STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

June 20, 2007

DAVID P. LITTELL
COMMISSIONER

Mr. Steve Freeman
Presque Isle Sewer District
P.O. Box 470
Presque Isle, Maine 04769

RE: ***Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100561***
Maine Waste Discharge License (WDL) Application #W002713-5L-D-R
Final MEPDES Permit/WDL

Dear Mr. Freeman:

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

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

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

Sincerely,

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

Enc.

cc: Bill Sheehan, DEP
Lori Mitchell, DEP
[redacted]
File #2713

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

DEPARTMENT ORDER

IN THE MATTER OF

PRESQUE ISLE SEWER DISTRICT	)	MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS	)	ELIMINATION SYSTEM PERMIT
PRESQUE ISLE, AROOSTOOK COUNTY, MAINE	)	AND
#ME0100561	)	WASTE DISCHARGE LICENSE
#W002713-5L-D-R **APPROVAL**	)	**RENEWAL**

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

APPLICATION SUMMARY

The PISD has applied to the Department for renewal of Waste Discharge License (WDL) renewal/modification #W002713-5L-C-M/ Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100561, which was issued on September 30, 2002 and is scheduled to expire on September 30, 2007. The 9/30/2002 MEPDES permit authorized the monthly average discharge of up to 2.31 million gallons per day (MGD) of secondary treated sanitary waste waters (Outfall #001) and an unspecified quantity of primary treated sanitary waste waters (Outfall #002) from a municipal waste water treatment facility to Presque Isle Stream, Class B, in Presque Isle, Maine. The 9/30/2002 MEPDES permit established a schedule of compliance to eliminate the discharge of wastewater from this facility to Presque Isle Stream between June 1 and September 30 of each year beginning calendar year 2007 due to non-attainment of Class B water quality standards.

On May 14, 2003, the Department administratively modified the 9/30/2002 MEPDES permit by eliminating the limitations and monitoring requirements for whole effluent toxicity (WET) testing, chemical-specific testing, bis (2-ethylhexyl) phthalate, total silver, and total zinc.

On October 29, 2003, the Department administratively modified the 9/30/2002 MEPDES permit by extending the submission deadline established in Special Condition K from April 17, 2004 to December 31, 2004.

On January 20, 2004, the Department administratively modified the 9/30/2002 MEPDES permit by eliminating the limitations and monitoring requirements for G-BHC.

On April 10, 2006, the Department administratively modified the 9/30/2002 MEPDES permit to incorporate testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

PERMIT SUMMARY

This permitting action is similar to the 9/30/2002 permitting action and 5/14/2003, 10/29/2003, 1/20/2004, and 4/10/2006 administrative modifications in that it is:

Presque Isle Stream – Secondary Treated Waste Waters (Outfall #001)

1. Carrying forward the monthly average discharge flow limit of 2.31 million gallons per day (MGD) and the daily maximum discharge flow reporting requirement;

2. Carrying forward seasonal, water quality-based monthly average, weekly average and daily maximum mass limits and the daily maximum concentration limit during the summer season (July 1-September 30) and technology-based concentration and mass limits during the non-summer season (October 1-June 30) of each year, and a 30-day average minimum percent removal requirement of 85% for biochemical oxygen demand (BOD_5);

3. Carrying forward technology-based monthly average, weekly average and daily maximum concentration and mass limits for total suspended solids (TSS);

4. Carrying forward a technology-based daily maximum concentration limit for settleable solids;

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

6. Carrying forward the water quality-based, daily maximum concentration limit for total residual chlorine (TRC);

7. Carrying forward the technology-based pH range limitation;

8. Carrying forward seasonal, water quality-based concentration and mass limits for total ammonia;

9. Carrying forward seasonal, weekly average water quality-based concentration and mass limits for orthophosphate (ortho-P);

PERMIT SUMMARY (cont'd)

Presque Isle Stream – CSO-Related Bypasses of Secondary Treatment (Outfall #002) (For the purposes of this permitting action, this term refers to structures and or processes at the waster water treatment facility that provide equivalent to primary treatment and disinfection of waste waters that bypass the biological treatment portion of the facility in an effort to mitigate the discharge of untreated combined sanitary waste waters and storm water).

10. Carrying forward the monthly average and daily maximum discharge flow reporting requirements;

11. Carrying forward the daily maximum concentration and 30-day percent removal reporting requirements for BOD_5 and TSS;

12. Carrying forward the daily maximum *E. coli* bacteria concentration limit for Class B waters;

13. Carrying forward the daily maximum reporting requirement for surface loading rate;

14. Carrying forward the daily maximum concentration limit for TRC; and

15. Carrying forward the monthly overflow occurrence reporting requirement.

This permitting action is different from the 9/30/2002 permitting action and 5/14/2003, 10/29/2003, 1/20/2004, 4/10/2006 administrative modifications in that it is:

Presque Isle Stream – Secondary Treated Waste Waters (Outfall #001)

1. Establishing whole effluent toxicity (WET), priority pollutant, and analytical chemistry testing for a Level I discharger, including reduced surveillance level WET testing; and

2. Revising the monthly average and daily maximum water quality-based concentration and mass limits for total copper;

3. Formally eliminating the limitations and monitoring requirements for Bis (2-Ethylhexl) Phthalate, G-BHC, total silver, and total zinc;

4. Revising the effective period for bacteria limits from year-round to seasonal between May 15th through September 30th of each year;

Presque Isle Stream – CSO-Related Bypasses of Secondary Treatment (Outfall #002)

5. Eliminating the pH range limitation;

PERMIT SUMMARY (cont'd)

Aroostook River – Secondary Treated Waste Waters (Outfall #001)

6. Establishing monthly average, weekly average, and daily maximum technology-based concentration and mass limits, and a 30-day average minimum percent removal requirement of 85% for BOD_5 and TSS;

7. Establishing a technology-based daily maximum concentration limit for settleable solids;

8. Establishing monthly average and daily maximum *Escherichia coli* bacteria concentration limits for Class C waters;

9. Establishing technology-based monthly average and daily maximum concentration limits for TRC;

10. Establishing a technology-based pH range limitation;

11. Establishing WET, priority pollutant and analytical chemistry testing for a Level II discharger, including reduced surveillance level WET testing;

12. Establishing seasonal, monthly average water quality-based concentration and mass limits and weekly average and daily maximum reporting requirements for total-P;

13. Establishing seasonal, monthly average, weekly average, and daily maximum concentration and mass reporting requirements for orthophosphate;

14. Establishing monthly average and daily maximum water quality-based concentration and mass limits for total copper;

Aroostook River – CSO-Related Bypasses of Secondary Treatment(Outfall #002)

15. Establishing monthly average and daily maximum discharge flow reporting requirements;

16. Establishing daily maximum concentration and 30-day percent removal reporting requirements for BOD_5 and TSS;

17. Establishing a daily maximum *E. coli* bacteria concentration limit for Class C waters;

18. Establishing a daily maximum reporting requirement for surface loading rate;

19. Establishing a daily maximum concentration limit for TRC; and

20. Establishing a monthly overflow occurrence reporting requirement.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated June 18, 2007, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge to Presque Isle Stream, either by itself or in combination with other discharges, will lower the quality of the Presque Isle Stream below the Class B minimum dissolved oxygen standard of 7.0 ppm during the summer months. Summer months in this permitting action is defined as June 1 through September 30. The discharge, either by itself or in combination with other discharges, will not lower the quality of the Aroostook River below its ascribed classification.

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

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

   (a) will not be met for the Presque Isle Stream discharge, in that;

      i. The standards of classification of the receiving water body are not met during the summer months and the discharge from the PISD will cause or contribute to the failure of the water body to meet the standards of classification;

      ii. Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will not be maintained and protected during the summer months;

      iii. The discharge will result in lowering the existing quality of the receiving water body during the summer months and the PISD has not provided the Department with the information necessary for the Department to make the finding, (following opportunity for public participation), that this action is necessary to achieve important economic or social benefits to the State.

   (b) will be met for the Aroostook River discharge, in that;

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

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

      iii. 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;

CONCLUSIONS (cont'd)

iv. 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

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

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

5. Elimination of the discharge of secondary treated waste waters from the PISD waste water treatment facility to Presque Isle Stream during the summer months is necessary for the receiving water to attain the standards of its assigned classification. Special Condition N, *Schedule of Compliance,* contains a schedule to eliminate the discharge of secondary treated wastewaters (year-round elimination) and the discharge of primary treated wastewaters (during the critical summer season) to Presque Isle Stream by November 1, 2009.

ACTION

THEREFORE, the Department APPROVES the above noted application of PRESQUE ISLE SANITARY DISTRICT to discharge a monthly average flow of up to 2.31 million gallons per day (MGD) of secondary treated sanitary waste waters (Outfall #001) and an unspecified quantity of primary treated sanitary waste waters (Outfall #002) from a municipal waste water treatment facility to Presque Isle Stream, Class B, in Presque Isle, Maine, and following relocation of the outfall pipe, to the Aroostook River, Class C, in Presque Isle, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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

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

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

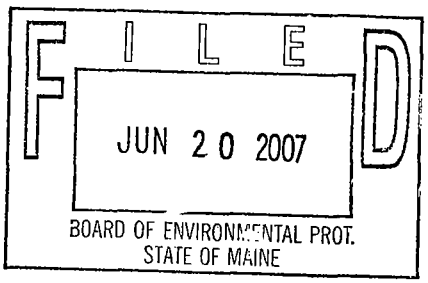
DONE AND DATED AT AUGUSTA, MAINE, THIS 18TH DAY OF JUNE, 2007.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 18, 2006
Date of application acceptance: December 22, 2006



Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0036218 / #W008085-5N-D-R June 18, 2007

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **secondary treated sanitary waste waters** from **OUTFALL #001** to **Presque Isle Stream through October 31, 2009**. Such discharges shall be limited and monitored by the permittee as specified below[1]. **Beginning November 1, 2009,** there shall be no discharge of secondary treated waste waters to Presque Isle Stream, except when the hydraulic capacity of the Aroostook River outfall structure is exceeded [2].

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	2.31 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]* July 1-September 30 October 1-June 30	168 lbs./day *[26]* 575 lbs./day *[26]*	168 lbs./day *[26]* 863 lbs./day *[26]*	168 lbs./day *[26]* 959 lbs./day *[26]*	Report mg/L *[19]* 30 mg/L *[19]*	Report mg/L *[19]* 45 mg/L *[19]*	13 mg/L *[19]* 50 mg/L *[19]*	3/Week *[03/07]* 3/Week *[03/07]*	24-Hour Composite *[24]*
BOD_5 Percent Removal[3] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	575 lbs./day *[26]*	863 lbs./day *[26]*	959 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS Percent Removal[3] *[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**[4] *[31633]*	---	---	---	64/100 ml[5] *[13]*	---	427/100 ml *[13]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine[6] *[50060]*	---	---	---	0.025 mg/L *[19]*	---	0.038 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	1/Day *[01/01]*	Grab *[GR]*

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

FOOTNOTES: See Pages 16 through 20 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

1. The permittee is authorized to discharge **secondary treated sanitary waste waters** from **OUTFALL #001** to **Presque Isle Stream through October 31, 2009**. Such discharges shall be limited and monitored by the permittee as specified below[(1)]: **Beginning November 1, 2009,** there shall be no discharge of secondary treated wastewaters to Presque Isle Stream, except when the hydraulic capacity of the Aroostook River outfall structure is exceeded [(2)] (cont'd).

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Ammonia (as N) ***[00610]*** July 1-September 30 October 1-June 30	--- 98 lbs./day *[26]*	---	9.6 lbs./day *[26]* ---	--- 7.6 mg/L *[19]*	---	0.74 mg/L *[19]* ---	3/Week *[03/07]* 1/Week *[01/07]*	Grab *[GR]*
Copper (Total) ***[01042]***	0.16 lbs./day *[26]*	---	0.17 lbs./day *[26]*	12.8 µg/L *[28]*	---	12.9 µg/L *[28]*	1/Quarter *[01/90]*	24-Hour Composite *[24]*
Orthophosphate[(7)] (June 1 – Sept. 30) *[04175]*	---	3.3 lbs./day *[26]*	---	---	0.2 mg/L *[19]*	---	3/Week *[03/07]*	24-Hour Composite *[24]*

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

FOOTNOTES: See Pages 16 through 20 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

2. **For Discharge to Presque Isle Stream (Level I).** Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements.

SURVEILLANCE LEVEL - Beginning 12 months following issuance of this permit and lasting through 12 months prior to permit expiration.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(8)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]f*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Analytical Chemistry (9) *[51168]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*

SCREENING LEVEL - Beginning upon issuance of the permit and lasting through the first 12 months of the permit, and then again beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter.

	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(8)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	4/Year *[04/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	4/Year *[04/YR]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	4/Year *[04/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	4/Year *[04/YR]*	Composite *[24]*
Analytical Chemistry (9) *[51168]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutant (10) *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

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

FOOTNOTES: See Pages 16 through 20 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. The permittee is authorized to discharge **primary treated waste waters** from **OUTFALL #002 (SWIRL SEPARATOR)** to Presque Isle Stream **through October 31, 2009**. Such discharges shall be limited and monitored by the permittee as specified below[(1)]: **Beginning November 1, 2009,** there shall be no discharge of primary treated wastewaters to Presque Isle Stream, except when the hydraulic capacity of the Aroostook River outfall structure is exceeded [(2)]. Such discharges may only occur in response to wet weather events when the flow rate through secondary treatment exceeds an instantaneous flow rate of 3,750 gpm (5.4 MGD) or in accordance with the most current approved High Flow Management Plan and shall be limited and monitored as specified below[(1)]. Approval of CSO-related bypasses will be reviewed and may be modified or terminated pursuant to Special Condition P, *Reopening of Permit For Modification*, if there is a substantial change in the volume or character of pollutants in the collection/treatment system. Also see supplemental report form, *DEP-49-CSO Form For Use With Dedicated CSO Primary Clarifier*, Attachment A of this permit.

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 *[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[(12)] *[01/DD]*	Calculate *[CA]*
Overflow Use, Occurrences[(13)] *[74062]*	---	---	Report, # of Days *[93]*	---	1/Discharge Day[(12)] *[01/DD]*	Record Total *[RT]*
BOD_5 *[00310]*	---	---	---	Report mg/L *[19]*	1/Discharge Day[(12)] *[01/DD]*	24-Hour Composite *[24]*
BOD_5 Percent Removal[(14)] *[81010]*	---	---	Report % *[23]*	---	1/Discharge Day[(12)] *[01/DD]*	Calculate *[CA]*
TSS *[00530]*	---	---	---	Report mg/L *[19]*	1/Discharge Day[(12)] *[01/DD]*	24-Hour Composite *[24]*
TSS Percent Removal[(14)] *[81011]*	---	---	Report % *[23]*	---	1/Discharge Day[(12)] *[01/DD]*	Calculate *[CA]*
***E. coli* Bacteria**[(4), (15)] *[31633]*	---	---	---	427/100 ml *[13]*	1/Discharge Day[(12)] *[01/DD]*	Grab *[GR]*
Total Residual Chlorine[(15)] *[50060]*	---	---	---	1.0 mg/L *[19]*	1/Discharge Day[(12)] *[01/DD]*	Grab *[GR]*

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

FOOTNOTES: See Pages 16 through 20 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. The permittee is authorized to discharge **secondary treated sanitary waste waters** from **OUTFALL #001** to the **Aroostook River**. Such discharges shall be limited and monitored by the permittee as specified below[1]:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	2.31 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	575 lbs./day *[26]*	863 lbs./day *[26]*	959 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 Percent Removal[3] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	575 lbs./day *[26]*	863 lbs./day *[26]*	959 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS Percent Removal[3] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Day *[01/01]*	Grab *[GR]*
***E. coli* Bacteria**[4] *[31633]*	---	---	---	142/100 ml[5] *[13]*	---	949/100 ml *[13]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine[6] *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.3 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	1/Day *[01/01]*	Grab *[GR]*

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

FOOTNOTES: See Pages 16 through 20 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

4. The permittee is authorized to discharge **secondary treated sanitary waste waters** from **OUTFALL #001** to the **Aroostook River**. Such discharges shall be limited and monitored by the permittee as specified below[1] (cont'd):

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Copper (Total) *[01042]*	1.5 lbs./day *[26]*	---	1.6 lbs./day *[26]*	121 µg/L *[28]*	---	126 µg/L *[28]*	1/Quarter *[01/90]*	24-Hour Composite *[24]*
Orthophosphate[7] (June 1 – Sept. 30) *[04175]*	Report lbs./day *[26]*	Report lbs./day *[26]*	Report lbs./day *[26]*	Report mg/L *[19]*	Report lbs./day *[26]*	Report mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
Phosphorus (Total)[16] (June 1 – Sept. 30) *[00665]*	19.2 lbs./day *[26]*	Report lbs./day *[26]*	Report lbs./day *[26]*	1.0 mg/L *[19]*	Report lbs./day *[26]*	Report mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*

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

FOOTNOTES: See Pages 16 through 20 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

5. **For Discharge to the Aroostook River (Level II).** Whole effluent toxicity, analytical chemistry and priority pollutant testing requirements.

SURVEILLANCE LEVEL - Beginning upon commencement of the discharge to the Aroostook River and lasting until 12 months prior to permit expiration.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(8)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]f*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/2 Years *[01/2Y]*	Composite *[24]*
Analytical Chemistry (9) *[54177]*	---	---	---	Report ug/L *[28]*	2/Year *[02/YR]*	Composite/Grab *[24]*

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

	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity(8)						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]f*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Analytical Chemistry (9) *[54177]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutant (10) *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

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

FOOTNOTES: See Pages 16 through 20 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES:

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

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

2. **Beginning November 1, 2009 and lasting through permit expiration,** there shall be no discharge of primary or secondary treated wastewaters to Presque Isle Stream, except when the actual hydraulic capacity of the Aroostook River outfall structure is exceeded. The permittee's engineer has determined, and the Department concurs, that the hydraulic capacity of the 36-inch diameter Aroostook River outfall is exceeded at the Aroostook River's 100-year flood elevation of 427.00. Discharges to the Presque Isle Stream under hydraulically limited conditions are subject to the effluent limitations and monitoring requirements specified in Special Condition A Table 1 of this permit, and all other applicable conditions and terms of this permit.

3. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of BOD_5 and TSS for all flows receiving secondary treatment. The percent removal shall be calculated based on influent and effluent concentration values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report "*NODI-9*" on the monthly Discharge Monitoring Report (DMR).

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

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

SPECIAL CONDITIONS

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

FOOTNOTES:

6. **TRC Monitoring** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The USEPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (most current edition), Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes. The limit at which compliance/non-compliance determinations will be based is the ML of 0.05 mg/L, or other ML as specified by the Department. All analytical test results shall be reported to the Department including results which are detected below the ML of 0.05 mg/L, or other ML as specified by the Department. It is noted that the Department will code the DMR with a daily maximum concentration value of 0.05 mg/L such that detectable values between 0.025 mg/L and 0.05 mg/L will not be construed to be excursions of the water quality-based limits.

7. **Orthophosphate** – Orthophosphate monitoring shall be performed in accordance with Attachment B of this permit, *Protocol For Orthophosphate Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits – Revised June 2007,* unless otherwise specified by the Department.

8. **Whole Effluent Toxicity (WET)** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 50.0% and 44.5 %, respectively, for the discharge to Presque Isle Stream or critical acute and chronic thresholds of 2.8 % and 2.3 %, respectively, for the discharge to the Aroostook River), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 2.0:1 and 2.2:1, respectively, for the discharge to Presque Isle Stream and applicable acute and chronic dilution factors of 36:1 and 45:1, respectively, for the discharge to the Aroostook River.

   a. **Initial screening level Testing** – Beginning upon issuance of the permit and lasting through the first 12 months of the permit, the permittee shall conduct screening level WET testing at a minimum frequency of once per calendar quarter for the discharge to Presque Isle Stream (Level I). Acute and chronic tests shall be conducted on the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*).

   b. **Surveillance level testing** – Beginning 12 months following issuance of this permit and lasting through 12 months prior to permit expiration, the permittee shall initiate surveillance level WET testing at a minimum frequency of once every two years (reduced testing) for the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*). Tests shall be conducted in a different calendar quarter each year.

SPECIAL CONDITIONS

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

FOOTNOTES:

c. **Screening level testing** – Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level WET testing at a minimum frequency of once per calendar quarter for the discharge to Presque Isle Stream (Level I) and at a frequency of twice per year for the discharge to the Aroostook River (Level II) for both species. For Level II testing, there shall be at least six (6) months between testing events. Acute and chronic tests 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 of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 50 % and 44.5 %, respectively, for the discharge to Presque Isle Stream or 2.8 % and 2.3 %, respectively, for the discharge to the Aroostook River.

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

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

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

Results of WET tests shall be reported on the "Whole Effluent Toxicity Report – Fresh Waters" form included as Attachment D of this permit each time a WET test is performed. **The permittee is required to analyze the effluent for the analytical chemistry parameters specified on the "WET and Chemical Specific Data Report Form" form included as Attachment E of this permit each time a WET test is performed.**

SPECIAL CONDITIONS

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

FOOTNOTES:

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

    a. **Initial screening level testing** – Beginning upon issuance of the permit and lasting through the first 12 months of the permit, the permittee shall conduct analytical chemistry testing at a screening level frequency of once per calendar quarter for four consecutive calendar quarters.

    b. **Surveillance level testing** – Beginning 12 months following issuance of this permit and lasting until 12 months prior to permit expiration, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per calendar quarter for the discharge to Presque Isle Stream (Level I) and at a frequency of twice per year for the discharge to the Aroostook River (Level II). For Level II testing, there shall be at least six (6) months between testing events.

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

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

    a. **Initial screening level testing** – Beginning upon issuance of this permit and lasting through 12 months following issuance, the permittee shall conduct priority pollutant testing at a screening level frequency of once per year.

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

    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 *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005). For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

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

11. **Surface Loading Rate** – The surface loading rate is the average hourly rate per overflow occurrence in a discharge day. The permittee must provide this information to establish data on the effectiveness of peak flows receiving primary treatment.

12. **Discharge Day** – For the purposes of this permitting action, a discharge day is defined as a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

13. **Overflow Occurrences** – 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.

    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 BOD_5 and total suspended solids shall be collected per discharge day and shall be flow proportioned from each intermittent overflow during that 24-hour period. Only one grab sample for *E. coli* bacteria and total residual chlorine is required to be collected per discharge day.

    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 BOD_5 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.

SPECIAL CONDITIONS

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

FOOTNOTES:

14. **BOD & TSS Percent Removal** – The permittee shall analyze both the influent of the treatment plant and effluent of the primary swirl concentrator for BOD_5 and TSS during the discharge of treated excess combined sewer waste waters via Outfall #002, and report the percent removal on the monthly Discharge Monitoring Report (DMR). As an attachment to the DMR, the permittee shall report the individual BOD_5 and TSS test results used to calculate the percent removal rates reported. For the purpose of calculating BOD_5 and TSS percent removals, the influent sample shall only be collected during overflow occurrences.

15. **Grab samples** – Grab samples for *E. coli* bacteria and total residual chlorine are not required to be collected when Outfall #002 is active for a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events over a course of a 24-hour period lasting less than 120 minutes and sampling is only required if said event(s) occur between the hours of 7:00 AM – 4:00 PM during the normal work week (Monday through Friday, holidays excluded).

16. **Total Phosphorus** – Total phosphorus monitoring shall be performed in accordance with Attachment C of this permit entitled, *Protocol For Total P Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits – Revised June* 2007, unless otherwise specified by the Department.

B. NARRATIVE EFFLUENT LIMITATIONS

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

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

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

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

SPECIAL CONDITIONS

C. DISINFECTION

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

D. TREATMENT PLANT OPERATOR

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

E. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001(secondary treated waste waters) and Outfall #002 (primary treated waste waters). Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), Bypasses, of this permit.

F. LIMITATIONS FOR INDUSTRIAL USERS

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

G. MONITORING AND REPORTING

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

Department of Environmental Protection
Northern Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
1235 Central Park Drive
Skyway Park
Presque Isle, Maine 04769

SPECIAL CONDITIONS

H. NOTIFICATION REQUIREMENTS

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

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

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

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

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

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

I. SWIRL SEPARATOR MONITORING AND REPORTING

The permittee shall complete and submit monthly reports entitled "Wet Weather Bypass Operations Report, DEP-49-CSO" (See Attachment A of this permit) for discharge events from the swirl separator to:

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

(in electronic version preferably) along with another copy to the Department's facility inspector as directed in Special Condition G of this permit.

SPECIAL CONDITIONS

J. PUMP STATION EMERGENCY 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 emergency bypass flows discharged.

Outfall Number	Outfall Location	Receiving Water and Class
Chapman Street Pump Station	Chapman Street	Presque Isle Stream, Class B

Discharges from the pump station shall be reported in accordance with Standard Condition B(5) (Bypass) of this permit.

K. WET WEATHER MANAGEMENT PLAN

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

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

L. OPERATIONS AND MAINTENANCE (O&M) PLAN

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

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

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

SPECIAL CONDITIONS

M. SURFACE WATERS TOXICS CONTROL PROGRAM STATEMENT FOR REDUCED TOXICS TESTING

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

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

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

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

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

N. SCHEDULE OF COMPLIANCE

On or before December 31, 2007, the permittee shall submit final design plans and specifications and a scope and schedule to the Department for review and approval for the construction of the approved alternative to eliminate the discharge to Presque Isle Stream ***[PCS Code 53799]***.

Beginning March 1, 2008 ***[PCS Code 00199]*** **and every three months thereafter,** (June 1, 2008 *[PCS Code 00299]*, September 1, 2008 *[PCS Code 00399]*, December 1, 2008 *[PCS Code 00499]*, March 1, 2009 *[PCS Code 00599]*, and June 1, 2009 *[PCS Code 00699]*), the permittee shall submit progress reports on the construction of the approved alternative to eliminate the discharge to Presque Isle Stream. Each progress report shall contain an updated schedule with milestones to complete the construction of the project.

On or before November 1, 2009, the permittee shall cease all discharges of primary and secondary treated waste waters to Presque Isle Stream, except when the hydraulic capacity of the Aroostook River outfall structure is exceeded.

SPECIAL CONDITIONS

O. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to receive and introduce into the treatment process or solids handling stream **a maximum of 18,000 gallons per day (to a monthly total of 60,000 gallons)** of septage, subject to the following terms and conditions:

1. This approval is limited to methods and plans described in the application and supporting documents. Any variations are subject to review and approval prior to implementation.

2. At no time shall addition of septage cause or contribute to effluent quality violations. If such conditions do exist, the introduction of septage into the treatment process or solids handling stream shall be suspended until effluent quality can be maintained.

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

4. Addition of septage into the treatment process or solids handling stream shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of septage into the treatment process or solids handling stream shall be reduced or terminated in order to eliminate the overload condition.

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

6. During wet weather events, septage may be received into the solids handling stream but shall not be added to the treatment process.

7. Except as noted in item #9 below, holding tank waste water shall not be recorded as septage and should be reported in the treatment facility's influent flow.

8. Any trucked-in waste that has the characteristics of septage, specifically with regard to biochemical oxygen demand (5,000 mg/L or greater) and total suspended solids (10,000 mg/L or greater) shall be considered as septage and is subject to the above mentioned 18,000-gallon per day limit.

9. If conditions change within the permittee's septage management program, the permittee shall provide the Department with an updated septage management plan that reflects such changes, pursuant to *Standards for the Addition of Septage to Waste Water Treatment Facilities*, 06-096 CMR 555 (last amended January 29, 1989).

SPECIAL CONDITIONS

P. REOPENING OF PERMIT FOR MODIFICATION

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

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Doc Num: DEPLW0463

WET WEATHER BYPASS OPERATIONS REPORT FOR _____ State License No. _____ MEPDES/NPDES Permit No. _____ SIGNED BY:_____ DATE:_____ DEP-49-CSO-Dedicated.xls (rev. 12/12/01)

DATE MONTH___ YEAR___	SECONDARY BYPASS FLOW DATA						Cl RESIDUALS				BACTERIA							BOD5					TSS					WEATHER				
	TREATED PRIMARY FLOW BYPASSING SECONDARY	SECONDARY BYPASS CLARIFIER SURFACE AREA	BYPASS DURATION	BYPASS CLARIFIER SURFACE LOADING RATE	SECONDARY FLOW TREATED	TRUE CSO BYPASS AROUND PRIMARY	MAX CHLORIDE 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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ATTACHMENT B

Protocol for Orthophosphate Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 300.0 (Rev. 2.1), 300.1 (Rev. 1.0), 365.1 (Rev. 2.0), 365.3; SM 4110 B, 4110 B-00, 4500-P E, 4500-P F; ASTM D515-88(A), D4327-97, 03; D6508 (Rev. 2); USGS I-4601-85; OMAAOAC 973.55, 973.56, 993.30

Sample Collection: The Maine DEP is requesting that orthophosphate analysis be conducted on composite effluent samples unless a facility's Permit specifically indicates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed. Commercially purchased, pre-cleaned sample containers and or syringe type filtering apparatus are acceptable. If bench top filtering apparatus is being used this should be cleaned, as described above, before each use.

Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). The sample must be filtered immediately (within 15 minutes) after collection using a pre-washed 0.45-um membrane filter. Be sure to follow one of the pre-washing procedures described in the approved methods unless your commercial lab is providing you with pre-washed filters and filtering apparatus. If the sample is being sent to a commercial laboratory or analysis cannot be performed within 2 hours after collection then the sample must be kept at 0-6 degrees C (without freezing). There is a 48-hour holding time for this sample although analysis should be done sooner, if possible.

Laboratory QA/QC: Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods. Additionally, laboratories providing filters or filter apparatus for sampling are required to submit blank data for each lot of filters/filtering apparatus to the facility.

Sampling QA/QC:
Filter Blank- if a facility is using a pre-cleaned filter and or filtering apparatus provided by a commercial laboratory then the commercial laboratory must run a filter/filtering apparatus blank on each lot. The results of that analysis must be provided to the facility.

If a facility is using their own filters and filtering apparatus then a filter blank must be included with every sample set that does not include a composite sampler (composite jug and sample line) blank.

Composite Sampler Blank- If a composite sample is being collected using an automatic composite sampler, then once per month run a blank on the composite sampler. A separate filter blank does not have to be done along with the composite sampler blank. When running a composite sampler blank, automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then filter and analyze for orthophosphate. Preserve these samples as described above.

ATTACHMENT C

Protocol for Total Phosphorus Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 365.1 (Rev. 2.0), 365.3, 365.4; SM 4500-P B.5, 4500-P E, 4500-P F; ASTM D515-88(A), D515-88(B); USGS I-4600-85, I-4610-91; OMAAOAC 973.55, 973.56

Sample Collection: The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. Commercially purchased, pre-cleaned sample containers are an acceptable alternative. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved using H_2SO_4 to obtain a sample pH of <2 su and refrigerated at 0-6 degrees C (without freezing). The holding time for a preserved sample is 28 days.

Note: Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

Laboratory QA/QC: Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods.

Sampling QA/QC: If a composite sample is being collected using an automated sampler, then once per month run a blank on the composite sampler. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

ATTACHMENT D

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 E

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

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

Licensed Flow (MGD) | **Flow for Day (MGD)**[1] | **Flow Avg. for Month (MGD)**[2]
Acute dilution factor
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	Acute	Chronic	Health
	TOTAL RESIDUAL CHLORINE (mg/L) (9)	0.05				NA					
	AMMONIA	NA				(8)					
M	ALUMINUM	NA				(8)					
M	ARSENIC	5				(8)					
M	CADMIUM	1				(8)					
M	CHROMIUM	10				(8)					
M	COPPER	3				(8)					
M	CYANIDE	5				(8)					
M	LEAD	3				(8)					
M	NICKEL	5				(8)					
M	SILVER	1				(8)					
M	ZINC	5				(8)					

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

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

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

Notes:

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

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

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

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

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

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

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

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

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

Comments:

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **JUNE 18, 2007**

PERMIT NUMBER: **#ME0100561**
LICENSE NUMBER: **#W002713-5L-D-R**

NAME AND ADDRESS OF APPLICANT:

PRESQUE ISLE SEWER DISTRICT
P. O. BOX 470
PRESQUE ISLE, MAINE 04769

COUNTY: **AROOSTOOK**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

126 DYER STREET
PRESQUE ISLE, MAINE 04769

RECEIVING WATER/CLASSIFICATION: **PRESQUE ISLE STREAM/CLASS B**
AROOSTOOK RIVER/CLASS C
(FOLLOWING RELOCATION OF OUTFALL)

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **STEVE FREEMAN**
(207) 762-5061

1. APPLICATION SUMMARY

The Presque Isle Sewer District (PISD) has applied to the Department of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) renewal/modification #W002713-5L-C-M/ Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100561, which was issued on September 30, 2002 and is scheduled to expire on September 30, 2007. The 9/30/2002 MEPDES permit authorized the monthly average discharge of up to 2.31 million gallons per day (MGD) of secondary treated sanitary waste waters (Outfall #001) and an unspecified quantity of primary treated sanitary waste waters (Outfall #002) from a municipal waste water treatment facility to Presque Isle Stream, Class B, in Presque Isle, Maine. The 9/30/2002 MEPDES permit established a schedule of compliance to eliminate the discharge of wastewater from this facility between June 1 and September 30 of each year beginning calendar year 2007 due to non-attainment of Class B water quality standards for Presque Isle Stream.

1. APPLICATION SUMMARY (cont'd)

On May 14, 2003, the Department administratively modified the 9/30/2002 MEPDES permit by eliminating the limitations and monitoring requirements for whole effluent toxicity (WET) testing, chemical-specific testing, bis (2-ethylhexyl) phthalate, total silver, and total zinc.

On October 29, 2003, the Department administratively modified the 9/30/2002 MEPDES permit by extending the submission deadline established in Special Condition K from April 17, 2004 to December 31, 2004.

On January 20, 2004, the Department administratively modified the 9/30/2002 MEPDES permit by eliminating the limitations and monitoring requirements for G-BHC.

On April 10, 2006, the Department administratively modified the 9/30/2002 MEPDES permit to incorporate testing requirements of *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective October 9, 2005).

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 9/30/2002 permitting action and 5/14/2003, 10/29/2003, 1/20/2004, and 4/10/2006 administrative modifications in that it is:**

Presque Isle Stream – Secondary Treated Waste Waters (Outfall #001)

1. Carrying forward the monthly average discharge flow limit of 2.31 million gallons per day (MGD) and the daily maximum discharge flow reporting requirement;

2. Carrying forward seasonal, water quality-based monthly average, weekly average and daily maximum mass limits and the daily maximum concentration limit during the summer season (July 1-September 30) and technology-based concentration and mass limits during the non-summer season (October 1-June 30) of each year, and a 30-day average minimum percent removal requirement of 85% for biochemical oxygen demand (BOD_5);

3. Carrying forward technology-based monthly average, weekly average and daily maximum concentration and mass limits for total suspended solids (TSS);

4. Carrying forward a technology-based daily maximum concentration limit for settleable solids;

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

6. Carrying forward the water quality-based, daily maximum concentration limit for total residual chlorine (TRC);

7. Carrying forward the technology-based pH range limitation;

2. PERMIT SUMMARY (cont'd)

8. Carrying forward seasonal, water quality-based concentration and mass limits for total ammonia;

9. Carrying forward seasonal, weekly average water quality-based concentration and mass limits for orthophosphate (ortho-P);

Presque Isle Stream – CSO-Related Bypasses of Secondary Treatment(Outfall #002) (For the purposes of this permitting action, this term refers to structures and or processes at the waster water treatment facility that provide equivalent to primary treatment and disinfection of waste waters that bypass the biological treatment portion of the facility in an effort to mitigate the discharge of untreated combined sanitary waste waters and storm water).

10. Carrying forward the monthly average and daily maximum discharge flow reporting requirements;

11. Carrying forward the daily maximum concentration and 30-day percent removal reporting requirements for BOD_5 and TSS;

12. Carrying forward the daily maximum *E. coli* bacteria concentration limit for Class B waters;

13. Carrying forward the daily maximum reporting requirement for surface loading rate;

14. Carrying forward the daily maximum concentration limit for TRC; and

15. Carrying forward the monthly overflow occurrence reporting requirement.

This permitting action is different from the 9/30/2002 permitting action and 5/14/2003, 10/29/2003, 1/20/2004, and 4/10/2006 administrative modifications in that it is:

Presque Isle Stream – Secondary Treated Waste Waters (Outfall #001)

1. Establishing whole effluent toxicity (WET), priority pollutant, and analytical chemistry testing for a Level I discharger, including reduced surveillance level WET testing;

2. Revising the monthly average and daily maximum water quality-based concentration and mass limits for total copper;

3. Formally eliminating the limitations and monitoring requirements for Bis (2-Ethylhexl) Phthalate, G-BHC, total silver, and total zinc;

4. Revising the effective period for bacteria limits from year-round to seasonal between May 15th through September 30th of each year

2. PERMIT SUMMARY (cont'd)

Presque Isle Stream – CSO-Related Bypasses of Secondary Treatment (Outfall #002)

5. Eliminating the pH range limitation;

Aroostook River – Secondary Treated Waste Waters (Outfall #001)

6. Establishing monthly average, weekly average, and daily maximum technology-based concentration and mass limits, and a 30-day average minimum percent removal requirement of 85% for BOD_5 and TSS;

7. Establishing a technology-based daily maximum concentration limit for settleable solids;

8. Establishing monthly average and daily maximum *Escherichia coli* bacteria concentration limits for Class C waters;

9. Establishing technology-based monthly average and daily maximum concentration limits for TRC;

10. Establishing a technology-based pH range limitation;

11. Establishing WET, priority pollutant and analytical chemistry testing for a Level II discharger, including reduced surveillance level WET testing;

12. Establishing seasonal, monthly average water quality-based concentration and mass limits and weekly average and daily maximum reporting requirements for total-P;

13. Establishing seasonal, monthly average, weekly average, and daily maximum concentration and mass reporting requirements for orthophosphate;

14. Establishing monthly average and daily maximum water quality-based concentration and mass limits for total copper;

Aroostook River – CSO-Related Bypasses of Secondary Treatment (Outfall #002)

15. Establishing monthly average and daily maximum discharge flow reporting requirements;

16. Establishing daily maximum concentration and 30-day percent removal reporting requirements for BOD_5 and TSS;

17. Establishing a daily maximum *E. coli* bacteria concentration limit for Class C waters;

18. Establishing a daily maximum reporting requirement for surface loading rate;

19. Establishing a daily maximum concentration limit for TRC; and

20. Establishing a overflow occurrence reporting requirement.

2. PERMIT SUMMARY (cont'd)

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

September 21, 1995 – The U.S. Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0100561 for the discharge from the PISD's waste water treatment facility.

May 23, 2000 – Pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420 and *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W002713-46-A-R by establishing interim monthly average and daily maximum effluent concentration limits of 16.6 parts per trillion (ppt) and 24.9 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A. § 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

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

September 30, 2002 – The Department issued WDL #W002713-5L-C-M / MEPDES permit #ME0100561 to PISD for a five-year term. The 9/30/2002 permit superseded WDL #W002713-5L-B-R issued on December 28, 2000, and WDL #W002713-46-A-R issued on April 15, 1988 (earliest Order on file with the Department).

May 14, 2003 – The Department administratively modified the 9/30/2002 MEPDES permit by eliminating the limitations and monitoring requirements for whole effluent toxicity (WET) testing, chemical-specific testing, bis (2-ethylhexyl) phthalate, total silver, and total zinc.

October 29, 2003 – The Department administratively modified the 9/30/2002 MEPDES permit by extending the submission deadline established in Special Condition K from April 17, 2004 to December 31, 2004.

January 20, 2004 – The Department administratively modified the 9/30/2002 MEPDES permit by eliminating the limitations and monitoring requirements for G-BHC.

April 10, 2006 – The Department administratively modified the 9/30/2002 MEPDES permit to incorporate testing requirements of 06-096 CMR 530.

2. PERMIT SUMMARY (cont'd)

December 18, 2006 – PISD submitted a timely and complete General Application to the Department for renewal of the 9/30/02 MEPDES permit. The application was accepted for processing on December 22, 2006 and was assigned WDL #W002713-5L-D-R / MEPDES #ME0100561.

c. Source Description: The wastewater treatment facility serves a population of approximately 5,740 people in the City of Presque Isle. The treatment facility receives sanitary waste water generated by residential and commercial entities within the PISD's boundaries. The facility does not receive more than 10% of its flow or pollutant loading from industrial users of the system.

The sanitary sewer collection system consists of approximately 50 miles of pipe with four pump stations. The collection system is a separated system with no combined sewer overflow (CSO) points. The PISD has requested authorization to add a daily maximum of up to 18,000 gallons per day of septage (up to a monthly total of 60,000 gallons) into the facility's solids handling system. Special Condition O of this permit authorizes PISD to receive and introduce into its solids handling system the requested volume of septage wastes from local haulers. Septage will be transferred by tank truck to a 8,600-gallon aerated receiving/holding tank and then to a 9,000-gallon lime-stabilization tank. After the septage is lime-stabilized, it may be stored temporarily at the treatment facility with the treatment facility sludge, or it may be hauled directly to a sludge storage lagoon or a sludge utilization site. The permittee included with its 12/22/2006 General Application a complete DEP Form DEPLW0507-A2004, *Maine Waste Discharge License Application for Disposal of Septic Tank and Holding Tank Wastes in Wastewater Treatment Facilities.*

See Attachment A of this Fact Sheet for a map showing the location of the treatment facility, Presque Isle Stream outfall location and proposed Aroostook River outfall location.

d. Waste Water Treatment: The PISD provides a secondary level of treatment via an activated sludge system. The treatment process includes an aerated grit chamber, two bar screens, an oxidation ditch, two clarifiers with covers, and a chlorine contact chamber. An equipment upgrade project was completed in calendar year 2005. The dissolved air flotation (DAF) sludge thickener was replaced by a rotary drum thickener. The liquid sodium hypochlorite disinfection system was replaced by a bulk NaOCl disinfection system, and the gas sulfur dioxide dechlorination system was replaced by a liquid sodium bisulfite system. Final effluent is conveyed to the Presque Isle Stream via a 42-inch diameter outfall pipe. Upon relocation of the outfall pipe final effluent will be conveyed for discharge to the Aroostook River.

The PISD's treatment facility receives excessive inflow and infiltration into the sewer collection system. When flow to the treatment facility exceeds 5.2 MGD, a hydro-brake diverts the excess flow to a swirl separator and then to a point in the plant's outfall pipe after the chlorine contact chamber. The concentrated underflow from the swirl separator (0.2 MGD) is conveyed back to the headworks of the treatment facility for secondary treatment. The primary treated effluent is disinfected by a high rate disinfection system designed to meet Department best practicable

2. PERMIT SUMMARY (cont'd)

treatment (BPT) daily maximum *E. coli* bacteria limits protective of both Class B (Presque Isle Stream) and Class C (Aroostook River) waters.

See Attachment B of this Fact Sheet for a wastewater process flow schematic.

There is a pending project to relocate the outfall of the wastewater treatment facility from Presque Isle Stream to the Aroostook River. On March 30, 2007, the PISD's consulting engineer, Wright-Pierce, submitted to the Department a *"Preliminary Design Memorandum for the Presque Isle Sewer District Wastewater Treatment Facility Outfall Relocation Project"* The permittee submitted to the Department, *"Presque Isle Sewer District Contract Drawings for Wastewater Treatment Facility Outfall Pipe, March 2007, Preliminary Drawings for Permitting Purposes"* (attachment to March 20, 2007 letter from PISD to the Department). The 3/30/07 memorandum and March 2007 preliminary drawings specify that a 36-inch diameter outfall pipe is proposed to relocate the discharge from PISD to the Aroostook River just east of the U.S. Route 1 bridge crossing of the Aroostook River in Presque Isle. Upon completion of this project in 2009, all primary and secondary treated waste waters will be conveyed for discharge to the Aroostook River. This permit does, however, allow for the continued discharge to Presque Stream when the hydraulic capacity of the Aroostook River outfall is exceeded during 100-year flood conditions. A copy of *"Wastewater Treatment Facility Outfall Pipe"*, created by Wright-Pierce, is included as Attachment C of this fact sheet and show the location of the proposed outfall structure.

3. CONDITIONS OF PERMIT

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

4. RECEIVING WATER STANDARDS

Classification of major river basins, 38 M.R.S.A. § 467(15)(C)(2)(a) classifies Presque Isle Stream at the point of discharge as Class B waters. *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(3) describes the standards for Class B waters.

38 M.R.S.A., § 467(15)(C)(1)(d) classifies the Aroostook River, main stem, from its confluence with Presque Isle Stream to a point located 3.0 miles upstream of the intake of the Caribou water supply, including all impoundments, which includes the point of discharge for the proposed outfall relocation, as Class C waters. 38 M.R.S.A. § 465(4) describes the standards for Class C waters.

5. RECEIVING WATER QUALITY CONDITIONS

Current Water Quality Assessment/Modeling for the Presque Isle Stream

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 1.0-mile reach of the Presque Isle Stream at Presque Isle (Hydrologic Unit Code #ME0101000412 / Waterbody ID #140R03) as, *"Category 4-A: Rivers and Streams with Impaired Use, TMDL Completed."*

The Department conducted an intense stream monitoring study in the summer of 1995. In April of 1997, the Department issued a report entitled, *Presque Isle Stream Waste Load Allocation, Supplemental Report, April 1997* that contains the following statements in the Executive Summary section of the report:

> *The actual data taken that summer indicated non-compliance of minimum Class B dissolved oxygen standards occurred routinely in most of the weeks sampled, and non-compliance of the next lowest classification, C, occurred in four of the twelve weeks sampled. The dissolved oxygen readings below the treatment plant when compared to background readings were often 1 to 2 ppm lower, clearly documenting actual point source impact. All stations sampled demonstrated a significant diurnal range in dissolved oxygen when comparing the AM and PM readings. This points to benthic algae as the most significant impact and a need for nutrient controls. The larger diurnal D.O. swings in stream locations below the treatment plant when compared to background stations demonstrated the impact of point source nutrients.*
>
> *The severity of the problem is demonstrated by the fact that the PISD was at only 8% of its licensed mass BOD discharge during the intensive surveys, and Presque Isle Stream (Class B) still did not meet minimum dissolved oxygen criteria of the next lowest classification, C. The marginal compliance background stations with minimum Class B dissolved oxygen standards together with the low dilution of receiving water to effluent (3.3:1) also illustrates the severity of the problem. The low dilution also results in necessary ammonia reductions to met chronic toxicity criteria.*

During the summer of 2001, the Department conducted additional ambient water quality sampling on Presque Isle Stream as part of a stakeholder assisted study of the Aroostook River and its tributaries. In addition, the PISD conducted ambient sampling during the summer of 2001 as required by Special Condition B of WDL #W002713-5L-B-R issued by the Department on December 28, 2000. Both sources of data indicate that the Class B minimum dissolved oxygen criterion of 7 ppm in Presque Isle Stream is still not maintained, despite the fact that the PISD was well under the limits for BOD, ammonia and total phosphorus specified in the TMDL. The data indicates that the July 2000 TMDL allocation for total phosphorus needs to be much lower. The data also continues to support the finding

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

of the TMDL that background water quality above the PSID discharge is already degraded to the point that Class B dissolved oxygen criteria are not always attained. The Department has made a best professional judgment that based on the ambient water quality sampling conducted during the summer of 2001, Presque Isle Stream would marginally meet dissolved oxygen criteria or possibly not meet criteria below the PISD outfall even if the plant discharge is removed.

The Department has made a best professional judgment that the current discharge from the PISD waste water treatment facility (well below the permitted discharge) is causing and or contributing to failure of Presque Isle Stream to meet the Class B dissolved oxygen criterion of 7 ppm during the summer months of June 1 through September 30. The Department has determined through modeling that the PISD discharge is contributing to the dissolved oxygen depletion by as much as 1 to 2 ppm. The Department anticipates that without the removal of the PISD discharge in the summer, attainment of Class B minimum DO criteria is not possible. Special Condition N, *Schedule of Compliance*, of this permit establishes a schedule with a deadline of November 1, 2009, to eliminate the discharge of waste waters to Presque Isle Stream during the critical summer months.

Current Water Quality Assessment/Modeling

The Aroostook River Basin is the largest sub basin of the St. John River lying almost entirely within the State of Maine. The river segment of interest on the Aroostook begins in Ashland and flows to Washburn, Presque Isle, Caribou, Fort Fairfield and eventually the international border. In this segment of interest, there are seven point source discharges licensed to discharge organic waste loads to the Aroostook River: Ashland Water and Sewer District (AWSD), Town of Washburn, Presque Isle Sewer District (PISD), Caribou Utilities District (CUD), Loring Development Authority (LDA), Fort Fairfield Utilities District (FFUD), and McCain Foods, USA, Inc. (McCain). Additionally, two dams significantly impound water in this river segment. The Caribou dam is located approximately 15 river miles upstream of the international border and impounds water 4.5 river miles upstream of the international border. The Tinker dam is located in Canada, but impounds water 5 river miles upstream of the international border.

A study of the Aroostook River from Ashland to the United States-Canadian border (58 miles) began in the summer of 2001 involving the Department and a number of stakeholders, including McCain. Two data sets were collected in August of 2001 to calibrate and verify a water quality model, and in September 2004, the Department summarized the findings in a report entitled, *Aroostook River Modeling Report, Final Sept 2004* ("Modeling Report").

It is appropriate to note at this point that the Department has not established numeric nutrient criteria at this time, specifically for phosphorous. The Department is in the process of developing nutrient criteria (as required by the USEPA), methodologies for quantitatively evaluating benthic-attached algae, and developing water classification specific (Class A, Class B, and Class C) chlorophyll-a standards for Maine waters. These criteria and standards are anticipated to be finalized at the time the PISD applies for renewal of this permit in 2012. At the time that the Department's Division of Environmental Assessment (DEA) evaluated the 2001 Aroostook River data, calibrated and verified the Aroostook River water quality model, and published the 2004 Modeling Report, certain assumptions were incorporated into the model to predict water quality conditions, such as utilizing a range of 8 to 12 ug/L

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

for chlorophyll-a as the likely threshold level for algae blooms. Additionally, "there is currently no precedent on threshold levels of benthic algae where designated uses become inhibited, but it is likely that this could also be an issue on the Aroostook River after the nutrient criteria are developed...." (Modeling Report, p.51) In the Executive Summary of the Modeling Report (see #11 and #12), the Department concluded that "An additional data set should be taken at reduced point source phosphorous inputs" and "Total phosphorous license allocations for point sources should be re-evaluated by the model after collection of the additional data set recommended and nutrient criteria development are final." The Department stated in its response to comment #11 (see page 4 of the Modeling Report, *Response to Comments*), that "it [i]s important to make all stakeholders aware of the nutrient issue on the Aroostook River and give some idea for ballpark estimates of phosphorous allocations, given the current science and knowledge of this issue."

With these recommendations in mind, the Department is providing in this fact sheet a summary of significant findings and predictions of the 2001 data and 2004 Modeling Report.

The Department concluded in the Modeling Report that both 2001 data sets experienced chlorophyll-a levels exceeding the upper range of the 8 to 12 µg/L threshold from above the Caribou dam to the international border, and that algae blooms are projected for 13 to 23 miles of the river from Maysville to the international border, with chlorophyll-a levels as high as 17 µg/L. The model predicts that both minimum dissolved oxygen criteria and monthly average dissolved oxygen criteria (6.5 parts per million) should be met everywhere on the Aroostook River. Additionally, the Modeling Report states that "Although not quantitatively sampled, large levels of benthic algae were observed in the Aroostook River during the 2001 surveys. The benthic algae were evident from the confluence of the Presque Isle Stream to the head of the Caribou dam impoundment, but most abundant from below the Caribou dam to the head of the Tinker Dam impoundment in Fort Fairfield." The Modeling Report states that dissolved oxygen data collected in 2001 are characterized by large diurnal fluctuations due to the significant growths of both bottom-attached (benthic) and floating algae (phytoplankton)." There is a trend of less fluctuation (generally around 1-2 ppm) above the major point source discharges as compared to average diurnal fluctuations below the major point source discharges (ranging from 5 to 9 ppm in shallower flowing sections and 1 to 4 ppm in impoundments).

Phosphorous is ordinarily the limiting nutrient in fresh water systems, which must be reduced in order to alleviate eutrophication. Component analysis was undertaken by comparing input loads of point and non-point sources of ultimate BOD and total phosphorous. This analysis demonstrates that at 7Q10 river conditions, McCain and PISD are the major sources of phosphorous in the river, assuming that both are discharging at licensed flows with contributions of 43% and 17% of the total river phosphorous load, respectively. See Figure 16 of the Modeling Report. Assuming that all dischargers are discharging their licensed BOD_5 loads at 7Q10 flow, McCain, LDA, CUD, and PISD are all significant inputs with contributions of 29%, 15%, 15%, and 14%, respectively, of the total ultimate BOD load. For both phosphorous and BOD, base flow non-point source and background sources are not significant, accounting collectively for 4% and 13% of the total river load for phosphorous and BOD, respectively. See Figure 17 of the Modeling Report.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Different levels of point source reductions were investigated to estimate the amount needed to alleviate eutrophication on the Aroostook River, given the model assumptions described above. See Table 10 of the Modeling Report. Large reductions of point source phosphorous are recommended to reduce algae to a non-eutrophic state. Model prediction runs undertaken with reduced phosphorous inputs from McCain and PISD, which collectively have been identified as the two largest sources of phosphorous to the river, provide guidance as to the necessary reductions. The model runs suggest that a total phosphorous effluent mass limit for the McCain and PISD facilities based upon permitted flow and a total phosphorous concentration of 0.5 ppm would result in a maximum chlorophyll-a concentration of 9 ppb, which approaches the lower end of the 8-12 ppb range at which algae blooms are expected in the river.

The Modeling Report states that phosphorous limits "should proceed only after the collection of an additional data set under reduced phosphorous inputs and the establishment of nutrient criteria." And, "Given the high levels of benthic and floating algae, and the large swings in DO and pH on the Aroostook [River], it is obvious that nutrients are an issue here and some reductions of phosphorous are likely in the near future. It is hoped that McCain's and other stakeholders take this issue seriously and at least consider what the targeted P-reductions investigated in the report will mean for them. It is also hoped that some of the stakeholders will agree to voluntary P-reduction in a future summer under which more data can be collected." (See response to comment #11 of the Modeling Report, *Response to Comments*.) In this permitting action, the Department is emphasizing the importance of investigating phosphorous reduction at the major point source dischargers and additional ambient data collection to support future arguments on the establishment of limitations and monitoring requirements following completion of the nutrient criteria. Additionally, concerns regarding the analytical model utilized by the Department for the Modeling Report (QUAL2MDEP version of QUAL2EU) should be discussed with the Department's Division of Environmental Assessment during the early part of the effective term of this permit to ensure any changes in model calibration/verification, model runs or data collection can be completed prior to application for renewal of this permit.

The previous permitting action established seasonal water quality-based weekly average concentration and mass limits of 0.2 mg/L and 3.3 lbs./day, respectively, for total-P for the Presque Isle Stream discharge. Based on identification through the *Aroostook River Modeling Report, Final Sept 2004* that the PISD is a significant source of total phosphorous loading to the Aroostook River, this permitting action is establishing water quality-based monthly average mass and concentration limits for total phosphorous consistent with the recommendations of the Modeling Report, establishing daily maximum total phosphorous mass and concentration reporting requirements, and establishing monthly average and daily maximum mass and concentration reporting requirements for orthophosphate as discussed in Section 6 j. of this Fact Sheet, *Effluent Limitations and Monitoring Requirements*. Upon development of final nutrient criteria for Maine waters, the Department may re-evaluate this water quality-based limit and determine if adjustments are necessary and appropriate.

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

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report lists all of Maine's fresh waters as, *"Category 4-B-3: Waters Impaired by Atmospheric Deposition of Mercury. Regional or National TMDL may be Required."* Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, *"the impairment is presumed to be from atmospheric contamination and deposition. The advisory is based on probability data that a stream, river, or lake may contain some fish that exceed the advisory action level. Any freshwater may contain both contaminated and uncontaminated fish depending on size, age and species occurrence in that water."* Pursuant to Maine law, 38 M.R.S.A. §420 subsection 1-B(B), *"a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11."* The Department has established interim mercury limits for this facility.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average flow limitation of 2.31 MGD based on the design capacity of the facility, and a daily maximum discharge flow reporting requirement. A summary of the discharge flow (secondary treated wastewater)data as reported on the Discharge Monitoring Reports (DMRs) submitted to the Department for the period December 2002 – November 2006 is as follows:

Discharge Flow	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	0.789 MGD	4.234 MGD	1.874 MGD	47
Daily Maximum	0.921 MGD	5.649 MGD	3.538 MGD	47

b. Dilution Factors: Dilution factors associated with the permitted discharge flow of 2.31 MGD to Presque Isle Stream were derived in accordance with 06-096 CMR 530(4)(A) and were calculated as follows.

Acute: 1Q10 = 7.1 cfs $\Rightarrow \frac{(7.1 \text{ cfs})(0.6464) + (2.31 \text{ MGD})}{(2.31 \text{ MGD})} = 2.0{:}1$

Chronic: 7Q10 = 8.3 cfs $\Rightarrow \frac{(8.3 \text{ cfs})(0.6464) + (2.31 \text{ MGD})}{(2.31 \text{ MGD})} = 2.3{:}1$

Harmonic Mean[1] = 24.9 cfs $\Rightarrow \frac{(24.9 \text{ cfs})(0.6464) + (2.31 \text{ MGD})}{(2.31 \text{ MGD})} = 7.0{:}1$

[1] Pursuant to 06-096 CMR 530(4)(a)(2)(c), the harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by a factor of three (3).

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

Dilution factors associated with the permitted discharge flow of 2.31 MGD to the Aroostook River were derived in accordance with 06-096 CMR 530(4)(A) and were calculated as follows.

Acute: 1Q10 = 126 cfs $\Rightarrow \frac{(126 \text{ cfs})(0.6464) + (2.31 \text{ MGD})}{(2.31 \text{ MGD})} = 36{:}1$

Chronic: 7Q10 = 156 cfs $\Rightarrow \frac{(156 \text{ cfs})(0.6464) + (2.31 \text{ MGD})}{(2.31 \text{ MGD})} = 45{:}1$

Harmonic Mean [1] = 460 cfs $\Rightarrow \frac{(460 \text{ cfs})(0.6464) + (2.31 \text{ MGD})}{(2.31 \text{ MGD})} = 130{:}1$

c. Biochemical Oxygen Demand (BOD_5): The following table summarizes the previous and current effluent limits for BOD_5:

BOD_5	Effective Period	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum
Previous Permit and This Permit for Presque Isle Stream	Jul 1-Sept 30	168 lbs./day	168 lbs./day	168 lbs./day	Report mg/L	Report mg/L	13 mg/L
	Oct 1-Jun 30	575 lbs./day	863 lbs./day	959 lbs./day	30 mg/L	45 mg/L	50 mg/L
This Permit for Aroostook River	Year-Round	575 lbs./day	863 lbs./day	959 lbs./day	30 mg/L	45 mg/L	50 mg/L

For the summer months (July 1 – September 30) monthly average, weekly average and daily maximum mass limits and the daily maximum concentration limitation established in the previous licensing action were based on the June 2000 TMDL for the Presque Isle Stream and are being carried forward in this permitting action.

The monthly average and daily maximum concentration limits for the discharge to Presque Isle Stream during the non-summer months (October 1 – June 30) and for the discharge to the Aroostook River are based on the secondary treatment requirements specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(3)(III) (effective January 12, 2001). The daily maximum concentration limit of 50 mg/L is based on best professional judgment (BPJ) of best practicable treatment (BPT) for secondary treated municipal wastewater. The technology-based monthly average, weekly average and daily maximum mass limits of 575 lbs./day, 863 lbs./day, and 959 lbs./day established in the previous permitting action for the discharge to Presque Isle Stream during the non-summer months are slightly more stringent than the product using the correct mathematical formula below and are being carried forward in this permitting action. This permitting action is establishing these same limits for the year-round discharge to the Aroostook River.

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

Mass Limit: (concentration limit, mg/L)(8.34 lbs./gallon)(monthly average flow limit, MGD)

This permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River a 30-day average percent removal of 85 percent for BOD_5 pursuant to Department regulation Chapter 525(3)(III)(a&b)(3).

This permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River a minimum monitoring frequency requirement of three times per week for BOD_5 based on Department guidance.

A summary of the effluent BOD_5 data as reported on the DMRs submitted to the Department for the period December 2002 – November 2006 is as follows:

BOD_5	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	26 lbs./day	777 lbs./day	167 lbs./day	47
	4 mg/L	13 mg/L	11 mg/L	46
Weekly Average	39 lbs./day	2,452 lbs./day	295 lbs./day	47
	4 mg/L	75 mg/L	14 mg/L	46
Daily Maximum	55 lbs./day	3,232 lbs./day	453 lbs./day	46
	6 mg/L	155 mg/L	19 mg/L	46

The previous permitting action established, and this permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River, a daily maximum concentration reporting requirement and a 30-day average percent removal reporting requirement for BOD_5 for primary treated waste waters discharged via the swirl separator (Outfall #002).

A review of the swirl separator effluent data as reported on the DMRs submitted to the Department for the period March 2003 – November 2006 (# DMRs=18) indicates the daily maximum BOD_5 concentration discharge has ranged from 27 mg/L to 112 mg/L with an arithmetic mean of 55 mg/L. The PISD reported two occurrences (June 2005 and June 2006) of swirl separator discharges during the summer season months of June-September.

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

d. Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River, monthly average and weekly average technology-based concentration limits of 30 mg/L and 45 mg/L, respectively, based on the secondary treatment requirements specified at 06-096 CMR 525(3)(III), and a daily maximum concentration limit of 50 mg/L, which is based on BPJ of BPT for secondary treated municipal wastewater. The technology-based monthly average, weekly average and daily maximum mass limits of 575 lbs./day, 863 lbs./day, and 959 lbs./day established in the previous permitting action for the discharge to Presque Isle Stream are slightly more stringent than the product using the correct mathematical formula and are being carried forward in this permitting action for the discharge to Presque Isle Stream and are being establishing for the discharge to the Aroostook River.

This permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River a 30-day average percent removal of 85 percent for TSS pursuant to Department regulation Chapter 525(3)(III)(a&b)(3).

This permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River a minimum monitoring frequency requirement of three times per week for TSS based on Department guidance.

A summary of review of the effluent TSS data as reported on the DMRs submitted to the Department for the period December 2002 – November 2006 is as follows:

TSS	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	30 lbs./day	700 lbs./day	148 lbs./day	47
	4 mg/L	31 mg/L	9 mg/L	47
Weekly Average	56 lbs./day	1,310 lbs./day	249 lbs./day	47
	5 mg/L	61 mg/L	13 mg/L	47
Daily Maximum	74 lbs./day	2,836 lbs./day	554 lbs./day	47
	6 mg/L	136 mg/L	23 mg/L	47

The previous permitting action established, and this permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River, a daily maximum concentration reporting requirement and a 30-day average percent removal reporting requirement for TSS for primary treated waste waters discharged via the swirl separator (Outfall #002).

A review of the swirl separator effluent data as reported on the DMRs submitted to the Department for the period March 2003 – November 2006 (# DMRs=18) indicates the daily maximum TSS concentration discharge has ranged from 31 mg/L to 297 mg/L with an arithmetic mean of 95 mg/L.

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

e. Settleable Solids – The previous permitting established, and this permitting action carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River, a daily maximum concentration limit of 0.3 ml/L, which is considered a best practicable treatment limitation (BPT) for secondary treated wastewater.

A review of the settleable solids data as reported on the DMRs submitted to the Department for the period December 2002 – November 2006 (# DMRs = 47) indicates the daily maximum settleable solids concentration discharge has been 0.0 ml/L 100% of the time.

Taking into consideration the results of settleable solids monitoring, this permitting action is revising (from once per day) for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River a minimum monitoring frequency requirement to five times per week for settleable solids.

f. *Escherichia coli* bacteria: The previous permitting action established, and this permitting action carrying forward for the discharge to Presque Isle Stream monthly average and daily maximum concentration limits of 64 colonies/100 ml and 427 colonies/100 ml, respectively, based on the State's Water Classification Program criteria for Class B waters. The limits established in the previous permitting action were in effect on a year-round basis to protect human health as the Caribou Utilities District (CUD) utilized the Aroostook River downstream from the PISD discharge as source waters for its public drinking water supply. In a letter from the CUD to the Department, dated March 1, 2007, the CUD stated that they no longer operate the drinking water filter plant. The CUD has changes its source waters from the river to ground water wells. Therefore, year-round bacteria limitations are not necessary to protect human health and this permitting action is revising the effective period for bacteria limits to May 15th through September 30th of each year.

A summary of review of the effluent *E. coli* bacteria data as reported on the DMRs submitted to the Department for the period December 2002 – November 2006 is as follows:

E. coli Bacteria	Minimum	Maximum	Arithmetic Mean	# DMRs
Monthly Average	1 col/100 ml	15 col/100 ml	6 col/100 ml	47
Daily Maximum	12 col/100 ml	248 col/100 ml	77 col/100 ml	47

The previous permitting action established, and this permitting action carrying forward for the discharge to Presque Isle Stream from the swirl separator, a year-round daily maximum concentration limit of 427 colonies/100 ml based on the State's Water Classification Program criteria for Class B waters.

A review of the *E. coli* bacteria data as reported on the DMRs submitted to the Department for the period March 2003 – November 2006 (# DMRs = 18) for the swirl separator indicates the daily maximum *E. coli* bacteria concentration discharge has ranged from 1 colony/100 ml mg/L to >4,000 colonies/100 ml with an arithmetic mean of 1,060 colonies/100 ml.

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

This permitting action is establishing for the discharge to the Aroostook River year-round monthly average and daily maximum concentration limits of 142 colonies/100 ml and 949 colonies/100 ml, respectively, based on the State's Water Classification Program criteria for Class C waters. This permitting action is revising the effective period for bacteria limits from year-round to May 15th through September 30th of each year as discussed in this subsection above.

This permitting action is establishing a year-round daily maximum *E. coli* bacteria concentration limit of 949 colonies/100 ml for the swirl separator discharge to the Aroostook River based on the State's Water Classification Program criteria for Class C waters.

g. Total Residual Chlorine (TRC): The previous permitting action established a water quality-based daily maximum concentration limit of 0.025 mg/L for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department licensing/permitting actions impose the more stringent of either a water quality-based or BPT based limit.

With acute and chronic dilution factors associated with the discharge to Presque Isle Stream, end-of-pipe acute and chronic water quality-based concentration thresholds the discharge to Presque Isle Stream may be calculated as follows:

			Calculated	
Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Acute Threshold	Chronic Threshold
0.019 mg/L	0.011 mg/L	2.0:1 (A) 2.3:1 (C)	0.038 mg/L	0.025 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge in order to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. PISD dechlorinates the effluent prior to discharge in order to consistently achieve compliance with the water quality-based thresholds. Both water quality-based thresholds are more stringent than either technology-based standard, and both water quality-based thresholds are less than the Department's current minimum level (ML) of detection of 0.05 mg/L for TRC. The previous permit established the daily maximum limit in error by utilizing the chronic water quality threshold to establish a daily maximum limitation. This permitting action is correcting this error by revising the daily maximum TRC limit to 0.038 mg/L and establishing a monthly average limit of 0.038 mg/L. The limit at which compliance/non-compliance determinations will be based is the ML of 0.05 mg/L, or other ML as specified by the Department. All analytical test results shall be reported to the Department including results which are detected below the ML of 0.05 mg/L, or other ML as specified by the Department. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The EPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (most current edition), Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes. It is noted that the Department will code the DMR with a daily maximum concentration

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

value of 0.05 mg/L such that detectable values between 0.025 mg/L and 0.05 mg/L will not be construed to be excursions of the water quality-based limits.

A review of the TRC data (for secondary treated waste waters) as reported on the DMRs submitted to the Department for the period December 2002 – November 2006 indicates the daily maximum TRC discharged has ranged from 0.03 mg/L to 0.05 mg/L with an arithmetic mean of 0.04 mg/L (# DMRs = 47).

With acute and chronic dilution factors associated with the discharge to the Aroostook River, end-of-pipe acute and chronic water quality-based concentration thresholds the discharge to the Aroostook River may be calculated as follows:

			Calculated	
Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Acute Threshold	Chronic Threshold
0.019 mg/L	0.011 mg/L	36:1 (A) 45:1 (C)	0.7 mg/L	0.5 mg/L

The technology-based monthly average and daily maximum limits of 0.1 mg/L and 0.3 mg/L, respectively, are more stringent than the water quality-based thresholds and are therefore being established for the discharge to the Aroostook River.

This permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River a minimum monitoring frequency requirement of once per day for TRC based on Department guidance.

The previous permitting action established, and this permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River, a daily maximum BPT-based limitation of 1.0 mg/L for TRC for the swirl separator, which during wet weather flows, is protective of ambient water quality.

It is noted that the Department will code the DMR with a daily maximum concentration value of 0.05 mg/L such that detectable values between 0.025 mg/L and 0.05 mg/L will not be construed to be excursions of the water quality-based limits.

h. pH: The previous permitting action established, and this permitting action is carrying forward for the discharge to Presque Isle Stream and is establishing for the discharge to the Aroostook River and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units, which is based on 06-096 CMR 525(3)(III), and a minimum monitoring frequency requirement of once per day for pH based on Department guidance.

A review of the daily maximum data as reported on the DMRs submitted to the Department for the period December 2002 – November 2006 indicates the facility has been in compliance with the pH range limitation 100% of the time during said reporting period (# DMRs = 47).

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

i. Total Ammonia: The previous permitting action established, and this permitting action is carrying forward for the discharge to Presque Isle Stream, seasonal mass and concentration limitations for total ammonia (as N) based on the June 2000 TMDL. For non-summer months (October 1 – June 30), monthly average mass and concentration limits of 98 lbs/day and 7.6 mg/L, respectively, were established and are being carried forward in this permitting action. For summer months (July 1 – September 30), daily maximum mass and concentration limits of 9.6 lbs/day and 0.74 mg/L, respectively, were established and are being carried forward in this permitting action.

A summary of review of the total ammonia data as reported on the DMRs submitted to the Department for the period of December 2002 – November 2006 is as follows:

Total Ammonia	Minimum	Maximum	Arithmetic Mean	# DMRs	Permit Limits
October – June	1 lbs./day	88 lbs./day	31.7 lbs./day	32	98 lbs/day
Monthly Average	0.03 mg/L	6.3 mg/L	2.6 mg/L	31	7.6 mg/L
July - September	1 lbs./day	394 lbs./day	63.5 lbs./day	13	9.6 lbs/day
Daily Maximum	0.02 mg/L	18 mg/L	3.8 mg/L	13	0.74 mg/L

This permitting action is carrying forward the minimum monitoring frequency requirements of three times per week for the summer months and once per week for the non-summer months.

On February 8, 2007, the Department conducted a statistical evaluation of the most recent 60 months of total ammonia data on fie with the Department in accordance with the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's *"Technical Support Document for Water Quality-Based Toxics Control"* which demonstrated that the discharge does not exhibit a reasonable potential to exceed the critical acute or chronic ambient water quality control criteria for ammonia for the Aroostook River. The *Aroostook River Modeling Report, Final Sept 2004* does not recommend limiting the discharge of ammonia from this or any other facility on the Aroostook River. The Modeling Report states that at almost all river locations, the measured value of ammonia nitrogen was under the detection limit of 0.04 ppm. Therefore, this permitting action is not establishing effluent limitations or monitoring requirements for total ammonia for the discharge to the Aroostook River.

j. Total Phosphorus (Total-P) and Orthophosphate (Ortho-P): The previous permitting action established, and this permitting action is carrying forward for the discharge to Presque Isle Stream, seasonal (June 1-September 30) weekly average mass and concentration limits of 3.3 lbs./day and 0.2 mg/L, respectively, for ortho-P based on the recommendations in the June 2000 TMDL for Presque Isle Stream.

A review of the ortho-P data as reported on the DMRs submitted to the Department for the period June 2003 – September 2006 (summer season months only, # DMRs = 14) indicates the weekly average ortho-P mass discharged has ranged from 1.0 lbs./day to 6.0 lbs./day with an arithmetic mean of 2 lbs./day, and the weekly average concentration discharged has ranged from 0.048 mg/L to 0.4 mg/L with an arithmetic mean of 0.14 mg/L.

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

As of the effective date of this permitting action, the Department has not established nutrient criteria for phosphorous.

A discussion of phosphorous and receiving water quality is provided in Section 5 of this fact sheet and should be reviewed for its relevance to phosphorous limitations and monitoring requirements established herein for the discharge to the Aroostook River.

In consideration of the *Aroostook River Modeling Report, Final Sept 2004*, comments from the permittee on the proposed draft permit issued on May 14, 2007, and lack of nutrient criteria at this time, this permitting action is establishing for the discharge to the Aroostook River a new, seasonal, water quality-based monthly average end-of-pipe concentration limit of 1.0 mg/L based on a Department best professional judgment determination and a monthly average total phosphorous mass limit of 9.6 lbs./day, which was derived as follows:

Monthly Average Mass Limit: (1.0 mg/L)(8.34 lbs./gallon)(2.31 MGD) = 19.2 lbs./day

This permitting action is daily maximum concentration and mass reporting requirements for total-P during the June 1-September 30 period. This permitting action is establishing monthly average and daily maximum concentration and mass reporting requirements for ortho-P to assist in developing a relationship between total-P and the highly bio-available ortho-P.

Total-P and ortho-P limits/monitoring requirements are effective June 1 through September 30, inclusive, of each year. This permitting action is establishing a minimum monitoring frequency requirement of three times per week based on best professional judgment.

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

WET, priority pollutant and analytical chemistry testing, as required by 06-096 CMR 530, is included in this permit in order to characterize the effluent. WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate water flea (*Ceriodaphnia dubia*) and vertebrate brook trout (*Salvelinus fontinalis*). Chemical-specific monitoring is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria. Priority pollutant testing refers to the analysis for levels of priority pollutants listed in

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

06-096 CMR 525(4)(VI). Analytical chemistry refers to a suite of thirteen (13) chemical tests for ammonia-nitrogen, total aluminum, total cadmium, total chromium, total copper, total hardness (fresh water only), total lead, total nickel, total silver, total zinc, total arsenic, total cyanide and total residual chlorine.

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

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

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

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

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

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

river. Should the multi-discharger evaluation indicate there are parameters that exceed or have a reasonable potential to exceed applicable AWQC, this permit may be reopened pursuant to Special Condition P, *Reopening of Permit For Modifications*, to incorporate additional limitations and or revise monitoring requirements.

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

06-096 CMR 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level I dischargers are *"having a chronic dilution factor of less than 20 to 1"* and Level II dischargers are those *"having a chronic dilution factor of at least 20 but less than 100 to 1."* The chronic dilution factor associated with the discharge from the PISD to Presque Isle Stream is 2.3 to 1, and the chronic dilution factor associated with the discharge to the Aroostook River is 45:1. Therefore, the facility is considered a Level I facility when discharging to Presque Isle Stream and a Level II facility when discharging to the Aroostook River for purposes of toxics testing. 06-096 CMR 530(2)(D) specifies default WET, priority pollutant, and analytical chemistry test schedules for Level I and Level II dischargers as follows:

Presque Isle Stream Discharge: Level I Monitoring Requirements

Screening level testing – Beginning upon issuance of the permit and lasting through the first 12 months of the permit, and then again begnning12 months prior to permit expiration and lasting through permit expiration and every five years thereafter.

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

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

Level	WET Testing	Priority pollutant testing	Analytical chemistry
I	2 per year	None required	4 per year

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

Aroostook River Discharge: Level II Monitoring Requirements

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

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	2 per year	1 per year	4 per year

Surveillance level testing – Beginning upon commencement of the discharge to the Aroostook River and lasting until 12 months prior to permit expiration.

Level	WET Testing	Priority pollutant testing	Analytical chemistry
II	1 per year	None required	2 per year

The previous permit established an A-NOEL limit of 51% for the brook trout and C-NOEL limits of 43% for the brook trout, water flea and fathead minnow based on a reasonable potential to exceed the critical water quality thresholds for these test species. It is noted that the freshwater test organisms specified by 06-096 CMR 530 no longer includes fathead minnow. On May 14, 2003, the Department administratively modified the 9/30/2002 MEPDES permit to eliminate the effluent limits and monitoring requirements for whole effluent toxicity testing. This action was based on the fact that the previous permit contained a schedule of compliance for the elimination of the discharge to Presque Isle Stream by June 1, 2007. Due to circumstances beyond the control of the permittee, the PISD will be unable to eliminate the discharge by 2007 and this permit contains a new schedule of compliance for elimination of the discharge to Presque Isle Stream by November 1, 2009. On April 10, 2006, the Department modified the 9/30/2002 permit to reinstate testing requirements required by the new 06-096 CMR 530, which became effective October 2005. The 4/10/2006 permit modification established testing requirements consistent with those specified in the table above for Level II based on the scheduled removal of the discharge from Presque Isle Stream by June 2007.

A review of the most recent 60 months of data on file with the Department for this facility indicates that the PISD has completed four (4) A-NOEL and C-NOEL tests (5/7/2002, 8/6/2002, 11/12/2002, and 10/22/2006) on the water flea and one A-NOEL and C-NOEL test (10/22/2006) on the brook trout and one (1) priority pollutant scan (8/6/2002) since May 2002. 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 priority pollutant test dates and copper test results.

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

WET Evaluation

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

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

On February 8, 2007, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the PISD in accordance with the statistical approach outlined above. The 2/8/07 statistical evaluation indicates the discharge does not exceed or demonstrate a reasonable potential (RP) to exceed the critical acute or chronic water quality thresholds (50.0% and 44.5 % respectively for Presque Isle Stream or 2.8% and 2.2% respectively for the Aroostook River) for the water flea or brook trout. Therefore, this permitting action is not establishing numeric limitations for either test organism for either discharge scenario.

06-096 CMR 530(2)(D)(3)(c) states, *"dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence."* Based on this provision and Department best professional judgment, this permitting action is establishing reduced surveillance level WET testing at a frequency of once every other year.

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

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

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

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

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

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

Priority Pollutant Evaluation

On February 8, 2007, the Department conducted a statistical evaluation on the most recent 60 months of chemical-specific tests results on file with the Department for the PISD in accordance with the statistical approach outlined above. **The 2/8/07 statistical evaluation indicates one total copper test result (110 µg/L on 11/12/2002) demonstrates a reasonable potential to exceed the acute and chronic AWQC thresholds for copper. The evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed the AWQC thresholds for any other parameters tested.**

06-096 CMR 530(3) states, *"the Department shall establish appropriate discharge prohibitions, effluent limits and monitoring requirements in waste discharge licenses if a discharge contains pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an ambient excursion in excess of a numeric or narrative water quality criteria or that may impair existing or designated uses."* The previous permitting action established monthly average and daily maximum concentration and mass limits of 19 µg/L and 0.24 lbs./day, respectively, for total copper for the Presque Isle Stream discharge. These water quality-based limits were derived based on less stringent AWQC in effect at the time the previous permit was developed. This permitting action is revising the monthly average water quality-based concentration and mass limits for total copper based on revised AWQC and for both the Presque Isle Stream and Aroostook River discharge scenarios.

06-096 CMR 530(3)(D)(1) states, *"for specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded."* The arithmetic mean of 1.874 MGD is less than the design capacity of 2.31 MGD as discussed in Section 6 a. of this fact sheet. The water quality-based concentration limits for total copper are being increased by a factor of 1.5 so as not to penalize the permittee for operating at flows less than the permitted flow and to promote water conservation at the facility.

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

With regard to hardness-dependent AWQC for metals, the fact sheet associated with the previous permitting action stated,

> "The Department's Total Hardness Protocol adopted on March 5, 2001, states *'Where natural total hardness upstream of all known point source and non-point source (caused by human activity) discharges that increase the instream total hardness is different than the statewide (20 mg/l), a licensee/permittee may submit receiving water total hardness data from that upstream location to DEP for consideration of an alternate total hardness to be used in calculation of the statewide water quality criteria (SWQC). Such data shall be at least monthly measurements for a period of one year in the receiving water upstream of the discharge or equivalent data as determined by the DEP. All receiving water sampling plans to develop an alternative total hardness for the receiving water must be reviewed and approved in writing by the Department prior to implementation. Data collected prior to March 5, 2001, will be considered on a case-by-case basis.'*
>
> In a letter dated September 21, 2000, to the Department, the permittee submitted eight and a half years (1990-1999) of quarterly test results (by season) of the background hardness of Presque Isle Stream in an effort have the Department consider a site specific hardness for hardness dependent metals. The arithmetic mean of the seasonal data points are as follows: Winter (62 mg/L), Spring (34 mg/L), Summer (66 mg/L) and Fall (40 mg/L). In addition to ambient hardness for Presque Isle Stream, the permittee has submitted fours years (1997-2000) of quarterly test results (by season) of the hardness of the discharge from the treatment plant. The arithmetic mean of the seasonal data points are as follows: Winter (174 mg/L), Spring (226 mg/L), Summer (225 mg/L) and Fall (233 mg/L). The Department has taken the data submitted by the permittee into consideration and has made the determination that for hardness dependent metals, the applicable acute hardness for Presque Isle Stream at the point of discharge is 33 mg/L and the chronic hardness is 40 mg/L."

06-096 CMR 584(5)(B) states, "Fresh water quality must be calculated using a pH of 7.0, a temperature of 25 degrees Celsius, and a hardness of 20 mg/L." 06-096 CMR 584(5)(B) further notes, "These characteristics, however, may vary depending on the location of the discharge. The relative criteria for a pollutant subject to these considerations may be recalculated in any given licensing proceeding using the actual local ambient physical water characteristics. 06-096 CMR 530(4)(D) states, "The Department may use available information to evaluate physical and chemical characteristics of a specific receiving water and adjust calculations of the degree to which they influence the relative toxicity of individual pollutants in that situation. The information may include tests conducted by the Department, the discharger or another organization, provided that approved methods are used for sample collection and analysis. Once being accepted by the Department as valid data, this information may be used in place of the assumptions used to

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

develop statewide water quality criteria for the effected pollutants and discharger." Therefore, the acute and chronic AWQC for copper for the Presque Isle Stream discharge are based on site-specific harness of 33 mg/L (acute) and 40 mg/L (chronic).

The applicable acute and chronic AWQC for copper (based on ambient hardness of 20 mg/L) are 3.07 µg/L and 2.36 µg/L, respectively. The applicable acute and chronic AWQC for copper adjusted for the Presque Isle Stream are 4.93 µg/L and 4.26 µg/L, respectively. The permittee has not submitted ambient hardness data for the Aroostook River. Therefore, the Department must utilize the default hardness value of 20 mg/L (and resulting criteria) when evaluating appropriate limits for the discharge of copper to the Aroostook River.

Based on the applicable AWQC, the acute and chronic dilution factors associated with the Presque Isle Stream and Aroostook River discharge scenarios, monthly average and daily maximum water quality-based limits for total copper may be calculated as follows:

Concentration Limit Formula =

$$\text{(Dilution Factor)[(0.75)(criterion)] + (0.25)(criterion)}$$

Mass Limit Formula =

$$\frac{\text{(Conc. Limit, µg/L)(8.34 lbs./gallon)(flow limit, MGD)}}{\text{1000 µg/mg}}$$

Presque Isle Stream Discharge:

Monthly Average Concentration = (2.3)[(0.75)(4.26 µg/L)] + (0.25)(4.26 µg/L)
= 7.4 + 1.1
= 8.5 µg/L x 1.5
= **12.8 µg/L**

Monthly Average Mass = $\frac{\text{(8.5 µg/L)(8.34 lbs./gallon)(2.31 MGD)}}{\text{1000 µg/mg}}$ = **0.16 lbs./day**

Daily Maximum Concentration = (2.0)[(0.75)(4.93 µg/L)] + (0.25)(4.93 µg/L)
= 7.4+ 1.2
= 8.6 µg/L x 1.5
= **12.9 µg/L**

Daily Maximum Mass = $\frac{\text{(8.6 µg/L)(8.34 lbs./gallon)(2.31 MGD)}}{\text{1000 µg/mg}}$ = **0.17 lbs./day**

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

Aroostook River Discharge:

Monthly Average Concentration = (45)[(0.75)(2.36 µg/L)] + (0.25)(2.36 µg/L)
= 79.7 + 0.6
= 80.3 µg/L x 1.5
= **121 µg/L**

Monthly Average Mass = $\frac{(80.3\ \mu g/L)(8.34\ lbs./gallon)(2.31\ MGD)}{1000\ \mu g/mg}$ = **1.5 lbs./day**

Daily Maximum Concentration = (36)[(0.75)(3.07 µg/L)] + (0.25)(3.07 µg/L)
= 82.9+ 0.8
= 83.7 µg/L x 1.5
= **126 µg/L**

Daily Maximum Mass = $\frac{(83.7\ \mu g/L)(8.34\ lbs./gallon)(2.31\ MGD)}{1000\ \mu g/mg}$ = **1.6 lbs./day**

The permittee has completed a total of three (3) total copper tests subsequent to the 11/12/2002 maximum test result of 110 µg/L. None of the subsequent test results demonstrate a reasonable potential to exceed the AWQC for copper. Based on the severity and frequency of copper test results on file, this permitting action is establishing a routine (Level I) surveillance level testing frequency of four times per year for total copper.

On May 14, 2003, the Department administratively modified the 9/30/2002 MEPDES permit to eliminate the effluent limits and monitoring requirements for Bis (2-Ethylhexl) Phthalate, G-BHC, total silver, and total zinc. Based on the results of the 2/8/2007 statistical evaluation, this permitting action serves to formally eliminate effluent limits and monitoring requirements for these parameters.

In consideration that this facility has only conducted one priority pollutant scan within the last 60-month period, and given the low dilution rates associated with the discharge to Presque Isle Stream, the Department is making a best professional judgment determination to require screening level priority pollutant and analytical chemistry testing during the first 12 months of this permit followed by routine surveillance level testing during the second, third and fourth years of the permit with screening level testing in the fifth (final) year of this permit.

7. PRIMARY TREATED WASTE WATERS

The permittee maintains a primary treatment system (swirl separator) for the treatment of wet weather flows in excess of the secondary treatment capabilities. The PISD has identified an instantaneous flow rate of 3,750 gallons per minute (5.4 MGD) as the maximum flow rate above which secondary treatment of wet weather flows is not practicable. The permittee has developed and maintains current a Wet Weather Management Plan (WWMP) to maximum secondary treatment of waste water flows received at the facility. However, due to the nature and volume of wet weather flows, it is not possible to provide secondary treatment for all flows that can be conveyed to the treatment plant. Attempting to do so would cause upsets and damage to the secondary treatment process. Expansion of the secondary system would not be practicable since the facilities would be too large to effectively treat normal dry weather flows.

Given these circumstances, and consistent with the USEPA's April 19, 1994 CSO Policy, Section II.C.7, the Department has determined that primary treatment and disinfection (when required) is an appropriate means of best practicable treatment (BPT) for some excess wet weather flows and this treatment can be accomplished at the existing treatment facility. For those 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 (BPJ) that primary treatment and disinfection constitute appropriate and best practicable treatment. This permitting action carries forward numeric daily maximum limitations for *E. coli* bacteria and for TRC based on Department BPJ of BPT for primary treated wastewater.

Bacterial contamination is the most direct water quality risk from wet weather discharge events and this permit contains limits for *E. coli* bacteria on a year-round basis to protect the health, safety and welfare of the public. The Department has made a best professional judgment determination that year-round daily maximum *E. coli* bacteria concentration limits of 427 colonies/100 ml for the swirl separator discharge to the Presque Isle Stream (Class B) and 949 colonies/100 ml for the swirl separator discharge to the Aroostook River, which are based on the State's Water Classification Program criteria for Class C waters, constitute best practicable treatment for primary treated waste waters that, with the available dilution, is protective of receiving water quality.

8. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

The PISD has requested authorization to add a daily maximum of up to 18,000 gallons per day of septage (up to a monthly total of 60,000 gallons) into the facility's solids handling system. Special Condition O of this permit authorizes PISD to receive and introduce into its solids handling system the requested volume of septage wastes from local haulers. The permittee included with its 12/22/2006 General Application a complete DEP Form DEPLW0507-A2004, *Maine Waste Discharge License Application for Disposal of Septic Tank and Holding Tank Wastes in Wastewater Treatment Facilities* and DEPLW0508, *Septage Disposal Application Worksheet and Summary*, consistent with the requirements of *Standards for the Addition of Septage to Wastewater Treatment Facilities*, 06-096 CMR 555 (last amended January 29, 198).

9. SCHEDULE OF COMPLIANCE

38 M.R.S.A. § 414-A(2) 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 N of this permitting action establishes a schedule of compliance for the elimination of all discharges from this facility to Presque Isle Stream due to non-attainment of receiving water quality standards (except that discharges under flood conditions when the hydraulic capacity of the Aroostook River outfall structure is exceeded). The permittee is required to submit to the Department a scope and schedule for construction plans and periodic (every three months) progress reports on the construction of the approved alternative to eliminate the discharge to Presque Isle Stream. On or before November 1, 2009, the permittee shall cease all discharges of waste waters (primary treated and secondary treated) to Presque Isle Stream (except under flood conditions). The Department has determined that this schedule is "as short as possible, based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards."

10. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted (based in part on the recommendations in July 2000 final TMDL for Presque Isle Stream and the September 2004 Aroostook River Modeling Report), the Department has determined the existing water uses will be maintained and protected and anticipates additional improvements in water quality in Presque Isle Stream and the Aroostook River after implementation of water quality-based limits herein and the outfall relocation project that will result in the discharge not causing or contributing to the failure of Presque Isle Stream to meet standards of its assigned Class B classification and of the Aroostook River to meet standards of its assigned Class C classification.

11. PUBLIC COMMENTS

Public notice of this application was made in the *Presque Isle Star Herald* newspaper on or about December 12, 2006. 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 sent to:

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

13. RESPONSE TO COMMENTS

During the period of May 14, 2007 through June 13, 2007, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the PISD for the proposed discharges. The Department received significant comments on the proposed draft permit (on June 12, 2007 via electronic mail and on June 13, 2007 via conventional mail) from the PISD. Significant comments and Department responses are as follows.

Comment #1: The PISD requested that the applicable summer season period for BOD5 and ammonia limitations be corrected from June 1 through September 30 to July 1 through September 30.

Response #1: The Department has corrected this error in the final permit.

Comment #2: The PISD has requested that the Department eliminate "the requirement for screening level testing for WET, priority pollutants, and analytical chemistry during the first 12 months of the permit. The District believes this requirement for additional testing is not warranted because there have not been any significant changes in the volume or the character of the wastewaters during the past five years and because the wastewater treatment facility does not receive any significant volumes of process wastewater from industry. Moreover, the testing results for WET, in particular, will not have much significance because the discharge from the treatment facility is being relocated to the Aroostook River as per Condition N."

Response #2: The Department has established screening level toxics testing during the first 12 months of the effective date of this permit to ensure that the best professional judgment decision to grant reduced testing in future years is justified. The PISD has performed only one priority pollutant scan and one WET test (using the brook trout) since calendar year 2002. Thus, there is limited data available to grant reduced testing. Therefore, the Department has not modified the screening level testing requirements for WET, priority pollutants, and analytical chemistry testing requirements during the first 12 months of the permit. Moreover, the toxicity of the effluent is equivalent regardless of the receiving water body and is therefore essential information to ensure that discharge levels of toxic substances do not exceed the levels set forth in 06-096 CMR 584.

13. RESPONSE TO COMMENTS (cont'd)

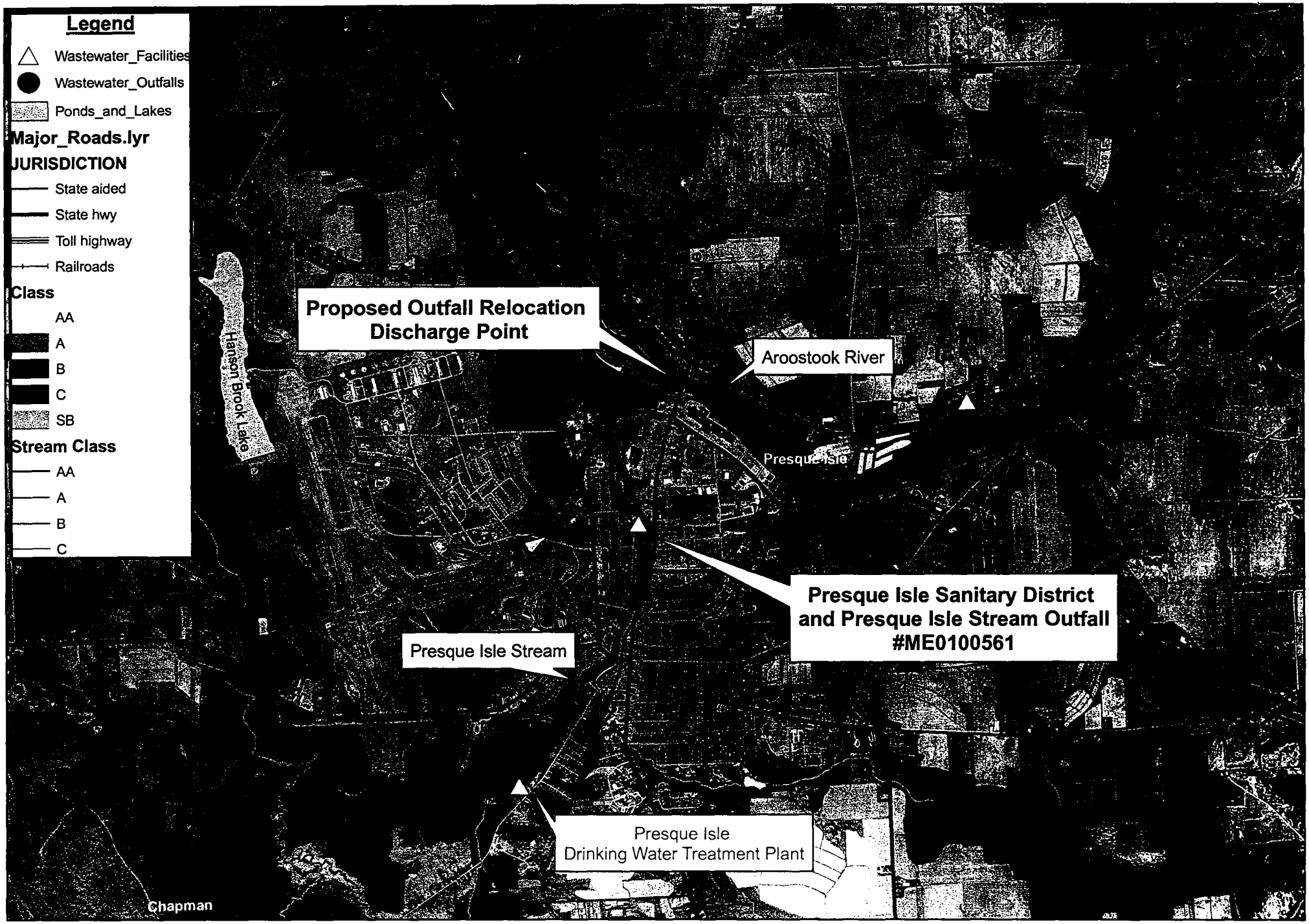
Comment #3: The PISD stated, "The draft permit has monthly average concentration and mass limits for total phosphorous (TP) that are overly stringent. The proposed limit of 0.5 ppm of total phosphorous (TP) is equivalent to a discharge of 9.6 pounds per day of total phosphorous at a licensed flow of 2.3 MGD. Given a dilution ratio of about 36 to 1 for a discharge to the Aroostook River, a discharge of 9.6 pounds TP is equivalent to a nominal concentration of 9 ppb TP in the Aroostook River at 7Q10 flows. A concentration of 9 ppb TP is much less than the limiting threshold of 20 ppb for algae growth, and it indicates that the proposed limit of 0.5 ppm TP is too stringent. The Sewer District requests consideration of a discharge limitation of 1.0 ppm TP instead of 0.5 ppm TP. A discharge of 1.0 ppm TP will result in a nominal concentration of 18 ppb TP in the Aroostook River at 7Q10 flows. A concentration of 18 ppb TP is still below the limiting threshold of 20 ppb TP for algae growth, and given that the dry weather flows discharged by the District during the summer are much less than the licensed flow of 2.3 MGD, a limitation of 1.0 ppm TP will still be conservative and protective of the receiving waters."

Response #3: In consideration of the PISD's comments, the lack of nutrient criteria at this time and that the permit contains a reopener clause to allow the Department to reopen this permit to modify phosphorous limits following completion of the nutrient criteria, the Department has modified the draft permit to revise the total phosphorous concentration limit from 0.5 mg/L to 1.0 mg/L and the mass limit from 9.6 lbs./day to 19.2 lbs./day. The Department strongly encourages the PISD to investigate phosphorous reductions below the 1 mg/L limit as final nutrient criteria may result in discharge levels that are below the 1 mg/L limitation established in this permitting action.

Comment #4: The PISD stated, "The Sewer District requests that the date of June 1, 2009 for stopping seasonal discharges to the Presque Isle Stream be changed to November 1, 2009. A deadline of November 1, 2009 will allow two construction seasons to construct the pipeline instead of one construction season." "Two construction seasons are needed because of the NRPA permit limitation that work in the Presque Isle Stream and/or Aroostook River can only be done between July 15th and October 1st. The proposed work in the stream and river consists of four stream crossings and the installation of a diffuser. The work in the stream and the river includes the installation of about 1,450 feet of 36-inch pipe. A single construction season with only 77 days allowed for work in the water is too short for a local contractor to complete the work given "Murphy's Law" and that weather is unpredictable."

Response #4: Given the need to comply with other permits issued by this Department, the Department finds the PISD's request to extend the compliance deadline to November 1, 2009 and has made all necessary reference changes to the draft permit.

ATTACHMENT A



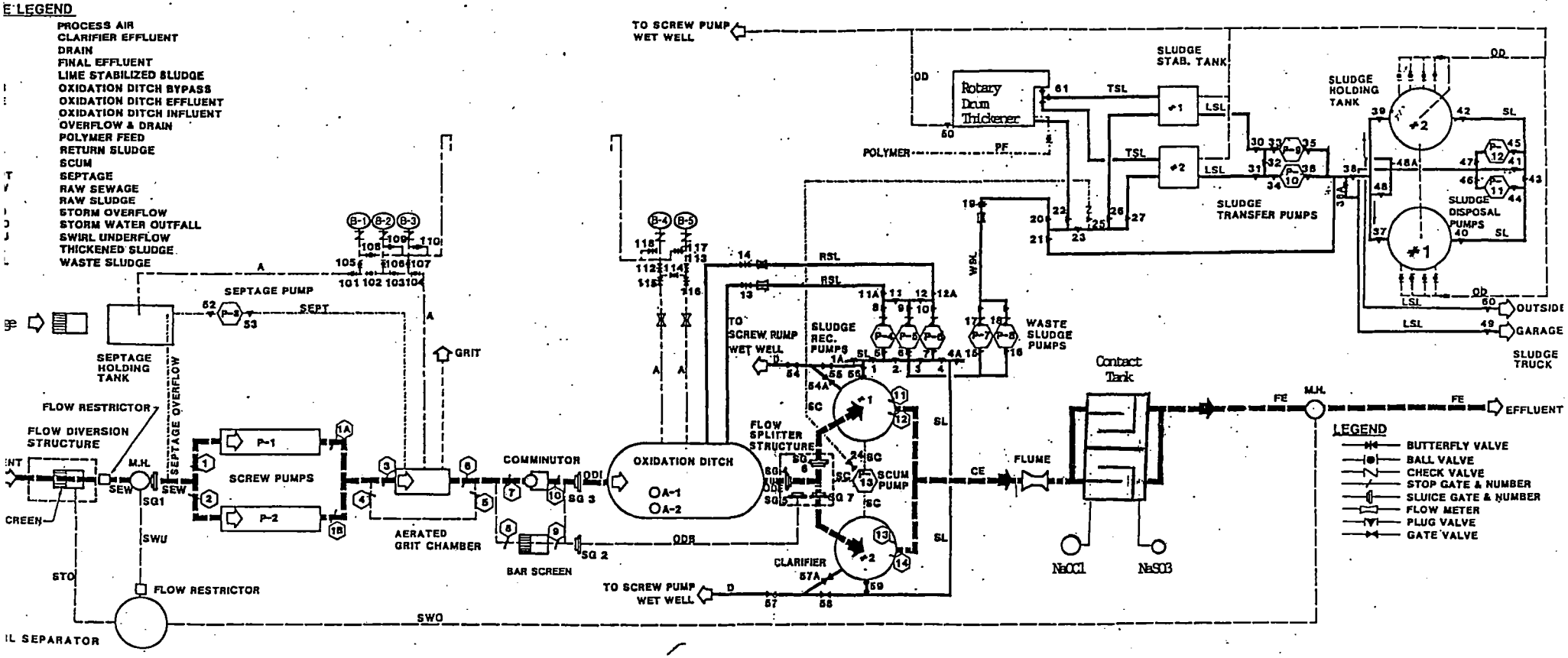
0 1 2 4 Miles

N W E S

Map created by Maine DEP
February 27, 2007

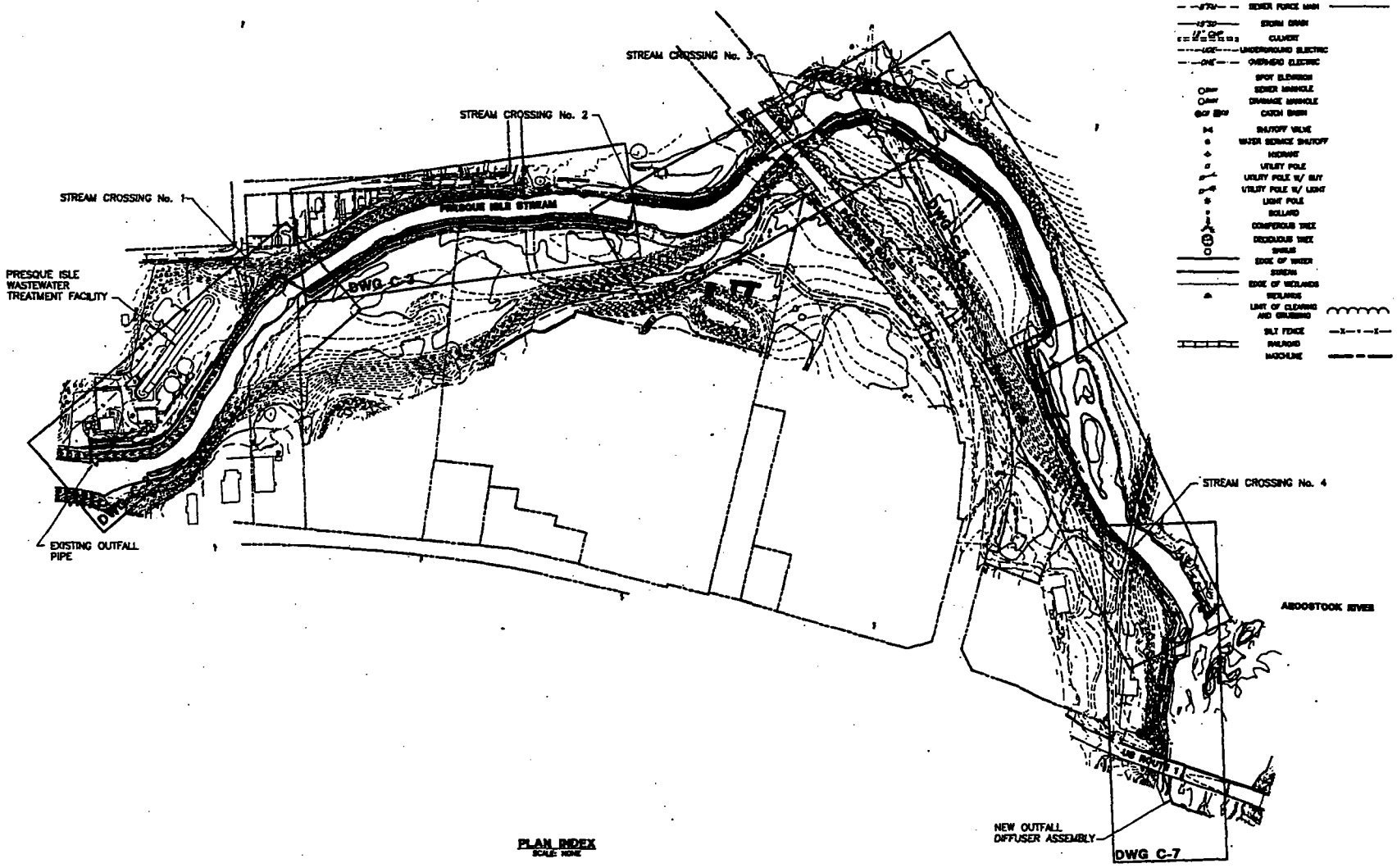
Presque Isle Sanitary District at Presque Isle, Maine

ATTACHMENT B



Presque Isle Sewer District
WWTF 126 Dyer Street

ATTACHMENT C



PLAN INDEX
SCALE: NONE

PRESQUE ISLE SEWER DISTRICT
PRESQUE ISLE, MAINE
WASTEWATER TREATMENT FACILITY
OUTFALL PIPE

GENERAL NOTES, LEGEND AND INDEX PLAN

DWG C-1
OF

ATTACHMENT D

Species	Test	Test Result %	Sample Date
WATER FLEA	C_NOEL	100	08/01/2000
WATER FLEA	LC50	>100	08/01/2000
FATHEAD	A_NOEL	100	10/31/2000
FATHEAD	C_NOEL	100	10/31/2000
FATHEAD	LC50	>100	10/31/2000
WATER FLEA	A_NOEL	100	10/31/2000
WATER FLEA	C_NOEL	5	10/31/2000
WATER FLEA	LC50	>100	10/31/2000
WATER FLEA	C_NOEL	100	12/12/2000
FATHEAD	A_NOEL	100	02/20/2001
FATHEAD	C_NOEL	100	02/20/2001
FATHEAD	LC50	>100	02/20/2001
WATER FLEA	A_NOEL	100	02/20/2001
WATER FLEA	C_NOEL	100	02/20/2001
WATER FLEA	LC50	>100	02/20/2001
FATHEAD	A_NOEL	100	05/08/2001
FATHEAD	C_NOEL	100	05/08/2001
FATHEAD	LC50	>100	05/08/2001
WATER FLEA	A_NOEL	100	05/08/2001
WATER FLEA	C_NOEL	5	05/08/2001
WATER FLEA	LC50	>100	05/08/2001
WATER FLEA	C_NOEL	100	06/05/2001
FATHEAD	A_NOEL	100	02/19/2002
FATHEAD	C_NOEL	100	02/19/2002
FATHEAD	LC50	>100	02/19/2002
WATER FLEA	A_NOEL	100	02/19/2002
WATER FLEA	C_NOEL	100	02/19/2002
WATER FLEA	LC50	>100	02/19/2002
WATER FLEA	A_NOEL	100	05/07/2002
WATER FLEA	C_NOEL	100	05/07/2002
WATER FLEA	LC50	>100	05/07/2002
WATER FLEA	A_NOEL	100	08/06/2002
WATER FLEA	C_NOEL	100	08/06/2002
WATER FLEA	LC50	>100	08/06/2002
WATER FLEA	A_NOEL	100	11/12/2002
WATER FLEA	C_NOEL	100	11/12/2002
WATER FLEA	LC50	>100	11/12/2002
TROUT	A_NOEL	100	10/22/2006
TROUT	C_NOEL	100	10/22/2006
WATER FLEA	A_NOEL	100	10/22/2006
WATER FLEA	C_NOEL	100	10/22/2006

ATTACHMENT E

Sample Date: 02/20/2001
Plant flows provided

tal Tests: 122
ssing Compounds: 2
sts With High DL: 2
mon.(MGD)= 0.883
day(MGD)= 0.890
M = 2 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 05/08/2001
Plant flows provided

tal Tests: 21
sts With High DL: 0
mon.(MGD)= 1.661
day(MGD)= 1.821
M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 02/19/2002
Plant flows provided

tal Tests: 21
sts With High DL: 0
mon.(MGD)= 1.080
day(MGD)= 0.880
M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 05/07/2002
Plant flows provided

tal Tests: 21
sts With High DL: 0
mon.(MGD)= 2.014
day(MGD)= 1.823
M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 08/06/2002
Plant flows provided

tal Tests: 139
ssing Compounds: 2
sts With High DL: 5
mon.(MGD)= 1.169
day(MGD)= 1.656
M = 5 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 08/04/2003
Plant flows provided

Total Tests: 26
Missing Compounds: 98
Tests With High DL: 0
mon.(MGD)= 1.696
day(MGD)= 2.197
M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 10/22/2006
Plant flows provided

Total Tests: 21
Tests With High DL: 0
mon.(MGD)= 2.189
day(MGD)= 3.542
M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

PP Data for "Hits" Only

?RESQUE ISLE
?RESQUE ISLE STREAM

:OPPER
IDL = 3 ug/l

	Conc, ug/l	MDL	Sample Date	Date Entered
	4.000000	OK	10/22/2006	01/09/2007
	5.000000	OK	08/01/2006	10/23/2006
	5.000000	OK	11/11/2003	01/23/2004
	5.000000	OK	06/05/2001	08/26/2001
	7.000000	OK	05/02/2004	06/28/2004
	7.000000	OK	08/03/2004	10/14/2004
	7.000000	OK	05/20/2003	08/06/2003
	8.000000	OK	05/08/2001	09/06/2001
	9.000000	OK	05/25/2005	08/01/2005
	9.000000	OK	08/06/2002	11/18/2002
	10.000000	OK	08/04/2003	10/30/2003
	10.000000	OK	11/12/2002	04/07/2003
	10.000000	OK	02/20/2001	05/09/2001
	11.000000	OK	08/03/2005	09/21/2005
	11.000000	OK	08/06/2002	11/19/2002
	12.000000	OK	02/02/2004	05/11/2004
	12.000000	OK	05/08/2001	08/26/2001
	13.000000	OK	05/07/2002	08/05/2002
	13.000000	OK	02/04/2003	05/01/2003
	14.000000	OK	11/01/2004	02/07/2005
	15.000000	OK	02/19/2002	06/11/2002
	16.000000	OK	05/07/2002	07/17/2002
	20.000000	OK	02/19/2002	05/20/2002
	22.000000	OK	03/07/2005	05/05/2005
	27.000000	OK	02/01/2005	05/05/2005
	110.000000	OK	11/12/2002	01/27/2003
<	5.000000	HI	06/19/2005	08/01/2005
<	5.000000	HI	11/05/2006	01/09/2007
<	5.000000	HI	11/06/2005	01/17/2006
<	5.000000	HI	11/04/2001	01/18/2002