April 22, 2008

Michael Hanson
Sanford Sewerage District
P. O. Box 338, River Street
Sanford, ME 04083-0338

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100617
Maine Waste Discharge License #W000870-5M-E-R
Final Permit/License

Dear Mr. Hanson:

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 287-7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.
cc: Matt Hight, DEP/SMRO
John True, DEP/CMRO
James Crowley, DEP/CMRO
Sandy Lao, USEPA

IN THE MATTER OF

SANFORD SEWERAGE DISTRICT		)	MAINE POLLUTANT DISCHARGE
SANFORD, YORK COUNTY, MAINE		)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS		)	AND
ME0100617		)	WASTE DISCHARGE LICENSE
W000870-5M-E-R	**APPROVAL**	)	**RENEWAL**

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

APPLICATION SUMMARY

The SSD has submitted a timely and complete application to the Department for renewal of combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100617/Maine Waste Discharge License (WDL) #W000870-5L-D-R (permit hereinafter) which was issued on March 28, 2003 and is due to expire on March 28, 2008. The 3/28/03 permit was subsequently modified on 3/30/05 and 8/12/05 to modify the schedule of compliance for Tier II limits to become effective and modify limitations and or monitoring frequencies for toxic pollutants that exceeded or had a reasonable potential to exceed ambient water quality criteria (AWQC). The permit authorized the seasonal discharge of up to a monthly average flow of 8.8 million gallons per day (MGD) of advanced treated sanitary waste waters from a publicly owned treatment works (POTW) and discharge an unspecified quantity of untreated sanitary/storm water from two combined sewer overflows to the Mousam River, Class C, in Sanford, Maine.

PERMIT SUMMARY

This permitting action is <u>similar to</u> the 3/23/03 permit and subsequent modifications in that it;

1. Carries forward the prohibition to discharge when the flow in the Mousam River is less than 20 cfs for Tier II limitations.

2. Carries for the non-summer technology based biochemical oxygen demand (BOD) and total suspended solids (TSS) mass and concentration limits for Tier II.

3. Carries forward the water quality based mass and concentration limits for BOD and TSS for Tier II based on the 2001 TMDL approved by the EPA.

PERMIT SUMMARY (cont'd)

4. Carries forward the seasonal monthly aveage and daily maximum technology based limits for *E. coli* bacteria for Tier II.

5. Carries forward the technology based limitations for settleable solids and pH for Tier II.

6. Carries forward the seasonal water quality based mass and concentration limits for total phosphorus and ammonia for Tier II based on the 2001 TMDL.

7. Carries forward the requirement to maintain a minimum seasonal dissolved oygen content in the effluent for Tier II.

8. Carries forward rountine whole effluent toxicity (WET) and chemical specific testing requrements pursuant to Department rule Chapter 530, *Surface Water Toxics Control Program*.

9. Carries forward all the limitations and monitoring requirements for Tier III.

10. Carries forward the requirement to maintain a current Operations and Maintenance (O&M) Plan and Wet Weather Flow Management Plan for the facility.

11. Carries forward authorization to discharge untreated waste waters/storm water from two combined sewer overflow structures and associated reporting requrements.

This permitting action is <u>different than</u> the 3/23/03 permitting action in that it;

12. Eliminates the monthly average water quality based limits for arsenic and lead for for both Tier II and Tier III.

13. Establishes monthly average and/or daily maximum water quality based mass and concentration limits for aluminum and copper for Tier II.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated March 12, 2008, and subject to the Conditions listed below, the Department makes the following conclusions:

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

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

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

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

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

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

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

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

4. The discharge(s) including the CSOs will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of the SANFORD SEWERAGE DISTRICT to discharge up to 8.8 MGD of advanced treated sanitary waste waters and an unspecified quantity of untreated sanitary/storm water from two combined sewer overflows to the Mousam River, Class C, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

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

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

3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS ____ DAY OF _____, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
David P. Littell, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application February 19, 2008.

Date of application acceptance February 20, 2008.

Date filed with Board of Environmental Protection _____

This Order prepared by GREGG WOOD, BUREAU OF LAND & WATER QUALITY

ME0100617 2008 4/21/08

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Beginning upon issuance of this permit, the permittee is authorized to discharge advanced treated sanitary waste waters from **Outfall 001A.** Such **Tier II**, discharges shall be limited and monitored by the permittee as specified below:

There shall be no discharge when the Mousam River is less than 20 cfs.

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]* *(October 1 – April 30)* *(May 1 – September 30)*	4.4 MGD 3.48 MGD *[03]*	--- --- 	Report Report (MGD) *[03]*	--- --- 	--- --- 	--- --- 	Continuous Continuous *[99/99]*	Recorder Recorder *[RC]*
BOD_5 *[00310]* *(October 1 – April 30)* *(May 1 – September 30)*	1,101 lbs/day 261 lbs/day *[26]*	1,651 lbs/day 392 lbs/day *[26]*	1,835 lbs/day 522 lbs/day *[26]*	30 mg/L 10 mg/L *[19]*	45 mg/L 15 mg/L *[19]*	50 mg/L 20 mg/L *[19]*	3/Week 3/Week *[03/07]*	Composite Composite *[24]*
BOD% Removal(1) *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]* *(October 1 – April 30)* *(May 1 – September 30)*	1,101 lbs/day 290 lbs/day *[26]*	1,651 lbs/day 435 lbs/day *[26]*	1,835 lbs/day 580 lbs/day *[26]*	30 mg/L 10 mg/L *[19]*	45 mg/L 15 mg/L *[19]*	50 mg/L 20 mg/L *[19]*	3/Week 3/Week *[03/07]*	Composite Composite *[24]*
TSS% Removal(1) *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	5/Week *[05/07]*	Grab *[GR]*
E. coli. Bacteria(2) *[31616]* *(May 15 – September 30)*	---	---	---	142/100 ml(3) *[13]*	---	949/100 ml *[13]*	2/Week *[02/07]*	Grab *[GR]*
pH (Std. Units) *[00400]*	---	---	---	---	---	6.0-9.0 *[12]*	1/Day *[01/01]*	Grab *[GR]*

SPECIAL CONDITIONS

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

There shall be no discharge when the Mousam River is less than 20 cfs.

Outfall #001A – Tier II

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
River Flow[(4)] *[00056]*	---	---	---	---	---	≥20 cfs[(5)] *[08]*	2/Week *[02/07]*	Measure *[MS]*
Dissolved Oxygen *[00300]* *(May 1 – September 30)*	---	---	---	---	---	≥7.5 ppm[(6)] *[26]*	1/Day *[01/01]*	Measure *[MS]*
Phosphorus (Total) ***[00665]*** *(May 1 – September 30)*	3.0 lbs/day	---	---	---	---	---	3/Week *[03/07]*	Grab *[GR]*
(October 1 – April 30)	23 lbs/day *[26]*	---	46 lbs/day *[26]*	---	---	---	1/Week *[01/07]*	
Ammonia-Nitrogen ***[00610]*** *(May 15 – September 30)*	---	14.5	---	---	---	---	3/Week *[03/07]*	Grab *[GR]*
(October 1 – May 14)	276 lbs/day *[26]*	lbs/day *[26]*	---	11.3 mg/L *[19]*	---	---	1/Week *[01/07]*	Grab *[GR]*
Aluminum (Total) *[01105]*	10 lbs/day *[26]*	---	---	414 ug/L *[28]*	---	---	1/Quarter *[01/901*	Composite *[24]*
Copper (Total) *[01042]*	0.28 lbs/day *[26]*	---	0.36 lbs/day *[26]*	11 ug/L *[28]*	---	14 ug/L *[28]*	1/Quarter *[01/901*	Composite *[24]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd) – Outfall #001A – Tier II

SURVEILLANCE LEVEL **-** Beginning upon permit issuance 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[7]						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	25 % *[23]*	2/Year *[02/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/Year *[01YR]*	Composite *[24]*
Analytical chemistry[8] *[51168]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd) – Outfall #001A – Tier II

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

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity[7]						
Acute – NOEL						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/Quarter *[01/90]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/Quarter *[01/90]*	Composite *[24]*
Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	25 % *[23]*	1/Quarter *[01/90]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/Quarter *[0190]*	Composite *[24]*
Analytical chemistry[8] *[51168]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutant [9] *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

SPECIAL CONDITIONS

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

Outfall #001B - Tier III

HIGH RIVER FLOW - Between February 15 – April 15 of each year and when the receiving water flow is ≥100 cfs as measured at the Route #4 bridge in Sanford.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
River Flow[(4)] *[00056]*	---	---	---	---	---	≥100 cfs[(5)] *[12]*	2/Week *[02/07]*	Measure *[MS]*
Flow *[50050]*	8.8 MGD *[03]*	Report MGD *[03]*	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	2,202 lbs/day *[26]*	3,303 lbs/day *[26]*	3,670 lbs/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
TSS *[00530]*	2,202 lbs/day *[26]*	3,303 lbs/day *[26]*	3,670 lbs/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
Phosphorus (Total) *[00665]*	23 lbs/day *[26]*	---	46 lbs/day *[26]*	---	---	---	1/Week *[01/07]*	Grab *[GR]*
Ammonia-Nitrogen *[00610]*	612 lbs/day *[26]*	---	---	12.5 mg/L *[19]*	---	---	1/Week *[01/07]*	Grab *[GR]*

SPECIAL CONDITIONS

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

Footnotes:

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, 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. Samples that are sent to another POTW licensed pursuant to *Waste DischargeLlicenses*, 38 M.R.S.A. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

All 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 or as specified by other approved test methods. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the 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.

1. **Percent Removal -** The treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent removal shall be based on a twelve (12) month rolling average value. Months when the monthly average influent concentration is less than 200 mg/L shall not be included in the yearly rolling average calculation. For the purposes of this permitting action, the twelve-month rolling average calculation is based on the most recent twelve month period.

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

SPECIAL CONDITIONS

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

Footnotes:

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

4. **River flow** – Shall be measured at the Route #4 bridge staff gauge in Sanford.

5. **River Flow** – These flow thresholds are daily minimum flows in the Mousam River as measured at the Route #4 bridge staff gauge in Sanford, not a daily maximum threshold.

6. **Dissolved oxygen** - Daily minimum dissolved oxygen limitation between May 1 and September 30 of each calendar year, not a daily maximum limit.

7. **Whole effluent toxicity (WET) testing** - Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic dilution of 25%), 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. WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days after receiving the results from the laboratory conducting the testing 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 25%.

   a. **Surveillance level testing** - Beginning upon issuance of this permit and lasting through 12 months prior to the expiration date of the permit, the permittee shall conduct surveillance level WET testing. Testing on the water flea (*Ceriodaphnia dubia*) shall be conducted at a frequency of 2/Year and testing on the brook trout (*Salvelinus fontinalis)* shall be conducted at a frequency of 1/Year. Testing shall be conducted in a different calendar quarter of each year such that a test is conducted in all four calendar quarters in the first four years of the term of the permit.

   b. **Screening level testing** - Beginning twelve months prior to the expiration date of the permit and every five years thereafter, the permittee shall conduct screening level WET testing at a frequency of once per calendar quarter (1/Quarter) for both the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis).*

SPECIAL CONDITIONS

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

Footnotes:

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

a. 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.

Each time a WET test is performed, the permittee shall sample and analyze for the nine (9) parameters in the WET Chemistry and the twelve (12) parameters in the Analytical Chemistry sections of the Department form entitled, *Maine Department of Environmental Protection, WET and Chemical Specific Data Report Form*. See Attachment A of this permit.

8. **Analytical chemistry** – Refers to a suite of chemical tests that include ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total lead, total nickel, total silver, total zinc and total residual chlorine.

   a. **Surveillance level testing** – Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per year (1/Year). Testing shall be conducted in a different calendar quarter of each year such that an analytical chemistry analysis is conducted in each of the four calendar quarters during the first four years of the term of the permit.

   b. **Screening level testing** – Beginning 12 months prior to the expiration date of the permit and every five years thereafter, screening level testing shall be conducted 1/Quarter.

9. **Priority pollutant testing –** Priority pollutants are those parameters listed by Department rule, Chapter 525, Section 4(IV).

   a. **Screening level testing** - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year). It is noted Department rule Chapter 530, *Surface Water Toxics Control Program*, does not establish routine surveillance level priority pollutant testing.

SPECIAL CONDITIONS

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

Footnotes:

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. See Attachment A of this permit for a list of the Department's reporting levels (RLs) of detection. Test results
must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days after receiving the results from the laboratory conducting the testing 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 Department rule Chapter 584 *Surface Water Quality Criteria for Toxic Pollutants.* 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 by this permit or required to determine compliance with interim limitations established pursuant to Department rule Chapter 519, 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. See Attachment B, *Effluent Mercury Test Report*, of this permit for the Department's form for reporting mercury test results.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

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

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

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

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

C. DISINFECTION

If chlorination is used as a 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 total residual chlorine (TRC) cannot be met by dissipation in the detention tank. The TRC in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall be sufficient to leave a TRC concentration that will effectively reduce bacteria to levels below those specified in Special Condition A, *"Effluent Limitations and Monitoring Requirements"*, above.

D. TREATMENT PLANT OPERATOR

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

SPECIAL CONDITIONS

E. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on February 20, 2008; 2) the terms and conditions of this permit; and 3) only from Outfall #001 and the two (2) CSOs outfalls (#002 and #003) listed in Special Condition K of this permit. Discharges of waste water from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

F. NOTIFICATION REQUIREMENT

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

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

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

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

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

G. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to receive and introduce into the treatment process or solids handling stream **a maximum of 40,000 gallons per day** of septage, subject to the following terms and conditions:

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

2. At no time shall 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.

SPECIAL CONDITIONS

G. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

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

6. 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.

H. WET WEATHER FLOW MANAGEMENT PLAN

The permittee shall maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall. The plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events. **The permittee shall review their plan annually** and record any necessary changes to keep the plan up to date.

SPECIAL CONDITIONS

I. OPERATION & MAINTENANCE (O&M) PLAN

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

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

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

J. CONDITIONS FOR COMBINED SEWER OVERFLOW (CSO)

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

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

Outfall #	Location	Receiving Water & Class
002	Jagger Mill Road	Mousam River, Class C
003	Bougie Avenue (Formerly Island Avenue)	Mousam River, Class C

Authorization to discharge from Outfall #003 is only being granted from the date of issuance of this permit through December 31, 2008. Beginning January 1, 2009, any discharge from Outfall #003 will be considered an unauthorized discharge and shall be reported to the Department in accordance with the reporting requirements in the Standard Conditions attached to this permit. See Special Condtion J(4) of this permit.

SPECIAL CONDITIONS

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

2. Prohibited Discharges

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

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

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

3. Narrative Effluent Limitations

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

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

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

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

4. CSO Master Plan (see Sections 2 & 3 of Chapter 570 Department Rules)
   The permittee shall implement CSO control projects in accordance with an approved CSO Master Plan and abatement schedule. The CSO Master Plan entitled, *"CSO Master Plan for the Sanford Sewerage District"*, dated February 2000, and the abatement project schedule included in the District's letter entitled *"Resolution of Outstanding Issues and Request for Final Approval"* dated February 25, 2002, were approved on March 5, 2002. It is noted the most recent revisions to the abatement schedule were approved by the Department onJanuary 3, 2008. Key milestones approved in most recent abatement schedule that the permittee is required to comply with are:

SPECIAL CONDITIONS

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

On or before December 31, 2008, ***(PCS Code 04599)*** the permittee shall complete removal of the overflow structure at CSO #003, Bougie Anvenue and eliminate the CSO.

On or before December 31, 2011, ***(PCS Code 04599)*** the permittee shall remove from the sanitary sewer system, the last know catch basins (CBs) connected to the system. The CBs to be removed from the system are CB #32, #33, #34, #35 and #68 which are all located on Main Street.

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

5. Nine Minimum Controls (NMC) (see Section 5 Chapter 570 of Department Rules)
The permittee shall implement and follow the Nine Minimum Control documentation as approved by EPA on May 29, 1997. Work preformed on the Nine Minimum Controls during the year shall be included in the annual CSO Progress Report (see below).

6. CSO Compliance Monitoring Program (see Section 6 Chapter 570 of Department Rules)
The permittee shall conduct block testing or flow monitoring according to an approved *Compliance Monitoring Program* on all CSO points, as part of the CSO Master Plan. Annual flow volumes for all CSO locations shall be determined by actual flow monitoring, or by estimation using a model such as EPA's Storm Water Management Model (SWMM). Results shall be submitted annually as part of the annual *CSO Progress Report* (see below), and shall include annual precipitation, CSO volumes (actual or estimated) and any block test data required. Any abnormalities during CSO monitoring shall also be reported. The results shall be reported on the Department form "CSO Activity and Volumes" (Attachment C of this permit) or similar format and submitted to the Department on diskette.

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

SPECIAL CONDITIONS

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

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

8. Annual CSO Progress Reports (see Section 7 of Chapter 570 of Department Rules) **By March 1 of each year** ***(PCS code 33101)*** the permittee shall submit *CSO Progress Reports* covering the previous calendar year (January 1 to December 31). The CSO Progress Report shall include, but is not necessarily limited to, the following topics as further described in Chapter 570: CSO abatement projects, schedule comparison, progress on inflow sources, costs, flow monitoring results, CSO activity and volumes, nine minimum controls update, sewer extensions, and new commercial or industrial flows.

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

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

9. Signs

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

   SANFORD SEWERAGE DISTRICT
   WET WEATHER SEWAGE DISCHARGE
   CSO # AND NAME

SPECIAL CONDITIONS

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

10. Definitions

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

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

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

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

K. INDUSTRIAL PRETREATMENT PROGRAM

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

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

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

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

SPECIAL CONDITIONS

K. INDUSTRIAL PRETREATMENT PROGRAM (cont'd)

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

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

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

e. The permittee shall provide the Department with an annual report describing the permittee's pretreatment program activities for the twelve month period ending 60 days prior to the due date in accordance with federal regulation found at 40 CFR 403.12(i) and Department rule Chapter 528(12)(I). The **annual report** shall be consistent with the format described in Attachment F of this permit **and shall be submitted no later than December 1st of each calendar year.** ***(PCS Code 6101L)***

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

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

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

L. CHAPTER 530.5(B)(7)(c)(iii) CERTIFICATION

By December 31 of each calendar year, ***(PCS Code 90199)*** the permittee shall provide the Department with a certification describing any of the following that have occurred since the effective date of this license:

1. Increases in the number, types and flows of industrial, commercial or domestic discharges to the facility that in the judgment of the Department may cause the receiving water to become toxic.

2. Changes in the condition or operations of the facility that may increase the toxicity of the discharge.

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

4. Increases in the type or volume of hauled wastes accepted by the facility.

5. The Department reserves the right to impose additional testing if new information becomes available that indicates the discharge may cause or have a reasonable potential to cause exceedences of ambient water quality criteria/thresholds.

M. MONITORING AND REPORTING

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

Department of Environmental Protection
Southern Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
312 Canco Road
Portland, Maine 04103

SPECIAL CONDITIONS

N. REOPENING OF THE PERMIT FOR MODIFICATIONS

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

O. SEVERABILITY

In the event that any provision(s), 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 D

RE-ASSESSMENT OF TECHNICALLY BASED INDUSTRIAL DISCHARGE LIMITS

Pursuant to federal regulation 40 CFR Part 122.21(j)(4) and Department rule Chapter 528, all Publicly Owned Treatment Works (POTWs) with approved Industrial Pretreatment Programs (IPPs) shall provide the Department with a written evaluation of the need to revise local industrial discharge limits under federal regulation 40 CFR Part 403.5(c)(1) and Department rule 06-096 CMR Chapter 528(6)**.**

Below is a form designed by the U.S. Environmental Protection Agency (EPA - New England) to assist POTWs with approved IPPs in evaluating whether their existing Technically Based Local Limits (TBLLs) need to be recalculated. The form allows the permittee and Department to evaluate and compare pertinent information used in previous TBLLs calculations against present conditions at the POTW. **Please read the directions below before filling out the attached form.**

ITEM I.

* In Column (1), list what your POTW's influent flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present influent flow rate. Your current flow rate should be calculated using the POTW's average daily flow rate from the previous 12 months.

* In Column (1) list what your POTW's SIU flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present SIU flow rate.

* In Column (1), list what dilution ratio and/or 7Q10 value was used in your previous MEPDES permit. In Column (2), list what dilution ration and/or 7Q10 value is presently being used in your reissued MEPDES permit.

  The 7Q10 value is the lowest seven day average flow rate, in the river, over a ten-year period. The 7Q10 value and/or dilution ratio used by the Department in your MEPDES permit can be found in your MEPDES permit "Fact Sheet."

* In Column (1), list the safety factor, if any, that was used when your existing TBLLs were calculated.

* In Column (1), note how your bio-solids were managed when your existing TBLLs were calculated. In Column (2), note how your POTW is presently disposing of its biosolids and how your POTW will be disposing of its biosolids in the future.

ITEM II.

* List what your existing TBLLs are - as they appear in your current Sewer Use Ordinance (SUO).

RE-ASSESSMENT OF TECHNICALLY BASED INDUSTRIAL DISCHARGE LIMITS

ITEM III.

* Identify how your existing TBLLs are allocated out to your industrial community. Some pollutants may be allocated differently than others, if so please explain.

ITEM IV.

* Since your existing TBLLs were calculated, identify the following in detail:

  (1) if your POTW has experienced any upsets, inhibition, interference or pass-through as a result of an industrial discharge.

  (2) if your POTW is presently violating any of its current MEPDES permit limitations - include toxicity.

ITEM V.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in pounds per day) received in the POTW's influent. Current sampling data is defined as data obtained over the last 24 month period.

  All influent data collected and analyzed must be in accordance with federal regulation 40 CFR Part 136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace, or other approved method.

  Based on your existing TBLLs, as presented in Item II., list in Column (2) each Maximum Allowable Industrial Headworks Loading (MAIHL) value corresponding to each of the local limits derived from an applicable environmental criteria or standard, *e.g.* water quality, sludge, MEPDES permit, inhibition, etc. For each pollutant, the MAIHL equals the calculated Maximum Allowable Headwork Loading (MAHL) minus the POTW's domestic loading source(s). For more information, please see, *Local Limits Development Guidance (July 2004).*

ITEM VI.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in micrograms per liter) present your POTW's effluent. Current sampling data is defined as data obtained during the last 24 month period.

  All effluent data collected and analyzed must be in accordance with federal regulation 40 CFR Part 136. Sampling data collected should be analyzed using the lowest possible detection method(s), *e.g.* graphite furnace, or other approved method.

RE-ASSESSMENT OF TECHNICALLY BASED INDUSTRIAL DISCHARGE LIMITS

* List in Column (2A) what the Ambient Water Quality Criteria (AWQC) (found in Department rule Chapter 584 –*Surface Water Quality Criteria For Toxic Pollutants, Appendix A,* October 2005) were (in micrograms per liter) when your TBLLs were calculated. Please note what hardness value was used at that time. Hardness should be expressed in milligrams per liter of Calcium Carbonate. In the absence of a specific AWQC, control(s) adequate to protect the narrative water quality standards for the receiving water may be applied.

List in Column (2B) the current AWQC values for each pollutant multiplied by the dilution ratio used in your reissued MEPDES permit. For example, with a dilution ratio of 25:1 at a hardness of 20 mg/l - Calcium Carbonate (copper's chronic freshwater AWQC equals 2.36 ug/l) the chronic MEPDES permit limit for copper would equal 45 ug/l. Example calculation:

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
Chronic AWQC = 2.36 ug/L

Chronic EOP = [25 x $0.75^{(1)}$ x 2.36 ug/L] + [0.25 x 2.36 ug/L] = 45 ug/L

(1) Department rule Chapter 530, *Surface Water Toxics Control Program*, October 2005) requires that 10% of the AWQC be set aside for background that may be present in the receiving water and 15% of the AWQC be set aside as a reserve capacity for new dischargers or expansion of existing discharges.

ITEM VII.

* In Column (1), list all pollutants (in micrograms per liter) limited in your reissued MEPDES permit. In Column (2), list all pollutants limited in your previous MEPDES permit.

ITEM VIII.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants in your POTW's biosolids. Current data is defined as data obtained during the last 24-month period. Results are to be expressed as total dry weight.

All biosolids data collected and analyzed must be in accordance with federal 40 CFR Part 136.

In Column (2A), list current State and/or Federal sludge standards that your facility's biosolids must comply with. Also note how your POTW currently manages the disposal of its biosolids. If your POTW is planning on managing its biosolids differently, list in Column (2B) what your new biosolids criteria will be and method of disposal.

If you have any questions, please contact the State Pretreatment Coordinator at the Maine Department of Environmental Protection, Bureau of Land & Water Quality, Division of Water Quality Management, State House Station #17, Augusta, ME. 04333. The telephone number is (207) 287-8898, and the email address is james.r.crowley@maine.gov.

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

POTW Name & Address : _____

MEDES Permit # : _____

Date EPA approved current TBLLs : _____

Date EPA approved current Sewer Use Ordinance : _____

ITEM I.

In Column (1) list the conditions that existed when your current TBLLs were calculated. In Column (2), list current conditions or expected conditions at your POTW.

	Column (1)	**Column (2)**
	EXISTING TBLLs	PRESENT CONDITIONS
POTW Flow (MGD)	_____	_____
SIU Flow (MGD)	_____	_____
Dilution Ratio or 7Q10 from the MEPDES Permit)	_____	_____
Safety Factor	_____	N/A
Biosolids Disposal Method(s)	_____	_____

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM II.

EXISTING TBLLs

POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)	POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)

ITEM III.

Note how your existing TBLLs, listed in Item II., are allocated to your Significant Industrial Users (SIUs), i.e. uniform concentration, contributory flow, mass proportioning, other. Please specify by circling.

ITEM IV.

Has your POTW experienced any upsets, inhibition, interference or pass-through from industrial sources since your existing TBLLs were calculated?

If yes, explain. _____
_____

Has your POTW violated any of its MEPDES permit limits and/or toxicity test requirements?

If yes, explain. _____
_____

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM V.

Using current POTW influent sampling data fill in Column (1). In Column (2), list your Maximum Allowable Industrial Headwork Loading (MAIHL) values used to derive your TBLLs listed in Item II. In addition, please note the environmental criteria for which each MAIHL value was established, *i.e.* water quality, sludge, MEPDES, etc.

	Column (1)		**Column (2)**	
Pollutant	Influent Data Analyses		MAIHL Values	Criteria
	Maximum (lb/day)	Average (lb/day)	(lb/day)	
Arsenic	_____	_____	_____	_____
Cadmium	_____	_____	_____	_____
Chromium	_____	_____	_____	_____
Copper	_____	_____	_____	_____
Cyanide	_____	_____	_____	_____
Lead	_____	_____	_____	_____
Mercury	_____	_____	_____	_____
Nickel	_____	_____	_____	_____
Silver	_____	_____	_____	_____
Zinc	_____	_____	_____	_____
Other (List)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM VI.

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Ambient Water Quality Criteria (AWQC) were at the time your existing TBLLs were developed.

List in Column (2B) current AWQC values multiplied by the dilution ratio used in your reissued MEPDES permit.

	Column (1)		Columns (2A)	(2B)
	Effluent Data Analyses		Water Quality Criteria (AWQC)	
	Maximum (ug/l)	Average (ug/l)	From TBLLs (ug/l)	Today (ug/l)
Pollutant				
Arsenic	_____	_____	_____	_____
Cadmium*	_____	_____	_____	_____
Chromium*	_____	_____	_____	_____
Copper*	_____	_____	_____	_____
Cyanide	_____	_____	_____	_____
Lead*	_____	_____	_____	_____
Mercury	_____	_____	_____	_____
Nickel*	_____	_____	_____	_____
Silver	_____	_____	_____	_____
Zinc*	_____	_____	_____	_____
Other (List)				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

*Hardness Dependent (mg/l - CaCO3)

RE-ASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

ITEM VII.

In Column (1), identify all pollutants limited in your reissued MEPDES permit. In Column (2), identify all pollutants that were limited in your previous MEPDES permit.

Column (1)	Column (2)

REISSUED PERMIT		PREVIOUS PERMIT	
Pollutants	Limitations (ug/l)	Pollutants	Limitations (ug/l)

ITEM VIII.

Using current POTW biosolids data, fill in Column (1). In Column (2A), list the biosolids criteria that were used at the time your existing TBLLs were calculated. If your POTW is planning on managing its biosolids differently, list in Column (2B) what your new biosolids criteria would be and method of disposal.

	Column (1) Biosolids Data Analyses Average (mg/kg)	**Columns (2A)** Biosolids Criteria From TBLLs (mg/kg)	**(2B)** New (mg/kg)
Pollutant			
Arsenic			
Cadmium			
Chromium			
Copper			
Cyanide			
Lead			
Mercury			
Nickel			
Silver			
Zinc			
Molybdenum			
Selenium			
Other (List)			

ATTACHMENT E

MEPDES PERMIT REQUIREMENTS
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

The information described below shall be included in the pretreatment program annual reports:

1. An updated list of all industrial users by category, as set forth in federal regulation 40 CFR Part 403.8 and Department rule 06-096 CMR Chapter 528(9) indicating compliance or noncompliance with the following:

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

2. A summary of compliance and enforcement activities during the preceding year, including the number of:

    - significant industrial users inspected by POTW (include inspection dates for each industrial user);
    - significant industrial users sampled by POTW (include sampling dates for each industrial user);
    - compliance schedules issued (include list of subject users);
    - written notices of violations issued (include list of subject users);
    - administrative orders issued (include list of subject users),
    - criminal or civil suits filed (include list of subject users); and
    - penalties obtained (include list of subject users and penalty amounts).

3. A list of significantly violating industries required to be published in a local newspaper in accordance with federal regulation 40 CFR Part 403.8(f)(2)(viii) and Department rule 06-096 CMR Chapter 528(9)(f)(2)(vii).

4. A narrative description of program effectiveness including present and proposed changes to the program, such as funding, staffing, ordinances, regulations, rules and/or statutory authority.

5. A summary of all pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus threshold inhibitory concentrations for the POTW and effluent sampling results versus water quality standards. Such a comparison shall be based on the sampling program described in the paragraph below or any similar sampling program described in this permit.

MEPDES PERMIT REQUIREMENTS
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

At a minimum, annual sampling and analysis of the influent and effluent of the POTW shall be conducted for the following pollutants:

a.) Total Cadmium	f.) Total Nickel
b.) Total Chromium	g.) Total Silver
c.) Total Copper	h.) Total Zinc
d.) Total Lead	i.) Total Cyanide
e.) Total Mercury	j.) Total Arsenic

The sampling program shall consist of one 24-hour, flow-proportioned, composite and at least one grab sample that is representative of the flows received by the POTW. The composite shall consist of hourly, flow-proportioned grab samples taken over a 24-hour period if the sample is collected manually, or shall consist of a minimum of 48 samples collected at 30-minute intervals if an automated sampler is used. Cyanide shall be taken as a grab sample during the same period as the composite sample. Sampling and preservation shall be consistent with federal regulation 40 CFR Part 136.

6. A detailed description of all interference and pass-through that occurred during the past year.

7. A thorough description of all investigations into interference and pass-through during the past year.

8. A description of monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying parameters and frequencies.

9. A description of actions being taken to reduce the incidence of significant violations by significant industrial users.

10. The date of the latest adoption of local limits and an indication as to whether or not the City is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

ATTACHMENT E

MEPDES PERMIT REQUIREMENTS
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

The information described below shall be included in the pretreatment program annual reports:

3. An updated list of all industrial users by category, as set forth in federal regulation 40 CFR Part 403.8 and Department rule 06-096 CMR Chapter 528(9) indicating compliance or noncompliance with the following:

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

4. A summary of compliance and enforcement activities during the preceding year, including the number of:

   - significant industrial users inspected by POTW (include inspection dates for each industrial user);
   - significant industrial users sampled by POTW (include sampling dates for each industrial user);
   - compliance schedules issued (include list of subject users);
   - written notices of violations issued (include list of subject users);
   - administrative orders issued (include list of subject users),
   - criminal or civil suits filed (include list of subject users); and
   - penalties obtained (include list of subject users and penalty amounts).

3. A list of significantly violating industries required to be published in a local newspaper in accordance with federal regulation 40 CFR Part 403.8(f)(2)(viii) and Department rule 06-096 CMR Chapter 528(9)(f)(2)(vii).

4. A narrative description of program effectiveness including present and proposed changes to the program, such as funding, staffing, ordinances, regulations, rules and/or statutory authority.

5. A summary of all pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus threshold inhibitory concentrations for the POTW and effluent sampling results versus water quality standards. Such a comparison shall be based on the sampling program described in the paragraph below or any similar sampling program described in this permit.

MEPDES PERMIT REQUIREMENTS
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

At a minimum, annual sampling and analysis of the influent and effluent of the POTW shall be conducted for the following pollutants:

a.) Total Cadmium	f.) Total Nickel
b.) Total Chromium	g.) Total Silver
c.) Total Copper	h.) Total Zinc
d.) Total Lead	i.) Total Cyanide
e.) Total Mercury	j.) Total Arsenic

The sampling program shall consist of one 24-hour, flow-proportioned, composite and at least one grab sample that is representative of the flows received by the POTW. The composite shall consist of hourly, flow-proportioned grab samples taken over a 24-hour period if the sample is collected manually, or shall consist of a minimum of 48 samples collected at 30-minute intervals if an automated sampler is used. Cyanide shall be taken as a grab sample during the same period as the composite sample. Sampling and preservation shall be consistent with federal regulation 40 CFR Part 136.

6. A detailed description of all interference and pass-through that occurred during the past year.

7. A thorough description of all investigations into interference and pass-through during the past year.

8. A description of monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying parameters and frequencies.

9. A description of actions being taken to reduce the incidence of significant violations by significant industrial users.

10. The date of the latest adoption of local limits and an indication as to whether or not the City is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **March 12, 2008**

PERMIT NUMBER: **ME0100617**
LICENSE NUMBER: **W000870-5L-E-R**

NAME AND ADDRESS OF APPLICANT:

SANFORD SEWERAGE DISTRICT
P.O. Box 338, River Street
Sanford, Maine 04083

COUNTY: **York County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

192 Gavel Street
Sanford, Maine 04073

RECEIVING WATER AND CLASSIFICATION: **Mousam River/Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Michael Hanson**
Superintendent
(207) 324-5313
e-mail: mhanson@sanfordsewerage.org

1. APPLICATION SUMMARY

a. Application: The Sanford Sewerage District (SSD) has filed a timely and complete application with the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100617/Maine Waste Discharge License (WDL) #W000870-5L-D-R (permit hereinafter) which was issued by the Department on March 28, 2003 and is due to expire on March 28, 2008. The 3/28/03 permit was subsequently modified on 3/30/05 and 8/12/05 to modify the schedule of compliance for Tier II limits to become effective and modify limitations and or monitoring frequencies for toxic pollutants that exceeded or had a reasonable potential to exceed ambinent water quality criteria (AWQC). The permit authorized the seasonal discharge of up to a monthly average flow of 8.8 million gallons per day (MGD) of advanced treated sanitary waste waters from a publicly owned treatment works (POTW) and an unspecified quantity of untreated sanitary/storm water from two combined sewer overflows to the Mousam River, Class C, in Sanford, Maine. See Attachment A of this Fact Sheet for a location map.

1. APPLICATION SUMMARY (cont'd)

b. Source Description: The waste water treatment facility located on Gavel Road in Sanford treats domestic, industrial, and commercial waste waters from entities within the District's boundaries in the Town of Sanford. The waste water treatment facility serves a population of approximately 12,000 users. Several industrial users are required to pre-treat their waste waters and the SSD monitors all industrial pretreatment under Department guidelines. The sanitary collection system is approximately 60 miles in length, is 5% combined (sanitary and storm water) and 95% is separated, has 13 pump stations (two with on-site back-up power and 11 supported by portable generators) and two combined sewer overflows (CSOs) that are authorized to discharge pursuant to Special Condition L of this permitting action. The SSD waste water treatment facility is authorized to receive and treat up to 40,000 gallons per day of septage received from local septage haulers.

c. Waste Water Treatment: To comply with the most stringent limitations established in the 3/28/03 permit as recommended in the 2001 TMDL prepared by the Department, the SSD upgraded the waste water treatment plant in 2004-2005. All influent waste water is pumped by the Mousam River pump station to the grit removal facilities. Screenings removal equipment is located at the pump station ahead of the wet well. Septage receiving facilities are located near the grit removal facilities and septage is metered into the grit removal facilities at a controlled rate. Effluent from the grit removal facilities flows by gravity to a biological nutrient removal (BNR) oxidation ditch treatment system. The oxidation ditch provides sequential aerobic, anoxic, and anaerobic treatment zones to provide biological treatment of BOD, TSS, nitrogen (nitrification and denitrification) and phosphorus.

Mixed liquor from the oxidation ditch flow to two circular secondary clarifiers. Settled sludge is either returned to the BNR system or wasted to a holding tank. Secondary clarifier effluent flows to the secondary equalization basin and pump station. The equalization basin moderates peak influent flows by allowing a reduction in peak flows to the tertiary and disinfection treatment facilities. If influent flow exceeds the desired maximum tertiary flow rate for an extended period of time, excess flows are diverted from the equalization basin to the long term storage lagoons (stabilization lagoons). Flow from the secondary equalization basin is pumped to the tertiary treatment facilities. Poly-aluminum chloride (PAC) or ferric chloride is added to the waste water prior to the flocculation tanks to precipitate remaining phosphorus. The flocculation tank's effluent enters the inclined plate clarifiers where sludge solids (chemical phosphorus sludge) settles out. Clarifier effluent receives additional treatment in sand filters that further reduce effluent BOD, TSS and phosphorus concentrations. During the summer period, filter effluent is disinfected using ultraviolet light and post aerated with diffused aeration.

1. APPLICATION SUMMARY (cont'd)

Treated effluent is discharged to the Mousam River via a serpentine outfall channel located adjacent to the river. Periodically, water is pumped out of the long term storage lagoons using the intermediate pump station. The stored water is pumped to either to the grit removal facilities, flocculation tanks, disinfection facilities or directly to the effluent outfall depending on the characteristics of the water and the effluent discharge permit requirements at the time. Waste activated sludge and chemical phosphorus sludge are mechanically dewatered and disposed of in an existing sludge landfill located adjacent to the treatment facility. See Attachment B of this Fact Sheet for a schematic of the SSD's waste water treatment facility.

2. PERMIT SUMMARY

a. Terms and conditions: This permitting action is similar to the 3/23/03 permit and subsequent modifications in that it;

1. Carries forward the prohibition to discharge when the flow in the Mousam River is less than 20 cfs for Tier II limitations.

2. Carries for the non-summer technology based biochemical oxygen demand (BOD) and total suspended solids (TSS) mass and concentration limits for Tier II.

3. Carries forward the water quality based mass and concentration limits for BOD and TSS for Tier II based on the 2001 TMDL approved by the EPA.

4. Carries forward the seasonal monthly aveage and daily maximum technology based limits for *E. coli* bacteria for Tier II.

5. Carries forward the technology based limitations for settleable solids and pH for Tier II.

6. Carries forward the seasonal water quality based mass and concentration limits for total phosphorus and ammonia for Tier II based on the 2001 TMDL.

7. Carries forward the requirement to maintain a minimum seasonal dissolved oygen content in the effluent for Tier II.

8. Carries forward rountine whole effluent toxicity (WET) and chemical specific testing requrements pursuant to Department rule Chapter 530, *Surface Water Toxics Control Program.*

9. Carries forward all the limitations and monitoring requirements for Tier III.

10. Carries forward the requirement to maintain a current Operations and Maintenance (O&M) Plan and Wet Weather Flow Management Plan for the facility.

2. PERMIT SUMMARY (cont'd)

11. Carries forward authorization to discharge untreated waste waters/storm water from two combined sewer overflow structures and associated reporting requrements.

This permitting action is <u>different than</u> the 3/23/03 permitting action in that it;

12. Eliminates the monthly average water quality based limits for arsenic and lead for for both Tier II and Tier III.

13. Establishes monthly average and/or daily maximum water quality based mass and concentration limits for aluminum and copper for Tier II.

b. <u>History</u>: The most recent/relevant regulatory actions include the following:

September 29, 1993 – The EPA issued a renewal of NPDES permit #ME0100617 for a Five-year term.

June 13, 1994 – The Department issued WDL renewal #W000870-46-C-R for a five-year term.

July 14, 1998 – The EPA issued Administrative Order (AO) #ME0100617, Docket No. 98-12 based on the SSD's inability to consistently meet the effluent limitations for ammonia, aluminum, copper, biochemical oxygen demand (BOD), total suspended solids (TSS), settleable solids, pH and phosphorus and failure to fully implement the industrial pretreatment and combined sewer overflow (CSO) abatement requirements in the 1993 NPDES permit. The AO required the SSD to submit a Waste Water Treatment Facility Upgrade Facilities Plan and Implementation Schedule, a CSO Abatement Master Plan and Implementation Schedule and a final Local Industrial Discharge Limits Report containing proposed modifications to the existing local limits. The SSD has complied with the submission requirements of the AO. The AO established year-round interim mass and/or concentration limits for aluminum, copper, TSS, BOD and settleable solids and seasonal interim limits for ammonia, BOD and phosphorus.

January, 1999 – The SSD submitted an application to the EPA to renew NPDES permit #ME0100617. The EPA deemed the application complete for processing on February 4, 1999. The EPA never acted on the application by issuing a NPDES permit.

May 23, 2000 – The Department administratively modified the WDL for the SSD facility by establishing interim monthly average and daily maximum concentration limits for mercury.

2. PERMIT SUMMARY (cont'd)

February 2001 – The Department submitted a final Total Maximum Daily Load (TMDL) report to the EPA for review and approval. The document entitled, Mousam River TMDL, Town of Sanford, Final Report, Feb 2001, was prepared due to the fact that a 3.7 mile segment of the Mousam River from the Route #4 bridge in Sanford to Estes Lake in Sanford was not attaining the standards of its assigned classification for dissolved oxygen and certain toxic substances. It is noted the SSD discharge is located approximately 0.8 miles downstream of the Route #4 bridge and 2.9 miles upstream of Estes Lake in Sanford. The TMDL was developed for BOD, phosphorus, ammonia nitrogen, and seven toxic substances.

March 8, 2001 – The EPA approved the Department's February 2001 TMDL for the aforementioned 3.7 miles segment of the Mousam River.

March 28, 2003 – The Department issued combination MEPDES permit #ME0100617/WDL #W000870-5L-D-R for a five-year term.

March 30, 2005 – The Department modified the 3/28/03 MEPDES permit by extending the date for compliance with Tier II limitations from 6/1/05 to 8/15/05 and eliminated all water quality based limitations for bis (2-ethylhexhl) phthalate, cadmium, silver and zinc.

August 12, 2005 – The Department modified the 3/28/03 MEPDES permit by extending the date for compliance with Tier II limitations from 8/15/05 to 9/30/05.

October 31, 2005 – The Department modified the 3/28/03 MEPDES permit by extending the date for compliance with Tier II ammonia limitations from 11/1/05 to 12/15/05.

April 10, 2006 – The Department modified the 3/28/03 MEPDES permit/WDL by incorporating the terms and conditions of Department rule Chapter 530, *Surface Water Toxics Control Program*, promulgated on October 15, 2005.

February 19, 2008 – The SSD submit a timely and complete application to the Department to renew the MEPDES permit /WDL for the waste water treatment facility.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (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., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 467(6)(A)(2) classifies the Mousam River main stem, from a point located 0.5 miles above Mill Street in Springvale to its confluence with Estes Lake as a Class C waterway. Maine Law, 38 M.R.S.A., Section 465(4) describes the standards for classification of Class C waters.

Maine law, 38 M.R.S.A., Section 480-B(5) by definition classifies Estes Lake as a Great Pond (GPA). Maine law, 38 M.R.S.A., Section 465-A describes the standards for classification of Class GPA waters.

Maine law, 38 M.R.S.A., Section 464(4)(A)(3) states that the Department may not issue a waste discharge license to any discharge into a tributary of GPA waters that by itself or in combination with other activities causes water quality degradation that would impair the characteristics and designated uses of downstream GPA waters or causes an increase in the trophic state of those GPA waters.

5. RECEIVING WATER QUALITY CONDITIONS

The February 2001 TMDL for the Mousam River, published by the Department and approved by the EPA indicated that a 3.7 mile segment of the Mousam River from the Route #4 bridge in Sanford to Estes Lake was not attaining the standards of its assigned classification for dissolved oxygen and certain toxic substances based on two ambient water quality sampling events conducted by the Department in the summer of 1999. The report states that the major impact to the 3.7 mile segment of river is from nutrients (respiration of bottom attached algae) and nitrogenous BOD (ammonia) which are responsible for 50% and 25% of the total dissolved oxygen depletion, respectively. The water quality model developed by the Department indicates that at full permitted loading, the SSD waste water treatment facility discharge was responsible for two-third's (2/3) of the total dissolved oxygen depletion. The report also states that low dissolved oxygen levels above the SSD discharge are likely due to natural sources and nutrient rich runoff from urban areas of Sanford and Springvale but that non-point source pollution in general does not appear to be a significant factor contributing to dissolved oxygen depletion.

A document entitled, 2006 Integrated Water Quality Monitoring and Assessment Report published by the Department pursuant to Section 305(b) of the Federal Water Pollution Control Act lists a 20.5-mile segment of the Mousam River below Rt #224 bridge in Sanford, in a table entitled, *Category 4-A: Rivers and Streams With Impaired Use, TMDL Completed*. The impairment is described above.

As for Estes Lake, it is listed in a table in the 305(b) report entitled, *Category 4-A Lake Waters with Impaired Use, TMDL Completed*. The impaired designated use is recreation in and on the water due to algal blooms. The table indicates Estes Lake was last sampled in 2005 indicating improvement but algal blooms were still present and that follow-up sampling is planned.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

Lastly, all freshwaters in the State of Maine are listed in the table entitled, *Category 5-C: Waters Impaired by Atmospheric Deposition of Mercury*. *Regional or National TMDL May Be Required*, of the the 305(b) report. The impairment is the designated use of fishing (consumption) as Maine has a fish advisory due to elevated levels of mercury in fish tissue.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The previous permitting action established three tiers of limitations. Tier I limitations were established as interim limitations while the waste water treatment facility was being upgraded to advanced (tertiary) treatment. Tier I (Outfall #001A) limitations became effective upon issuance of the 3/28/03 permit and lasted through October 1, 2005. After October 1, 2005, Tier II (Outfall #001A) limitations became effective, however, discharges from the facility were contingent upon the flow in the Mousam River being $\geq$20 cfs. Tier III (Outfall #001B) limitations were seasonal limitations established for the period February 15th – April 15th of each year. A discharge under Tier III limitations was contingent upon the flow in Mousam River being $\geq$100 cfs during the discharge period. Being that the upgrade at the waste water treatment facility was completed in the fall of 2005, Tier I limitations are no longer applicable and have been removed from this permit. As for Tier II and Tier III limitations, they are being carried forward in this permitting action. For the purposes of consistency and historical context, this permit will continue to refer the three tiers of limitations as Tier I, Tier II and Tier III.

OUTFALL #001A – Tier II, Advanced Treated Effluent

a. Flow:- The summertime (May 1 – September 30) monthly average flow limitation of 3.48 MGD established in the previous permitting action is being carried forward in this permit based on water quality concerns. The non-summer (October 1 – April 30) monthly average flow limit of 4.4 MGD established in the previous permitting action is being carried forward in this permit and was based on water quality concerns and a negotiated settlement between the SSD and the Department. As a result of the reduction of the non-summer flow limit from 5.5 MGD in Tier I to 4.4 MGD in Tier II, the SSD would have been required to store more waste water. Rather than build additional storage capacity, the SSD and Department negotiated an additional flow regime (Tier III) whereby the SSD ws authorized to discharge up to 8.8 MGD between February 15 and April 15 of each year (least water quality impact) provided the flow in the Mousam River is greater than 100 cfs.

b. Dilution Factors: Dilution factors associated with the discharge from the SSD's waste water treatment facility were derived in accordance with freshwater protocols established in Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, October 2005**.** As with the previous permitting action, the facility is prohibited from discharging when the receiving water flow is less than 20 cfs and the monthly average discharge flow limits are seasonal; 3.48 MGD in the summer (October 1 – April 30) and 4.4 MGD in the non-summer (May 1 – September 30). This permit also establishes a monthly average limit of 8.8 MGD for discharges between February 15 and April 15 of each year.

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

Tier II discharges are only authorized at this higher discharge rate when the Mousam River flow is greater than 100 cfs. Dilution calculations are as follows:

$$\text{Dilution Factor} = \frac{\text{River Flow (cfs)(Conv. Factor)} + \text{Plant Flow}}{\text{Plant Flow}}$$

Summer (May 1 – September 30)

Acute & Chronic: 1Q10 & 7Q10 = 20 cfs $\Rightarrow \frac{(20 \text{ cfs})(0.6464) + (3.48 \text{ MGD})}{(3.48 \text{ MGD})} = 4.7:1$

Non-summer (October 1 – April 30)

Acute & Chronic: 1Q10 & 7Q10 = 20 cfs $\Rightarrow \frac{(20 \text{ cfs})(0.6464) + (4.4 \text{ MGD})}{(4.4 \text{ MGD})} = 3.9:1$

Year-round

Harmonic Mean: = 30 cfs $\Rightarrow \frac{(30 \text{ cfs})(0.6464) + (4.4 \text{ MGD})}{(4.4 \text{ MGD})} = 5.4:1$

Footnotes:

Tier II - The prohibition of discharging when the receiving water flow is less than 20 cfs is the critical low flow recommended in the Department's February 2001 TMDL as the flow below which there shall be no discharge. Therefore, for the purposes of this permitting action, 20 cfs is the 7Q10 and 1Q10 critical low flow of the Mousam River for the discharge from the Sanford Sewerage District. It is noted that 20 cfs is not the statistical 7Q10 or 1Q10 of the Mousam River at the point of discharge based on longterm flow records of the Mousam River. The statistical 7Q10 is estimated to be 10 cfs. As for the harmonic mean, because the statistical 7Q10 is estimated to be 10 cfs, the Department is multiplying the 7Q10 by a factor of three to calculate a harmonic mean flow of 30 cfs to be used in calculating a harmonic mean dilution factor for this permitting action.

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS)

1. Non-summer time (October 1 – April 30)

The previous permitting action established non-summer monthly and weekly average BOD5 and TSS concentration limits of 30 mg/L and 45 mg/L respectively, that were based on secondary treatment requirements found in Department rule 06-096 CMR Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of best practicable treatment (BPT). All three concentration limits are being carried forward in this permitting action. The monthly average, weekly average and daily maximum mass limitations were calculated based on the applicable concentration limits and a non-summer flow monthly average flow limitation of 4.4 MGD. The calculations are as follows:

Monthly average: (4.4 MGD)(8.34)(30 mg/L) = 1,101 lbs/day
Weekly average: (4.4 MGD)(8.34)(45 mg/L) = 1,651 lbs/day
Daily Maximum: (4.4 MGD)(8.34) (50 mg/L) = 1,835 lbs/day

2. Summer time (May 1 – September 30)

The monthly average, weekly average and daily maximum concentration limits for BOD and TSS of 10 mg/L, 15 mg/L and 20 mg/L respectively, are being carried forward from the previous permit and were established as a Department best professional judgment of BPT limitations based on the historical effluent data for this time of the year. The monthly average, weekly average and daily maximum summertime BOD_5 mass limits in the previous permitting action were not based on the conventional calculation cited above and a summertime monthly average flow of 3.48 MGD but based on the recommendations in the 2001 TMDL and were water quality based. The summertime mass limits are as follows:

Monthly average = 261 lbs/day
Weekly average = 392 lbs/day
Daily Maximum = 522 lbs/day

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

The monthly average, weekly average and daily maximum mass limitations for TSS were calculated based on the applicable concentration limits and summertime flow monthly average flow limitation of 3.48 MGD. The calculations are as follows:

Monthly average: (3.48 MGD)(8.34)(10 mg/L) = 290 lbs/day
Weekly average: (3.48 MGD)(8.34)(15 mg/L) = 435 lbs/day
Daily Maximum: (3.48 MGD)(8.34) (20 mg/L) = 580 lbs/day

The previous permitting action established an 85% removal for BOD and TSS pursuant to Department rule 06-096 CMR Chapter 525(3)(III)(a&b)(3) that is being carried forward in this permitting action.

d. Settleable Solids – The daily maximum concentration limitation of 0.3 ml/L established in the previous permitting action is being carried forward in this permitting action and is considered by the Department as BPT for secondary treated waste water.

e. *E. coli* Bacteria The previous permitting action established seasonal monthly average and daily maximum *E. coli* bacteria limits of 142 colonies/100 ml and 949 colonies/100 ml respectively, based on the State of Maine Water Classification Program criteria for Class C waters found at Maine law, 38 MRSA, §465(4). The limitations are being carried forward in this permitting action. It is noted that during calendar year 2005, Maine's Legislature approved a new daily maximum water quality standard of 236 colonies/100 ml for water bodies designated as Class B and Class C. However, the Department is carrying forward the limits in the previous permitting action as a best professional judgment of BPT.

f. pH –The previous permitting action established a pH range limitation of 6.0 –9.0 standard units that is being carried forward in this permitting action and is based on Department rule 06-096 CMR Chapter 525(3)(III)(c). The limits are considered BPT.

g. River Flow: The previous permitting action established a discharge prohibition when the flow in the Mousam River was below 20 cfs based on recommendations of the 2001 TMDL. The prohibition was established to protect water quality during low flow conditions in the river and is being carried forward in this permitting action. Both this permit and the previous permit require the SSD to measure the river flow 2/Week on a year-round basis at the permanent gauging station installed at the Route #4 bridge approximately 0.8 river miles upstream from the SSD's waste water treatment outfall pipe. The gauge at the Route #4 bridge shall be calibrated yearly by the U. S. Geological Survey or a qualified hydrogeologist.

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

h. Dissolved Oxygen – Both this permit and the previous permitting action require the SSD to maintain a dissolved oxygen content of >7.5 ppm in the effluent from the waste water treatment facility between May 1 and September 30 based on a recommendation in the 2001 TMDL. Maintaining a minimum dissolved oxygen of >7.5 ppm in the effluent is necessary in order for the Mousam River to attain the Class C dissolved oxygen standards of 5 ppm and 60% saturation at all times and 6.5 ppm as a 30-day rolling average.

i. Total Phosphorus – The previous permitting action established seasonal limits for total phosphorus to control algal blooms in Estes Lake. The non-summer (October 1 – April 30) monthly average and daily maximum mass limits of 23 lbs/day and 46 lbs/day respectively, were originally established to protect Estes Lake from algal blooms and have demonstrated to be successful. Therefore, the limits are being carried forward in this permit along with a 1/Week monitoring requirement.

The previous permitting action established a monthly average summertime (May 1 – September 30) mass limit of 3.0 lbs/day recommended on the 2001 TMDL due to dissolved oxygen depletion in the Mousam River due to algal respiration. The TMDL took into consideration the natural, non-point, and the ground water source inputs of phosphorus in developing the limitation of 3.0 lbs/day. The summertime mass limitation is being carried forward in this permitting action along with the 3/Week monitoring requirement.

j. Ammonia – As with phosphorus, the previous permiting action established seasonal limitations for ammonia based on the 2001 TMDL. The TMDL considered natural, non-point, and the ground water source inputs of ammonia in developing both the non-summer (October 1 – May 14) and summer (May 15 – September 30) ammonia limitations for the SSD discharge. For the non-summer monthly average mass limit, the TMDL recommended the SSD be limited to 276 lbs/day based on an AWQC of 2.6 mg/L which is based on a river temperature of 15ºC and a pH of 7.0 standard units. Back-calculating a concentration limit based on the mass and a flow limitation of 4.4 MGD yields a concentration of 7.52 mg/L. To be consistent with establishing concentration limits for toxics, the calculated end-of-pipe concentration of 7.52 mg/L was increased by a factor of 1.5 to 11.3 mg/L as not to penalize facilities for operating at flows less than permitted design flow of the waste water plant. This represents an effluent concentration that is achievable through proper operation and maintenance of the treatment plant.

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

For the summertime, the previous permiting action established a weekly average mass limitation of 14.5 lbs/day based on the 2001 TMDL to meet water quality in the summer months. No concentration limits were established to give the SSD flexibility in managing the nitrification process in the treatment plant during the summer. The weekly average mass limitation and the 3/Week monitoring requirement are being carried forward in this permitting action.

k. Whole Effluent Toxicity (WET) & Chemical-Specific Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department Rules, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET, priority pollutant and analytical chemistry testing as required by Chapter 530, is included in this permit in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

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

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

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

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

Department rule Chapter 530 (1)(D) specifies the criteria to be used in determining the minimum monitoring frequency requirements for WET, priority pollutant and analytical chemistry testing. Based on the Chapter 530 criteria, the SSD facility falls into the Level I frequency category as the facility has a chronic dilution factor of <20:1. Chapter 530(1)(D)(1) specifies that default screening and surveillance level testing requirements are as follows:

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

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

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
I	4 per year	1 per year	4 per year

A review of the data on file with the Department indicates that to date, SSD has fulfilled the WET and chemical-specific testing requirements of the former Chapter 530.5. See Attachment C of this Fact Sheet for a summary of the WET test results and Attachment D of this Fact Sheet for a summary of the chemical-specific test dates.

Department rule Chapter 530(D)(3)(c) states in part *"Dischargers in Level I may reduce surveillance testing to one WET or specific chemical series per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E).*"

Chapter 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 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.*"

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

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

WET Evaluation

On December 20, 2007, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department. It is noted the Department conducted the statistical evaluation based on the most stringent acute and chronic dilution factor of 3.9:1 in this and the previous permitting action. The statistical evaluation indicates the discharge from the permittee's waste water treatment facility has only one C-NOEL test results of 25% (2/24/04) for the water flea that has a reasonable potential to exceed the critical chronic water quality threshold of 25%. Therefore, a C-NOEL limit of 25% is being established for the water flea.

Based on the results of the 12/20/07 statistical evaluation, the permittee qualifies for the Chapter 530(2)(D)(3)(d) testing reduction for the brook trout but not the water flea. Therefore, this permit action establishes a reduced surveillance level testing of 1/Year for the brook trout but holds the test frequency for the water flea at the default surveillance level of testing of 2/Year.

Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration, surveillance level WET testing is as follows:

Level	WET Testing
I	1 per year for the brook trout 2 per year for the water flea

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

Chapter 530 §(2)(D) states:

(4) 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.

Special Condition L, *Chapter 530 §(2)(D)(4) Certification*, of this permitting action requires the permittee to file an annual certification with the Department.

Department rule Chapter 530 (2)(D)(1) specifies that screening level testing is to be established as follows:

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

Level	WET Testing
I	4 per year for the water flea 4 per year for the brook trout

Analytical chemistry & priority pollutant testing evaluation

Chapter 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*

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

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 of the Mousam River. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

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

As with WET test results, on 12/20/07, the Department conducted a statistical evaluation on the most recent 60 months of analytical chemistry and priority pollutant test results on file with the Department. The statistical evaluation indicates the discharge has one test result of 617 mg/L (10/18/05) that exceeds the chronic AWQC for aluminum, has multiple test results that have a reasonable potential to exceed the chronic AWQC for ammonia (temperature dependent) and has multiple test results that have a reasonable potential to exceed the acute and chronic AWQC for copper.

It is noted the previous permitting action contained water quality based monthly average mass and concentration limits for total arsenic and total lead. The Fact Sheet for the 3/28/03 permit contained the following explanation for the limitations:

> *"The 2001 TMDL recommends the mass and concentrations established in Special Condition A of this permit. The Department took into consideration natural background and non-point source concentrations for each metal. See Attachment D, entitled Table 7 Mousam River (Sanford) TMDL for Toxic Substances, of this Fact Sheet for the derivation of the monthly average and or daily maximum mass and concentration limits for each parameter. It is noted, the concentrations calculated in the far right-hand column with the heading [(Sanford TMDL Conc (ppb)] of Table 7 were multiplied by a factor of 1.5 to establish the applicable permit limits for concentration as not to penalize facilities for operating at flows less than permitted design flow of the waste water plant."*

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

Because the most recent statistical evaluation (taking into consideration withholding 10% for background and 15% reserve) does not indicate arsenic and/or lead are being discharged at levels that exceed or have a reasonable potential to exceed applicable AWQC, these parameters are being eliminated from this permit.

Chapter 530 §(3)(E) states *"... that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action."*

Chapter 530 §(3)(D) states *"Expression of effluent limits. Where the need for effluent limits has been determined, limits derived from acute water quality criteria must be expressed as daily maximum values. Limits derived from chronic or human health criteria must be expressed as monthly average values."* Therefore, this permit modification establishes monthly average (chronic) end-of-pipe (EOP) mass and concentrations limits for aluminum, ammonia and copper and daily maximum (acute) EOP mass and concentration limit for copper. The derivation for these limits is as follows:

Aluminum (Total):

Chronic AWQC = 87 ug/L
Chronic dilution factor = 3.9:1

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]

EOP = [3.9 x 0.75 x 87 ug/L] + [0.25 x 87 ug/L] = 276 ug/L

Based on a permitted flow of 4.4 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Monthly Avg. Mass Limit
Aluminum	276 ug/L	10 lbs/day

Example Calculation: Aluminum - $\frac{(276 \text{ ug/L})(8.34)(4.4 \text{ MGD})}{1000 \text{ ug/mg}}$ = 10 lbs/day

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

Ammonia (Total):

Chronic AWQC = 1.0 mg/L (based on 25ºC, pH 7.0 S.U.)
Chronic dilution factor = 3.9:1

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]

EOP = [3.9 x 0.75 x 3.0 mg/L] + [0.25 x 3.0 mg/L] = 9.5 mg/L

Based on a permitted flow of 4.4 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Monthly Avg. Mass Limit
Ammonia	9.5 mg/L	349 lbs/day

Example Calculation: Ammonia - (9.5 mg/L)(8.34)(4.4 MGD) = 349 lbs/day

Though the allowable water quality based mass and concentration limits calculated above are representative of the assimilative capacity of the Mousam River, the previous permitting action established more stringent limitations for both mass and concentration based on the recommendations in the 2001 TMDL approved by the EPA. Therefore, the seasonal limitations for ammonia established in the previous permitting action are being carried forward in this permitting action. See section 6(j) of this Fact Sheet.

Copper (Total):

Acute AWQC = 3.07 ug/L
Acute dilution factor = 3.9:1

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
EOP = [3.9 x 0.75 x 3.07 ug/L] + [0.25 x 3.07 ug/L] = 9.7 ug/L

Based on a permitted flow of 4.4 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Daily Max. Mass Limit
Copper	9.7 ug/L	0.36 lbs/day

Example Calculation: Copper - $\frac{(9.7 \text{ ug/L})(8.34)(4.4 \text{ MGD})}{1000 \text{ ug/mg}}$ = 0.36 lbs/day

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

Copper (Total):

Chronic AWQC = 2.36 ug/L
Chronic dilution factor = 3.9:1

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]
EOP = [3.9 x 0.75 x 2.36 ug/L] + [0.25 x 2.36 ug/L] = 7.5 ug/L

Based on a permitted flow of 4.4 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Daily Max. Mass Limit
Copper	7.5 ug/L	0.28 lbs/day

Example Calculation: Copper - $\frac{(7.5 \text{ ug/L})(8.34)(4.4 \text{ MGD})}{1000 \text{ ug/mg}}$ = 0.28 lbs/day

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

As not to penalize the permittee for operating at flows less than the permitted flow, the Department is establishing concentration limits based on a factor of 1.5. Therefore, concentration limits for the parameter of concern in this permit are as follows:

Parameter	Calculated EOP Concentration	Monthly Avg. Conc. Limit	Daily Max. Conc. Limit
Aluminum	276 ug/L	414 ug/L	---
Copper	9.7 ug/L	---	14 ug/L
Copper	7.5 ug/L	11 ug/L	---

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

The Department is not requiring the permittee to conducted a TRE for aluminum at this time as the permittee has submitted seven sample results for aluminum since the 10/18/05 test result that exceeded the chronic AWQC. It is also noted the test result of concern is more than three times higher than the next highest test result (200 ug/L) for aluminum on file at the Department for the SSD facility and is not indicative of historic concentration levels . The Department will continue to track future test results for aluminum to determine if concentration levels remain below the critical chronic AWQC threshold. If not, the Department will require the permittee to conduct a TRE at that time.

Chapter 530 does not establish specific monitoring frequencies for parameters that exceed or have a reasonable to exceed AWQC. This permitting action is establishing the monitoring frequencies for ammonia based on a best professional judgment given the timing, frequency and severity of the exceedence or reasonable potential to exceed AWQC. To be consistent with the default surveillance level monitoring requirements in Chapter 530, the Department is establishing a monitoring frequency of 1/Quarter for both aluminum and copper.

As for the remaining parameters, monitoring frequencies for priority pollutant and analytical testing established in this permitting action are based on the Chapter 530 rule. Chapter 530(2)(D)(3)(d) states in part that for Level I facilities "… *may reduce surveillance testing to one WET or specific chemical series per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E)"*. Based on the results of the 12/20/07 statistical evaluation, the permittee qualifies for the testing reduction. Therefore, this permit action establishes surveillance level priority pollutant and analytical testing (with the exception of aluminum, ammonia and copper) requirements as follows:

Beginning upon permit issuance and lasting through 12 months prior to permit expiration surveillance level testing requirements are as follows:

Level	Priority pollutant testing	Analytical chemistry
I	Not required	1 per year

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

OUTFALL #001A – Tier II, Advanced Treated Effluent

Department rule Chapter 530 (2)(D)(1) specifies that screening level testing is to be establishes for analytical chemistry and priority pollutant testing requirements as follows:

Beginning 12 months prior to and lasting through permit expiration and every five years thereafter screening level testing is as follows:.

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

As with WET testing, Chapter 530 (2)(D) requires an annual certification to qualify for reduced testing. Special Condition L, *Chapter 530 (2)(D)(4) Certification*, of this permitting action requires the permittee to file an annual certification with the Department.

i. Mercury - 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 #W000870-5L-D-R by establishing interim average and maximum effluent concentration limits of 4.5 parts per trillion (ppt) and 6.8 ppt, respectively, and a minimum monitoring frequency requirement of four (4) tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through 38 M.R.S.A.§ 413 and 06-096 CMR 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the ambient water quality criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413, subsection 11. A review of the Department's data base for the period December 2000 – October 2007 indicates mercury test results have ranged from 0.2 ppt to 11.1 ppt with an arithmetic mean (n=30) of 2.3 ppt.

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

OUTFALL #001B – Tier III, High Flow
[See Special Condition A(2)]

As a result of the reduction of the wintertime flow limit from 5.5 MGD in Tier I to 4.4 MGD in Tier II, the SSD is being required to store more waste water in the winter months. Rather than build additional storage capacity, the SSD and Department negotiated an additional flow regime (Tier III) in the previous permit whereby the SSD was authorized to discharge up to 8.8 MGD between February 15 and April 15 of each year (least water quality impact) provided the flow in the Mousam River was greater than 100 cfs. The same limitation and restrictions are being carried forward in this permitting action.

j. River Flow: - Due to the 100 cfs threshold, the permittee is required to measure the river flow 2/Week on a year-round basis at the permanent gauging station installed at the Route #4 bridge approximately 0.8 river miles upstream from the SSD's waste water treatment outfall pipe. The gauge at the Route #4 bridge shall be calibrated yearly by the U. S. Geological Survey or a qualified hydrogeologist.

k. Flow: The monthly average flow limit of 8.8 MGD established in the previous permit was based on the recommendation in the 2001 TMDL and is being carried forward in this permitting action. The limit was a negotiated value by the SSD and Department and is necessary to manage the different flow regimes in the permit.

l. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS) – The monthly average, weekly average and daily maximum mass limits for BOD5 and TSS are based on recommendations in the 2001 TMDL. The Department has determined the limits are protective of water quality given dissolved oxygen deficits in the Mousam River only occur during the summer months. The monthly average and weekly average concentration limits of 30 mg/L, and 45 mg/L are based on are based on secondary treatment requirements of Department rule 06-096 CMR Chapter 525(3)(III). The maximum daily BOD_5 and TSS concentration limits of 50 mg/L are based on a Department best professional judgment of best practicable treatment. All BOD5 and TSS mass limitations are calculated based on the monthly average permit flow limit of 8.8 MGD and applicable concentration limits as follows:

Monthly average: (8.8 MGD)(8.34)(30 mg/L) = 2,202 lbs/day
Weekly average: (8.8 MGD)(8.34)(45 mg/L) = 3,303 lbs/day
Daily Maximum: (8.8 MGD)(8.34) (50 mg/L) = 3,670 lbs/day

m. Total Phosphorus – The monthly average and daily maximum limits of 23 lbs/day and 46 lbs/day respectively established in Tier II of this permit are being carried forward in Tier III. The Tier II mass limitations for total phosphorus were originally established to protect Estes Lake from algal blooms and have demonstrated to be successful. Therefore, the wintertime monthly average and daily maximum mass limits of 23 lbs/day and 46 lbs/day respectively are being carried forward as Tier III limitations.

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

OUTFALL #001 – Tier III, High Flow
[See Special Condition A(2)]

n. Ammonia Nitrogen - As with Tier II limitations for ammonia, the TMDL considered natural, non-point, and the ground water source inputs of ammonia in developing the high flow ammonia limitations for the SSD discharge. The TMDL recommends the SSD be limited to 612 lbs/day based on an AWQC of 2.7 mg/L which is based on a river temperature of 10ºC and a pH of 7.0 standard units. Back-calculating a concentration limit based on the mass and a flow limitation of 8.8 MGD yields a concentration of 8.33 mg/L. To be consistent with establishing concentration limits for toxics, the calculated end-of-pipe concentration of 8.33 mg/L was increased by a factor of 1.5 to 12.5 mg/L as not to penalize facilities for operating at flows less than permitted design flow of the waste water plant. This represents an effluent concentration that is achievable through proper operation and maintenance of the treatment plant.

o. Arsenic and Lead – The 2001 TMDL recommended the mass and concentrations established in Special Condition A(3) of this permit. The monthly average and or daily maximum concentration limits for said parameters in Tier III were carried forward from Tier II while the corresponding mass limits were doubled from the Tier II limitations based on a doubling of the flow from
4.4 MGD to 8.8 MGD. As previously stated, these parameters are not being limited in this permit based on the 12/20/07 statistical evaluation that indicates these pollutants are not being disharge at levels that exceed or have a reasonable potential to exceed applicable AWQC taking into consideration background levels (10% default) and withholding 15% of AWQC in reserve.

7. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

This permitting action is carrying forward authorization to receive and introduce a daily maximum of up to 40,000 gallons per day of septage wastes into the treatment process or solids handling or treatment plant process. This quantity of septage is approximately 1% of the monthly average design flow of the facility (4.4 MGD) and is consistent with the 1% threshold in Department rule 06-096 CMR 555, *Standards For The Addition of SEptage to Waste Water Treatment Facilities*. The SSD's has submitted an up-to-date written septage management plan to the Department as an exhibit in their February 19, 2008 general application.

8. PRETREATMENT

The permittee is required to administer a pretreatment program based on the authority granted under Federal regulations 40 CFR §122.44(j), 40 CFR Part 403 and section 307 of the Federal Water Pollution Control Act (Clean Water Act) and Department rule Chapter 528, *Pretreatment Program*. The permittee's pretreatment program received EPA approval on July 19, 1985 and as a result, appropriate pretreatment program requirements were incorporated into the previous National Pollutant Discharge Elimination System (NPDES) permit which were consistent with that approval and federal pretreatment regulations in effect when the permit was issued.

Since issuance of the previous NPDES permit, the State of Maine has been authorized by the EPA to administer the federal pretreatment program as part of receiving authorization to administer the NPDES program. Upon issuance of this MEPDES permit, the permittee is obligated to modify (if applicable) its pretreatment program to be consistent with current federal regulations and State rules. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce Department approved specific effluent limits (technically-based local limits - lasted approved by the EPA on January 9, 1999; (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with federal regulations and State rules; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant non-compliance for industrial users; and (6) establish a definition of and track significant industrial users.

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

In addition to the requirements described above, this permit requires that within 180 days of the permit's effective date, the permittee shall submit to the Department in writing, a description of proposed changes to permittee's pretreatment program deemed necessary to assure conformity with current federal and State pretreatment regulations and rules respectively. These requirements are included in the permit (Special Condition 0) to ensure that the pretreatment program is consistent and up-to-date with all pretreatment requirements in effect. Lastly, by December 1 of each calendar year, the permittee must submit a pretreatment report detailing the activities of the program for the twelve month period ending 60 days prior to the due date.

9. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the Mousam River to meet standards for Class C and Estes Lake to meet standards for Class GPA.

10. PUBLIC COMMENTS

Public notice of this application was made in the Sanford News and Journal Tribune newspapers on or about February 16, 2008. The Department receives public comment on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

11. DEPARTMENT CONTACTS

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

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone (207) 287-7693
Electronic mail: gregg.wood@maine.gov

12. RESPONSE TO COMMENTS

During the period of March 12, 2008, through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the Sanford Sewerage District facility. The Department did not receive comments from the permittee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit. Therefore, the Department has not prepared a Response to Comments.