STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

March 24, 2026

Mrs. Amanda Smith
City of Bangor
73 Harlow St.
Bangor, ME 04401

Sent via electronic mail
Delivery confirmation requested

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100781
Maine Waste Discharge License (WDL) Application #W001041-5M-L-R
Proposed Draft MEPDES Permit Renewal

Dear Mrs. Smith,

Enclosed is a **proposed draft** MEPDES permit and Maine WDL which the Department proposes to issue 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 permit 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 from various state and federal agencies and from any other parties who have notified the Department of their interest in this matter.

The comment period begins today, Tuesday, March 24, 2026, and ends on Friday, **April 10, 2026**. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business Friday, April 10, 2026. Failure to submit comments in a timely fashion may result in the proposed draft/license permit 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 207-215-6856.

Sincerely,

Asenath Frizzell
Division of Water Quality Management
Bureau of Water Quality

Enclosure

ec: Lori Mitchell, DEP/CMRO
Mike Loughlin, DEP/EMRO
Gary Brooks, DEP/EMRO
Gregg Wood, DEP/CMRO
Holly Ireland, DEP/CMRO
Wendy Garland, DEP/CMRO
Mike Riley, DEP/CMRO
Laura Crossley, DEP/CMRO
Michael Cobb, USEPA
Kathryn Rosenberg, USEPA
Richard Carvalho, USEPA
Sean Mahoney, CLF Maine
IFW
Maine DMR

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

DEPARTMENT ORDER

IN THE MATTER OF

CITY OF BANGOR	)	MAINE POLLUTANT DISCHARGE
BANGOR, PENOBSCOT COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
ME0100781	)	WASTE DISCHARGE LICENSE
W001041-5M-L-R **APPROVAL**	)	**RENEWAL**

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

APPLICATION SUMMARY

On June 14, 2021, the Department accepted as complete for processing an application from Bangor for renewal of combination Waste Discharge License (WDL) # W001041-5M-J-R / Maine Pollutant Discharge Elimination System (MEPDES) permit # ME0100781, which was issued by the Department on June 9, 2016 for a five-year term. The June 9, 2016 permit authorized the monthly average discharge of 18.0 million gallons per day (MGD) of secondary treated sanitary wastewater from a publicly owned treatment works (POTW) to the Penobscot River, Class B, in Bangor, Maine.

The June 9, 2016 MEPDES permit also authorized Bangor to discharge an unspecified quantity of primary treated wastewater from a POTW when the influent to the wastewater treatment facility exceeded a sustained daily flow rate of 30 MGD and authorized the discharge of an unspecified quantity of untreated combined sanitary and storm water from nine (9) combined sewer overflow (CSO) outfalls to the Kenduskeag Stream, Class C and the Penobscot River, Class B in Bangor, Maine.

On August 8, 2016, the Department issued a minor revision to clarify the monitoring point for influent flow and sampling during bypass events in the permit, as well as minor language edits in the fact sheet.

PERMIT SUMMARY

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

1. Increasing the *Escherichia coli* bacteria (*E. coli*) monitoring season from May 15th – September 30th to April 15th –October 31st pursuant to 38 M.R.S § 465(3)(B);

2. Established seasonal monitoring for Total Residual Chlorine for April 15th – May 14th with the technology-based limit of 1.0 mg/L, due to the increase dilution during spring runoff.

3. Established seasonal monitoring for Total Residual Chlorine for May 15- October 31st with the water quality-based limits for monthly average and daily maximum of 0.1 mg/L and 0.3 mg/L, respectively.

4. Revising the BOD_5 daily maximum mass limitation from 9,245 lbs./day to 8,072 lbs./day for administrative Outfall #001C, based on the results of facility testing;

5. Revising the TSS daily maximum mass limitation from 13,470 lbs./day to 11,832 lbs./day for administrative Outfall #001C, based on the results of facility testing;

6. Eliminating Special Condition N, *Ambient Water Quality Monitoring*;

7. Eliminating permitted combined sewer overflow (CSO) Cemetery, Outfall #016;

8. Adding limits and monitoring for copper and Bis(2-Ethylhexyl)phthala.

9. Eliminating Special Condition K , *Disposal of Transported Wastes in Wastewater Treatment Facility*.

10. Establishing ambient and effluent monitoring for total Phosphorus in order to determine if the permittee's effluent exceeds or has the reasonable potential to exceed the ambient water quality criteria for total phosphorus. Ambient sampling to be reported on the newly established outfall #002A.

11. Reducing Daily Maximum water quality-based effluent limit for E. Coli Bacteria based on revisions to 38 M.R.S. § 465 (3)(B).

CONCLUSIONS

BASED on the findings in the attached and incorporated Fact Sheet dated March 24, 2026, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

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

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

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

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

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

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

(d) Where the actual quality of any classified receiving waterbody 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 waterbody, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharges (including the eight CSOs and the CSO related bypasses of secondary treatment) 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).

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ACTION

THEREFORE, the Department APPROVES the above noted application of the City of Bangor to discharge a monthly average flow of 18.0 MGD of secondary treated sanitary wastewater and allow the discharge of an unspecified quantity of excess combined sanitary and storm water receiving primary treatment only from the City of Bangor to the Penobscot River, Class B, and untreated combined sanitary and storm water from five (5) CSO outfalls to Kenduskeag Stream, Class C, and three (3) CSO outfalls to the Penobscot River, Class B, in Bangor, Maine, SUBJECT TO ALL APPLICABLE STANDARDS AND REGULATIONS AND THE FOLLOWING CONDITIONS:

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 becomes effective upon the date of signature below and expires at midnight five (5) years after that date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act and Other Administrative Matters*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters,* 06-096 C.M.R. ch. 2 § 21(A) (effective September 15, 2024)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____DAY OF _____2026.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
_ For Melanie Loyzim, Commissioner

Date of initial receipt of application: June 7, 2021
Date of application acceptance: June 14, 2021

This Order prepared by Asenath Frizzell, Bureau of Water Quality

SPECIAL CONDITIONS

A. 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 June 14, 2021; 2) the terms and conditions of this permit; and 3) only from Outfall #001A, #001B, #001C and eight (8) combined sewer overflow outfalls listed in Special Condition L, *Combined Sewer Overflows,* of this permit. Discharges of wastewater from any other point source 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.

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge secondary treated sanitary wastewater from **Outfall #001A** to the Penobscot River in Bangor, Maine. Such discharges are limited and must be monitored by the City of Bangor as specified below [(1)].

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	18.0 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	4,504 lbs./day *[26]*	6,755 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L[(2)] *[19]*	45 mg/L[(2)] *[19]*	50 mg/L[(2)] *[19]*	3/Week *[03/07]*	Composite *[24]*
BOD_5 ***(When bypass is active)*** *[00310]*	4,504 lbs./day *[26]*	6,755 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L[(2)] *[19]*	45 mg/L[(2)] *[19]*	Report mg/L[(2)] *[19]*	3/Week *[03/07]*	Composite *[24]*
BOD_5 Percent Removal[(3)] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	4,504 lbs./day *[26]*	6,755 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L[(2)] *[19]*	45 mg/L[(2)] *[19]*	50 mg/L[(2)] *[19]*	3/Week *[03/07]*	Composite *[24]*
TSS ***(When bypass is active)*** *[00530]*	4,504 lbs./day *[26]*	6,755 lbs./day *[26]*	Report lbs./day *[26]*	30 mg/L[(2)] *[19]*	45 mg/L[(2)] *[19]*	Report mg/L[(2)] *[19]*	3/Week *[03/07]*	Composite *[24]*
TSS Percent Removal [(3)] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	4/Week *[04/07]*	Grab *[GR]*
E. coli Bacteria [(4,5)] *(April 15th – October 31st) [31633]*	---	---	---	64/100 ml[(5)] *[13]*	---	236/100 ml *[13]*	3/Week *[03/07]*	Grab *[GR]*

SPECIAL CONDITIONS

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

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
TRC [6] *[50060]* (Seasonally May 15- October 31)	---	---	---	0.1 mg/L *[19]*	---	0.3 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
TRC [6] *[50060]* (Seasonally April 15- May 14)	---	---	---	---	---	1.0 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	1/Day *[01/01]*	Grab *[GR]*
Total Phosphorus[16] *[00665]* (June 1 – September 30th)	Report lbs/day *[19]*	---	Report lbs/day *[19]*	Report mg/L *[19]*	---	Report mg/L *[19]*	2/Month *[01/30]*	Grab *[GR]*
Mercury (Total) [7] *[71900]*	---	---	---	11.3 ng/L *[3M]*	---	16.9 ng/L *[3M]*	1/Year *[01/YR]*	Grab *[GR]*
Lead (Total) *[01051]*	3.81 lbs/day *[26]*	---	---	25 ug/L *[28]*	---	---	1/Year *[01/YR]*	Composite *[24]*
Bis(2-EthylHexyl)phthalate *[39100]*	8.7 lbs/day *[26]*						2/Year *[01/YR]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports (DMRs). **Footnotes:** See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. The permittee must, seasonally (June 1st – September 30th), conduct Ambient Receiving Water monitoring of the Penobscot River the "Eddington Eddy" (44.824402, -68.694753) on the second week of each month (**Outfall #002A**). See **Attachment B** of this permit for a map depicting the sampling location. Such sampling must be conducted by the permittee as specified below(1).

Ambient Receiving Water Characteristic	Ambient Reporting	Monitoring Requirements	
	Monthly Average	Measuring Frequency	Sample Type
Up-Stream: Total Phosphorus (16) ***(June 1st – September 30th)*** *[00665]*	Report mg/L *[19]*	1/Month *[01/30]*	Grab(10) [GR]

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the Monthly Discharge Monitoring Reports (DMRs). **Footnotes:** See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

3. The permittee is authorized to discharge **secondary treated municipal wastewaters from Outfall #001A** to the Penobscot River in Bangor. Such discharges must be limited and monitored by the permittee as specified below [(1)]:

   SCREENING LEVEL – 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.

Effluent Characteristic	Discharge Limitations				Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
WET Acute – No Observed Effect Level (NOEL) [(8)]						
Ceriodaphnia dubia (Water flea) *[TDA3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TDA6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
WET Chronic – NOEL						
Ceriodaphnia dubia (Water flea) *[TBP3B]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Salvelinus fontinalis (Brook trout) *[TBQ6F]*	---	---	---	Report % *[23]*	1/Year *[01/YR]*	Composite *[24]*
Analytical chemistry [(9)] *[51477]*	---	---	---	Report µg/L *[28]*	1/Quarter *[01/90]*	Composite/Grab *[24]*
Priority Pollutant [(9)] *[50008]*	---	---	---	Report µg/L *[28]*	1/Year *[01/YR]*	Composite/Grab *[24]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports (DMRs). **Footnotes:** See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

4. PRIMARY TREATED WASTEWATER (Administrative OUTFALL #001B – Primary Treatment Only)

Consistent with CSO bypass regulations, the permittee is allowed to bypass secondary treatment and provide primary treatment only prior to combining with secondary treated wastewater. Bypassing secondary treatment is allowed when the influent flow to the wastewater treatment facility exceeds 20,833 gpm (30 MGD (Instantaneous)). Allowance to bypass secondary treatment will be reviewed and may be modified or terminated pursuant to Special Condition O, *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*. This form can be found at: https://www.maine.gov/dep/water/cso/index.html#form . Outfall 001B must be monitored as follows **(1)**:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Influent Flow Rate Minimum *[00058]*	---	Report (gpm) **(10)** *[78]*	---	---	Instantaneous *[01/99]*	Recorder *[RC]*
Flow *[50050]*	Report (Total MGD) *[03]*	Report (MGD) *[03]*	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	---	Report lbs./day *[26]*	---	Report mg/L *[19]*	1/Discharge Day **(11,14)** *[01/DD]*	Composite *[24]*
TSS *[00530]*	---	Report lbs./day *[26]*	---	Report mg/L *[19]*	1/Discharge Day **(11,14)** *[01/DD]*	Composite *[24]*
Overflow Occurrence **(12)** *[74062]*	---	---	Report (# of days) *[93]*	---	1/Discharge Day **(11)** *[01/DD]*	Record Total *[RT]*
E. coli Bacteria *(April 15th – October 31st)* *[31633]*	---	---	---	Report col/100 ml *[13]*	1/Discharge Day **(11,14)** *[01/DD]*	Grab *[GR]*
TRC *[50060]*	---	---	--	Report mg/L *[19]*	1/Discharge Day **(11,14)** *[01/DD]*	Grab *[GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports (DMRs). **Footnotes:** See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

4. BLENDED EFFLUENT (Administrative OUTFALL #001C)

Consistent with CSO bypass regulations, the permittee is allowed to discharge primary and secondary treated wastewater (blended effluent - Outfall #001C (administrative outfall)) to the Penobscot River. Bypassing secondary treatment is allowed when the influent flow to the wastewater treatment facility exceeds 20,833 gpm (30 MGD). Allowance to bypass secondary treatment will be reviewed and may be modified or terminated pursuant to Special Condition O, *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*. This form can be found at: https://www.maine.gov/dep/water/cso/index.html#form. Outfall 001C must be monitored as follows (1):

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	Report (Total MGD) *[03]*	Report (MGD) *[03]*	---	---	1/Discharge Day (11) *[01/DD]*	Calculate *[CA]*
BOD_5 (13) *[00310]*	---	8,286 lbs./day *[26]*	---	Report mg/L *[19]*	1/Discharge Day (11,14) *[01/DD]*	Calculate *[CA]*
TSS (13) *[00530]*	---	11,832 lbs./day *[26]*	---	Report mg/L *[19]*	1/Discharge Day (11,14) *[01/DD]*	Calculate *[CA]*
E. coli Bacteria (4) *(April 15th – October 31st)* *[31633]*	---	---	---	236 col/100 ml *[13]*	1/Discharge Day (11,14) *[01/DD]*	Calculate *[CA]*
TRC (6) *[50060]*	---	---	---	1.0 mg/L *[19]*	1/Discharge Day (11) *[01/DD]*	Calculate *[CA]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports (DMRs). **Footnotes:** See Pages 11-15 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES

1. **Sampling** – The permittee must conduct sampling and analysis in accordance with; a) methods approved by 40 Code of Federal Regulations (C.F.R.) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 C.F.R. 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 wastewater. Samples that are sent to a publicly owned treatment works (POTW) 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 C.M.R. Ch. 263 (effective December 19, 2018). Laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of 10 − 144 C.M.R. Ch. 263. If the Town monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. Part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the discharge monitoring report (DMR).

   In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the City must monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) The method minimum level is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest minimum level of the analytical methods approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers either to the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in the following ways: they may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

   Sampling Locations – Any change in sampling location(s) other than those specified below must be reviewed and approved by the Department in writing.

   Influent
   BOD_5 and TSS must be sampled at the discharge of the main lift station prior to degritting.

   Effluent receiving secondary treatment (Outfall #001A)
   BOD_5, TSS, WET testing, analytical chemistry and TRC must be sampled at the drop box prior to discharge to the river. Sampling for pH, settleable solids, and *E.coli* bacteria must be at the influent end of the Parshall flume.

Effluent receiving primary treatment (Internal Waste Stream - Outfall #001B) BOD_5, TSS, TRC, pH, settleable solids and *E. coli* bacteria must be collected immediately downstream from the effluent launders of Primary Clarifier #1.

Effluent from Outfall #001B and Outfall #001C should be reported as NODI-9 when not discharging.

Ambient Receiving Water monitoring of the Penobscot River (Outfall #002A) The "Eddington Eddy" (44.824402, -68.694753) on the second week of each month. See **Attachment B** of this permit for a map depicting the sampling location.

2. **BOD_5 & TSS** – When the bypass of secondary treatment is active, sample results obtained for these parameters are not to be included in calculations to determine compliance with monthly or weekly average limitations. Also, when the bypass of secondary treatment is active, the daily maximum concentration limit of 50 mg/L for BOD_5 and TSS at Outfall #001A is not in effect.

3. **Percent Removal** – The permittee must achieve a minimum of 85 percent removal of both TSS and BOD_5 for all flows receiving secondary treatment. The percent removal is calculated based on influent and effluent concentration values. The percent removal will be waived if the calculated percent removal is less than 85% and when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility may report "*N9"* on the monthly Discharge Monitoring Report (DMR).

4. ***E. coli* Bacteria –** Limits and monitoring requirements are seasonal and apply between April 15th and October 31st 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.

5. **Bacteria Reporting** – The monthly average *E. coli* bacteria limitation is a geometric mean limitation and sample results must be reported as such. Results must be expressed in MPN/100mL or CFU/100mL.

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

7. **Mercury** - The permittee must conduct all mercury monitoring required by this permit or required to determine compliance with interim limitations established pursuant to 06-096 C.M.R. ch. 519 in accordance with the U.S. Environmental Protection Agency's (USEPA) "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. For the most up-to-date reporting form, go to https://www.maine.gov/dep/water/wd/municipal_industrial/index.html or DEP website at maine.gov/dep/index.html, and search "wastewater reporting forms" and select "Whole Effluent Toxicity, Chemistry, and Mercury Reporting Forms" for a reporting form for mercury test results. Compliance with the monthly average limitation established in Special Condition A of this permit will be based on the cumulative arithmetic mean of all mercury tests results that were conducted utilizing sampling Method 1669 and analysis Method 1631E on file with the Department for this facility.

8. **WET Testing** – Definitive WET Testing is a multi-concentration testing event (a minimum of five dilutions, bracketing the critical acute and chronic thresholds of 3.8% and 0.86% respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level 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 25.1:1 and 107.5:1, respectively, for Outfall #001A.

    a. **Surveillance level testing** – Waived pursuant Department rule *Surface water Toxics Control Program*, 06-096 C.M.R. ch. 530 2(D)(3)(b).

    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 WET testing at a minimum frequency of once per year (1/Year) on the water flea and brook trout.

Test results must be submitted to the Department no later than the next 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 3.8% and 0.86%, 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. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th ed. USEPA 821-R-02-013. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual).

b. U.S. Environmental Protection Agency. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th ed. USEPA 821-R-02-013. U.S. Environmental Protection

Agency, Office of Water, Washington, D.C., October 2002 (the freshwater chronic method manual).

Results of WET tests must be reported on the "*Whole Effluent Toxicity Report Fresh Waters*" form each time a WET test is performed. The form can be found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

The permittee must analyze the effluent for the analytical chemistry and priority pollutant parameters specified on the "*WET and Chemical Specific Data Report Form*" form each time a WET test is performed. The form can be found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

9. **Analytical Chemistry** – Refers to those pollutants listed in their respective categories on the "WET and Chemical Specific Data Report Form" found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

   a. Surveillance level testing – Waived pursuant Department rule *Surface water Toxics Control Program*, 06-096 C.M.R. ch. 530 2(D)(3)(b).

   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.

10 **Priority Pollutant Testing –** Refers to those pollutants listed in their respective categories on the "WET and Chemical Specific Data Report Form" found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

   a. Surveillance level testing – Waived pursuant Department rule *Surface water Toxics Control Program*, 06-096 C.M.R. ch. 530 2(D)(3)(b).

   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.

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

Analytical chemistry and priority pollutant 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 laboratory reports for up to 10 business days after receiving the test results from the laboratory conducting the testing 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 ambient water quality criteria (AWQC) as established in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 C.M.R. ch. 584 (amended February 16, 2020). For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "N-9" monitoring not required this period.

11. **Influent Flow Rate Minimum** – The permittee must report the minimum instantaneous influent flow rate entering the headworks of the plant at the time each bypass of secondary treatment is activated.

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

13. **Overflow Occurrence** – An overflow occurrence is defined as the period of time between initiation of flow from the primary bypass and ceasing discharge from the primary bypass. Overflow occurrences are reported in discharge days. Multiple intermittent overflow occurrences in one discharge day are reported as one overflow occurrence and are sampled according to the measurement frequency specified.

14. **BOD_5 & TSS** – When quantifying the blended effluent, the permittee has the option to calculate the discharge characteristics of the final effluent discharged to the receiving water. To do this, the permittee must mathematically add the monthly average mass of BOD_5 and TSS of the secondary treated wastewater (Outfall #001A) to each of the daily BOD_5 and TSS mass values of the primary treated wastewater when the bypass is active and report the highest combined mass of BOD_5 and TSS values for each month. Example calculation is as follows:

BOD_5 mass (blended effluent) =
BOD_5 mass (monthly average for secondary) + BOD_5 mass (highest for bypass)

For Concentration:
BOD_5 mg/L (blended effluent (Outfall #001C)) =

$$\frac{\text{BOD5 mass (Blended effluent)}}{\text{(Flow during Bypass)(8.34lbs/gal.)}}$$

All calculations and data utilized must be submitted to the Department with the applicable monthly DMR.

15. **BOD $_5$, TSS, *E. coli* bacteria, TRC** – Sampling to comply with the 1/Discharge Day monitoring requirement is only required when the facility is regularly staffed and if it coincides with the regularly scheduled 3/Week monitoring requirement on the secondary treated effluent waste stream. Additionally, samples for these parameters are not required to be collected when Outfall #001B is active for a single continuous discharge event

lasting less than 60 minutes or during intermittent discharge events over a course of a 24-hour period totaling less than 120 minutes.

16. **Total Phosphorus** – Total phosphorus monitoring must be performed in accordance with **Attachment A** of this permit entitled, *Protocol for Total P Sample Collection and Analysis for Wastewater – May 2014*, unless otherwise specified by the Department. Phosphorus mass and concentration monitoring requirements and limits are seasonal and in effect from June 1 through September 30 of each year. Ambient sampling is to be reported using the Outfall #002A.

C. NARRATIVE EFFLUENT LIMITATIONS

1. The permittee 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 permittee 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 permittee must not discharge effluent that imparts color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their classification.

4. The permittee 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.

D. TREATMENT PLANT OPERATOR

The person who has management responsibility over the treatment facility must hold a **Maine Grade V,** Biological Treatment certificate (or higher) or must be a Maine Registered Professional Engineer pursuant to Maine Laws, *Regulations for Wastewater Treatment Plant Operators*, 32 M.R.S. § 4171-4182 and *Regulations for Wastewater Operator Certification*, 06-096 C.M.R. ch. 531 (effective July 24, 2023). All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

E. 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 into the system at the time of permit issuance.

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

   (a) The quality and quantity of wastewater introduced to the wastewater collection and treatment system; and

   (b) Any anticipated impact of the change in the quantity or quality of the wastewater to be discharged from the treatment system.

F. MONITORING AND REPORTING

Electronic Reporting

NPDES Electronic Reporting, 40 C.F.R. Part 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 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 Department toxsheet reporting form. An electronic copy of the toxsheet reporting document must be submitted to your Department compliance inspector as an attachment to an email. 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.

G. 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 C.M.R. ch. 528 (last amended March 17, 2008).

H. INDUSTRIAL PRETREATMENT PROGRAM

1. Pollutants introduced into POTW's by a non-domestic source (user) must not pass-through the POTW or interfere with the operation or performance of the works and collection system.

   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 POTW's 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, biomonitoring results, secondary/biological activated sludge inhibition, worker health and safety, and concerns with collection system interference. In preparing this evaluation, the permittee must complete the "Re-Assessment of Technically Based Local Limits" form included as **Attachment C** of this permit with the technical evaluation to assist in determining whether existing local limits need to be revised or new local limits added. 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 EPA'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 C.F.R. 403 and *Pretreatment Program*, 06-096 C.M.R. ch. 528 (effective 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.

c. Obtain appropriate remedies for noncompliance by an Industrial User with any pretreatment standard, best management practice or other 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 C.M.R. ch. 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 D of this permit and must be submitted no later than December 1 of each calendar year.** The Annual Report for reporting year prior to 1 January 2026 as required of the permittee in the Industrial Users and Pretreatment Program section of this permit shall be submitted to the Pretreatment Coordinator in Maine Department of Environmental Protection Water Bureau. The current Coordinator contact information can be found under Industrial Pretreatment Program (IPP) at: Water Contacts, Maine DEP or the IPP section at: Wastewater Treatment, Water Quality, Maine Department of Environmental Protection. Reports with reporting year ending after 31 December 2025 and with a due date on or after 1 March 2026, must be done electronically as NetDMR attachments and/or using EPA's NPDES Electronic Reporting Tool ("NeT"), which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

   Other requests, reports and notices that should continue to be submitted directly to the Pretreatment Coordinator in Maine Department of Environmental Protection Water Bureau include:

   (1) Pretreatment Reports Reassessment of Technically Based Industrial Discharge Limits Form,
   (2) Revisions to Industrial Discharge Limits,
   (3) Report describing Pretreatment Program activities, and
   (4) Proposed changes to a Pretreatment Program

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 state regulation 06-096 C.M.R. ch. 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 Parts 405 through 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)the effectiveness of their Enforcement Response Plan; (2) the adequacy or need for revision of their Sewer Use Ordinance; and (3) the need for and effectiveness of Industrial User slug control evaluations. The permittee will implement these proposed changes pending the Department's approval under 40 CFR 403.18 and 06-096 C.M.R. ch. 528(18). This submission is separate and distinct from any local limits analysis submission described in section 1(a) above.

I. OPERATION & MAINTENANCE (O&M) PLAN

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

By December 31 of each year, **or within 90 days of any process changes or minor equipment upgrades,** the permittee 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 EPA 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. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff must have a current written Wet Weather or High Flow Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

The plan must conform to Department guidelines for such plans and 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 permittee must review their plan at least annually and record any necessary changes to keep the plan up to date. The Department may require review and update of the plan as it is determined to be necessary.

K. COMBINED SEWER OVERFLOWS (CSO's)

1. Definitions

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

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

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

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

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

Outfall #	Location	Receiving Water & Class
002	Barkersville	Penobscot River, Class B
003	Davis Brook	Penobscot River, Class B
006	Kenduskeag West	Kenduskeag Stream, Class C
007	Kenduskeag East	Kenduskeag Stream, Class C
009	Hammond Street	Kenduskeag Stream, Class C
011	Meadowbrook	Kenduskeag Stream, Class C
020	Carr Brook	Penobscot River, Class B
023	Central Street	Kenduskeag Stream, Class C

3. Prohibited Discharges

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

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 capacity of the wastewater treatment facility, pumping stations or sewerage system.

4. Narrative Effluent Limitations

a) The permittee 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.

b) The permittee must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life; or which would impair the usage designated for the classification of the receiving waters.

c) The permittee must not discharge effluent that imparts color, taste, turbidity, toxicity, radioactivity, or other properties which cause those waters to be unsafe for the designated uses and characteristics ascribed to their classification.

d) The permittee must not discharge effluent that lowers 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.

5. CSO Master Plan [see 06-096 C.M.R. ch. 570(3) and 06-096 C.M.R. ch. 570(4)]

On June 28, 1991, the USEPA, the U.S. Department of Justice, the State of Maine and City of Bangor entered into a Consent Decree superseding and incorporating the conditions of the June 30, 1987 Consent Decree and adding conditions to address combined sewer overflow control, including requirements for a CSO Facilities Plan and an implementation schedule. The CSO Master Plan entitled, *Final Draft Combined Sewer Overflow Facilities Plan for the City of Bangor*, dated December 1993, and abatement project schedule was approved by the USEPA on December 22, 1994. On November 13, 2015, the USEPA, the U.S. Department of Justice, the State of Maine and City of Bangor entered into a Consent Decree superseding the 1991 decree adding conditions to address combined sewer overflow control, including requirements for a Phase II CSO Long Term Control Plan and an implementation schedule.

By June 30, 2026, *(ICIS Code 81699)* the City of Bangor must submit to USEPA and the Department for approval a detailed five-year scope of work (SOW) for all control projects that are planned for the period January 1, 2027 through December 31, 2031. This is a five-year period will be referred to as Part C of the Phase II CSO Long Term Control Plan (LTCP). This will include the overall plan for CSO control consistent with the requirements in the Consent Decree including the specific CSO abatement plan developed for the Barkersville drainage area. Only schedule changes that do not otherwise alter the obligations to the decree can be made by written agreement among USEPA, DEP, and the City. Any other changes have to be made by all parties (including the State Attorney General's office and U.S. Department of Justice) and, if they are major modifications, must be approved by the court.

6. Nine Minimum Controls (NMC) [see 06-096 C.M.R. ch. 570 § 5]

The permittee must implement and follow the Nine Minimum Control documentation. as approved by EPA 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).

7. CSO Compliance Monitoring Program [see 06-096 C.M.R. ch. 570 § 6]

The permittee must conduct flow monitoring according to a Department approved *Compliance Monitoring Program* on all outfalls, 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 EPA'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, and actual 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 to the Department on form *"CSO Activity and Volumes"* (**Attachment E** of this permit) or similar format and submitted to the Department in electronic format.

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 +separation has been completed and CSO outfalls have been eliminated.

8. Additions of New Wastewater [see 06-096 C.M.R. ch. 570(8)]

Chapter 570 Section 8 lists requirements relating to any proposed addition of wastewater to the combined sewer system. Documentation of the new wastewater additions to the system and associated mitigating measures 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.

9. Annual CSO Progress Reports [see 06-096 C.M.R. ch. 570(7)]

By March 1 of each year, *(ICIS Code CS010)*, 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:

a. CSO abatement projects. CSO abatement projects including milestone dates such as design start and completion and construction start and completion.

b. Schedule comparison. A comparison of the existing schedule with the Department-approved implementation schedule. If the existing schedule is behind the approved schedule, list the reasons why, and how the licensee proposes to catch up in order to comply with the approved schedule.

c. Progress on inflow sources. Progress made on locating and removing private inflow sources, such as roof leaders and basement sump pumps.

d. Costs. Total cost and local share of CSO abatement projects to date, plus an anticipated budget for projects in the next year.

e. Flow monitoring results. Results of any specific flow monitoring to determine effectiveness of previous CSO abatement projects. Compare actual CSO abatement with projections made during the CSO Master Plan.

f. CSO activity and volumes. Yearly precipitation, CSO volumes (actual or estimated), and any block test data (see Section 6) submitted on department form titled "CSO Activity and Volumes". The form must be in electronic form, if possible, to allow easy data entry. Report any abnormalities during CSO monitoring.

g. Nine minimum controls update. Work done on the Nine Minimum Controls during the year including, but not limited to the following:

1. Results of operation and maintenance programs for the sewer system and combined sewer overflows during the year, such as, frequency of regulator inspections, number of catch basins cleaned, and feet of sewer cleaned or repaired, with estimates of material removed, if possible.
2. Low-cost projects to maximize use of the collection system for storage or to maximize flow to the POTW for treatment.
3. Modifications to the pretreatment program to assure the CSO impacts are minimized.
4. Low-cost projects that maximize flow to the POTW for treatment.
5. Documentation that no CSO discharges occurred during dry weather.
6. Projects to control solid and floatable materials in CSO discharges.
7. Pollution prevention programs that focus on contaminant reduction activities.
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.
9. Any monitoring and sampling results to effectively characterize CSO impacts and the effectiveness of CSO controls.

h. Sewer extensions and new commercial or industrial flows. List the sewer extensions and new commercial or industrial flows added during the year, along with what mitigating measures were accomplished to prevent these flows from contributing to CSOs (see Section 8).

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 to the following address:

CSO Coordinator
Department of Environmental Protection
Bureau of Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333-0017
e-mail: CSOCoordinator@maine.gov

10. Signs

The permittee must maintain an identification sign at the 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 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 BANGOR
WET WEATHER
SEWAGE DISCHARGE
OUTFALL NAME AND NUMBER

L. STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

In accordance with 06-096 C.M.R. ch. 530 § 530(2)(D)(4), and 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 75305]***. See **Attachment C** of the Fact Sheet for an acceptable certification form to satisfy this Special Condition.

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

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

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

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

(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 that routine screening or surveillance level testing be re-instated if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

M. REOPENING OF PERMIT FOR MODIFICATIONS

In accordance with 38 M.R.S. § 414-A(5) and upon evaluation of the test results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to: (1) include effluent limitations necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded: (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

N. SEVERABILITY

In the event that any provision or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit 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

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

Approved Analytical Methods: EPA 200.7 (Rev. 44), 365.1 (Rev. 2.0), (Lachat), 365.3, 365.4; SM 3120 B, 4500-P B.5, 4500-P E, 4500-P F, 4500-P G, 4500-P H; ASTM D515-88(A), D515-88(B); USGS I-4471-97, I-4600-85, I-4610-91; OMAAOAC 973.55, 973.56

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

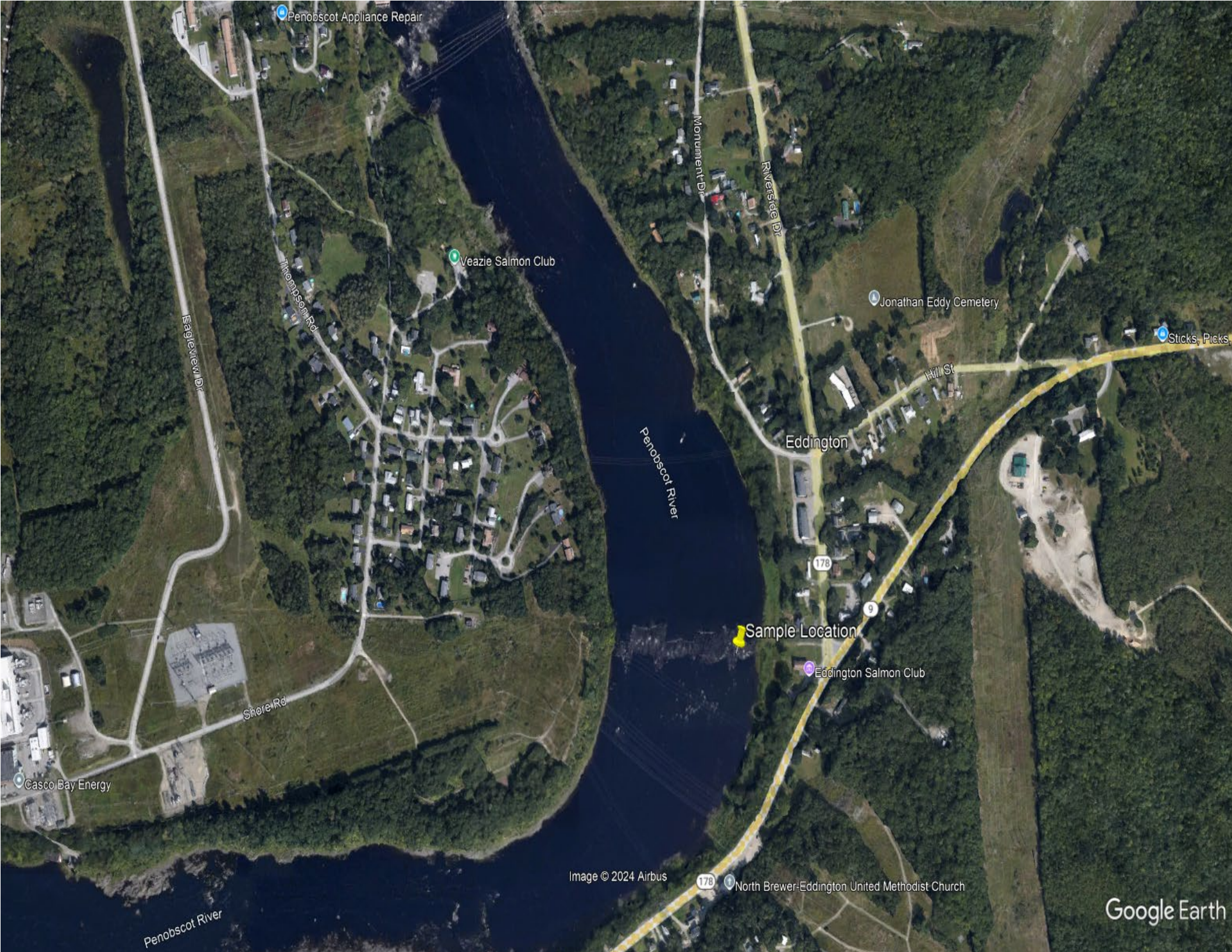
Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved using H_2SO_4 to obtain a sample pH of <2 su and refrigerated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

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

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

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

ATTACHMENT B


Penobscot Appliance Repair
Veazie Salmon Club
Thompson Rd
Eagleview Dr
Monument Dr
Riverside Dr
Jonathan Eddy Cemetery
Sticks, Picks,
Hill St
Eddington
Penobscot River
178
9
Sample Location
Eddington Salmon Club
Shore Rd
Casco Bay Energy
Image © 2024 Airbus
178
North Brewer-Eddington United Methodist Church
Penobscot River
Google Earth

ATTACHMENT C

RE-ASSESSMENT OF TECHNICALLY BASED INDUSTRIAL DISCHARGE LIMITS

Pursuant to federal regulation 40 CFR §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 §403.5(c)(1) and Department rule ***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 NPDES permit. In Column (2), list what dilution ration and/or 7Q10 value is presently being used in your new/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).

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 §136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

* 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, NPDES, 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 p., 3-28 in EPA's *Guidance Manual on the Development and Implementation of Local Limits Under the Pretreatment Program, 12/87*.

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 §136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

* List in Column (2A) what the Water Quality Standards (WQS) 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 milligram per liter of Calcium Carbonate.

  List in Column (2B) the current WQSs or "Chronic Gold Book" values for each pollutant multiplied by the dilution ratio used in your new/reissued MEPDES permit. For example, with a dilution ratio of 25:1 at a hardness of 20 mg/l - Calcium Carbonate (copper's chronic WQS equals 2.99 ug/l) the chronic MEPDES permit limit for copper would equal 75 ug/l.

ITEM VII.

* In Column (1), list all pollutants (in micrograms per liter) limited in your new/reissued MEPDES permit. In Column (2), list all pollutants limited in your old/expired NPDES 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 §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.

In general, please be sure the units reported are correct and all pertinent information is included in your evaluation. If you have any questions, please contact your pretreatment representative at the Maine Department of Environmental Protection, Bureau of Land & Water Quality, Division of Engineering, Compliance & Technical Assistance, State House Station #17, Augusta, ME. 04333. The telephone number is (207) 287-3901.

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

POTW Name & Address _____

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

ITEM II.

EXISTING TBLLs

POLLUTANT	NUMERICAL LIMIT	POLLUTANT	NUMERICAL LIMIT (mg/l)

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 _____

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)				

ITEM VI.

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Water Quality Standards (Gold Book Criteria) were at the time your existing TBLLs were developed. List in Column (2B) current Gold Book values multiplied by the dilution ratio used in your new/reissued NPDES permit.

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

*Hardness Dependent (mg/l-CaCO3)

ITEM VII.

In Column (1), identify all pollutants limited in your new/reissued MEPDES permit. In Column (2), identify all pollutants that were limited in your old/expired NPDES permit.

Column (1) NEW PERMIT		**Column (2)** OLD 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 was 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 D

MEPDES PERMIT REQUIREMENT
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

1/ A narrative description **(paragraph)** of program effectiveness including the following:

- ***present and proposed changes*** to the program
  - Funding
  - Staffing
  - Ordinances
  - Regulations
  - Statutory authority
  - Other

Our pretreatment program is very effective as indicated by the SIU compliance rate and the reduction in pollutant loading to the POTW.

The program is adequately funded and staffed to provide for annual training and completion of our regulatory responsibilities.

No changes have been made, or are proposed, to _____'s Sewer Use Ordinance. The SUO provides adequate statutory authority to enforce in Local, State and Federal courts.

2/ The **date** of the latest adoption of Local Limits and a statement as to whether the municipality is under a State or Federal compliance schedule that includes steps to be taken to revise Local Limits.

If yes, Compliance Schedule; if no, schedule not needed.

_____'s Local Limits were last adopted (by local authority) on _____ and _____ is under no State or Federal compliance schedule that includes steps to be taken to revise Local Limits.

3/ A description of actions taken to reduce the incidence of violations by SIU's;
Example: Inspections – Notifications – Information/Education

4/ 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;

Example: Evaluations/investigations as a result of Monitoring, Sewer Inspections, and Evaluations, Influent – Effluent results, Spills, Dumps, Toxicity, or Unusual events.

5/ A detailed description of all Interference and Pass Through that occurred during the past year; **[statement of: Event, Parameter, Violation, Cause, IU, POTW action, IU action, Result (see NOV #).**

_____ *experienced no events of Interference or Pass-Through in this reporting period. If "Yes" then describe.*

6/ A thorough description of all investigations into Interference and Pass-Through during the past year;
A paragraph: Violation, Problem, Steps to resolve, Result.

(same as 5/ or describe investigations.)

7/ An updated **list** of all industrial users by category (40 CFR 403.8(f)(2)(i), *indicating compliance or non-compliance* 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 limits

Example:

SIU	***New Promulgated BMR/Compliance Y/N)***	***Cat Limits Compliance (Y/N)***	***Local Limits Compliance (Y/N)***	***Semi-annual Reports Compliance (Y/N)***

8/ A summary of compliance and enforcement activities during the preceding year including a:

- **list** of SIU's inspected by the POTW (dates, compliance status),
- **list** of SIU's sampled by the POTW (dates, compliance status),

Example:
SIU Inspected Sampled/self Sampled/POTW Compliance Y/N

- **list** of SIU's to which compliance schedules were issued,
  [SIU] - Violation - Compliance - Schedule
  N/A or schedule plus Progress Reporting Dates]

- **summary list** of NOV's written to SIU's by name
  [statement],
- **summary list** of AO's written to SIU's by name
  [statement],
- **list** of criminal and/or civil suits filed by SIU,
  [usually a simple statement]
- **list** of penalty amounts obtained (by SIU) **[a statement].**

NOTE: Some items in numbers 9 & 10 may be combined in a chart, or charts. Be sure that any charts are logical, not cluttered, and don't contain an unreasonable amount of information.

Any violations should be shown separately, in summary, for each item.

9/ **List** of violating industries required to be published in a local newspaper (40 CFR 403.8(f)(2)(vii). **[Statement]**

10/ A **summary** of all pollutant analytical results for:
- Influent **[Annual average – show violations]**
- Effluent **[Annual average – show violations]**
- Sludge **[Annual average– show violations]**
- Toxicity/Bioassay **[Annual Average – show violations]**

- **comparison** of influent sampling results versus threshold inhibitory concentrations for the POTW's wastewater treatment system.
- **comparison** of effluent sampling results versus water quality standards, considering the permitted dilution factor of the POTW.

NOTE: The sampling program shall be as described below OR any similar sampling program described in the NPDES permit. - At a minimum, annual sampling and analysis of/ the influent and effluent of the POTW's wastewater treatment plant shall be conducted on the following pollutants:

Example:

	Influent	***Inhibition***	***Effluent***	***AWC***	
				Acute	***Chronic***
- Total Cadmium					
- Total Chromium					
- Total Copper					
- Total Lead					
- Total Mercury (Methods 1669 & 1631)					
- Total Nickel					
- Total Silver					
- Total Zinc					
- Total Cyanide					
- Total Arsenic					

The sampling program shall consist of one 24-hour flow-proportioned composite that is representative of the flow received by the POTW.

The composite shall consist of accurately flow-proportioned grab samples taken over a discharge day if the samples are collected manually, or shall consist of a minimum of 48 accurately flow-proportioned samples if an automatic sampler is used. Sampling and preservation shall be according to 40 CFR part 136.

ATTACHMENT E

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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **March 24, 2026**

MEPDES PERMIT: **ME0100781**

WASTE DISCHARGE LICENSE: **W001041-5M-L-R**

NAME AND ADDRESS OF APPLICANT:

CITY OF BANGOR
73 HARLOW STREET
BANGOR, ME 04401

COUNTY: **PENOBSCOT**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

760 LOWER MAIN STREET
BANGOR, MAINE 04401

RECEIVING WATER / CLASSIFICATION: **PENOBSCOT RIVER/CLASS B**
KENDUSKEAG STREAM, CLASS C

COGNIZANT OFFICIAL AND TELEPHONE NUMBER:

AMANDA SMITH
DIRECTOR OF WATER QUALITY MANAGEMENT
(207) 992-4471
amanda.smith@bangormaine.gov

1. APPLICATION SUMMARY

a. Application: On June 14, 2021, the Department accepted as complete for processing an application from Bangor for renewal of combination Waste Discharge License (WDL) # W001041-5M-J-R / Maine Pollutant Discharge Elimination System (MEPDES) permit # ME0100781, which was issued by the Department on June 9, 2016 for a five-year term. The June 9, 2016 permit authorized the monthly average discharge of 18.0 million gallons per day (MGD) of secondary treated sanitary wastewater from a publicly owned treatment works (POTW) to the Penobscot River, Class B, in Bangor, Maine.

The June 9, 2016 MEPDES permit also authorized Bangor to discharge an unspecified quantity of primary treated wastewater from a POTW when the influent to the wastewater treatment facility exceeded a sustained daily flow rate of 30 MGD and authorized the discharge of an unspecified quantity of untreated combined sanitary and storm water from nine (9) combined sewer overflow (CSO) outfalls to the Kenduskeag Stream, Class C and the Penobscot River, Class B in Bangor, Maine.

On August 8, 2016, the Department issued a minor revision to clarify the monitoring point for influent flow and sampling during bypass events in the permit, as well as minor language edits in the fact sheet.

b. Source Description: The City of Bangor is 32.9 square miles with a population of 33,000 people. Bangor consists of an urbanized core made up of residential, commercial and light industrialized areas totaling approximately 16 square miles. The POTW received sanitary and process wastewater from residential, commercial and industrial facilities within the City of Bangor and the Towns of Hampden and Hermon. Bangor serves eleven (11) Significant Industrial Users (SIUs) and is required to implement an Industrial Pretreatment Program as a condition of the NPDES permit issued on October 1, 1992. The permittee maintains five pump stations throughout the collection system. A map showing the location of the facility and the receiving waters is included as Fact Sheet **Attachment A**.

c. Wastewater Treatment: The following information was included as part of the permittee's application materials.

Early sewer records date back to the 1850's. To date the permittee maintains 139.9 miles of collector sewers and 9.0 miles of interceptor sewer. In 1968 the permittee started operating a primary treatment plant. In 1987 the permittee began working on a multimillion-dollar program to abate and control CSOs. In 1992 the permittee finished constructing and began operating a secondary treatment plant. That same year the permittee undertook a program to develop a CSO Control Plan. The plan outlines projects in the sewer system to control CSO discharges and improve water quality. Four underground tanks have been constructed to further control CSOs. Since the program inception, the permittee had eliminated 13 of the original CSO points. The following is a list of all CSO points and when they were eliminated.

CSO Serial NO.	CSO Name	1987	2001	2015	2021	Discharge
002	Barkersville	1	1	1	1	Penobscot
003	Davis Brook	1	1	1	1	Penobscot
004	May Street	1	E	E	E	
005	Union Street	1	E	E	E	
006	Kenduskeag West	1	1	1	1	Kenduskeag
007	Kenduskeag East	1	1	1	1	Kenduskeag
008	Hancock Street	1	1	E	E	
009	Hammond Street	1	1	1	1	Kenduskeag
010	State Street	1	1	E	E	
011	Meadow Brook	1	1	1	1	Kenduskeag
012	Mill Street #1	1	E	E	E	
013	Mill Street #2	1	E	E	E	
014	Everett Street	1	E	E	E	
015	Fourteenth Street	1	E	E	E	
016	Cemetery	1	1	1	E	
017	Artic Brook	1	1	E	E	
018	Blanchard Street	1	E	E	E	
020	Carr Brook	1	E	1	1	Penobscot
022	Woodlawn	1	E	E	E	
023	Central Street	1	1	1	1	Kenduskeag
024	Franklin Street	1	1	E	E	
025	Olive Street	1	E	E	E	

1= open, E = eliminated

The permittee provides a secondary level of treatment by way of a dual stage activated bio-filter system (ABF) consisting of a fixed film bio-tower process followed by a high rate suspended growth phase. The treatment process includes coarse tanks, two re-aeration tanks, two circular final clarifiers, two chlorine contact basins, two sludge thickening tanks and two belt filter presses. The facility uses sodium hypochlorite and sodium bi-sulfate for chlorination and de-chlorination of the effluent. The facility is designed to provide secondary treatment for a monthly average flow of 18 MGD and a daily maximum flow of 30 MGD.

The permittee maintains a combined sewer system, which conveys both domestic wastewater and storm water runoff to the treatment facility. During wet weather periods, the combined sewer collection system is periodically overloaded. The permittee maintains eight (8) combined sewer overflow points (identified in Special Condition L of this permit) in the collection system through which excess flows are periodically discharged to receiving waters.

As part of its combined sewer overflow abatement programs, the facility treats a portion of the excess flows at the wastewater treatment plant. To the extent possible, combined sewer flows will receive secondary treatment along with normal dry weather flows. However, in order to prevent damage to the treatment system by upsetting the biological process, the volume of water receiving secondary treatment is limited. The influent pipe to the treatment plant is capable of conveying 43 MGD to the treatment plant under optimal conditions. The

maximum combined flow to receive secondary treatment is at the rate of 30 MGD. Due to seasonal variations and the need to maintain stable treatment for dry weather flows, the amount of combined sewer flow receiving secondary treatment may vary at any given time. Flows received at the treatment plant exceeding 30 MGD will receive primary treatment via screening, primary clarification and disinfection. The primary treated portion of the total flow will then be combined with secondary treated wastewater prior to discharge to the Penobscot River via a 48-inch outfall pipe at a depth of 18 feet below mean low water. The outfall pipe is fitted with a two-port diffuser to enhance mixing of the discharge with receiving waters.

The June 2016 permit authorized the permittee to accept up to 20,000 gallons per day of transported wastes. This permit is no longer authorizing the permittee to accept any transported wastes at the permittee's request.

See **Attachment B** of this Fact Sheet for a facility schematic.

2. PERMIT SUMMARY

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

1. Increasing the *Escherichia coli* bacteria (*E. coli*) monitoring season from May 15th – September 30th to April 15th –October 31st pursuant to 38 M.R.S § 465(3)(B);

2. Established seasonal monitoring for Total Residual Chlorine for April 15th – May 14th with the technology-based limit of 1.0 mg/L, due to the increase dilution during spring runoff.

3. Established seasonal monitoring for Total Residual Chlorine for May 15- October 31st with the water quality-based limits for monthly average and daily maximum of 0.1 mg/L and 0.3 mg/L, respectively.

4. Revising the BOD_5 daily maximum mass limitation from 9,245 lbs./day to 8,072 lbs./day for administrative Outfall #001C, based on the results of facility testing;

5. Revising the TSS daily maximum mass limitation from 13,470 lbs./day to 11,832 lbs./day for administrative Outfall #001C, based on the results of facility testing;

6. Eliminating Special Condition N, *Ambient Water Quality Monitoring*;

7. Eliminating permitted combined sewer overflow (CSO) Cemetery, Outfall #016;

8. Adding limits and monitoring for copper and Bis(2-Ethylhexyl)phthala.

9. Eliminating Special Condition K , *Disposal of Transported Wastes in Wastewater Treatment Facility*.

10. Establishing ambient and effluent monitoring for total Phosphorus in order to determine if the permittee's effluent exceeds or has the reasonable potential to exceed

the ambient water quality criteria for total phosphorus. Ambient sampling to be reported on the newly established outfall #002A.

11. Reducing Daily Maximum water quality-based effluent limit for E. Coli Bacteria based on revisions to 38 M.R.S. § 465 (3)(B).

b. History: The most recent relevant licensing and permitting actions for the City of Bangor POTW include the following:

April 22, 1981 – The Department issued renewal WDL #1041 which authorized Bangor to discharge 9.0 MGD of primary treated wastewater to the Penobscot River.

September 14, 1983 – The Department issued renewal WDL #1041 which authorized Bangor to discharge 9.0 MGD of primary treated wastewater to the Penobscot River.

December 30, 1986 – The U.S. Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0100781 with secondary treatment requirements as specified by the Clean Water Act (CWA).

June 30, 1987 – The Department and Bangor entered into a Consent Decree ordering the upgrade of the wastewater treatment facility from a primary to secondary level of treatment and rehabilitation of the sanitary sewer collection system. The Consent Decree was amended in December of 1987.

June 28, 1991 - USEPA, the U.S. Department of Justice, the State of Maine and City of Bangor entered into a consent Decree superseding and incorporating the conditions of the June 30, 1987 Consent Decree and adding conditions to address combined sewer overflow control, including requirements for a CSO Facilities Plan and an implementation schedule.

September 29, 1992 – USEPA re-issued NPDES permit #ME0100781 with secondary treatment requirements.

December 17, 1992 – Bangor completed construction of the plant upgrade and expansion (to secondary treatment) and commenced operations of the new treatment facility.

December 1993 – Bangor submitted a document to the USEPA and Department entitled Final Draft Combined Sewer Overflow Facilities Plan For the City of Bangor. The facilities plan proposed a four (4) phase implementation schedule.

January 25, 1994 – USEPA issued a modification of NPDES permit #ME0100781 to include a new attachment regarding implementation of the Region I CSO Policy for Tier I Communities.

December 22, 1994 – USEPA conditionally approved Phases I and II of Bangor's CSO facility plan. Approval of Phases III and IV were contingent upon the results achieved in Phases I & II.

April 2, 1996 – USEPA approved Bangor's proposal to provide a CSO bypass at the treatment plant. Flows in excess of 30 MGD, up to a peak flow of 43 MGD, would receive primary treatment and disinfection and would be blended with the secondary treated waste stream prior to discharge through a common outfall. It should be noted that this request and approval was based on a blended effluent (CSO bypass and secondary) with the blended effluent discharge expected to meet water quality standards at all times.

September 30, 1996 – USEPA issued a modification of NPDES permit #ME0100781 that authorized a bypass of secondary treatment for flows exceeding 30 MGD. The permit required any wastewaters bypassing secondary treatment be given primary treatment and disinfected prior to discharge.

November 1, 1996 – The Department issued WDL #W001041-47-B-R for five-year term.

March 20, 1997 – USEPA issued a modification of NPDES permit ME0100781 (issued on 9/29/92) to waive the 85% removal requirement for monthly average BOD and TSS when the influent is < 200 mg/L.

May 11, 1998 – USEPA approved Bangor's request to construct the Davis Brook CSO Storage Facility (a Phase IV project).

May 19, 2000 – The Department approved Bangor's request to construct the Kenduskeag East CSO Storage Facility (a Phase III project), other improvements that incorporate the intent of the Kenduskeag West Floating Solids Trap (a Phase III project) and improved monitoring capabilities at Kenduskeag East and West CSO discharge locations.

May 23, 2000 – Pursuant to 38 M.R.S. §420 and §413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 C.M.R. Chapter 519, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL #W001041-47-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 11.3 parts per trillion (ppt) and 16.9 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury.

June 6, 2000 – USEPA approved Bangor's request to construct the Kenduskeag East CSO Storage Facility (a Phase III project) other improvements that incorporate the intent of the Kenduskeag West Floating Solids Trap (a Phase III project) and improved monitoring capabilities at Kenduskeag East and West CSO discharge locations.

September 19, 2000 – USEPA re-issued NPDES permit #ME0100781.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permit program in Maine. From that date forward, the permit program has been referred to as the MEPDES permit program and #ME0100781 (same as the NPDES permit) will be the primary reference number for the facility.

September 24, 2001 – USEPA approved Bangor's proposed modification to the Consent Decree schedule that authorizes Bangor to proceed with all remaining Phase III and Phase IV projects.

January 1, 2002 – Bangor was able to eliminate 10 CSOs out of the original 22 CSOs, in the 2001 calendar year.

February 12, 2002 – The Department issued WDL #W001041-5M-E-R/#ME0100781 for a five-year term.

April 10, 2006 - The Department issued a modification of WDL #W001041-5M-E-R by incorporating WET and chemical specific testing requirements pursuant to 06-096 C.M.R. ch. 530.

July 12, 2006 – Bangor submitted a timely application for permit renewal. The application was accepted as complete on 7/12/06 and was assigned WDL #W001041-5M-F-R.

December 16, 2008 – The Department issued minor revision WDL #W001041-5M-G-R by establishing a deadline of December 31, 2009 for the submission of an updated CSO Master Plan.

May 26, 2011 – The Department issued combination MEPDES permit #ME0100781/WDL W001041-5M-F-R for a five-year term.

January 8, 2013 – The Department initiated a modification of the 5/26/11 permit to reduce the monitoring frequency for mercury to once per year.

September 10, 2013 – The Department issued modification #ME0100781/WDL#W001401-5M-I-M for the revision of the inorganic arsenic limit.

November 13, 2015 – The USEPA, the U.S. Department of Justice, the State of Maine and City of Bangor entered into a Consent Decree superseding the 1991 decree and adding conditions to address combined sewer overflow control, including requirements for a CSO Facilities Plan and an implementation schedule.

January 1, 2016 – Bangor eliminated four CSOs and reactivated one of the CSOs that was eliminated in 2001. All this was finished in the 2015 calendar year.

January 19, 2016 – The permittee submitted a timely and complete General Application to the Department for renewal of the May 26, 2011 permit (including subsequent minor permit revisions and permit modifications). The application was accepted for processing on January 20, 2016 and was assigned WDL #W001041-5M-J-R / MEPDES #ME0100781. This permit eliminated the numeric limitations for *E.coli* and TRC and made them report only. Surface Loading Rate, BOD_5 and TSS percent removal are not included in this permit based on best professional judgment that these technology-based metrics have not been particularly useful in assessing primary treatment system performance and are not necessary to ensure water quality standards are met.

June 9, 2016 – The Department issued combination MEPDES permit #ME0100781/ WDL#W001041-5M-J-R for a five-year term.

August 8, 2016 - The Department issued a minor revision #ME0100781/WDL#W001401-5M-K-M f to clarify the monitoring point for influent flow and sampling during bypass events in the permit, as well as minor language edits in the fact sheet.

June 7, 2021 – The permittee submitted a timely and complete General Application to the Department for renewal of the June 9, 2016 permit (including subsequent minor permit revisions and permit modifications). The application was accepted for processing on June 14, 2021 and was assigned WDL #W001041-5M-L-R / MEPDES #ME0100781.

May 6, 2021 – Bangor had eliminated one new CSO from those that were being used in 2015. Eight CSOs are left and still in use.

January 1, 2024 – The Davis Brook storage tank was completed by the permittee during the year 2023.

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 the application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, *Certain deposits and discharges prohibited,* 38 M.R.S. § 420 and Department rule *Surface Water Toxics Control Program,* 06-096 C.M.R. ch. 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. ch. 584 (amended February 16, 2020), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Classification of major river basins, 38 M.R.S. § 467(7)(A)(6) & (7) states "*(6) From the Milford Dam, but not including the Milford Dam, to the Maine Central Railroad bridge in Bangor-Brewer - Class B. Further, the Legislature finds that the free-flowing habitat of this river segment provides irreplaceable social and economic benefits and that this use must be maintained. (7) From the Maine Central Railroad bridge in Bangor to a line extended in an east-west direction from a point 1.25 miles upstream of the confluence of Reeds Brook in Hampden - Class B. Further, the Legislature finds that the free-flowing habitat of this river segment provides irreplaceable social and economic benefits and that this use must be maintained.*" Therefore, the Penobscot River at the point of all discharges specified in this permit is classified as Class B.

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

A. Class B waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as

prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired.

B. Class B waters must be of sufficient quality to support all aquatic species indigenous to those waters without detrimental changes in the resident biological community. The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the one-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. Between April 15th and October 31st, the number of Escherichia coli bacteria in these waters may not exceed a geometric mean of 64 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval.

C. Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community.

(1-A)For the purpose of allowing the discharge of aquatic pesticides or chemicals approved by the department and conducted by the department, the Department of Inland Fisheries and Wildlife or an agent of either agency to restore resident biological communities affected by an invasive species, the department may find that the discharged effluent will not cause adverse impact to aquatic life as long as the materials and methods used do not cause a significant loss of any nontarget species and allow restoration of nontarget species. The department may find that an unavoidable, temporary loss of nontarget species does not constitute a significant loss of nontarget species.

(2) For the purpose of allowing the discharge of aquatic pesticides approved by the department for the control of mosquito-borne diseases in the interest of public health and safety, the department may find that the discharged effluent will not cause adverse impact to aquatic life as long as the materials and methods used provide protection for nontarget species. When the department issues a license for the discharge of aquatic pesticides authorized under this subparagraph, the department shall notify the municipality in which the application is licensed to occur and post the notice on the department's publicly accessible website.

38 M.R.S., Section 467(7)(F)(3) states "*Kenduskeag Stream (Bangor) below the Bullseye Bridge - Class C*" and this includes the points of discharge. *Standards for classification of fresh surface waters*, 38 M.R.S. § 465(4) describes the standards for Class C waters as follows:

A. Class C waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as a habitat for fish and other aquatic life.

B. Class C waters must be of sufficient quality to support all species of fish indigenous to those waters and to maintain the structure and function of the resident biological community. The dissolved oxygen content of Class C water may not be less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes must be maintained. In order to provide additional protection for the growth of indigenous fish, the following standards apply.

(1) The 30-day average dissolved oxygen criterion of a Class C water is 6.5 parts per million using a temperature of 22 degrees centigrade or the ambient temperature of the water body, whichever is less, if:

(a) A license or water quality certificate other than a general permit was issued prior to March 16, 2004 for the Class C water and was not based on a 6.5 parts per million 30-day average dissolved oxygen criterion; or

(b) A discharge or a hydropower project was in existence on March 16, 2005 and required but did not have a license or water quality certificate other than a general permit for the Class C water.

This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

(2) In Class C waters not governed by subparagraph (1), dissolved oxygen may not be less than 6.5 parts per million as a 30-day average based upon a temperature of 24 degrees centigrade or the ambient temperature of the water body, whichever is less. This criterion for the water body applies to licenses and water quality certificates issued on or after March 16, 2004.

The department may negotiate and enter into agreements with licensees and water quality certificate holders in order to provide further protection for the growth of indigenous fish. Agreements entered into under this paragraph are enforceable as department orders according to the provisions of sections 347-A to 349.

Between April 15th and October 31st, the number of Escherichia coli bacteria in Class C waters may not exceed a geometric mean of 100 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval. The board shall adopt rules governing the procedure for designation of spawning areas. Those rules must include provision for periodic review of designated spawning areas and consultation with affected persons prior to designation of a stretch of water as a spawning area.

C. Discharges to Class C waters may cause some changes to aquatic life, except that the receiving waters must be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community. For the purpose of allowing the discharge of aquatic pesticides or chemicals approved by the department and conducted by the department, the Department of Inland

Fisheries and Wildlife or an agent of either agency to restore biological communities affected by an invasive species, the department may find that the discharged effluent will not cause unacceptable changes to aquatic life as long as the materials and methods used will ensure the support of all species of indigenous fish and the structure and function of the resident biological community and will allow restoration of nontarget species.

5. REASONABLE POTENTIAL

Pursuant to 33 U.S.C. § 1311(b)(1)(C) and 40 C.F.R. § 122.44(d)(1), NPDES permits must contain any requirements in addition to technology based effluent limitations (TBELs) that are necessary to achieve water quality standards established under 33 U.S.C. § 1311(b)(1)(C). In addition, limitations "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard (WQS), including State narrative criteria for water quality." 40 C.F.R. § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 C.F.R. § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain water quality-based effluent limitations (WQBELs) for that pollutant. *See* 40 C.F.R. § 122.44(d)(1)(i).

6. RECEIVING WATER QUALITY CONDITIONS

The *State of Maine 2018/2020/2022 Integrated Water Quality Monitoring and Assessment Draft Report*, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists Penobscot River at Bangor-Brewer including the Kenduskeag Stream as Assessment Unit (AU) ME0102000513_234R, the Kenduskeag Stream and its tributaries in Bangor from Bullseye Bridge to Penobscot River, 2.96 miles as AU ME0102000510_224R02, and a 10.1-mile segment of the main stem of the Penobscot River from Main Stem (Penobscot), Veazie Dam to Reeds Brook as Assessment Unit (AU) ME0102000513_234R02. This assessment unit is listed in the following categories:

"Category 5-D: Rivers and Streams Impaired by Legacy Pollutants" for polychlorinated biphenyls (PCBs). The report notes that "this legacy pollutant cannot be addressed with a TMDL or permit. Pollutant effects will continue to diminish naturally over time."

"Category 4-B: Rivers and Streams Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment" for dissolved oxygen and nutrient/eutrophication biological indicators. The instantaneous data collected during 2013 – 2019 indicates attainment of DO criteria. Continuous data is still needed to confirm attainment. The 2011 WDL/MEPDES Permits (Millinocket to Veazie) providing nutrient limits are expected to correct aquatic life use impairments.

Category 4-B for Dioxin (including 2,3,7,8-TCDD). The report states "Fish tissue levels of dioxin measured in 2013 were slightly reduced from previous measures in 2002, and below the Maine Center for Disease Control and Prevention's (MeCDC) Fish Tissue Action Level (FTAL). This segment is expected to attain standards for Dioxin (including 2,3,7,8-TCDD) in 2030.

The report lists an additional AU segment (ME0102000513_234R – Penobscot River at Bangor-Brewer including the Kenduskeag Stream) in "Category 4-A: Rivers and Streams with Impaired Use other than mercury, TMDL Completed." This segment is listed as impaired Primary and Secondary Contact Recreation due to the presence of *E. coli* criteria nonattainment.

The report lists a third AU segment (ME0102000510_224R02 -The Kenduskeag Stream and its tributaries) in "Category 2: Rivers and Streams Attaining Some Designated Uses – Insufficient Information for Other Uses." In this segment, bacteria levels were found to be below assessment thresholds in a single year of recent sampling (2019).

The Report states, "All freshwaters are listed in Category 4A (Total Maximum Daily Load (TMDL) Completed) due to USEPA approval of a Regional Mercury TMDL in December 2007." 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 recommending limits on consumption for all freshwater fish. Maine has instituted statewide programs for removal and reduction of mercury sources.

Pursuant to 38 M.R.S. § 420(1-B)(B)(1), "a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11." Pursuant to 06-096 C.M.R. ch. 519, the Department has established interim monthly average and daily maximum mercury concentration limits and requirements for this facility.

Bangor has developed and implemented a CSO Master Plan for the elimination of all CSO points associated with the Bangor POTW. The Department acknowledges that elimination of all CSO points is a costly and long-term project. As Bangor's treatment plant and sewer collection system are upgraded and maintained 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.

7. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

OUTFALL #001A – SECONDARY TREATED EFFLUENT

a. Flow: The previously established monthly average discharge flow limitation of 18.0 MGD, which is based on the dry weather design criterion for this facility, is being carried forward by this permitting action.

A summary of flow data as reported on the DMRs submitted to the Department for the period of August 2017 through April 2024 is as follows:

Flow (DMRs = 78)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	18.0	3.76 – 17.42	8.48
Daily Maximum	Report	4.61 – 33.54	20.7

b. Dilution Factors: The department establishes applicable dilution factors for the discharge in accordance with freshwater protocols established in *Surface Water Toxics Control Program,* 06-096 C.M.R. 530 (last amended March 21, 2012). In December 2023, the department's Division of Environmental Assessment updated the 1Q10, 7Q10, and harmonic mean flow for the Penobscot River using flow data from the USGS gage in Enfield, flow routing from the USGS's Milford Flow Study, and tributary inflow estimates from USGS regression equations. Using the results of this update and a monthly average flow limit of 18.0 MGD for the facility's discharge, dilution factors for the facility were calculated as follows:

Modified Acute[1]: 1/4th of 1Q10 = 671 cfs $\Rightarrow \frac{(671 \text{ cfs})(0.6464) + (18.0 \text{ MGD})}{(18.0 \text{ MGD})} = 25.1{:}1$

Acute: 1Q10 = 2,682 cfs $\Rightarrow \frac{(2{,}682\text{cfs})(0.6464) + (18.0 \text{ MGD})}{(18.0 \text{ MGD})} = 97.3{:}1$

Chronic: 7Q10 = 2,966 cfs $\Rightarrow \frac{(2{,}966 \text{ cfs})(0.6464) + (18.0 \text{ MGD})}{(18.0 \text{ MGD})} = 108{:}1$

Harmonic Mean: HM Flow = 8,098 cfs $\Rightarrow \frac{(8{,}098 \text{ cfs})(0.6464) + (18.0 \text{ MGD})}{(18.0 \text{ MGD})} = 292{:}1$

[1] 06-096 C.M.R. ch. 530(4)(B)(1) states that analyses using numeric acute criteria for aquatic life must be based on ¼ of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it.

The Department has made the determination the discharge does not receive rapid and complete mixing with the receiving water, therefore the default stream flow of ¼ of the 1Q10 is applicable in acute statistical evaluations.

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): Previous permitting action established monthly average and weekly average BOD_5 and TSS *concentration limits* of 30 milligrams per liter (mg/L) and 45 mg/L, respectively, which are based on secondary treatment requirements pursuant to 40 CFR 133.102 and 06-096 C.M.R. ch. 525(3)(III). Previous permitting action also established daily maximum BOD_5 and TSS *concentration limits* of 50 mg/L based on a Department best professional judgment (BPJ) of BPT for secondary

treated wastewater. All three concentration limitations are being carried forward in this permitting action.

Previous permitting action established monthly average and weekly average *mass limits* based on a monthly average flow limit of 18.0 MGD, which are being carried forward in this permitting action. No daily maximum *mass limitations* (report only) for BOD_5 or TSS were established in previous permitting actions as doing so may discourage Bangor from treating as much wastewater as possible through the secondary treatment system during wet weather events.

Mass limitations were derived as follows:

Monthly Average	(30 mg/L)(8.34 lbs./gallon)(18.0 MGD) =	4,504 lbs./day
Weekly Average	(45 mg/L)(8.34 lbs./gallon)(18.0 MGD) =	6,755 lbs./day

This permitting action is also carrying forward the requirement for a minimum of 85% removal of BOD_5 & TSS pursuant to 06-096 C.M.R. ch. 525(3)(III)(a)(3) and (b)(3).

This permitting action is carrying forward the previously established limits when bypass is active for BOD_5 and TSS. The mass monthly average and weekly average limits of 4,504 lbs/day and 6,755 lbs/day, respectfully, and concentration monthly average and weekly average limitation of 30 mg/L and 45 mg/L, respectively. This permitting action is also carrying forward the report only daily maximum limit for both mass and concentration limits of BOD_5 and TSS when bypass is active. This permitting action is also carrying forward the three times per week (3/Week) monitoring frequency for BOD_5 and TSS when bypass is active.

A summary of BOD_5 data as reported on the DMRs submitted to the Department for the period of August 2017 through April 2024 is as follows:

BOD_5 mass (DMRs = 118)			
Value	**Limit (lbs./day)**	**Range (lbs./day)**	**Average (lbs./day)**
Monthly Average	4,504	203 – 3,108	1,080
Weekly Average	6,755	243 – 3,394	1,136
Daily Maximum	Report	230 – 5,440	2,244

BOD_5 concentration (DMRs = 118)			
Value	**Limit (mg/L)**	**Range (mg/L)**	**Average (mg/L)**
Monthly Average	30	5.10 – 24.5	12.6
Weekly Average	45	6.00 – 47.6	14.7
Daily Maximum	50	7.80 – 93.3	20.5

BOD_5 Percent Removal (DMRs = 72)			
Value	**Limit (%)**	**Range (%)**	**Average (%)**
Monthly Average	85	85 – 97	92

A summary of TSS data as reported on the DMRs submitted to the Department for the period of August 2017 through April 2024 is as follows:

TSS mass (DMRs = 123			
Value	**Limit (lbs./day)**	**Range (lbs./day)**	**Average (lbs./day)**
Monthly Average	4,504	143 – 6,329	957
Weekly Average	6,755	242 – 3,622	886
Daily Maximum	Report	264 – 13,672	2,501

TSS concentration (DMRs = 123)			
Value	**Limit (mg/L)**	**Range (mg/L)**	**Average (mg/L)**
Monthly Average	30	3.11 – 35.5	9.61
Weekly Average	45	4.60 – 20.7	10.5
Daily Maximum	50	5.10 – 58.4	17.5

TSS Percent Removal (DMRs = 77)			
Value	**Limit (%)**	**Range (%)**	**Average (%)**
Monthly Average	85	86 – 98	94

In consideration of *Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies* (USEPA Guidance April 1996) and, *Performance Based Reduction of Monitoring Frequencies - Modification of EPA Guidance Released April 1996* (Maine DEP May 22, 2014), the June 2016 permitting action reduced the monitoring frequency for BOD_5 and TSS from 5/Week to 3/Week. The monitoring frequency for the percent removal was previously established at once per month (1/Month).This permit is carrying those actions forward.

d. Settleable Solids: The October 1, 1992 permitting action established a daily maximum concentration limit of 0.3 milliliters per liter (mL/L) for settleable solids and is considered by the Department as a best professional judgment of BPT for secondary treated wastewater.

Due to the consistent nature of the monitoring results for settleable solids, the June 2016 permitting action reduced the monitoring frequency from 1/Day to 4/Week. This permit is carrying that action forward.

A summary of settleable solids data as reported on the DMRs submitted to the Department for the period of August 2017 through April 2024 is as follows:

Settleable Solids concentration (n = 80)

Value	Limit (ml/L)	Range (ml/L)	Average (ml/L)
Daily Maximum	0.3	< 0.01 – 0.20	<0.100

e. *Escherichia coli* (*E. coli*) bacteria: The previous permitting action established seasonal monthly average and daily maximum concentration limits for *E. coli* of 64 colonies/100 ml (geometric mean) and 427 colonies/100 ml (instantaneous level), respectively, based on the State of Maine Water Classification Program criteria for Class B waters found at 38 M.R.S. §465(3)(B), during the time of permitting.

In calendar year 2005, Maine's Legislature approved a new daily maximum water quality standard of 236 colonies/100 ml for water bodies designated as Class B and Class C. The

Department determined that end-of-pipe limitations for the daily maximum (instantaneous) standard of 236 colonies/100 mL, 38 M.R.S. § 465 (3) states "Between April 15th and October 31st, the number of Escherichia coli bacteria in these waters may not exceed a geometric mean of 64 CFU or MPN per 100 milliliters over a 90-day interval or 236 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval." This means that dilutions cannot be taken into account for these limits.

Current EPA guidance recommends that Maine extend the monitoring season within which bacteria criteria apply to reflect a longer time-period for potential human recreational contact. Pursuant to 38 M.R.S. § 465(3)(B), this permitting action is expanding the *E. coli* monitoring season from May 15th through September 30th to April 15th through October 31st for all of the facilities outfalls, Outfall #001A, Outfall #001B and Outfall #001C. The Department reserves the right to impose year-round bacteria limits, if necessary, to protect the health, safety and welfare of the public.

Based on the results of facility testing, the June 2016 permitting action reduced the monitoring requirement from 5/Week to 3/Week. This permit is carrying that action forward.

A summary of *E. coli* monitoring data as reported on the DMRs submitted to the Department for the period of August 2017 through April 2024 is as follows:

***E. coli* Bacteria (DMRs=32)**

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	64	1.00 – 10.3	2.66
Daily Maximum	427	4.10 – 2,419*	117.5

It is noted that the daily maximum limitation was exceeded September 2021 and May 2022.

f. Total Residual Chlorine (TRC): The permittee requested different TRC limits for the first month (April to May) and last month (October) of disinfection season, due to facility constraints. The Department has looked at the flow of the Penobscot River at the point of discharge for April, May, and October based on the USGS gauge at Enfield. TRC limits are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Permitting actions by the Department imposes the more stringent of water quality or technology-based limits.

1. *Water Quality-Based* Limits: With dilution factors as determined above, end-of-pipe (EOP) water quality-based concentration thresholds are calculated as follows:

   a. Water Quality-Based Limits for *May 15th through October 31st* of each year.

      Acute Threshold = Acute Criterion x Modified Acute Dilution Factor

      Acute Threshold = 0.019 mg/L x 25.1 = 0.5 mg/L

      Chronic Threshold = Chronic Criterion x Chronic Dilution Factor

      Chronic Threshold = 0.011 mg/L x 108 = 1.2 mg/L

Criterion	Dilution Factors	Calculated Threshold
Mod. Acute = 0.019 mg/L	25.1:1[(1)]	0.5 mg/L
Chronic = 0.011 mg/L	108:1	1.2 mg/L

[(1)] Based on a ¼1Q10 stream flow of 671 cfs.

b. Water Quality-Based Limits for *April 15th through May 15th* of each year.

Daily Maximum TRC Limits for Bangor POTW				
	Estimated 1Q10 at Enfield (cfs)	Estimated 1Q10 at Bangor (cfs)	Modified Acute Dilution Factor at Bangor (1) (X:1)	Daily Maximum WQBL for TRC (2) (mg/L)
April	6120	56274	57.3:1	1.1
May	555	5695	52.1:1	1.0

1. The modified acute dilution factor assumes the discharges mixes with just one-fourth of the river's flow.
2. The daily maximum water quality-based limit (WQBL) = 0.019 mg/L X modified acute dilution factor.

Acute Threshold = Acute Criterion x Modified Acute Dilution Factor

Acute Threshold (April) = 0.019 mg/L x 57.3 = 1.1 mg/L

Acute Threshold (May) = 0.019 mg/L x 52.1 = 1.0 mg/L

Acute Threshold (October) = 0.019 mg/L x 28.1 = 0.5 mg/L

2. *BPT-Based Limit*

a. The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds.

b. For facilities that must 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.

To meet the acute water quality-based thresholds calculated above for May 15 through October 31, the permittee must dechlorinate the effluent prior to discharge. In April of 1999, the Department established a new daily maximum BPT limitation of 0.3 mg/L for facilities that need to dechlorinate their effluent unless calculated water quality-based thresholds are lower than 0.3 mg/L. In the case of Bangor, the calculated acute water quality-based threshold is higher than 0.3 mg/L, thus the BPT limit of 0.3 mg/L is imposed as the daily maximum limit. As for the monthly average limitation, the Department's BPT limitation is 0.1 mg/L. Being that the calculated chronic water quality-based limit is higher than the BPT limit of 0.1 mg/L, the BPT limit is imposed in this permitting action.

The acute water quality-based thresholds calculated above for April 15 through May 14, the permittee does not need to dechlorinate for this time frame. The calculations above

show that the water quality-based thresholds for both the month of April and May are greater than or equal to the daily maximum BPT limitation of 1.0 mg/L.

Therefore, this permitting action is establishing the daily maximum BPT limitation of 1.0 mg/L for the April 15th through May 14th. For the monitoring season of May 15th through October 31st this permitting action is carrying forward the previously established BPT monthly average and daily maximum limits of 0.1 mg/L and 0.3 mg/L, respectively. Based on the results of facility testing, the June 2016 permitting action reduced the monitoring requirement for TRC from 2/Day to 1/Day. This permit is carrying the monitoring frequency of 1/Day forward for both the April 15th through May 14th and May 15th through October 31st seasons.

A summary of TRC data as reported on the monthly DMRs for the period of August 2017 through April 2024 is as follows:

Total Residual Chlorine (DMRs = 31)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	0.1	0.00 – 0.05	0.03
Daily Maximum	0.3	0.04 – 0.30	0.13

g. pH: This permitting action is carrying forward the previously established technology-based pH range limitation of 6.0 – 9.0 standard units pursuant to 06-096 C.M.R. ch. 525(3)(III)(c). A monitoring frequency of 1/Day was also established. Both are being carried forward in this permitting action.

A summary of pH data as reported on the monthly DMRs for the period of August 2017 through April 2024 is as follows:

pH (DMRs = 80)

Value	Limit (SU)	Minimum (SU)	Maximum (SU)
Range	6.0 – 9.0	6.00	8.36

h. Mercury: Pursuant to 38 M.R.S. § 420 and 38 M.R.S. § 413 and 06-096 C.M.R. ch. 519, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W001041-47-B-R by establishing interim monthly average and daily maximum effluent concentration limits of 11.3 parts per trillion (ppt) and 16.9 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury. 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.

On February 6, 2012, the Department issued a minor revision to the May 26, 2011 permit thereby revising the minimum monitoring frequency requirement from 4/Year to 1/Year pursuant to 38 M.R.S. § 420(1-B)(F). This monitoring frequency is being carried forward by this permitting action.

A summary of Mercury data as reported on the DMRs submitted to the Department for the period of August 2017 through April 2024 is as follows:

Mercury (n = 26)

Value	Limit (ng/L)	Range (ng/L)	Mean (ng/L)
Monthly Average	11.3	2.03 – 6.10	5.06
Daily Maximum	16.9	1.03 – 16.90	3.83
Cumulative Arithmetic Mean of all* Mercury Test Results on File			3.52

***Includes all mercury test results utilizing sampling Method 1669 and analysis Method 1631E**

i. Total Phosphorus: The May 2011 permitting action established a seasonal (June-September) monitoring and reporting condition for total phosphorus at a frequency of twice per month (2/Month). Bangor was required to report both monthly average and daily maximum mass and concentration values. The results of the effluent monitoring, conducted 2011 through June 2016 were as follows:

Concentration

Value	Limit	Range (mg/L)	Average (mg/L)
Monthly Average	Report Only	3.15 – 1.425	2.3
Daily Maximum	Report Only	0.9 – 3.3	2.3

Department Rule 06-096 C.M.R. ch. 583 has stated that the freshwater nutrient criteria of 0.030 mg/L of total phosphorus for Class B waters. A reasonable potential was recalculated using the 2011 through 2016 effluent total phosphorus data's mean value of 2.3 mg/L, the ambient total phosphorus ambient background value from the 2007 waste load allocation study, and the August median flow from the 2023 flow balance analysis of the Penobscot River. The reasonable potential calculation is as follows:

Reasonable Potential Analysis

$$Cr = \frac{QeCe + QsCs}{Qr}$$

Qe_{bangor} = Bangor POTW discharge limit = 18.0 MGD
Ce_{bangor} = Bangor POTW effluent TP concentration (2011-2016) = 2.3 mg/L
Qe_{brewer} = Brewer WPCF discharge limit = 5.19 MGD
Ce_{brewer} = Brewer WPCF effluent TP concentration (2011-2015) = 2.1 mg/L
Qs = August median flow of the Penobscot River at Bangor/Brewer = 3,809 MGD (5,893 cfs)
Cs = upstream TP concentration (2007 WLA study) = 0.0166 mg/L
Qr = receiving water flow (3,809 MGD + 18.0 MGD + 5.19 MGD) = 3832.19 MGD
Cr = receiving water concentration

$$Cr = \frac{\left(18.0\ MGD * 2.3\frac{mg}{L}\right) + \left(5.19\ MGD * 2.1\frac{mg}{L}\right) + (3{,}809 MGD * 0.0166\frac{mg}{L})}{3{,}832.19\ MGD}$$
$$= 0.030\ mg/L$$

Cr = 0.030 mg/L = 0.030 mg/L for Class B waters => **No Reasonable Potential**

There have been many changes to the Penobscot River since the waste load allocation done in 2007. Many major dischargers are no longer discharging to the river will change the ambient background phosphorus levels, therefore this permit is establishing upstream ambient monitoring to be conducted seasonally (June 1st – September 30th) on the first week of each month (reporting 1/Month) at the "Eddington Eddie" (44.824402, -68.694753), reported on DMRs via Outfall #002A. Effluent monitoring to be conducted seasonally (June 1st – September 30th). This permit is also carrying forward the Total phosphorus effluent report only requirement and a monitoring frequency of twice per month (2/Month).

j. ***Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing***

38 M.R.S. § 414-A and 38 M.R.S. § 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 C.M.R. ch. 530 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. 06-096 C.M.R. ch. 584 sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

WET, priority pollutant and analytical chemistry testing, as required by 06-096 C.M.R. ch. 530, is included in this permit in order to characterize the effluent. WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on the water flea *(Ceriodaphnia dubia)* and the brook trout *(Salvelinus fontinalis)*. Chemical-specific monitoring is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria. Analytical Chemistry and Priority Pollutant refers to those pollutants listed in their respective categories on the "WET and Chemical Specific Data Report Form." The form can be found at:
https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

06-096 C.M.R. ch. 530(2)(A) specifies the dischargers subject to the rule as:

> *"All licensed dischargers of industrial process wastewater or domestic wastes discharging to surface waters of the State must meet the testing requirements of this section. Dischargers of other types of wastewater are subject to this subsection when and if the Department determines that toxicity of effluents may have reasonable potential to cause or contribute to exceedances of narrative or numerical water quality criteria."*

Bangor discharges domestic (sanitary) and industrial process wastewater to surface waters and is therefore subject to the testing requirements of the toxics rule.

06-096 C.M.R. ch. 530(2)(B) categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV).

The four categories for dischargers are as follows:

Level I	Chronic dilution factor of <20:1
Level II	Chronic dilution factor of ≥20:1 but <100:1.
Level III	Chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD
Level IV	Chronic dilution factor >500:1 and Q ≤1.0 MGD

Based on the criteria, the permittee's facility is considered a Level III discharger as the chronic dilution of the receiving water is 108:1. Department Rule 06-096 C.M.R. ch. 530(2)(D) specifies default WET, priority pollutant, and analytical chemistry test schedules for Level III dischargers as follows.

Surveillance level testing

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

Screening level testing

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

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

a. Whole Effluent Toxicity (WET): The June 9, 2016 permit did not establish any wet limitations as a statistical evaluation, at the time all results indicated no reasonable potential or exceedances. 06-096 C.M.R. ch. 530(3)(E) states:

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

On June 18, 2024, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the Bangor POTW in accordance with the statistical approach outlined above. The June 18, 2024 statistical evaluation indicates the discharge from the Bangor POTW has not exceeded or demonstrated a reasonable potential to exceed the critical acute or chronic ambient water quality thresholds for the water flea *(Ceriodaphnia dubia)* or brook trout *(Salvelinus fontinalis)*.

06-096 C.M.R. ch. 530(2)(D)(3)(b) states, "Dischargers in Levels III and IV may be waived from conducting surveillance testing for individual WET species or chemicals provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedences….." Based on the provisions of 06-096 C.M.R. ch. 530 and Department best professional judgment, this permitting action is waiving the surveillance level WET and analytical chemistry testing requirements for this facility. Special Condition M. *06-096 C.M.R. ch. 530(2)(D)(4) Statement For Reduced/Waived Toxics Testing* of this Permit explains the statement required by the discharger to waive WET testing.

b. Analytical Chemistry & Priority Pollutant Testing Evaluation: The 6/9/2016 permit established a monthly average water quality-based mass limit for Lead as a statistical evaluation, at the time results indicated a reasonable potential.

06-096 C.M.R. ch. 530(3)(E) states,

"Where it is determined through [the statistical approach referred to in USEPA's Technical Support Document for Water Quality-Based Toxics Control] 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 C.M.R. ch. 530(3)(D) states:

"Where the need for effluent limits has been determined, limits derived from acute water quality criteria must be expressed as daily maximum values. Limits derived from chronic or human health criteria must be expressed as monthly average values."

On November 14, 2025, the Department conducted a statistical evaluation of the most recent 60 months of chemical-specific test results on file with the Department. The evaluation was based on 0% of the ambient water quality criteria being withheld (Report ID 1658). The November 14, 2025 evaluation indicates that test results from the Bangor facility discharge has a reasonable potential to exceed the human health AWQC for BIS(2-Ethylhexyl)phthalate established in 06-096 C.M.R. ch. 584, *Surface Water Quality Criteria for Toxic Pollutants*. See **Attachment D** of this Fact Sheet for test dates and results for the pollutants of concern.

The Department has prepared guidance that establishes protocols for establishing waste load allocations (see **Attachment E** of this Fact Sheet). The guidance states that the most protective of water quality becomes the facility's allocation. According to the

1/5/16 statistical evaluation, lead is to be limited based on the segment allocation method.

Chapter 530 §(3)(D)(1) states:

"*For specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded. With regard to concentration limits, the Department may review past and projected flows and set limits to reflect proper operation of the treatment facilities that will keep the discharge of pollutants to the minimum level practicable*."

In May 2012, 38 M.R.S. §464(4)(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 metals from a publicly owned treatment works.

Segment allocation methodology

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

For the permittee's facility, the historical average for pollutants of concern are calculated as follows:

Lead

Mean Concentration (n=16) = 2 ug/L or 0.002 mg/L
Permit Flow Limit = 18.0 MGD
Historical Average Mass = (0.002mg/L)(8.34)(18.0MGD) = 0.3 lbs/day

Historically, larger industrial users were allocated more of the assimilative capacity in the Penobscot River, leaving a smaller allocation for other dischargers. Due to the recent closure of these industries, the assimilative capacity can now be re-allocated. The previous permit stated Bangor's historical average mass for lead was 0.28 lbs./day. At that time, Bangor was allocated 7.4% of the assimilative capacity for lead. The

January 5, 2016 statistical evaluation (Report ID 818) indicates the historical average mass of lead discharged by Bangor is 0.3 lbs./day. Due to the re-allocation, Bangor is now assigned 65.285% of the total lead assimilative capacity on the main stem of the Penobscot River. The chronic assimilative capacity (AC) at Bangor was calculated based on 90% of the applicable chronic AWQC (taking into consideration the 10% reduction to account for background, 0% reduction for reserve, totaling 10%), at critical low flow (7Q10 = 2,966 cfs) less the assimilative capacity allocated to the Piscataquis River (7Q10 at Milo = 27.7 cfs).

The chronic assimilative capacity calculation for lead is as follows:

7Q10 at Bangor = 2,966 cfs or 1,917 MGD
7Q10 at Milo = 27.6962 cfs or 17.9 MGD

Chronic AWQC = 0.41 µg/L = 0.00041 mg/L
Chronic AWQC minus 10% background = 0.00041mg/L (0.90) = 0.000369 mg/L

Chronic Flow = 1,917 MGD – 17.9 MGD = 1,899.1 MGD

Chronic AC mass = (1,899.1 MGD)(8.34 lbs./gal)(0.000369 mg/L) = 5.84 lbs./day

Therefore, the chronic segment allocations for lead for the permittee can be calculated as follows:

Monthly average mass limit for lead:

$$Mass\ Limit = (Chronic\ AC\ mass)(\%\ of\ total\ lead\ discharged)$$

$$Mass\ limit = \left(5.84\frac{lbs}{day}\right)(0.65285) = \mathbf{3.81\ lbs/day}$$

06-096 C.M.R. ch. 530 does not establish monitoring frequencies for parameters that exceed or have a reasonable potential to exceed the chronic AWQC. Monitoring frequencies are established on case-by-case basis given the timing, severity and frequency of occurrences of the exceedances or reasonable potential to exceed applicable critical water quality thresholds. Therefore, this permitting action is making a best professional judgment to establish the monitoring frequency for lead at the routine surveillance level frequency of 1/Year specified in 06-096 C.M.R. ch. 530.

BIS(2-Ethylhexyl)phthalate

According to the November 14, 2025 statistical evaluation (Report ID #1658), the historical average mass of BIS(2-Ethylhexyl)phthalate discharged by the permittee (1.99 lbs/day). The acute capacity (AC) at Bangor was calculated based on 90% of the applicable AWQC (taking into consideration the 10% reduction to account for background, 0% reduction for reserve, totaling 10%), critical low flows (Harmonic mean flow = 8,098 cfs) at Bangor. The calculation for BIS(2-Ethylhexyl)phthalate is as follows:

Human Health:

End of Pipe (EOP) calculation is as follows:

$$EOP = \left[(dilution\ factor)X\left(100\% - (Reserve\% + background\%)\right)X\ (AWQC)\right] + [(background + reserve)X(AWQC)]$$

Dilution factor = 292
Background + Reserve = 10%
AWQC = 0.22 ug/L

$$EOP = [(292)X(1.00 - .10)X(0.22)] + [(.10)X(0.22)] = 57.84\ ug/L$$

EOP = 0.05784 mg/L

Monthly Average Mass Limit
Monthly Average = (Permitted flow)(8.34lbs/day)(EOP)

(18 MGD)(8.34 lbs/gal)(0.05784 mg/L) = **8.7 lbs/day**

Based on the timing, severity and frequency of occurrences of the reasonable potential to exceed applicable critical water quality thresholds, this permitting action is carrying forward the previously established minimum monitoring frequency requirement of twice per year.

k. Transported Wastes: The previous permitting action authorized the permittee to accept and treat up to 20,000 gpd of transported wastes. Standards For The Addition of Transported Wastes to Wastewater Treatment Facilities, C.M.R. ch. 555 (last amended March 9, 2009), 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 does not utilize a side stream storage method as transported wastes are introduced into the wetwell of the facility. With a design capacity of 18 MGD, 20,000 gpd represents 0.1% of said capacity. The Department has reviewed and approved the permittee's most current Septage Management Plan and determined that under normal operating conditions, the addition of 20,000 gpd of transported wastes to the facility will not cause or contribute to upset conditions of the treatment process. This permit is no longer authorizing the acceptance and treatment of transported wastes, at the request of the permittee.

OUTFALL #001B-PRIMARY TREATED EFFLUENT

m. CSO-Related Bypass of Secondary Treatment: The CSO (combined sewer overflow) is during any substantial storm that will cause more water to come into the sewer system and will cause for storm and sewer water to be discharged to waters of the State without treatment. For those flows received at the treatment facility which are greater than that

which can be treated to a secondary level of treatment, the Department has made a BPJ that primary treatment and disinfection constitutes appropriate BPT.

The reporting requirements for the parameters in Special Condition A(3) of this permit (Influent Flow Rate Minimum, Flow, Overflow Occurrences, BOD_5, TSS, *E. coli*, TRC) are being carried forward in this permitting action. These are parameters the Department has deemed necessary to evaluate the performance of the primary treatment process. A review of the DMR data for the period August 2017 – April 2024 indicates the following:

Influent Flow Rate Minimum (n = 58)			
Value	Limit	Range	Mean
Daily Minimum	Report Only	3,139 – 56,376	24,638

BOD_5 (n = 20)			
Value	Limit	Range	Mean
Daily Maximum (Load)	Report Only	149.20 – 2891.30 lbs/day	991.28 lbs/day
Daily Maximum (Concentration)	Report Only	11.00 – 1,065.00 mg/L	87.24 mg/L

TSS (n = 20)			
Value	Limit	Range	Mean
Daily Maximum (Load)	Report Only	184 – 4,735 lbs/day	2141.3 lbs/day
Daily Maximum (Concentration)	Report Only	27.4 – 1,406 mg/L	154 mg/L

E. Coli (n = 32)			
Value	Limit	Range	Mean
Monthly Average	427	1.00 – 10.30	2.66
Daily Maximum	64	4.10 – 2,419	118

TRC (n = 1)			
Value	Limit	Range	Mean
Daily Maximum	Report Only	0.04 - 0.04	0.040

Overflow Occurrences

Year	Limit (# of days)	Total (# of days)
2017	Report	
2018	Report	17
2019	Report	23
2020	Report	15
2021	Report	14
2022	Report	19
2023	Report	11
2024 (Jan. – Mar.)	Report	6

Flow - Total Gallons/Month

Year	Limit (MGD)	Range (MGD)	Total (MGD)
2017	Report	0.0 – 6.1	24.0
2018	Report	0.0 – 11.4	29.6
2019	Report	0.0 – 9.3	49
2020	Report	0.0 – 14.7	42.6
2021	Report	0.0 – 12.6	31.9
2022	Report	0.0 – 143.6	194.6
2023	Report	0.0 – 20.4	33.5
2024 (Jan.-Mar)	Report	0.0 – 30.0	35.2

Flow – Daily Maximum Gallons			
Year	**Limit (MGD)**	**Range (MGD)**	**Total (MGD)**
2017	Report	0.0 – 3.5	14.5
2018	Report	0.0 – 5.4	19.2
2019	Report	0.0 – 5.8	35.9
2020	Report	0.0 – 8.4	24.9
2021	Report	0.0 – 5.1	18.3
2022	Report	0.0 – 6.7	34.7
2023	Report	0.0 – 10.1	20.2
2024 (Jan.-Mar)	Report	0.0 – 9.4	14.6

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 must 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.[1] 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

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

either technically or financially infeasible to provide secondary treatment at the existing facilities for greater amounts of wet weather flow."[2]

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.[3] 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.[4] 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 of secondary treatment at the Bangor facility based on an evaluation of feasible alternatives, which indicates it is technically and financially infeasible at this time to provide secondary treatment at the existing facilities as summarized in the original CSO Master Plan.

During wet weather events when flows to the treatment facility have exceeded an instantaneous flow rate of 30 MGD (20,833 gallons a minute), secondary treatment of all wet weather flows is not practicable and flows exceeding 20,833 gallons a minute have the potential of damaging the secondary treatment equipment at the facility. Therefore, a portion of the primary flow (from Primary Clarifier 1) can be diverted prior to secondary treatment. This apportioned flow receives primary treatment, is chlorinated, and dechlorinated in-situ, and is discharged via Outfall #001B. The subject flow is subsequently combined with flow from Outfall #001A (secondary treated effluent), and then discharged to the river via Outfall #001C (administrative outfall). This permitting action is establishing end-of-pipe limitations 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, and that for facilities that blend primary and secondary effluent prior to discharge, such as the permittee's facility, compliance must be evaluated at the point of discharge, unless impractical or infeasible.[5] 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. Where a CSO-related bypass is directly discharged after primary settling and chlorination, monitoring will be at end of pipe if possible.

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

[2] 59 Fed. Reg. at 18,694.
[3] 59 Fed. Reg. at 18,693.
[4] 59 Fed. Reg. at 18694, col 1 (April 19, 1994).
[5] 40 CFR 122.45(h).

all of Maine's CSO-related bypass facilities.[6] To standardize how the Department will regulate these facilities to ensure compliance with the CSO Control Policy and CWA [7], the Department has determined that limitations for blended effluent (the discharge of CSO-related bypass effluent 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 calculations or best professional judgment of Department water quality engineers of assimilative capacity of the receiving water.

The federal secondary treatment regulation does not contain daily maximum effluent limitations for BOD_5 and TSS. The Department established a daily maximum concentration limit of 50 mg/L for secondary treated wastewater as BPJ of BPT prior to NPDES delegation and promulgation of secondary treatment regulations into State rule that are consistent with the Clean Water Act. Following consultation with USEPA, the Department has chosen to waive the requirement to comply with numeric daily maximum concentration limitations for BOD_5 and TSS for days with CSO-related bypass events.

During CSO-related bypasses, secondary treated wastewater is combined with wastewater from the primary treatment system, which is designed to provide primary clarification, solids and floatables removal and disposal, and disinfection. The permittee is not able to consistently achieve compliance with technology based effluent limits (TBELs) derived from the secondary treatment regulation during CSO-related bypasses. As part of its consideration of possible adverse effects resulting from the bypass, the Department must ensure that the bypass will not cause exceedance of water quality standards. CSO Control

OUTFALL #001C-BLENDED EFFLUENT DISCHARGED TO PENOBSCOT RIVER

Analysis of Water Quality Impacts During Discharge of Blended Effluent

Due to the close proximity of the City of Bangor POTW discharge to the Brewer discharge, and in consideration of the fact that the City of Bangor has a licensed flow rate that is three times that of Brewer's, the Department chose to evaluate water quality impacts based on the simultaneous influence of both discharges to the Penobscot River.

However, since the dischargers did not have comparatively elevated results on the same days, the Department identified the day with the highest mass loading for both BOD and TSS for Bangor and Brewer, individually, and then combined those results in the following calculations. In this way, we can evaluate the "worst case" for each discharger for both BOD and TSS in the last ten years and calculate a simulated combined discharge to assess the water quality impact in the Penobscot River. This is different from the previous permit in that the data set has been extended to ten years. This allows for additional weather events to be taken into consideration.

In previous MEPDES permits, to calculate the change in water quality conditions due to a blended effluent addition, the lowest flow in the receiving waterbody that was recorded by the nearest USGS gauge for that month was applied. However, due to federal sequestration

[6] Maine currently has 16 permitted facilities with a CSO-related bypass.
[7] In other words, that any other treatment that can reasonably be provided is, in fact, provided.

cuts, the USGS gauge in the vicinity of the Bangor/Brewer area is no longer monitoring flow rates. The closest gauge on the mainstem Penobscot with flow data is West Enfield, more than 30 miles north of the discharges. Therefore, the Department used data from the West Enfield gauge in the following calculations.

The calculations for BOD and TSS are as follows:

BOD

Bangor

Highest Daily Maximum BOD_5 Mass Loading = 8,760 lbs./day, collected January 25, 2017

Parameters for January 25, 2017 are as follows:

Daily Maximum Concentration for Outfall 001A (Secondary)	= 49 mg/L
Daily Maximum Concentration for Outfall 001B (Primary)	= 51 mg/L
Daily Maximum Flow for Outfall 001A (Secondary)	= 27.859 MGD
Daily Maximum Flow for Outfall 001B (Primary)	= 1.834 MGD
Facility Flow (Blended)	= 29.69 MGD

Weighted Average Concentration of Primary and Secondary (Blended) = 49 mg/L

Brewer-Administrative Outfall 001C (Blended Effluent) was established by the 2016 permitting action. One overflow occurrence occurred between June 2016 through April 2024.

Highest Daily Maximum BOD_5 Mass Loading = 3,845 lbs./day, collected March 30, 2024

Parameters for March 30, 2024, are as follows:

Daily Maximum Concentration for Outfall 001A (Secondary)	= 6.77 mg/L
Daily Maximum Concentration for Outfall 001B (Primary)	= 70 mg/L
Daily Maximum Flow for Outfall 001A (Secondary)	= 6.055 MGD
Daily Maximum Flow for Outfall 001B (Primary)	= 6.5 MGD
Daily Maximum Facility Flow (Blended)	= 12.55 MGD

Weighted Average Concentration of Primary and Secondary (Blended) = 39.5 mg/L

Combined BOD (Bangor and Brewer)

Weighted Average BOD Concentration of the Combined Discharges = **46.2 mg/L**

From the months of January 2017 and March 2024, the lowest river flow was 6,720 cfs on January 03, 2017.

$$6{,}720\ cfs\ X\ 0.646\ \frac{MGD}{cfs} = 4{,}341\ MGD$$

Dilution based on 6,720 cfs (or 4,344 MGD) and the combined discharge (12.55 + 29.69) is applied as follows:

4,344 MGD + 42.24 MGD = 104:1
42.24 MGD

Therefore, the increase of instream BOD concentration given these conditions is:

46.2 = **0.44 mg/L** (< 2 mg/L is not measurable)
104

TSS

Bangor

Highest Daily Maximum TSS Mass Loading = 17,989.7 lbs./day, collected January 31, 2024

Parameters for January 31, 2024, are as follows:

Daily Maximum Concentration for Outfall 001A (Secondary)	= 58.4 mg/L
Daily Maximum Concentration for Outfall 001B (Primary)	= 100.8 mg/L
Daily Maximum Flow for Outfall 001A (Secondary)	= 28.07 MGD
Daily Maximum Flow for Outfall 001B (Primary)	= 5.136 MGD
Facility Flow (Blended)	= 33.21 MGD

Weighted Average Concentration of Primary and Secondary (Blended) = 64.76 mg/L

Brewer

Highest Daily Maximum TSS Mass Loading = 9,912.8 lbs./day, collected March 30, 2024

Parameters for March 30, 2024

Daily Maximum Concentration for Outfall 001A (Secondary)	= 12.3 mg/L
Daily Maximum Concentration for Outfall 001B (Primary)	= 184 mg/L
Daily Maximum Flow for Outfall 001A (Secondary)	= 6.055 MGD
Daily Maximum Flow for Outfall 001B (Primary)	= 6.5 MGD
Daily Maximum Facility Flow (Blended)	= 12.55 MGD

Weighted Average Concentration of Primary and Secondary (Blended) = 95.1 mg/L

Combined TSS (Bangor & Brewer)

Weighted Average TSS Concentration of the Combined Discharges = **72.95 mg/L**

From the months of January 2024 and March 2024, the lowest river flow was 9,970 cfs on January 6, 2024.

Dilution based on 9,970 cfs (or 6,445 MGD) and the combined discharge (12.55 + 33.21) is applied as follows:

6,445 MGD + 45.76 MGD = 142:1
45.76 MGD

Therefore, the increase of instream TSS concentration given these conditions is:

72.95 = **0.51 mg/L** (< 2 mg/L is not measurable)
142

Based on the previous calculations and information from both dischargers, there was no measurable impact in the receiving water due to the addition of increased levels of BOD and TSS from blended effluent during a wet weather event in the previous five years.

Establishing Blended Effluent Limits for Bangor

BOD

If we assume, during a wet weather event, that the facility is discharging secondary-treated water at full permitted flow (18.0 MGD), and in compliance with the daily maximum TBEL-derived discharge limit (50 mg/L), then the maximum effluent value for secondary treated wastewater is:

18.0 MGD x 50 mg/L x 8.34 (conversion factor) = 7,506 lbs./day

If we use the primary-treated water BOD concentration from the highest BOD mass loading event in the previous ten years, and the flow from that event/day, the primary effluent mass loading is:

1.834 MGD x 51 mg/L x 8.34 = 780 lbs./day

The combined mass from the secondary and primary is 8,286 lbs./day. The combined flow for primary and secondary was 27.05 MGD.

The weighted average concentration of primary effluent at its highest values (in five years) and secondary effluent at full permitted flow = **49 mg/L**

In the absence of a practical and reasonable standard, the Department chose to evaluate the Bangor discharge at its proposed limits under chronic river flow conditions. Although a discharge of blended effluent during 7Q10 conditions is not likely to occur, using these extremely conservative conditions demonstrates compliance, and provides assurance that the discharge of blended effluent at proposed limits will not cause or contribute to a violation of water quality standards. The chronic dilution flow for the Penobscot River at Bangor is 2,966 cfs or 1,917 MGD. Therefore, the dilution to be applied to the discharges is:

$$\frac{1{,}917\ \text{MGD} + 27.05\ \text{MGD}}{27.05\ \text{MGD}} = 72{:}1$$

Therefore, the increase in instream BOD concentration given this condition is as follows:

$$Instream\ BOD\ increase = \frac{49}{72} = 0.68\frac{mg}{L}\ (< 2\frac{mg}{L} is\ not\ measurable)$$

TSS

If we follow the same methodology for TSS as BOD, the following maximum effluent values apply:

18.0 MGD x 50 mg/L x 8.34 = 7,506 lbs./day (secondary treatment)

If we use the primary-treated water TSS concentration from the highest TSS mass loading event in the previous ten years, and the flow from that event/day, the primary effluent mass loading is:

5.136 MGD x 101 mg/L x 8.34 = 4,326 lbs./day

The combined mass from the secondary and primary is 11,832 lbs./day.

The weighted average concentration of Primary effluent at its highest values (in ten years) and Secondary effluent at full permitted flow = **95 mg/L**

The chronic dilution flow for the Penobscot River at Bangor is 2,966 cfs or 1,917 MGD. Therefore the dilution to be applied to the discharges is as follows:

$$\frac{1{,}917 \text{ MGD} + 33.21 \text{ MGD}}{33.21 \text{ MGD}} = 59{:}1$$

Therefore, the increase in instream TSS concentration given this condition is:

$$Instream\ TSS\ increase = \frac{95}{59} = 1.61\frac{mg}{L}\ (< 2\frac{mg}{L}\ is\ not\ measurable)$$

Simulated Discharge of Blended Effluent from Bangor and Brewer at Calculated Limits

The combined discharge of blended effluent from Bangor and Brewer at permitted limits is calculated as such:

BOD

Bangor BOD limit = 49 mg/L @ 27.05 MGD
Brewer BOD limit = 61 mg/L @ 11.69 MGD

The weighted average of the combined effluents = 53 mg/L @ 38.74 MGD

The chronic dilution flow for the Penobscot River at Bangor is 2,966 cfs or 1,917 MGD. Therefore, the dilution to be applied to the blended discharges is as follows:

$$Blended\ Flow\ Dilution\ Factor\ for\ BOD = \frac{1{,}917\ MGD + 38.74\ MGD}{38.74\ MGD} = 50{:}1$$

Therefore, the increase in instream BOD concentration given this condition is as follows:

$$Instream\ BOD\ increase = \frac{53}{50} = 1.06\frac{mg}{L}\ (< 2\frac{mg}{L}\ is\ not\ measurable)$$

TSS

Bangor TSS limit = 95 mg/L @ 33.21 MGD
Brewer TSS limit = 122 mg/L @ 6.055 MGD

The weighted average of the combined effluents = 99 mg/L @ 39.265 MGD

The chronic dilution factor for the Penobscot River at Bangor is 2,966 cfs or 1,917 MGD. Therefore, the dilution to be applied to the discharges is as follows:

$$Blended\ flow\ dilution\ factor\ for\ TSS = \frac{1{,}917\ MGD + 39.265\ MGD}{39.265\ MGD} = 50{:}1$$

Therefore, the increase in instream TSS concentration given this condition is as follows:

$$Instream\ TSS\ increase = \frac{95}{50} = 1.9\frac{mg}{L}\ (< 2\frac{mg}{L}\ is\ not\ measurable)$$

Based on the combined BOD_5 and TSS values (blended effluent) cited, the Department has made a best professional judgment, maximum effluent discharge limitations of 8,286 lbs./day for BOD_5 and 11,832 lbs./day for TSS established in this permit is more stringent than the June 9, 2016 permit, provides reasonable assurance that the discharge will not cause or contribute to a violation of an applicable water quality standard in the Penobscot River and complies with the State's antidegradation policy at 38 M.R.S. § 464(4)(F).

***E. coli* Bacteria**

As stated above, the daily maximum limit for E. coli bacteria is 236 colonies/100 mL. At times of wet weather, for blended effluent, the Department is keeping the end of pipe limit based on 38 M.R.S. § 465(3)(B). This permitting action is establishing the bacteria daily maximum limit of 236 colonies/100mL when discharging blended effluent. When the blended effluent is being discharged between April 15th – October 31st of every year.

Total Residual Chlorine

As stated above, when the Penobscot River is at the level of chronic dilution, a limit of 1.0 mg/L is protective of water quality. At times of wet weather, for blended effluent, the Department is making a BPJ that a TRC limit of 1.0 mg/L is protective of water quality standards. The June 2016 permitting action established a TRC daily maximum limit of 1.0 mg/L when discharging blended effluent. This permit is carrying that action forward.

8. COMBINED SEWER OVERFLOWS

This permit contains effluent limitations and monitoring requirements for the following combined sewer overflow point source discharges.

Outfall #	Location	Receiving Water & Class
002	Barkersville	Penobscot River, Class B
003	Davis Brook	Penobscot River, Class B
006	Kenduskeag West	Kenduskeag Stream, Class C
007	Kenduskeag East	Kenduskeag Stream, Class C
009	Hammond Street	Kenduskeag Stream, Class C
011	Meadowbrook	Kenduskeag Stream, Class C
020	Carr Brook	Penobscot River, Class B
023	Central Street	Kenduskeag Stream, Class C

Combined Sewer Overflow Abatement 06-096 CMR ch. 570 (last amended February 8, 1978) states that for discharges from overflows from combined municipal storm and sanitary sewer systems, the requirement of "best practicable treatment" specified in 38 M.R.S. § 414-A(1)(D) may be met by agreement with the discharger, as a condition of its permit, through development of a plan within a time period specified by the Department.

On June 28, 1991, the USEPA, the U.S. Department of Justice, the State of Maine and City of Bangor entered into a Consent Decree superseding and incorporating the conditions of the June 30, 1987 Consent Decree and adding conditions to address combined sewer overflow control, including requirements for a CSO Facilities Plan and an implementation schedule. The CSO Master Plan entitled, Final Draft Combined Sewer Overflow Facilities Plan for the City of Bangor, dated December 1993, and abatement project schedule was approved by the USEPA on December 22, 1994. On November 13, 2015, the USEPA, the U.S. Department of Justice, the State of Maine and City of Bangor entered into a Consent Decree superseding the 1991 decree adding conditions to address combined sewer overflow control, including requirements for a Long-Term Control Plan and an implementation schedule.

The City of Bangor 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 waters. Special Condition L, *Combined Sewer Overflows*, of this 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 remaining CSOs in the collection system and the CSO-related bypass of secondary treatment is a costly, long-term project. As the Bangor treatment facility and the sewer collection system is 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 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.

9. ANTI-BACKSLIDING

Federal regulation 40 C.F.R. §122.44(l) contains the criteria for what is often referred to as the anti-backsliding provisions of the Federal Water Pollution Control Act (Clean Water Act). In general, the regulation states that except for provisions specified in the regulation, effluent limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit. Applicable exceptions include: (1) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation and (2) information is available which was not available at the time of the permit issuance (other than revised regulations, guidance, or test methods) and which would justify the application of less stringent effluent limitations at the time of permit issuance. All limitations in this permit are equally or more stringent than those in the previous permit.

10. ANTI-DEGREDATION

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 waterbody to meet standards for Class B classification.

11. PUBLIC COMMENTS

Public notice of this application was made in the *Bangor Daily News* newspaper on or about May 6, 2021. 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 C.M.R. ch. 522 (effective January 12, 2001).

12. DEPARTMENT CONTACTS

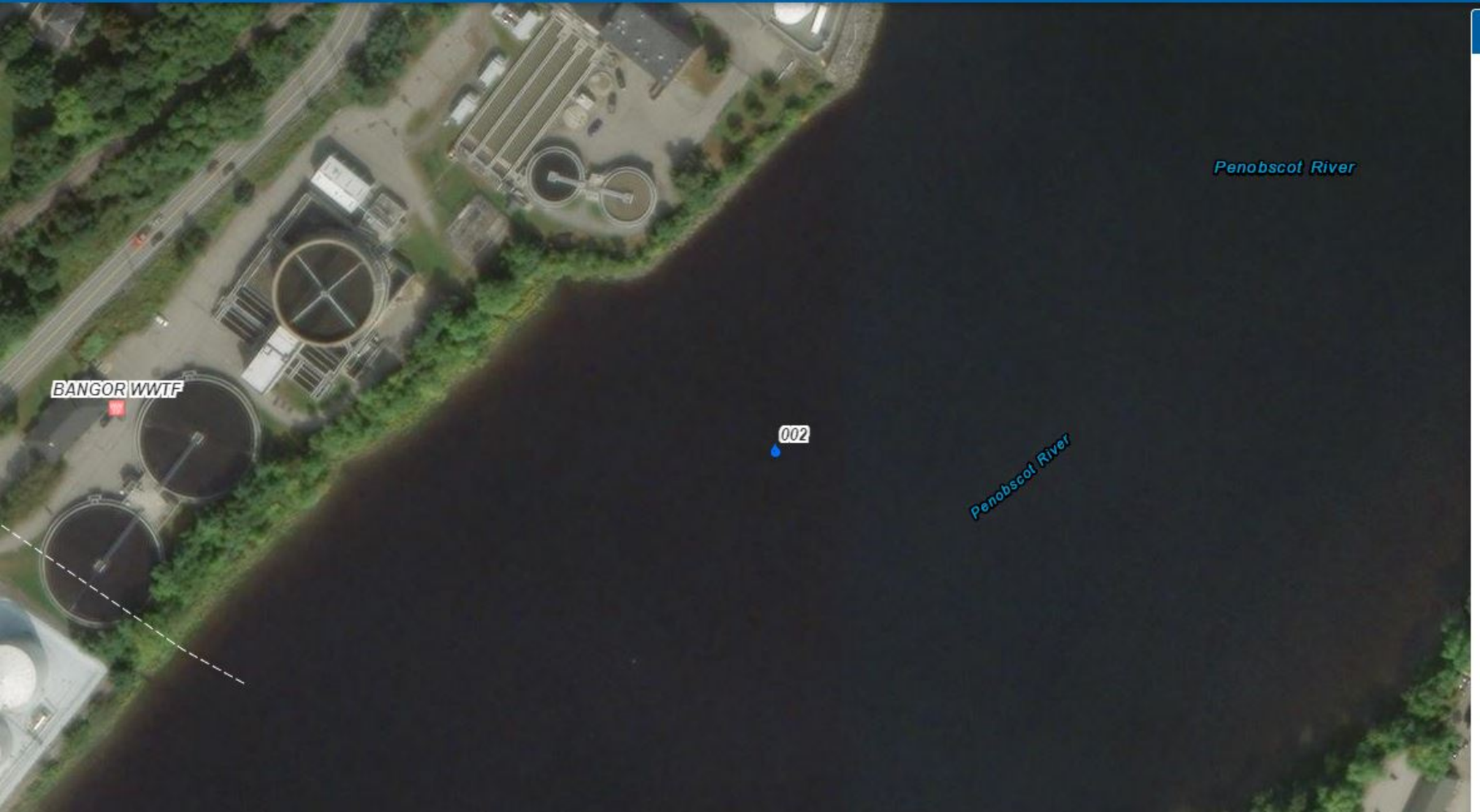
Additional information concerning this permitting action may be obtained from, and written comments sent to:

Asenath Frizzell
Division of Water Quality Management
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 215-6856
e-mail: Asenath.Frizzell@maine.gov

13. RESPONSE TO COMMENTS

This section reserved for future comments

ATTACHMENT A



Legend

MEPDES Facility

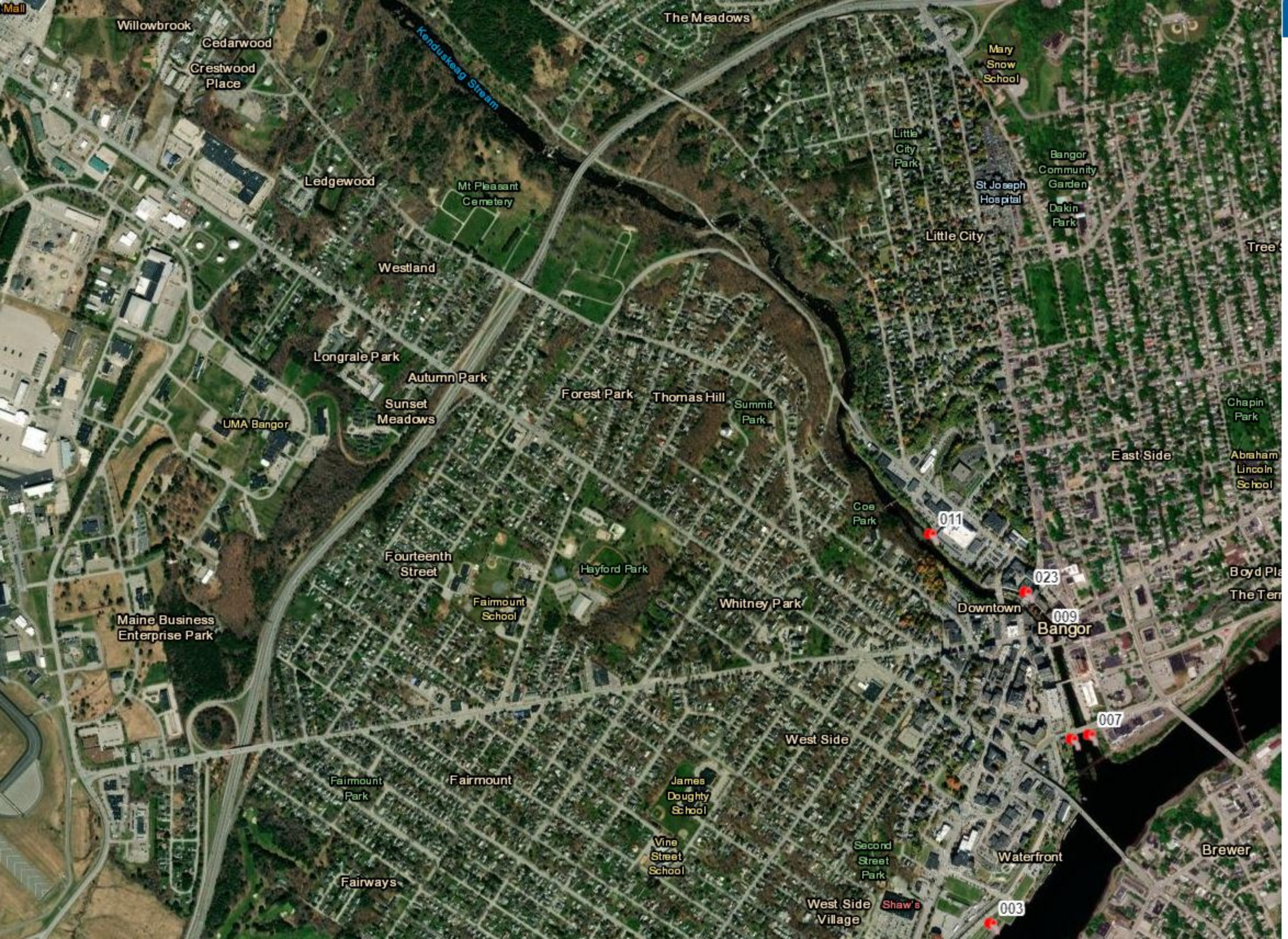
- ACTIVE FACILITY
- INACTIVE FACILITY

MEPDES Outfalls

- ACTIVE OUTFALL
- INACTIVE OUTFALL

CSO

- ACTIVE CSO
- CLOSED CSO



Legend

MEPDES Facility

- ACTIVE FACILITY
- INACTIVE FACILITY

MEPDES Outfalls

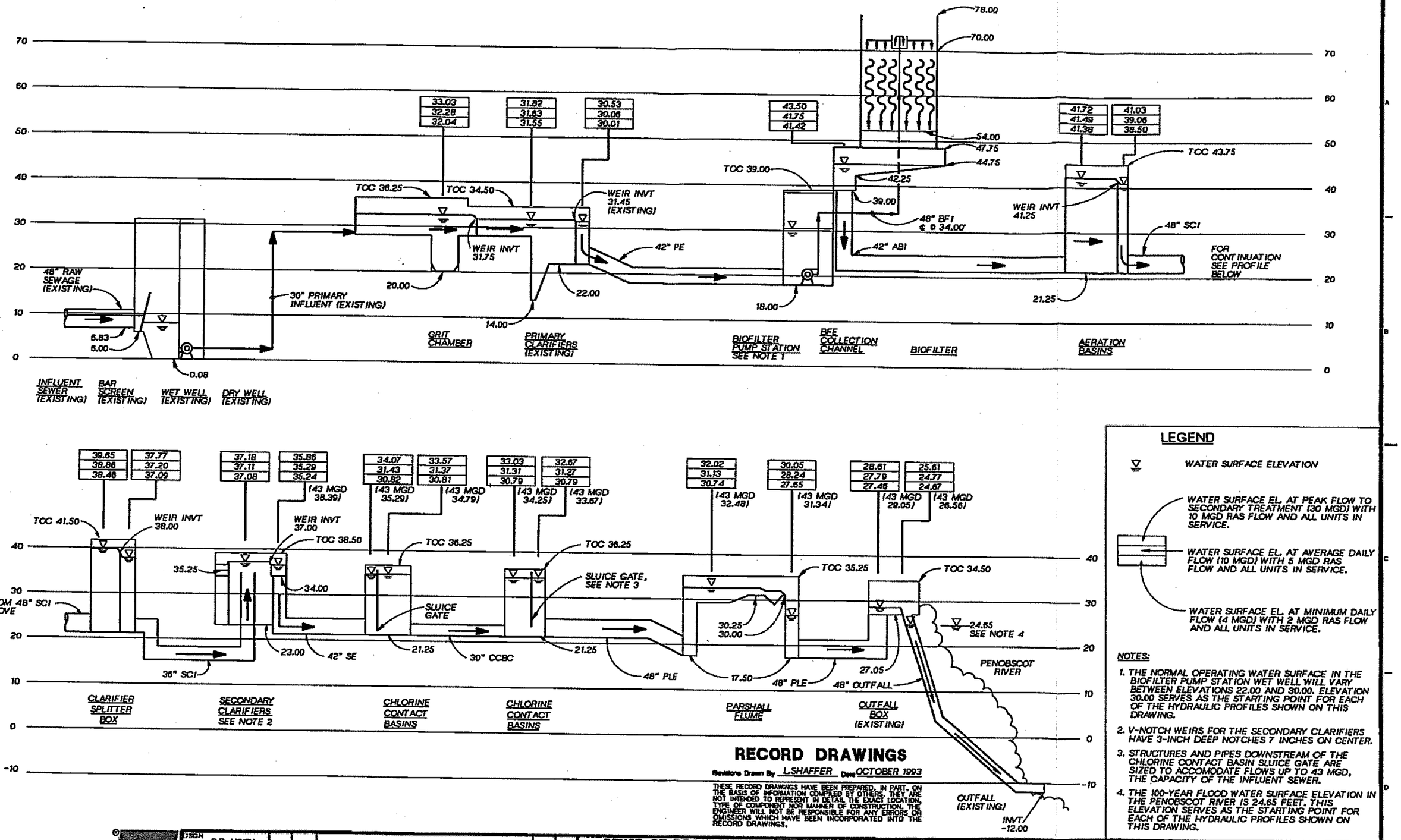
- ACTIVE OUTFALL
- INACTIVE OUTFALL

CSO

- ACTIVE CSO
- CLOSED CSO

ATTACHMENT B

08-28-90:8581G005.DGN



LEGEND

▽ WATER SURFACE ELEVATION

WATER SURFACE EL. AT PEAK FLOW TO SECONDARY TREATMENT (30 MGD) WITH 10 MGD RAS FLOW AND ALL UNITS IN SERVICE.

WATER SURFACE EL. AT AVERAGE DAILY FLOW (10 MGD) WITH 5 MGD RAS FLOW AND ALL UNITS IN SERVICE.

WATER SURFACE EL. AT MINIMUM DAILY FLOW (4 MGD) WITH 2 MGD RAS FLOW AND ALL UNITS IN SERVICE.

NOTES:

1. THE NORMAL OPERATING WATER SURFACE IN THE BIOFILTER PUMP STATION WET WELL WILL VARY BETWEEN ELEVATIONS 22.00 AND 30.00. ELEVATION 30.00 SERVES AS THE STARTING POINT FOR EACH OF THE HYDRAULIC PROFILES SHOWN ON THIS DRAWING.
2. V-NOTCH WEIRS FOR THE SECONDARY CLARIFIERS HAVE 3-INCH DEEP NOTCHES 7 INCHES ON CENTER.
3. STRUCTURES AND PIPES DOWNSTREAM OF THE CHLORINE CONTACT BASIN SLUICE GATE ARE SIZED TO ACCOMODATE FLOWS UP TO 43 MGD, THE CAPACITY OF THE INFLUENT SEWER.
4. THE 100-YEAR FLOOD WATER SURFACE ELEVATION IN THE PENOBSCOT RIVER IS 24.65 FEET. THIS ELEVATION SERVES AS THE STARTING POINT FOR EACH OF THE HYDRAULIC PROFILES SHOWN ON THIS DRAWING.

RECORD DRAWINGS

Revisions Drawn By L.SHAFFER Date OCTOBER 1993

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

CH2M HILL

DSGN D.P. LYNCH
DR S.G. SHREWSBURY
CHK J. E. HOWEY
APVD J. L. HAWLEY

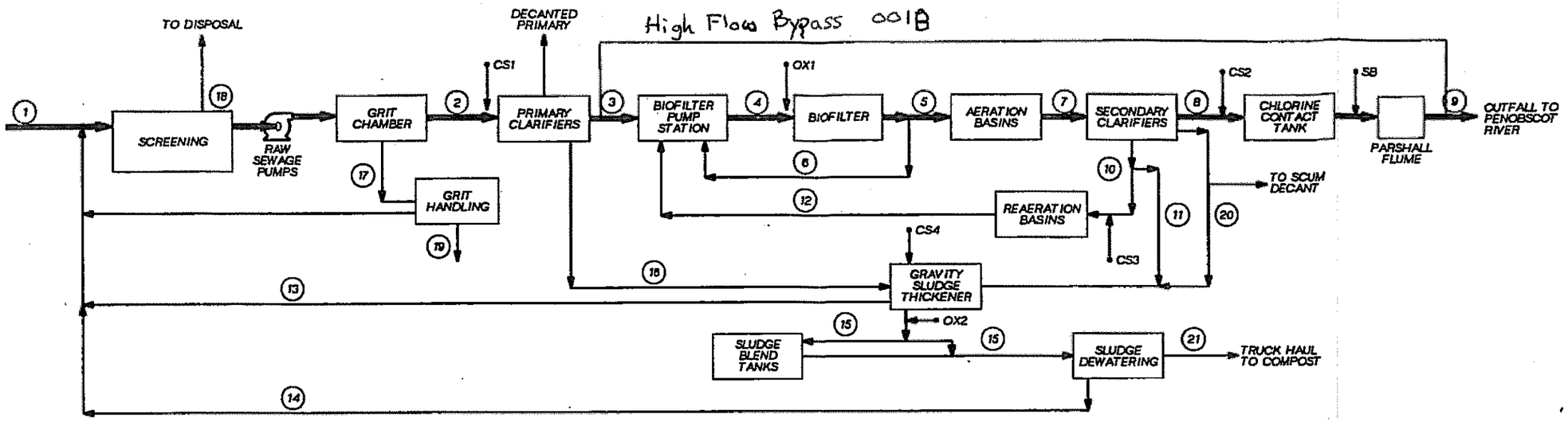
NO. | DATE | REVISION | BY | APVD

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

PRIMARY WASTEWATER TREATMENT PLANT UPGRADE
CITY OF BANGOR, MAINE

GENERAL
HYDRAULIC PROFILE

SHEET 12
DWG NO. G-12
DATE SEPT. 1990
PROJ NO. 805285B1.A0



	STREAM IDENTIFICATION	FLOW MAX MO. (MGD)	TSS MAX MO. (lb/D)	BOD MAX MO. (lb/D)
1	RAW SEWAGE	18.0	43,800	19,000
2	PRIMARY INFLUENT	19.2	27,400	21,500
3	PRIMARY EFFLUENT	19.2	13,700	17,100
4	ABF INFLUENT	37.2	-----	-----
5	ABF EFFLUENT	28.2	-----	-----
6	ABF RECYCLE	9.0	-----	-----
7	AERATION BASIN EFFLUENT	28.2	-----	-----
8	SECONDARY EFFLUENT	18.9	3200	900
9	PLANT EFFLUENT	17.8	3000	840
10	RETURN ACTIVATED SLUDGE	9.0	-----	-----
11	WASTE ACTIVATED SLUDGE	0.2	15,500	-----
12	REAERATION BASIN EFFLUENT	9.0	-----	-----
13	GRAVITY THICKENER OVERFLOW	1.3	1500	470
14	BFP FILTRATE	0.1	1400	400

	STREAM IDENTIFICATION	FLOW MAX MO. (MGD)	TSS MAX MO. (lb/D)	BOD MAX MO. (lb/D)
15	THICKENED SLUDGE	0.1	27,700	-----
16	PRIMARY SLUDGE	0.1	13,700	-----
17	GRIT TO CYCLONES	0.2	19,100	-----
18	SCREENINGS	-----	180*	-----
19	GRIT TO DISPOSAL	-----	17,190	-----
20	SECONDARY SCUM	0.02	-----	-----
21	DEWATERED SLUDGE	-----	26,500	-----

* CU FT/DAY

CHEMICAL FEED LOCATIONS	MAX MONTH lb/D	MAX MONTH MG/L
• CS1	900	6
• CS2	1200	8
• CS3	380	5
• CS4	100	40
• SB	450	3
• OX1	2400	15
• OX2	140	40

LEGEND

CS - CHLORINE SOLUTION
OX - OXIDANT (HYDROGEN PEROXIDE)
SB - SODIUM BISULFATE

RECORD DRAWINGS

Revisions Drawn By L.SHAFFER Date OCTOBER 1993

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

DSGN J. HAWLEY
DR [illegible] J.L. HART
CHK X
APVD X

NO.	DATE	REVISION	BY	APVD

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

PRIMARY WASTEWATER TREATMENT PLANT UPGRADE
CITY OF BANGOR, MAINE

GENERAL
PROCESS FLOW DIAGRAM

SHEET 13
DWG NO. G-13
DATE SEPT. 1990
PROJ NO. 20152581.A0

ATTACHMENT C

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 530.2(D)(4) CERTIFICATION

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.

ATTACHMENT D

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 17/Jun/2019 - 17/Jun/2024

Facility Name: **BANGOR WWTP** NPDES: **ME0100781**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
09/23/2019	6.78	4.74	122	8	28	46	25	4	11	F	0
12/05/2019	10.69	7.89	65	8	0	46	0	0	11	F	0
02/26/2020	6.70	8.56	8	8	0	0	0	0	0	F	0
05/12/2020	7.42	7.91	8	8	0	0	0	0	0	F	0
08/05/2020	4.79	7.04	8	8	0	0	0	0	0	F	0
11/04/2020	7.84	6.25	8	8	0	0	0	0	0	F	0
02/08/2021	5.67	5.38	8	8	0	0	0	0	0	F	0
02/10/2021	5.67	5.38	57	0	0	46	0	0	11	F	0
05/04/2021	6.43	7.36	8	8	0	0	0	0	0	F	0
08/04/2021	5.45	5.17	65	8	0	46	0	0	11	F	0
11/10/2021	10.78	6.57	65	8	0	46	0	0	11	F	0
06/02/2022	4.79	4.86	8	5	0	1	0	0	2	F	0
08/03/2022	5.24	7.37	8	8	0	0	0	0	0	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

PRIORITY POLLUTANT DATA SUMMARY

Date Range: 17/Jun/2019 - 17/Jun/2024

Facility Name: **BANGOR WWTP** NPDES: **ME0100781**

Test Date	Monthly (Flow MGD)	Daily (Flow MGD)	Total Test Number	Test # By Group M	V	BN	P	O	A	Clean	Hg
11/30/2022	10.99	22.71	65	8	0	46	0	0	11	F	0
02/22/2023	9.19	10.91	65	8	0	46	0	0	11	F	0
06/07/2023	8.66	10.28	64	7	0	46	0	0	11	F	0
08/16/2023	7.73	6.12	65	8	0	46	0	0	11	F	0
11/08/2023	7.97	5.99	65	8	0	46	0	0	11	F	0
02/07/2024	7.18	5.67	65	8	0	46	0	0	11	F	0

Key:

A = Acid O = Others P = Pesticides

BN = Base Neutral M = Metals V = Volatiles

ATTACHMENT E

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

DATE: October 2008

TO: Interested Parties

FROM: Dennis Merrill, DEP

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

****

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

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

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

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

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

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

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

Maine Department of Environmental Protection

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Maine Department of Environmental Protection

Working Definitions of Terms Used in the DeTox System.

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

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

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

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

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

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

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

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

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

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

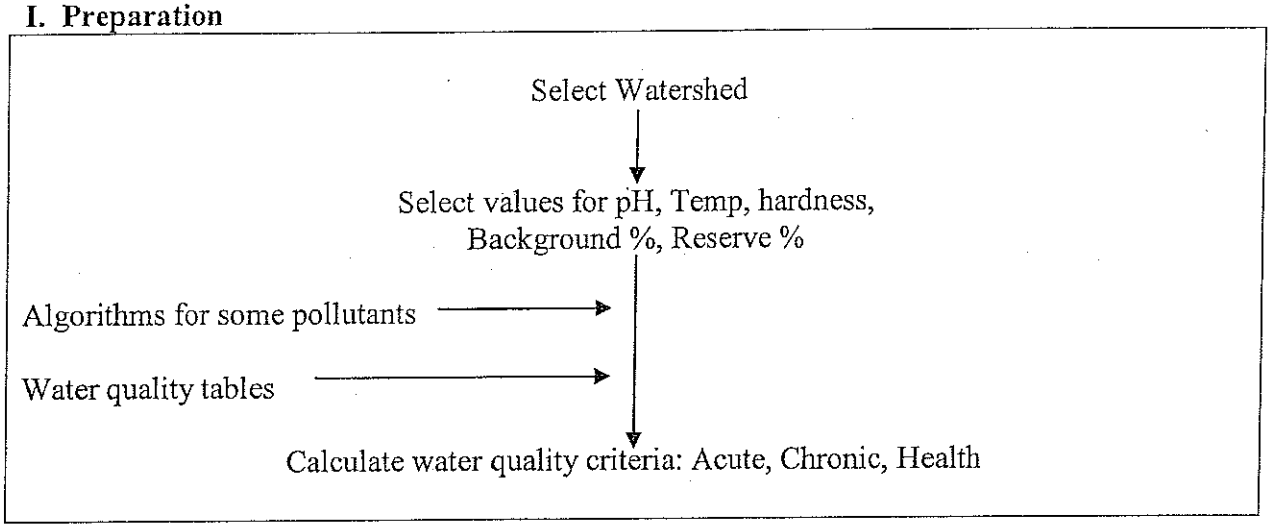
Segment allocation. One of three ways of developing an *allocation.* The amount is set by multiplying a facility's *historical discharge percentage* for a specific pollutant by the *assimilative capacity* for that pollutant and criterion. A facility will have different allocation percentages for each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

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

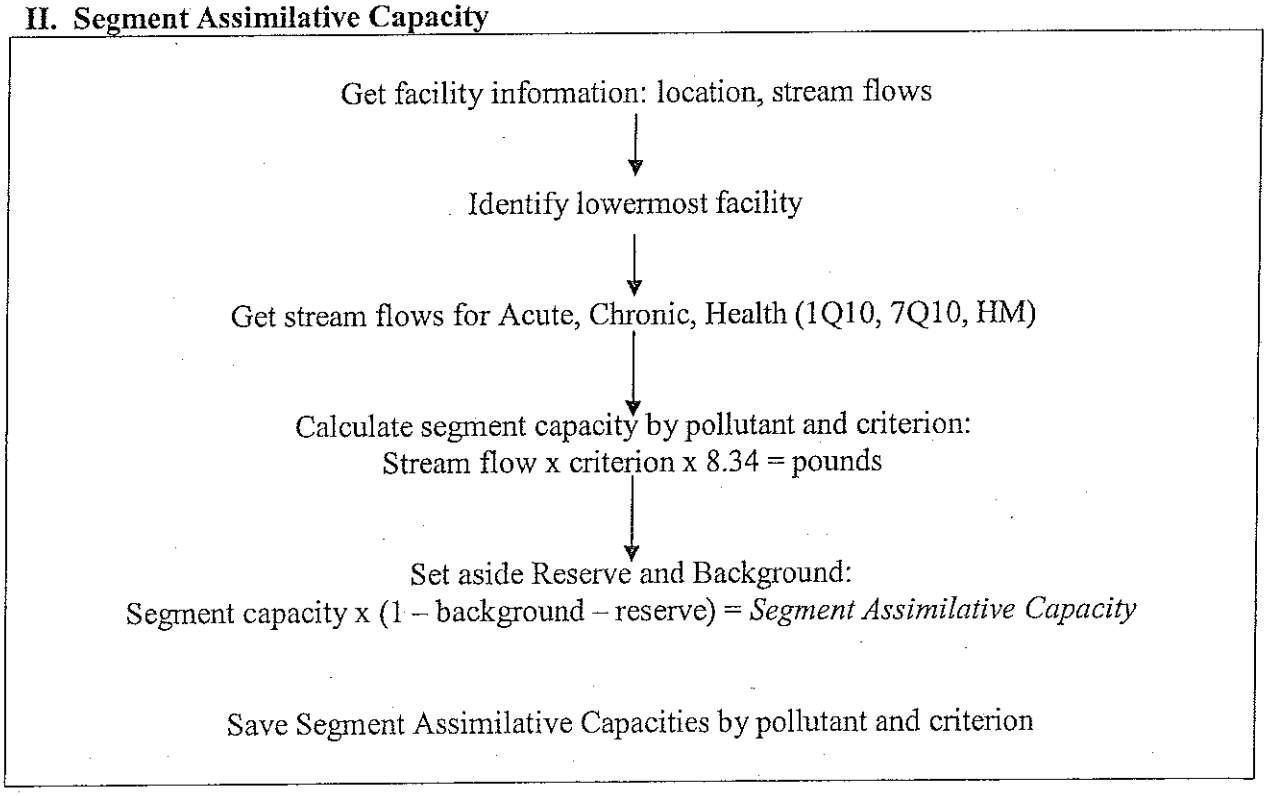
Water quality criteria. Standards for acceptable in-stream or ambient levels of pollutants. These are established in the Department's Chapter 584 and are expressed as concentrations in ug/L. There may be separate standards for acute and chronic protection aquatic life and/or human health. Each criterion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

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

I. Preparation

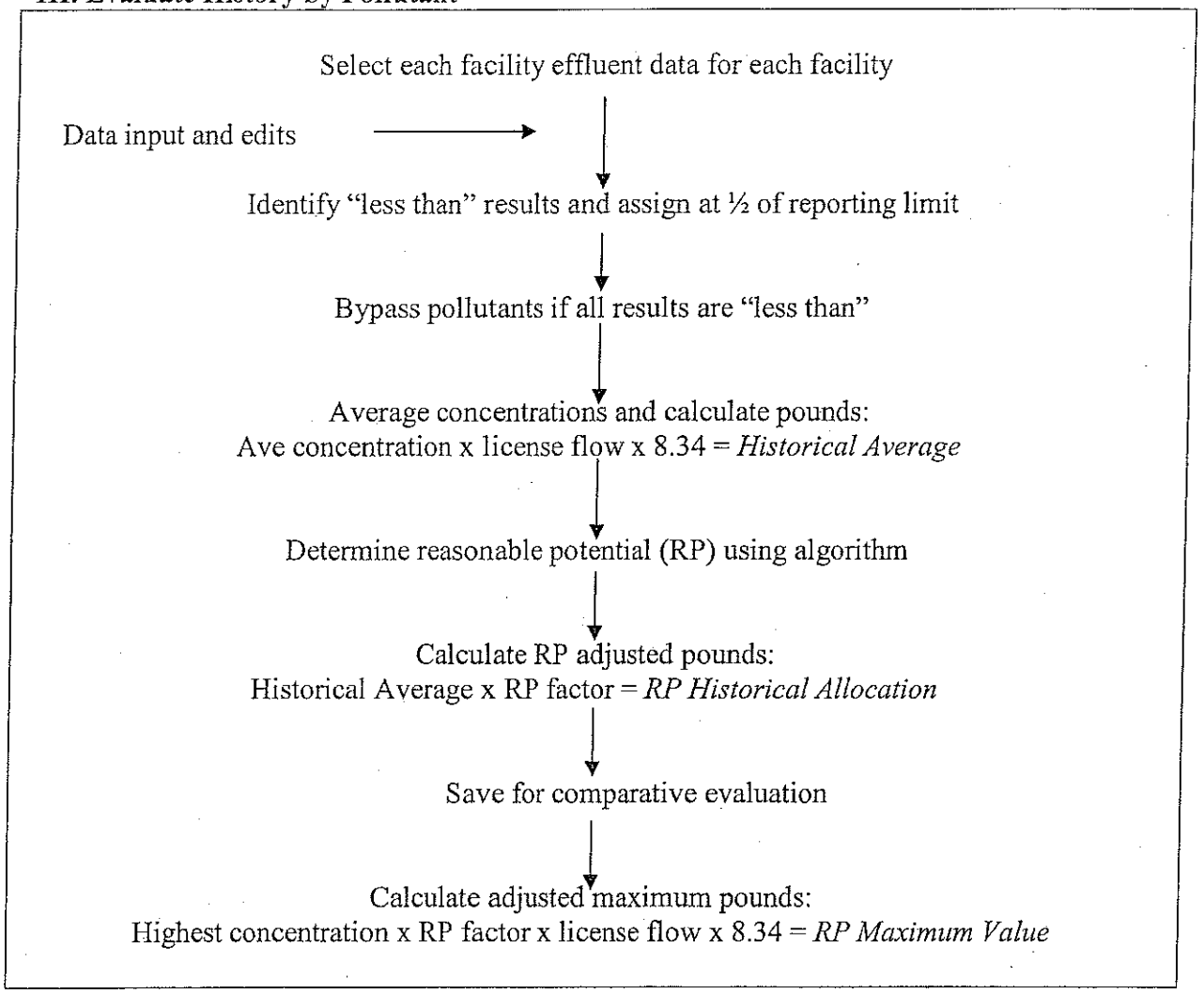


II. Segment Assimilative Capacity

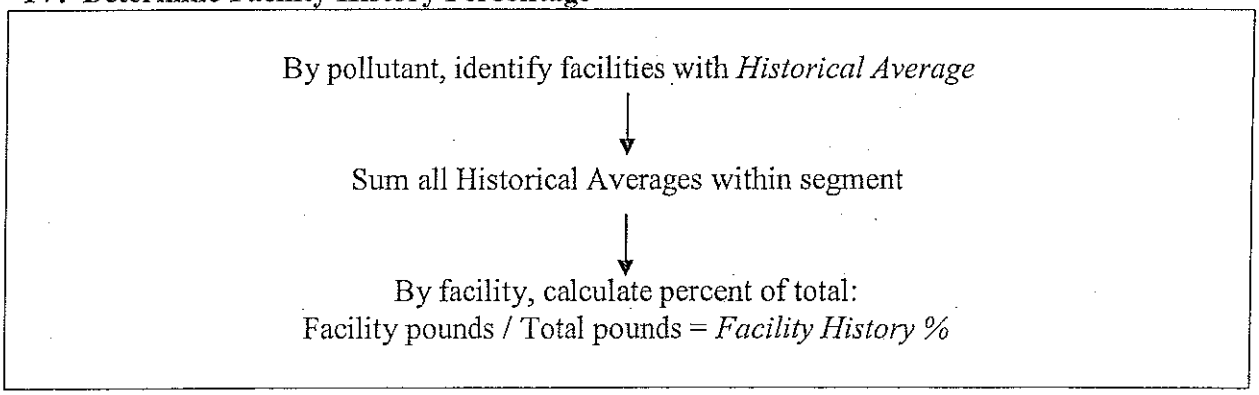


Maine Department of Environmental Protection
General Processing Steps in "DeTox"

III. Evaluate History by Pollutant



IV. Determine Facility History Percentage



V. Segment Allocation

By pollutant and criterion, select *Segment Assimilative Capacity*

↓

Select individual *Facility History %*

↓

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

↓

Save for comparative evaluation

VI. Individual Allocation

Select individual facility and dilution factor (DF)

↓

Select pollutant and water quality criterion

↓

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

↓

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

↓

Save for comparative evaluation

VII. Make Initial Allocation

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

↓

Compare allocation and select the smallest

↓

Save as *Facility Allocation*

VIII. Evaluate Need for Effluent Limits

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

↓

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

↓

Save *Effluent Limit* for comparison

IX. Reallocation of Assimilative Capacity

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

↓

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

↓

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

↓

Save difference

↓

Select next facility downstream

↓

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

↓

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

↓

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

↓

Repeat process for each facility downstream in turn

CONTENTS

A. GENERAL PROVISIONS

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

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

(a) They are not

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. OPERATION AND MAINTENACE OF FACILITIES

1. General facility requirements.

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

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

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

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

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

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

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

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

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

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

5. Bypasses.

(a) Definitions.

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

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

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

(c) Notice.

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

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

(d) Prohibition of bypass.

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

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

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

6. Upsets.

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

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

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

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

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

C. MONITORING AND RECORDS

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

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

3. Monitoring and records.

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

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

(c) Records of monitoring information shall include:

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

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

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

D. REPORTING REQUIREMENTS

1. Reporting requirements.

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

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

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

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

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

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

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

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

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

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

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

(f) Twenty-four hour reporting.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5. Publicly owned treatment works.

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

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

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

E. OTHER REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Maximum daily discharge limitation means the highest allowable daily discharge.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DEP INFORMATION SHEET

Appeals to the Board of Environmental Protection

Date: November 2024 **Contact: Clerk.BEP@maine.gov or (207) 314-1458**

SUMMARY

This document provides information regarding a person's rights and obligations in filing an administrative or judicial appeal of: (1) a final license decision made by the Commissioner of the Department of Environmental Protection ("DEP"); or (2) an insurance claim-related decision ("Clean-up and Response Fund decision") made by the Commissioner or the Office of State Fire Marshal pursuant to 38 M.R.S. § 568-A.

Except as explained below, there are two methods available to an aggrieved person seeking to appeal a license decision made by the Commissioner or a Clean-up and Response Fund decision: (1) an administrative appeal before the Board of Environmental Protection ("Board"); or (2) a judicial appeal before Maine's Superior Court. An aggrieved person seeking review of a license decision or Clean-up and Response Fund decision made by the Board may seek judicial review in Maine's Superior Court.

An appeal of a license decision made by the DEP Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)), a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)), or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

A person filing an appeal with the Board should review the applicable rules and statutes, including the DEP's Chapter 2 rule, *Processing of Applications and Other Administrative Matters* (06-096 C.M.R. ch. 2); Organization and Powers, 38 M.R.S. §§ 341-D(4) and 346; and the Maine Administrative Procedure Act, 5 M.R.S. § 11001.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

Within 30 calendar days of the date of: (1) a final license decision of the Commissioner; or (2) a Clean-up and Response Fund decision, an aggrieved person may appeal to the Board for review of that decision. "Aggrieved person" means any person whom the Board determines may suffer a particularized injury as a result of a Commissioner's license decision or a Clean-up and Response Fund decision. A complete appeal must be received by the Board no later than 5:00 p.m. on the 30th calendar day of the decision being appealed. With limited exception, untimely appeals will be dismissed.

HOW TO SUBMIT AN APPEAL TO THE BOARD

An appeal to the Board may be submitted via postal mail or electronic mail (e-mail) and must contain all signatures and required appeal contents. An electronic filing must contain the scanned original signature of the appellant(s). The appeal documents must be sent to the following address.

Chair, Board of Environmental Protection
c/o Board Clerk
17 State House Station
Augusta, ME 04333-0017
Clerk.BEP@maine.gov

The DEP may also request the submittal of the original signed paper appeal documents when the appeal is filed electronically. The risk of material not being received in a timely manner is on the sender, regardless of the method used.

At the time an appeal is filed with the Board, the appellant must send a copy of the appeal to: (1) the Commissioner of the DEP (Maine Department of Environmental Protection, 17 State House Station, Augusta, Maine 04333-0017); (2) the licensee, if the appellant is not the licensee; and (3) if a hearing was held on the application, any intervenors in that hearing proceeding. For appeals of Clean-up and Response Fund decisions made by the State Fire Marshal, the appellant must also send a copy of the appeal to the State Fire Marshal. **Please contact the Board Clerk at clerk.bep@maine.gov or DEP staff at 207-287-7688 with questions or for contact information regarding a specific license or Clean-up and Response Fund decision.**

REQUIRED APPEAL CONTENTS

A written appeal must contain the information specified in Chapter 2, section 23(B) or section 24(B), as applicable, at the time the appeal is submitted. **Please carefully review these sections of Chapter 2**, which is available online at https://www.maine.gov/sos/cec/rules/06/chaps06.htm, or contact the Board Clerk to obtain a copy of the rule. Failure to comply with the content of appeal requirements may result in the appeal being dismissed pursuant to Chapter 2, section 23(C) or section 24(C).

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with the administrative record.* Generally, the record on which the Board decides an appeal is limited to the record prepared by the agency in its review of the application, any supplemental evidence admitted to the record by the Board Chair and, if a hearing is held on the appeal, additional evidence admitted during the hearing. A person who seeks to appeal a decision to the Board is encouraged to contact the DEP (or State Fire Marshal for Clean-up and Response Fund decisions made by that agency) to inspect the record before filing an appeal.

2. *Be familiar with the applicable rules and laws.* An appellant is required to identify the licensing criterion or standard the appellant believes was not satisfied in issuing the decision, the bases of the objections or challenges, and the remedy sought. Prior to filing an appeal, review the decision being appealed to identify the rules and laws that are applicable to the decision. An appellant may contact the DEP or Board staff with any questions regarding the applicable rules and laws or the appeal procedure generally.

3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a separate stay of the decision is requested and granted (*see* Chapter 2, section 23(M)), the licensee may proceed with an approved project pending the outcome of the appeal. Any activity initiated in accordance with the approved license during the pendency of the appeal comes with the risk of not knowing the outcome of the appeal, including the possibility that the decision may be reversed or modified by the Board.

4. *Alternative dispute resolution.* If the appeal participants agree to use mediation or another form of alternative dispute resolution ("ADR") to resolve the appeal and so notify the Board, the Board will not hear the matter until the conclusion of that effort, provided the participants engaged in the alternative dispute resolution demonstrate satisfactory progress toward resolving the issues. *See* Chapter 2, section 23(H) or contact the Board Executive Analyst (contact information below) for more information on the ADR provision.

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

The Board will acknowledge receipt of each appeal and develop a service list of appeal participants and any interested persons for use in the appeal proceeding. Electronic mail (e-mail) is the preferred method of communication during an appeal proceeding; however, the Board reserves the right to require paper copies of all filings. Once the Board Chair rules on the admissibility of all proposed supplemental evidence, the licensee (if the licensee is not the appellant) may respond to the merits of the appeal. Instructions specific to each appeal will be provided in correspondence from the Board Executive Analyst or Board Chair. Generally, once all filings in an appeal proceeding are complete, the DEP staff will assemble a packet of materials for the Board (Board packet), including a staff recommendation in the form of a proposed Board Order. Once available, appeal participants will receive a copy of the Board packet and an agenda with the meeting location and start time. Once finalized, the meeting agenda will be posted on the Board's webpage https://www.maine.gov/dep/bep/index.html. Appeals will be considered based on the administrative record on appeal and oral argument at a regular meeting of the Board. *See* Chapter 2, Section 23(I). The Board may affirm all or part of the decision under appeal; affirm all or part of the decision under appeal with modifications, or new or additional conditions; order a hearing to be held as expeditiously as possible; reverse the decision under appeal; or remand the decision to the Commissioner or State Fire Marshal, as applicable, for further proceedings.

II. JUDICIAL APPEALS

The filing of an appeal with the Board is not a prerequisite for the filing of a judicial appeal. Maine law generally allows aggrieved persons to appeal final license decisions to Maine's Superior Court (*see* 38 M.R.S. § 346(1); Chapter 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A judicial appeal by a party to the underlying proceeding must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other aggrieved person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. *See* 38 M.R.S. § 346(4), the Maine Administrative Procedure Act, statutes governing a particular license decision, and the Maine Rules of Civil Procedure for substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal procedure, for administrative appeals contact the Board Clerk at clerk.bep@maine.gov or 207-287-2811 or the Board Executive Analyst at bill.hinkel@maine.gov or 207-314-1458, or for judicial appeals contact the court clerk's office in which the appeal will be filed.

Note: This information sheet, in conjunction with a review of the statutory and rule provisions referred to herein, is provided to help a person to understand their rights and obligations in filing an administrative or judicial appeal, and to comply with notice requirements of the Maine Administrative Procedure Act, 5 M.R.S. § 9061. This information sheet is not intended to supplant the parties' obligations to review and comply with all statutes and rules applicable to an appeal and insofar as there is any inconsistency between the information in this document and the applicable statutes and rules, the relevant statutes and rules apply.