STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

October 12, 2011

VIA ELECTRONIC MAIL

Mr. Charles Applebee
City of Gardiner Wastewater Treatment Facility
6 Church Street
Gardiner, ME 04345
capplebee@gardinermaine.com

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101702
Maine Waste Discharge License (WDL) Application #W002655-6D-I-R
Final Permit/License – City of Gardiner Wastewater Treatment Facility

Dear Mr. Applebee:

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

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

If you have any questions regarding this matter, please feel free to contact me at (207) 287-7658 or via email at: phyllis.a.rand@maine.gov.

Sincerely,

Phyllis Arnold Rand

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

Enclosure

Cc: Beth DeHaas, DEP/CMRO Lori Mitchell, DEP/DMU Sandy Mojica, EPA

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

DEPARTMENT ORDER

IN THE MATTER OF

CITY OF GARDINER	)	MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS	)	ELIMINATION SYSTEM PERMIT
GARDINER, KENNEBEC COUNTY, MAINE	)	AND
ME0101702	)	WASTE DISCHARGE LICENSE
W002655-6D-I-R **APPROVAL**	)	**RENEWAL**

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

APPLICATION SUMMARY

The permittee has applied to the Department for renewal of combination Maine Pollutant Discharge Elimination System Permit (MEDPES) # ME0101702/Waste Discharge License (WDL) #W002655-5L-H-M ("permit," hereinafter) which was issued on March 16, 2006 and expired on March 16, 2011. The 3/16/06 permit authorized the discharge of up to a monthly average flow of 4.5 million gallons per day (MGD) of secondary treated sanitary waste water, an unspecified quantity of primary treated waste water during wet weather events and an unspecified quantity of untreated combined sanitary and storm water from two (2) combined sewer overflow (CSO) outfalls to the Kennebec River, Class B, in Gardiner, Maine. On January 2, 2008, CSO Outfall #002 (Rolling Dam Brook) was eliminated as a permitted outfall and converted to an emergency outfall. See **Attachment A** of the attached Fact Sheet for site location maps.

PERMIT MODIFICATIONS REQUESTED

The permittee is requesting the following permit modifications:

1. **Arsenic –** Remove required arsenic testing because historical test results have been below permit limits and no "reasonable potentials" have been experienced.

2. **Phosphorus –** Reduce the required phosphorus testing requirement (June – September) to August and September based on consistent historical results.

PERMIT MODIFICATIONS REQUESTED (cont'd)

3. **Mercury –** Reduce the required mercury testing from quarterly to biannual based on consistency of historical results.

4. **Outfall #001B –** Add language consistent with grab sampling language at Outfall #001B so that BOD5 and TSS sampling at Outfall #001B are not required whenever a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events occurs over the course of a 24-hour period lasting less than a total of 120 minutes.

5. PERMIT MODIFICATION REQUESTS GRANTED

The Department is granting the following permit modification requests:

a. **Phosphorus –** The Department is eliminating the total phosphorus monitoring requirement. See Fact Sheet Item 8, *Receiving Water Conditions,* for further explanation.

b. **Outfall #001B** – Composite samples for BOD_5 and TSS are not required to be collected when Outfall #001B (CSO-related bypass of secondary treatment) is active for a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events over a course of the 24-hour reporting period lasting less than 120 minutes.

6. PERMIT MODIFICATION REQUEST DENIED

The Department is denying the following permit modification requests:

a. **Arsenic –** A test result for a sample collected on 4/07/10 indicates the permittee has a reasonable potential to exceed the human health ambient water quality criterion for total arsenic. The permittee shall monitor for total arsenic until such time EPA approves a test method for inorganic arsenic.

b. **Mercury –** *Interim Effluent Limitations and Controls for the Discharge of Mercury,* 06-096 CMR 519 [effective February 5, 2000], does not allow for a reduction in monitoring frequency except in the cases where licensees discharge on a seasonal or intermittent basis.

PERMIT SUMMARY

1. Terms & conditions**:** This permitting action is similar to the 3/16/06 permitting action in that it is carrying forward all the terms and conditions with the following exceptions. This permitting action is different in that it is:

a) Establishing monthly average water quality based mass and concentration limits for total aluminum.

PERMIT SUMMARY (cont'd)

b) Establishing monthly average water quality based mass and concentration limits for total lead.

c) Revising the monthly average mass and concentration limitations for total arsenic.

d) Establishing a monthly average water quality based mass limit for inorganic arsenic along with a schedule of compliance for meeting said limit.

e) Revising the monitoring frequency requirement for total arsenic based on *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005).

f) Eliminating total phosphorus monitoring requirements.

g) Revising composite and grab sampling requirements at Outfall #001B.

h) Revising *E. coli* monthly average and daily maximum discharge limitations at Outfall #001A based on reclassification of the receiving stream at the point of discharge from Class C to Class B waters.

j) Revising the influent BOD5 and TSS sampling locations from, "…prior to the rolling screens" to, "prior to the primary sedimentation basins" as the rolling screens are only in the process flow during wet weather events.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated October 11, 2011 and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

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

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

3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:

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

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

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

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

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

4. The discharges (including the 1 CSO) will be subject to effluent limitations that require application of best practicable treatment.

ACTION

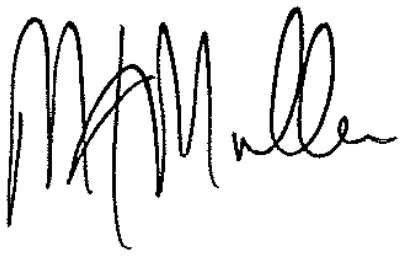
THEREFORE, the Department APPROVES the application of the CITY OF GARDINER to discharge up to a monthly average flow of 4.5 million gallons per day (MGD) of secondary treated sanitary waste water, an unspecified quantity of primary treated waste water during wet weather events and an unspecified quantity of untreated combined sanitary and storm water from one (1) combined sewer overflow outfall to the Kennebec River, Class B, in Gardiner, Maine. The discharges shall be subject to the attached conditions and all applicable standards and regulations:

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

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

3. This permit and the authorization to discharge become effective upon the date of signature below and expire at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S.A. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (effective April 1, 2003)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES



This permit is digitally signed by Michael Mullen on behalf of Acting Commissioner Patricia Aho. It is digitally signed pursuant to 10 M.R.S.A. § 9418. It has been filed with the Board of Environmental Protection as of the signature date. 2011.10.12 11:10:30 -04'00'

Date of initial receipt of application January 6, 2011.
Date of application acceptance January 6, 2011.

This Order prepared by Phyllis Arnold Rand, BUREAU OF LAND & WATER QUALITY

ME0101702 2011

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Beginning the effective date of this permit, the permittee is authorized to discharge secondary treated waste waters to the Kennebec River. Such treated waste water discharges shall be limited and monitored by the permittee as specified below. The italicized numeric values bracketed in the table below and on the following pages are code numbers that Department personnel utilize to code Discharge Monitoring Reports.

SECONDARY TREATED WASTE WATER - OUTFALL #001

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]*	4.5 MGD*[03]*	---	Report (MGD)	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
Biochemical Oxygen Demand (BOD_5) ***[00310]***	1,126 lbs/Day *[26]*	1,689 lbs/Day *[26]*	Report lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
BOD_5 % Removal(1) *[81010]*	---	---	---	85%*[23]*	---	---	1/Month *[01/30]*	Calculate*[CA]*
Total Suspended Solids (TSS) *[00530]*	1,126 lbs/Day *[26]*	1,689 lbs/Day *[26]*	Report lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS % Removal (1) *[81011]*	---	---	---	85%*[23]*	---	---	1/Month*[01/30]*	Calculate*[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	5/Week *[05/07]*	Grab *[GR]*
E. coli Bacteria (2) *[31633]* *(May 15 – September 30)*	---	---	---	64/100 mL(3) *[13]*	---	427/100 mL *[13]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine(4) *[50060]*	---	---	---	---	---	1.0 mg/L *[19]*	2/Day *[02/01]*	Grab *[GR]*
pH (Std. Units) *[00400]*	---	---	---	---	---	6.0-9.0 *[12]*	1/Day *[01/01]*	Grab *[GR]*

FOOTNOTES: See pages 10 – 15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. Beginning the effective date of this permit, discharges shall be limited and monitored by the permittee as specified below.

SECONDARY TREATED WASTE WATERS - OUTFALL #001A

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Arsenic (Total) [8] *(Upon permit issuance)* *[01002]*	Report lbs/day *[26]*	---	---	Report ug/L *[28]*	---	---	1/Quarter *[01/90]*	24-Hour Composite *[24]*
Arsenic (Inorganic) [8,9] *(Upon test method approval)* *[01252]*	0.07 lbs/day *[26]*	---	---	1.9 ug/L *[28]*	---	---	1/Quarter *[01/90]*	24-Hour Composite *[24]*
Aluminum (Total) *[01105]*	5.5 lbs/day *[26]*	---	---	147 ug/L *[28]*	---	---	1/Year *[01/YR]*	24-Hour Composite *[24]*
Lead (Total) *[01051]*	3.4 lbs/day *[26]*	---	---	90.6 ug/L *[28]*	---	---	1/Year *[01/YR]*	24-Hour Composite *[24]*

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

FOOTNOTES: See pages 10 – 15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

3. ***SCREENING LEVEL*** **-** Beginning 12 months prior to expiration of this permit and every five years thereafter.

SECONDARY TREATED WASTE WATERS - OUTFALL #001A

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(5)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/Year *[01YR]*	24-Hour Composite *[24]*
Analytical chemistry(6) *[51477]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	24-Hour Composite/ Grab *[24]*
Priority Pollutants(7) *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	24-Hour Composite/ Grab *[24]*

FOOTNOTES: See pages 10 – 15 of this permit for applicable footnotes**.**

SPECIAL CONDITIONS

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

4. Beginning the effective date of this permit, the permittee is authorized to bypass secondary treatment. Such CSO related bypasses of secondary treatment discharges(16) may only occur in response to wet weather events when the influent to the waste water treatment facility exceeds a peak hourly flow rate of 3,125 gallons per minute (4.5 MGD) or in accordance with the most current approved Wet Weather Flow Management Plan. Approval of said bypass will be reviewed and may be modified or terminated pursuant to Special Condition P, *Reopening of Permit For Modifications,* if there is a substantial change in the volume or character of pollutants in the collection/treatment system, if new information regarding CSO management becomes available or if necessary for implementation of an approved CSO Master Plan. Bypasses shall be monitored and reported as specified below. **Footnotes:** See pages 10 – 15 of this permit for applicable footnotes.

PRIMARY TREATED WASTE WATERS - OUTFALL #001B (Secondary Treatment Bypass)

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average As specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow, MGD *[50050]*	Report (Total MGD) *[03]*	Report (MGD) *[03]*	---	---	Continuous *[99/99]*	Recorder *[RC]*
Surface Loading Rate(11) *[50997]*	---	Report (gpd/sf) *[07]*	---	---	1/Discharge Day(10) *[01/DS]*	Calculate *[CA]*
Overflow Use, Occurrences(12) *74062]*	---	---	Report (# of days) *[93]*	---	1/Discharge Day(10) *[01/DS]*	Record Total *[RT]*
BOD_5 *[00310]*	---	---	---	Report mg/L *[19]*	1/Discharge Day(10,14) *[01/DS]*	Composite *[CP]*
BOD5 % Removal(1,13) *[81010]*	Report (%) *[23]*	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	---	---	---	Report mg/L *[19]*	1/Discharge Day(10,14) *[01/DS]*	Composite *[CP]*
TSS % Removal(1,13) *[81011]*	Report (%) *[23]*	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
E. coli Bacteria(2) *[31633]* (May 15 – September 30)	---	---	---	949/100 mL *[13]*	1/Discharge Day(10) *[01/DS]*	Grab(15) *[GR]*
Total Residual Chlorine(4) *[50060]*	---	---	---	1.0 mg/L *[19]*	1/Discharge Day(10) *[01/DS]*	Grab(15) *[GR]*
pH *[00400]*	---	---	---	Report (SU) *[19]*	1/Discharge Day(10) *[01/DS]*	Grab(15) *[GR]*

SPECIAL CONDITIONS

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

Footnotes:

Sampling Locations:

Influent sampling for BOD_5 and TSS shall be sampled after the bar screen but prior to the primary sedimentation basins. Note: Rolling screens are only in the process flow during wet weather events.

Primary (Secondary Treatment Bypass) and Secondary Treated Effluent shall be sampled for all parameters at the ends of the respective chlorine contact chambers.

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

Sampling and analysis must be conducted in accordance with; a) methods approved in 40 Code of Federal Regulations (CFR) Part 136 or, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services for waste water testing. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 or laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

All analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods. See **Attachment A** of this permit for a list of the Department's 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 RL achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL or reporting an estimated value ("J" flagged) is not acceptable and will be rejected by the Department. Reporting analytical data and its use in calculations must follow established Department guidelines specified in this permit or in available Department guidance documents.

1. **Percent removal** – For secondary treated waste waters, the facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS. For both primary treated and secondary treated waste waters, the percent removal shall be based on a monthly average value calculated based on influent and effluent concentrations. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L.

SPECIAL CONDITIONS

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

Footnotes:

For instances when this occurs, the facility shall report *"NODI-9"* on the monthly Discharge Monitoring Report.

2. ***E. coli* bacteria** - Limits are seasonal and apply between May 15 and September 30 of each calendar year. The Department reserves the right to require disinfection on a year-round basis to protect the health and welfare of the public.

3. ***E. coli* bacteria** – The monthly average limitation is a geometric mean limitation and shall be calculated and reported as such.

4. **Total residual chlorine (TRC)** – Limitations and monitoring requirements are in effect anytime elemental chlorine or chlorine based compounds are utilized to disinfect the discharge(s). The permittee shall utilize an EPA-approved test method capable of bracketing the TRC limitations specified in this permitting action.

5. **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 dilutions of 1.3% and 0.27%, respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverses of the applicable acute and chronic dilution factors of 77:1 and 368:1, respectively.

   a. **Surveillance level testing** – Surveillance level testing is waived per 06-096 CMR 530 (2)(D)(3)(b).

   b. **Screening level testing** - Beginning 12 months prior to expiration of the permit and every five years thereafter, the permittee shall initiate screening level WET tests at a frequency of once per year (any calendar quarter). Testing shall be conducted on the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis).* 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 after receiving the test results from the laboratory conducting the testing. 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 1.3% and 0.27%. Surveillance level testing for the first four years of the term of this permit have been waived in accordance with the criteria in 06-096 CMR 530 (D)(3)(b).

SPECIAL CONDITIONS

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

Footnotes:

Toxicity tests must be conducted by an experienced laboratory approved by the Department. See **Attachment B** of this permit for a copy of the Department's WET report form. The laboratory must follow procedures as described in the following U.S.E.P.A. methods manuals.

i. 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.

ii. 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.

The permittee is also required to analyze the effluent for the parameters specified in the WET chemistry section and the parameters specified in the analytical chemistry section in **Attachment A** of this permit each time a WET test is performed.

6. **Analytical chemistry** – Refers to a suite of chemical tests listed in **Attachment A** of this permit. Screening level testing shall be conducted once per quarter (1/Quarter) for four consecutive calendar quarters beginning 12 months prior to expiration of the permit and every five years thereafter. With the exceptions of total aluminum, arsenic and lead, surveillance level analytical testing has been waived pursuant to 06-096 CMR 530 (D)(3)(b).

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

7. **Priority pollutant testing** – Refers to a suite of chemical tests listed in **Attachment A** of this permit. Screening level testing shall be conducted once per year (1/Year) beginning 12 months prior to expiration of the permit and every five years thereafter. Surveillance level priority pollutant testing is not required pursuant to 06-096 CMR 530 (2)(D).

   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.

SPECIAL CONDITIONS

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

Footnotes:

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 06-096 CMR 584. For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

8. **Arsenic (Total)** – **Beginning upon issuance of this permit and lasting through a date on which the USEPA approves a test method for inorganic arsenic**, the permittee shall sample and analyze the discharge from the facility for total arsenic. The Department's most current reporting limit (RL) for total arsenic is 5 ug/L but may be subject to revision during the term of this permit. All detectable analytical test results shall be reported to the Department including results which are detected below the Department's most current RL at the time of sampling and reporting.

9. **Arsenic (Inorganic) –** The limitations and monitoring requirements are not in effect until the USEPA approves of a test method for inorganic arsenic. Once effective, compliance will be based on a 12-month rolling average basis beginning 12 months after the effective date of the limits. Following USEPA approval of a test method for inorganic arsenic and based on recent available data, the permittee may request that the Department reopen this permit in accordance with Special Condition P, *Reopening of Permit For Modifications,* of this permit to establish a schedule of compliance for imposition of the numeric inorganic arsenic limitations.

10. **Discharge Day -** A discharge day is defined as a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

11. **Surface Loading Rate –** For the purposes of this permitting action is defined as the average hourly rate per overflow occurrence in a discharge day. The permittee should provide this information to establish data on the effectiveness of peak flows receiving primary treatment only.

12. **Overflow occurrence –** An overflow occurrence is defined as the period of time between initiation of flow from the primary bypass and ceasing discharge from the primary bypass. Overflow occurrences are reported in discharge days.

SPECIAL CONDITIONS

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

Footnotes:

Multiple intermittent overflow occurrences in one discharge day are reported as one overflow occurrence and are sampled according to the measurement frequency specified. One composite sample for BOD5 and total suspended solids shall be collected per discharge day and shall be of flow proportioned from each intermittent overflow during that 24-hour period.

For overflow occurrences exceeding one day in duration, sampling shall be performed each day of the event according to the measurement frequency specified. For example, if an overflow occurs for all or part of three discharge days, the permittee shall take three composite samples for BOD5 and TSS, initiating samples at the start of the overflow and each subsequent discharge day thereafter and terminating samples at the end of the discharge day or the end of the overflow occurrence. Samples shall be flow proportioned.

13. **BOD_5 and TSS percent removal** - The permittee shall analyze both the influent of the treatment plant and effluent of the primary clarifiers for BOD_5 and TSS during the discharge of treated excess combined sewer waste waters from Outfall 001B and report the percent (%) removal on the monthly Discharge Monitoring Report (DMR). Composite samples for BOD_5 and TSS are not required to be collected when Outfall 001B (CSO-related bypass of secondary treatment) is active for a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events over a course of the 24-hour reporting period lasting less than 120 minutes. As an attachment to the DMR, the permittee shall report the individual BOD_5 and TSS test results used to calculate the percent removal rates reported. For the purpose of calculating BOD_5 and TSS percent (%) removals on the treated excess combined sewer waste water, the influent sample shall only be collected during overflow occurrences.

14. For facilities whose normal staffing hours do not include weekends, or whose weekend staffing time is limited to minimum facility oversight (i.e. permit required daily grab sample analysis, setting up composite samplers, or performing routine observations of treatment plant functions), bypass BOD_5/TSS composite samples collected after one hour before the end of normal staffing hours on Friday through 22 hours before normal staffing
time on Monday may be held beyond the maximum holding time of twenty-four hours and analyzed as soon as possible during staffed hours on the Monday following the weekend. Composite samples with extended holding times must remain refrigerated until analyzed, and must conform to any other bypass sampling procedures as defined in this document. Any reported extended holding time composite sample results must be flagged to distinguish them from samples that were analyzed within the proper holding time. In this case, this data shall be used in calculations for compliance reporting purposes.

SPECIAL CONDITIONS

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

Footnotes:

15. **Grab samples** for *E. coli* bacteria, pH and total residual chlorine at Outfall #001B are only required to be collected when Outfall #001B is active for a single continuous discharge event lasting greater than 120 minutes and between the hours of 8:00 AM – 4:30 PM during the normal work week (Monday through Friday except holidays).

16. **CSO-Related Bypasses of Secondary Treatment** – For the purposes of this permitting action, this term refers to structures and or processes at the waste water treatment facility that provide equivalent to primary treatment and disinfection of waste water that bypasses the biological treatment portion of the facility in an effort to mitigate the discharge of
untreated combined sanitary waste water and storm water.

B. NARRATIVE EFFLUENT LIMITATIONS

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

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

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

4. Notwithstanding specific conditions of this license 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. TREATMENT PLANT OPERATOR

The person who has the management responsibility over the treatment facility must hold a **Grade IV** certificate (or higher) or must be a Maine Registered Professional Engineer pursuant to *Sewerage Treatment Operators*, Title 32 M.R.S.A., Sections 4171-4182 and *Regulations for Wastewater Operator Certification*, 06-096 CMR 531 (effective May 8, 2006). All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

SPECIAL CONDITIONS

D. 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.

E. NOTIFICATION REQUIREMENT

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

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

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

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

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

F. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on January 6, 2011; 2) the terms and conditions of this permit; and 3) only from Outfalls #001A and #001B and the one (1) combined sewer overflow outfall identified in Special Condition L of this permit. Discharges of waste water 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.

G. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY

The permittee is not authorized to receive concentrated septage from commercial septage haulers without a formal modification of this permit to do so. The permittee is authorized to accept up to 200 gallons per day and up to 4,000 gallons per year of holding tank wastes (with or without chemicals) from recreational vehicles and campers.

SPECIAL CONDITIONS

H. SCHEDULE OF COMPLIANCE – INORGANIC ARSENIC

This permitting action is establishing a schedule of compliance for the monthly average mass limit for inorganic arsenic as follows:

Beginning upon issuance of this permit and lasting through a date on which the EPA approves a test method for inorganic arsenic, the limitations and monitoring requirements for inorganic arsenic are not in effect. During this time frame, the permittee is required to conduct 1/Quarter sampling and analyses for total arsenic.

Beginning 12 months after EPA approval of a test method for inorganic arsenic, the permittee shall be in compliance with the 12-month rolling average mass limit of 0.07 lbs/day for inorganic arsenic.

Note: The applicable ambient water quality criteria for arsenic are currently undergoing review by the Department and other regulatory authorities. Should the criteria be changed during the term of this permit, the permit may be reopened and amended accordingly.

I. MERCURY

All mercury sampling (4/Year) 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 analyses shall be conducted in accordance with EPA Method 1631E, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry. See **Attachment C,** *Effluent Mercury Test Report*, of this permit for the Department's form for reporting mercury test results.

J. WET WEATHER FLOW MANAGEMENT PLAN

The permittee 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. The plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events. **The permittee shall review their plan annually** and record any necessary changes to keep the plan up to date.

SPECIAL CONDITIONS

K. OPERATION & MAINTENANCE (O&M) PLAN

This facility shall have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of 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, **and 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.

L. COMBINED SEWER OVERFLOWS (CSOs)

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

1. CSO location

Outfall #	Location	Receiving Water & Class
003	Maine Avenue Pump Station	Kennebec River, Class B

2. Prohibited Discharges

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

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

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

SPECIAL CONDITIONS

L. COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

3. Narrative Effluent Limitations

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

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

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

d) Notwithstanding specific conditions of this permit, the effluent by itself or in combination with other discharges shall not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

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

The permittee shall implement CSO control projects in accordance with an approved the CSO Master Plan entitled *Combined Sewer Overflow Facilities Plan, Gardiner, Maine,* dated March 1995 and subsequently updated in September of 2000. Key milestones approved in the most recent abatement schedule or agreed to by the permittee and Department that the permittee is required to comply with are:

On or before January 31, 2012 *(PCS Code 04599),* the permittee shall:

a. Install automatic sluice gate operators and a level control system.
b. Remove existing Parshall flume.
c. Add a level indicator at Rolling Dam Brook emergency bypass with automatic pump start.
d. Upgrade influent pump sheaves and motors and add variable frequency drives.
e. Perform State Point Analyses of clarifiers.
f. Install locking covers on two manholes along the Kennebec interceptor.

On or before September 1, 2012 *(PCS Code 53599)*, the permittee shall conduct a flow monitoring program around the Main Avenue area influenced by Farmingdale and Hannaford Brothers and submit an Engineering Report with recommendations to the Department for review and approval.

SPECIAL CONDITIONS

L. COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

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

   To modify the dates and or projects specified above, the permittee must file an application with the Department to formally modify this permit. The remaining work items identified in the abatement schedule may be amended from time to time based on mutual agreements between the permittee and the Department. The permittee must notify the Department in writing prior to any proposed changes to the implementation schedule.

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

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

6. CSO Compliance Monitoring Program (see Section 6 Chapter 570 of Department Rules) The permittee shall conduct flow monitoring according to an approved *Compliance Monitoring Program* on all CSO points, as part of the CSO Master Plan. Annual flow volumes for all CSO locations shall be determined by actual flow monitoring, by estimation using a model such as EPA's Storm Water Management Model (SWMM) or by some other estimation technique approved by the Department.

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

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

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

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

SPECIAL CONDITIONS

L. COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

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

collection system. Pre-approved sewer extensions totaling up to 25,000 gallons per day from the Libby Hill Industrial Park are exempt from this provision. A Sewer Extension/Addition Reporting Form shall be completed and submitted to the Department along with plans and specifications of the proposed extension/addition.

8. Annual CSO Progress Reports (see Section 7 of Chapter 570 of Department Rules)
By March 1 of each year ***(PCS Code 11099)***, the permittee shall submit a *CSO Progress Reports* covering the previous calendar year (January 1 to December 31). The CSO Progress Report shall include, but is not necessarily limited to, the following topics as further described in Chapter 570: CSO abatement projects, schedule comparison, progress on inflow sources, costs, flow monitoring results, CSO activity and volumes, nine minimum controls update, sewer extensions, and new commercial or industrial flows.

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

CSO Coordinator
Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333
e-mail: CSOCoordinator@state.me.us

9. Signs

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

CITY OF GARDINER
WET WEATHER
SEWAGE DISCHARGE
CSO # AND NAME

SPECIAL CONDITIONS

L. COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

10. Definitions

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

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

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

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

M. PUMP STATION BYPASSES

Discharges from emergency bypass structures in pump stations are not authorized by this permit. The permittee shall make provisions to monitor the pump station identified below via an electronic flow estimation system to record frequency, duration and estimation of flow discharged. An electronic device utilized to measure levels in the wet well and measure duration of the overflow is an acceptable methodology for determining quantity.

Outfall Number	Outfall Location	Receiving Water and Class
002	**Rolling Dam**	**Rolling Dam Brook, Class B**

Discharges from the pump stations shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

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

By December 31 of each calendar year ***[PCS Code 95799]***, the permittee shall provide the Department with a certification describing any of the following that have occurred since the effective date of this permit. See **Attachment G** of the Fact Sheet for an acceptable certification form to satisfy this Special Condition.

(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

SPECIAL CONDITONS

N. 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING (cont'd)

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

In addition, in the comments section of the certification form, the permittee shall provide the Department with statements describing;

(d) Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge.

(e) Increases in the type or volume of hauled wastes accepted by the facility.

The Department reserves the right to reinstate annual (surveillance level) testing or other toxicity testing if new information becomes available that indicates the discharge may cause or have a reasonable potential to cause exceedences of ambient water quality criteria/thresholds.

O. MONITORING AND REPORTING

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

A signed copy of the DMR and all other reports required herein shall be submitted to the following address:

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

Alternatively, if you are submitting an electronic DMR (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory **not later than close of business on the 15th day of the month** following the completed reporting period. **Hard Copy documentation** submitted in support of the eDMR must be **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. **Electronic**

SPECIAL CONDITIONS

O. MONITORING AND REPORTING (cont'd)

documentation in support of the eDMR must be submitted **not later than close of business on the 15th day of the month** following the completed reporting period.

Additional monthly reporting requires submitting a paper copy of, *"DEP-49-CSO Form For Use With Non-Dedicated CSO Primary Clarifiers"* (**Attachment E** of this permit) to the Department inspector at the address above and an electronic version to the CSO Coordinator at the address below:

CSO Coordinator
Department of Environmental Protection
Bureau of Land & Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333
e-mail: CSOCoordinator@maine.gov

P. REOPENING OF PERMIT FOR MODIFICATIONS

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

Q. 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

Printed 1/22/2009

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 #** _____ Facility Representative Signature _____
Pipe # _____ 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			
Chronic dilution factor		**Date Sample Collected**	Date Sample Analyzed
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)					

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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									

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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									

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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:

ATTACHMENT B

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 _____ (mm/dd/yy) Date Tested _____ (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 C

Maine Department of Environmental Protection

Effluent Mercury Test Report

Name of Facility: _____ Federal Permit # ME _____

Pipe # _____

Purpose of this test:
- ☐ Initial limit determination
- ☐ Compliance monitoring for: year _____ calendar quarter _____
- ☐ Supplemental or extra test

SAMPLE COLLECTION INFORMATION

Sampling Date: ___ ___ ___ (mm dd yy) Sampling time: _____ AM/PM

Sampling Location:

Weather Conditions: _____

Please describe any unusual conditions with the influent or at the facility during or preceding the time of sample collection:

Optional test - not required but recommended where possible to allow for the most meaningful evaluation of mercury results:

Suspended Solids _____ mg/L Sample type: _____ Grab (recommended) or _____ Composite

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory: _____

Date of analysis: _____ **Result:** _____ **ng/L (PPT)**

Please Enter Effluent Limits for your facility

Effluent Limits: **Average =** _____ ng/L **Maximum =** _____ ng/L

Please attach any remarks or comments from the laboratory that may have a bearing on the results or their interpretation. If duplicate samples were taken at the same time please report the average.

CERTIFICATION

I certifiy that to the best of my knowledge the foregoing information is correct and representative of conditions at the time of sample collection. The sample for mercury was collected and analyzed using EPA Methods 1669 (clean sampling) and 1631 (trace level analysis) in accordance with instructions from the DEP.

By: _____ Date: _____

Title: _____

PLEASE MAIL THIS FORM TO YOUR ASSIGNED INSPECTOR

ATTACHMENT D

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSO ACTIVITY AND VOLUMES

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

CSO EVENT NO.	START DATE OF STORM	PRECIP. DATA		FLOW DATA (GALLONS PER DAY) OR BLOCK ACTIVITY("1")							
		TOTAL INCHES	MAX. HR. INCHES	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	EVENT OVERFLOW GALLONS	EVENT DURATION HRS
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2											
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	TOTALS										

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

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

ATTACHMENT E

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP-49-CSO FORM FOR USE WITH NON-DEDICATED CSO PRIMARY CLARIFIERS

Doc Num: DEPLW0464

WET WEATHER BYPASS OPERATIONS REPORT FOR _____ State License No. _____ MEPDES/NPDES Permit No. _____ SIGNED BY:_____ DATE:_____

DEP-49-CSO-Non-Dedicated.xls (rev. 12/12/01)

DATE	SECONDARY BYPASS FLOW DATA						Cl RESIDUALS				BACTERIA								BOD5					TSS					WEATHER				
MONTH_____ YEAR_____	TREATED PRIMARY FLOW BYPASSING SECONDARY	PRIMARY CLARIFIER SURFACE AREA	BYPASS DURATION	PRIMARY CLARIFIER SURFACE LOADING RATE	SECONDARY FLOW TREATED	TRUE CSO BYPASS AROUND PRIMARY	MAX CHLORINE DOSE	CHLORINE RESIDUAL IN PRIMARY EFFLUENT	CHLORINE RESIDUAL IN SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	pH	SETTLEABLE SOLIDS IN PRIMARY EFFLUENT	PRIMARY INFLUENT	PRIMARY EFFLUENT	PERCENT REMOVAL	SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	PRIMARY INFLUENT	PRIMARY EFFLUENT	PERCENT REMOVAL	SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	CONDITIONS	TEMPERATURE	PRECIPITATION	STORM DURATION	COMMENTS
	MG	Sf	hrs	Gpd/Sf	MG	MG	mg/L	mg/L	mg/L	mg/L	#/100	#/100	#/100	#/100	#/100			ml/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	%	mg/L	mg/L		F	In	Hrs	
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30																																
31																																
Total																																
Avr																																
Max																																

Number of discharge days

Avr

Max

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

October 11, 2011

PERMIT NUMBER: **ME0101702**
LICENSE NUMBER: **W002655-6D-I-R**

NAME AND ADDRESS OF APPLICANT:

CITY OF GARDINER
6 Church Street
Gardiner, Maine 04345

COUNTY: **Kennebec County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

CITY OF GARDINER WASTEWATER TREATMENT FACILITY
540 River Avenue
Gardiner, Maine 04345

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

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Charles Applebee**
Superintendent, WWTF
(207) 582-1351
capplebee@gardinermaine.com

1. APPLICATION SUMMARY

The City of Gardiner ("permittee," hereinafter) has applied to the Department for renewal of combination Maine Pollutant Discharge Elimination System Permit (MEDPES) # ME0101702/Waste Discharge License (WDL) #W002655-5L-H-M ("permit," hereinafter) which was issued on March 16, 2006 and expired on March 16, 2011. The 3/16/06 permit authorized the discharge of up to a monthly average flow of 4.5 million gallons per day (MGD) of secondary treated sanitary waste water, an unspecified quantity of primary treated waste water during wet weather events and an unspecified quantity of untreated combined sanitary and storm water from two (2) combined sewer overflow (CSO) outfalls to the Kennebec River, Class B, in Gardiner, Maine. On January 2, 2008, CSO Outfall #002 (Rolling Dam Brook) was eliminated as a permitted outfall and converted to an emergency outfall. See **Attachment A** of the attached Fact Sheet for site location maps.

2. PERMIT MODIFICATIONS REQUESTED

The permittee is requesting the following permit modifications:

a. **Arsenic –** Remove required arsenic testing because historical test results have been below permit limits and no "reasonable potentials" have been experienced.

b. **Phosphorus –** Reduce the required phosphorus testing requirement (June – September) to August and September based on consistent historical results.

c. **Mercury –** Reduce the required mercury testing from quarterly to biannual based on consistency of historical results.

d. **Outfall #001B –** Add language consistent with grab sampling language at Outfall #001B so that BOD5 and TSS sampling at Outfall #001B are not required whenever a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events occurs over the course of a 24-hour period lasting less than a total of 120 minutes.

3. PERMIT MODIFICATION REQUESTS GRANTED

The Department is granting the following permit modification requests:

a. **Phosphorus –** The Department is eliminating the total phosphorus monitoring requirement. See Fact Sheet Item 8, *Receiving Water Conditions*, for further explanation.

b. **Outfall #001B** – Composite samples for BOD_5 and TSS are not required to be collected when Outfall #001B (CSO-related bypass of secondary treatment) is active for a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events over a course of the 24-hour reporting period lasting less than 120 minutes.

4. PERMIT MODIFICATION REQUEST DENIED

The Department is denying the following permit modification requests:

a. **Arsenic –** A test result for a sample collected on 4/07/10 indicates the permittee has a reasonable potential to exceed the human health ambient water quality criterion for total arsenic. The permittee shall monitor for total arsenic until such time EPA approves a test method for inorganic arsenic.

b. **Mercury –** *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 [effective February 5, 2000], does not allow for a reduction in monitoring frequency except in the cases where licensees discharge on a seasonal or intermittent basis.

5. PERMIT SUMMARY

a. Terms & conditions**:** This permitting action is similar to the 3/16/06 permitting action in that it is carrying forward all the terms and conditions with the following exceptions. This permitting action is different in that it is:

1) Establishing monthly average water quality based mass and concentration limits for total aluminum.

2) Establishing monthly average water quality based mass and concentration limits for total lead.

3) Revising the monthly average mass and concentration limitations for total arsenic.

4) Establishing monitoring requirements for inorganic arsenic along with a schedule of compliance for meeting said limits.

5) Revising monitoring frequency requirements for total arsenic based on *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005).

6) Eliminating total phosphorus monitoring requirements.

7) Revising composite and grab sampling requirements at Outfall #001B.

8) Revising *E. coli* monthly average and daily maximum discharge limitations at Outfall #001A based on reclassification of the receiving stream at the point of discharge from Class C to Class B waters.

9) Revising the influent BOD5 and TSS sampling locations from, "…prior to the rolling screens" to, "prior to the primary sedimentation basins" as the rolling screens are only in the process flow during wet weather events.

b. History: The most current relevant licensing permitting and other actions include the following:

September 30, 1998 – The U.S. EPA issued NPDES permit #ME010702 for a five-year term.

June 3, 1999 – The Department issued WDL #W002655-5L-E-R for a five-year term.

May 23, 2000 – The Department administratively modified WDL #W002655-5L-E-R by establishing interim average and maximum concentration limits for mercury.

July 20, 2001 – The Department issued MEPDES permit #ME0101702/WDL modification #W002655-5L-F-M. This permitting/licensing action superseded the NPDES permit which resulted in the terms and conditions of the NPDES permit being null and void.

5. PERMIT SUMMARY (cont'd)

b. History (cont'd)

September 8, 2005 – The permittee submitted an application to the Department to modify its MEPDES permit/WDL to authorize the use of a wet weather primary treatment system.

March 16, 2006 – The Department issued MEPDES permit #ME0101702/WDL #W002655-5L-H-M for a five-year term.

January 6, 2011 – The permittee submitted a timely application for permit renewal. The Department accepted the application as complete on 1/06/11 and assigned WDL #W002655-6D-I-R.

c. Source Description: The permittee receives sanitary waste water flows from approximately 2,750 residential, commercial and industrial users in the cities of Gardiner, Randolph and Farmingdale, Maine. The sewer collection system is approximately 10 miles in length and has nine (9) pump stations. Two (2) of the pump stations have on-site back-up power while five (5) are served by portable generator units. One (1) permitted CSO (Outfall #003 – Maine Avenue Pumping Station) is associated with the collection system and is listed in Special Condition L, *Combined Sewer Overflows (CSO)*, of this permitting action. It is noted that as of January 2, 2008, CSO Outfall #002 (Rolling Dam Brook) was no longer considered a permitted outfall and was converted to an emergency outfall.

The permittee is authorized to accept up to 200 gallons per day and up to 4,000 gallons per year of holding tank wastes (with or without chemicals) from recreational vehicles and campers. Holding tank wastes are introduced directly into the waste water influent channel.

d. Waste Water Treatment: Approximately 75% of the collection system is clay tile pipe. The pipe is being replaced over time as resources allow. Waste water conveyed to Outfall #001A receives primary treatment and a secondary level of treatment via a mechanical bar screen, two parallel basins each with two medium-density and three high-density rotating biological contactors, two secondary clarifiers, three aerobic digesters and two chlorine contact chambers. Flow is measured utilizing a Parshall flume with a sonic level measuring device. Plant flow schematics are included as **Attachment B** of this Fact Sheet.

CSO-related flows that bypass secondary treatment receive primary treatment and seasonal disinfection and occur in response to wet weather events when the influent to the waste water treatment facility exceeds a peak hourly flow of 4.5 MGD. The primary and secondary treated waste water streams are disinfected independently and are co-mingled prior to discharge to the Kennebec River via a 20-inch pipe located 2 feet below mean low water. Waste water from Outfall #003 (Maine Avenue Pump Station CSO) is

5. PERMIT SUMMARY (cont'd)

d. Waste Water Treatment (cont'd)

discharged to the Kennebec River via a 15-inch pipe located 2 feet below mean low water. Plant outfall schematics are included as **Attachment C** of this Fact Sheet.

Biosolids are dewatered by two screw presses and shipped offsite for composting.

The permittee's significant modifications since the last permit application was filed include the following:

1. Approximately 1,700 feet of gravity sewer replaced on Harrison Avenue during the summer/fall of 2010 and approximately 5,200 feet of gravity sewer replaced in the area of town known as, "The Northwest Quadrant," in 2008;

2. Rebuild of the South Gardiner Pump Station, fall, 2010;

3. Replacement of self-priming Gorman Rupp pumps with Flygt submersible pumps, increasing pump capacity from 200 gallons per minute (gpm) to 400 gpm, spring, 2011.

The permittee is considering the recommendations from a 2010 CSO study by Wright-Pierce Engineers and the recommendations of a 2010 Capital Improvement Plan by Dirigo Engineering.

The permittee's High Flow Management Plan was last revised on 1/03/11.

6. CONDITIONS OF PERMITS

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, *Certain Deposits and Discharges Prohibited,* 38 M.R.S.A. §420 and *Surface Water Toxics Control Program*, 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, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

7. RECEIVING WATER QUALITY STANDARDS

Classification of major river basins, 38 M.R.S.A., §467(4)(A)(13 &14) classifies the Kennebec River as follows:

From the Father John J. Curran Bridge in Augusta to a line drawn across the tidal estuary of the Kennebec River due east of Abagadasset Point - Class B. Further, the Legislature finds that the free-flowing habitat of this river segment provides irreplaceable social and economic benefits and that this use must be maintained.

From a line drawn across the tidal estuary of the Kennebec River due east of Abagadasset Point, to a line across the southwesterly area of Merrymeeting Bay formed by an extension of the Brunswick-Bath boundary across the bay in a northwesterly direction to the westerly shore of Merrymeeting Bay and to a line drawn from Chop Point in Woolwich to West Chop Point in Bath - Class B. Further, the Legislature finds that the free-flowing habitat of this river segment provides irreplaceable social and economic benefits and that this use must be maintained.

Standards for classification of fresh surface waters, 38 M.R.S.A., §465(3) describe standards for classification of Class B waters as follows:

> *Class B waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.*
>
> *The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the 1-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. Between May 15th and September 30th, the number of Escherichia coli bacteria of human and domestic animal origin in these waters may not exceed a geometric mean of 64 per 100 milliliters or an instantaneous level of 236 per 100 milliliters. In determining human and domestic animal origin, the department shall assess licensed and unlicensed sources using available diagnostic procedures.*
>
> *Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community.*

8. RECEIVING WATER CONDITIONS

The State *of Maine 2008 Integrated Water Quality Monitoring and Assessment Report*, prepared by the Department pursuant to §303(d) and §305(b) of the Federal Water Pollution Control Act (referred to as the "305b Report"), lists the receiving waterbody at the point of discharge (Hydrologic Unit Code ME0103000312_340R_04) as Category 5-B, *Rivers and Streams Impaired by Bacteria Contamination (TMDL Required).* A table entitled, Category 5-D, *Rivers and Streams Impaired By Legacy Pollutants*, in the 305b Report, states that a 22.8-mile segment of the Kennebec River is not attaining the standards of its assigned classification due to the presence of toxics (PCBs) that has resulted in a fish consumption advisory on the river.

In addition, the Report lists all freshwaters in Maine in "*Category 4A: Waters Impaired by Atmospheric Deposition of Mercury (TMDL Completed).*" Impairment in this context refers to the designated use of recreational fishing due to elevated levels of mercury in some fish caused by atmospheric deposition. As a result, the State has established a fish consumption advisory for all freshwaters in Maine. The Report states that a regional-scale TMDL has been approved by the EPA. In addition, pursuant to Maine law, 38 M.R.S.A. §420(1-B)(B)(1), *"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 monthly average and daily maximum mercury concentration limits for this facility. See the discussion on compliance in Section 9(i) of this Fact Sheet.

As for PCBs and dioxin, the presence of PCBs is not typically associated with any identifiable source but is rather a legacy of practices that predate the national ban on the use of PCB in 1979. The Department is not aware of any information that indicates the permittee is discharging PCBs to the Kennebec River. The formation and discharge of dioxin and dioxin like compounds have been associated with historic practice of bleaching pulp with elemental chlorine. This practice has been replaced by modifying the bleaching sequence at pulp mills such that chlorine dioxide is now used which has eliminated the discharge of detectable quantities of dioxin. The Department has no information nor does it suspect that dioxin or dioxin like compounds are or will be discharged from the permittee.

The Kennebec River at the point of the permittee's discharge and below was reclassified from a Class C to a Class B waterway on September 12, 2003. This reclassification resulted in higher dissolved oxygen standards. Modeling of the Kennebec River conducted by the Department was documented in a model report entitled, *Kennebec River Model Report*, dated April 2000. The model indicates the average daily dissolved oxygen will marginally meet standards but tidal/diurnal variation would result in marginally non-attainment within the tidal river segment. Modeling showed that the discharge from the Gardiner facility (at full permitted flow) is responsible for approximately 1.2% of the dissolved oxygen deficit (not including indirect nutrient impacts) and 1.5% of the total phosphorus loading.

8. RECEIVING WATER CONDITIONS (cont'd)

The Department is eliminating total phosphorus monitoring requirements from the previous permitting action at this time given that:

a) Implementation of the CSO Master Plan, specifically construction of primary treatment/disinfection bypass, will result in a reduction of CSO discharge events.
b) The permittee's non-nutrient impact on the modeled dissolved oxygen deficit is insignificant.
c) The Department is in the process of developing nutrient criteria that may or may not result in phosphorus limits in the future.
d) The Department has no information at this time that the permittee causes or contributes to non-attainment of the standards for Class B waters.

If ambient water quality monitoring or future modeling determines that at full permitted discharge limits the permittee's discharge is causing or contributing to the non-attainment of standards, this permit will be reopened per Special Condition P, *Reopening of Permit For Modifications*, to impose more stringent limitations to meet water quality standards.

9. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Waste Water

a. Flow: The monthly average flow limitation of 4.5 MGD in the previous permitting action is being carried forward in this permitting action and is considered to be representative of the monthly average design flow for the permittee. This permitting action is carrying forward a Department Best Professional Judgment daily maximum flow "Report only" limitation in order to monitor flows associated with wet weather events.

A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 13, 2006 – April 13, 2011 (n=57) indicates the permittee has discharged monthly average flows in the range of 0.63 MGD to 2.2 MGD with an average of 1.2 MGD and a daily maximum flow of 4.4 MGD.

b. Dilution Factors: The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005). With a WDL flow limit of 4.5 MGD the dilution factors are as follows:

¼ Acute[(1)]: 1Q10 = 526 cfs $\Rightarrow \frac{(526 \text{ cfs})(0.6464^{(2)}) + (4.5 \text{ MGD})}{(4.5 \text{ MGD})} = 77{:}1$

Acute: 1Q10 = 2,104 cfs $\Rightarrow \frac{(2{,}104 \text{ cfs})(0.6464) + (4.5 \text{ MGD})}{(4.5 \text{ MGD})} = 303{:}1$

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

Secondary Treated Waste Water

Chronic: 7Q10 =2,552 cfs $\Rightarrow \frac{(2{,}552 \text{ cfs})(0.6464) + (4.5 \text{ MGD})}{(4.5 \text{ MGD})} = 368{:}1$

Harmonic Mean: = 5,883 cfs $\Rightarrow \frac{(5{,}883 \text{ cfs})(0.6464) + (4.5 \text{ MGD})}{(4.5 \text{ MGD})} = 846{:}1$

Footnotes:

(1)06-096 CMR 530 (D)(4)(a) states that analyses using numeric acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The 1Q10 is the lowest one-day flow over a ten-year recurrence interval. The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it. Based on information provided by the permittee as to the configuration and location of the outfall pipe and instream hydrology information collected by the Department in calendar year 1999, the Department has made the determination that the discharge does not receive rapid and complete mixing with the receiving water, therefore the default stream flow of ¼ of the 1Q10 is applicable in acute statistical evaluations pursuant to 06-096 CMR 530.

(2)Conversion factor, cubic feet per second to million gallons per day.

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): The previous permitting action established monthly and weekly average BOD5 and TSS best practicable treatment (BPT) concentration limits of 30 mg/L and 45 mg/L respectively, which were based on secondary treatment requirements in 06-096 CMR 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of BPT. All three concentration limits are being carried forward in this permitting action.

As for mass limitations, this permitting action is carrying forward the monthly average and weekly average limitations based on a monthly average limit of 4.5 MGD. The limitations were calculated as follows:

Monthly average: (4.5 MGD)(8.34)(30 mg/L) = 1,126 lbs/day
Weekly average: (4.5 MGD)(8.34)(45 mg/L) = 1,689 lbs/day

No daily maximum mass limitations (report only) for BOD5 or TSS are being established in this permitting action as doing so may discourage the permittee from treating as much waste water as possible through the secondary treatment system during wet weather events.

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

Secondary Treated Waste Water

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS) (cont'd)

A review of the DMR data for the period April 13, 2006 – April 13, 2011 indicates the monthly average and daily maximum mass and concentration values for BOD5 & TSS have been reported as follows:

BOD_5 Mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)	Number of DMRs	Compliance
Monthly Average	1,126	8 – 145	46	59	100%
Weekly Average	1,689	8 – 195	70	59	100%
Daily Maximum	Report	11 – 249	104	59	N/A

BOD_5 Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Monthly Average	30	3 – 19	10	59	100%
Daily Maximum	50	3 – 19	12	59	100%

TSS mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)	Number of DMRs	Compliance
Monthly Average	268	8 – 90	46	59	100%
Weekly Average	402	10 – 215	73	59	100%
Daily Maximum	Report	12 – 305	120	59	N/A

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Monthly Average	30	4- 17	10	59	100%
Daily Maximum	50	7 – 30	14	59	100%

The permittee's BOD5 percent removal rates for the period of April 13, 2006 – April 13, 2011 (n=51) ranged from 86% to 98% and TSS from 85% to 98%, respectively. This permitting action is carrying forward a requirement of 85% removal for BOD5 and TSS pursuant to 06-096 CMR 525(3)(III)(a&b)(3).

Monitoring frequencies for BOD and TSS of 3/Week are being carried forward from the previous permitting action and are based on Department policy for facilities with a monthly average flow limitation greater than 1.0 MGD but less than 5.0 MGD.

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

Secondary Treated Waste Water

d. Settleable Solids: This permitting action is carrying forward a 5/Week monitoring frequency and a daily maximum BPT concentration limit of 0.3 mL/L. A review of the DMR data for the period April 13, 2006 – April 13, 2011 (n = 57) indicates the settleable solids results ranged from 0.1 mL/L to 0.2 mL/L and 100% compliance.

e. Escherichia coliform (*E. coli)* bacteria: The previous permitting action carried forward monthly average and daily maximum *E. coli* bacteria limits of 142 colonies/100 mL and 949 colonies/100 mL based on the State of Maine Water Classification Program criteria for Class C waters. The segment of the Kennebec River from the Father John J. Curran Bridge in Augusta to a line drawn across the tidal estuary of the Kennebec River due east of Abagadasset Point was reclassified from Class C to Class B as of September 12, 2003. However, the statute containing the classification standards for this segment of the river further stated that the Class C standards for total residual chlorine and bacteria would remain the same as the limits in effect on that date, and, until June 30, 2009 or upon renewal of the license, whichever comes later. *Standards for the Classification of Fresh Surface Waters*, 38 M.R.S.A, *§*465(3), establishes monthly average and daily maximum ambient water quality based *E. coli* thresholds of 64 colonies/100 mL and 236 colonies/100 mL, respectively. However, the Department has developed an alternative approach to calculating daily maximum limits that considers the dilution of the receiving water for freshwater dischargers. Based on this approach, the Department has determined that any facility in Class B waters with an acute dilution of at least 1.1:1 would be allowed an end-of-pipe daily maximum *E. coli* limitation of 427 colonies/100mL as previously established for dischargers to Class B waters. The permittee has an acute dilution meeting this criterion. Therefore, this permitting action is establishing monthly average and daily maximum *E. coli* BPT limits of 64 colonies/100 mL and 427 colonies/100 mL, respectively. A 3/Week monitoring requirement is being carried forward from the previous permitting action.

A review of the DMR data for the period April 13, 2006 – April 13, 2011 indicates the monthly average and daily maximum values have been reported as follows:

***E. coli* bacteria**

Value	Limit (#col/100 mL)	Range (#col/100 ml)	Arith. Mean (#col/100 mL)	Number of DMRs	Compliance
Monthly Average	142	1 – 21	5	25	100%
Daily Maximum	949	3 – 2,420	228	25	92%

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

Secondary Treated Waste Water

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

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	19 ug/L	11 ug/L	77:1	368:1	1.5 mg/L	4.0 mg/L

Example calculation, Acute: 0.019 mg/L (77) = 1.5 mg/L

In the case of the permittee, the calculated acute water quality based threshold is higher than 1.0 mg/L, thus the BPT limit of 1.0 mg/L is imposed as a daily maximum limit. This permitting action is carrying forward the monitoring requirement from the previous permitting action which states that whenever elemental chlorine or chlorine based compounds are used to disinfect the discharge from the waste water treatment plant, TRC limitations and monitoring requirements are in effect and enforceable.

A review of the DMR data for the period April 13, 2006 – April 13, 2011 indicates the daily maximum concentration values have been reported as follows:

Total Residual Chlorine

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)	Number of DMRs	Compliance
Daily Maximum	1.0	0.02 – 0.99	0.49	32	100%

g. pH Range: This permitting action is carrying forward the BPT-based pH daily maximum limits of 6.0 –9.0 standard units (SU) pursuant to 06-096 CMR 525(3)(III)(c). A review of the DMR data for the period April 2006 – April 2011 (n=57) indicates the pH range was 6.8 SU to 7.7 SU.

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing: 38 M.R.S.A., §414-A and §420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. 06-096 CMR 530 and 06-096 CMR 584 set 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 are included in this permit in order to fully characterize the effluent. This permit also provides for

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

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

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Priority pollutant and analytical chemistry testing are required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health AWQC as established in 06-096 CMR 584.

06-096 CMR 530 establishes four categories of testing requirements based predominately on the chronic dilution factor. The categories are as follows:

1) Level I – chronic dilution factor of <20:1.
2) Level II – chronic dilution factor of ≥20:1 but <100:1.
3) Level III – chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD
4) Level IV – chronic dilution >500:1 and Q ≤1.0 MGD

06-096 CMR 530 (D)(1) specifies the criteria to be used in determining the minimum monitoring frequency requirements for WET, priority pollutant and analytical chemistry testing. Based on the 06-096 CMR 530 (D)(1) criteria, the permittee's facility falls into the Level III frequency category as the facility has a chronic dilution factor of ≥100:1 but < 500:1. 06-096 CMR 530 (D)(1) specifies that default screening and surveillance level testing requirements are as follows:

Default Screening level testing – Beginning 12 months prior to expiration of the permit and every five years thereafter.

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

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

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

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

A review of the data on file with the Department indicates that to-date, the permittee has fulfilled the WET and chemical-specific testing requirements of 06-096 CMR 530. See **Attachment D** of this Fact Sheet for a summary of the WET test results and **Attachment E** of this Fact Sheet for a summary of the chemical-specific test dates.

06-096 CMR 530 (3)(b) states in part, *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 as calculated pursuant to section 3(E).*

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.*"

06-096 CMR 530(3) states, "*In determining if effluent limits are required, the Department shall consider all information on file and effluent testing conducted during the preceding 60 months. However, testing done in the performance of a Toxicity Reduction Evaluation (TRE) approved by the Department may be excluded from such evaluations."*

WET evaluation

On 4/07/11, the Department conducted a statistical evaluation on the most recent 60 months of WET data that indicates the discharge does not have a reasonable potential (RP) to exceed the acute or chronic critical ambient water quality criteria (AWQC) thresholds (1.3% and 0.27%, respectively – mathematical inverses of the modified acute dilution factor of 77:1 and the chronic dilution factor of 368:1). As a result, this permitting action is not establishing numerical WET limitations.

Given the absence of exceedences or reasonable potential to exceed critical WET thresholds for the brook trout or water flea, the permittee meets the surveillance level monitoring frequency waiver criteria found at 06-096 CMR 530 (D)(3)(b). **This permit is carrying forward the requirement for the permittee to conduct screening level WET testing at a frequency of once per year (1/Year) on the brook trout and water flea.**

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

Screening level testing shall be conducted beginning 12 months prior to expiration of the permit and every five years thereafter.

In accordance with Special Condition N, *06-096 CMR 530 (2)(D)(4) Statement For Reduced/Waived Toxics Testing*, of this permit, the permittee must annually submit to the Department a written statement evaluating its current status for each of the conditions listed.

Chemical evaluation

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 limited information on the background levels of metals in the water column in the Kennebec River in the vicinity of the permittee's outfall. Therefore, a default background concentration of 10% of the 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 the applicable water quality criteria in the calculations of this permitting action.

06-096 CMR 530 (3)(E) states *"... 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."*

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

06-096 CMR 530 (4)(F) states in part "*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 total allowable discharge quantity for pollutants must be allocated consistent with the following principles.*

Evaluations must be done for individual pollutants of concern in each watershed or segment to assure that water quality criteria are met at all points in the watershed and, if appropriate, within tributaries of a larger river.

The total assimilative capacity, less the water quality reserve and background concentration, may be allocated among the discharges according to the past discharge quantities for each as a percentage of the total quantity of discharges, or another comparable method appropriate for a specific situation and pollutant. Past discharges of pollutants must be determined using the average concentration discharged during the past five years and the facility's licensed flow.

The amount of allowable discharge quantity may be no more than the past discharge quantity calculated using the statistical approach referred to in section 3(E) [Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control"] of the rule, but in no event may allocations cause the water quality reserve amount to fall below the minimum referred to in 4(E) [15% of the total assimilative capacity]. Any difference between the total allowable discharge quantity and that allocated to existing dischargers must be added to the reserve."

See **Attachment F** of this Fact Sheet for Department guidance that establishes protocols for establishing waste load allocations. The guidance states that the most protective of water quality becomes the facility's allocation. According to the 4/13/11 statistical evaluation (Report ID #364), the pollutants of concern—total aluminum, arsenic and lead are to be limited based on the segment allocation method.

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

Segment allocation methodology

Historical Average:

For the segment allocation methodology, the historical average quantity (mass) for each pollutant of concern for each facility is calculated utilizing the arithmetic mean of the concentrated values reported for each pollutant, a conversion factor of 8.34 lbs/gallon and the monthly average permit limit for flow. The historical mass discharged for each pollutant for each facility is mathematically summed to determine the total mass discharged for each pollutant in the watershed. Based on the individual discharger's historical average, each discharger is assigned a percentage of the whole which is then utilized to determine the percent of the segment allocation for each pollutant for each facility. For the permittee, historical averages for arsenic, aluminum and lead were calculated as follows:

Arsenic (inorganic)

Mass limits
Mean concentration (n=9) = 3.22 ug/l = 0.0032 mg/L
Permit flow limit = 4.5 MGD
Historical average mass = (0.0032 mg/L)(8.34)(4.5 MGD) = 0.12 lbs/day

The 4/13/11 statistical evaluation (Report ID #364) indicates the historical average mass of total arsenic discharged by the permittee's facility is 25.2% of the arsenic discharged by the facilities on the Kennebec River and its tributaries. Therefore, the permittee's segment allocation for arsenic is calculated as 25.2% of the harmonic mean assimilative capacity of the river at Richmond, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Kennebec River that have permitted discharges. The Department has calculated a harmonic mean assimilative capacity of 0.284 lbs/day of arsenic at Richmond.

Therefore, the mass segment allocation for inorganic arsenic for the permittee can be calculated as follows:

Monthly average mass for inorganic arsenic:

(Harmonic mean assimilative capacity mass)(% of total arsenic discharged)
(0.284 lbs/day)(0.252)= 0.0716 lbs/day

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

Monthly average concentration for inorganic arsenic:

$$\frac{0.0716 \text{ lbs/day}}{(4.5 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.0019 \text{ mg/L or } 1.9 \text{ ug/L}$$

06-096 CMR 530 (C)(6) states:

All chemical testing must be carried out by approved methods that permit detection of a pollutant at existing levels in the discharge or that achieve detection levels as specified by the Department. When chemical testing results are reported as less than, or detected below the Department's specified detection limits, those results will be considered as not being present for the purposes of determining exceedences of water quality criteria.

The USEPA has not approved a test method for inorganic arsenic as of the date of issuance of this permit. Therefore, there is no way for the permittee to formally demonstrate compliance with the monthly average water quality based mass and concentration limits for inorganic arsenic established in this permitting action. Therefore, beginning upon issuance of this permit and lasting through the date in which the USEPA approves a test method for inorganic arsenic the permittee is being required to monitor for total arsenic. Once a test method is approved, the Department will notify the permittee in writing and the limitations and monitoring requirements for inorganic arsenic become effective thereafter.

As of the date of this permitting action, the Department has limited data on the percentage of inorganic arsenic (approximately 50%) in total arsenic test results. Based on a literature search conducted by the Department, the inorganic fraction can range from 1% - 99% depending on the source of the arsenic. Generally speaking, ground water supplies derived from bedrock wells will likely tend to have higher fractions of inorganic arsenic (As^{+3}-arsentite and/or As^{+5}- arsenate) than one may find in a food processing facility where the inorganic fraction is low and the organic fraction (arsenobetaine, arsenoribosides) is high. Until the Department and the regulated community in Maine develop a larger database to establish statistically defensible ratios of inorganic and organic fractions in total arsenic test results, the Department is making a rebuttable presumption that the effluent contains a ratio of 50% inorganic arsenic and 50% organic arsenic in total arsenic results.

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

Being that the only approved test methods for compliance with arsenic limits established in permits is for total arsenic, the Department converted the water quality based end-of pipe monthly average concentration value of 1.9 ug/L for inorganic arsenic calculated on the previous page of this Fact Sheet into an equivalent total arsenic threshold (assuming 50% of the total arsenic is inorganic arsenic). This results in a total arsenic end-of-pipe monthly average concentration threshold of 3.8 ug/L. The calculation is as follows:

$$\frac{\text{1.9 ug/L inorganic arsenic}}{\text{0.5 ug/L inorganic arsenic/ 1.0 ug/L total arsenic}} = \text{3.8 ug/L total arsenic}$$

Therefore, a total arsenic value greater than 3.8 ug/L is potentially exceeding the water quality based end-of pipe monthly average concentration value of 1.9 ug/L for inorganic arsenic. It is noted the Department's current RL for total arsenic is 5.0 ug/L.

Maine law, 38 M.R.S.A., §414-A(2), Schedules of Compliance states "*Within the terms and conditions of a license, the department may establish a schedule of compliance for a final effluent limitation based on a water quality standard adopted after July 1, 1977. When a final effluent limitation is based on new or more stringent technology-based treatment requirements, the department may establish a schedule of compliance consistent with the time limitations permitted for compliance under the Federal Water Pollution Control Act, Public Law 92-500, as amended. A schedule of compliance may include interim and final dates for attainment of specific standards necessary to carry out the purposes of this subchapter and must be as short as possible, based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards*."

Special Condition H, *Schedule of Compliance – Inorganic Arsenic*, of this permit establishes a schedule as follows:

Beginning upon issuance of this permit and lasting through a date on which the USEPA approves a test method for inorganic arsenic, the limitations and monitoring requirements for inorganic arsenic are not in effect. During this time frame, the permittee is required by Special Condition A, Effluent Limitations and Monitoring Requirements, of this permit to conduct 1/Quarter sampling and analysis for total arsenic.

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

Upon receiving written notification by the Department that a test method for inorganic arsenic has been approved by the USEPA, the limitations and monitoring requirements for inorganic arsenic become effective and enforceable and the permittee is relieved of their obligation to sample and analyze for total arsenic.

The schedule of compliance reserves the final date for compliance with the limit for inorganic arsenic. This reservation stems from the fact the EPA has no schedule for approving a test method for inorganic arsenic nor does the Department have any authority to require the EPA to do so. Therefore, the Department considers the aforementioned schedule for inorganic arsenic to be as short as possible given the technological (or lack thereof) issue of not being able to sample and analyze for inorganic arsenic with an approved method.

Waste Discharge License Conditions, 06-096 CMR 523 §7, *Schedules of Compliance* sub-§3, *Interim dates,* states in part, "*if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.*

(i) The time between interim dates shall not exceed 1 year, except that in the case of a schedule for compliance with standards for sewage sludge use and disposal, the time between interim dates shall not exceed six months.

(ii) If the time necessary for completion of any interim requirement (such as the construction of a control facility) is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

Should the test method approval for inorganic arsenic extend more than one year from the date of the issuance of this permit, the sampling and analysis for total arsenic will serve to satisfy the interim requirements specified by 06-096 CMR 523 sub-§3.

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.*

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

With regard to concentration limits, the Department may review past and projected flows and set limits to reflect proper operation of the treatment facilities that will keep the discharge of pollutants to the minimum level practicable."

06-096 CMR 530 does not establish specific monitoring frequencies for parameters that exceed or have a reasonable potential to exceed AWQC. This permitting action is establishing the monitoring frequencies for total arsenic based on a best professional judgment given the timing, frequency and severity of the exceedence or reasonable potential to exceed the AWQC. To be consistent with the default screening level monitoring requirements in 06-096 CMR 530, the Department is revising the permittee's total arsenic monitoring frequency from 1/Year to 1/Quarter.

Aluminum

Mass limits

Mean concentration (n=4) = 102.5 ug/l = 0.1025 mg/L
Permit flow limit = 4.5 MGD
Historical average mass = (0.1025 mg/L)(8.34)(4.5 MGD) = 3.85 lbs/day

The 4/13/11 statistical evaluation (Report ID #364) indicates the historical average mass of total aluminum discharged by the permittee is 0.64% of the aluminum discharged by the facilities on the Kennebec River and its tributaries. Therefore, the permittee's segment allocation for aluminum is calculated as 0.64% of the chronic assimilative capacity of the river at Richmond, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Kennebec River that have permitted discharges. The Department has calculated a chronic assimilative capacity of 865 lbs/day of aluminum at Richmond. Therefore, the mass segment allocation for aluminum for the permittee can be calculated as follows:

Monthly average mass for aluminum

(Chronic assimilative capacity mass)(% of aluminum discharged)

(865 lbs/day)(0.0064) = 5.5 lbs/day

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

The monthly average concentration for aluminum can be calculated as follows:

Monthly average concentration for aluminum

$$\frac{5.5 \text{ lbs/day}}{(4.5 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.147 \text{ mg/L or } 147 \text{ ug/L}$$

This permitting action is establishing a monitoring frequency of 1/Year for total aluminum.

Lead

Mass limits

Mean concentration (n=4) = 59.8 ug/l = 0.0598 mg/L
Permit flow limit = 4.5 MGD
Historical average mass = (0.0598 mg/L)(8.34)(4.5 MGD) = 2.24 lbs/day

The 4/13/11 statistical evaluation (Report ID #364) indicates the historical average mass of total lead discharged by the permittee's facility is 82.9 % of the lead discharged by the facilities on the Kennebec River and its tributaries. Therefore, the permittee's segment allocation for lead is calculated as 82.9% of the chronic assimilative capacity of the river at Richmond, the most downstream facility minus the assimilative capacities assigned to the tributaries on the Kennebec River that have permitted discharges. The Department has calculated a chronic assimilative capacity of 4.12 lbs/day of lead at Richmond. Therefore, the mass segment allocation for lead for the permittee can be calculated as follows:

Monthly average mass for lead

(Chronic assimilative capacity mass)(% of lead discharged)

(4.12 lbs/day)(0.829) = 3.4 lbs/day

Monthly average concentration for lead

$$\frac{3.4 \text{ lbs/day}}{(4.5 \text{ MGD})(8.34 \text{ lbs/gal.})} = 0.090 \text{ mg/L or } 90.6 \text{ ug/L}$$

This permitting action is establishing a monitoring frequency of 1/Year for total lead.

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

Secondary Treated Waste Water

h. Whole Effluent Toxicity (WET) and Chemical Specific Testing (cont'd)

As for the remaining chemical-specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action is carrying forward the waived surveillance level reporting and monitoring frequency for analytical chemistry and priority pollutant testing. As with reduced WET testing, the permittee must file an annual certification with the Department pursuant to Special Condition N, *06-096 CMR 530 (2)(D)(4) Statement For Reduced/Waived Toxics Testing*.

Beginning 12 months prior to the expiration date of the permit and every five years thereafter, the permittee shall conduct default screening level analytical chemistry testing at a frequency of 1/Quarter and priority pollutant testing at a frequency of 1/Year.

i. Mercury: On May 23, 2000, pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420, *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 #W002655-5L-E-R by establishing interim monthly average and daily maximum effluent concentration limits of 12.7 parts per trillion (ppt) and 19.1 ppt, respectively, and a minimum monitoring frequency requirement of four (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.

38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the ambient water quality criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to § 413, subsection 11. A review of the Department's database for the period June 2006 – November 2010 (n =21) indicates mercury test results have ranged from 3.1 ppt to 14.2 ppt with an arithmetic mean of 6.0 ppt. Mercury results are included in **Attachment E** of this Fact Sheet.

j. Phosphorus: Based on the Department's assessment of the permittee's historical nutrient contributions at full permitted flow to the Kennebec River, this permitting action is eliminating the permittee's monitoring requirements for total phosphorus. Additional discussion of phosphorus monitoring is included in Section 8 of this Fact Sheet. Should future modeling or monitoring determine that at full permitted discharge limits the permittee's discharge is causing or contributing to the non-attainment of standards, this

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

Secondary Treated Waste Water

permit will be reopened per Special Condition P, *Reopening of Permit For Modifications*, to impose more stringent limitations to meet water quality standards.

A review of the DMR data for the period April 13, 2006 – April 13, 2011 indicates the monthly average and daily maximum mass and concentration values for total phosphorus have been reported as follows:

Total Phosphorus Mass

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)	Number of DMRs	Compliance
Monthly Average	Report	19 – 38	26	20	N/A
Daily Maximum	Report	19 – 38	26	20	N/A

Total Phosphorus Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Monthly Average	Report	3 – 6	4	20	N/A
Daily Maximum	Report	3 – 6	4	20	N/A

k. Transported Wastes: This permitting action is carrying forward the authorization from the previous permitting action which allowed the permittee to accept and treat up to 200 gallons per day, and up to 4,000 gallons per year, of holding tank wastes (with or without chemicals) from recreational vehicles and campers. The permittee is not authorized to receive or treat any other transported wastes without a formal modification of this permit.

Primary Treated Effluent (Outfall #001B)

For those flows in excess of the daily and peak hourly design flows received at the treatment facility which are greater than that which can be treated to a secondary level of treatment, the Department has made a best professional judgment that primary treatment and disinfection constitutes appropriate and best practicable treatment. The reporting requirements for the parameters in Special Condition A(4) of this permit (Flow, Surface Loading Rate, Overflow Occurrences and BOD5 and TSS percent removal rates) and the daily maximum limits for *E. coli* bacteria, pH and total residual chlorine were established in the 3/16/06 permit based on Department best professional judgment of the parameters deemed necessary to evaluate the performance of the primary treatment process. It is noted the secondary treated waste water and primary treated waste water (during wet weather events) are disinfected independently and the primary treated waste stream combines with the secondary treated waste stream after the chlorine contact chamber.

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

Primary Treated Effluent (Outfall #001B)

l. Flow: This permitting action is carrying forward the flow reporting requirements from the previous permitting action. A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 13, 2006 – April 13, 2011 indicates the following:

Flow (DMRs=25)

Value	Limit (MGD)	Range (MGD)	Total (MGD)
Total gallons/month	Report	0.634 – 0.784 (2006) 0.036 – 1.403 (2007) 0.124 – 1.369 (2008) 0.624 – 1.169 (2009) 0.634 – 1.834 (2010)	1.42 (2006) 2.52 (2007) 7.14 (2008) 5.47 (2009) 5.43 (2010)

m. Surface Loading Rate: This permitting action is carrying forward the daily maximum surface loading rate reporting requirements.

A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 13, 2006 – April 13, 2011 indicates the following:

Surface Loading Rate

Value	Limit (gpd/sf)	Range (gpd/sf)	Average (gpd/sf)	Number of DMRs
Daily Maximum	Report	257 – 4,106	1,942	25

n. Overflow Use, Occurrences: This permitting action is carrying forward the monthly average overflow use occurrences reporting requirements.

A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 13, 2006 – April 13, 2011 indicates the following:

Overflow occurrences

Value	Range (# of days/month)	Total (# of days/year)
Daily Maximum	---	---
2006	0 - 5	9
2007	0 - 5	11
2008	0 - 4	20
2009	0 - 2	10
2010*	0 - 6	14

*Note: The number of overflow occurrences in 2010 are higher than recorded in 2009 due to work on the Randolph, ME pumping station in 2010.

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

OUTFALL #001B - Primary Treated Waste Water

o. BOD5: This permitting action is carrying forward the daily maximum monitoring requirement from the previous permitting action.

A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 2006 – April 2011 indicates the following:

BOD_5 Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Daily Maximum	Report	7 – 80	47	25	N/A

p. Total Suspended Solids: This permitting action is carrying forward the daily maximum monitoring requirement from the previous permitting action.

A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 13, 2006 – April 13, 2011 indicates the following:

TSS Concentration

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Daily Maximum	Report	37 – 108	75	24	N/A

q. BOD5 and TSS Percent Removals: This permitting action is carrying forward the reporting requirements for BOD5 and TSS percent removals from the previous permitting action.

A review of the DMR data for the period April 13, 2006 – April 13, 2011 indicates the BOD5 and TSS percent removals ranged from -13% to 63% and -6% to 88%, respectively.

r. *E. coli*: This permitting action is carrying forward the daily maximum reporting requirement for *E. coli*.

A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 2006 – April 2011 indicates the following:

***E. coli* bacteria**

Value	Limit (#col/100 mL)	Range (#col/100 ml)	Arith. Mean (#col/100 mL)	Number of DMRs	Compliance
Daily Maximum	949	1 – 2	2	2	100%

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

OUTFALL #001B - Primary Treated Waste Water

s. Total residual chlorine (TRC): This permitting action is carrying forward the daily maximum TRC reporting requirement from the previous permitting action.

A summary of the monthly Discharge Monitoring Report (DMR) data for the period April 2006 – April 2011 indicates the following:

Total Residual Chlorine

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)	Number of DMRs	Compliance
Daily Maximum	1.0	0 – 0.75	0.25	3	100%

t. pH – This permitting action is carrying forward the pH daily maximum reporting requirement from the previous permitting action. A review of the DMR data for the period April 13, 2006 – April 13, 2011 (n=25) indicates the pH range was 6.8 SU to 7.7 SU.

10. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

The expansion of the waste water treatment facility and improvements in the collection system have substantially improved the capacity of the plant to treat current combined sewer flows as well as improve the treatment of waste waters before being discharged to the receiving waters. As permitted, the Department of Environmental Protection has determined the existing water uses will be maintained and protected and the treatment plant discharge will not cause or contribute to the failure of the waterbody to meet Class B standards

If ambient water quality monitoring or future modeling determines that at full permitted discharge limits, the permittee's discharge is causing or contributing to the non-attainment of standards, this permit will be re-opened per Special Condition P, *Reopening of Permit For Modifications*, to impose more stringent limitations to meet water quality standards.

11. PUBLIC COMMENTS

Public notice of this application was made in the *Kennebec Journal* newspaper on or about December 31, 2010. 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).

12. DEPARTMENT CONTACTS

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

Phyllis Arnold Rand
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Tel: (207) 287-7658 Fax: (207) 287-3435
e-mail: phyllis.a.rand@maine.gov

13. RESPONSE TO COMMENTS

During the period of August 17, 2011, through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit to be issued for the discharge(s) from the permittee. The Department received written comments from the permittee via electronic mail on Monday, October 10, 2011. No comments were received from state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit. The permittee's comments and the Department's responses follow:

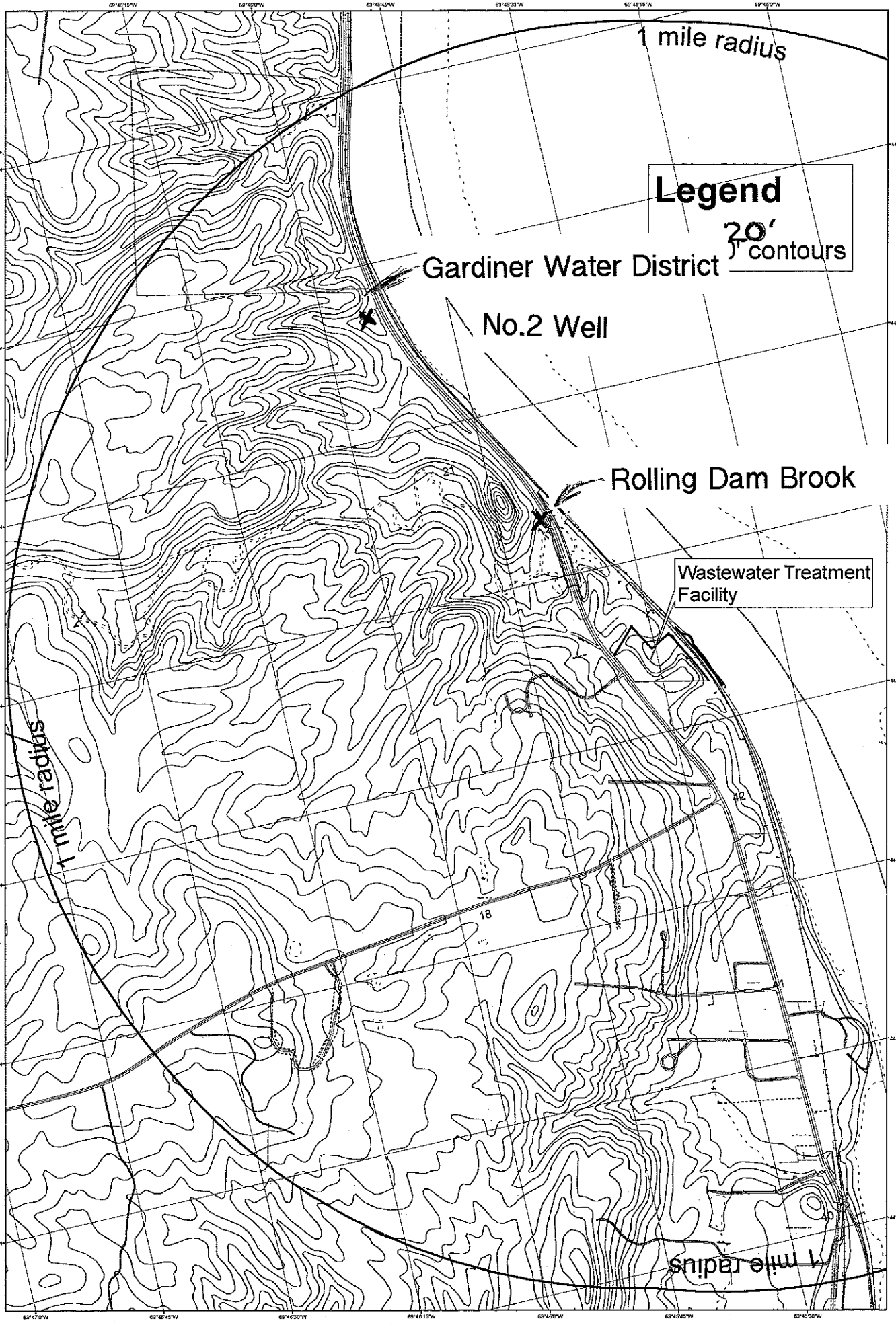
Comment #1: *Special Condition H, add the following highlighted* [underlined] *wording: "Beginning 12 months after EPA approval of a test method for inorganic arsenic, the permittee shall be in compliance with the 12-month rolling average mass limit of 0.07 lbs/day for inorganic arsenic. If the permittee is not in compliance within 12 months after EPA method approval for inorganic arsenic the permittee by action of a letter has the option to negotiate with the department an obtainable compliance schedule.*

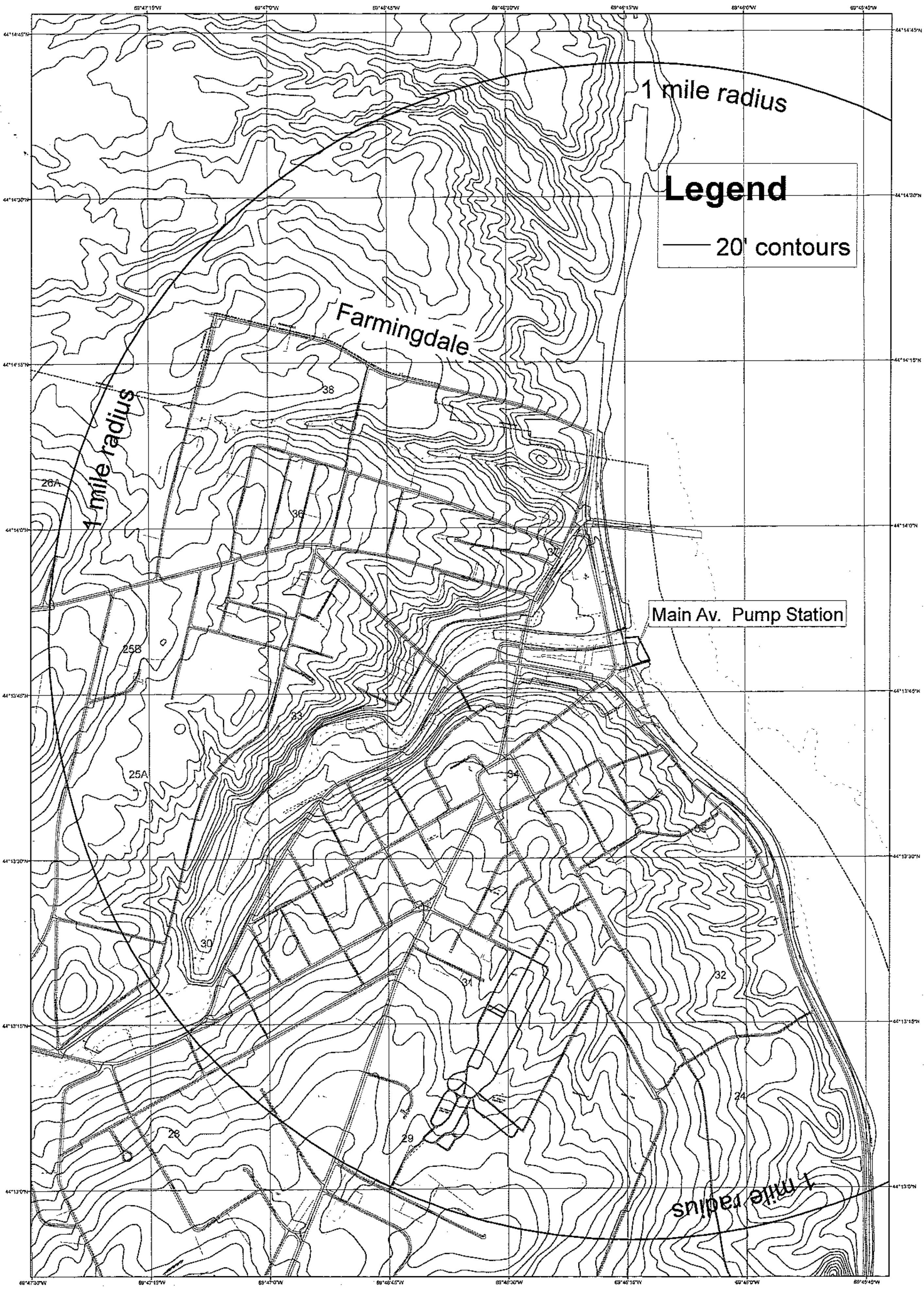
Response #1: The following underlined section of permit footnote #9 addresses this issue: *Arsenic (Inorganic) – The limitations and monitoring requirements are not in effect until the USEPA approves of a test method for inorganic arsenic. Once effective, compliance will be based on a 12-month rolling average basis beginning 12 months after the effective date of the limits. Following USEPA approval of a test method for inorganic arsenic and based on recent available data, the permittee may request that the Department reopen this permit in accordance with Special Condition P, Reopening of Permit For Modifications, of this permit to establish a schedule of compliance for imposition of the numeric inorganic arsenic limitations.*

Comment#2: *Special Condition L.4, please add the highlighted* [underlined] *wording:* On or before September 1, 2012 *(PCS Code 53599),* the permittee shall conduct a flow monitoring program around the Main Avenue area influenced by Farmingdale and Hannaford Brothers and submit an Engineering Report with recommendations to the Department for review and approval.

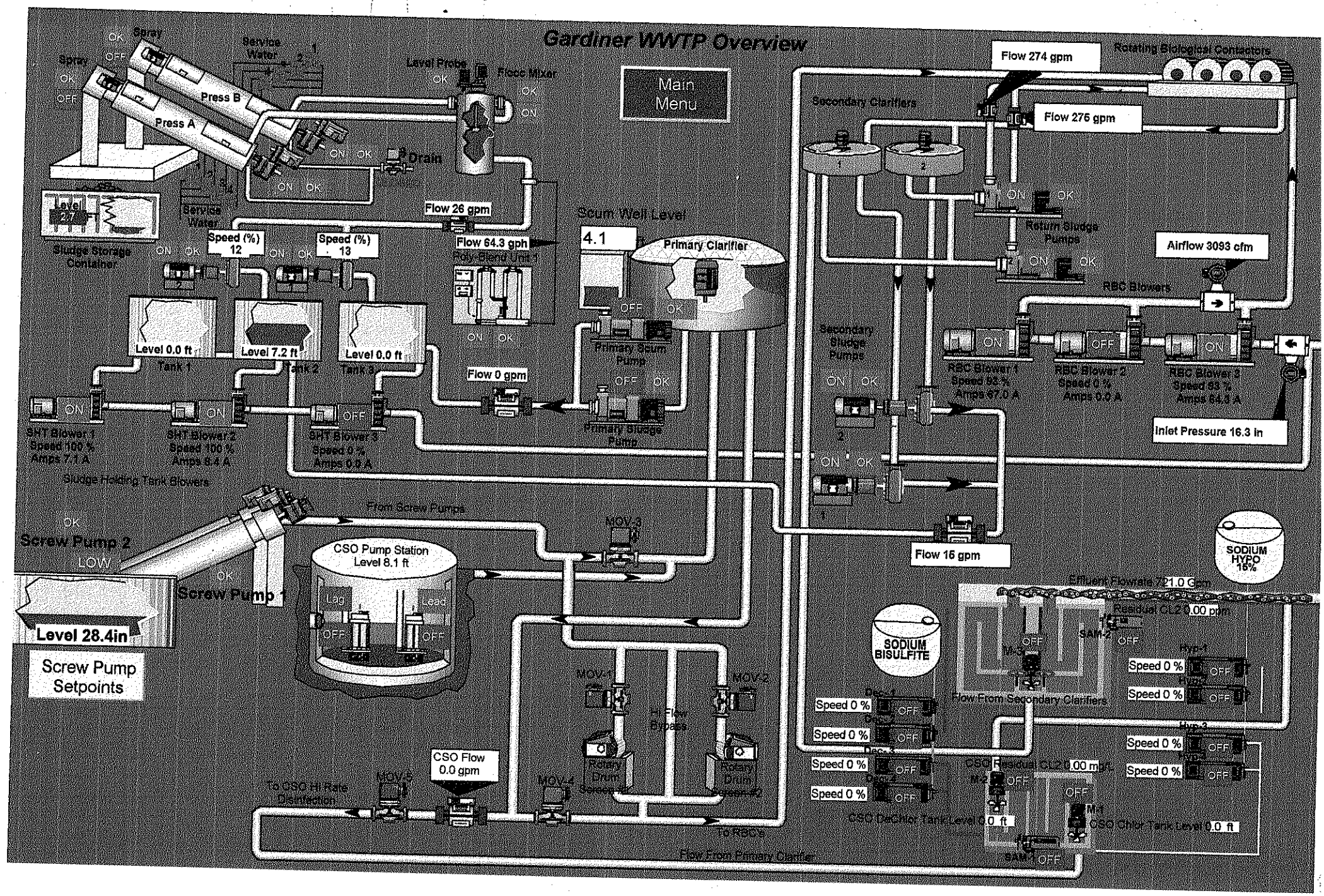
Response #2: The Department added the requested wording to the permit.

ATTACHMENT A

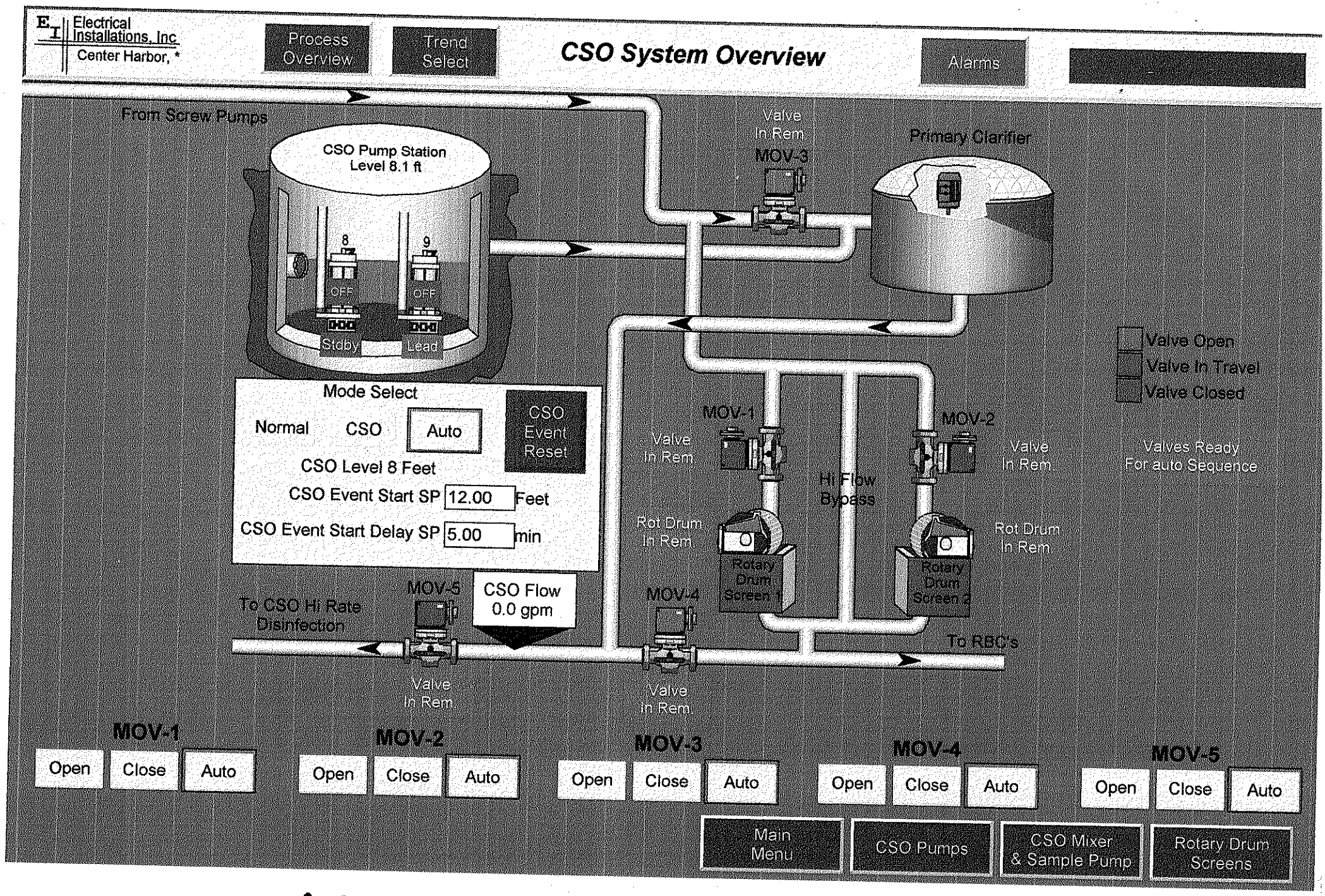

1 mile radius
Legend
20'
contours
Gardiner Water District
No.2 Well
Rolling Dam Brook
Wastewater Treatment Facility
1 mile radius
1 mile radius


1 mile radius
Legend
20' contours
Farmingdale
Main Av. Pump Station
1 mile radius
1 mile radius
38
36
37
26A
25B
25A
33
34
35
30
31
32
24
28
29

ATTACHMENT B



Normal (Dry) Flow Schematic

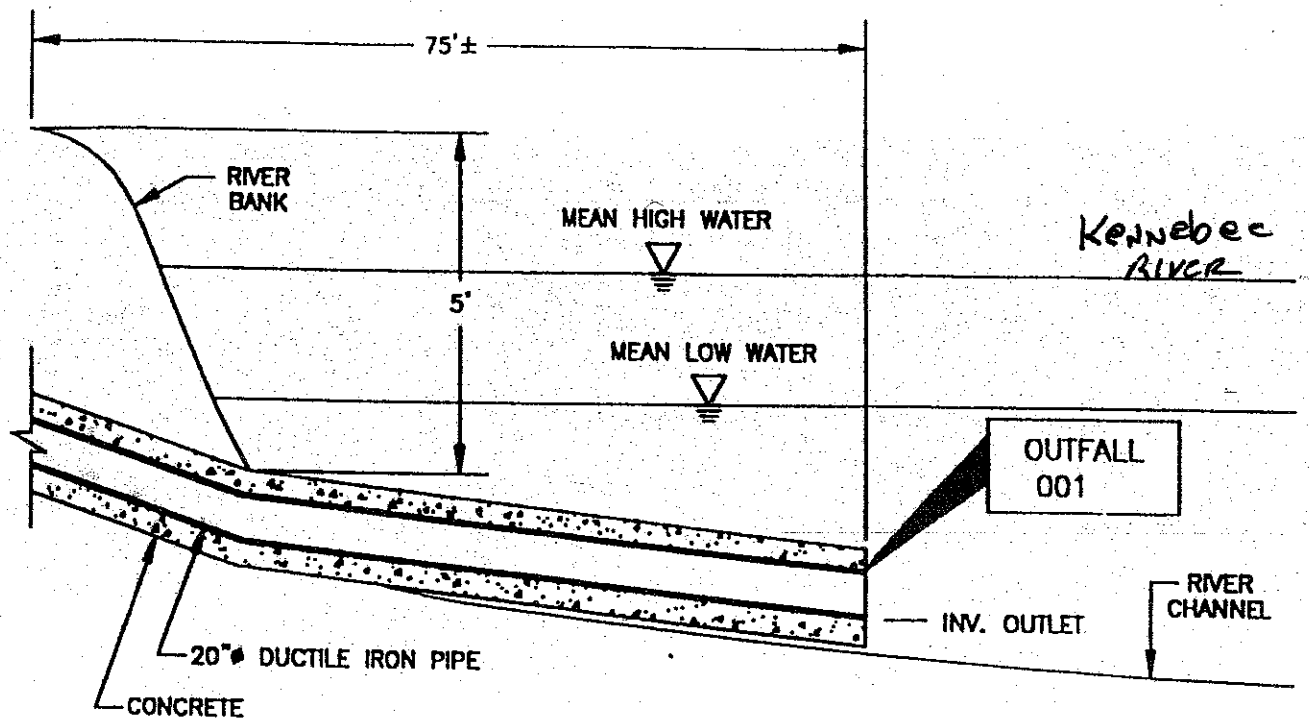


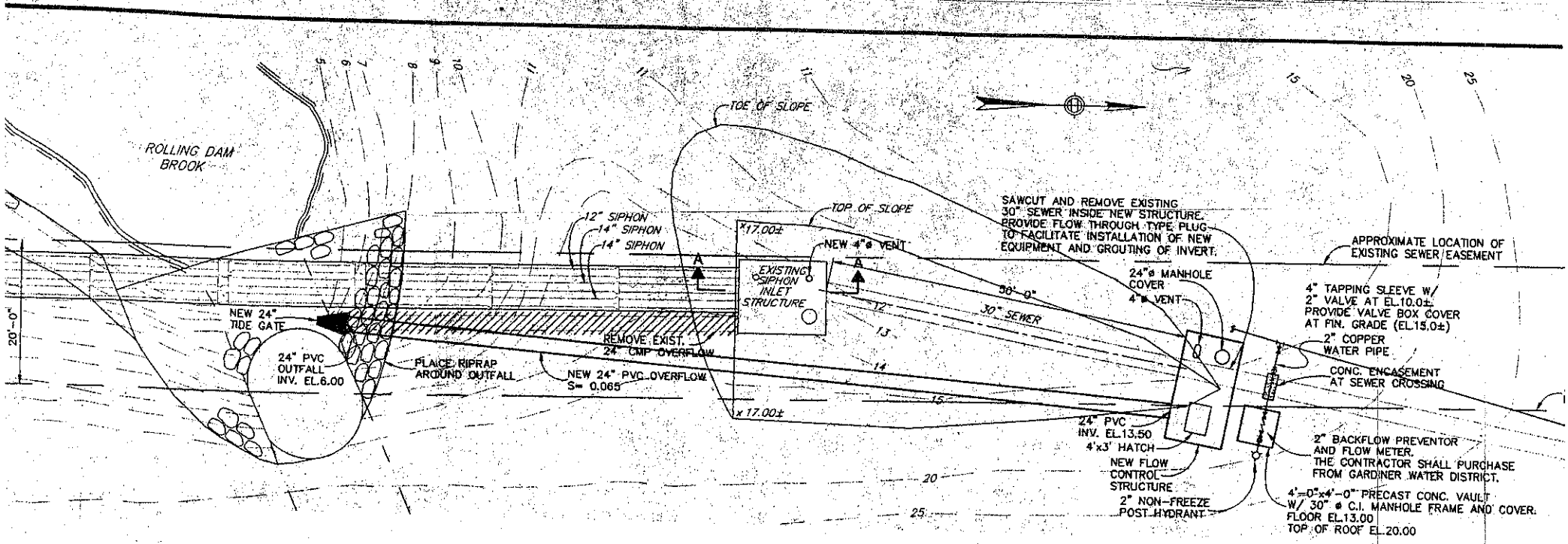
Wet Weather Flow Schematic

ATTACHMENT C

GARDINER WASTEWATER TREATMENT FACILITY

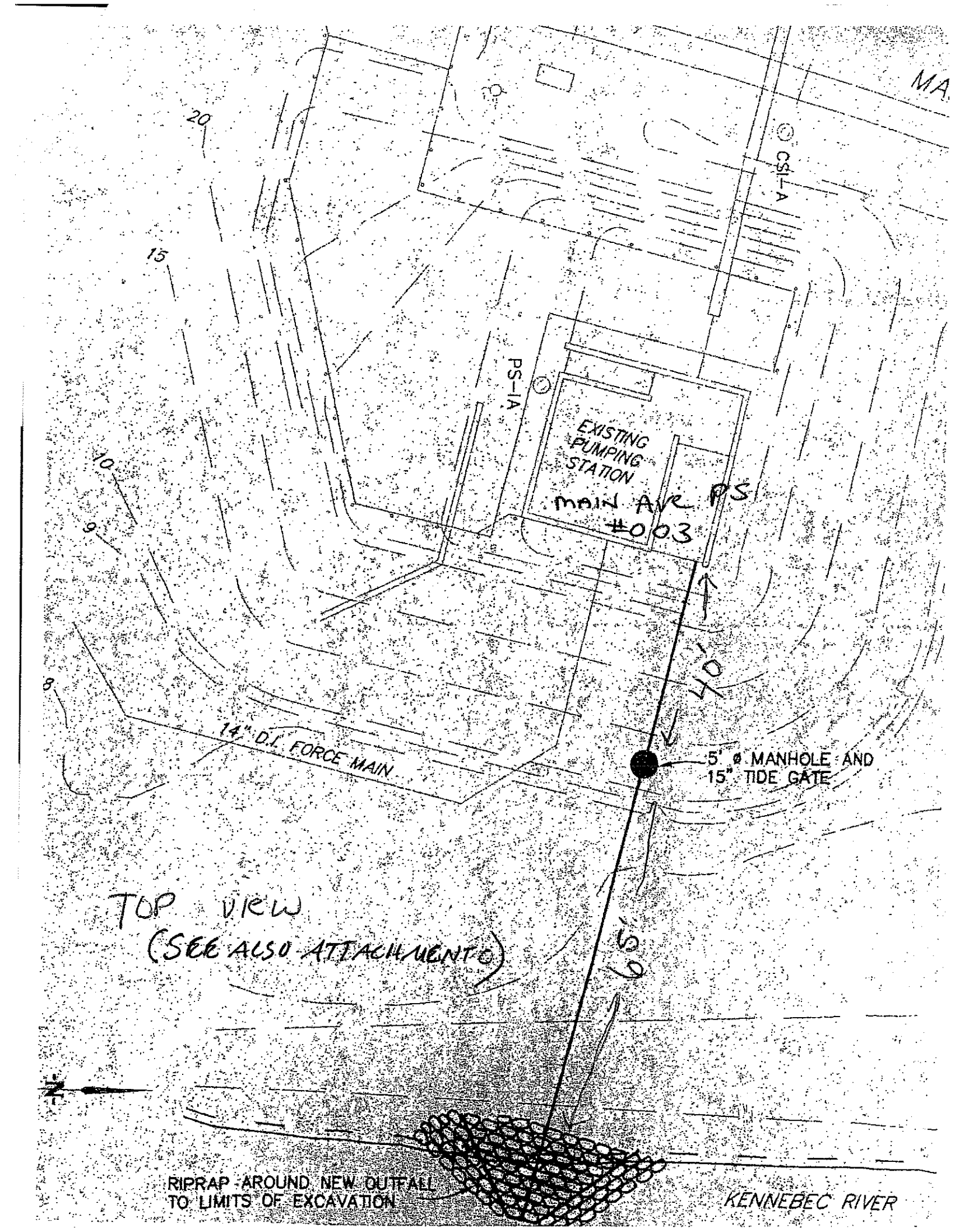
(SEE ALSO: ATTACH. C)





ROLLING DAM BROOK #002
EMERGENCY OVERFLOW POINT

(SEE ALSO: ATTACHMENT C)


MA
20
15
10
9
8
CS-1-A
PS-1A
EXISTING PUMPING STATION
MAIN AVE PS #003
110'
14" D.I. FORCE MAIN
5' ø MANHOLE AND 15" TIDE GATE
TOP VIEW
(SEE ALSO ATTACHMENT 6)
60'
RIPRAP AROUND NEW OUTFALL TO LIMITS OF EXCAVATION
KENNEBEC RIVER

ATTACHMENT D

FACILITY WET EVALUATION REPORT

Facility: GARDINER **Permit Number:** ME0101702 **Report Date:** 4/7/2011

Receiving Water: KENNEBEC RIVER **Rapidmix:** N

Diluition Factors: 1/4 Acute: 76.558 Acute: 303.234 Chronic: 367.5877

Effluent Limits: Acute (%): 1.319 Chronic (%): 0.272 **Date range for Evaluation: From** 07/Apr/2006 **To:** 07/Apr/2011

Test Type: A_NOEL

Test Species: TROUT

Species Summary:	Test Date	Result (%)	Status
	07/27/2008	25.000	OK

Test Number: 1 **RP:** 6.200 **Min Result (%):** 25.000 **RP factor (%):** 4.032 **Status:** OK

Test Type: C_NOEL

Test Species: TROUT

Species Summary:	Test Date	Result (%)	Status
	07/27/2008	100.000	OK

Test Number: 1 **RP:** 6.200 **Min Result (%):** 100.000 **RP factor (%):** 16.129 **Status:** OK

Test Type: A_NOEL

Test Species: WATER FLEA

Species Summary:	Test Date	Result (%)	Status
	07/27/2008	30.600	OK

Test Number: 1 **RP:** 6.200 **Min Result (%):** 30.600 **RP factor (%):** 4.935 **Status:** OK

Test Type: C_NOEL

Test Species: WATER FLEA

Species Summary:	Test Date	Result (%)	Status
	07/27/2008	100.000	OK

Test Number: 1 **RP:** 6.200 **Min Result (%):** 100.000 **RP factor (%):** 16.129 **Status:** OK

WET TEST REPORT

Data for tests conducted for the period

GARDINER

NPDES= ME010170 Effluent Limit: Acute (%) = 0.330 Chronic (%) = 0.272

Species	Test	Percent	Sample date	Critical %	Exception	RP
TROUT	A_NOEL	25	07/27/2008	0.330		
TROUT	C_NOEL	100	07/27/2008	0.272		
WATER FLEA	A_NOEL	30.60	07/27/2008	0.330		
WATER FLEA	C_NOEL	100	07/27/2008	0.272		

ATTACHMENT E

FACILITY CHEMICAL DATA REPORT

Data Date Range:

Facility name: **GARDINER** Permit Number: **ME0101702**

Parameter: 1,1,1-TRICHLOROETHANE	Test date	Result (ug/l)	Lsthan
	07/27/2008	2.000	Y
Parameter: 1,1,2,2-TETRACHLOROET	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,1,2-TRICHLOROETHANE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,1-DICHLOROETHANE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,1-DICHLOROETHYLENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,2-(O)DICHLOROBENZEI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,2,4-TRICHLOROBENZEN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,2-DICHLOROETHANE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,2-DICHLOROPROPANE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,2-DIPHENYLHYDRAZINE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,2-TRANS-DICHLOROETH	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,3-(M)DICHLOROBENZEI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,3-DICHLOROPROPYLENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 1,4-(P)DICHLOROBENZEN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 2,4,6-TRICHLOROPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	3.000	Y
Parameter: 2,4-DICHLOROPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5.000	Y
Parameter: 2,4-DIMETHYLPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5.000	Y
Parameter: 2,4-DINITROPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	6.000	Y

Parameter: 2,4-DINITROTOLUENE	Test date	Result (ug/l)	Lsthan
	07/27/2008	2.000	Y
Parameter: 2,6-DINITROTOLUENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 2-CHLOROETHYLVINYL ET	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	15.000	Y
Parameter: 2-CHLORONAPHTHALENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 2-CHLOROPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5.000	Y
Parameter: 2-NITROPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5.000	Y
Parameter: 3,3'-DICHLOROBENZIDIN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	16.500	Y
Parameter: 3,4-BENZO(B)FLUORANTH	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 4,4'-DDD	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: 4,4'-DDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: 4,4'-DDT	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: 4,6-DINITRO-O-CRESOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	6.000	Y
Parameter: 4-BROMOPHENYLPHENYL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 4-CHLOROPHENYL PHENY	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: 4-NITROPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	6.000	Y
Parameter: A-BHC	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.200	Y
Parameter: ACENAPHTHENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: ACENAPHTHYLENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: ACROLEIN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	500.000	Y
Parameter: ACRYLONITRILE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: A-ENDOSULFAN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y

Parameter: ALDRIN	Test date	Result (ug/l)	Lsthan
	07/27/2008	0.150	Y
Parameter: ALUMINUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	90.000	N
	01/21/2010	94.000	N
	04/07/2010	122.000	N
	07/14/2010	104.000	N
Parameter: AMMONIA	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	100.000	Y
	01/21/2010	900.000	N
	04/07/2010	2800.000	N
	07/14/2010	1200.000	N
Parameter: ANTHRACENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: ANTIMONY	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: ARSENIC	**Test date**	**Result (ug/l)**	**Lsthan**
	09/30/2006	5.000	Y
	09/30/2007	5.000	Y
	07/27/2008	1.000	Y
	09/30/2008	5.000	Y
	09/30/2009	5.000	Y
	01/21/2010	2.000	N
	04/07/2010	8.000	N
	06/30/2010	5.000	Y
	07/14/2010	4.000	N
Parameter: B-BHC	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: B-ENDOSULFAN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: BENZENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: BENZIDINE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	22.000	Y
Parameter: BENZO(A)ANTHRACENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: BENZO(A)PYRENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: BENZO(G,H,I)PERYLENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: BENZO(K)FLUORANTHENI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: BERYLLIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.200	Y
Parameter: BIS(2-CHLOROETHOXY)M	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y

Parameter: BIS(2-CHLOROETHYL)ETH	Test date	Result (ug/l)	Lsthan
	07/27/2008	2.000	Y
Parameter: BIS(2-CHLOROISOPROPYI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: BIS(2-ETHYLHEXYL)PHTH	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	6.000	N
Parameter: BROMOFORM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: BUTYLBENZYL PHTHALATI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: CADMIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.200	N
	01/21/2010	1.800	N
	04/07/2010	1.200	N
	07/14/2010	1.000	N
Parameter: CALCIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	29000.000	N
Parameter: CARBON TETRACHLORIDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: CHLORDANE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.100	Y
Parameter: CHLORINE	**Test date**	**Result (ug/l)**	**Lsthan**
	01/21/2010	50.000	Y
Parameter: CHLOROBENZENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: CHLORODIBROMOMETHAI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: CHLOROETHANE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: CHLOROFORM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	4.000	N
Parameter: CHROMIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
	01/21/2010	4.000	N
	04/07/2010	2.000	Y
	07/14/2010	2.000	Y
Parameter: CHRYSENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: COPPER	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	18.000	N
	01/21/2010	18.000	N
	04/07/2010	13.000	N
	07/14/2010	14.000	N
Parameter: CYANIDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	4.000	N

	01/21/2010	2.000	Y
	04/07/2010	2.000	Y
	07/14/2010	2.000	Y
Parameter: D-BHC	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: DIBENZO(A,H)ANTHRACE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: DICHLOROBROMOMETHAI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: DIELDRIN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: DIETHYL PHTHALATE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: DIMETHYL PHTHALATE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: DI-N-BUTYL PHTHALATE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: DI-N-OCTYL PHTHALATE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: ENDOSULFAN SULFATE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.100	Y
Parameter: ENDRIN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: ENDRIN ALDEHYDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.050	Y
Parameter: ETHYLBENZENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: FLUORANTHENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: FLUORENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: G-BHC	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.150	Y
Parameter: HEPTACHLOR	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.150	Y
Parameter: HEPTACHLOR EPOXIDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.100	Y
Parameter: HEXACHLOROBENZENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: HEXACHLOROBUTADIENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	1.000	Y
Parameter: HEXACHLOROCYCLOPENT	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y

Parameter: HEXACHLOROETHANE	Test date	Result (ug/l)	Lsthan
	07/27/2008	2.000	Y
Parameter: INDENO(1,2,3-CD)PYREN	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: ISOPHORONE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: LEAD	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	9.000	N
	01/21/2010	173.000	N
	04/07/2010	54.000	N
	07/14/2010	3.000	N
Parameter: MAGNESIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5300.000	N
Parameter: MERCURY	**Test date**	**Result (ug/l)**	**Lsthan**
	06/01/2006	0.006	N
	09/08/2006	0.014	N
	12/14/2006	0.005	N
	12/21/2006	0.005	N
	03/21/2007	0.003	N
	05/07/2007	0.008	N
	09/11/2007	0.008	N
	12/11/2007	0.009	N
	02/26/2008	0.006	N
	06/12/2008	0.007	N
	07/25/2008	0.007	N
	09/26/2008	0.005	N
	01/05/2009	0.004	N
	02/10/2009	0.004	N
	04/27/2009	0.009	N
	07/21/2009	0.004	N
	10/29/2009	0.005	N
	03/09/2010	0.006	N
	05/03/2010	0.004	N
	08/10/2010	0.005	N
	11/15/2010	0.003	N
Parameter: METHYL BROMIDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: METHYL CHLORIDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: METHYLENE CHLORIDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5.000	Y
Parameter: NAPHTHALENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: NICKEL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
	01/21/2010	4.000	N
	04/07/2010	2.000	N
	07/14/2010	2.000	Y

Parameter: NITROBENZENE	Test date	Result (ug/l)	Lsthan
	07/27/2008	2.000	Y
Parameter: N-NITROSODIMETHYLAMI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	1.000	Y
Parameter: N-NITROSODI-N-PROPYL/	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: N-NITROSODIPHENYLAMI	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: PCB-1016	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.300	Y
Parameter: PCB-1221	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.300	Y
Parameter: PCB-1232	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.300	Y
Parameter: PCB-1242	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.300	Y
Parameter: PCB-1248	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.300	Y
Parameter: PCB-1254	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.300	Y
Parameter: PCB-1260	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.200	Y
Parameter: P-CHLORO-M-CRESOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5.000	Y
Parameter: PENTACHLOROPHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	11.000	Y
Parameter: PHENANTHRENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: PHENOL	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	5.000	Y
Parameter: PYRENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: SELENIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	1.000	Y
Parameter: SILVER	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	0.300	Y
	01/21/2010	0.300	Y
	04/07/2010	0.300	Y
	07/14/2010	0.300	Y
Parameter: TETRACHLOROETHYLENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: THALLIUM	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	1.000	Y

Parameter: TOLUENE	Test date	Result (ug/l)	Lsthan
	07/27/2008	2.000	Y
Parameter: TOXAPHENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	1.000	Y
Parameter: TRICHLOROETHYLENE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: VINYL CHLORIDE	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	2.000	Y
Parameter: ZINC	**Test date**	**Result (ug/l)**	**Lsthan**
	07/27/2008	95.000	N
	01/21/2010	98.000	N
	04/07/2010	44.000	N
	07/14/2010	35.000	N

MERCURY REPORT - Clean Test Only

Data Date Range:

Facility: GARDINER **Permit Number:** ME0101702

Max (ug/l): 0.0164 **Average (ug/l):** 0.0071

Sample Date	Result (ug/l)	Lsthan	Clean
06/01/2006	0.006100	N	T
09/08/2006	0.014000	N	T
12/14/2006	0.005200	N	T
12/21/2006	0.005200	N	T
03/21/2007	0.003100	N	T
05/07/2007	0.007500	N	T
09/11/2007	0.008000	N	T
12/11/2007	0.009100	N	T
02/26/2008	0.005900	N	T
06/12/2008	0.007200	N	T
07/25/2008	0.006710	N	T
09/26/2008	0.004600	N	T
01/05/2009	0.003600	N	T
02/10/2009	0.003800	N	T
04/27/2009	0.008700	N	T
07/21/2009	0.003700	N	T
10/29/2009	0.004700	N	T
03/09/2010	0.006400	N	T
05/03/2010	0.004400	N	T
08/10/2010	0.005000	N	T
11/15/2010	0.003200	N	T

ATTACHMENT F

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

DATE: October 2008

TO: Interested Parties

FROM: Dennis Merrill, DEP

SUBJECT: DEP's system for evaluating toxicity from multiple discharges

****

Following the requirements of DEP's rules, Chapter 530, section 4(F), the Department is evaluating discharges of toxic pollutants into a freshwater river system in order to prevent cumulative impacts from multiple discharges. This is being through the use of a computer program known internally as "DeTox". The enclosed package of information is intended to introduce you to this system.

Briefly, the DeTox program evaluates each wastewater facility within a watershed in three different ways in order to characterize its effluent: 1) the facility's past history of discharges, 2) its potential toxicity at the point of discharge on an individual basis, and 3) the facility's contribution to cumulative toxicity within a river segment in conjunction with other facilities. The value that is most protective of water quality becomes the value that is held in the DeTox system as an allocation for the specific facility and pollutant.

The system is not static and uses a five-year "rolling" data window. This means that, over time, old test results drop off and newer ones are added. The intent of this process is to maintain current, uniform facility data to estimate contributions to a river's total allowable pollutant loading prior to each permit renewal.

Many facilities are required to do only a relatively small amount of pollutant testing on their effluent. This means, statistically, the fewer tests done, the greater the possibility of effluent limits being necessary based on the facility's small amount of data. To avoid this situation, most facilities, especially those with low dilution factors, should consider conducting more than the minimum number of tests required by the rules.

Attached you will find three documents with additional information on the DeTox system:

- Methods for evaluating the effects of multiple discharges of toxic pollutants
- Working definitions of terms used in the DeTox system
- Reviewing DeTox Reports
- Prototype facility and pollutant reports

If you have questions as you review these, please do not hesitate to contact me at Dennis.L.Merrill@maine.gov or 287-7788.

Maine Department of Environmental Protection

Methods for evaluating the effects of multiple discharges of toxic pollutants.

Reference: DEP Rules, Chapter 530, section 4(F)

To evaluate discharges of toxic pollutants into a freshwater river system and prevent cumulative impacts from multiple discharges, DEP uses a computer program called "DeTox that functions as a mathematical evaluation tool.

It uses physical information about discharge sources and river conditions on file with the Department, established water quality criteria and reported effluent test information to perform these evaluations. Each toxic pollutant and associated water quality criterion for acute, chronic and/or human health effects is evaluated separately.

Each facility in a river drainage area has an assigned position code. This "address" is used to locate the facility on the river segment and in relation to other facilities and tributary streams. All calculations are performed in pounds per day to allow analysis on a mass balance. Pollutants are considered to be conservative in that once in the receiving water they will not easily degrade and have the potential to accumulate.

The process begins with establishing an assimilative capacity for each pollutant and water quality criterion at the most downstream point in the river segment. This calculation includes set-aside amounts for background and reserve quantities and assumed values for receiving water pH, temperature and hardness. The resulting amount of assimilative capacity is available for allocation among facilities on the river.

Each facility is evaluated to characterize its past discharge quantities. The historical discharge, in pounds per day, is figured using the average reported concentration and the facility's permitted flow. As has been past practice, a reasonable potential (RP) factor is used as a tool to estimate the largest discharge that may occur with a certain degree of statistical certainty. The RP factor is multiplied by the historical average to determine an allocation based on past discharges. The RP factor is also multiplied by the single highest test to obtain a maximum day estimate. Finally, the direct average without RP adjustment is used to determine the facility's percent contribution to the river segment in comparison to the sum of all discharges of the pollutant. This percent multiplied by the total assimilative capacity becomes the facility's discharge allocation used in evaluations of the segment loadings.

Additionally, individual facility discharges are evaluated as single sources, as they have been in the past to determine if local conditions are more limiting than a segment evaluation.

With all of this information, facilities are evaluated in three ways. The methods are:

1. The facility's past history. This is the average quantity discharged during the past five years multiplied by the applicable RP factor. This method is often the basis for an allocation when the discharge quantity is relatively small in comparison to the water quality based allocation.
2. An individual evaluation. This assumes no other discharge sources are present and the allowable quantity is the total available assimilative capacity. This method may be used when a local condition such as river flow at the point of discharge is the limiting factor.
3. A segment wide evaluation. This involves allocating the available assimilative capacity within a river segment based on a facility's percent of total past discharges. This method would be used when multiple discharges of the same pollutant to the same segment and the available assimilative capacity is relatively limited.

The value that is most protective of water quality becomes the facility's allocation that is held in the system for the specific facility and pollutant. It is important to note that the method used for allocation is facility and pollutant specific and different facilities on the same segment for the same pollutant can have different methods used depending on their individual situations.

Discharge amounts are always allocated to all facilities having a history of discharging a particular pollutant. This does not mean that effluent limits will be established in a permit. Limits are only needed when past discharge amounts suggest a reasonable potential to exceed a water quality based allocation, either on an individual or segment basis. Similar to past practices for single discharge evaluations, the single highest test value is multiplied by a RP factor and if product is greater than the water quality allowance, an effluent limit is established. It is important to remember an allocation is "banking" some assimilative capacity for a facility even if effluent limits are not needed.

Evaluations are also done for each tributary segment with the sum of discharge quantities in tributaries becoming a "point source" to the next most significant segment. In cases where a facility does not use all of its assimilative capacity, usually due to a more limiting individual water quality criterion, the unused quantity is rolled downstream and made available to other facilities.

The system is not static and uses a five-year rolling data window. Over time, old tests drop off and newer ones are added on. These changes cause the allocations and the need for effluent limits to shift over time to remain current with present conditions. The intent is to update a facility's data and relative contribution to a river's total assimilative capacity prior to each permit renewal. Many facilities are required to do only minimal testing to characterize their effluents. This creates a greater degree of statistical uncertainty about the true long-term quantities. Accordingly, with fewer tests the RP factor will be larger and result in a greater possibility of effluent limits being necessary. To avoid this situation, most facilities, especially those with relatively low dilution factors, are encouraged to conduct more that a minimum number of tests. It is generally to a facility's long-term benefit to have more tests on file since their RP factor will be reduced.

Maine Department of Environmental Protection

Working Definitions of Terms Used in the DeTox System.

Allocation. The amount of pollutant loading set aside for a facility. Separate amounts are set for each *water quality criterion.* Each pollutant having a history of being discharged will receive an allocation, but not all allocations become *effluent limits.* Allocation may be made in three ways: *historical allocation, individual allocation* or *segment allocation.*

Assimilative capacity. The amount of a pollutant that river segment can safely accept from point source discharges. It is determined for the most downstream point in a river segment using the *water quality criterion* and river flow. Separate capacities are set for acute, chronic and human health criteria as applicable for each pollutant. Calculation of this capacity includes factors for *reserve* and *background* amounts.

Background. A concentration of a pollutant that is assumed to be present in a receiving water but not attributable to discharges. By rule, this is set as a rebuttable presumption at 10% of the applicable *water quality criterion.*

Effluent limit. A numeric limit in a discharge permit specifically restricting the amount of a pollutant that may be discharged. An effluent limit is set only when the highest discharge, including an adjustment for *reasonable potential,* is greater than a facility's water quality based *allocation* for a pollutant.

Historical allocation (or *RP history*). One of three ways of developing an *allocation.* The facility's average history of discharges, in pounds at design flow, is multiplied by the appropriate *reasonable potential* factor. An allocation using this method does not become an *effluent limit.*

Historical discharge percentage. For each pollutant, the average discharge concentration for each facility in a segment is multiplied by the permitted flow (without including a *reasonable potential* factor). The amounts for all facilities are added together and a percent of the total is figured for each facility. When a facility has no detectable concentrations, that pollutant is assumed to be not present and it receives no percentage.

Individual allocation. One of three ways of developing an *allocation.* The facility's single highest discharge on record multiplied by the appropriate *reasonable potential* factor is compared to a water quality based quantity with an assumption that the facility is the only point source to that receiving water. If the RP-adjusted amount is larger, the water quality amount may become an *effluent limit.*

Less than. A qualification on a laboratory report indicating the concentration of a pollutant was below a certain concentration. Such a result is evaluated as being one half of the Department's reporting limit in most calculations.

Reasonable potential (RP). A statistical method to determine the highest amount of a pollutant likely to be present at any time based on the available test results. The method produces a value or RP factor that is multiplied by test results. The method relies on an EPA guidance document, and considers the coefficient of variation and the number of tests. Generally, the fewer number of tests, the higher the RP factor.

Reserve. An assumed concentration of a pollutant that set aside to account for non-point source of a pollutant and to allow new discharges of a pollutant. By rule this is set at 15% of the applicable *water quality criterion.*

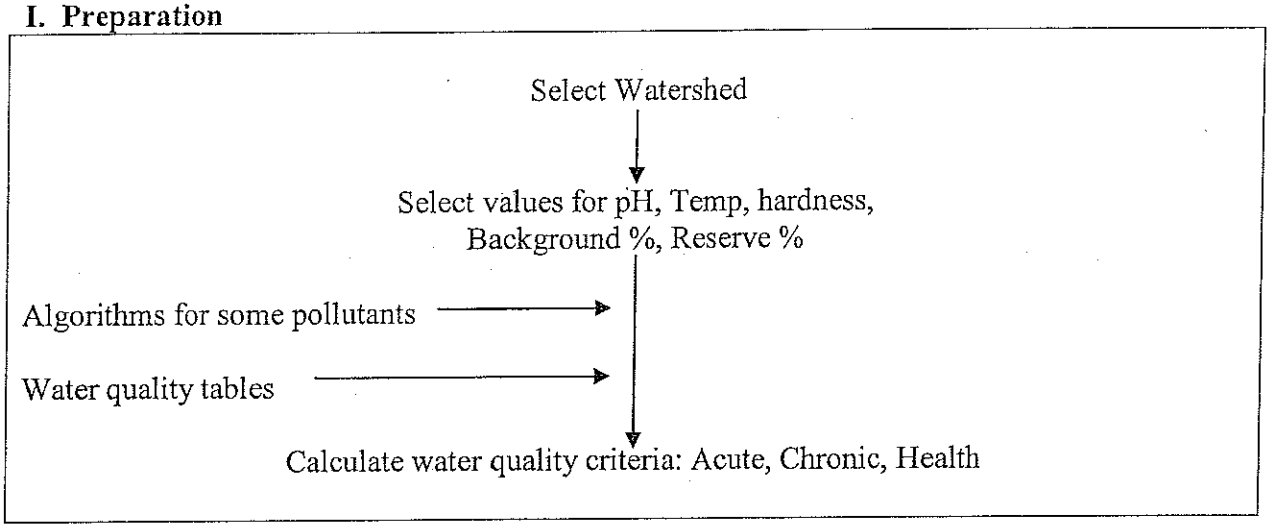
Segment allocation. One of three ways of developing an *allocation.* The amount is set by multiplying a facility's *historical discharge percentage* for a specific pollutant by the *assimilative capacity* for that pollutant and criterion. A facility will have different allocation percentages for each pollutant. This amount may become an *effluent limit.*

Tributary. A stream flowing into a larger one. A total pollutant load is set by adding the all facilities *allocations* on the tributary and treating this totaled amount as a "point source" to the next larger segment.

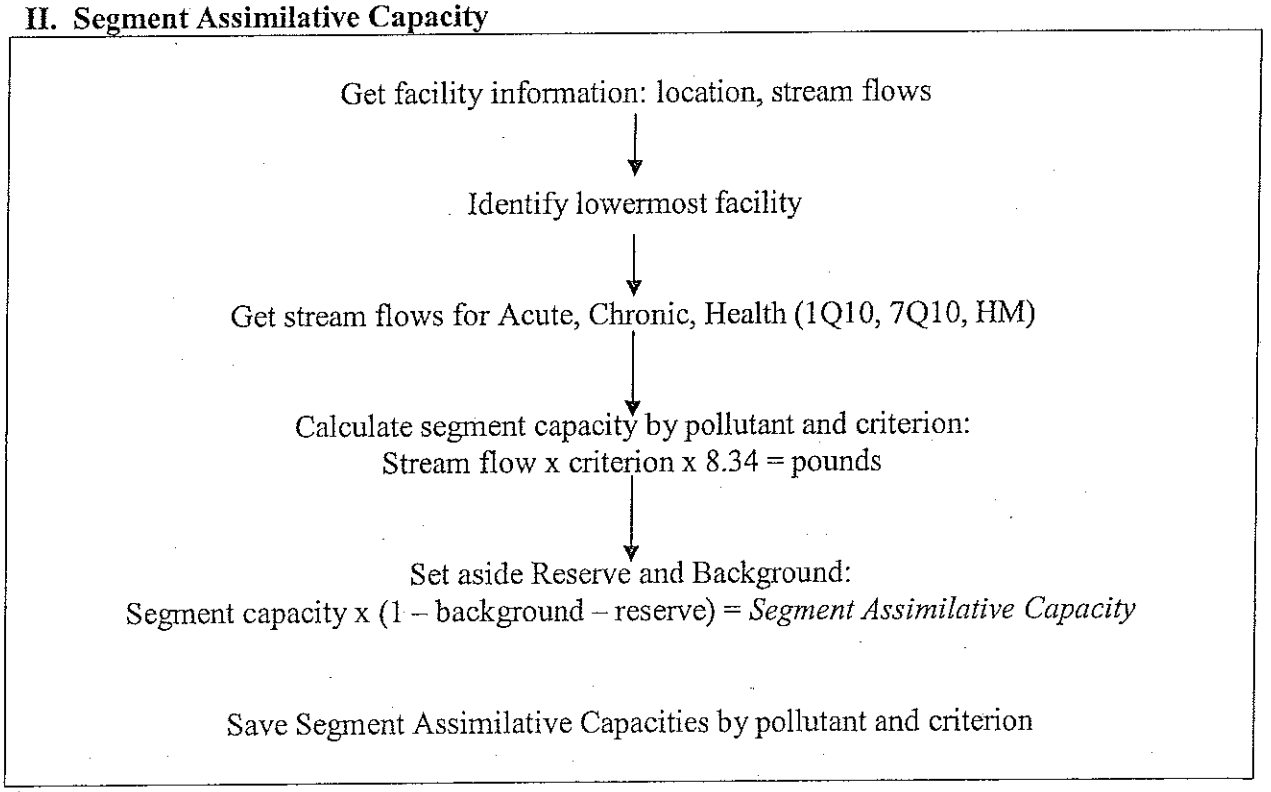
Water quality criteria. Standards for acceptable in-stream or ambient levels of pollutants. These are established in the Department's Chapter 584 and are expressed as concentrations in ug/L. There may be separate standards for acute and chronic protection aquatic life and/or human health. Each criterion becomes a separate standard. Different stream flows are used in the calculation of each.

Maine Department of Environmental Protection
General Processing Steps in "DeTox"

I. Preparation

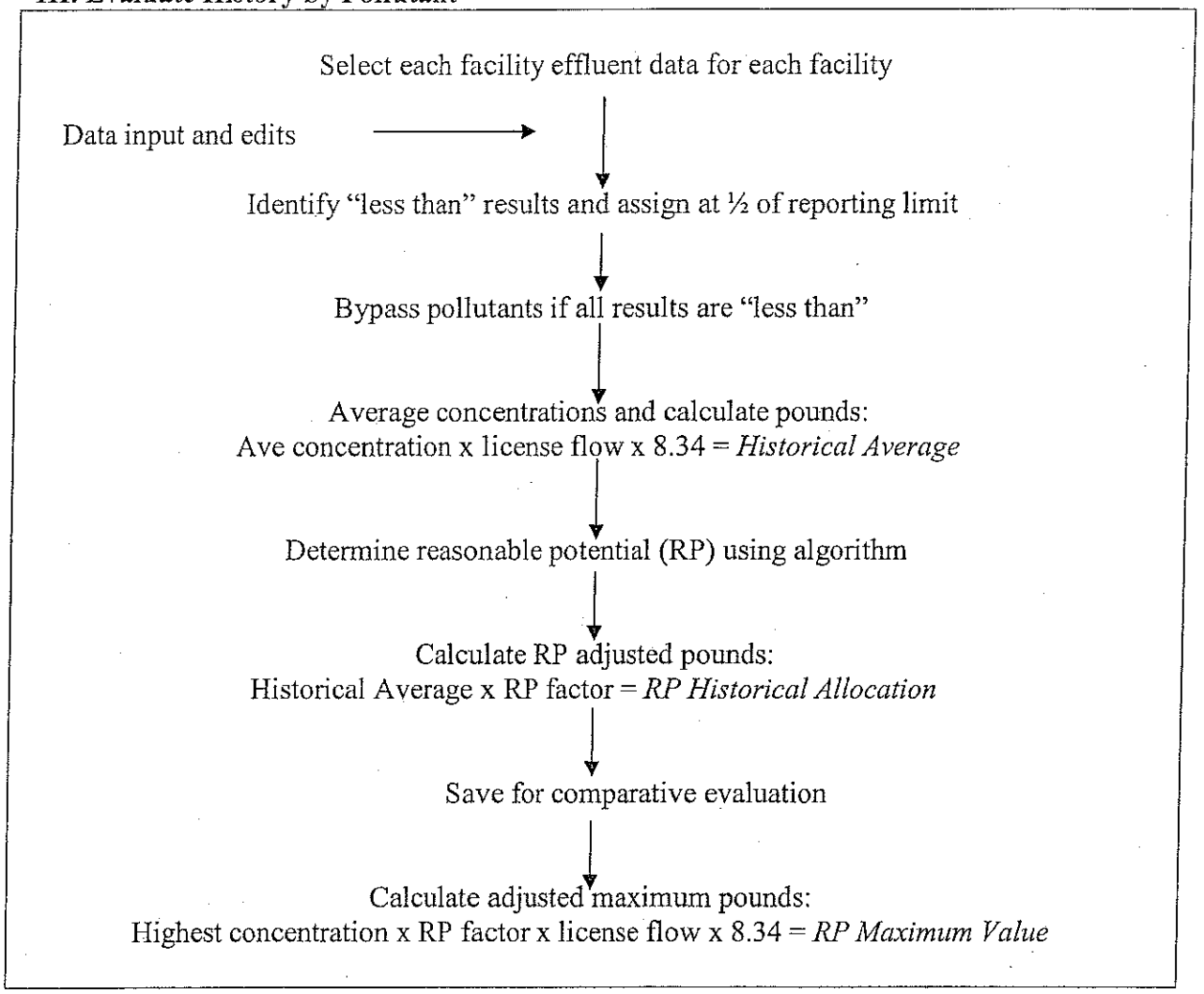


II. Segment Assimilative Capacity

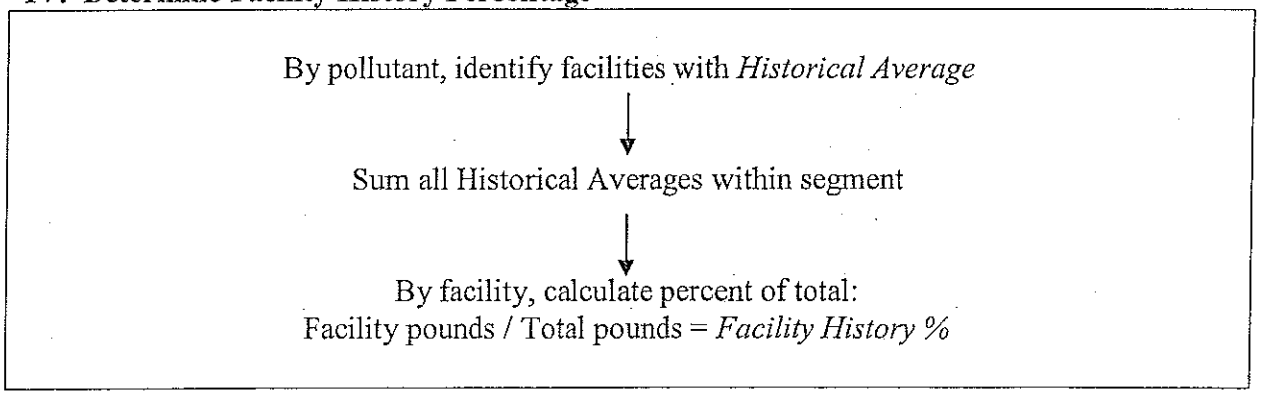


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant



IV. Determine Facility History Percentage



V. Segment Allocation

By pollutant and criterion, select *Segment Assimilative Capacity*

↓

Select individual *Facility History %*

↓

Determine facility allocation:
Assimilative Capacity x Facility History % = *Segment Allocation*

↓

Save for comparative evaluation

VI. Individual Allocation

Select individual facility and dilution factor (DF)

↓

Select pollutant and water quality criterion

↓

By pollutant and criterion, calculate individual allocations:
[DF x 0.75 x criterion] + [0.25 x criterion] = Individual Concentration

↓

Determine individual allocation:
Individual Concentration x license flow x 8.34 = *Individual Allocation*

↓

Save for comparative evaluation

VII. Make Initial Allocation

By facility, pollutant and criterion, get:
Individual Allocation, Segment Allocation, RP Historical Allocation

↓

Compare allocation and select the smallest

↓

Save as *Facility Allocation*

VIII. Evaluate Need for Effluent Limits

By facility, pollutant and criterion select
Segment Allocation, *Individual Allocation* and *RP Maximum value*

↓

If *RP Maximum value* is greater than either *Segment Allocation* or *Individual Allocation*, use lesser value as *Effluent Limit*

↓

Save *Effluent Limit* for comparison

IX. Reallocation of Assimilative Capacity

Starting at top of segment, get *Segment Allocation*, *Facility Allocation* and *Effluent Limit*

↓

If *Segment Allocation* equals *Effluent Limit*, move to next facility downstream

↓

If not, subtract *Facility Allocation* from *Segment Allocation*

↓

Save difference

↓

Select next facility downstream

↓

Figure remaining *Segment Assimilative Capacity* at and below facility, less tributaries

↓

Add saved difference to get an adjusted *Segment Assimilative Capacity*

↓

Reallocate *Segment Assimilative Capacity* among downstream facilities per step V

↓

Repeat process for each facility downstream in turn

ATTACHMENT G

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

MEPDES# _____ Facility Name _____

Since the effective date of your permit have there been:	NO	YES (Describe in Comments)
1. changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may **increase** the toxicity of the discharge?		
2. changes in the operation of the treatment works that may **increase** the toxicity of the discharge?		
3. changes in industrial manufacturing processes contributing wastewater to the treatment works that may **increase** the toxicity of the discharge?		

COMMENTS:

Name(print) _____

Signature _____ Date _____

This document must be signed by the permittee or their legal representative.

This form may be used to meet the requirements of Chap 530(2)(D)(4). This Chapter requires all dischargers having waived or reduced Toxic testing to file a statement with the Department describing changes to the waste being contributed to their system as outlined above. As an alternative the discharger may submit a signed letter containing the same information.

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.

DEP INFORMATION SHEET

Appealing a Commissioner's Licensing Decision

Dated: May 2004 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) in an administrative process before the Board of Environmental Protection (Board); or (2) in a judicial process before Maine's Superior Court. This INFORMATION SHEET, in conjunction with consulting statutory and regulatory provisions referred to herein, can help aggrieved persons with understanding their rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

DEP's *General Laws*, 38 M.R.S.A. § 341-D(4), and its *Rules Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 CMR 2.24 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written notice of appeal within 30 calendar days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner and the applicant a copy of the documents. All the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

The materials constituting an appeal must contain the following information at the time submitted:

1. *Aggrieved Status*. Standing to maintain an appeal requires the appellant to show they are particularly injured by the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.

6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.

7. *New or additional evidence to be offered.* The Board may allow new or additional evidence as part of an appeal only when the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or show that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2, Section 24(B)(5).

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license file is public information made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.

3. *The filing of an appeal does not operate as a stay to any decision.* An applicant proceeding with a project pending the outcome of an appeal runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge initiation of the appeals procedure, including the name of the DEP project manager assigned to the specific appeal, within 15 days of receiving a timely filing. The notice of appeal, all materials accepted by the Board Chair as additional evidence, and any materials submitted in response to the appeal will be sent to Board members along with a briefing and recommendation from DEP staff. Parties filing appeals and interested persons are notified in advance of the final date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision. The Board will notify parties to an appeal and interested persons of its decision.

II. APPEALS TO MAINE SUPERIOR COURT

Maine law allows aggrieved persons to appeal final Commissioner licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2.26; 5 M.R.S.A. § 11001; & MRCivP 80C. Parties to the licensing decision must file a petition for review within 30 days after receipt of notice of the Commissioner's written decision. A petition for review by any other person aggrieved must be filed within 40-days from the date the written decision is rendered. The laws cited in this paragraph and other legal procedures govern the contents and processing of a Superior Court appeal.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, contact the DEP's Director of Procedures and Enforcement at (207) 287-2811.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.