in conjunction with several POTWs that utilize aerated wastewater treatment lagoons, conducted a study of 24-hour biochemical oxygen demand (BOD_5) and total suspended solids (TSS) composite versus grab samples for lagoon wastewater treatment plants in calendar year 2003 to determine whether or not there are significant differences between the two sampling methods and, if so, which sampling method provides the most representative results. Preliminary results of the study indicate that the BOD_5 correlations demonstrate a statistically significant difference between 24-hour composite and grab samples for most of the facilities participating in the study. The results suggest that lagoon facilities should, as a default, collect 24-hour composite samples for BOD_5. A copy of the draft report was distributed to all municipal wastewater facilities in Maine that utilize treatment lagoons for their review and comment. A final report has not been produced as of the date of this permitting action.

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

The Department made a best professional judgment determination based on the preliminary results of the lagoon study and other significant factors that POTWs utilizing treatment lagoons should, as a default, collect composite samples for BOD_5 and TSS. In addition to the preliminary results of the lagoon study, the Department considered seasonal variations, such as spring benthic demand, summer algal blooms, autumn algal die-off and winter cold temperatures as well as diurnal variations in dissolved oxygen levels that occur in lagoons and stabilization ponds. The variability associated with lagoon systems supports the collection of composite rather than grab samples for the parameters BOD_5 and TSS. Collection of composite samples for BOD_5 and TSS is anticipated to result in more representative and comparable results than would grab samples and will allow for more accurate analyses of effluent quality and determinations of permit compliance.

As currently licensed, 23 of 26 municipal POTWs utilizing lagoons in Maine (including the UUD) have a 24-hour composite sampling requirement for BOD_5 and TSS. The Department intends to establish composite sample requirements for the other POTWs utilizing treatment lagoons as individual permits/licenses are renewed. The goal is to facilitate the collection of data in a uniform manner that will be used to ensure accurate and consistent evaluation of treatment system performance between facilities and to assess receiving water quality impacts.

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

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

A summary of the most recent 60 months of effluent settleable solids data as reported on the monthly DMRs and which has been entered into the Department's compliance tracking system database as of April 2007 (data for April 2002 – December 2006 available) (# DMRs = 16) indicates the daily maximum settleable solids concentration discharge has been <0.1 ml/L 100% of the time.

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

e. *Escherichia coli* bacteria: The previous permitting action established, and this permitting action carrying forward, seasonal (May 15-September 30 of each year) monthly average and daily maximum *E. coli* bacteria concentration limits of 64 colonies/100 ml and 427 colonies/100 ml, respectively, based on the State's Water Classification Program criteria for Class B waters.

A summary of the most recent 60 months of effluent data on file for this facility as of April 2007 (data for April 2002 – December 2006 available) indicates the facility has not discharged wastewater during the period when seasonal bacteria limits are in effect. Therefore, the UUD has not performed bacteria monitoring during the stated time period.

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

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

With acute and chronic dilution factors associated with the discharge water quality-based concentration thresholds the discharge may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Calculated Chronic Threshold
0.019 mg/L	0.011 mg/L	100:1 (A) 100:1 (C)	1.9 mg/L	1.1 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. The daily maximum BPT-based limit of 1.0 mg/L is more stringent than the water quality-based thresholds and is therefore being carried forward in this permitting action.

A summary of the most recent 60 months of effluent data on file for this facility as of April 2007 (data for April 2002 – December 2006 available) indicates the facility has not discharged wastewater during the period when seasonal bacteria limits are in effect. Therefore, the UUD has not performed utilized chlorine-based compounds for effluent disinfection during the stated time period.

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

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

g. pH: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units, which is based on 06-096 CMR 525(3)(III), and a minimum monitoring frequency requirement of once per day for pH based on Department guidance. The pH value of the effluent shall not be lower than 6.0 SU nor higher than 9.0 SU at any time unless these limitations are exceeded due to natural causes. The permittee shall provide oral notification of any exceedence within 24 hours from the time the permittee becomes aware of the circumstances and shall submit a written explanation of the exceedence within 5 days of the time the permittee becomes aware of the circumstances.

A summary of the most recent 60 months of effluent settleable solids data as reported on the monthly DMRs and which has been entered into the Department's compliance tracking system database as of April 2007 (data for April 2002 – December 2006 available) (# DMRs = 16) indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period.

h. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: 38 M.R.S.A. § 414-A and 38 M.R.S.A. § 420 prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. 06-096 CMR 530 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

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

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

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

06-096 CMR 530(4)(C) states *"The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department shall use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions." "The Department shall use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations."* The Department has no information on the background levels of metals in the water column in Twenty-Five Mile Stream. Therefore, a default background concentration of 10% of applicable water quality criteria is being used in the calculations of this permitting action.

06-096 CMR 530(4)(E) states *"In allocating assimilative capacity for toxic pollutants, the Department shall hold a portion of the total capacity in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The unallocated reserve must be reviewed and restored as necessary at intervals of not more than five years. The water quality reserve must be not less than 15% of the total assimilative quantity."*

Therefore, the Department is reserving 15% of applicable water quality criteria used in the calculations of this permitting action.

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

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

permit may be reopened pursuant to Special Condition M, *Reopening of Permit For Modifications*, to incorporate additional limitations and or revise monitoring requirements.

This permit provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment, and receiving water characteristics.

06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level III dischargers are *"having a chronic dilution factor of at least 100 but less than 500 to 1, or dischargers having a chronic dilution factor of more than 500 to 1 and a permitted flow of 1 million gallons per day or greater."* The chronic dilution factor associated with the discharge from the UUD is 100 to 1. Therefore, the facility is considered a Level III facility for purposes of toxics testing. 06-096 CMR 530(2)(D) specifies default WET, priority pollutant, and analytical chemistry test schedules for Level III as follows:

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

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

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

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

The previous permit established one round of screening level WET and chemical-specific testing pursuant to the toxics rule in effect at that time, Chapter 530.5. On April 10, 2006, the Department amended the 8/13/2002 permit to establish testing requirements required by the new rule, 06-096 CMR 530, which became effective October 2005. The 4/10/2006 permit amendment established one round of screening level testing (one WET, one priority pollutant, and four analytical chemistry tests) consistent with those specified in the table above.

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

WET Evaluation

06-096 CMR 530(3)(E) states:

> *For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*

On July 26, 2007, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the UUD in accordance with the statistical approach outlined above. **The 7/26/07 statistical evaluation indicates that the discharge does not exceed or demonstrate a reasonable potential to exceed the critical acute or chronic water quality thresholds for either the water flea or brook trout.** This permitting action is not establishing limitations for WET test species

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

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

06-096 CMR 530(2)(D)(4) states, *"all dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.*

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

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

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

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

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

Priority Pollutant Evaluation

On July 26, 2007, the Department conducted a statistical evaluation on the most recent 60 months of chemical-specific tests results on file with the Department for the PISD in accordance with the statistical approach outlined above. **The 7/26/07 statistical evaluation indicates the discharge demonstrates a reasonable potential to exceed (RP) the acute AWQC thresholds for total copper and total zinc.**

The discharge does not exceed or demonstrate a reasonable potential to exceed the critical AWQC for any other parameters tested. It is noted that the 7/26/07 statistical evaluation indicates the discharge demonstrates RP for the human health-based AWQC threshold for inorganic arsenic. However, all tests results are below the Department's minimum reporting level of 5.0 µg/L. 06-096 CMR 530(3)(F)(1) states, *"When a test result for a specific chemical is reported as not found in concentrations at a detection level specified by the Department pursuant to section 2(C)(6), the compound must be considered to be not present for the purposes of determining exceedences of water quality criteria."* Therefore, the Department is applying this provision of Department rules to make a best professional judgment determination that the discharge does not exhibit RP for arsenic.

See Attachment D of this Fact Sheet for a summary of chemical-specific test dates and copper and zinc test results.

06-096 CMR 530(3) states, *"the Department shall establish appropriate discharge prohibitions, effluent limits and monitoring requirements in waste discharge licenses if a discharge contains pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an ambient excursion in excess of a numeric or narrative water quality criteria or that may impair existing or designated uses."* Therefore, this permitting action is establishing water quality-based daily maximum effluent concentration and mass limitations for total copper and total zinc.

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

Based on the applicable AWQC and an acute dilution factor of 100:1 associated with the discharge, and a permitted discharge flow limit of 0.5 MGD, water quality-based effluent limitations for total copper and total zinc may be calculated using the following formulas:

Concentration Formula =

(Dilution Factor)[(0.75)(criterion)] + (0.25)(criterion)

Mass Formula =

(Conc. Limit, mg/L)(8.34 lbs./gallon)(flow limit, MGD)

06-096 CMR 530(3)(D)(1) states, *"for specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded."* The arithmetic mean of 0.41 MGD for the monthly average discharge flow as discussed in Section 6 b. of this fact sheet is 1.2 times lower than the design capacity of 0.5 MGD. Based on the provisions of 06-096 CMR 530 and Department best professional judgment, the water quality-based concentration thresholds for the ten parameters listed above are being increased by a factor of 1.2 so as not to penalize the permittee for operating at flows less than the permitted flow and to promote water conservation at this facility and at Irving Tannery.

Daily Maximum Concentration and Mass Limits for Total Copper:

Daily Maximum Conc. = (100)[(0.75)(3.07 µg/L)] + (0.25)(3.07 µg/L)
= 230.3 + 0.77
= 231 µg/L x 1.2
= 277 µg/L ≈ **0.28 mg/L**

Daily Maximum Mass = (0.28 mg/L)(8.34 lbs./gallon)(0.5 MGD) = **1.2 lbs./day**

Daily Maximum Concentration and Mass Limits for Total Zinc:

Daily Maximum Conc. = (100)[(0.75)(30.6 µg/L)] + (0.25)(30.6 µg/L)
= 2,295 + 7.7
= 2,303 µg/L x 1.2
= 2,764 µg/L ≈ **2.8 mg/L**

Daily Maximum Mass = (2.8 mg/L)(8.34 lbs./gallon)(0.5 MGD) = **11.7 lbs./day**

Taking into consideration the test results on file and the intermittent nature of the discharge, this permitting action is establishing a minimum monitoring frequency requirement of once per year for both total copper and total zinc.

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

Based on the provisions of 06-096 CMR 530 and best professional judgment, this permitting action is waiving surveillance level analytical chemistry testing for this facility, except for those parameters for which testing is otherwise specified in the permit.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

8. PUBLIC COMMENTS

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

9. DEPARTMENT CONTACTS

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

William F. Hinkel
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7659 Fax: (207) 287-3435
e-mail: bill.hinkel@maine.gov

10. RESPONSE TO COMMENTS

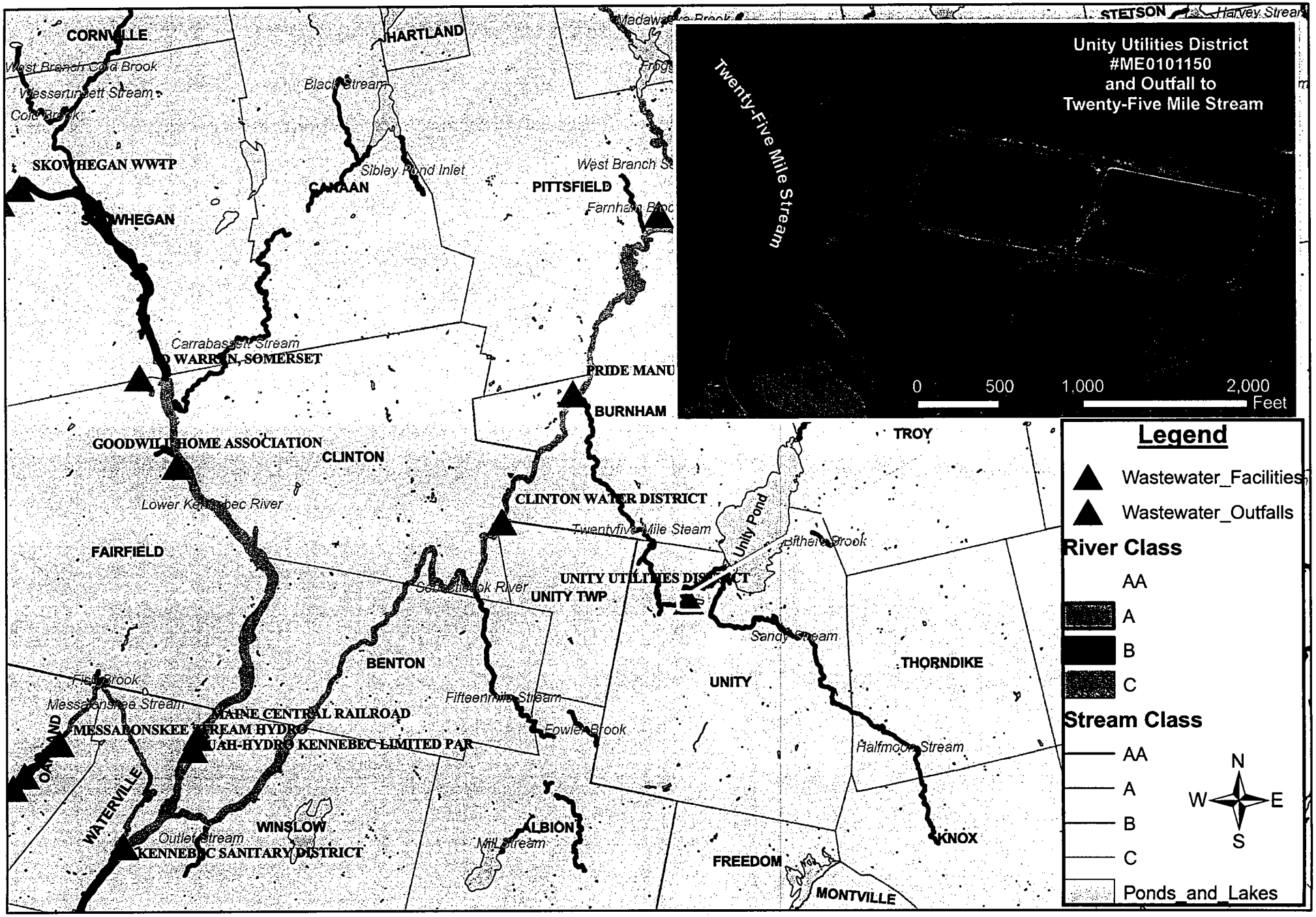
During the period of June 18, 2007, 2004 through July 18, 2007, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the Unity Utilities District for the proposed discharge. The Department received one significant comment from the UUD's superintendent in a letter dated July 6, 2007. The comment and Department response is summarized below.

Comment #1: The UUD requested that the Department allow the facility to utilize and assumed influent value for BOD_5 and TSS percent removal calculations as the facility discharges. According to the UUD's comments of July 6, 2007, most of the discharge occurs during wet weather periods of the years which will skew the influent loading data because sampling will not take into account typical dry weather sewage flow loading data during the rest of the year.

Response #1: The Department has modified the draft permit to allow the UUD to utilize an assumed influent BOD_5 and TSS strength of 286 mg/L, which is based on typical residential sanitary wastewater influent strength.

It is noted that addition review during the proposed draft comment period of priority pollutant data on file for this facility revealed that the discharge has on one occasion demonstrated a reasonable potential to exceed the acute ambient water quality criteria for both total copper and total zinc. Therefore, the draft permit was revised and this final permit contains water quality-based daily maximum effluent concentration and mass limitations for total copper and total zinc as required by 06-096 CMR 530.

ATTACHMENT A



Unity Utilities District at Unity, Maine

Map created by Maine DEP
May 16, 2007

ATTACHMENT B

measurements conducted in 1991 as part of a sludge blanket analysis performed by DEP revealed that the actual pond depth varies from two to nine feet with an overall average depth of six feet. It appears that the variable pond depth was installed during construction to avoid excavating a ledge outcrop located in the area between the two ponds. Figure 2 shows the varying pond depths at gridded intervals.

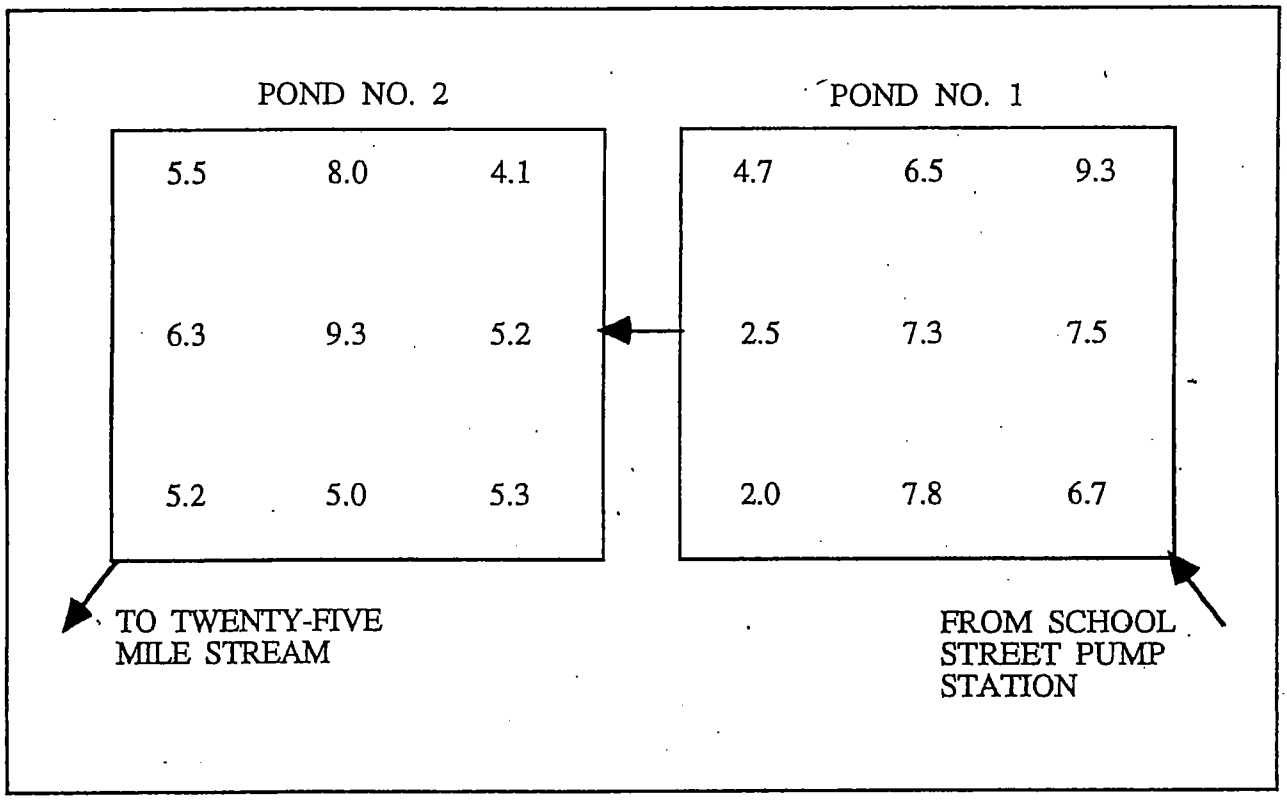


FIGURE 2: UNITY'S STABILIZATION POND AS-BUILT DEPTHS (FT)

Unity's ponds were constructed with a natural clay liner, most of which was reportedly excavated on-site. Earthen dikes were constructed around the perimeter of each pond to an elevation that creates a minimum freeboard of three feet above the design maximum water surface. The water/air interface along the dikes are protected against erosion by bituminous concrete structural panels. The remainder of the dike surfaces are covered by grass vegetation. The interior of each dike is reported to be constructed of an impervious clay core that extends several feet below the bottom of each lagoon.

ATTACHMENT C

Species	Test	Test Result %	Sample Date
FATHEAD	A_NOEL	100	09/16/1996
FATHEAD	C_NOEL	100	09/16/1996
FATHEAD	LC50	>100	09/16/1996
WATER FLEA	A_NOEL	100	09/16/1996
WATER FLEA	C_NOEL	50	09/16/1996
WATER FLEA	LC50	>100	09/16/1996
TROUT	A_NOEL	100	05/07/1997
TROUT	C_NOEL	100	05/07/1997
WATER FLEA	A_NOEL	100	05/07/1997
WATER FLEA	C_NOEL	100	05/07/1997
TROUT	A_NOEL	100	04/20/1998
TROUT	C_NOEL	100	04/20/1998
WATER FLEA	A_NOEL	100	04/20/1998
WATER FLEA	C_NOEL	100	04/20/1998
TROUT	A_NOEL	100	04/12/1999
TROUT	C_NOEL	100	04/12/1999
WATER FLEA	A_NOEL	100	04/12/1999
WATER FLEA	C_NOEL	100	04/12/1999
TROUT	A_NOEL	100	04/17/2000
TROUT	C_NOEL	100	04/17/2000
TROUT	LC50	>100	04/17/2000
WATER FLEA	A_NOEL	100	04/17/2000
WATER FLEA	C_NOEL	100	04/17/2000
WATER FLEA	LC50	>100	04/17/2000
TROUT	A_NOEL	100	05/07/2001
TROUT	C_NOEL	25	05/07/2001
TROUT	LC50	>100	05/07/2001
WATER FLEA	A_NOEL	100	05/07/2001
WATER FLEA	C_NOEL	50	05/07/2001
WATER FLEA	LC50	>100	05/07/2001
TROUT	A_NOEL	>100	05/06/2007
TROUT	C_NOEL	100	05/06/2007
WATER FLEA	A_NOEL	>100	05/06/2007
WATER FLEA	C_NOEL	100	05/06/2007

ATTACHMENT D

Sample Date: 05/07/2001
Plant flows provided

otal Tests:	136	mon.(MGD)= 0.362
issing Compounds:	0	day(MGD)= 0.450
ests With High DL:	0	

M = 0 V = 0 A = 0

BN = 0 P = 0 other = 0

Sample Date: 05/06/2007
Plant flows provided

otal Tests:	22	mon.(MGD)= 0.365
		day(MGD)= 0.414
ests With High DL:	0	

M = 0 V = 0 A = 0

BN = 0 P = 0 other = 0

PP Data for "Hits" Only

NITY
VENTY FIVE MILE STREAM

RSENIC
DL = 5 ug/l

Conc, ug/l	MDL	Sample Date	Date Entered
2.200000	OK	05/06/2007	06/19/2007
3.000000	OK	05/07/2001	09/06/2001

OPPER
DL = 3 ug/l

Conc, ug/l	MDL	Sample Date	Date Entered
8.300000	OK	05/07/2001	09/06/2001
22.000000	OK	05/06/2007	06/19/2007

INC
DL = 5.0 ug/l

Conc, ug/l	MDL	Sample Date	Date Entered
66.000000	OK	05/07/2001	09/06/2001
123.000000	OK	05/06/2007	06/19/2007

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

CONTENTS

A. GENERAL PROVISIONS

1. **General compliance**. All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

2. Other materials. Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

(a) They are not

(i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
(ii) Known to be hazardous or toxic by the licensee.

(b) The discharge of such materials will not violate applicable water quality standards.

3. Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
(b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

4. Duty to provide information. The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

5. Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. Reopener clause. The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

7. Oil and hazardous substances. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

8. Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

9. Confidentiality of records. 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

10. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

11. Other laws. The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee if its obligation to comply with other applicable Federal, State or local laws and regulations.

12. Inspection and entry. The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

(a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

maximize removal of pollutants unless authorization to the contrary is obtained from the Department.

(b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.

(c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.

(d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.

(e) The permittee shall install flow measuring facilities of a design approved by the Department.

(f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

2. Proper operation and maintenance. 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. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypasses.

(a) Definitions.

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.

(c) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).

(d) Prohibition of bypass.

(i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(C) The permittee submitted notices as required under paragraph (c) of this section.

(ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

6. Upsets.

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;
(ii) The permitted facility was at the time being properly operated; and
(iii) The permittee submitted notice of the upset as required in paragraph D(1)(f), below. (24 hour notice).
(iv) The permittee complied with any remedial measures required under paragraph B(4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING AND RECORDS

1. General Requirements. This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

2. Representative sampling. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

3. Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

(c) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;
(ii) The individual(s) who performed the sampling or measurements;
(iii) The date(s) analyses were performed;
(iv) The individual(s) who performed the analyses;
(v) The analytical techniques or methods used; and
(vi) The results of such analyses.

(d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.

(e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

D. REPORTING REQUIREMENTS

1. Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting.

(i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(B) Any upset which exceeds any effluent limitation in the permit.
(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

2. Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

3. Availability of reports. Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

4. Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 ug/l);
(ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following ``notification levels":

(i) Five hundred micrograms per liter (500 ug/l);
(ii) One milligram per liter (1 mg/l) for antimony;
(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

5. Publicly owned treatment works.

(a) All POTWs must provide adequate notice to the Department of the following:

(i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
(ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty 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 wastewater pumping and treatment facilities fails as follows.

(a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.

(b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

2. Spill prevention. (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminates and shall specify means of disposal and or treatment to be used.

3. **Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

4. **Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

F. DEFINITIONS. For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

Average weekly discharge limitation means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Composite sample means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

Continuous discharge means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Flow weighted composite sample means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab sample means an individual sample collected in a period of less than 15 minutes.

Interference means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum daily discharge limitation means the highest allowable daily discharge.

New source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

Pass through means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR parts 122, 123 and 124. Permit includes an NPDES general permit (Chapter 529). Permit does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

Person means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

Point source means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works ("POTW") means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

Septage means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

Time weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

Toxic pollutant includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.