STATE OF MAINE
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

July 25, 2017

Mr. Patrick Cloutier
General Manager
South Portland Water Pollution Control Facility
PO Box 9422
South Portland, ME 04116-942
e-mail*: pcloutier@southportland.org*

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100633
Maine Waste Discharge License (WDL) Application #W001370-5M-K-R
Proposed Draft Permit

Dear. Mr. Cloutier:

Enclosed is a **proposed draft** MEPDES permit and Maine WDL **renewal** which the Department proposes to issue for your facility as a final document after opportunity for your review and comment. By transmittal of this letter, you are provided with an opportunity to comment on the proposed draft document and its special and standard conditions. If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit document from various state and federal agencies and from any other parties who have notified the Department of their interest in this matter.

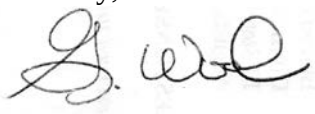
Beginning today, Tuesday, July 25, 2017, the Department is making the draft permit document available for a 30-day public comment period. All comments on the proposed draft permit document must be received in the Department of Environmental Protection office on or before the close of business **Friday, August 25, 2017**. Failure to submit comments in a timely fashion will result in the proposed draft document being issued as drafted.

Comments in writing should be submitted to my attention at the following address:

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

If you have any questions regarding the matter, please feel free to call me at (207) 287-7693 or send me an e-mail at gregg.wood@maine.gov.

Sincerely,



Gregg Wood
Division of Water Quality Management
Bureau of Water Quality

Enc.

cc: Stuart Rose, DEP/SMRO
Barry Mower, DEP/CMRO
Lori Mitchell, DEP/CMRO
Michael Riley, DEP/CMRO
David Webster, USEPA
Ellen Weitzler, USEPA
Alex Rosenberg, USEPA
Marely Vega, USEPA
Olga Vergara, USEPA
Maine DMR
Maine IF&W
Ivy Frignoca, Casco Baykeeper

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

CITY OF SOUTH PORTLAND)	MAINE POLLUTANT DISCHARGE
SOUTH PORTLAND, CUMBERLAND COUNTY)	ELIMINATION SYSTEM PERMIT
MAINE)	AND
PUBLICLY OWNED TREATMENT WORKS)	
#ME0100633)	WASTE DISCHARGE LICENSE
#W001370-5M-K-R **APPROVAL**)	**RENEWAL**

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S. §§ 411 – 424-B, *Water Classification Program*, 38 M.R.S. §§ 464 – 470 and *Federal Water Pollution Control Act*, Title 33 U.S.C. § 1251, and applicable rules of the Department of Environmental Protection (Department hereinafter), the Department has considered the application of the CITY OF SOUTH PORTLAND (City/permittee hereinafter), with its supportive data, agency review comments, and other related materials on file, and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The permittee has submitted a timely and complete application to the Department for the renewal of Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100633/ Maine Waste Discharge License (WDL) #W001370-5M-I-R (permit hereinafter), which was issued by the Department on July 15, 2009, for a five-year term. The July 15, 2009, permit authorized the discharge of secondary treated sanitary wastewater and an unspecified quantity of excess combined sanitary and stormwater receiving primary treatment from the municipal wastewater treatment facility to the Fore River, Class SC, in South Portland, Maine and an unspecified quantity of untreated combined sanitary and stormwater from six (6) combined sewer overflow (CSO) outfalls to receiving waters that were classified as either Class C or Class SC in South Portland, Maine. It is noted the dry weather design flow of the waste water treatment facility is 9.3 MGD.

On February 6, 2012, the Department issued permit modification MEPDES permit #ME0100633/ #W001370-5M-J-M that reduced the monitoring frequency for total mercury from 4/Year to 1/Year.

On December 18, 2015, the Department issued permit modification MEPDES permit #ME0100633/ #W001370-5M-L-M that established Special Conditions requiring the City to prepare an Asset Management Plan and fund a Repair and Replacement reserve account.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the previous permitting action except it is:

1. *Outfall #001A - Secondary Treated Wastewater*

   a. Establishing a daily maximum reporting requirement for discharge flow.

   b. Reducing the monitoring frequencies for biochemical oxygen demand (BOD) and total suspended solids (TSS) from 5/Week to 3/Week and settleable solids from 1/Day to 3/Week based on statistical evaluation of the most current 36 months of test results. The statistical evaluation is supported by both EPA and Department guidance on monitoring frequency reductions.

   c. Establishing a waiver from the daily maximum concentration limitations of 50 mg/L for BOD_5 and TSS during CSO-related bypass events. The Department has defined CSO-related bypass in the permit as a discharge of wastewater from the secondary treatment system via Outfall #001A when the flow rate through the secondary treatment system has exceeded an instantaneous flow rate of 15,900 gallons per minute (gpm) (22.9 MGD).

   d. Eliminating the effluent limitations and monitoring requirements for bis (2-ethylhexyl) phthalate and total zinc as a current statistical evaluation on test results indicates the discharge no longer exceeds or has a reasonable potential to exceed ambient water quality criteria (AWQC) established in 06-096 CMR Chapter 584.

   e. Eliminating the water quality based concentration limits for cyanide and ammonia pursuant to Maine law 38 M.R.S, §464,¶K.

   f. Revising the monthly average water quality based limitations for ammonia and cyanide based on an updated statistical evaluation pursuant to 06-096 CMR 530 and to correct an error in the calculations in the July 15, 2009, permit.

   g. Incorporating the interim mercury limits established by the Department for this facility pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S. § 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); and

   h. Establishing daily maximum, technology-based mass limitations of 12,795 lbs./day for BOD_5 and 9,137 lbs./day for TSS that are protective of water quality standards;

PERMIT SUMMARY (cont'd)

2. *Outfall #001B – Primary Treated Wastewater (Administrative outfall)* -

i. Eliminating the reporting requirements for BOD_5 and TSS percent removal and surface overflow rates as the Department has determined the information being collected is of minimum value;

j. Eliminating the numeric limitations for fecal coliform bacteria and total residual chlorine as they are not necessary given compliance with water quality standards is determined on the blended effluent.

k. Establishing a requirement to report the minimum instantaneous flow rate at which the bypass of secondary treatment is activated.

3. *Blended Effluent (Outfall #001C - Administrative outfall)* - For the purposes of this permitting action, this term refers to discharges of effluent from the secondary treatment system (Outfall #001A) combined with the primary treated waste stream (Outfall #001B – internal waste stream) via the main outfall (Outfall #001A) when the flow rate through secondary treatment has exceeded an instantaneous flow rate of 15,900 gpm (22.9 MGD).

l. Establishing a daily maximum effluent flow monitoring and reporting requirement;

m. Establishing daily maximum, technology-based mass limitations of 12,795 lbs./day for BOD_5 and 9,137 lbs./day for TSS that are protective of water quality standards;

n. Establishing a water quality-based effluent limitation of 0.078 mg/L for total residual chlorine (TRC);

o. Establishing a water quality-based effluent limitation of 50 colonies / 100 mL for fecal coliform bacteria;

CONCLUSIONS

Based on the findings summarized in the attached **PROPOSED DRAFT** Fact Sheet dated July 25, 2017, and subject to the special and standard conditions that follow, the Department makes the following CONCLUSIONS:

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

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

3. The provisions of the State's antidegradation policy, *Classification of Maine waters,* 38 M.R.S. §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 natural resource, that water quality will be maintained and protected;

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

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

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

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

ACTION

Based on the findings and conclusions as stated above, the Department APPROVES the above noted application of the CITY OF SOUTH PORTLAND to discharge secondary treated sanitary wastewater; an unspecified volume of blended primary and secondary treated municipal wastewater to the Fore River, Class SC, in South Portland Maine; and an unspecified quantity of untreated combined sanitary and stormwater from the six (6) combined sewer overflow (CSO) outfalls identified in Special Condition J to the identified receiving waters classified as Class C or Class SC in South Portland, Maine**,** SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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

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

3. This permit and the authorization to discharge become effective upon the date of signature below and expire at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (amended August 25, 2013)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____ 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
Paul Mercer, Commissioner

Date of initial receipt of application: May 5, 2014

Date of application acceptance: May 6, 2014

Date filed with Board of Environmental Protection _____

This Order prepared by Gregg Wood, BUREAU OF WATER QUALITY

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge **secondary treated waste waters** to the Fore River. Such treated waste water discharges shall be limited and monitored by the permittee as specified below. **OUTFALL #001A – Secondary treatment**

Effluent Characteristic							**Minimum Monitoring Requirements**	
	Monthly Average	**Weekly Average**	**Daily Maximum**	**Monthly Average**	**Weekly Average**	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Flow *[50050]*	Report MGD *[03]*	---	Report (MGD)	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
Biochemical Oxygen Demand (BOD_5) ***[00310]***	2,327 lbs/Day *[26]*	3,490 lbs/Day *[26]*	12,795 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L **(1a)** *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
BOD_5 % Removal **(1b)** *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
BOD_5 *[00310]* ***(When bypass is active)***	---	---	12,795 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	Report mg/L *[19]*	3/Week *[03/07]*	Composite *[24]*
Total Suspended Solids (TSS) *[00530]*	2,327 lbs/Day *[26]*	3,490 lbs/Day *[26]*	9,137 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L **(1a)** *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS % Removal **(1b)** *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]* ***(When bypass is active)***	---	---	9,137 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	Report mg/L *[19]*	3/Week *[03/07]*	Composite *[24]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	3/Week *[03/07]*	Grab *[GR]*
Fecal Coliform Bacteria **(2)** *[31616] (May 15 – September 30)*	---	---	---	15/100 mL **(3)** *[13]*	---	50/100 mL *[13]*	5/Week *[05/07]*	Grab *[GR]*
Total Residual Chlorine **(4)** *[50060]*	---	---	---	0.075 mg/L *[19]*	---	0.078 mg/L *[19]*	2/Day *[02/01]*	Grab *[GR]*
pH (Std. Units) *[00400]*	---	---	---	---	---	6.0-9.0 *[12]*	1/Day *[01/01]*	Grab *[GR]*

Footnotes: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

OUTFALL #001A – Secondary treatment

Effluent Characteristic	Discharge Limitations			Minimum Monitoring Requirements		
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Ammonia (as N) ***(June – October)*** *[00610]*	---	706 lbs./day *[26]*	---	Report mg/L *[19]*	1/Quarter *[01/90]*	Composite *[24]*
Ammonia (as N) ***(November – May)*** *[00610]*	---	1,055 lbs./day *[26]*	---	Report mg/L *[19]*	1/Quarter *[01/90]*	Composite *[24]*
Cyanide Amendable to Chlorination *[00722]*	---	0.43 lbs./day *[26]*	---	Report µg/L *[28]*	2/Year *[02/YR]*	Grab *[GR]*
Mercury **(5)** *[71900]*	---	---	4.8 ng/L *[3M]*	7.2 ng/L *[3M]*	1/Year *[01/YR]*	Grab *[GR]*
Total Kjeldahl Nitrogen (as N) *[00625]* ***(May – Oct) Calendar years 2018 & 2019***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
Nitrate + Nitrate Nitrogen (as N) *[00630]* ***(May – Oct) Calendar years 2018 & 2019***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
Total Nitrogen (as N) *[00600]* ***(May – Oct) Calendar years 2018 & 2019***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
Total Nitrogen (as N) **(6)** *[00600]* ***DMR for the month of October***	Report lbs/day *[26]*	---	---	---	1/Season *[01/SN]*	Calculate *[CA]*
Total Kjeldahl Nitrogen (as N) *[00625]* ***(May – Oct) Beginning calendar year 2020***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Month *[01/30]*	Composite *[24]*
Nitrate + Nitrate Nitrogen (as N) *[00630]* ***(May – Oct) Beginning calendar year 2020***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Month *[01/30]*	Composite *[24]*
Total Nitrogen (as N) *[00600]* ***(May – Oct) Beginning calendar year 2020***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Month *[01/30]*	Composite *[24]*
Total Nitrogen (as N) **(6)** *[00600]* ***DMR for the month of October***	Report lbs/day *[26]*	---	---	---	1/Season *[01/SN]*	Calculate *[CA]*

Footnotes: **See Pages 12 through 17 of this permit for applicable footnotes.**

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

SURVEILLANCE LEVEL TESTING **-** Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit).

OUTFALL #001A – Secondary treatment

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						
Americamysis bahia *[TDM3E]* *(Mysid Shrimp)*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Chronic – NOEL						
Arbacia punctulata *[TBH3A]* *(Sea urchin)*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Analytical chemistry[8,10] *[51477]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

Footnotes: **See Pages 12 through 17 of this permit for applicable footnotes.**

SPECIAL CONDITIONS

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

SCREENING LEVEL TESTING **-** Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement.

OUTFALL #001A – Secondary treatment

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** *Americamysis bahia* *[TDM3E]* *(Mysid Shrimp)*	---	---	---	Report % *[23]*	1/Quarter *[01/90]*	Composite *[24]*
Chronic – NOEL *Arbacia punctulata* *[TBH3A]* *(Sea urchin)*	---	---	---	Report % *[23]*	1/Quarter *[01/90]*	Composite *[24]*
Analytical chemistry[8,10] *[51477]*	---	---	---	Report ug/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority pollutant[9,10] *[50008]*	---	---	---	Report ug/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

Footnotes: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. Consistent with CSO bypass regulations, the permittee is allowed to bypass secondary treatment and provide primary treatment only **Outfall #001B** (**administrative outfall**) prior to combining with secondary treated wastewater**.** Bypassing secondary treatment is allowed when the flow to the treatment plant has exceeded the instantaneous flow rate of 15,900 gpm (22.9 MGD). Allowance to bypass secondary treatment will be reviewed and may be modified or terminated pursuant to Special Condition P, *Reopening of Permit for Modification*, if there is substantial change in the volume or character of pollutants in the collection/treatment system. Also see supplemental report form, *DEP-49-CSO Form For Use With Dedicated CSO Primary Clarifier*, **Attachment E** of this permit. **Outfall 001B** shall be monitored as follows:

OUTFALL #001B Primary Treatment

Effluent Characteristic	**Discharge Limitations**				**Monitoring Requirements**	
	Monthly Average	**Daily Maximum**	**Monthly Average**	**Daily Maximum**	**Measurement Frequency**	**Sample Type**
Overflow Use, Occurrences**(11)** *[74062]*	---	---	Report (# of days) *[93]*	---	1/Discharge Day *[01/DD]*	Record Total *[RT]*
Influent Flow Rate Minimum *[00058]*	---	Report (gpm) **(12)** *[78]*	---	---	Instantaneous *[91/99]*	Recorder *[RC]*
Flow, MGD *[50050]*	Report (Total MGD) *[03]*	Report (MGD) *[03]*	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD5 *[00310]*	---	Report lbs/day *[26]*	---	Report mg/L *[19]*	3/Week**(13)** *[02/07]*	Composite *[24]*
TSS *[00530]*	---	Report lbs/day *[26]*	---	Report mg/L *[19]*	3/Week**(13)** *[02/07]*	Composite *[24]*
Fecal coliform bacteria *[31616]* *(May 15 – September 30)*	---	---	---	Report col/100 ml *[13]*	5/Week**(13)** *[03/07]*	Grab *[GR]*
Total Residual Chlorine *[50060]*	---	---	--	Report mg/L *[19]*	2/Day**(13)** *[01/01]*	Grab *[GR]*

Footnotes: See Pages 12 through 17 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LI MITATIONS AND MONITORING REQUIREMENTS (cont'd)

Outfall #001C. Consistent with CSO bypass regulations, the permittee is allowed to discharge primary and secondary treated wastewater **(blended effluent)** from **Outfall #001C** (administrative outfall) to the Fore River. These limitations and monitoring requirements apply after blending when the flow to the treatment facility has exceeded the instantaneous flow rate of 15,900 gpm (22.9 MGD). Allowance to bypass secondary treatment will be reviewed and may be modified or terminated pursuant to Special Condition P, *Reopening of Permit for Modification,* if there is substantial change in the volume or character of pollutants in the collection/treatment system.

BLENDED EFFLUENT (OUTFALL #001C)

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD *[50050]*		Report (MGD) *[03]*	---	---	When Discharging *[WH/DS]*	Calculate *[CA]*
BOD5 *[00310]*	---	12,795 lbs/day(14) *[26]*	---	Report mg/L(15) *[19]*	3/Week(13) *[02/07]*	Calculate *[CA]*
TSS *[00530]*	---	9,137 lbs/day(14) *[26]*	---	Report mg/L(15) *[19]*	3/Week(13) *[02/07]*	Calculate *[CA]*
Fecal coliform Bacteria(2) *[31616]* *(May 15 – September 30)*	---	---	---	50 col/100 ml(15) *[13]*	5/Week(13) *[02/07]*	Calculate *[CA]*
Total Residual Chlorine(4) *[50060]*	---	---	--	0.078 mg/L(15) *[19]*	1/Day(13) *[01/01]*	Calculate *[CA]*

SPECIAL CONDITIONS

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

Footnotes:

Sampling - Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services for waste water. Samples that are analyzed by laboratories operated by waste discharge facilities licensed pursuant to *Waste discharge licenses,* 38 M.R.S. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules,* 10-144 CMR 263 (last amended April 1, 2010). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in this permit, all results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report.

Sampling locations

Influent sampling for BOD_5 and TSS for wastewater receiving primary treatment must be sampled at the overflow splitter box downstream of the CSO influent flume.

Influent sampling for BOD_5 and TSS for wastewater receiving secondary treatment must be sampled after the influent Parshall flume but before the mechanical bar screen of the treatment facility.

Effluent receiving secondary treatment (Outfall #001A)- Grab samples receiving secondary treatment must be collected in the discharge pipe invert, past the dechlorination tank. During periods when Outfall #001A is in operation, grab samples receiving secondary treatment must be collected at the end of the dechlorination tank. All composite samples must be collected at the end of the dechlorination tank.

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

1. BOD & TSS

a. **Outfall #001A** – Limitations for Outfall #001A remain in effect at all times with the exception of daily maximum concentration limits of 50 mg/L for BOD and TSS on any day when the bypass of secondary treatment is active and any sample results obtained on these days are not to be included in calculations to determine compliance with monthly or weekly average limitations.

SPECIAL CONDITIONS

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

b. **Percent removal** - The treatment facility must maintain a minimum of 85 percent removal of both BOD_5 and TSS for all waste waters receiving a secondary level of treatment. The percent removal must be based on a monthly average calculation using influent and effluent concentrations. The percent removal shall be waived if the calculated percent removal is less than 85% and the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report *"N-9"* on the monthly Discharge Monitoring Report.

2. **Bacteria limitations –** Fecal coliform bacteria limitations and monitoring requirements are seasonal and apply between May 15 and September 30, inclusive, of each year. In accordance with 38 M.R.S. § 414-A(5), the Department may, at any time and with notice to the permittee, modify this permit to establish bacteria limitations on a year-round basis to protect the health and welfare of the public.

3. **Bacteria reporting –** The monthly average fecal coliform bacteria limitation is a geometric mean limitation and monitoring results must be reported as such.

4. **TRC monitoring** –Limitations and monitoring requirements are in effect any time elemental chlorine or chlorine-based compounds are utilized to disinfect the discharge(s). The permittee must utilize a USEPA-approved test method capable of bracketing the TRC limitations specified in this permitting action. Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. For instances when a facility has not disinfected with chlorine-based compounds for an entire reporting period, the facility must report *"N9"*on the monthly electronic DMR.

5. **Mercury** – Sampling must be conducted in a different calendar quarter of each year such that all four quarters of the year are sampled during the term of the permit. The permittee must conduct all mercury sampling required by this permit or required to determine compliance with interim limitations established pursuant to 06-096 CMR 519 in accordance with the USEPA's "clean sampling techniques" found in USEPA Method 1669, *Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels*. All mercury analysis must be conducted in accordance with USEPA Method 1631, *Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.* See **Attachment A** for a Department report form for mercury test results. Compliance with the monthly average limitation established in Special Condition A.1 of this permit will be based on the cumulative arithmetic mean of all mercury tests results that were conducted utilizing sampling Methods 1669 and analysis Method 1631E on file with the Department for this facility.

6. **Total Nitrogen (as N) – Seasonal daily average -** The permittee is required to report the seasonal daily average mass of total nitrogen discharged from the facility on the October DMR for each year. The seasonal daily average mass must be calculated by summing the mass results for each sampling event and dividing by the total number of samples. See Special Condition H of this permit for annual reporting requirements. See **Attachment B** of this permit for the Department's protocol entitled, *Protocol For Total Nitrogen Sample Collection and Analysis For Waste Water Effluent*.

SPECIAL CONDITIONS

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

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 thresholds of 17% and 10% respectively), which provides an estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 6:1 and 10:1, respectively.

   a. **Surveillance level testing** - Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit), the permittee must initiate surveillance level acute and chronic WET testing at a minimum frequency of once per year (1/Year) on the mysid shrimp (*Americamysis bahia*) and the sea urchin (*Arbacia punctulata*). Testing must be conducted in a different calendar quarter of each year such that a test is conducted in all four calendar quarters during the term of the permit.

   b. **Screening level testing -** Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee must conduct screening level acute and chronic WET testing at a minimum frequency of four times per year (1/Quarter) for both species.

   WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee must evaluate test results being submitted and identify to the Department possible exceedances of the critical acute and chronic water quality thresholds of 17% and 10%, respectively.

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

   a. U.S. Environmental Protection Agency, 2002. Short-term Methods for Estimating the chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third edition, October 2002, EPA 821-R002-014.

   b. U.S. Environmental Protection Agency, 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth edition, October 2002, EPA 821-R-02-012.

SPECIAL CONDITIONS

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

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

8. **Analytical chemistry** – Refers to those pollutants listed under "Analytical Chemistry" on the form included as **Attachment D** of this permit.

   a. **Surveillance level testing** - Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit), the permittee must conduct analytical chemistry testing at a minimum frequency of once per year. Testing must be conducted in a different calendar quarter of each year such that a test is conducted in all four calendar quarters during the term of the permit.

   b. **Screening level testing** - Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee must conduct screening level analytical chemistry testing at a minimum frequency of four times per year (4/Year) in successive calendar quarters.

9. **Priority pollutant testing –** Refers to those pollutants listed under "Priority Pollutants" on the form included as **Attachment D** of this permit.

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

   b. **Screening level testing** - Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement, the permittee must conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year) in any calendar quarter provided the sample is representative of the discharge and any seasonal or other variations in effluent quality.

10. **Priority pollutant and analytical chemistry testing** – This testing must 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 must be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department.

SPECIAL CONDITIONS

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

Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee must evaluate test results being submitted and identify to the Department, possible exceedances of the acute, chronic or human health AWQC as established in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (last amended July 29, 2012). For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "N9" monitoring not required this period.

11. **Overflow occurrence** – An overflow occurrence is defined as the period of time between initiation and cessation of flow from the storm flow chlorine contact tank. Overflow occurrences are reported in number of days. Multiple overflow occurrences may occur in a single day but should be reported as a single event.

12. M**inimum instantaneous influent flow** – For each month in which the bypass is active, the permittee must report the minimum instantaneous influent flow rate entering the headworks of the plant.

13. **Bypass sampling** – Sampling for BOD, TSS, fecal coliform bacteria and total residual chlorine are only required if a continuous overflow occurrence is greater than 60 minutes in duration or intermittent occurrences totaling 120 minutes during a 24-hour period. Multiple intermittent overflow occurrences in one discharge day are reported as one overflow occurrence and are sampled according to the measurement frequency specified. One composite sample for BOD5 and TSS and one grab sample for *E. coli* bacteria and total residual chlorine each must be collected per overflow occurrence that meets the time frames specified above. Sampling of an overflow occurrence is only required if the overflow occurrence coincides with the regularly scheduled sampling days of the secondary treated waste stream. Composite samples must be flow proportioned from all intermittent overflows during that 24-hour period.

14. **BOD & TSS** – For reporting compliance with the daily maximum mass limitation for BOD and TSS when the secondary bypass has been active, the permittee shall mathematically add the daily mass values of BOD and TSS of the secondary treated waste water (Outfall #001A) to each of the corresponding daily BOD and TSS mass values of the primary treated waste water (Outfall #001B) when the bypass is active and report the highest combined mass of BOD and TSS values for each month. Example calculation is as follows:

(Daily BOD/TSS mass for Outfall #001A during a bypass event)
+
(Daily BOD/TSS mass for Outfall #001B during a bypass event)
=
BOD/TSS mass (daily blended effluent for each bypass event).

Report the highest blended effluent BOD/TSS mass values for each month.

SPECIAL CONDITIONS

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

15. **BOD, TSS, Total residual chlorine & fecal coliform bacteria** - To fulfill the daily maximum reporting concentration requirements for BOD, TSS and total residual and the bacteria counts for fecal coliform bacteria when the secondary bypass has been active, the permittee must report the daily maximum flow weighted concentration and bacteria count for each month in accordance with the following equation:

    [(Daily BOD/TSS/TRC/concentration and bacteria count of Outfall #001A for each bypass event) x (Daily flow of Outfall #001A for each bypass event)

    +

    (Daily BOD/TSS/TRC/concentration and bacteria count of Outfall #001B for each bypass event) x (Daily flow of Outfall #001B for each bypass event)]

    ÷

    (Daily flow for Outfall #001A each bypass event) + (Daily flow for Outfall #001B for each bypass event)

    =

    Weighted concentration or bacteria count

    Report the highest weighted concentration results and bacteria count of the blended effluent for each month

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent must not discharge effluent that contains a visible oil sheen, foam or floating solids at any time which would impair the uses designated for the classification of the receiving waters.

2. The effluent must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the uses designated for the classification of the receiving waters.

3. The effluent must not discharge wastewater that causes visible discoloration or turbidity in the receiving waters that causes those waters to be unsuitable for the designated uses and characteristics ascribed to their class.

4. The effluent must not discharge effluent that lowers the quality of any classified body of water below such classification, or lowers the existing quality of any body of water if the existing quality is higher than the classification.

C. TREATMENT PLANT OPERATOR

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

SPECIAL CONDITIONS

D. AUTHORIZED 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 May 6, 2014; 2) the terms and conditions of this permit; and 3) only from Outfall #001A and the six (6) CSOs listed in Special Condition K, *Combined Sewer Overflows (CSOs)* of this permit. Discharges of wastewater from any other point source(s) are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit.

E. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the wastewater collection and treatment system by a non-domestic source (user) must not pass through or interfere with the operation of the treatment system. The permittee must conduct an Industrial Waste Survey (IWS) any time a new industrial user proposes to discharge within its jurisdiction; an existing user proposes to make a significant change in its discharge; or at an alternative minimum, once every permit cycle and submit the results to the Department. The IWS must identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of the federal Clean Water Act, 40 CFR Part 403 (general pretreatment regulations) or *Pretreatment Program*, 06-096 CMR 528 (last amended March 17, 2008). See **Attachment F** of the Fact Sheet of this permit for guidance on conducting an IWS.

F. NOTIFICATION REQUIREMENT

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

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

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

3. For the purposes of this section, notice regarding substantial change must include information on:

    a. the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and

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

SPECIAL CONDITIONS

G. WET WEATHER MANAGEMENT PLAN

The permittee must maintain a current, written Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow.The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall. A specific objective of the Wet Weather Management Plan must be to maximize the volume of wastewater receiving secondary treatment under all operating conditions. The Wet Weather Management Plan must 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 Department may require the submission of the Wet Weather Management Plan for review and approval.

The permittee must review the Wet Weather Management Plan at least annually and record any necessary changes to keep the plan up-to-date. The Department may require review and update of the plan as it is determined to be necessary.

H. NITROGEN

The permittee must operate the waste water treatment facility to optimize nitrogen removal in order to maintain the mass discharge of total nitrogen no greater than the existing seasonal daily average mass loading of total nitrogen. Seasonal is defined as May 1st – October 31st of each year. The existing seasonal daily average mass loading of total nitrogen will be established based a statistical evaluation of the 2018 and 2019 effluent monitoring data for total nitrogen.

On or before **December 31st** of each year beginning calendar year 2018, the permittee must submit an annual progress report ***(ICIS Code CSO10)*** to the Department that summarizes activities related to optimizing nitrogen removal efficiencies, documents the seasonal nitrogen discharge load from the facility and tracks trends relative to the previous year. The progress report must also contain a scope of work or tasks/measures to be taken in the next 12-month period to further reduce the nitrogen loading from the treatment facility.

I. OPERATIONS AND MAINTENANCE (O&M) PLAN

The permittee must have a current written comprehensive Operation & Maintenance (O&M) Plan for this facility. The plan must specify how the permittee will 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.

SPECIAL CONDITIONS

I. OPERATIONS AND MAINTENANCE (O&M) PLAN (cont'd)

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

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

J. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY

Pursuant to this permit and *Standards for the Addition of Transported Wastes to Wastewater Treatment Facilities,* 06-096 CMR 555 (effective March 9, 2009), during the effective period of this permit, the permittee is authorized to receive up to **a daily maximum of 20,000 gallons per day (gpd)** of transported wastes at the treatment plant and is authorized to introduce into the treatment process up to **a daily maximum of 10,000 gpd**, subject to the following terms and conditions.

1. **"**Transported wastes" means any liquid non-hazardous waste delivered to a wastewater treatment facility by a truck or other similar conveyance that has different chemical constituents or a greater strength than the influent described on the facility's application for a waste discharge license. Such wastes may include, but are not limited to septage, industrial wastes or other wastes to which chemicals in quantities potentially harmful to the treatment facility or receiving water have been added.

2. The 20,000 gpd of transported wastes authorized to be received at the treatment facility by this permit is characterized as septage waste, the permittee may introduce into the treatment process no more than a daily maximum of 10,000 gpd of septage.

3. The character and handling of all transported wastes received must be consistent with the information and management plans provided in application materials submitted to the Department.

4. At no time must the addition of transported wastes cause or contribute to effluent quality violations. Transported wastes may not cause an upset of or pass through the treatment process or have any adverse impact on the sludge disposal practices of the wastewater treatment facility. Wastes that contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation must be refused. Odors and traffic from the handling of transported wastes may not result in adverse impacts to the surrounding community. If any adverse effects exist, the receipt or introduction of transported wastes into the treatment process or solids handling stream must be suspended until there is no further risk of adverse effects.

SPECIAL CONDITIONS

J. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY (cont'd)

5. The permittee must maintain records for each load of transported wastes in a daily log which must include at a minimum the following.
   (a) The date;
   (b) The volume of transported wastes received;
   (c) The source of the transported wastes;
   (d) The person transporting the transported wastes;
   (e) The results of inspections or testing conducted;
   (f) The volumes of transported wastes added to each treatment stream; and
   (g) The information in (a) through (d) for any transported wastes refused for acceptance.
   These records must be maintained at the treatment facility for a minimum of five years.

6. The addition of transported wastes into the treatment process or solids handling stream must 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 transported wastes into the treatment process or solids handling stream must be reduced or terminated in order to eliminate the overload condition.

7. Holding tank wastewater from domestic sources to which no chemicals in quantities potentially harmful to the treatment process have been added must not be recorded as transported wastes but should be reported in the treatment facility's influent flow.

8. During wet weather events, transported wastes may be added to the treatment process or solids handling facilities only in accordance with a current high flow management plan approved by the Department that provides for full treatment of transported wastes without adverse impacts.

9. In consultation with the Department, chemical analysis is required prior to receiving transported wastes from new sources that are not of the same nature as wastes previously received. The analysis must be specific to the type of source and designed to identify concentrations of pollutants that may pass through, upset or otherwise interfere with the facility's operation.

10. Access to transported waste receiving facilities may be permitted only during the times specified in the application materials and under the control and supervision of the person responsible for the wastewater treatment facility or his/her designated representative.

11. The authorization in the Special Condition is subject to annual review and, with notice to the permittee and other interested parties of record, may be suspended or reduced by the Department as necessary to ensure full compliance with 06-096 CMR 555 and the terms and conditions of this permit.

SPECIAL CONDITIONS

K. COMBINED SEWER OVERFLOWS (CSOs)

Pursuant to *Combined Sewer Overflow Abatement*, 06-096 CMR 570 (effective date February 5, 2000), the permittee is authorized to discharge from the following locations of CSOs (stormwater and sanitary wastewater) subject to the conditions and requirements herein.

1. CSO Locations

Outfall #	Location	Receiving Water & Class
004	Long Creek CSO	Long Creek (tidal area), Class SC
005	Cash Corner CSO	Calvery Pond, Class C
006	Broadway/Evans CSO	Barberry Creek, Class C
018	Front Street CSO	Portland Harbor, Class SC
019	West High Street CSO	Portland Harbor, Class SC
024	Elm Street CSO	Fore River, Class SC

2. Prohibited Discharges

   a. The discharge of dry weather flows is prohibited.

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

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

   d. Any discharge prohibited by this section must be reported to the Department in accordance with Standard Condition D (1) of this permit.

3. Narrative Effluent Limitations

   a. The effluent must 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 must 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 must 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.

SPECIAL CONDITIONS

K. EFFLUENT LIMITATIONS AND CONDITIONS FOR COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

4. CSO Master Plan [see 06-096 CMR 570(3) and 06-096 CMR 570(4)]

The permittee must implement CSO control projects in accordance with an approved CSO Master Plan. The most recent Master Plan entitled, *Combined Sewer Overflow Facilities Plan Update for the City of South Portland Maine*, dated September 2008 (Revised October 2011) prepared by Wright-Pierce Engineering was approved by the Department on August 30, 2012. The 11-year Implementation Schedule (Table 10-3), which was modified by the City and approved by the Department on November 28, 2016, must be followed.

Key milestones approved in the modified abatement schedule that the permittee is required to comply with during this permit cycle are:

On or before **December 31, 2018**, (EFIS Code 75305) the permittee shall complete construction of the collection system separation projects identified as Elm Street Phase I, consisting of the Pleasantdale and Anthoine separation projects;

On or before **December 31, 2019**, (EFIS Code 75305) the permittee shall complete construction of the collection system capacity upgrade projects identified as Front Street Phase I and West High Street Phase 2;

On or before **December 31, 2020**, (EFIS Code 75305) the permittee shall complete construction of the collection system capacity upgrade projects identified as Evans and Broadway Phase I;

On or before **December 31, 2021**, (EFIS Code 75305) the permittee shall complete construction of the wastewater screening and collection system capacity upgrade projects identified as Front Street Phase 2, and the collection system capacity upgrade project identified as Cash Corner Phase 4;

On or before **October 15, 2022**, (EFIS Code 81699) the permittee shall submit to the Department for review and approval, an Updated CSO Master Plan and implementation schedule.

To modify the dates and or projects specified above (but not dates in the Master Plan), the permittee must file an application with the Department to formally modify this permit. The work items identified in the abatement schedule may be amended from time to time based upon approval by 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 06-096 CMR 570(5)]

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

SPECIAL CONDITIONS

K. EFFLUENT LIMITATIONS AND CONDITIONS FOR COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

6. CSO Compliance Monitoring Program [see 06-096 CMR 570(6)]

   The permittee must 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 must be determined by actual flow monitoring, or by estimation using a model such as USEPA's Storm Water Management Model (SWMM).

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

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

7. Addition of New Wastewater [see 06-096 CMR 570(8)]

   06-096 CMR 570(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 must 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 06-096 CMR 570(7)]

   By March 1 of each year *[ICIS Code 11099]* the permittee must submit *CSO Progress Reports* covering the previous calendar year (January 1 to December 31). The CSO Progress Report must include, but is not necessarily limited to, the following topics as further described in 06-096 CMR 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 must 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 Water Quality
   17 State House Station
   Augusta, Maine 04333
   e-mail: CSOCoordinator@maine.gov

SPECIAL CONDITIONS

K. EFFLUENT LIMITATIONS AND CONDITIONS FOR COMBINED SEWER OVERFLOWS (CSOs) (cont'd)

9. Signs

If not already installed, the permittee must 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 must be a minimum of 12" x 18" in size with white lettering against a green background and must contain the following information:

CITY OF SOUTH PORTLAND
WET WEATHER
SEWAGE DISCHARGE
CSO # AND NAME

10. Definitions

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

a. Combined Sewer Overflow - a discharge of excess waste water from a municipal or quasi-municipal sewerage system that conveys both sanitary wastes and stormwater 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.

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

By December 31 of each calendar year, the permittee must provide the Department with a certification describing any of the following that have occurred since the effective date of this permit ***[ICIS Code 96299]***. See **Attachment E** of the Fact Sheet of this permit for an acceptable certification form to satisfy this Special Condition.

a. Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;
b. Changes in the operation of the treatment works that may increase the toxicity of the discharge;
c. Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge;
d. Changes in stormwater collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge; and
e. Increases in the type or volume of transported (hauled) wastes accepted by the facility.

The Department may require more frequent monitoring if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

SPECIAL CONDITIONS

M. INDUSTRIAL PRETREATMENT PROGRAM

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

    a. The permittee must develop and enforce specific effluent limits (local limits) or conditions (Best Management Practices) 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 POTWs MEPDES permit or sludge use or disposal practices. Specific local limits must not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.

    Within 180 days of the effective date of this permit, ***[ICIS code PR002]*** the permittee must prepare and submit a written technical evaluation to the Department analyzing the need to revise local limits. As part of this evaluation, the permittee must assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee must complete the "Re-Assessment of Technically Based Local Limits" form included as **Attachment G** of this permit with the technical evaluation to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. Should the evaluation reveal the need to revise local limits, the permittee must complete the revisions within 120 days of notification by the Department and submit the revisions to the Department for approval. The permittee must carry out the local limits revisions in accordance with USEPA's document entitled, *Local Limits Development Guidance (July 2004).*

2. The permittee must 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 *Pretreatment Program*, 06-096 CMR 528 (last amended March 17, 2008). 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 must 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.

    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.

SPECIAL CONDITIONS

M. INDUSTRIAL PRETREATMENT PROGRAM (cont'd)

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 must 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 06-096 CMR 528(12)(i). The annual report ***[ICIS code 53199]*** must be consistent with the format described in the "MEPDES Permit Requirements For Industrial Pretreatment Annual Report" form included as **Attachment H** of this permit and must be submitted no later than September 1 of each calendar year.

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 06-096 CMR 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 405-471.

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,** ***[ICIS code 50799]*** the permittee must provide the Department in writing, proposed changes 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 06-096 CMR 528(18). This submission is separate and distinct from any local limits analysis submission described in section 1(a) above.

SPECIAL CONDITIONS

N. MONITORING AND REPORTING

Electronic Reporting

NPDES Electronic Reporting, 40 C.F.R. 127, requires MEPDES permit holders to submit monitoring results obtained during the previous month on an electronic discharge monitoring report to the regulatory agency utilizing the USEPA electronic system.

Electronic Discharge Monitoring Reports (DMRs) submitted using the USEPA NetDMR system, must be:

1. Submitted by a facility authorized signatory; and
2. Submitted no later than **midnight on the 15th day of the month** following the completed reporting period.

Documentation submitted in support of the electronic DMR may be attached to the electronic DMR. Toxics reporting must be done using the DEP Toxsheet reporting form included as **Attachment D** of this permit. An electronic copy of the Toxsheet reporting document must be submitted to the assigned Department compliance inspector as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to the assigned compliance inspector, or a copy attached to the NetDMR submittal will suffice. Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15th day of the month following the completed reporting period.

An electronic copy of the secondary treatment bypass reporting document must be submitted to the assigned Department compliance inspector and the CSO Coordinator as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to the assigned compliance inspector, or a copy attached to your NetDMR submittal will suffice. Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15th day of the month following the completed reporting period.

Non-electronic Reporting

If you have received a waiver from the Department concerning the USEPA electronic reporting rule, or are permitted to submit hardcopy DMR's to the Department, then your monitoring results obtained during the previous month must be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and postmarked on or before the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period.

Toxsheet reporting forms must be submitted electronically as an attachment to an email sent to the Department assigned compliance inspector. In addition, a signed hardcopy of your Toxsheet must also be submitted.

SPECIAL CONDITIONS

N. MONITORING AND REPORTING

A signed copy of the DMR and all other reports required herein must be submitted to the Department assigned compliance inspector (unless otherwise specified) following address:

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

An electronic version of *"CSO Activity and Volumes"* (**Attachment F** of this permit) or similar format shall be submitted to the Department assigned compliance inspector at the above address and to the CSO Coordinator at the address below:

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

O. REPAIR AND REPLACEMENT RESERVE ACCOUNT

Beginning October 1, 2017, **and every year thereafter through October 1, 2020,** the permittee must fund a Repair and Replacement Reserve Account in the amount recommended in the permittee's AMP or at a minimum of 2% of the permittee's total yearly waste water operation and maintenance budget.

On or before October 1, 2017, and every year thereafter through October 1, 2020
(ICIS Code 75305) the permittee must submit a certification to the Department indicating a Repair and Replacement Reserve Account has been fully funded as required above. See **Attachment I** of this minor revision for a copy of the certification form. The permittee must attach copies of yearly audit reports to the annual certification forms showing funds in the reserve account for each year for the five years and, if funds were expended, what the funds were used for.

SPECIAL CONDITIONS

P. REOPENING OF PERMIT FOR MODIFICATION

In accordance with 38 M.R.S. § 414-A(5) and 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 any time and with notice to the permittee, modify this permit to: 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded, (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

Q. 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 must remain in full force and effect, and must be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

Maine Department of Environmental Protection

Effluent Mercury Test Report

Name of Facility: _____ Federal Permit # ME _____

Pipe # _____

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

SAMPLE COLLECTION INFORMATION

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

Sampling Location:

Weather Conditions: _____

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

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

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

ANALYTICAL RESULT FOR EFFLUENT MERCURY

Name of Laboratory: _____

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

Please Enter Effluent Limits for your facility

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

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

CERTIFICATION

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

By: _____ Date: _____

Title: _____

PLEASE MAIL THIS FORM TO YOUR ASSIGNED INSPECTOR

ATTACHMENT B

Protocol for Total Nitrogen Sample Collection and Analysis for Waste Water Effluent

Approved Analytical Methods (from Table 1 B of Part 136 per the 2012 Method Update Rule): (laboratory must be certified for any method performed)

Total Kjeldahl Nitrogen (TKN):

Manual digestion and distillation or gas diffusion followed by any of the following	SM4500-Norg B-97 or C-97 and SM4500-NH3 B-97	ASTM D3590-02 (06) (A)	I-4515-9145
Titration	SM4500-NH3 C-97	ASTM D3590-89, 02 (A)	973.48.3
Nesslerization		ASTM D1426-08 (A)	
Electrode	SM4500-NH3 D-97 or E-97	ASTM D1426-08 (B)	
Semi-automated phenate	EPA 350.1 Rev. 2.0 (1993)	SM4500-NH3 G-97 or H-97	
Manual phenate, salicylate, or other substituted phenols in Berthelot reaction based methods	SM4500-NH3 F-1997		
Automated methods for TKN that do not require manual digestion			
Automated phenate, salicylate, or other substituted phenols in Berthelot reaction based methods colorimetric (auto digestion and distillation)	EPA 351.1 (1978)		I-4551-788
Semi-automated block digestor colorimetric (distillation not required)	EPA 351.2, Rev. 2.0 (1993)	SM4500-Norg D-97	ASTM D3590-02 (06) (B)	I-4515-9145

Nitrate + Nitrite (NO3 + NO2):

Cadmium reduction, Manual		SM4500-NO3 E-00	ASTM D3867-04 (B)	
Cadmium reduction, Automated, or	EPA 353.2, Rev. 2.0 (1993)	SM4500-NO3 F-00	ASTM D3867-04(A)	I-4545-852
Automated hydrazine		SM4500-NO3 H-00		
Ion chromatography	EPA 300.0, Rev. 2.1 (1993) and EPA 300.1, rev. 1.0 (1997)	SM4110 B-00 or C-00	ASTM D4327-03	993.303
CIE/UV		SM4140 B-97	ASTM D6508-00 (05)	ASTM D6508, Rev. 2

Sample Collection: The Maine DEP is requesting that total nitrogen analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute H_2SO_4. This cleaning should be followed by several rinses with distilled water. Commercially purchased, pre-cleaned sample containers are an acceptable alternative. The sampler hoses should be cleaned; as needed.

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

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

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

ATTACHMENT C

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
MARINE WATERS

Facility Name _____ MEPDES Permit # _____

Pipe # _____

Facility Representative _____ Signature _____

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

Facility Telephone # _____ Date Collected _____ Date Tested _____

mm/dd/yy mm/dd/yy

Chlorinated? _____ Dechlorinated? _____

Results **% effluent**

	mysid shrimp	**sea urchin**
A-NOEL		
C-NOEL		

A-NOEL	
C-NOEL	

	% survival	**% fertilized**
QC standard	**>90**	**>70**
lab control		
receiving water control		
conc. 1 (%)		
conc. 2 (%)		
conc. 3 (%)		
conc. 4 (%)		
conc. 5 (%)		
conc. 6 (%)		
stat test used		

brine	
sea salt	
other	

place * next to values statistically different from controls

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

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

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

ATTACHMENT D

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

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

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

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

Last Revision - July 1, 2015

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

MARINE AND ESTUARY VERSION

Please see the footnotes on the last page.

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

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

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

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

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

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

V	BROMOFORM	5									
V	CARBON TETRACHLORIDE	5									
V	CHLOROBENZENE	6									
V	CHLORODIBROMOMETHANE	3									
V	CHLOROETHANE	5									
V	CHLOROFORM	5									
V	DICHLOROBROMOMETHANE	3									
V	ETHYLBENZENE	10									
V	METHYL BROMIDE (Bromomethane)	5									
V	METHYL CHLORIDE (Chloromethane)	5									
V	METHYLENE CHLORIDE	5									
V	TETRACHLOROETHYLENE (Perchloroethylene or Tetrachloroethene)	5									
V	TOLUENE	5									
V	TRICHLOROETHYLENE (Trichloroethene)	3									
V	VINYL CHLORIDE	5									

Notes:

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

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

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

(3a) Cyanide, Available (Cyanide Amenable to Chlorination) is not an analytical chemistry parameter, but may be required by certain discharge permits .

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

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

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

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

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

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

Comments:

ATTACHMENT E

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Doc Num: DEPLW0463

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

DATE	SECONDARY BYPASS FLOW DATA						CI RESIDUALS				BACTERIA								BOD5					TSS					WEATHER				
MONTH_____ YEAR_____	TREATED PRIMARY FLOW BYPASSING SECONDARY	SECONDARY BYPASS CLARIFIER SURFACE AREA	BYPASS DURATION	BYPASS CLARIFIER SURFACE LOADING RATE	SECONDARY FLOW TREATED	TRUE CSO BYPASS AROUND PRIMARY	MAX CHLORINE DOSE	CHLORINE RESIDUAL IN PRIMARY EFFLUENT	CHLORINE RESIDUAL IN SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN PRIMARY EFFLUENT	E.COLI / FECAL IN SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	pH	SETTLEABLE SOLIDS IN PRIMARY EFFLUENT	PRIMARY INFLUENT	PRIMARY EFFLUENT	PERCENT REMOVAL	SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	PRIMARY INFLUENT	PRIMARY EFFLUENT	PERCENT REMOVAL	SECONDARY EFFLUENT	CALCULATED BLENDED EFFLUENT	CONDITIONS	TEMPERATURE	PRECIPITATION	STORM DURATION	COMMENTS
	MG	Sf	hrs	Gpd/Sf	MG	MG	mg/L	mg/L	mg/L	mg/L	#/100	#/100	#/100	#/100	#/100			ml/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	%	mg/L	mg/L		F	In	Hrs	
1																																
2																																
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27																																
28																																
29																																
30																																
31																																
Total																																
Avr																																
Max																																

Number of discharge days _____

ATTACHMENT F

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSO ACTIVITY AND VOLUMES

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

CSO EVENT NO.	START DATE OF STORM	PRECIP. DATA		FLOW DATA (GALLONS PER DAY) OR BLOCK ACTIVITY("1")							
		TOTAL INCHES	MAX. HR. INCHES	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	EVENT OVERFLOW GALLONS	EVENT DURATION HRS
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
	TOTALS										

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

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

ATTACHMENT G

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

*Hardness Dependent (mg/l - $CaCO_3$)

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) REISSUED PERMIT		**Column (2)** 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.

		Columns	
	Column (1) Biosolids Data Analyses Average (mg/kg)	**(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 H

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 I

CLEAN WATER STATE REVOLVING FUND

REPAIR AND REPLACEMENT RESERVE ACCOUNT CERTIFICATION

I _____ representing the _____
(print name of cognizant official) *(print name of permittee)*

hereby certify to the Maine Department of Environmental Protection that as of _____
(date)

a *Clean Water State Revolving Fund (CWSRF) Repair and Replacement Reserve Account* has been established and is fully funded in accordance with Department Guidance entitled, *Maine Department of Environmental Protection, Clean Water State Revolving Fund (CWSRF) Guidance for Minimum Requirements for an Asset Management Program and Reserve Account In Order to Qualify for CWSRF Principal Forgiveness*, DEPLW1190C-2014; and

That our total yearly wastewater operation and maintenance budget for the previous year was $_____; and

That the amount recommended in our asset management plan, or as a minimum, 2% of our total yearly wastewater operation and maintenance budget was $_____; and

That $_____ was deposited to the Repair and Replacement Reserve Account last year; and

That $_____ was expended from this account last year in accordance with the Department Guidance; and

That the current balance of the Repair and Replacement Reserve Account is $_____.

Signature _____ Date _____

CONTENTS

A. GENERAL PROVISIONS

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

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

(a) They are not

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

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

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

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

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

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

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

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

2. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

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

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

5. Bypasses.

(a) Definitions.

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

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

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

(c) Notice.

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

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

(d) Prohibition of bypass.

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

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

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

6. Upsets.

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

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

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

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

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

C. MONITORING AND RECORDS

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

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

3. Monitoring and records.

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

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

(c) Records of monitoring information shall include:

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

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

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

D. REPORTING REQUIREMENTS

1. Reporting requirements.

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

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

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

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

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

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

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

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

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

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

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

(f) Twenty-four hour reporting.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5. Publicly owned treatment works.

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

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

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

E. OTHER REQUIREMENTS

1. Emergency action - power failure. Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Maximum daily discharge limitation means the highest allowable daily discharge.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

PRELIMINARY DRAFT
FACT SHEET

DATE: **July 25, 2017**

PERMIT NUMBER: **#ME0100633**

WASTE DISCHARGE LICENSE: **#W001370-5M-K-R**

NAME AND ADDRESS OF APPLICANT:

CITY OF SOUTH PORTLAND
P.O. Box 9422
South Portland, Maine 04116

COUNTY: **Cumberland**

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

CITY OF SOUTH PORTLAND
111 Waterman Drive
South Portland, Maine 04116

RECEIVING WATER CLASSIFICATION: **Fore River/Class SC**

COGNIZANT OFFICIAL CONTACT INFORMATION:

Mr. Patrick Cloutier, General Manager
(207) 767-7675
pcloutier@southportland.org

1. APPLICATION SUMMARY

a. Application The permittee has submitted a timely and complete application to the Department for the renewal of Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0100633/ Maine Waste Discharge License (WDL) #W001370-5M-I-R (permit hereinafter), which was issued by the Department on July 15, 2009, for a five-year term. The July 15, 2009, permit authorized the discharge of secondary treated sanitary wastewater and an unspecified quantity of excess combined sanitary and stormwater receiving primary treatment from the municipal wastewater treatment facility to the Fore River, Class SC, in South Portland Maine and an unspecified quantity of untreated combined sanitary and stormwater from six (6) combined sewer overflow (CSO) outfalls to receiving waters that were classified as either Class C or Class SC in South Portland, Maine.

1. APPLICATION SUMMARY (cont'd)

On February 6, 2012, the Department issued permit modification MEPDES permit #ME0100633/ #W001370-5M-J-M that reduced the monitoring frequency for total mercury from 4/Year to 1/Year.

On December 18, 2015, the Department issued permit modification MEPDES permit #ME0100633/ #W001370-5M-L-M that established Special Conditions requiring the City to prepare an Asset Management Plan and fund a Repair and Replacement reserve account.

b. Source Description: The facility located on Waterman Drive in South Portland treats domestic, industrial, and commercial wastewater from South Portland and parts of Cape Elizabeth. A map showing the location of the treatment facility is included as Fact Sheet **Attachment A**. The facility serves a population of approximately 25,000 people. The applicant cites five (5) significant industrial users (SIUs) currently contributing wastewater to the treatment facility for which pretreatment of their wastewater is required and monitored by the Department via industrial pretreatment requirements established in Special Condition M, *Industrial Pretreatment Program*, of this permitting action. The categorical SIUs consist of two semiconductor facilities, ON Semiconductor and Texas Instruments and two central waste treaters, Clean Harbors and ENPRO of Maine. The non-categorical SIUs are: Inland Seafood, a fish/crab processor, and Monson Industries, which generates chemical tank washdown water.

The facility is authorized to receive up to 20,000 gallons per day (gpd) and treat up to 10,000 gallons per day (gpd) of transported wastes. The City accepts domestic septic and holding tanks wastes from the City of South Portland and certain Cape Elizabeth residents only. The transported waste receiving facility consists of two 11,500-gallon storage tanks with coarse-bubble diffusers. After screening, the transported waste is pumped to the influent side of the Main Pump Station. The facility receives an average of 2,000-3,000 gallons of transported waste per day. The City submitted a copy their Septage Management Plan (revised March 2014) that has been reviewed by the Department.

The City's sewer collection system is approximately 111 miles in length and is approximately 25% combined and 75% separated with 28 pump stations. Fourteen (14) of the pump stations are equipped with on-site back-up power in the event of a power outage and the remaining 14 pump stations are equipped with hook-ups for back-up power provided by portable generators. The collection system does not have sufficient capacity to transport the volume of inflow and infiltration (I&I) of water experienced during periods of rainfall and snow melt. The six (6) permitted combined sewer overflow (CSO) outfalls associated with the collection system are listed in Special Condition K, *Combined Sewer Overflows (CSOs)*, of this permitting action. For the period 2009-2013, there was an average of 8 wet-weather-related bypass events a year.

1. APPLICATION SUMMARY (cont'd)

The permittee submitted a CSO Master Plan update entitled *Combined Sewer Overflow Facilities Plan Update for the City of South Portland Maine, dated September 2008* (Revised October 2011) prepared by Wright-Pierce Engineering which was approved by the Department on August 30, 2012. The 12-year Implementation Schedule (Table 10-3) in the update was modified by the City and subsequently approved by the Department on June 12, 2014.

c. Wastewater Treatment:

Secondary Treatment

Influent wastewater enters the Main Pump Station by gravity. The station is equipped with a coarse manual bar rack prior to entering the wet well. The pump station discharges influent flow to two aerated grit chambers. The Pearl Street Pump Station discharges just downstream from the grit chambers. The combined influent flows by gravity through a 12-inch Parshall flume and then through a mechanical bar rack. After this primary treatment, flows proceed by gravity to the aeration basin flow splitter to be split to whichever aeration basin trains are online. There are no primary clarifiers involved with the secondary treatment system.

From the aeration basins, the activated sludge (mixed liquor) flows by gravity to the secondary clarifier flow splitter for distribution to any of the three 90-foot diameter secondary clarifiers for settling. Secondary clarifier effluent then flows by gravity through a 48-inch magmeter for flow measurement and then to the chlorination chamber for disinfection with sodium hypochlorite. Flows then proceed by gravity through the chlorine contact tank to the dechlorination chamber where the effluent is dechlorinated prior to discharge to the Fore River. Discharge to the harbor is via gravity through a 54-inch pipe with no diffuser at 4.5 feet below mean low water. The end of the outfall pipe is positioned at the top of the navigation channel back slope, out of the way of the channel-dredging operations.

Sludge dewatering is accomplished by means of two belt filter presses. Dewatered sludge is trucked off-site for disposal.

Wet Weather Flows (CSO-Related Bypasses of Secondary Treatment)

Bypasses around secondary treatment occurs under two scenarios: first, should the flow reaching the Main Pump Station be greater than the capacity of the influent pumps, the influent wet well will surcharge into the overflow wet well. The second scenario in which a bypass can occur is as a result of operational decisions by plant personnel. Should the incoming flows to the treatment facility as measured at the influent Parshall flume exceed the operational limit (usually set at 22.9 MGD), pumps at the Main Pump Station are ramped down to allow Pearl Street flows to be maximized. The intention is that an untreated CSO bypass can be averted at Pearl Street and a bypass created at the treatment facility where the flow receives primary treatment and disinfection before blending with the secondary effluent and discharging to the harbor.

1. APPLICATION SUMMARY (cont'd)

Under either of the two scenarios causing a bypass, overflow pumps will pump excess flows from the overflow wet well to the overflow channel adjacent to the Main Pump Station. Sodium hypochlorite is added to the overflow channel for disinfection purposes. Flow then travels by gravity to the overflow clarifier flow splitter where flows will be directed to any of the three primary overflow clarifiers. At this splitter box, additional sodium hypochlorite, if needed, is added for disinfection purposes.

There are three overflow clarifiers, which were rebuilt in 2012, where primary treatment occurs through settling. The flows exit the clarifiers and flow by gravity to the overflow dechlorination chamber attached to the side of the chlorine contact tank. Treated flows are mixed with sodium bisulfite for dechlorination prior to blending with the secondary effluent and discharging to the Fore River through the same 54-inch pipe used to convey secondary treated flows. See **Attachment B** for the overflow process flow schematic.

2. PERMIT SUMMARY

a. Terms and Conditions: This permitting action is carrying forward all the terms and conditions of the previous permitting action except it is:

1. *Outfall #001A - Secondary Treated Wastewater*

a. Establishing a daily maximum reporting requirement for discharge flow.

b. Reducing the monitoring frequencies for biochemical oxygen demand (BOD) and total suspended solids (TSS) from 5/Week to 3/Week and settleable solids from 1/Day to 3/Week based on statistical evaluation of the most current 36 months of test results. The statistical evaluation is supported by both EPA and Department guidance on monitoring frequency reductions.

c. Establishing a waiver from the daily maximum concentration limitations of 50 mg/L for BOD_5 and TSS during CSO-related bypass events. The Department has defined CSO-related bypass in the permit as a discharge of wastewater from the secondary treatment system via Outfall #001A when the flow rate through the secondary treatment system has exceeded an instantaneous flow rate of 15,900 gallons per minute (gpm) (22.9 MGD).

d. Eliminating the effluent limitations and monitoring requirements for bis (2-ethylhexyl) phthalate and total zinc as a current statistical evaluation on test results indicates the discharge no longer exceeds or has a reasonable potential to exceed ambient water quality criteria (AWQC) established in 06-096 CMR Chapter 584.

e. Eliminating the water quality based concentration limits for cyanide and ammonia pursuant to Maine law 38 M.R.S, §464,¶K.

PERMIT SUMMARY (cont'd)

f. Revising the monthly average water quality based limitations for ammonia and cyanide based on an updated statistical evaluation pursuant to 06-096 CMR 530 and to correct an error in the calculations in the July 15, 2009, permit.

g. Incorporating the interim mercury limits established by the Department for this facility pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S. § 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); and

h. Establishing daily maximum, technology-based mass limitations of 12,795 lbs./day for BOD_5 and 9,137 lbs./day for TSS that are protective of water quality standards;

2. *Outfall #001B – Primary Treated Wastewater (Administrative outfall)* -

i. Eliminating the reporting requirements for BOD_5 and TSS percent removal and surface overflow rates
as the Department has determined the information being collected is of minimum value;

j. Eliminating the numeric limitations for fecal coliform bacteria and total residual chlorine as they are not necessary given compliance with water quality standards is determined on the blended effluent.

k. Establishing a requirement to report the minimum instantaneous flow rate at which the bypass of secondary treatment is activated.

3. *Blended Effluent (Outfall #001C - Administrative outfall)* - For the purposes of this permitting action, this term refers to discharges of effluent from the secondary treatment system (Outfall #001A) combined with the primary treated waste stream (Outfall #001B – internal waste stream) via the main outfall (Outfall #001A) when the flow rate through secondary treatment has exceeded an instantaneous flow rate of 15,900 gpm (22.9 MGD).

l. Establishing a daily maximum effluent flow monitoring and reporting requirement;

m. Establishing daily maximum, technology-based mass limitations of 12,795 lbs./day for BOD_5 and 9,137 lbs./day for TSS that are protective of water quality standards;

n. Establishing a water quality-based effluent limitation of 0.078 mg/L for total residual chlorine (TRC);

o. Establishing a water quality-based effluent limitation of 50 colonies / 100 mL for fecal coliform bacteria;

2. PERMIT SUMMARY (cont'd)

b. History: The most current relevant regulatory actions and significant events associated with the City's POTW include the following.

January 23, 1992 – The City, the Department and the United States Environmental Protection Agency (USEPA) entered into a Consent Decree that established a schedule of compliance to upgrade the City's wastewater treatment facility. The schedule of compliance established a deadline of August 1, 1995 as a deadline for the substantial completion of the upgrade which the City of South Portland subsequently achieved.

September 30, 1997 – The USEPA issued National Pollution Discharge Elimination System (NPDES) permit renewal #ME0100633 to the City for a five-year term.

November 10, 1997 – The USEPA issued an Administrative Order (AO Docket No. 98-02) authorizing, with conditions, the discharge of primary treated and disinfected wastewater from the City's combined sewer overflow (CSO) bypass once the peak hourly flow through the secondary treatment process of the treatment facility exceeded 22.9 MGD or 15,900 gallons per minute (gpm).

March 1, 1999 – The Department issued WDL #W001370-5M-D-R for a five-year term. It is noted the WDL also included authorization to discharge primary treated and disinfected wastewater associated with the CSO bypass discussed above.

June 1, 2000 – The Department administratively modified WDL #W001370-5M-E-M by establishing interim average and maximum concentration limits for the discharge of mercury.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permitting program in Maine, excluding areas of special interest to Maine Indian Tribes. From this point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program, and MEPDES permit #ME0100048 has been utilized for this facility.

April 23, 2004 – The Department issued combination MEPDES Permit/WDL #ME0100633/W001370-5M-F-R for a five-year term.

December 22, 2006 – The Department administratively modified WDL #W001370-5M-F-R by changing the date for submission of the CSO Master Plan from 11/30/06 to 12/31/07 and eliminating CSO Outfalls #004, #021 and #028.

February 19, 2008 – The Department administratively WDL #W001370-5M-F-R by changing the date of submission for the updated CSO Master Plan from December 31, 2007 to September 30, 2008 and reauthorizing discharges of untreated sanitary wastewater from CSO Outfall #004 (Long Creek).

2. PERMIT SUMMARY (cont'd)

July 15, 2009 - The Department issued combination MEPDES Permit/WDL #ME0100633/W001370-5M-I-R for a five-year term.

February 6, 2012 – The Department issued permit modification WDL #W001370-5M-J-M to reduce the monitoring frequency for total mercury from 4/Year to 1/Year.

May 5, 2014 – The City submitted a timely and complete General Application to the Department for renewal of the July 15, 2009, MEPDES permit. The application was accepted for processing on May 6, 2014, and was assigned WDL #W001370-5M-K-R / MEPDES #ME0100633.

December 18, 2015 - The Department issued permit modification MEPDES permit #ME0100633/ #W001370-5M-L-M that established Special Conditions requiring the City to prepare an Asset Management Plan and fund a Repair and Replacement reserve account.

3. CONDITIONS OF PERMIT

Conditions of licenses, 38 M.R.S. § 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. § 420 and 06-096 C.M.R. 530 require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 C.M.R. 584 (last amended July 29, 2012), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Classification of estuarine and marine waters, 38 M.R.S. § 469(E) classifies the tidewaters of the Fore River, Long Creek and Portland Harbor as a Class SC waterways. *Classification of minor drainages*, 38 M.R.S. § 468(D)(1) classifies all minor drainages, including Barberry Creek and Calvery Pond as Class C waters. *Standards for classification of estuarine and marine waters*, 38 M.R.S. § 465-B(3) describes the standards for classification of Class SC waterways. *Standards for classification of fresh surface waters*, 38 M.R.S. § 465(4) describes the classification standards for Class C waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2014 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the Fore River Estuary in South Portland as, *"Category 4-A: Estuarine and Marine Waters with Impaired Use, TMDL Completed."* Sampling conducted in calendar year 2001 indicates the 1.20 square miles of the Fore River Estuary in South Portland (waterbody ID #804-7) is impaired by bacteria. The Department completed the TMDL in 2009 and it was approved by USEPA on September 28, 2009.

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

The report lists the Fore River Estuary as *"Category 5-A: Estuarine and Marine Waters Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D (TMDL Required)."* The Report states that aquatic life and toxics may impair "marine life use support." The report indicates the causes of the impairment are municipal point sources, combined sewer overflows, stormwater, hazardous waste sites and nonpoint spills of all sizes. The report indicates that a total maximum daily load (TMDL) has not been scheduled at this time and that the TMDL report is listed as a medium priority.

The estuarine and marine waters of Portland Harbor are listed as, *"Category 5-D: Legacy Pollutants"* for legacy pollutants in lobster tomalley and *"Category 4-A: Estuarine and Marine Waters with Impaired Use, TMDL Completed."* The Report states that bacteria may impair either recreational uses (swimming) or shellfish consumption uses, or both. Shellfish consumption impairments only apply to waters naturally capable of supporting the shellfish-harvesting use (*i.e.*, waters of high enough salinity for propagation of shellfish.) On September 28, 2009, the USEPA approved the Department's Maine Statewide Bacteria TMDL (Total Maximum Daily Loads), dated August 2009, for fresh, marine and estuarine waters impaired by bacteria.

The report lists a 4.12-mile reach of Long Creek, (ADB Assessment Unit ID ME0106000105_610R03), which includes the receiving water at the point of discharge, as, *"Category 4-B: Rivers and Streams Impaired By Pollutants, Pollution Control Requirements Reasonably Expected To Result In Attainment."* Impairment in this context refers to benthic-macroinvertebrate bioassessments and habitat assessments. The Report indicates that the watershed restoration project is in its third year and that the receiving water is expected to attain standards in 2020.

The report lists a 3.03-mile reach of Barberry Creek, (ADB Assessment Unit ID ME0106000105_610R09), which includes the receiving water at the point of discharge, as, *"Category 4AB: Rivers and Streams with Impaired Use other than mercury, TMDL Complete."* Impairment in this context refers to benthic-macroinvertebrate bioassessments and habitat assessments. The Department completed the TMDL in 2006 and it was approved by USEPA on June 21, 2007.

The Report lists all of Maine's fresh waters as, *"Category 4-A: Waters Impaired by Atmospheric Deposition of Mercury."* Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, "All freshwaters are listed in Category 4A (TMDL Completed) due to USEPA approval of a Regional Mercury TMDL. Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many waters, and many fish from any given water, do not exceed the action level for mercury. However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Health and Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources."

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

The City has developed and implemented a CSO Master Plan for the elimination of all CSO points associated with the City's collection system. The Department acknowledges that elimination of all CSO points is a costly and long-term project. As the City's treatment plant and sewer collection system are upgraded and maintained in according to the CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO and primary treatment activities and, over time, improvement in the quality of the wastewater discharged to the receiving waters. Compliance with the limitations established in the permit ensure that the discharge of treated wastewater will not cause or contribute to exceedance of water quality standards.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent Outfall #001A

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average report only requirement for flow given the facility is a CSO community with a bypass of secondary treatment at the treatment facility. This permit is establishing a daily maximum discharge flow reporting requirement. It is noted the dry weather design capacity of the treatment facility remains at 9.3 MGD.

The following table summarizes effluent data reported on Discharge Monitoring Reports (DMRs) for the period of September 2013 through August 2016.

Flow (n= 36)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	9.3	3.95 – 10.03	5.9

b. Dilution Factors: 06-096 C.M.R. 530(4)(A)(2)(a) states, *"For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model."* With a permitted flow limitation of 9.3 MGD and the location and configuration of the outfall structure, the Department has established dilution factors as follows.

Acute = 6:1 Chronic = 10:1 Harmonic mean[1] = 30:1

[1] The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the U.S. EPA publication, *"Technical Support Document for Water Quality-Based Toxics Control"* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

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c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward, monthly average and weekly average technology-based concentration limits of 30 mg/L and 45 mg/L, respectively, for BOD_5 and TSS based on the secondary treatment requirements specified at *Effluent Guidelines and Standards*, 06-096 C.M.R. 525(3)(III) (effective January 12, 2001), and a daily maximum concentration limit of 50 mg/L, which is based on a Department best professional judgment of best practicable treatment for secondary treated wastewater. The technology-based monthly average and weekly average mass limits of 2,327 lbs./day and 3,490 lbs./day, respectively, established in the previous permitting action for BOD_5 and TSS are based on the monthly average flow design criterion of 9.3 MGD and the applicable concentration limits, and are also being carried forward in this permitting action.

The secondary treatment regulation at 40 CFR 133.102 requires that the 30-day average percent removal of BOD_5 and TSS must not be less than 85 percent. This permitting action is carrying forward a requirement to achieve 85 percent removal of BOD_5 and TSS for all non-wet weather related discharges. For POTWs with combined sewers, a decision must be made on a case-by-case basis as to whether any attainable percentage removal level can be defined during wet weather events, and if so, what the level should be. In making this determination, adjustment of the 85 percent removal requirement for POTWs with combined sewers should still provide incentive to control excess infiltration.

A requirement to achieve 85% removal at all times at facilities with combined sewers is not attainable due to the complexity of the sewer systems and the highly variable influent concentration. The Department is carrying forward a waiver on the percent removal requirement when influent strength is less than 200 mg/L. Dilute influent strength of 200 mg/L or less is considered to be attributable to wet weather related flows. The reissued permit for the City contains conditions for CSO abatement, including requirements for a CSO Master Plan to address excess infiltration.

The following table summarizes effluent data reported on Discharge Monitoring Reports (DMRs) for the period of September 2013 through August 2016.

BOD mass (n=36)

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	2,327	292 – 1,317	641
Weekly Average	3,490	361 – 2,674	1,022
Daily Maximum	Report	475 – 6,247	1,956

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BOD concentration (n=36)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	6 - 18	12
Weekly Average	45	10 – 22	16
Daily Maximum	50	12 – 49	26

TSS mass (n = 36)

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	2,327	272 – 1,317	605
Weekly Average	3,490	311 – 2,376	994
Daily Maximum	Report	483 – 5,260	1,970

TSS concentration (n=36)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	6 - 27	12
Weekly Average	45	7 - 43	16
Daily Maximum	50	11 – 63	25

Minimum monitoring frequency requirements in MEPDES permits are prescribed by 06-096 C.M.R. 523(8)(b). The USEPA has published guidance entitled, *Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies* (USEPA Guidance April 1996). In addition, the Department has supplemented the EPA guidance with its own guidance entitled, *Performance Based Reduction of Monitoring Frequencies - Modification of EPA Guidance Released April 1996* (Maine DEP May 22, 2014). Both documents are being utilized to evaluate the compliance history for each parameter regulated by the previous permit to determine if a reduction in the monitoring frequencies is justified.

Although EPA's 1996 Guidance recommends evaluation of the most current two years of effluent data for a parameter, the Department is considering 36 months of data (September 2013 – August 2016). A review of the mass monitoring data for BOD & TSS indicates the ratios (expressed in percent) of the long term effluent average to the monthly average limits can be calculated as 27% for BOD and 26% for TSS. According to Table I of the EPA Guidance and Department Guidance, a 5/Week monitoring requirement can be reduced to 3/Week. Therefore, this permitting action is reducing the monitoring frequency for BOD and TSS from 5/Week to 3/Week.

This permitting action is carrying forward a monthly average percent removal requirement of 85 percent for BOD_5 and TSS as required pursuant to 06-096 CMR 525(3)(III)(a&b)(3) for all flows receiving secondary treatment. The Department is carrying forward a waiver on the percent removal requirement when the monthly average influent strength is less than 200 mg/L given the collection system is still a combined sewer system with an active CSO outfall.

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A reviewed of the monthly DMRs data for the period September 2013 – August 2016 indicates values have reported as follows:

BOD % Removal (DMRs=35)

Value	Limit (%)	Range (%)	Average (%)
Monthly Average	85	88 - 97	93

TSS % Removal (DMRs=35)

Value	Limit (%)	Range (%)	Average (%)
Monthly Average	85	86 - 96	93

d. Settleable Solids: The previous permitting action established, and this permitting action is carrying forward, a technology-based daily maximum concentration limit of 0.3 ml/L for settleable solids, which is considered a best practicable treatment limitation for secondary treated wastewater.

The following table summarizes effluent data reported on DMRs for the period of September 2013 through August 2016.

Settleable solids (DMRs=36)

Value	Limit (ml/L)	Range (ml/L)	Average (ml/L)
Daily Maximum	0.3	0.0 – 0.0	0.0

This permitting action is modifying the minimum monitoring frequency requirement for settleable solids from 1/Day to 3/Week based on *Performance Based Reduction of Monitoring Frequencies - Modification of EPA Guidance Released April 1996* (Maine DEP May 22, 2014).

e. Fecal Coliform Bacteria – The previous permitting action established, and this permitting action is carrying forward, seasonal monthly average and daily maximum concentration limits of 15 colonies/100 ml and 50 colonies/100 ml, respectively, for fecal coliform bacteria, which are consistent with the National Shellfish Sanitation Program. Bacteria limits are seasonal and apply between May 15 and September 30 of each year; however, the Department reserves the right to require year-round disinfection to protect the health, safety and welfare of the public.

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A summary of the effluent fecal coliform data as reported on the DMRs submitted to the Department for the period September 2013 through August 2016 follows.

Fecal coliform bacteria (DMRs=15)

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	15	1.0 – 6.0	2.5
Daily Maximum	50	4.0 – 2,420	185(1) 17(2)

(1) Average including excursions of the daily maximum limit. Two excursions occurred in September 2015 (high of 116 col/100 ml) and two excursions occurred in July of 2016 high of 2,420 col/100 ml).
(2) Average without including the excursions.

Given the excursions, this permit is maintaining the seasonal monitoring frequency 5/Week.

f. Total Residual Chlorine (TRC): The previous permitting action established water quality-based monthly average and daily maximum concentration limits of 0.075 mg/L and 0.078 mg/L, respectively, along with a 2/Day monitoring requirement for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department permitting actions impose the more stringent of either a water quality-based or best practicable treatment-based limit. With dilution factors as determined above, end-of-pipe (EOP) water quality-based concentration thresholds for TRC may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Chronic Threshold
0.013 mg/L	0.0075 mg/L	6:1 (A) 10:1 (C)	0.078 mg/L	0.075 mg/L

The Department has established a daily maximum best practicable treatment limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge in order to meet water quality-based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The City dechlorinates the effluent prior to discharge in order to achieve compliance with the water quality-based thresholds. The calculated water quality-based thresholds of 0.078 mg/L and 0.075 mg/L are more stringent than the technology-based thresholds and are therefore being carried forward in this permitting action.

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A summary of TRC data as reported on the monthly DMRs for the period September 2013 – August 2016 indicates the following.

Total residual chlorine (DMRs=15)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	0.075	0.01 – 0.02	0.02
Daily Maximum	0.078	0.04 – 0.07	0.06

The Department's guidance entitled *Performance Based Reduction of Monitoring Frequencies - Modification of EPA Guidance Released April 1996* (Maine DEP May 22, 2014) does not authorize a permit writer to reduce monitoring frequencies for parameters with water quality based limitations. Therefore, the monitoring frequency of 2/Day is being carried forward in this permitting action.

g. pH: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units (SU), which is based on 06-096 CMR 525(3)(III), and a minimum monitoring frequency requirement of 1/Day.

The Department reviewed 36 DMRs that were submitted for the period September 2013 – August 2016. It is noted the daily minimum pH limit of 6.0 SU was exceeded several times during this time frame. A review of data indicates the following.

pH

Value	Limit (SU)	Minimum (SU)	Maximum (SU)
Range	6.0 – 9.0	5.2	7.10

h. Mercury: Pursuant to 38 M.R.S. § 420 and 06-096 C.M.R. 519, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL W001370 by establishing interim monthly average and daily maximum effluent concentration limits of 4.8 parts per trillion (ppt) and 7.2 ppt, respectively, and a minimum monitoring frequency requirement of four (4) tests per year for mercury.

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38 M.R.S. § 420(1-B)(B)(1) provides that a facility is not in violation of the AWQC for mercury if the facility is in compliance with an interim discharge limit established by the Department. A review of the Department's database for the most current five-year period (2011 – 2015) is as follows;

Mercury

Value	Limit (ng/L)	Range (ng/L)	Mean (ng/L)
Average	4.8	1.95 – 3.2	2.5
Daily Maximum	7.2		

On February 6, 2012, the Department issued a minor revision to the July 15, 2009 permit thereby revising the minimum monitoring frequency requirement from once per quarter to once per year pursuant to 38 M.R.S. § 420(1-B)(F). This permitting action is carrying forward the 1/Year monitoring frequency.

i. Whole Effluent Toxicity (WET) & Chemical-Specific Testing: 38 M.R.S., § 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. 06-096 CMR 530 and 06-096 CMR 584 set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters. WET, priority pollutant and analytical chemistry testing as required by 06-096 CMR 530 are included in this permit in order to fully characterize the effluent. This permit also provides for 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. 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 06-096 CMR 584.

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

1) Level I – chronic dilution factor of <20:1.
2) Level II – chronic dilution factor of $\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 factor >500:1 and Q $\leq$1.0 MGD

Based on the criteria, the permittee falls into the Level I frequency category as the permittee has a chronic dilution factor $\leq$20:1.

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06-096 CMR 530 (D)(1) specifies that routine screening and surveillance level testing requirements are as follows:

Surveillance level testing – Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit).

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

Screening level testing – Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement.

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

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.

06-096 CMR 530 (3)(d) 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 exceedance as calculated pursuant to section 3(E).*

06-096 CMR 530 §(3)(E) states "*For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedance of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

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

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WET Evaluation

On 9/30/16, the Department conducted a statistical evaluation on the most recent 60 months of WET data to determine if the discharge exceeds or has a reasonable potential to exceed the critical acute or chronic thresholds of 17% and 10%, the mathematical inverse of the acute and chronic dilution factors of 6.0:1 and 10:0:1. respectively. The 9/30/16 statistical evaluation indicates the discharge does not exceed or have a reasonable potential to exceed the critical acute or chronic threshold for the mysid shrimp or the sea urchin. Therefore, this permitting action is eliminating the 10% chronic limitation for the sea urchin established in the previous permit and reducing the surveillance level monitoring frequency from 2/Year to 1/Year. This permitting action is carrying forward a report only requirement along with a 1/Year monitoring requirement for the mysid shrimp. In summary, this permitting action is establishing surveillance level WET testing as follows.

Surveillance level testing – Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit).

Level	WET Testing
I	1/Year

Pursuant to 06-096 CMR 530 (1)(D), screening level testing is being carried forward as follows:

Screening level testing – Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement.

Level	WET Testing
I	4/Year

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

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

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

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

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Special Condition L of this permit establishes, *06-096 CMR 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing*. This permit provides for reconsideration of testing requirements, including the imposition of certain testing in consideration of the nature of the wastewater discharged, existing wastewater treatment, receiving water characteristics, and results of testing. An example certification statement is included as **Attachment E** of this Fact Sheet.

Analytical Chemistry & Priority Pollutant Evaluation

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

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 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 very limited information on the background levels of metals in the water column in the Fore River. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

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

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06-096 CMR 530 §(3)(E) states *"... that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedance of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*

The 7/15/09 permit established seasonal monthly average water quality-based concentration limits for ammonia and cyanide amenable to chlorination, monthly average mass and concentration limits for bis (2-ethyl hexy) phthalate, and daily maximum water quality-based mass and concentration limits for total zinc. As with WET test results, on 9/30/16, 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 in accordance with the statistical approach outlined in Chapter 530. The statistical evaluation indicates the discharge from the permittee's facility has one test result that exceed the chronic AWQC for ammonia and has five test results that have a reasonable potential to exceed the chronic AWQC for ammonia. It is noted that ammonia AWQC is pH and temperature-dependent. For the purpose of permitting actions, the Department utilizes a pH of 8.0 standard units and a salinity of 20 parts per thousand for all temperature ranges. For the summer season (June 1 – October 30), the Department utilizes a temperature of 20°C that results in a chronic AWQC of 1.0 mg/L for ammonia. For the non-summer season (November 1 – May 31), the Department utilizes a temperature of 15°C that results in a chronic AWQC of 1.5 mg/L for ammonia. A more in depth evaluation of the data indicates for the summer season there are two results that exceed the chronic AWQC and two results that have reasonable potential to exceed the chronic AWQC. For the non-summer season the data indicates there is one result that exceeds the chronic AWQC and one result that has a reasonable potential to exceed the chronic AWQC. See **Attachment D** of this Fact Sheet for the test results evaluated.

For cyanide amenable to chlorination, the 9/30/16 statistical evaluation indicates the discharge has four test results of 5 ug/L (the Department's current reporting limit) for cyanide that have a reasonable potential to exceed the acute AWQC of 1.0 ug/L. See **Attachment D** of this Fact Sheet for the test results evaluated. The 9/30/16 statistical evaluation indicates bis (2-ethyl hexy) phthalate and total zinc are no longer pollutants of concern. Therefore, the limitations and monitoring requirements in the previous permit are being eliminated in this permit.

In the individual allocation, the Department continues to utilize the formula it has used in permitting actions since October 2005 taking into consideration background (10% of AWQC) and a reserve (0% of AWQC). It should be noted that the previous permitting action mistakenly took into consideration a 15% reserve. The formula is as follows:

EOP concentration threshold = [Dilution factor x 0.90 x AWQC] + [0.10 x AWQC]

Mass limit = (EOP concentration in mg/L)(8.34 lbs/gal)(permit flow limit in MGD)

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This permit is establishing year-round limitations for cyanide amenable to chlorination and seasonal limitations for ammonia as follows:

Cyanide Amenable to Chlorination

Acute AWQC = 1.0 ug/L
Acute dilution factor = 6.0:1

EOP concentration = [Dilution factor x 0.90 x AWQC] + [0.10 x AWQC]

EOP concentration = [6.0 x 0.90 x 1.0 ug/L] + [0.10 x 1.0 ug/L] = 5.5 ug/L

Based on a permitted flow of 9.3 MGD, the EOP mass limit is calculated as follows:

Daily Maximum Mass Limit: $\frac{(5.5\ ug/L)(8.34\ lbs./gal)(9.3\ MGD)}{1{,}000\ ug/mg}$ = **0.43 lbs/day**

It is noted that this mass limit calculated above is less stringent than the previous mass limit of 0.37 lbs./day. This is a result of not withholding a 15% reserve which was inadvertently withheld in the previous permitting action. Due to this technical error the Department is establishing less stringent limits which satisfy the anti-backsliding provisions under Section 402(o)(2)(B)(ii) of the Clean Water Act.

In May 2012, Maine law 38 M.R.S. §464, ¶¶ K was enacted which reads as follows, "*Unless otherwise required by an applicable effluent limitation guideline adopted by the department, any limitations for metals in a waste discharge license may be expressed only as mass-based limits.*" There are no applicable effluent limitation guidelines adopted by the Department or the USEPA for toxic pollutants discharged from a publicly owned treatment works. Therefore, this permitting action is eliminating the daily maximum and or monthly average concentration limits for all parameters of concern identified in the 9/30/16 statistical evaluation.

Based on the timing, severity and frequency of occurrences of the reasonable potential to exceed the acute AWQC for cyanide, this permitting action is making a best professional judgment to establishing a monitoring frequency at the routine surveillance level frequency of 2/Year specified in Chapter 530.

Ammonia (June 1 – October 31)

Chronic AWQC = 1.0 mg/L (based on a pH of 8.0 su, 20°C, salinity of 20 ppt)
Chronic dilution factor = 10:1
EOP concentration = [Dilution factor x 0.9 x AWQC] + [0.1 x AWQC]
EOP = [10 x 0.9 x 1.0 mg/L] + [0.1 x 1.0 mg/L] = 9.1 mg/L

Calculation, Ammonia: (9.1 mg/L)(8.34)(9.3 MGD) **= 706 lbs/day**

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Ammonia (November 1 – May 31)

Chronic AWQC = 1.5 mg/L (based on a pH of 8.0 su, 15°C, salinity of 20 ppt)
Chronic dilution factor = 10:1
EOP concentration = [Dilution factor x 0.9 x AWQC] + [0.1 x AWQC]
EOP = [10 x 0.9 x 1.5 mg/L] + [0.1 x 1.5 mg/L] = 13.6 mg/L

Calculation, Ammonia: (13.6 mg/L)(8.34)(9.3 MGD) = **1,055 lbs/day**

It is noted the seasonal mass limits of 706 lbs./day (June 1 – October 31) and 1,055 lbs./day (November 1 – May 31) are less stringent than the previous mass limits of 659 lbs./day (June 1 – October 31) and 931 lbs./day (November 1 – May 31). This is a result of not withholding a 15% reserve which was inadvertently withheld the previous permitting action. It should also be noted that the previous permit inadvertently used a chronic AWQC of 1.1 mg/L instead of 1.0 mg/L to calculate the summer (June 1 – October 31) limits. Due to this technical error the Department is establishing less stringent limits which satisfy the anti-backsliding provisions under Section 402(o)(2)(B)(ii) of the Clean Water Act.

Based on the timing, severity and frequency of occurrences of exceedances and the reasonable potential to exceed the chronic AWQC for ammonia, this permitting action is making a best professional judgment to establish a monitoring frequency at the routine screening level frequency of 1/Quarter specified in Chapter 530.

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action is carrying forward a reduced level of surveillance level reporting and monitoring for analytical chemistry testing beginning upon issuance of the permit and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit). As with reduced WET testing, the permittee must file an annual certification with the Department pursuant to Chapter 530 §2(D)(3) and Special Condition L, *06-096 CMR 530(2)(D)(4), Statement For Reduced/Waived Toxics Testing* of this permit.

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

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Surveillance and screening level testing is summarized as follows;

Surveillance level testing - Beginning upon permit issuance and lasting through 24 months prior to permit expiration (Years 1, 2 & 3 of the term of the permit) and commencing again 12 months prior to permit expiration (Year 5 of the term of the permit).

Level	Priority pollutant testing	Analytical chemistry
I	Not required	1/Year

Screening level testing - Beginning 24 months prior to permit expiration and lasting through 12 months prior to permit expiration (Year 4 of the term of the permit) and every five years thereafter if a timely request for renewal has been made and the permit continues in force, or is replaced by a permit renewal containing this requirement.

Level	Priority pollutant testing	Analytical chemistry
I	1/Year	4/Year (1/Quarter)

It is noted that if future WET or other chemical specific test results indicates the discharge exceeds critical water quality thresholds or AWQC, this permit will be reopened pursuant to Special Condition P, *Reopening of Permit For Modification*, to establish applicable limitations and monitoring requirements.

j. Total Nitrogen: The USEPA requested the Department evaluate the reasonable potential for the discharge of total nitrogen to cause or contribute to non-attainment of applicable water quality standards in marine waters, namely aquatic life use support. The permittee voluntarily participated in Department-coordinated projects using Maine certified analytical labs to determine typical effluent nitrogen concentrations, and submitted monthly composite samples from May-October, 2008 (n = 6) and June-October, 2016 (n = 5). The mean value of the permittee's 11 samples was 15.3 mg/L. For this reasonable potential evaluation, the Department considers 15.3 mg/L to be representative of total nitrogen discharge levels from the South Portland facility.

With the exception of ammonia, nitrogen is not acutely toxic; thus, the Department is considering a far-field dilution to be more appropriate when evaluating impacts of total nitrogen to the marine environment. The Fore River is a fairly well defined estuarine system that is confined by a distinctive upland edge. This type of estuarine system is well suited to the Departments embayment modeling technique to quantify the amount of hydraulic flushing associated with marine and fresh water influences. Ocean tides are the predominant hydraulic influence at the discharge location, with some additional flushing associated with fresh water inputs from the Stroudwater River and Long Creek. The Department's embayment modeling utilizes EPA's

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent – Outfall #001A

hydrodynamic WASP model to quantify the amount of flushing associated with the routine emptying and filling of the Fore River system. Volume estimates are based on bathymetry associated with navigational charts and tide data from a nearby reference location. The Fore River has been determined to flush approximately 16 to 26 million cubic meters of water per day (based on minimum and maximum tidal range). This equates to an average flushing rate of approximately 21 million cubic meters per day (approximately 5.5 billion gallons per day).

Flushing Rate = 5.5×10^9 gallons per day
Discharge Flow Rate = 9.3×10^6 gallons per day

$5.5 \times 10^9 \div 9.3 \times 10^6 = 591$

A strictly mathematical interpretation of the dilution yields a value of 591:1.

Total nitrogen concentrations in effluent = 15.3 mg/L
Far-field dilution factor = 591:1

In-stream concentration after dilution: $\frac{15.3 \text{ mg/L}}{591} = 0.026$ mg/L

However, the WASP modeling allows us to account for retention and re-entrainment of pollutants. The modeling suggests that a dilution factor of 300:1 would be appropriate to accommodate for these factors.

Total nitrogen concentrations in effluent = 15.3 mg/L
Far-field dilution factor = 300:1

In-stream concentration after dilution: $\frac{15.3 \text{ mg/L}}{300} = 0.052$ mg/L

The USEPA and Friends of Casco Bay have questioned the Department's use of the far field modeling and suggested the Department seek an independent person or entity to conduct modeling or review the use of the Department's far field dilution model. The Department has and will continue to consult with an experienced modeler associated with the University of Maine and the Sea Grant Program regarding hydrodynamic modeling of Casco Bay. The modeler has stated the Department's modeling to date is reasonable given the limited information on the hydrodynamics of Casco Bay. The Department considers the modeling to date to be preliminary and much more information needs to be collected to refine the model.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent – Outfall #001A

As of the date of this permitting action, the State of Maine has not promulgated numeric ambient water quality criteria for total nitrogen. According to several studies in EPA's Region I, numeric total nitrogen criteria have been established for relatively few estuaries but the criteria that have been set typically fall between 0.35 mg/L and 0.50 mg/L to protect marine life using dissolved oxygen as the indicator. While the thresholds are site-specific, nitrogen thresholds set for the protection of eelgrass habitat range from 0.30 mg/L to 0.39 mg/L.

Based on studies in EPA Region I and the Department's best professional judgment of thresholds that are protective of Maine water quality standards, the Department is utilizing a threshold of 0.45 mg/L for the protection of aquatic life in marine waters using dissolved oxygen as the indicator, and 0.32 mg/L for the protection of eelgrass in the vicinity of discharge outfalls. Given the absence of known eelgrass in the vicinity of the South Portland discharge, the Department is using a threshold value of 0.45 mg/L to protect aquatic life.

Four known surveys have been completed within the vicinity of the South Portland facility to document presence/absence of eelgrass. The first occurred in the 1970's by Timson of the Maine Geological Survey, the second (1993) and third (2001) by the Maine Department of Marine Resources (DMR), and the fourth (2013) as coordinated by the Department. Within the Fore River estuary, the Timson survey did not document eelgrass presence, and only small and isolated patches of eelgrass were mapped along the South Portland shore in the outer harbor in 1993 (0.02 acre), 2001 (0.14 acre), and 2013 (0.60 acre)(Figure 1). During the years when eelgrass was documented, the nearest patch was approximately 1.2 km from the outfall. Given the very small documented resource, its distance from the South Portland outfall, and periodic dredging and filling activities within Portland Harbor adjacent to potential eelgrass habitat, the Department is using a threshold value of 0.45 mg/L to protect aquatic life using DO as the indicator.

The Department and external partners have been collecting ambient total nitrogen data along Maine's coast. For the vicinity of the South Portland discharge, the Department calculated a mean background concentration of 0.41 mg/L (n = 39) based on surface water data collected at nine sites (Figure 1, Table 1) within the Fore River between May and October of a given year, on multiple tide and weather scenarios, at locations without a detectable impact from the discharge. Water quality monitoring conducted in 2016 indicated that the long term Friends of Casco Bay (FOCB) monitoring site at Knightville Landing, KVL84, is influenced by the discharge and therefore data from this site are not included in background assessments. Additionally, total nitrogen values (n = 85) generated from land-based sampling locations during a single synoptic sampling in July 2016 are not included in the background calculation due to the potential to skew the mean value otherwise calculated from raw data values originating from surface water collected over variable tide stages, weather conditions, and months. Finally, total nitrogen data from Fore River tributaries including Long Creek, Anthoine Creek, and Trout Brook are not included in this background total nitrogen calculation as tributary data collected on ebb tides would not be representative of ambient conditions in the mainstem of the estuary.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent – Outfall #001A

Figure 1. Numbered monitoring sites in proximity to South Portland WPCF outfall (yellow symbol). Green polygons show 2013 mapped eelgrass at Fore River mouth.

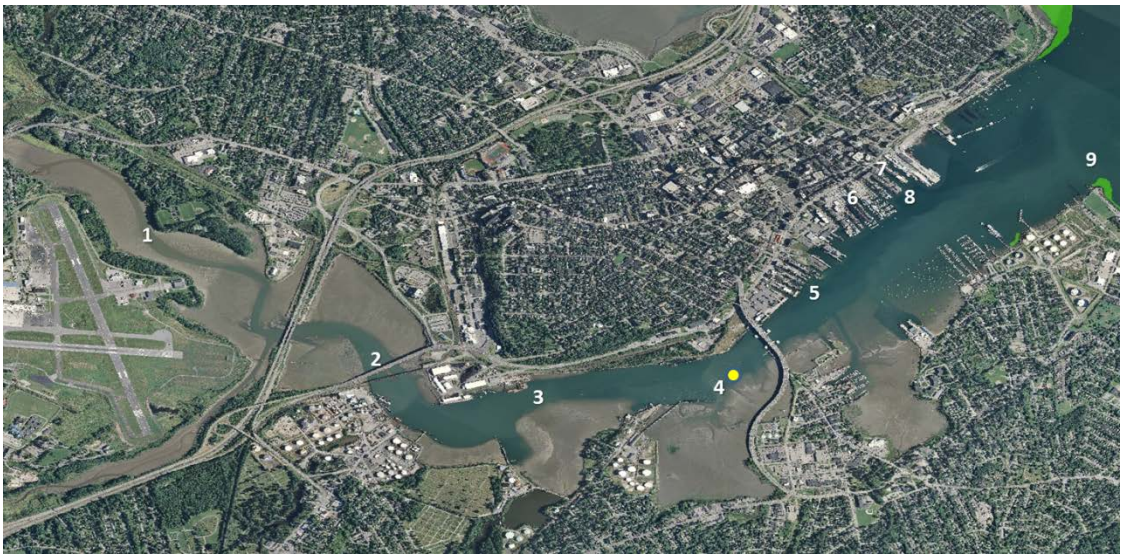


Table 2. Fore River monitoring sites used for calculation of background total nitrogen mean, with summary statistics.

Site #	Site Name (Monitoring Organization)	Data Collection Years	Total Nitrogen (mg/L)			
			n	min.	max.	mean
1	Fore River 02 (DEP, FOCB)	2016	2	0.33	0.54	0.44
2	Fore River 03 (DEP, FOCB)	2016	3	0.16	0.36	0.24
3	Fore River 04 (DEP, FOCB)	2016	3	0.21	0.38	0.28
4	Fore River 05A (DEP)	2016	3	0.17	0.27	0.23
5	Fore River 07 (DEP, FOCB)	2016	3	0.22	0.50	0.39
6	Long Wharf (DEP, FOCB)	2013	2	0.30	0.36	0.33
7	Fore River 08/Custom House Wharf (DEP, FOCB)	2009-2012	18	0.34	0.80	0.53
8	Maine State Pier (DEP, FOCB)	2013	2	0.19	0.30	0.25
9	Fore River 09 (DEP, FOCB)	2016	3	0.18	0.52	0.31

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent – Outfall #001A

In 2015, the Department assessed in-stream total nitrogen values using data collected by FOCB and Department, and noted considerable diel, spatial and temporal variability within the Fore River estuary. As a result, the Department, FOCB and City of South Portland Water Resource Protection staff pursued water quality, nutrient and biological indicator monitoring with distance from the outfall during the summer of 2016. Nitrogen data collected from the inner to outer estuary and tributaries in 2016 indicated somewhat higher values with a mean of 0.50 mg/L from inner estuary locations (including and west of Site #2 in Figure 1), and comparable mean total nitrogen values within the middle and outer estuary segments at 0.36 mg/L and 0.37 mg/L, respectively. On average, the total nitrogen concentration was not highest in immediate proximity to the discharge even when the FOCB site, KVL84 (see above), was included in calculations. 2016 total nitrogen data represent Fore River nitrogen conditions during dry weather when wastewater influence would be expected to be greatest and stormwater influence least. However, stormwater contributions were documented during the July 2016 synoptic, ebb tide sampling conducted by FOCB, which demonstrated significant spatial variability in total nitrogen concentrations with the highest values observed adjacent to shore in the immediate vicinity of tidal tributaries and Combined Sewer Overflow outfalls.

With regard to DO, of nearly 800 discrete sonde data values from the nine sites noted above as well as additional sites located mostly along the Portland Harbor shoreline, only 2% of values indicate percent saturation less than the 70% saturation threshold for SC waters. All of the data values below 70% were from the Custom House Wharf/Fore River 08 site (#7 in Figure 1) where FOCB has documented locally degraded water quality, with repeated observations of poor water clarity, commercial fishing-related activity, fish odor, and floating debris. Generally, DO data collected along the shore of Portland Harbor demonstrate large diel swings indicative of local production. In late August through early September 2016, the Department conducted continuous DO monitoring just upstream of Veteran's Memorial Bridge and at the end of Gulf of Maine Research Institute's pier (sites #2 and #5 in Figure 1). The high resolution DO data exhibited typical tidal and diel fluctuations, but no non-attaining values below the 70% threshold.

Water column Total Suspended Solids (TSS) concentrations monitored in 2016 indicate comparable and low concentrations (average of ~5 mg/L) throughout the estuary, with the highest values measured on particularly windy days from locations subject to wind-driven waves over shallow mud and sand flats. Secchi transparencies ranged from site average values of 1.6 m to 2.2 m, and did not demonstrate patterns of increase or decrease along the estuarine gradient. Light attenuation coefficient (Kd) values across all 2016 sites ranged from 0.52 m^{-1} to 0.70 m^{-1}, and were not correlated with total nitrogen concentrations in surface water. On average, 2016 Kd values observed within the Fore River estuary would be expected to support eelgrass based on restoration depth threshold values presented in New Hampshire's Numeric Nutrient Criteria for the Great Bay Estuary (2009) document.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent – Outfall #001A

Biological indicators including phytoplankton and nuisance macroalgae do not substantiate detrimental impacts to aquatic life based on available information. Chlorophyll *a* data from 2016 monitoring as well as a 2004 National Coastal Assessment site demonstrate low surface values (≤5.94 µg/L, n = 40) throughout the Fore River estuary. Chlorophyll data from sonde profiles collected in 2016 indicate possible subsurface chlorophyll maxima up to 13.5 µg/L, though low sample size and potential interference from dissolved organic matter preclude conclusions about subsurface production. Macroalgal proliferation in the form of nuisance blooms of green algae has been observed on several occasions on Anthoine and Mill Coves at the outlets of Anthoine Creek and Trout Brook in South Portland, respectively. Green algae blooms, while persistent for weeks at a time during summer in these coves, have been observed irregularly in the Fore River, and total nitrogen data from adjacent creeks indicate possible local and elevated, land-derived nitrogen levels.

Based on the calculated ambient mean total nitrogen value for this receiving water, the estimated increase in ambient total nitrogen after reasonable opportunity for mixing in the far-field is 0.41 mg/L + 0.026 mg/L = 0.43 mg/L. or 0.41 mg/L + 0.052 mg/L = 0.46 mg/L. The in-stream concentration value of 0.46 mg/L is slightly higher than the Department and USEPA's best professional judgment based total nitrogen threshold of 0.45 mg/L for the protection of aquatic life using DO as an indicator.

Given the range in dilution factors resulting in ambient concentrations ranging from 0.026 mg/L to 0.052 mg/L without any documented excursions of Class C dissolved oxygen standards, this permit is not establishing numeric limits for total nitrogen. However the permit is establishing a seasonal (May – October) 1/Week monitoring and reporting requirement for total kjeldahl nitrogen, nitrate + nitrite nitrogen and total nitrogen for seasons 2018 and 2019. After the two seasons of monitoring, the Department will conduct a statistical evaluation on the test results to establish a baseline for total nitrogen discharge levels. The Department will re-evaluate the monitoring frequency for calendar year 2020 and beyond based on the variability of the 2018 and 2019 data set.

Special Condition H, *Nitrogen,* of this permit takes an adaptive management approach to reducing the discharge of total nitrogen from the South Portland waste water treatment facility by requiring an evaluation of alternative methods of operating the existing wastewater treatment facility in order to control total nitrogen levels. Currently, the facility is not specifically designed to remove nitrogen. The evaluation shall include, but not be limited to, operational changes designed to enhance de-nitrification (seasonal and year-round), incorporation of anoxic zones, transported waste receiving policies and procedures and side stream management. The permit also requires implementation of optimization methods sufficient to ensure that there is no increase in total nitrogen compared to the existing average daily seasonal load, and submittal of annual reports that summarize progress and activities related to optimizing nitrogen removal efficiencies, document the seasonal nitrogen discharge load from the facility, and track trends relative to previous years for total nitrogen. The annual progress report required by Special Condition H, *Nitrogen*, of this permit will document these efforts and will report on the seasonal loading of total nitrogen for the prior year.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Secondary Treated Effluent – Outfall #001A

Based on the reasonable potential calculations of this Fact Sheet using facility-specific effluent and available ambient data, and in the absence of any information that the receiving water is not attaining standards, the Department is making a best professional judgment determination that the discharge of total nitrogen from the South Portland facility does not exhibit a reasonable potential to exceed applicable water quality standards for Class SC waters.

k. Transported Wastes - The previous permitting action authorized the permittee to receive up to 20,000 gpd and introduce up to 10,000 gpd and of transported wastes into the wastewater treatment process or solids handling stream. Department rule 06-096 CMR Chapter 555, *Standards For The Addition of Transported Wastes to Wastewater Treatment Facilities*, limits the quantity of transported wastes received at a facility to 1% of the design capacity of the treatment facility if the facility utilizes a side stream or storage method of introduction into the influent flow, or 0.5% of the design capacity of the facility if the facility does not utilize the side stream or storage method of introduction into the influent flow. A facility may receive more than 1% of the design capacity on a case-by-case basis. The permittee has requested the Department carry forward the daily quantities of 20,000 gpd and 10,000 gpd of transported wastes that it is authorized to receive and treat as it utilizes the side stream/storage method of metering transported wastes into the facility's influent flow. With a design capacity of 9.3 MGD, 10,000 gpd represents 0.10% of said capacity.

The Department has determined that under normal operating conditions, the receipt and treatment of 10,000 gpd of transported wastes to the facility will not cause or contribute to upset conditions of the treatment process.

CSO-Related Bypasses of Secondary Treatment

Bypasses around secondary treatment occurs under two scenarios: first, should the flow reaching the Main Pump Station be greater than the capacity of the influent pumps, the influent wet well will surcharge into the overflow wet well. The second scenario in which a bypass can occur is as a result of operational decisions by plant personnel. Should the incoming flows to the treatment facility as measured at the influent Parshall flume exceed the operational limit (usually set at 22.9 MGD), pumps at the Main Pump Station are ramped down to allow Pearl Street flows to be maximized. The intention is that an untreated CSO bypass can be averted at Pearl Street and a bypass created at the treatment facility where the flow receives primary treatment and disinfection before blending with the secondary effluent and discharging to the harbor.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

CSO-Related Bypasses of Secondary Treatment

The permittee maintains a combined sewer system from which wet weather overflows occur. Section 402(q)(1) of the Clean Water Act requires that "each permit, order or decree issued pursuant to this chapter after December 21, 2000 for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994 ….." 33 U.S.C. § 1342(q)(1). The Combined Sewer Overflow Control Policy (CSO Policy, 59 Fed. Reg. 18688-98), states that under USEPA's regulations the intentional diversion of waste streams from any portion of a treatment facility, including secondary treatment, is a bypass and that 40 CFR 122.41(m), allows for a facility to bypass some or all the flow from its treatment process under specified limited circumstances. Under the regulation, the permittee must show that the bypass was unavoidable to prevent loss of life, personal injury or severe property damage, that there was no feasible alternative to the bypass and that the permittee submitted the required notices. The CSO Policy also provides that, for some CSO-related permits, the study of feasible alternatives in the control plan may provide sufficient support for the permit record and for approval of a CSO-related bypass to be included in an NPDES permit.[2] Such approvals will be re-evaluated upon the reissuance of the permit, or when new information becomes available that would represent cause for modifying the permit.

The CSO Policy indicates that the feasible alternative threshold may be met if, among other things, "… the record shows the secondary treatment system is properly operated and maintained, that the system has been designed to meet secondary limits for flows greater than peak dry weather flow, plus an appropriate quantity of wet weather flow, and that it is either technically or financially infeasible to provide secondary treatment at the existing facilities for greater amounts of wet weather flow."[3]

USEPA's CSO Control Policy and CWA section 402(q)(1) provide that the CSO-related bypass provision in the permit should make it clear that all wet weather flows passing through the headworks of the POTW will receive at least primary clarification and solids and floatables removal and disposal, and disinfection, where necessary, and any other treatment that can reasonably be provided.[4] Under section 402(q)(1) of the CWA and as stated in the CSO Policy, in any case, the discharge must not violate applicable water quality standards.[5] The Department will evaluate and establish on a case-by-case basis effluent limitations for discharges that receive only a primary level of clarification prior to discharge and those bypasses that are blended with secondary treated effluent prior to discharge to ensure applicable water quality standards will be met.

This permitting action allows a CSO-related bypass at the South Portland POTW based on the City's evaluation of feasible alternatives, as summarized in the most recent Master Plan entitled, *Combined Sewer Overflow Facilities Plan Update for the City of South Portland Maine*, dated September 2008 (Revised October 2011) prepared by Wright-Pierce Engineering and approved by the Department on August 30, 2012. The 11-year Implementation Schedule (Table 10-3), which was modified by the City and approved by the Department on November 28, 2016.

[2] 59 Fed. Reg. 18,688, at 18,693 and 40 CFR Part 122.41(m)(4) (April 19, 1994).
[3] 59 Fed. Reg. at 18,694.
[4] 59 Fed. Reg. at 18,693.
[5] 59 Fed. Reg. at 18694, col 1 (April 19, 1994).

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

CSO-Related Bypasses of Secondary Treatment

During wet weather events when flows to the treatment facility exceed what was determined in the September 2008 report to be the peak hourly flow capacity of 15,900 gpm (22.9 MGD), excess flow is diverted to one of three overflow clarifiers for primary clarification and solids and floatables removal and disposal, and disinfection. The disinfected waste stream is then combined with the effluent from the secondary treatment system for discharge via Outfall #001A to the Fore River. This permitting action is establishing end-of-pipe limitations for CSO discharge events to comply with USEPA's CSO Control Policy and Clean Water Act section 402(q)(1).

The CSO Control Policy does not define specific design criteria or performance criteria for primary clarification. The Department and USEPA agree that existing primary treatment infrastructure was constructed to provide primary clarification. Therefore, the effluent quality from a properly designed, operated and maintained existing primary treatment system satisfies the requirements for primary clarification and solids removal.

For facilities that blend primary and secondary effluent prior to discharge, such as the South Portland POTW, compliance must be evaluated at the point of discharge, unless impractical or infeasible.[6] Monitoring to assess compliance with limits based on secondary treatment and other applicable limits is to be conducted following recombination of flows at the point of discharge or, where not feasible, by mathematically combining analytical results for the two waste streams.

Due to the variability of CSO-related bypass treatment systems and wet weather related influent quality and quantity, a single technology-based standard cannot be developed for all of Maine's CSO-related bypass facilities[7]. To standardize how the Department will regulate these facilities to ensure compliance with the CSO Control Policy and Clean Water Act[8], the Department has determined that effluent limitations for the discharge of CSO-related bypass effluent that is combined with effluent from the secondary treatment system should be based on the more stringent of either the past demonstrated performance of the properly operated and maintained treatment system(s) or site-specific water quality-based limits derived from computer modeling or best professional judgment of Department water quality engineers of assimilative capacity of the receiving water.

A review of DMR data for the period January 2013 – August 2016 indicates the following:

[6] 40 CFR 122.45(h).

[7] Maine currently has 16 permitted facilities with a CSO-related bypass.

[8] In other words, that any other treatment that can reasonably be provided is, in fact, provided.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Primary Treated Waste Water – Outfall #001B

l. Flow: The previous permitting action established, and this permitting action is carrying forward, a reporting requirement for total volume of waste water bypassing secondary treatment in each month (expressed in million gallons) as well as the daily maximum discharge flow volume (expressed in million gallons per day or MGD) for the month. A review of DMR data for the period January 2013 – August 2016 indicates the following:

Flow

Value	Limit (MGD)	Range (MGD)	Total (MGD)
Total gallons/month	Report	4.1 – 11.5 (2014) 3.6 – 4.5 (2015) 2.4 – 4.3 (2016)	31.0 (2014) 8.1 (2015) 6.7 (2016)
Daily Maximum	Report	2.4 – 8.0 (2014) 2.7 – 3.6 (2015) 2.4 – 4.3 (2016)	n/a (2014) n/a (2015) n/a (2016)

m. Surface Loading Rate: This permitting action is not carrying forward the daily maximum surface loading rate reporting requirements as the data collected to date for all facilities allowed to bypass secondary treatment has not provided useful information on the performance of clarifiers. A review of DMR data for the period January 2013 – August 2016 indicates the following:

Surface Loading Rate

Value	Limit (gpd/sf)	Range (gpd/sf)	Mean (gpd/sf)
Daily Maximum	Report	1,040 – 3,397	1,703

n. Overflow Occurrences: The previous permitting action established, and this permitting action is carrying forward, a reporting requirement for the total number of overflow occurrences during each calendar month. A reportable overflow occurrence is defined as a discharge from the CSO bypass system for greater than 60 minutes continuously or greater than 120 minutes intermittently during a 24-hour period. A review of DMR data for the period January 2013 – August 2016 indicates the following:

Overflow occurrences/month

Value	Limit (# of days)	Range (# of days)	Total (# of days)
Daily Maximum	Report	---	---
2014	Report	1 - 2	7
2015	Report	1 – 2	3
2016	Report	1 --1	2

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Primary Treated Waste Water – Outfall #001B

n. BOD & TSS: The previous permitting action established a daily maximum concentration reporting requirement for BOD and TSS with a monitoring requirement of 1/Discharge Day. A review of DMR data for the period January 2013 – August 2016 indicates the following:

BOD

Concentration

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	Report	27 – 107	50

TSS

Concentration

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	Report	37 - 132	75

This permit is carrying forward the daily maximum concentration reporting requirement for both BOD and TSS and is establishing monthly average and daily maximum mass reporting requirement as the permittee has been given the option to sample the blended effluent or sample the primary and secondary treated waste stream independently and the mathematically add the values to calculate the blended effluent mass values.

As for the monitoring frequency, this permit is eliminating the requirement to sample the primary treated waste water that is blended with the secondary treated waste water on a 1/Discharge Day basis. This permit establishes a monitoring frequency of 3/Week to coincide with the sampling of the secondary treated waste water (Outfall #001A) monitoring frequency.

o. BOD & TSS percent removal - The previous permit contained a requirement to calculate the BOD5 and TSS percent removal rates on the primary treated waste stream bypassing secondary treatment. A review of DMR data for the period January 2013 – August 2016 indicates the following:

BOD % Removal (DMRs=36)

Value	Limit (%)	Range (%)	Average (%)
Monthly Average	Report	-4 - 50	30

TSS % Removal (DMRs=36)

Value	Limit (%)	Range (%)	Average (%)
Monthly Average	Report	-1 - 82	47

The Department is eliminating the requirement to report the percent removal rates on the primary treated waste stream bypassing secondary treatment as the information collected to data has been of limited value to the Department.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Primary Treated Waste Water – Outfall #001B

p. Fecal Coliform Bacteria: The previous permitting action established a seasonal (May – September) daily maximum concentration limitation of 200 colonies/100 mL for fecal coliform bacteria along with a monitoring frequency of 1/Discharge Day. A review of DMR data for the period January 2013 – August 2016 indicates the following:

Fecal coliform bacteria (DMR=12)

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Daily Maximum	200	2 - 35	15

The Department is revising the numeric limit to a "report" only requirement as limiting an internal waste stream is not necessary given compliance with limitations in the permit is determined after the primary treated and secondary treated waste streams are blended. As for the monitoring frequency, this permit is establishing a monitoring frequency of 5/Week to coincide with the fecal coliform bacteria monitoring frequency of 5/Week for the secondary treated waste water (Outfall #001A) monitoring frequency.

r. Total Residual Chlorine (TRC): The previous permit established a daily maximum concentration limitation of 1.0 mg/L for TRC. A review of the DMRs that were submitted for the period January 2013 – August 2016 indicates the following:

Total residual chlorine (DMRs=12)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	1.0	0.01 – 0.09	0.37

The Department is revising the numeric limit to a "report" only requirement as limiting an internal waste stream is not necessary given compliance with limitations in the permit is determined after the primary treated and secondary treated waste streams are blended. As for the monitoring frequency, this permit is establishing a monitoring frequency of 2/Day to coincide with the TRC monitoring frequency of 2/Day for the secondary treated waste water (Outfall #001A) monitoring frequency.

s. Minimum Influent flow rate – This permitting action is establishing a new requirement to report the minimum instantaneous influent flow rate [expressed in gallons per minute (gpm)] through the secondary treatment process at the initiation of each overflow occurrence.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Blended Effluent – Outfall #001C

For the discharge of blended effluent to the Fore River via the main outfall, the Department is establishing daily maximum water quality-based effluent limitations for BOD_5 and TSS for discharges of blended wastewater to the Fore River. For data management purposes, this permitting action is designating an outfall identifier of Outfall #001C for discharges of blended wastewater when the flow rate through secondary treatment exceeds an instantaneous flow rate of 15,900 gpm (22.2 MGD).

t. Flow, BOD_5 and TSS: Given the configuration of the treatment plant, the permittee has measured flow, and concentrations for BOD_5 and TSS for Outfall #001B (primary treated only). To be conservative, the Department has chosen a pollutant load discharged from Outfall #001B by conducting a statistical evaluation of the monthly daily maximum mass loadings for the period January 2014 – June 2016. The daily maximum mass loadings were derived using the actual flow treated through the primary clarifiers and the daily maximum BOD & TSS concentration for each day the bypass was active. The statistical evaluation calculated the 99th percentile for each parameter as follows:

Flow: 7.75 MGD

BOD_5: 6,668 lbs./day

TSS: 3,976 lbs./day

For secondary treated effluent, the Department conducted a similar statistical evaluation by calculating the 99th percentile of flow, BOD and TSS based on the daily maximum mass values reported on the monthly DMRs (January 2014 – June 2016) for each parameter passing through secondary treatment during bypass events.

The statistical evaluation calculated the 99th percentile for each parameter as follows:

Flow: 23.4 MGD

BOD_5: 6,128 lbs./day

TSS: 5,161 lbs./day

For the purposes of this permitting action, the Department calculated a blended effluent as follows:

Flow: 7.75 MGD + 23.4 MGD = 31.2 MGD

BOD_5: 6,668 lbs./day + 6,128 lbs./day = 12,796 lbs/day
(1°) (2°)

TSS: 3,976 lbs./day + 5,161 lbs./day = 9,137 lbs/day
(1°) (2°)

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Blended Effluent – Outfall #001C

The Department has made a best professional judgment that the conservative far-field dilution of 300:1 calculated in section 6(a)(10) of this Fact Sheet is the most appropriate dilution factor to utilize under wet weather conditions. The increase in the BOD and TSS concentration in Fore River as a result of the discharge of blended effluent can be calculated as follows:

BOD: $\frac{12{,}796 \text{ lbs/day}}{(31.2 \text{ MGD})(8.34 \text{ lbs/gal})}$ = 49 mg/L (blended effluent concentration)

$\frac{49 \text{ mg/L}}{300}$ = 0.16 mg/L (not measureable)

TSS: $\frac{9{,}137 \text{ lbs/day}}{(31.2\text{MGD})(8.34 \text{ lbs/gal})}$ = 35 mg/L (blended effluent concentration)

$\frac{35 \text{ mg/L}}{300}$ = 0.12 mg/L (not measureable)

Based on the combined BOD_5 and TSS values (blended effluent) cited, the Department has made a best professional judgment, daily maximum effluent discharge limitations of 12,795 lbs./day for BOD_5 and 9,137 lbs./day for TSS established in this permit provides reasonable assurance that the discharge will not cause or contribute to a violation of an applicable water quality standard in the Fore River and complies with the State's antidegradation policy at 38 M.R.S. § 464(4)(F).

These limitations are based on new information concerning treatment system performance data as well as a revised and corrected methodology for regulating CSO-related bypasses in Maine. As such, the Department concludes that the new daily maximum effluent limitations of 12,795 lbs./day for BOD_5 and 9,137 lbs/day for TSS for the discharge of primary and secondary blended effluents when the flow rate through secondary treatment has exceeded an instantaneous flow rate of 15,900 gpm (22.2 MGD). complies with the exceptions to antibacksliding at Section 402(o)(2)(B)(i) of the Clean Water Act.

u. Fecal coliform bacteria: The previous permit did not establish any limitations or monitoring requirements for fecal coliform bacteria for the blended effluent waste stream. The Department is establishing a daily maximum limit of 50 col/100 ml based on Department best professional of best practicable treatment under wet weather conditions at the treatment facility.

v. Total residual chlorine (TRC): The previous permit did not establish any limitations or monitoring requirements for TRC for the blended effluent waste stream. As with fecal coliform bacteria, the Department is establishing a daily maximum water quality based limit of 0.078 mg/L based on Department best professional of best practicable treatment under wet weather conditions at the treatment facility.

7. COMBINED SEWER OVERFLOWS

This permit does not contain effluent limitations on the individual CSO outfalls listed in the table below.

Outfall	Location	Receiving Water & Class
004	Long Creek CSO	Long Creek (tidal area), Class SC
005	Cash Corner CSO	Calvery Pond, Class C
006	Broadway/Evans CSO	Barberry Creek, Class C
018	Front Street CSO	Portland Harbor, Class SC
019	West High Street CSO	Portland Harbor, Class SC
024	Elm Street CSO	Fore River, Class SC

The City submitted to the Department a CSO Master Plan update entitled, *"Combined Sewer Overflow Facilities Plan Update for the City of South Portland Maine*, dated September 2008 (Revised October 2011) and prepared by Wright-Pierce, which was approved by the Department on August 30, 2012. The 11-year Implementation Schedule (Table 10-3) from the report was modified and subsequently approved by the Department on November 28, 2016.

The City has been actively implementing the recommendations of the Master Plan and to date has significantly reduced the volume of untreated combined sewer overflows to the receiving water. Special Condition K, *Combined Sewer Overflows (CSOs)*, of the permit contains a schedule of compliance for items in the most current up-to-date abatement plan which must be completed.

The Department acknowledges that the elimination of the six remaining CSOs in the collection system of sanitary wastewater is a costly, long-term project. As the South Portland treatment facility and the sewer collection system are upgraded and maintained in accordance with the CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO activities and in the wastewater receiving primary treatment only at the treatment plant, and, over time, improvement in the quality of the wastewater discharged to the receiving waters.

8. PRETREATMENT

The permittee is required to administer a pretreatment program based on the authority granted under Federal regulations 40 CFR Part 122.44(j), 40 CFR Part 403, section 307 of the Federal Water Pollution Control Act (Clean Water Act), and *Pretreatment Program*, 06-096 CMR 528 (amended March 17, 2008). The permittee's pretreatment program received USEPA 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 that were consistent with that approval and federal pretreatment regulations in effect when the permit was issued. The State of Maine has been authorized by the USEPA to administer the federal pretreatment program as part of receiving authorization to administer the NPDES program.

8. PRETREATMENT (cont'd)

The permit contains a condition for industrial pretreatment (see Special Condition M) pursuant to 40 CFR 403 and 06-096 CMR 528 Pretreatment Program. Conditions for pretreatment have been in place at South Portland since at least the 2004 permit cycle. Annual reports are required pursuant to 40 CFR 403.12(i), and 06-096 CMR 528 (12)(i), which contain information describing the effluent from industrial sources discharging to the facility. As of 2014 there are 6 regulated Industrial Users (IUs) in the South Portland Pretreatment Program; Fairchild Semiconductor, Texas Instruments, Clean Harbors, ENPRO of Maine, Inland Seafood and Monson Industries. These IUs run analyses and submit reports to the City a minimum of twice a year (or more often), and the City runs an independent analysis & carries out a facility inspection once a year. In addition, the State Pretreatment Coordinator conducts either a Pretreatment Audit (Insp-G) or a Pretreatment Compliance Inspection (Insp-P) of the South Portland Pretreatment Program at a frequency of approximately once a year. In South Portland Local Limits have been technically derived for BOD, pH, ammonia nitrogen, arsenic, cadmium, copper, cyanide, lead, mercury, nickel, silver, zinc, molybdenum, Bis (2-ethylhexyl) phthalate, fluoride and Oil & Grease. The individual IU permits contain limits for site-specific relevant contaminants. Additionally, the City submits an Annual Pretreatment Report to the State Pretreatment Coordinator summarizing the year's compliance and enforcement activities. The South Portland MEPDES permit periodically requires effluent testing for a suite of additional pollutants (analytical chemistry), priority pollutants and whole effluent toxicity (WET testing). The Fact Sheet discusses the results of statistical evaluations conducted in accordance with USEPA's Technical Support Document for Water Quality-Based Toxics Control.

Upon issuance of this 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 - last approved by the USEPA on April , 2010); (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 POTWs 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 effective date of this permit,** the permittee must 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 to ensure that the pretreatment program is consistent and up-to-date with all pretreatment requirements in effect. **By September 1st of each calendar year,** the permittee must submit a pretreatment annual 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 water body to meet standards for Class SC classification.

10. PUBLIC COMMENTS

Public notice of this application was made in the *Portland Press Herald* newspaper on or about April 26, 2014. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits must have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses,* 06-096 CMR 522 (effective January 12, 2001).

11. DEPARTMENT CONTACTS

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

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

12. RESPONSE TO COMMENTS

Reserved until the end of the public comment period.

ATTACHMENT A

City of South Portland, Maine
Wastewater Effluent Discharge Pipe

Sewer Structures
- Catch Basin in Sewer
- Sewer Manhole with CSO
- Vault or Chamber
- Interceptor Sewer Manhole
- Pump Station
- Treatmant Plant
- Sewer Manhole
- Wet Well
- ServiceTie
- Private Pump Stations
- Dead End

Sewer Pipes
- Force Main
- Gravity
- Service
- Siphon
- Storm

Water System
- Service Valves
- Water Valve
- Public Hydrants
- Private Hydrant
- Water Mains

Stormwater Structures
- Culvert Inlet
- Culvert Outlet
- Outfall
- Catchbasin
- Drain Manhole
- Outlet Control Structure

Stormwater Pipes
- CSO
- Culvert
- Gravity
- Roof Drain

Terrain
- Waterbody
- Wet Area
- 2 Foot Contours
- Hydrography

Municipal
- Political Boundary
- Parcels, 12/2008
- Buildings

Sewer Districts

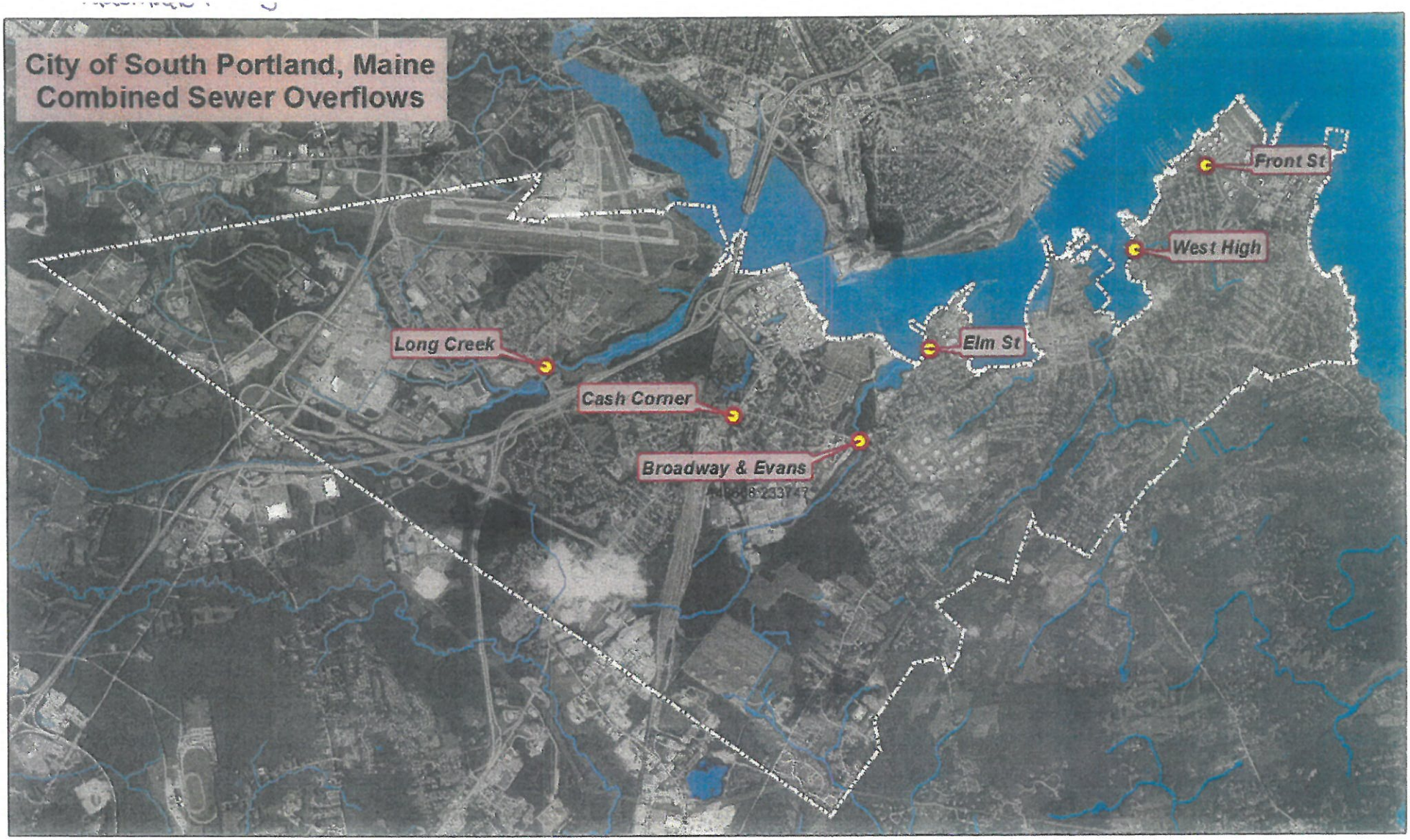
1H	1I2
1I1	1I3

City of South Portland
Water Resource Protection

Date: 3/24/14 by F. Dillon

GIS MAPPING & ANALYSIS

0 50 100 200 300 400 Feet


City of South Portland, Maine
Combined Sewer Overflows
Front St
West High
Elm St
Long Creek
Cash Corner
Broadway & Evans
Sewer Structures
Catch Basin in Sewer
Sewer Manhole with CSO
Vault or Chamber
Interceptor Sewer Manhole
Pump Station
Treatmant Plant
Sewer Manhole
Wet Well
Sewer Pipes
Force Main
Gravity
Service
Siphon
Storm
Water System
Service Valves
Water Valve
Public Hydrants
Private Hydrant
Water Mains
Stormwater Structures
Culvert Inlet
Culvert Outlet
Outfall
Catchbasin
Drain Manhole
Outlet Control Structure
Stormwater Pipes
CSO
Culvert
Terrain
Waterbody
Wet Area
2 Foot Contours
Hydrography
Municipal
Political Boundary
Parcels, 12/2008
Buildings
Sewer Districts
1H
112
111
113
N
City of South Portland
Water Resource Protection
Date: 4/23/13 by F. Dillon
0
0.5
1
Miles

ATTACHMENT B

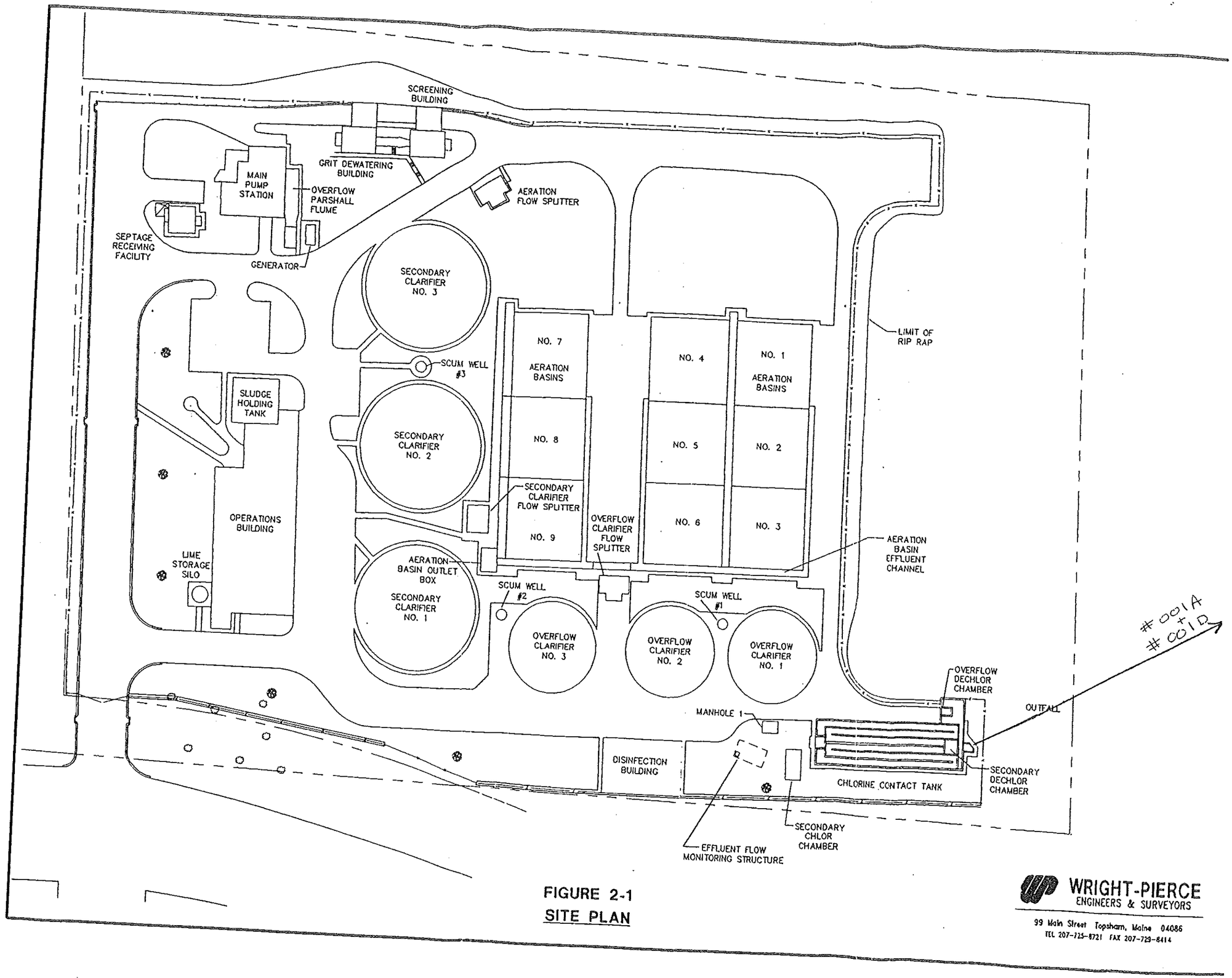


FIGURE 2-1
SITE PLAN

WRIGHT-PIERCE
ENGINEERS & SURVEYORS
99 Main Street Topsham, Maine 04086
TEL 207-725-8721 FAX 207-729-8414

ATTACHMENT C

FACILITY WET EVALUATION REPORT

Facility: SOUTH PORTLAND **Permit Number:** ME0100633 **Report Date:** 9/30/2016

Receiving Water: FORE RIVER **Rapidmix:** Y

Diluition Factors: 1/4 Acute: N/A Acute: 6.000 Chronic: 10

Effluent Limits: Acute (%): 16.667 Chronic (%): 10.000 **Date range for Evaluation: From** 30/Sep/2011 **To:** 30/Sep/2016

Test Type: A_NOEL

Test Species: MYSID SHRIMP

Test Date	Result (%)	Status
02/22/2012	100.000	OK
11/06/2012	54.800	OK
09/24/2013	73.600	OK
10/15/2013	54.400	OK
01/29/2014	57.500	OK
04/23/2014	100.000	OK
11/05/2014	39.700	OK
11/24/2014	38.000	OK
02/04/2015	100.000	OK
10/06/2015	52.200	OK
02/08/2016	100.000	OK

Species Summary:

Test Number: 11 **RP:** 1.300 **Min Result (%):** 38.000 **RP factor (%):** 29.231 **Status:** OK

Test Type: C_NOEL

Test Species: SEA URCHIN

Test Date	Result (%)	Status
12/14/2011	50.000	OK
02/22/2012	100.000	OK
11/06/2012	50.000	OK
05/01/2013	100.000	OK
08/26/2013	100.000	OK
10/15/2013	100.000	OK
02/12/2014	100.000	OK
04/23/2014	16.700	OK
11/24/2014	25.000	OK
02/04/2015	25.000	OK
10/06/2015	100.000	OK
02/08/2016	100.000	OK

ATTACHMENT D

CHEMICAL TEST REPORT

Data entered into Toxscan for the period

25/Oct/2011-25/Oct/2016

Facility Name: **SOUTH PORTLAND WRP** Permit Number: ME010063

AMMONIA

Test Date	Result (ug/l)	Lsthan	Status
12/01/2015	5900.000	N	
12/14/2011	4100.000	N	
02/22/2012	5700.000	N	
03/15/2012	2400.000	N	
07/09/2012	6500.000	N	
08/15/2012	2400.000	N	
11/06/2012	8100.000	N	
02/14/2013	3400.000	N	
04/08/2013	8000.000	N	
05/01/2013	7200.000	N	
08/26/2013	7600.000	N	
09/24/2013	10000.000	N	
10/15/2013	9500.000	N	
01/29/2014	16000.000	N	
02/12/2014	11000.000	N	
04/23/2014	9400.000	N	
08/26/2014	3400.000	N	
11/05/2014	5000.000	N	
11/24/2014	5300.000	N	
02/04/2015	5000.000	N	
06/02/2015	3400.000	N	
09/22/2015	6200.000	N	
10/06/2015	11000.000	N	
02/08/2016	5300.000	N	
03/21/2016	3000.000	N	
06/03/2016	6700.000	N	
09/06/2016	7600.000	N	

CYANIDE AS AMENABLE

Test Date	Result (ug/l)	Lsthan	Status
05/23/2012	5.000	N	
07/09/2012	5.000	N	
10/15/2012	5.000	N	
02/14/2013	5.000	N	
09/06/2016	5.000	N	

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 25/Oct/2011 - 25/Oct/2016

Facility Name: **CITY OF SOUTH PORTLAND** NPDES: **ME0100633**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
12/01/2015	5.96	4.79	98	12	28	46	0	1	11	F	0

Facility Name: **SOUTH PORTLAND** NPDES: **ME0100633**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
12/14/2011	6.79	6.31	17	11	0	0	0	6	0	F	0
02/22/2012	5.93	5.28	16	10	0	0	0	6	0	F	0
03/15/2012	6.55	6.43	116	9	28	46	25	1	7	F	0
03/28/2012	6.55	4.49	1	1	0	0	0	0	0	F	0
05/23/2012	7.89	5.97	1	1	0	0	0	0	0	F	0
07/09/2012	5.40	5.05	2	1	0	0	0	1	0	F	0
08/15/2012	5.40	7.55	1	0	0	0	0	1	0	F	0
10/15/2012	5.38	5.11	1	1	0	0	0	0	0	F	0
11/06/2012	5.14	5.06	16	10	0	0	0	6	0	F	0
02/14/2013	6.35	5.36	2	1	0	0	0	1	0	F	0
04/08/2013	6.22	6.04	129	14	28	46	25	5	11	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 25/Oct/2011-25/Oct/2016

Facility Name: **SOUTH PORTLAND** NPDES: **ME0100633**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
05/01/2013	5.87	4.90	16	10	0	0	0	6	0	F	0
05/23/2013	5.87	7.80	1	1	0	0	0	0	0	F	0
06/19/2013	7.50	5.68	1	0	0	1	0	0	0	F	0
08/26/2013	4.55	4.30	15	10	0	0	0	5	0	F	0
09/23/2013	6.09	5.13	2	1	0	0	0	1	0	F	0
09/24/2013	6.09	4.94	15	10	0	0	0	5	0	F	0
10/15/2013	4.33	4.29	15	10	0	0	0	5	0	F	0
12/11/2013	5.03	4.89	1	1	0	0	0	0	0	F	0
01/29/2014	8.03	5.30	15	10	0	0	0	5	0	F	0
02/12/2014	4.79	4.37	15	10	0	0	0	5	0	F	0
03/05/2014	7.86	4.79	2	1	0	0	0	1	0	F	0
04/03/2014	8.95	10.98	1	1	0	0	0	0	0	F	0
04/14/2014	8.95	8.01	123	13	28	46	25	0	11	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 25/Oct/2011 - 25/Oct/2016

Facility Name: **SOUTH PORTLAND** NPDES: **ME0100633**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
04/23/2014	8.95	6.34	17	11	0	0	0	6	0	F	0
08/26/2014	6.70	5.08	2	1	0	0	0	1	0	F	0
11/05/2014	6.11	5.92	15	10	0	0	0	5	0	F	0
11/24/2014	6.11	7.61	16	11	0	0	0	5	0	F	0
12/01/2014	10.40	8.93	1	1	0	0	0	0	0	F	0
02/04/2015	4.11	4.10	16	10	0	0	0	6	0	F	0
03/03/2015	6.84	4.03	2	1	0	1	0	0	0	F	0
05/07/2015	9.49	8.29	1	1	0	0	0	0	0	F	0
06/02/2015	5.96	9.17	1	0	0	0	0	1	0	F	0
09/22/2015	4.48	3.60	2	1	0	0	0	1	0	F	0
10/06/2015	0.22	0.20	15	10	0	0	0	5	0	F	0
02/08/2016	NR	NR	16	10	0	0	0	6	0	F	0
03/21/2016	7.79	7.21	4	2	0	0	0	2	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 25/Oct/2011 - 25/Oct/2016

Facility Name: **SOUTH PORTLAND** NPDES: **ME0100633**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
06/03/2016	5.10	4.25	3	1	0	0	0	2	0	F	0
09/06/2016	3.51	3.61	3	1	0	0	0	2	0	F	0
09/07/2016	3.51	3.69	2	0	0	1	0	1	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

ATTACHMENT E

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 530.2(D)(4) CERTIFICATION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
Commissioner

MEPDES#_____Facility Name_____

Since the effective date of your permit, have there been;		NO	YES Describe in comments section
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?	☐	☐

COMMENTS:

Name (printed): _____

Signature: _____ Date: _____

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

This form may be used to meet the requirements of Chapter 530.2(D)(4). This Chapter requires all dischargers having waived or reduced toxic testing to file a statement with the Department describing changes to the waste being contributed to their system as outlined above. As an alternative, the discharger may submit a signed letter containing the same information.

Scheduled Toxicity Testing for the next calendar year

Test Conducted	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
WET Testing	□	□	□	□
Priority Pollutant Testing	□	□	□	□
Analytical Chemistry	□	□	□	□
Other toxic parameters [1]	□	□	□	□

Please place an "X" in each of the boxes that apply to when you will be conducting any one of the three test types during the next calendar year.

1 This only applies to parameters where testing is required at a rate less frequently than quarterly.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207)760-3143

web site: www.maine.gov/dep

ATTACHMENT F

Limitations for Industrial Users – How to conduct an Industrial Waste Survey

The National Pretreatment Program is scaled to cities and towns that are generally more developed than those in Maine. Small towns around here tend to wonder what the fuss is about – we know (or at least are pretty sure we know) everything that's going on in our collection systems. A lot can happen, and a lot can change in areas like Portland, Bangor, Lewiston/Auburn, let alone bigger places like Boston or NY. Regardless of community size, or whether or not you have any new facilities (or existing facilities that have changed what they're doing), the Industrial Waste Survey (IWS) is a federal requirement that has been adopted into Maine's MEPDES wastewater licensing program.

Step 1: For a small community, the quickest, easiest thing to do is take a day when not much is going on at the plant, get in the vehicle, & drive the entire extent of your collection system. Take the attached logsheet with you & make a list of every industrial or significant commercial facility that discharges to your system. The IWS list is basically a summary of the dischargers in your system that may have wastewater with different characteristics than the wastewater discharge from the sinks, toilets, bathtub, dishwasher and washing machine at your typical home or commercial building.

(Note: Do not include homes, rentals, restaurants, delis & fast food joints. You may need a FOG/grease trap program for those kinds of places, but that's a different consideration than an IWS and most small-scale commercial activity. Even some larger-scale places, like schools, cafeterias, managed care homes, etc., generally have wastewater that is similar in characteristics to residential wastewater, just more of it.)

Step 2 – Take your logsheet and compare each facility to this set of conditions:

► Does the facility discharge a monthly average of >25,000 gallons a day of **process** wastewater?

► Does the facility's **process** wastewater discharge make up 5% or more of your daily influent flow?

► Does the facility's **process** wastewater discharge make up 5% or more of your daily influent BOD?

► Does the facility's **process** wastewater discharge make up 5% or more of your daily influent TSS?

► Does the facility's **process** wastewater have a reasonable potential to adversely affect your POTW operations, cause a problem with your discharge, or cause a problem with your sludge disposal?

If "yes" to any of the above, then the facility is a potential **Significant Industrial User** of your system. Put a check in that column on the spreadsheet.

Step 3 - Indicate on the spreadsheet if any of the facilities fall under one of the National Categorical Standards, 40 CFR 405 through 471 (Use the attached list of Categorical Industrial Users to determine if any of the facilities on your list are included).

*If yes to this consideration, then the facility may be a **Categorical Industrial User** of your system. Put a check in that column also.*

See next page

Step 4 - If any of the facilities on your list meet one or more of those conditions, then you're going to want to go back and take a closer look at them; find out more detail on their process(es), wastewater characteristics, discharge pattern. You will likely find that most facilities are not a problem. Only a few will need closer scrutiny.

(Note – having industries within your collection system does not automatically require increased regulatory activity on your part; the only uniform requirement is that you know what you have.) The first time through the IWS process takes some time but after that it is relative easy to update it on an as-needed basis.

Though this requirement has only recently explicitly appeared in MEPDES permits, it has actually been a federal requirement all along. Again, the first time through will be a bit of a project, but from then on, it shouldn't be difficult.

If you have questions regarding whether a particular discharger is a **Significant Industrial User** or **Categorical Industrial User contact your assigned MeDEP wastewater treatment system inspector or the MEDEP Pretreatment coordinator.**

James R. Crowley
Compliance Supervisor, State Pretreatment Coordinator
Department of Environmental Protection
Division of Water Quality Management
207-287-8898
james.r.crowley@maine.gov

Industrial User Survey

Date:_____

Surveyor:_____

	Facility name/Address/ Contact	Type of business	Wastewater flow (GPD)	Wastewater characteristics, conc., constituents, etc	Comments	Onsite Pretreatment?	Significant Industrial User?	Categorical Industrial User?

Categorical Industrial Users (from 40 CFR Sections 403-471)

	5	Dairy Products		26	Glass Manu.		46	Paint formulating
	6	Grain Mill		27	Asbestos manu.		47	Ink formulating
	7	Canned/preserv fruits& vegs		28	Rubber manu.		49	Airport deicing
	8	Canned/preserved seafood		29	Timber products processing		50	Construction & Development
	9	Sugar processing		30	Pulp/paper/paperboard		51	Conc. aquatic animal prod.
	10	Textile mill		32	Meat & Poultry products		54	Gum & Wood chemicals
	11	Cement manufacturing		33	Metal Finishing		55	Pesticide Chemicals
	12	Conc. animal feeding ops.		34	Coal mining		57	Explosives
	13	Electroplating		35	Oil& Gas extraction		58	Carbon Black Manu.
	14	Organic chemicals, plastics & syn. fiber		36	Mineral mining/processing		59	Photographic
	15	Inorganic chemicals		37	Centralized waste treatment		60	Hospital
	17	Soap & Detergent Manu.		38	Metal products		61	Battery manufacturing
	18	Fertilizer manu.		39	Pharmaceutical Manu		63	Plastics molding/forming
	19	Petroleum refining		40	Ore mining/processing		64	Metal molding/casting
	20	Iron & Steel manu.		42	Transportation equip. cleaning		64	Coil coating
	21	Non-Ferrous metals		43	Paving & roofing materials		66	Porcelain
	22	Phosphate		44	Waste combustors		67	Aluminum forming
	23	Steam Electric power		45	Landfill		68	Copper forming
	24	Ferroalloy manu.					69	Electrical & electronic components
	25	Leather tanning/finishing					71	Nonferrous metals forming/Metals powders