STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
ACTING COMMISSIONER

November 9, 2020

Bryan Levitt
City of Bath
1 Town Landing Road
Bath, ME 04530
blevitt@cityofbath.com

***Sent via electronic mail***
***Delivery confirmation requested***

***RE:*** *Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100021*
*Maine Waste Discharge License (WDL) Application #W002678-6D-O-R*
***Proposed Draft MEPDES Permit Renewal***

Dear Bryan Levitt:

Attached is a proposed draft MEPDES permit and Maine WDL which the Department proposes to issue for your facility as a final document after opportunity for your review and comment. By transmittal of this letter, you are provided with an opportunity to comment on the proposed draft 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 on November 9, 2020 and ends on Wednesday, December 9, 2020. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business December 9, 2020. Failure to submit comments in a timely fashion will 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
Aaron.A.Dumont@maine.gov

If you have any questions regarding the matter, please feel free to contact me.

Sincerely,

Aaron Dumont
Division of Water Quality Management
Bureau of Water Quality
Aaron.A.Dumont@maine.gov

Enc.

ec:
Stuart Rose, MEDEP
Pamela Parker, MEDEP
Barry Mower, MEDEP
Lori Mitchell, MEDEP
Environmental Review, MEDMR
Environmental Review, MEIFW
Ellen Weitzler, USEPA
Alex Rosenberg, USEPA
Marelyn Vega, USEPA
Richard Carvalho, USEPA
Shelley Puleo, USEPA
Sean Mahoney, CLF
Bruce Poliquin, Interested Party

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

DEPARTMENT ORDER

**IN THE MATTER OF**

| | | |
|---|---|---|
| CITY OF BATH | ) | MAINE POLLUTANT DISCHARGE |
| BATH, SAGADAHOC COUNTY, MAINE | ) | ELIMINATION SYSTEM PERMIT |
| PUBLICLY OWNED TREATMENT WORKS | ) | AND |
| ME0100021 | ) | WASTE DISCHARGE LICENSE |
| W002678-6D-O-R **APPROVAL** | ) | **RENEWAL** |

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

## APPLICATION SUMMARY

On September 22, 2020, the Department accepted as complete for processing, a renewal application from the City for Maine Pollutant Discharge Elimination System (MEPDES) ME0100021/Waste Discharge License (WDL) W002678-6D-K-R, which was issued on June 1, 2016 for a five-year term. The 6/1/16 MEPDES permit authorized the monthly average discharge of 3.5 million gallons per day (MGD) of secondary treated sanitary wastewater, and allowed an unspecified quantity of primary treated wastewater from a secondary treatment bypass structure at the facility and an unspecified quantity of untreated excess combined sanitary and storm water from four (4) combined sewer overflow (CSO) outfalls during wet weather events to the Kennebec River, Class SB, in Bath, Maine.

Since the 6/1/16 renewal the Department has issued one permit modification and two minor revisions; 1) On October 4, 2016, the Department issued a minor revision to the June 1, 2016 permit as the permittee had fulfilled its obligations in an agreement with the Department entitled, Applicant Agreement To Comply With *2011 Clean Water State Revolving Fund (CWSRF) Requirements*; 2) On December 20, 2016, a permit modification was issued that established a new deadline of December 31, 2017, in the CSO Master Plan for the completion of the School Street project; and 3) On December 11, 2018, the Department issued a minor revision to the above mentioned permit that allowed the City to modify the milestones for project #35, #37, and #38 from December 31, 2017 to December 31, 2020.

## PERMIT SUMMARY

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

1. *Secondary Treated Wastewater (Outfall #001A)*

    a. Establishing a seasonal monitoring requirement for Enterococci bacteria from April 15th – October 31st starting on April 15th, 2022. As well as establishing monthly average and daily maximum limits of 8 CFU/100 mL and 54 CFU/100 mL, respectively; and

**PERMIT SUMMARY (cont'd)**

b. Amending Fecal coliform limits from a monthly average of 15 CFU/100 mL and a daily maximum of 50 CFU/100 mL to 14 colonies/100 mL and 31 colonies/100 mL, in order to be consistent with the National Shellfish Sanitation Program.

**CONCLUSIONS**

Based on the findings summarized in the attached Fact Sheet dated November 6, 2020, and subject to the special and standard conditions that follow, the Department makes the following CONCLUSIONS:

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

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

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

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

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

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

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

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

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

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**ACTION**

Based on the findings and conclusions as stated above, the Department APPROVES the above noted application of CITY OF BATH to discharge a monthly average of 3.5 million gallons per day (MGD) of secondary treated sanitary wastewater, allows an unspecified quantity of primary treated wastewater from a secondary treatment bypass structure at the facility, and an unspecified quantity of untreated excess combined sanitary and storm water from four (4) combined sewer overflow (CSO) outfalls during wet weather events to the Kennebec River, Class SB, in Bath, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

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

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

3. This permit and the authorization to discharge become effective upon the date of signature below and expire at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (amended June 9, 2018)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
for MELANIE LOYZIM, Acting Commissioner

**FILED**

MAR 30, 2020

**State of Maine**
**Board of Environmental Protection**

Date filed with Board of Environmental Protection_____

Date of initial receipt of application: September 14, 2020
Date of application acceptance: September 22, 2020

This Order prepared by Aaron Dumont, BUREAU OF WATER QUALITY

## SPECIAL CONDITIONS

### A.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge **secondary treated municipal sanitary wastewater from Outfall #001A** to the Kennebec River in Bath. Such discharges are limited and must be monitored by the permittee 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]* | Report MGD *[03]* | --- | Report MGD *[03]* | --- | --- | --- | Continuous *[99/99]* | Recorder *[RC]* |
| Biochemical Oxygen Demand ($BOD_5$)[(2a)] *[00310]* | 876 lbs/day *[26]* | 1,314lbs/day *[26]* | Report lbs/day *[26]* | 30 mg/L *[19]* | 45 mg/L *[19]* | 50 mg/L *[19]* | 2/Week *[02/07]* | 24-Hour Composite *[24]* |
| Biochemical Oxygen Demand ($BOD_5$) *When bypass is active*[(2a)] *[00310]* | --- | --- | Report lbs/day *[26]* | --- | --- | Report mg/L *[19]* | 2/Week *[02/07]* | Composite *[24]* |
| $BOD_5$ Percent Removal[(2b)] *[81010]* | --- | --- | --- | 85% *[23]* | --- | --- | 1/Month *[01/30]* | Calculate *[CA]* |
| Total Suspended Solids (TSS)[(2a)] *[00530]* | 876 lbs/day *[26]* | 1,314 lbs/day *[26]* | Report lbs/day *[26]* | 30 mg/L *[19]* | 45 mg/L *[19]* | 50 mg/L *[19]* | 2/Week *[02/07]* | 24-Hour Composite *[24]* |
| TSS *When bypass is active*[(2a)] *[00530]* | --- | --- | Report lbs/day *[26]* | --- | --- | Report mg/L *[19]* | 2/Week *[02/07]* | Composite *[24]* |
| TSS % Removal[(2b)] *[81011]* | --- | --- | --- | 85% *[23]* | --- | --- | 1/Month *[01/30]* | Calculate *[CA]* |
| Settleable Solids *[00545]* | --- | --- | --- | --- | --- | 0.3 ml/L *[25]* | 4/Week *[04/07]* | Grab *[GR]* |
| Total Residual Chlorine[(5)] *[50060]* | --- | --- | --- | 0.1 mg/L *[19]* | --- | 0.37 mg/L *[19]* | 1/Day *[01/01]* | Grab *[GR]* |
| Fecal Coliform Bacteria[(3)] *[31616]* | --- | --- | --- | 14/100 CFU/mL *[13]* | --- | 31/100 CFU/mL *[13]* | 3/Week *[03/07]* | Grab *[GR]* |

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

**FOOTNOTES:** See Pages 9 – 14 of this permit for applicable footnotes.

**SPECIAL CONDITIONS**

**A.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall #001A cont'd)**

The permittee is authorized to discharge **secondary treated municipal sanitary wastewater from Outfall #001A** to the Kennebec River in Bath. Such discharges are limited and must be monitored by the permittee 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 |
| Enterococci Bacteria[(4)] *(Seasonally April 15th- October 31st Beginning 2022) [61211]* | --- | --- | --- | 8/100 CFU/mL *[13]* | --- | 54/100 CFU/mL *[13]* | 3/Week *[03/07]* | Grab *[GR]* |
| pH (Std. Units) *[00400]* | --- | --- | --- | --- | --- | 6.0 – 9.0 SU *[12]* | 1/Day *[01/01]* | Grab *[GR]* |
| Mercury (Total)[(6)] *[71900]* | --- | --- | --- | 30.9 ng/L *[3M]* | --- | 46.3 ng/L *[3M]* | 1/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.

**FOOTNOTES:** See Pages 9 – 14 of this permit for applicable footnotes.

**SPECIAL CONDITIONS**

**A.2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)**

***SCREENING LEVEL TESTING***

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

| Effluent Characteristic | Discharge Limitations | | Minimum Monitoring Requirements | |
|---|---|---|---|---|
| | **Monthly Average** | **Daily Maximum** | **Measurement Frequency** | **Sample Type** |
| Whole Effluent Toxicity[7]<br>**Acute – NOEL**<br>*Americamysis bahia* (Mysid shrimp) *[TDM3E]* | --- | Report% *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| **Chronic – NOEL**<br>*Arbacia punctulata* (Sea urchin) *[TBH3A]* | --- | Report% *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| Analytical Chemistry[8,10] *[51477]* | --- | Report ug/L *[28]* | 1/Quarter *[01/90]* | Composite/Grab *[24/GR]* |
| Priority Pollutant[9,10] *[50008]* | --- | Report ug/L *[28]* | 1/Year *[01/YR]* | Composite/Grab *[24/GR]* |

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

**FOOTNOTES:** See Pages 9 – 14 of this permit for applicable footnotes.

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**SPECIAL CONDITIONS**

**A.3 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)**

**PRIMARY TREATED WASTEWATER (OUTFALL #002A)**

**1.** Consistent with CSO bypass regulations, this permit allows initiation of CSO-related bypasses of secondary treatment via Outfall #001A when the instantaneous flow rate to the treatment facility has exceeded 4,861 gpm (7.0 MGD). Allowance to bypass secondary treatment will be reviewed and may be modified or terminated pursuant to Special Condition, *Reopening of Permit for Modification*, if there is substantial change in the volume or character of pollutants in the collection/treatment system. Also see supplemental report form, *DEP-49-CSO Form For Use With Dedicated CSO Primary Clarifier*, **Attachment D** of this permit. **Outfall 002A** (wastewater receiving only primary treatment only) must be monitored as follows:

| **Effluent Characteristic** | **Discharge Limitations** | | | | **Monitoring Requirements** | |
|---|---|---|---|---|---|---|
| | **Monthly Average** | **Daily Maximum** | **Monthly Average** | **Daily Maximum** | **Measurement Frequency** | **Sample Type** |
| Overflow Use, Occurrences**(11)** *[74062]* | --- | --- | Report (# of days) *[93]* | --- | 1/When discharging *[01/DH]* | Record Total *[RT]* |
| Influent Flow Rate Minimum *[00058]* | --- | Report (gpm)**(12)** *[78]* | --- | --- | Instantaneous *[91/99]* | Recorder *[RC]* |
| Flow *[50050]* | Report (Total MG) *[3R]* | Report (MGD) *[03]* | --- | --- | Continuous *[99/99]* | Recorder *[RC]* |
| $BOD^5$ *[00310]* | --- | Report lbs/day *[26]* | --- | Report mg/L *[19]* | 2/Week**(13)** *[02/07]* | Composite *[24]* |
| TSS *[00530]* | --- | Report lbs/day *[26]* | --- | Report mg/L *[19]* | 2/Week**(13)** *[02/07]* | Composite *[24]* |
| Fecal coliform Bacteria (Year round) *[74055]* | --- | --- | --- | Report col/100 mL *[13]* | 3/Week**(13)** *[03/07]* | Grab *[GR]* |
| Total Residual Chlorine *[50060]* | --- | --- | -- | Report mg/L *[19]* | 1/Day**(13)** *[01/01]* | Grab *[GR]* |

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

**FOOTNOTES:** See Pages 9 – 14 of this permit for applicable footnotes.

**SPECIAL CONDITIONS**

## A.4 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

### BLENDED EFFLUENT (OUTFALL #002B)

1. Consistent with CSO bypass regulations, the permittee is allowed to discharge primary and secondary treated wastewater **(blended effluent)** from **Outfall #002B** (administrative outfall) to the Kennebec River. These limitations and monitoring requirements apply after blending, when the instantaneous flow rate to the treatment facility has exceeded 4,861 gpm (7.0 MGD). Allowance to bypass secondary treatment will be reviewed and may be modified or terminated pursuant to Special Condition P, *Reopening of Permit for Modification*, if there is substantial change in the volume or character of pollutants in the collection/treatment system. Also see supplemental report form, *DEP-49-CSO Form For Use With Dedicated CSO Primary Clarifier*, **Attachment D** of this permit**.** **Outfall 002B** must be limited and monitored as follows:

| **Effluent Characteristic** | **Discharge Limitations** | | | | **Monitoring Requirements** | |
|---|---|---|---|---|---|---|
| | **Monthly Average** | **Daily Maximum** | **Monthly Average** | **Daily Maximum** | **Measurement Frequency** | **Sample Type** |
| Flow *[50050]* | --- | Report (MGD) *[03]* | --- | --- | 1/When discharging *[01/DH]* | Calculate *[CA]* |
| BOD5 *[00310]* | --- | 8,206 lbs/day *[26]* | --- | Report mg/L**(14)** *[19]* | 2/Week**(13)** *[02/07]* | Calculate *[CA]* |
| TSS *[00530]* | --- | 18,423 lbs/day *[26]* | --- | Report mg/L**(14)** *[19]* | 2/Week**(13)** *[02/07]* | Calculate *[CA]* |
| Fecal coliform bacteria**(2a)** *(Year round)* *[74055]* | --- | --- | --- | 200 col/100 mL**(14)** *[13]* | 3/Week**(13)** *[03/07]* | Calculate *[CA]* |
| Total Residual Chlorine**(4)** *[50060]* | --- | --- | --- | 1.0 mg/L**(14)** *[19]* | 1/Day**(13)** *[01/01]* | 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.

**FOOTNOTES:** See Pages 9 – 14 of this permit for applicable footnotes.

**SPECIAL CONDITIONS**

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

**FOOTNOTES**

1. **Sampling** – The licensee must conduct sampling and analysis in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services for 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 CMR 263 (effective December 19, 2018). Laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of 10 − 144 CMR 263. If the licensee monitors any pollutant more frequently than required by the license using test procedures approved under 40 CFR Part 136 or as specified in this license, the results of this monitoring must be included in the calculation and reporting of the data submitted in the discharge monitoring report (DMR).

   **Sampling Locations:**

   **Influent sampling** for $BOD_5$ and TSS must be sampled at the discharge of the headworks, after screening but before de-gritting.

   **Effluent receiving secondary treatment** (Outfall #001A) must be collected at the drop box prior to discharge to the river. Fecal coliform bacteria may be sampled after chlorination but before dechlorination.

   **Effluent receiving primary treatment** (Outfall #002A) must be collected at the end of the CSO structure, after dechlorination, but prior to combining with the final effluent. Fecal coliform bacteria may be sampled after chlorination but before dechlorination.

   **Blended effluent (Outfall #002B)** – This permit allows the permittee to mathematically combine the results of the primary treated and secondary treated waste streams to determine compliance with the limitations for the discharge of blended effluent.

**OUTFALL #001A – Secondary Treated Wastewater**

2. **$BOD_5$ and TSS**

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

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

### FOOTNOTES

### OUTFALL #001A – Secondary Treated Wastewater

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

3. **Fecal coliform bacteria** – Limits apply on a year-round basis at the request of the Maine Department of Marine Resources. The monthly fecal coliform average limitation is a geometric mean and results must be calculated and reported as such.

4. **Enterococcus Bacteria Reporting** – Enterococcus bacteria limits and monitoring requirements are seasonal running from April 15th – October 31st, beginning in 2022. The monthly average limitation for enterococci is a geometric mean and results must be calculated and reported as such.

5. **TRC Monitoring** – Limitations and monitoring requirements are in effect any time elemental chlorine or chlorine-based compounds are utilized to disinfect the discharge(s). The permittee must utilize a USEPA-approved test method capable of bracketing the TRC limitations specified in this permitting action. Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. For instances when a facility has not disinfected with chlorine-based compounds for an entire reporting period, the facility must report "NODI-9" for this parameter on the monthly DMR or "N9" if the submittal is an electronic DMR.

6. **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. 519 in accordance with the USEPA's "clean sampling techniques" found in USEPA Method 1669, *Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels*. All mercury analysis must be conducted in accordance with USEPA Method 1631, *Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry*. Go to https://www.maine.gov/dep/water/wd/municipal_industrial/index.html and click on "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.

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

### FOOTNOTES

### OUTFALL #001A – Secondary Treated Wastewater

7. **Whole effluent toxicity (WET) testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 2.9% and 0.35% respectively), which provides an estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 34:1 and 284:1, respectively.

   a. **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). Acute tests must be conducted on the mysid shrimp (*Americamysis bahia*); chronic tests must be conducted on the sea urchin (*Arbacia punctulata*).

   b. **Surveillance level testing** − Waived pursuant to 06-096 CMR Chapter 530(2)(D)(3)(b).

   WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee must evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 2.9% and 0.35%, 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 Organism*s, 5th ed. USEPA 821-R-02-012. 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 Marine and Estuarine Organisms*, 3rd ed. EPA 821-R-02-014. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the marine chronic method manual).

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## SPECIAL CONDITIONS

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

### FOOTNOTES

### OUTFALL #001A – Secondary Treated Wastewater

Results of WET tests must be reported on the "*Whole Effluent Toxicity Report Marine Waters*" form found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html permit each time a WET test is performed. Each time a WET test is performed, the permittee must sample and analyze for the parameters in the WET Chemistry and the Analytical Chemistry sections of the Department form entitled, *Maine Department of Environmental Protection, Chemical Specific Data Report Form* found at:https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

8. **Analytical chemistry** – Refers to those pollutants listed under "Analytical Chemistry" on the form found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

   a. **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 analytical chemistry testing at a minimum frequency of once per calendar quarter (1/Quarter) for four consecutive calendar quarters.

   b. **Surveillance-level testing** – Waived pursuant to 06-096 CMR Chapter 530(2)(D)(3)(b).

9. **Priority Pollutant Testing –** Refers to those pollutants listed under "Priority Pollutants" on the form found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

   a. **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 priority pollutant testing at a minimum frequency of 1/Year calendar.

   b. **Surveillance-level testing** – Pursuant to 06-096 CMR 530(2)(D)(1) priority pollutant surveillance testing is not required for Level III facilities.

10. **Analytical chemistry and priority pollutant** – Testing must be conducted on samples collected at the same time as those collected for whole effluent toxicity tests. Priority pollutant and analytical chemistry testing must be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department.

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**SPECIAL CONDITIONS**

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

**FOOTNOTES**

**OUTFALL #001A – Secondary Treated Wastewater**

Test results must be submitted to the Department not 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 acute, chronic or human health Ambient Water Quality Criteria (AWQC) as established in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective October 9, 2005). For the purposes of DMR reporting, enter a "1" for yes, testing done this monitoring period or "N9" monitoring not required this period.

**OUTFALL #002A – Primary treated wastewater and OUTFALL #002B – Blended effluent**

11. **Overflow Occurrence** – An overflow occurrence, whereby a portion of the flow entering the treatment plant bypasses secondary treatment, is allowed when the instantaneous flow rate to the treatment plant has exceeded 4,861 gpm (7.0 MGD). A reportable overflow occurrence is defined as a discharge from the storm flow chlorine contact tank for greater than 60 minutes continuously or greater than 120 minutes intermittently during a 24-hour period. 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.

12. M**inimum instantaneous influent flow** – The permittee must record the minimum instantaneous influent flow rate to the treatment plant at the initiation of each overflow occurrence and report the minimum value for each month. This reporting is not required if there are no overflow occurrences during the month.

13. **BOD, TSS, TRC and fecal coliform bacteria** – Sampling for BOD, TSS, total residual chlorine and fecal coliform bacteria are only required for reportable overflow occurrences as defined in footnote #11 above. Multiple intermittent overflow occurrences in one discharge day are reported as one overflow occurrence and are sampled according to the measurement frequency specified. One composite sample for BOD5 and TSS and one grab sample for fecal coliform bacteria and total residual chlorine each must be collected per overflow occurrence that meets the timeframes specified above. Sampling of an overflow occurrence is only required if the overflow occurrence coincides with the regularly scheduled sampling days of the secondary treated waste stream. Composite samples must be flow proportioned from all intermittent overflows during that 24-hour period.

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

**FOOTNOTES**

**OUTFALL #002B – Blended effluent**

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

    (Daily BOD/TSS/TRC/bacteria concentration/count of Outfall #001A for each bypass event) x (Daily flow of Outfall #001A for each bypass event) + (Daily BOD/TSS/TRC/bacteria concentration/count of Outfall #002A for each bypass event) x (Daily flow of Outfall #002A for each bypass event) ÷ [(Daily flow for Outfall #001A each bypass event) + (Daily flow for Outfall #002A for each bypass event)] = Weighted concentration.

    The City must report the highest weighted average concentration/count of the blended effluent for each month.

## B. 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 by the classification of the receiving water.

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 by the classification of the receiving water.

3. The permittee must not discharge effluent that imparts color, taste, turbidity, toxicity, radioactivity or other properties which cause those water to be unsafe 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 lower the existing quality of any body of water if the existing quality is higher than the classification.

## C. TREATMENT PLANT OPERATOR

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

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**SPECIAL CONDITIONS**

## D. LIMITATIONS FOR INDUSTRIAL USERS

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

## E. 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 September 22, 2020; 2) the terms and conditions of this permit; and 3) only from Outfall #001A, 002A and the four (4) CSOs listed in Special Condition K, *Combined Sewer Overflows (CSOs)* of this permit. Discharges of wastewater from any other point source(s) are not authorized under this permit and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four-hour reporting*, of this permit.

## F. NOTIFICATION REQUIREMENT

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

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

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

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

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

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**SPECIAL CONDITIONS**

## G. WET WEATHER MANAGEMENT PLAN

The treatment facility staff must have a current written Wet Weather 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.

## H. OPERATIONS AND MAINTENANCE (O&M) PLAN

The permittee must maintain a current written comprehensive Operation & Maintenance (O&M) Plan for the facility. 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 USEPA personnel upon request.

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

## I. DISPOSAL OF TRANSPORTED WASTES IN WASTEWATER TREATMENT FACILITY

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

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

**SPECIAL CONDITIONS**

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

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

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

4. The permittee must maintain records for each load of transported wastes in a daily log which must include at a minimum the following.

   (a) The date;
   (b) The volume of transported wastes received;
   (c) The source of the transported wastes;
   (d) The person transporting the transported wastes;
   (e) The results of inspections or testing conducted;
   (f) The volumes of transported wastes added to each treatment stream; and
   (g) The information in (a) through (d) for any transported wastes refused for acceptance.

   These records must be maintained at the treatment facility for a minimum of five years.

5. The addition of transported wastes into the treatment process or solids handling stream must not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of transported wastes into the treatment process or solids handling stream must be reduced or terminated in order to eliminate the overload condition.

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

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

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

**SPECIAL CONDITIONS**

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

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

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

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

**By December 31 of each calendar year**, the permittee must provide the Department with a certification describing any of the following that have occurred since the effective date of this permit ***[ICIS Code 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 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.

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**SPECIAL CONDITIONS**

## K. EFFLUENT LIMITATIONS AND CONDITIONS FOR COMBINED SEWER OVERFLOWS (CSOs)

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

1. CSO Locations

| Outfall # | Location | Receiving Water & Class |
|---|---|---|
| 003 | Rose Street Pump Station | Kennebec River, Class SB |
| 004 | Pleasant Street Pump Station | Kennebec River, Class SB |
| 005 | Commercial Street Pump Station | Kennebec River, Class SB |
| 008 | Harward Street | Kennebec River, Class SB |

2. Prohibited Discharges

   a. The discharge of dry weather flows is prohibited.

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

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

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

3. Narrative Effluent Limitations

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

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

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

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**SPECIAL CONDITIONS**

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

4. CSO Master Plan [see 06-096 CMR 570(3) and 06-096 CMR 570(4)]
   The permittee must implement CSO control projects in accordance with the most current approved CSO Master Plan and abatement schedule. The CSO Master Plan entitled, *"City of Bath – Revised 2006 Combined Sewer Overflow Master Plan Update,"* In addition there have been three revision letters (2008, 2011 and 2015) submitted to the Department updating the scope of work and schedules for selected projects.

   Key milestones approved in the most recent abatement schedule or agreed to by the permittee and Department that the permittee is required to comply with are:

   **On or before December 31, 2021, *(EFIS CODE CS010),*** the permittee must submit an updated CSO Master Plan to the Department for review and approval.

   To modify the dates and or projects specified above (but not dates in the Master Plan), the permittee must file an application with the Department to formally modify this permit. The work items identified in the abatement schedule may be amended from time to time based upon approval by the Department. The permittee must notify the Department in writing prior to any proposed changes to the implementation schedule.

5. Nine Minimum Controls (NMC) [see 06-096 CMR 570(5)]

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

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

   The permittee must conduct block testing or flow monitoring according to an approved *Compliance Monitoring Program* on all CSO points, as part of the CSO Master Plan. Annual flow volumes for all CSO locations must be determined by actual flow monitoring, or by estimation using a model such as USEPA's Storm Water Management Model (SWMM).

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

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

**SPECIAL CONDITIONS**

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

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

   06-096 CMR 570(8) lists requirements relating to any proposed addition of wastewater to the combined sewer system. Documentation of the new wastewater additions to the system and associated mitigating measures must be included in the annual *CSO Progress Report* (see below). Reports must contain the volumes and characteristics of the wastewater added or authorized for addition and descriptions of the sewer system improvements and estimated effectiveness.

8. Annual CSO Progress Reports [see 06-096 CMR 570(7)]

   **By March 1 of each year** *[ICIS Code 11099]* the permittee must submit *CSO Progress Reports* covering the previous calendar year (January 1 to December 31). The CSO Progress Report must include, but is not necessarily limited to, the following topics as further described in 06-096 CMR 570: CSO abatement projects, schedule comparison, progress on inflow sources, costs, flow monitoring results, CSO activity and volumes, nine minimum controls update, sewer extensions, and new commercial or industrial flows.

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

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

9. Signs

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

   **CITY OF BATH**
   **WET WEATHER**
   **SEWAGE DISCHARGE**
   **CSO # AND NAME**

**SPECIAL CONDITIONS**

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

10. Definitions

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

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

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

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

## L. MONITORING AND REPORTING

Electronic Reporting

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

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

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

Documentation submitted in support of the electronic DMR may be attached to the electronic DMR. Toxics reporting must be done using the DEP toxsheet reporting form. An electronic copy of the toxsheet reporting document must be submitted to your Department compliance inspector as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to your compliance inspector, or a copy attached to your NetDMR submittal will suffice.

Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15$^{th}$ day of the month following the completed reporting period.

## SPECIAL CONDITIONS

### L. MONITORING AND REPORTING (cont'd)

Non-electronic Reporting

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

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

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

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

### M. REPORTING DISCHARGES NOT RECEIVING SECONDARY TREATMENT

Pursuant to *Classification of Maine waters*, 38 M.R.S.A. § 464(1)(C) and *Standards for classification of estuarine and marine waters*, 38 M.R.S.A. § 465-B, which contain standards to achieve Maine's water quality goals for the designated uses of fishing, aquaculture, and propagation and harvesting of shellfish, the permittee must report all occurrences of secondary wastewater treatment system bypasses, upsets, disinfection system malfunctions, combined sewer overflows, and discharges resulting from sanitary sewer overflows, pump stations or broken sewer pipes immediately upon becoming aware of such a condition.

Reporting must be provided through the Maine Department of Marine Resources' website at http://www.maine.gov/dmr/rm/public_health/rain/rptevent.htm or by calling the Maine Department of Marine Resources' Pollution Event Reporting Hotline at 207-633-9564.

The permittee must report the events in accordance with the Emergency Response Plan between the permittee and the Maine Department of Marine Resources and provide the following information at the time the report is made:

1. Name of facility/individual reporting event;
2. Contact phone number and e-mail address;
3. Location of event (physical address or description);
4. Pollution event type (for example, bypass, CSO, sewer line break);

**M. REPORTING DISCHARGES NOT RECEIVING SECONDARY TREATMENT (cont'd)**

5. Pollution event quantity (for example approximate number of gallons discharged);
6. Date and time event began;
7. Date and time event ended, or state that the event is on-going;
8. Additional comments;
9. First and last name of person reporting event; and
10. Authorization code.

The immediate reporting requirements by this Special Condition are in addition to Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit, which contains reporting requirements to the Department for conditions that may endanger health or the environment.

**N. REOPENING OF PERMIT FOR MODIFICATION**

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

**O. SEVERABILITY**

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

# DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Doc Num: DEPLW0463

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

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

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

Number of discharge days _____

# ATTACHMENT B

# 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 | | | | | | | | | | | |
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| 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**
**MAINE WASTE DISCHARGE LICENSE**

# FACT SHEET

DATE: **November 9, 2020**

PERMIT NUMBER: **ME0100021**

WASTE DISCHARGE LICENSE: **W002678-6D-O-R**

NAME AND ADDRESS OF APPLICANT:

**CITY OF BATH**
**1 TOWN LANDING ROAD**
**BATH, ME 04530**

COUNTY: **SAGADAHOC**

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

**CITY OF BATH**
**1 TOWN LANDING ROAD**
**BATH, ME 04530**

RECEIVING WATER CLASSIFICATION: **KENNEBEC RIVER/ CLASS SB**

COGNIZANT OFFICIAL CONTACT INFORMATION:

**Bryan Levitt**
**(207)-443-8348**
blevitt@cityofbath.com

## 1. APPLICATION SUMMARY

On September 22, 2020, the Department of Environmental Protection (Department) accepted as complete for processing, a renewal application from the City of Bath (city/permittee) for a Maine Pollutant Discharge Elimination System (MEPDES) ME0100021/Waste Discharge License (WDL) W002678-6D-K-R, which was issued on June 1, 2016 for a five-year term. The 6/1/16 MEPDES permit authorized the monthly average discharge of 3.5 million gallons per day (MGD) of secondary treated sanitary wastewater, and allowed an unspecified quantity of primary treated wastewater from a secondary treatment bypass structure at the facility and an unspecified quantity of untreated excess combined sanitary and storm water from four (4) combined sewer overflow (CSO) outfalls during wet weather events to the Kennebec River, Class SB, in Bath, Maine.

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## 1. APPLICATION SUMMARY (cont'd)

Since the 6/1/16 renewal the Department has issued one permit modification and two minor revisions; 1) On October 4, 2016, the Department issued a minor revision to the June 1, 2016 permit as the permittee had fulfilled its obligations in an agreement with the Department entitle, Applicant Agreement To Comply With *2011 Clean Water State Revolving Fund (CWSRF) Requirements*; 2) On December 20, 2016, a permit modification was issued that established a new deadline of December 31, 2017, in the CSO Master Plan for the completion of the School Street project; and 3) On December 11, 2018, the Department issued a minor revision to the above mentioned permit that allowed the City to modify the milestones for project #35, #37, and #38 from December 31, 2017 to December 31, 2020.

## 2. PERMIT SUMMARY

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

*Secondary Treated Wastewater (Outfall #001A)*

1. Establishing a seasonal monitoring requirement for Enterococci bacteria from April 15th – October 31st starting on April 15th, 2022. As well as establishing monthly average and daily maximum limits of 8 CFU/100 mL and 54 CFU/100 mL, respectively; and

2. Amending Fecal coliform limits from a monthly average of 15 CFU/100 mL and a daily maximum of 50 CFU/100 mL to 14 colonies/100 mL and 31 colonies/100 mL, for fecal coliform bacteria in order to be consistent with the National Shellfish Sanitation Program.

b. History: This section provides a summary of significant licensing actions and milestones that have been completed for the City of Bath:

*January 9, 1992* – The State of Maine entered into a Consent Agreement and Enforcement Order with the City, which established a compliance schedule to evaluate and eliminate combined sewer overflows (CSO's) through the development of a CSO abatement Master Plan and associated programs.

*September 1995* – A Master Plan document prepared by EER, Inc. and entitled, "Supplemental Combined Sewer Overflow Facilities Plan Study" was submitted to the Department and the USEPA for review and approval.

*October 1, 1999* – The CSO Master Plan was approved by the Department and the EPA.

*October 27, 1999* – The Department issued WDL #W002678-5L-D-R for a five-year term.

*July 12, 2000* – The Department administratively modified WDL #W002678-5L-D-R by establishing interim average and maximum concentration limits for the discharge of mercury.

*January 12, 2001* – The Department received authorization from the USEPA to administer the NPDES permitting program in Maine, excluding areas of special interest to Maine Indian Tribes. From this point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program, and MEPDES permit #ME0100021 has been utilized for this facility.

**2. PERMIT SUMMARY (cont'd)**

*December 27, 2001* – The Department administratively modified WDL #W002678-5L-D-R through the issuance of combination MEPDES permit #ME0100021/WDL modification #W002678-5L-E-M to the City. This modification incorporated the terms and conditions of the MEPDES permit program, established a requirement for a minimum of 85% removal of BOD5 and TSS, and revised the pH range limitation from 6.0 – 8.5 SU to 6.0 – 9.0 SU.

*February 19, 2003* – The Department issued a Notice of Violation (NOV) to the City for chronic violations of numeric limitations established in the 12/27/01 permitting action.

*September 22, 2004* – The USEPA issued an Administrative Order ("AO") (AO Docket No. 04-56) to the City for violations permit conditions established in the 12/27/01 MEPDES permit #ME0100021.

*October 26, 2004* – The Department issued combination MEPDES permit #ME0100021/ WDL#W002678-5L-F-R for a five-year term.

*February 20, 2008* – The Department approved an updated CSO Master Plan for the City.

*October 16, 2009* – The Department issued combination MEPDES permit #ME0100021/ WDL#W002678-6D-G-R for a five-year term.

*December 9, 2014* – The Department issued MEPDES Permit/WDL ME0100790/W000653-6D-L-R for a five-year term.

*November 2, 2011* – The Department issued permit modification #ME0100021/WDL #W002678-5L-H-R to incorporate Special Conditions to establish and implement an Asset Management Program and establish a repair and replacement reserve account.

*February 6, 2012* – The Department issued permit modification #ME0100021/WDL#W002678-5M-I-M to incorporate the average and maximum concentration limits for total mercury.

*December 3, 2012* – The Department issued permit modification #ME0100021/WDL#W002678-5M-J-M to eliminate the two CSO projects in the October 19, 2009, permit and replace them with the two new projects.

*June 1, 2016* – The Department issued MEPDES Permit/WDL ME0100021/W002678-6D-K-R for a five year term.

*October 4, 2016* – The Department issued minor revision ME0100021/ W002678-6D-L-R which removed Special Conditions L, and Special Conditions M related to the Asset Management Program.

*December20, 2016* – The Department issue modification ME0100021/W002678-6D-M-R to revise the completion date of the School Street project from December 31, 2016 to December 31, 2017.

*December 11, 2018* – The Department issued minor revision ME0100021/W002678-6D-N-R which modified the terms Special Conditions J after review by the Department's CSO Program Coordinator.

## 2. PERMIT SUMMARY (cont'd)

c. Source Description: The City operates a municipal wastewater treatment facility located on Town Landing Road in Bath for the treatment of domestic, industrial and commercial wastewater generated by users within the City of Bath. There are no significant industrial users contributing flows greater than 10% of the volume of wastewater received by the treatment facility. The City receives industrial wastes from Bath Iron Works (BIW), which is monitored by BIW and the City.

The City's sewer collection system is approximately 11.5 miles in length and is a combined (sanitary and storm water) system. At present the City currently maintains thirteen (13) pump stations, of which eight (8) are currently equipped with a back-up power supply. The City is projecting that a nine (9) pump stations will be fully equipped with back-up power by the time this permit is signed. Three of the remaining pump stations without backup power have been retrofitted to run off the City's 65kW portable trailer mounted generator. There are currently four (4) remaining combined sewer overflow (CSO) points associated with the collection system, which are identified in Special Condition J, *Conditions For Combined Sewer Overflows (CSOs),* of this permit. A map showing the location of the treatment facility is included as Fact Sheet **Attachment A**.

d. Wastewater Treatment: The City provides a secondary level of treatment via an activated sludge treatment process. Screenings and grit are removed at the headworks by means of an automatic climbing rake and swirl grit chamber with grit screw apparatus. Two secondary clarifiers were retrofitted in 1999 and now serve as primary treatment clarifiers. Each clarifier measures 50 feet in diameter and has a capacity of 212,851 gallons. Reaction is accomplished by two separate aeration trains (2 basins each) and secondary clarification of wastewater is accomplished using three 180-foot by 12-foot rectangular clarifiers that each have a capacity of 194,000 gallons. Sludge dewatering is accomplished by means of two (2) screw presses. Dewatered sludge is transported offsite for disposal in the City's landfill. Secondary treated waste water is disinfected using sodium hypochlorite and dechlorinated using sodium bisulfite in detention tanks prior to being discharged to the Kennebec River via a 36-inch diameter outfall pipe that is fitted with a diffuser to enhance mixing with the receiving water. The end of the outfall pipe is submerged to a depth of approximately 24 feet below the surface of the river at mean low water.

The previous permitting action authorized the City to accept and introduce into the waste water treatment facility up to 10,000 gallons per day of septage from local septage haulers. The permittee has requested to carry forward authorization for said quantity and has submitted an up-to-date transported waste management plan to the Department.

A process flow diagram submitted by the permittee is included as Fact Sheet **Attachment B**.

## 3. CONDITIONS OF PERMIT

*Conditions of licenses*, 38 M.R.S. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving water attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S. § 420 and 06-096 CMR 530 require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (last amended July 29, 2012), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface water is maintained and protected.

## 4. RECEIVING WATER QUALITY STANDARDS

*Classification of estuarine and marine waters,* 38 M.R.S. §469 classifies the tidewaters of the Kennebec River as Class SB water. *Standards for classification of estuarine and marine waters,* 38 M.R.S. § 465-B(2) describes the standards for classification of Class SB waterways.

## 5. RECEIVING WATER QUALITY CONDITIONS

*The State of Maine 2016 Integrated Water Quality Monitoring and Assessment Report*, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the Kennebec River Estuary in Bath (Waterbody ID 710-03) as "Category 4-A(b): Estuarine and Marine Water With Impaired Use – TMDL Completed (Bacteria from Combined Sewer Overflows)."

The Maine Department of Marine Resources (MEDMR) closes shellfish harvesting areas if there are known sources of discharges with unacceptable bacteria levels (thresholds established in the National Shellfish Sanitation Program) or maintains shellfish harvesting closure areas due to lack of updated information regarding ambient water quality conditions and current shoreline surveys. In addition, the MEDMR prohibits shellfish harvesting in the immediate vicinity of all wastewater treatment outfall pipes as a precautionary measure in the event of a failure in the treatment plant's disinfection system.

Thus, shellfish harvesting area #20 is closed to the harvesting of shellfish due the location of the District's wastewater treatment plant outfall. The shellfish closure area can be found at http://www.maine.gov/dmr/shellfish-sanitation-management/closures/pollution.html

The City of Bath met with representatives of MEDMR on 7/14/2016 to finalize and establish an ERP (Emergency Response Plan). This plan with MEDMR established communication protocol in the event of a treatment bypass. The ERP details the procedure for the immediate notification of a treatment bypass by the City so that MEDMR may appropriately assess impacts to shellfish harvesting areas. On 11/29/2018 MEDMR requested that the City only submit CSO reports for the Harward Street outfall.

Category 5-D*: Estuarine and Marine Waters Impaired by Legacy Pollutants*. All estuarine and marine water capable of supporting American lobster are listed in Category 5-D, partially supporting fishing ("shellfish" consumption) due to elevated levels of polychlorinated biphenyls (PCBs) and other persistent, bioaccumulating substances in lobster tomalley.

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average reporting requirement. The original dry weather design capacity of the treatment works remains 3.5 MGD.

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

The Department reviewed 55 Discharge Monitoring Reports (DMRs) that were submitted for the period December 2009 – September 2019. A review of data indicates the following:

**Flow**

| Value | Limit (MGD) | Range (MGD) | Mean (MGD) |
|---|---|---|---|
| Monthly Average | Report | 0.66–3.70 | 1.83 |
| Daily Maximum | Report | 0.96 – 11.73 | 5.14 |

b. Dilution Factors:

06-096 CMR 530(4)(A)(2)(a) states that, *"For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model."* Based on plan and profile information submitted by the permittee, and calculations based on interpretation of the CORMIX model, the Department has determined that the dilution factors associated with the discharge are as follows:

Acute = 34:1 Chronic = 284:1 Harmonic mean[1] = 852:1

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

The previous permitting action established, and this permitting action is carrying forward, monthly average and weekly average technology-based concentration limits of 30 mg/L and 45 mg/L, respectively, for $BOD_5$ and TSS based on the secondary treatment requirements specified at *Effluent Guidelines and Standards*, 06-096 CMR 525(3)(III) (effective January 12, 2001), and a daily maximum concentration limit of 50 mg/L, which is based on a Department best professional judgment of best practicable treatment for secondary treated wastewater. The previous permitting action established and this permitting action is carrying forward, monthly average and weekly average mass limits of 876 lbs./day and 1,314 lbs./day, respectively. To encourage the treatment facility to maximize use of its secondary treatment process during wet weather events, this permitting action is carrying forward a report only requirement for the daily maximum $BOD_5$ and TSS mass values.

As for mass limitations, the previous permitting action established monthly average, weekly average and daily maximum mass limitations that are being carried forward in this permitting action and are based on a monthly average dry weather flow of 3.5 MGD. The mass limits were derived as follows:

Monthly average: (3.5 MGD)(8.34)(30 mg/L) = 876 lbs/day
Weekly average: (3.5 MGD)(8.34)(45 mg/L) = 1,314 lbs/day

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

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

This permitting action is carrying forward a requirement for a minimum of 85% removal of $BOD_5$ and TSS as required by 06-096 CMR 525(3)(III)(a)(3) and (b)(3) of the Department's rules.

The Department reviewed the Discharge Monitoring Reports (DMRs) that were submitted for the period December 2016 – September 2020. A review of data indicates the following:

| **$BOD_5$ mass** | **(n=51)** | **n(51)** | **(n=66)** |
|---|---|---|---|
| **Value** | **Limit (lbs./day)** | **Range (lbs./day)** | **Mean (lbs./day)** |
| Monthly Average | 876 | 30 – 599 | 170 |
| Weekly Average | 1,314 | 41 – 1,029 | 269 |
| Daily Maximum | Report | 46 – 3,057 | 659 |

| **$BOD_5$ concentration** | **(n=51)** | **(n=51)** | **(n=66)** |
|---|---|---|---|
| **Value** | **Limit (mg/L)** | **Range (mg/L)** | **Mean (mg/L)** |
| Monthly Average | 30 | 5.0 – 21 | 11.6 |
| Weekly Average | 45 | 6.0 – 38 | 15.0 |
| Daily Maximum | 50 | 7.0 – 55 | 23.0 |

The Department reviewed the Discharge Monitoring Reports (DMRs) that were submitted for the period December 2016 – September 2020. A review of data indicates the following:

| **TSS mass** | **(n=51)** | **(n=51)** | **(n=66)** |
|---|---|---|---|
| **Value** | **Limit (lbs./day)** | **Range (lbs./day)** | **Mean (lbs./day)** |
| Monthly Average | 876 | 29 – 474 | 148.3 |
| Weekly Average | 1,314 | 50 – 1,204 | 249.0 |
| Daily Maximum | Report | 57 – 5,048 | 775.7 |

| **TSS concentration** | **(n=51)** | **(n=51)** | **(n=66)** |
|---|---|---|---|
| **Value** | **Limit (mg/L)** | **Range (mg/L)** | **Mean (mg/L)** |
| Monthly Average | 30 | 5.0 – 17 | 9.8 |
| Weekly Average | 45 | 5.0 – 43 | 14.2 |
| Daily Maximum | 50 | 7.0 – 73 | 25.0 |

d. Settleable Solids: The previous permitting action established, and this permitting action is carrying forward a daily maximum technology limit of 0.3 ml/L for settleable solids, which is considered by the Department as a best professional judgment of BPT for secondary treated wastewater, along with a minimum monitoring frequency requirement of 4/Week. The Department is considering 51 months of data (June 2016 – September 2020). During this reporting period of June 2016 – September 2020 the permittee reported 1 excursion that exceeded the daily maximum of 0.3 ml/L for settleable solids.

**Settleable solids concentration (n=51)**

| **Value** | **Limit (ml/L)** | **Range (ml/L)** | **Average (ml/L)** |
|---|---|---|---|
| Daily Maximum | 0.3 | 0.1 – 2.50 | 0.164 |

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

e. Fecal Coliform Bacteria: The previous permitting action established a year-round monthly average and daily maximum concentration limits of 15 colonies/100 ml and 50 colonies/100 ml, for fecal coliform bacteria. This permitting action is establishing a year-round monthly average and daily maximum concentration limits of 14 colonies/100 ml and 31 colonies/100 ml, respectively, for fecal coliform bacteria, which are consistent with the National Shellfish Sanitation Program. This permitting is establishing water quality-based concentration limits and a minimum monitoring frequency requirement of three times per week (3/Week) based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD. Pursuant to a written request from the Maine Department of Marine Resources, disinfection is required year-round in order to ensure compliance with fecal coliform bacteria limits and thereby providing for the protection of local shellfish resources.

The previous permitting action established a year-round monthly average and daily maximum concentration limits of 15 colonies/100 ml and 50 colonies/100 ml, respectively. A summary of effluent fecal coliform bacteria data as reported on the DMRs for the period June 2016 – September 2020 is as follows:

**Fecal coliform bacteria (DMR = 50)**

| Value | Limit (col/100 mL) | Range (col/100 mL) | Mean (col/100 mL) |
|---|---|---|---|
| Monthly Average | 15 | 1 – 10 | 3 |
| Daily Maximum | 50 | 2 – 201 | 37 |

During the period from June 2016 – September 2020 it is noted that there were 7 excursions from the Daily maximum for 50 col/100 mL.

The previous permit established, and this permit is carrying forward a minimum monitoring frequency for fecal coliform bacterial of three times per week (3/Week) based on the Department best professional judgment (BPJ). At the request of the Maine Department of Marine Resources **fecal coliform bacteria and monitoring limits are in effect year-round. Total residual chlorine (TRC) limits and monitoring requirements are in effect year-round whenever chlorine compounds are in use at the request of the Maine Department of Marine Resources in order to protect local shellfish resources near the outfall and to protect the health, safety and welfare of the public.**

f. Enterococcus Bacteria: This permitting action is establishing a seasonal monthly average and daily maximum concentration limits of 8 colonies/100 and 54 colonies/100 ml. Monitoring and reporting requirements of for enterococcus bacteria are based on current Maine criteria. In addition to fecal coliform limits to protect the designated use of "propagation and harvesting of shellfish", it is appropriate to require end-of-pipe limits for enterococcus bacteria, based on current Maine criteria, to protect the designated use of "recreation in and on the water" on a seasonal basis starting on April 15th, 2022. The seasonal reporting period will be April 15th through October 31st starting on April 15, 2022. A 3/Week monitoring requirement is also being established in this permitting action.

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

g. Total Residual Chlorine (TRC): The previous permitting action established technology-based monthly average and daily maximum concentration limits of 0.1 mg/L and 0.3 mg/L, respectively, for TRC along with a 1/Day monitoring requirement. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department permitting actions impose the more stringent of either a water quality-based or BPT-based limit. With dilution factors as determined above, end-of-pipe (EOP) water quality-based concentration thresholds for TRC may be calculated as follows:

| Acute (A) Criterion | Chronic (C) Criterion | A & C Dilution Factors | Calculated Acute Threshold | Chronic Threshold |
|---|---|---|---|---|
| 0.013 mg/L | 0.0075 mg/L | 34:1(A)<br>284:1 (C) | 0.44 mg/L | 2.13 mg/L |

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge in order to meet water quality-based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The City must dechlorinate the effluent prior to discharge in order to achieve compliance with the water quality-based thresholds. The daily maximum technology-based standard of 0.3 mg/L is more stringent than the calculated acute water quality-based threshold of 0.44 mg/L and is therefore being carried forward in this permitting action. The monthly average technology-based standard of 0.1 mg/L is more stringent than the calculated chronic water quality-based threshold of 2.13 mg/L and is therefore being carried forward in this permitting action.

The Department reviewed 51 Discharge Monitoring Reports (DMRs) that were submitted for the period June 2016 – September 2020. A review of data indicates the following:

**Total residual chlorine (n=51)**

| Value | Limit (mg/L) | Range (mg/L) | Mean (mg/L) |
|---|---|---|---|
| Monthly Average | 0.1 | 0.01 – 0.05 | 0.02 |
| Daily Maximum | 0.3 | 0.03 – 0.30 | 0.13 |

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

The Department reviewed 51 Discharge Monitoring Reports (DMRs) that were submitted for the period June 2016 – September 2020. A review of data indicates the following:

**pH (n=51)**

| Value | Limit (SU) | Minimum (SU) | Maximum (SU) |
|---|---|---|---|
| Range | 6.0 – 9.0 | 6.06 | 7.62 |

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

i. Mercury: Pursuant to *Certain deposits and discharges prohibited*, 38 M.R.S. § 420 and *Waste Discharge Licenses*, 38 M.R.S. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued an interim average and daily maximum effluent concentration limits of 30.9 parts per trillion (ppt) and 46.0 ppt, respectively, and a minimum monitoring frequency requirement of two (2) tests per year for mercury. 38 M.R.S. § 420(1-B)(B)(1) provides that a facility is not in violation of the Ambient Water Quality Criteria (AWQC) for mercury if the facility is in compliance with an interim discharge limit established by the Department. A review of the Department's data base for the period December 1999 – September 2020 indicates the results have been reported as follows:

**Mercury (DMRs=63)**

| Value | Limit (ng/L) | Range (ng/L) | Mean (ng/L) |
|---|---|---|---|
| Average | 30.9 | 1.28 – 86 | 6.86 |
| Daily Maximum | 46.3 | | |

The Department issued a minor revision on February 6, 2012, to the October 12, 2011, permit thereby revising the minimum monitoring frequency requirement from twice per year to once per year given the permittee has maintained at least 5 years of mercury testing data. Pursuant to 38 M.R.S. § 420(1-B)(F), this permitting action is carrying forward the 1/Year monitoring frequency established in the February 6, 2012, permit modification.

j. Nitrogen: The USEPA requested the Department evaluate the reasonable potential for the discharge of total nitrogen to cause or contribute to non-attainment of applicable water quality standards in marine water, namely dissolved oxygen (DO) and marine life support. The permittee voluntarily participated in a Department-coordinated project using a Maine certified analytical lab to determine typical effluent nitrogen concentrations, and submitted monthly composite samples from June-October, 2015. Values ranged from 11.6 to 17.09 mg/L, with a mean total nitrogen value of 13.2 mg/L. For reasonable potential evaluations, the Department considers 13.2 mg/L to be representative of total nitrogen discharge levels from the Bath facility.

As of the date of this permitting action, the State of Maine has not promulgated numeric ambient water quality criteria for total nitrogen. According to several studies in USEPA's Region 1, numeric total nitrogen criteria have been established for relatively few estuaries, but the criteria that have been set typically fall between 0.35 mg/L and 0.50 mg/L to protect marine life using dissolved oxygen as the indicator. While the thresholds are site-specific, nitrogen thresholds set for the protection of eelgrass habitat range from 0.30 mg/L to 0.39 mg/L. Based on studies in USEPA's Region 1 and the Department's best professional judgment of thresholds that are protective of Maine water quality standards, the Department is utilizing a threshold of 0.45 mg/L for the protection of aquatic life in marine water using dissolved oxygen as the indicator, and 0.32 mg/L for the protection of aquatic life using eelgrass as the indicator. In 1994 and 2005, the Maine Department of Marine Resources mapped eelgrass in the lower Kennebec River estuary. The survey areas did not extend to the north of the town of Phippsburg, so no known eelgrass survey exists in Bath. Regardless, eelgrass is not expected to be present in the vicinity of the Bath facility due to the persistent low salinity conditions. Given that there are no historic or current eelgrass beds present in the vicinity of the permittee's discharge, the threshold value of 0.45 mg/L will be used for reasonable potential analyses.

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

Because nitrogen is not acutely toxic, the Department is considering a far-field dilution to be more appropriate when evaluating the relative impacts of total nitrogen to the ambient environment. Nutrient enrichment can result in excessive algal growth, which can cause a variety of related negative environmental impacts. Due to the very dynamic nature of marine environments, these impacts generally manifest in a broader, more systemic scope. Environmental concerns associated with the discharge of non-toxic pollutants (i.e., nitrogen and BOD) in marine environments are significantly different than those associated with toxics. As such, near-field dilution factors in marine water is not relevant to the evaluation of these types of effects, and should be evaluated based on a significantly more generalized region of influence. The Department uses the term far-field to refer to this broader region of influence. The far-field area is intended to provide for a reasonable opportunity for dilution of non-toxic pollutants to occur, and should be more reflective of the systemic scope and scale of the ambient receiving water.

The permittee's facility has a chronic near field dilution factor of 284:1. In marine water, far field dilutions is significantly higher than the respective near-field dilution factor. The area in the vicinity of Bath's discharge is a particularly dynamic marine environment. Based on this knowledge, the Department is comfortable in using a far field dilution factor of at least 1,000:1 for the Bath discharge. Based on this analysis, the increase in the ambient total nitrogen due to the permittee's effluent discharge is as follows:

Estimated total nitrogen concentration in effluent = 13.2 mg/L

Chronic, far field dilution factor: 1,000:1

In-stream concentration after far field dilution: (13.2 mg/L)/1,000 = 0.013 mg/L

The Department and external partners have been collecting ambient total nitrogen data along Maine's coast. For the 2015 permit revision, the Department assessed available ambient total nitrogen data from nearby portions of the Kennebec River estuary as well as from sites in the Penobscot River estuary of comparable salinity ranges. For the 2020 permit revision and in lieu of new data from the upper Kennebec River estuary, available ambient nitrogen data were amended to include additional values from the upper Penobscot River estuary. Based on these data, a calculated mean +/- standard deviation background surface water total nitrogen concentration of 0.36 ± 0.07 mg/L (n=47) will be used in the current permit revision.

With the calculated ambient value for this receiving water, the estimated increase in ambient total nitrogen after reasonable opportunity for mixing in the far-field is 0.36 mg/L + 0.013 mg/L = 0.37 mg/L. The in-stream concentration value of 0.37 mg/L is less than the Department and USEPA's total nitrogen threshold of 0.45 mg/L for the protection of aquatic life using dissolved oxygen as an indicator. Using the reasonable potential calculations above and in the absence of any information that the receiving water is not attaining standards, the Department is making a best professional judgment determination that the discharge of total nitrogen from the Bath facility does not exhibit a reasonable potential to exceed applicable water quality standards for Class SB water. This permitting action is not establishing any discharge limitations or monitoring requirements for total nitrogen.

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

k. Whole Effluent Toxicity (WET) and Chemical-Specific 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 water of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. 06-096 CMR 530 sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface water is maintained and protected, and narrative and numeric water quality criteria are met. 06-096 CMR 584 sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface water.

WET, priority pollutant and analytical chemistry testing, as required by 06-096 CMR 530, is included in this permit in order to characterize the effluent. WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on the mysid shrimp *(Americamysis bahia)* and the sea urchin *(Arbacia punctulata)*. Chemical-specific monitoring is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria. Priority pollutant testing refers to the analysis for levels of priority pollutants listed under "Priority Pollutants" on the form on the form found at: https://www.maine.gov/dep/water/wd/municipal_industrial/index.html

> 06-096 CMR 530(2)(A) specifies the dischargers subject to the rule as:
>
> All licensed dischargers of industrial process wastewater or domestic wastes discharging to surface water 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.

The City of Bath discharges domestic (sanitary) wastewater to surface water and is therefore subject to the testing requirements of the toxics rule.

06-096 CMR 530(2)(B) categorizes discharges subject to the toxics rule into one of four levels (Level 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 |

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

Based on the Chapter 530 criteria, the permittee's facility falls into the Level III frequency category as the facility has a chronic dilution factor of ≥100:1 but <500:1. 06-096 530(2)(D)(1) specifies that routine screening and surveillance level testing requirements are as follows:

**Screening level testing**

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

**Surveillance level testing**

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

l. Whole Effluent Toxicity (WET) Evaluation: 06-096 CMR 530(3)(E) states:

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

On September 23, 2020, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department for the Town in accordance with the statistical approach outlined above. The 9/23/20 statistical evaluation indicates that none of the results had a reasonable potential to exceed the chronic or acute ambient water quality threshold.

See **Attachment C** of this Fact Sheet for a summary of the WET test results.

Based on the provisions of 06-096 CMR 530 and Department best professional judgment, this permitting action is establishing reduced surveillance level WET testing requirements for this facility. Special Condition J. 06-096 CMR 530(2)(D)(4) Statement for Reduced/Waived Toxics Testing of this Permit explains the statement required by the discharger to reduce WET testing.

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

m. Analytical Chemistry & Priority Pollutant Testing Evaluation:

06-096 CMR 530(4)(C) states:

> The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department must use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions. The Department must use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations.

06-096 CMR 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."

Chemical specific evaluation

06-096 CMR 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."

As with WET test results, the Department conducted a statistical evaluation on September 23, 2020, for the most current 60 months of analytical chemistry and priority pollutant test results on file. The evaluation conducted on 9/23/20 indicates that no chemicals had reasonable potential (RP) to exceed the chronic ambient water quality thresholds.

As for the remaining chemical specific parameters tested to date, none of the test results in the 60-month evaluation period exceed or have a reasonable potential to exceed applicable acute, chronic or human health AWQC. Therefore, this permitting action carrying forward screening level reporting and monitoring frequency for analytical chemistry at 4/Year pursuant to 06-096 CMR 530(2)(D)(3)(c). As with reduced WET testing, the permittee must file an annual certification with the Department pursuant to 06-096 CMR 530 2(D)(4) and Special Condition K of this permit.

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

### OUTFALL #001A – SECONDARY TREATED WASTEWATER

n. Transported Wastes – The City of Bath has applied for, and pursuant to *Standards for the Addition of Transported Wastes to Waste Water Treatment Facilities,* 06-096 CMR 555 (last amended February 5, 2009), and the District's written septage management plan, this permitting action authorizes the District to receive and introduce into the treatment process or solids handling stream up to a daily maximum of 10,000 GPD of transported wastes (septage wastes). See Special Condition I of the permit.

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

### OUTFALL #002A – Primary Treated Wastewater

o. Overflow Occurrences – The previous permitting action established, and this permitting action is carrying forward, a reporting requirement for the total number of overflow occurrences during each calendar month.

A review of the DMRs that were submitted for the period June 2016 – September 2020 indicates the following:

**Overflow occurrences/month (n=36)**

| Value | Limit (# of days) | Range (# of days) | Total (# of days) |
|---|---|---|---|
| Daily Maximum | Report | --- | --- |
| 2016 | --- | 1 – 3 | 9 |
| 2017 | --- | 1 – 5 | 16 |
| 2018 | --- | 1 – 8 | 27 |
| 2019 | --- | 1 – 4 | 22 |
| 2020 | --- | 1 – 5 | 14 |

p. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average and a daily maximum discharge flow reporting requirement. A review of the DMRs that were submitted for the period June 2016 – September 2020 indicates the following:

**Flow (n=72)**

| Value | Limit (MG) | Range (MG) | Total (MG) |
|---|---|---|---|
| Total gallons/month | Report | 0.48 – 4.01 (2016)<br>1.74 – 6.31 (2017)<br>0.13 – 13.85 (2018)<br>0.23 – 8.02 (2019)<br>0.13 – 4.42 (2020) | 9.65 (2016)<br>21.02 (2017)<br>37.24 (2018)<br>34.42 (2019)<br>12.74 (2020) |
| Daily Maximum | Report | 0.33 – 2.15 (2016)<br>1.45 – 3.37 (2017)<br>0.13 – 5.35 (2018)<br>0.23 – 5.65 (2019)<br>0.13 – 3.17 (2020) | 6.29 (2016)<br>11.56 (2017)<br>18.97 (2018)<br>22.62 (2019)<br>8.84 (2020) |

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

### OUTFALL #002A – Primary Treated Wastewater

q. $BOD_5$ and TSS: The previous permitting action established, and this permitting action is carrying forward, a daily maximum concentration reporting requirement for $BOD_5$ and TSS.

A review of the DMRs that were submitted for the period June 2015 – September 2020 indicates the following:

**$BOD_5$ Concentration (n=15)**

| Value | Limit (mg/L) | Range (mg/L) | Mean (mg/L) |
|---|---|---|---|
| Daily Maximum | Report | 15 – 71 | 38 |

**TSS Concentration (n=15)**

| Value | Limit (mg/L) | Range (mg/L) | Mean (mg/L) |
|---|---|---|---|
| Daily Maximum | Report | 34 – 150 | 81 |

Fecal Coliform Bacteria: The previous permitting action established a daily maximum concentration limitation of 200 colonies/100 mL for fecal coliform bacteria. As a result of recent litigation, the EPA has instructed the Department to eliminate numeric limitations on internal waste streams. Therefore, the limitation is not being carried forward in this permit.

A review of the DMRs that were submitted for the period June 2015 – September 2020 indicates the following:

**Fecal coliform bacteria (n=20)**

| Value | Limit (col/100 mL) | Range (col/100 mL) | Mean (col/100 mL) |
|---|---|---|---|
| Daily Maximum | 200 | 1 – 2,420 | 176 |

Total Residual Chlorine (TRC): The previous permit established a daily maximum concentration limitation of 1.0 mg/L for TRC. As with fecal coliform bacteria, the numeric limitation is being removed on this internal waste stream. A review of the DMRs that were submitted for the period January 2013 – August 2015 indicates the following:

**Total residual chlorine (n=25)**

| Value | Limit (mg/L) | Range (mg/L) | Mean (mg/L) |
|---|---|---|---|
| Daily Maximum | 1.0 | 0.0 – 3.10 | 0.23 |

### CSO-Related Bypasses of Secondary Treatment

The permittee maintains a combined sewer system from which wet weather overflows occur. Section 402(q)(1) of the Clean Water Act requires that "each permit, order or decree issued pursuant to this chapter after December 21, 2000 for a discharge from a municipal combined storm and sanitary sewer must conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994 ….." 33 U.S.C. § 1342(q)(1).

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

### OUTFALL #002A – Primary Treated Wastewater

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 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 permittees 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. The permittee must implement CSO control projects in accordance with the approved CSO Master Plan entitled *"City of Bath – Revised 2006 Combined Sewer Overflow Master Plan Update,"* In addition there have been three revision letters (2008, 2011 and 2015) submitted to the Department updating the scope of work and schedules for selected projects.

During wet weather events when flows to the treatment facility have exceeded an instantaneous flow rate of 4,861 gpm (7.0 MGD), secondary treatment of all wet weather flows is not practicable and a portion of the primary effluent is allowed to be bypassed around the aeration basins and secondary clarifiers, disinfected and then dechlorinated.

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

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).

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

### CSO-Related Bypasses of Secondary Treatment

The bypassed flow is recombined with the secondary clarifier effluent following chlorination and dechlorination of the secondary waste stream and the blended effluent is discharged to the river via the physical outfall designated as Outfall #001. 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. Therefore, the effluent quality from a properly designed, operated and maintained existing primary treatment system satisfies the requirements for primary clarification and solids removal.

For facilities that blend primary and secondary effluent prior to discharge, such as the permittee's facility, compliance must be evaluated at the point of discharge, unless impractical or infeasible.[1] 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 all of Maine's CSO-related bypass facilities[2]. To standardize how the Department will regulate these facilities to ensure compliance with the CSO Control Policy and Clean Water Act[3], the Department has determined that effluent limitations for the discharge of CSO-related bypass effluent that is combined with effluent from the secondary treatment system should be based on the more stringent of either the past demonstrated performance of the properly operated and maintained treatment system(s) or site-specific water quality-based limits derived from computer modeling or best professional judgment of Department water quality engineers of assimilative capacity of the receiving water.

The federal secondary treatment regulation does not contain daily maximum effluent limitations for $BOD_5$ and TSS. The Department has established a daily maximum concentration limit of 50 mg/L for secondary treated wastewater as best professional judgment of best practicable treatment. This standard was developed by the Department 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. This permitting action is eliminating the reporting requirements for primary clarifier $BOD_5$ and TSS percent removal and surface loading rate 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.

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1 40 CFR 122.45(h).

2 Maine currently has 16 permitted facilities with a CSO-related bypass.

3 In other words, that any other treatment that can reasonably be provided is, in fact, provided.

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

### CSO-Related Bypasses of Secondary Treatment

During CSO-related bypasses, secondary treated wastewater is combined with wastewater from the primary treatment system which is designed to provide primary clarification and 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 Policy at 59 Fed. Reg. 18694.

For the discharge of blended effluent to the Kennebec River via the main outfall (#001A), the Department is establishing daily maximum technology-based effluent limitations for $BOD_5$ and TSS.

For data management purposes, this permitting action is designating an outfall identifier of Outfall #002B for discharges of blended wastewater when the instantaneous flow rate to the treatment facility exceeds 4,861 gpm (7.0 MGD). Discharges of blended effluent to the Kennebec River are only allowed when the instantaneous flow rate to the treatment facility exceeds 4,861 gpm (7.0 MGD).

r. Flow, $BOD_5$ and TSS: Given the configuration of the treatment plant, the permittee has measured, blended effluent values for flow, BOD and TSS. To be conservative, the Department has chosen the highest value for each parameter for the purposes of evaluating the potential impact to the Kennebec River during the wet weather events when blended effluent is being discharged.

Based on a review of the DMR data for the period June 2015 – September 2020, the highest BOD and TSS loadings from the bypass waste stream occurred in October 2019. The values being utilized in calculations are as follows:

Flow: 4.59 MGD (October 2019)
$BOD_5$: 2,218 lbs./day, 45 mg/L (October 2019)
TSS: 4,907 lbs./day, 73 mg/L (October 2019)

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

### CSO-Related Bypasses of Secondary Treatment

**OUTFALL #002B – Blended effluent discharged to the Kennebec River**

To determine if water quality standards are being met when bypassing secondary treatment, the Department has assessed the impact of permitted BOD and TSS loads and flow from the secondary treatment side of the facility (based on 3.5 MGD and 50 mg/L) plus the actual historic flow and loadings from the primary treated waste stream cited. The calculated values are as follows:

BOD: 1,567 lbs/day + 2,218 lbs/day = 3,785 lbs/day
(2°) (1°)

TSS: 2,150 lbs/day + 4,907 lbs/day = 7,057 lbs/day
(2°) (1°)

Flow: 3.5 MGD + 4.59 MGD = 8.09 MGD
(2°) (1°)

To determine if water quality standards (dissolved oxygen) are maintained during times when bypassing secondary treatment, one must calculate the increase in the BOD and TSS concentration in the receiving water when the facility is discharging blended effluent.

The flow in the Kennebec River at Bath is comprised of flows from the Kennebec River and Androscoggin River. The two rivers converge in Merrymeeting Bay which is located downstream of Brunswick on the Androscoggin River and just downstream of Richmond on the Kennebec River. Merrymeeting Bay outlets at "the Chops" about 5 miles north of the City of Bath's discharge. The receiving water in Bath is also referred to as the Kennebec River. Without a gauging station that measures cfs on the Kennebec River after the Merrymeeting Bay outlet, the Department made a best professional judgment to approximate the flow at Bath by utilizing the two most downstream gauging stations on each river. For the Androscoggin River, the most downstream gauge is the USGS gauging station referred to as Near Auburn (station #01059000). For the Kennebec River, the most downstream gauging station is the USGS gauging station with flow data is referred to as North Sidney (station #01049265).

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

### CSO-Related Bypasses of Secondary Treatment

**OUTFALL #002B – Blended effluent discharged to the Kennebec River**

The Department chose the lowest river flows of 810 cfs (9/12/20) for the Androscoggin River and 1750 cfs (9/12/20) for the Kennebec River for a total of 2650 cfs (at the highest primary treated BOD and TSS loadings for 39 overflow occurrences between June 2015 and September 2020) to calculate the increase in BOD and TSS concentrations in the Kennebec River at Bath. The calculations are as follows:

BOD and TSS concentrations discharged from the facility when the blended effluent is discharged:

$$\text{BOD: } \frac{3{,}785 \text{ lbs/day}}{(8.09 \text{ MGD})(8.34 \text{ lbs/gal})} = 56 \text{ mg/L}$$

$$\text{TSS: } \frac{7{,}057 \text{ lbs/day}}{(8.09 \text{ MGD})(8.34 \text{ lbs/gal})} = 105 \text{ mg/L}$$

The increase in the BOD and TSS concentrations in the Kennebec River at Bath after rapid and complete mixing:

$$\text{Dilution factor: } \frac{(2650 \text{ cfs})(0.6464) + (8.09 \text{ MGD})}{(8.09 \text{ MGD})} = 213:1$$

$$\text{BOD: } \frac{56 \text{ mg/L}}{213} = 0.26 \text{ mg/L}$$

$$\text{TSS: } \frac{105 \text{ mg/L}}{213} = 0.50 \text{ mg/L}$$

Based on the combined $BOD_5$ and TSS values (blended effluent) cited above, the Department has made a best professional judgment, maximum effluent discharge limitations of 8,206 lbs./day for $BOD_5$ and 18,423 lbs/day for TSS established in the previous permit provide reasonable assurance that the discharge will not cause or contribute to a violation of an applicable water quality standard in the Kennebec River and complies with the State's antidegradation policy at 38 M.R.S. § 464(4)(F).

These limitations are based on new information concerning treatment system performance data as well as a revised and corrected methodology for regulating CSO-related bypasses in Maine. As such, the Department concludes that the new daily maximum effluent limitations of 18,423 lbs/day for $BOD_5$ and 8,206 lbs/day for TSS for the discharge of primary and secondary blended effluents when the flow rate through secondary treatment has exceeded an instantaneous flow rate of 4,861 gpm (7.0 MGD) complies with the exceptions to antibacksliding at Section 402(o)(2)(B)(i) of the Clean Water Act. This permitting action is carrying forward monthly average and weekly average blended effluent concentration reporting requirements for $BOD_5$ and TSS to assist in comparing the effluent quality against secondary treatment technology based effluent limits.

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

**CSO-Related Bypasses of Secondary Treatment**

**OUTFALL #002B - Blended effluent discharged to the Kennebec River**

s. Fecal Coliform Bacteria – This permitting action is establishing a daily maximum concentration limit of 200 colonies/100 ml for fecal coliform bacteria, which are consistent with the National Shellfish Sanitation Program. As with the secondary treated wastewater, the Maine Department of Marine Resources, disinfection is required year-round in order to ensure compliance with fecal coliform bacteria limits and thereby providing for the protection of local shellfish resources. Given the primary and secondary treated waste streams are disinfected independently, the permittee will need to mathematical determine compliance with the daily maximum limitation.

t. Total residual chlorine - 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. Given the primary and secondary treated waste streams are disinfected independently, the permittee will need to mathematically determine compliance with the daily maximum limitation.

## 7. COMBINED SEWER OVERFLOWS

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

| Outfall | Location | Receiving Water & Class |
|---|---|---|
| 003 | Rose Street Pump Station | Kennebec River, SB |
| 004 | Pleasant Street Pump Station | Kennebec River, SB |
| 005 | Commercial Street Pump Station | Kennebec River, SB |
| 008 | Harward Street | Kennebec River, SB |

*Combined Sewer Overflow Abatement* 06-096 CMR 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.A. 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. The City submitted to the Department a CSO Master Plan entitled, *City of Bath – Revised 2006 Combined Sewer Overflow Master Plan Update,"* In addition there have been three revision letters (2008, 2011 and 2015) submitted to the Department updating the scope of work and schedules for selected projects.

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

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

## 8. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY

The City of Bath has applied for, and pursuant to *Standards for the Addition of Transported Wastes to Waste Water Treatment Facilities,* 06-096 CMR 555 (last amended February 5, 2009), and the District's written septage management plan, this permitting action authorizes the District to receive and introduce into the treatment process or solids handling stream up to a daily maximum of 10,000 GPD of transported wastes (septage wastes). See Special Condition I of the permit.

## 9. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the water body to meet standards for Class SB classification.

## 10. PUBLIC COMMENTS

Public notice of this application was made in the *Times Record* newspaper on or about September 28, 2020. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits must have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses,* 06-096 CMR 522 (effective January 12, 2001).

## 11. DEPARTMENT CONTACTS

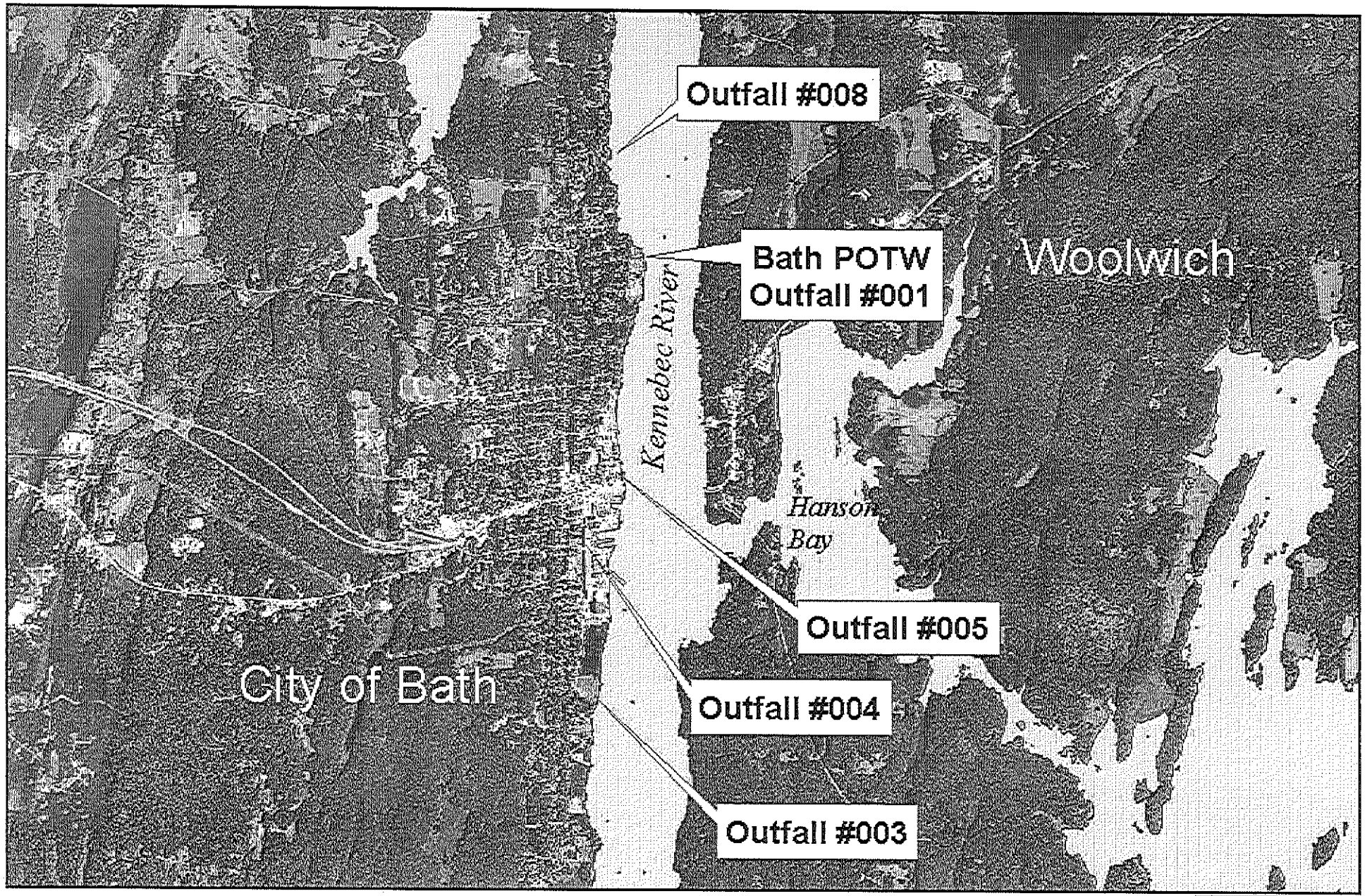
Additional information concerning this permitting action may be obtained from, and written comments sent to:

Aaron Dumont
Bureau of Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-1939
e-mail: Aaron.A.Dumont@maine.gov

## 12. RESPONSE TO COMMENTS

*This space left blank until the end of the comment period.*

# ATTACHMENT A

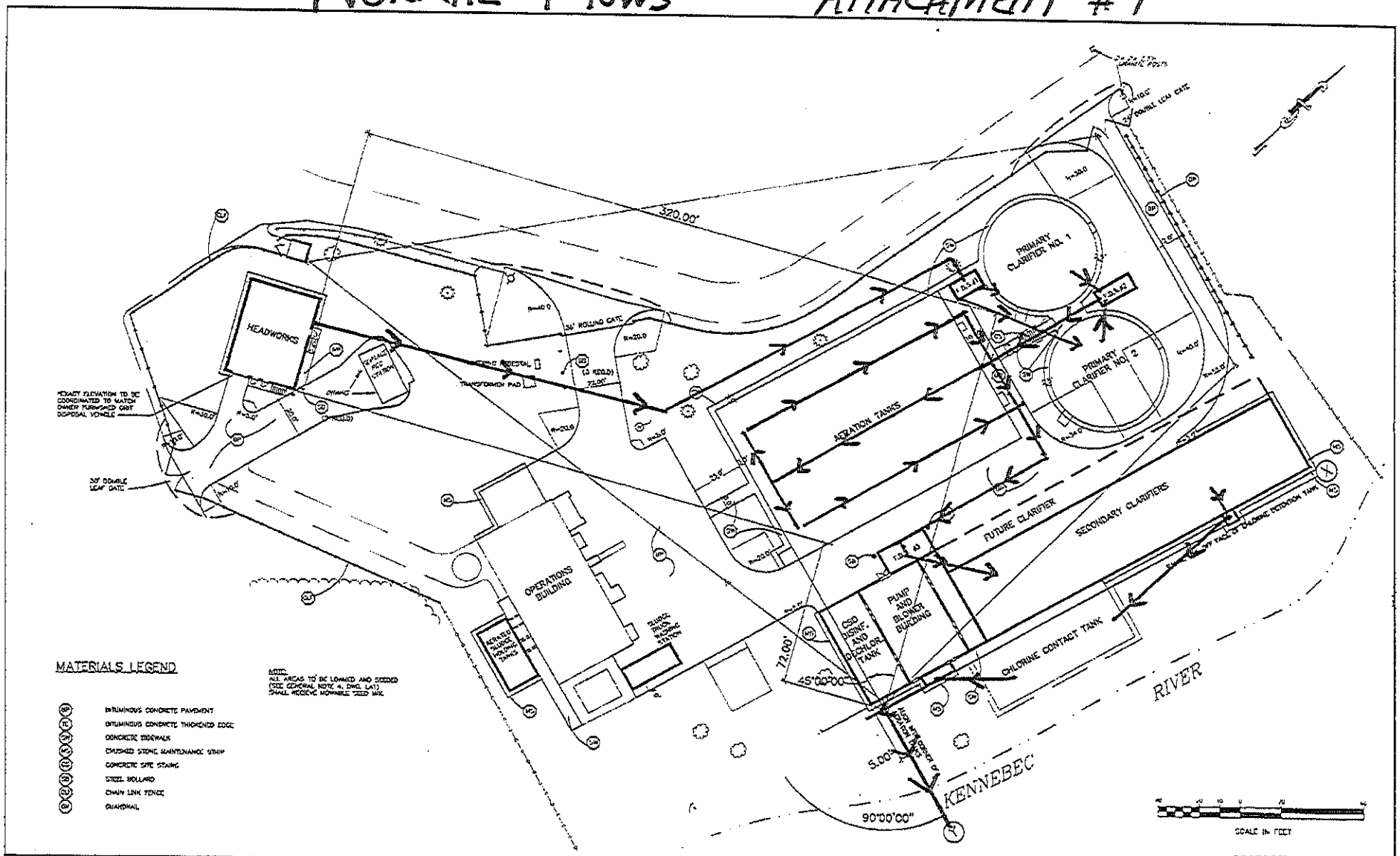


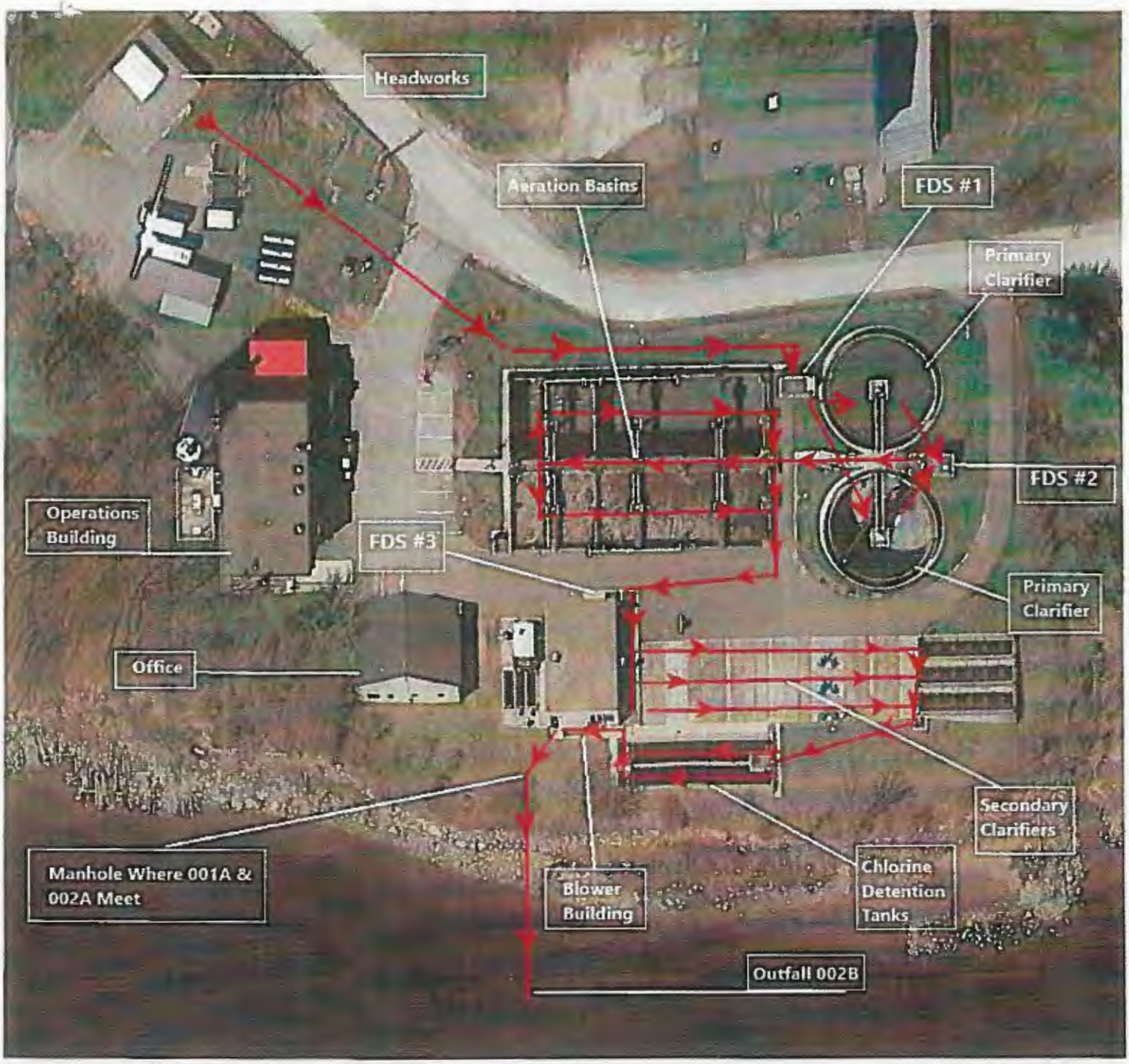

**Bath Publicly Owned Treatment Works, Bath, Maine**

Map Created by Maine DEP
July 30, 2014

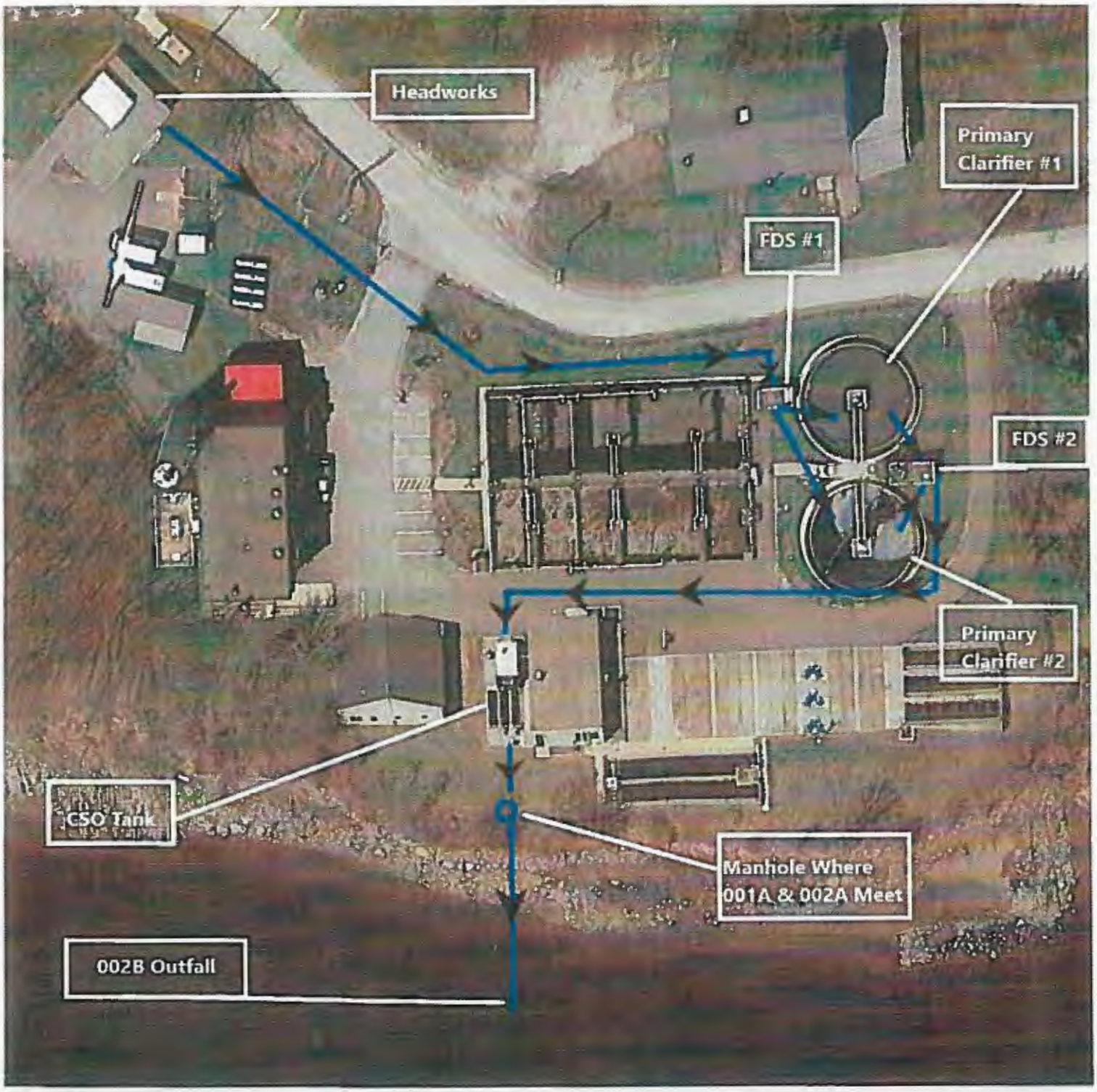
# ATTACHMENT B

# NORMAL FLOWS ATTACHMENT #1






DRY WEATHER FLOW DRAWING




WET WEATHER FLOW DRAWING

# 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<br>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

# FACILITY WET EVALUATION REPORT

**Facility:** BATH WPCF **Permit Number:** ME0100021 **Report Date:** 9/23/2020

**Receiving Water:** KENNEBEC RIVER **Rapidmix:** Y

**Diluition Factors:** 1/4 Acute: N/A Acute: 34.000 Chronic: 284

**Effluent Limits:** Acute (%): 2.941 Chronic (%): 0.352 **Date range for Evaluation: From** 23/Sep/2015 **To:** 23/Sep/2020

**Test Type:** A_NOEL

| Test Species: MYSID SHRIMP | Test Date | Result (%) | Status |
|---|---|---|---|
| | 06/26/2019 | 100.000 | OK |

**Species Summary:**

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

**Test Type:** C_NOEL

| Test Species: SEA URCHIN | Test Date | Result (%) | Status |
|---|---|---|---|
| | 06/26/2019 | 25.000 | OK |

**Species Summary:**

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

# ATTACHMENT E

# FACILITY PRIORITY POLLUTANT DATA REPORT

**Data Date Range:** 22/Oct/2015 - 22/Oct/2020

Showing all data

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| | | | |
|---|---|---|---|
| **Parameter:** 1,1,1-TRICHLOROETHANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** 1,1,2,2-TETRACHLOROETI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** 1,1,2-TRICHLOROETHANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** 1,1-DICHLOROETHANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** 1,1-DICHLOROETHYLENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 3.000 | Y |
| **Parameter:** 1,2-(O)DICHLOROBENZEI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 1,2,4-TRICHLOROBENZEN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 1,2-DICHLOROETHANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 3.000 | Y |
| **Parameter:** 1,2-DICHLOROPROPANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** 1,2-DIPHENYLHYDRAZINE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 19.000 | Y |
| **Parameter:** 1,2-TRANS-DICHLOROETH | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** 1,3-(M)DICHLOROBENZEI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 1,3-DICHLOROPROPYLENI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** 1,4-(P)DICHLOROBENZEN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2,4,6-TRICHLOROPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2,4-DICHLOROPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2,4-DIMETHYLPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2,4-DINITROPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 24.000 | Y |
| **Parameter:** 2,4-DINITROTOLUENE | **Test date** | **Result (ug/l)** | **Lsthan** |

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| | | | |
|---|---|---|---|
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2,6-DINITROTOLUENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2-CHLOROETHYLVINYL ET | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 10.000 | Y |
| **Parameter:** 2-CHLORONAPHTHALENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2-CHLOROPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 2-NITROPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 3,3'-DICHLOROBENZIDIN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 3,4-BENZO(B)FLUORANTH | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 4,4'-DDD | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** 4,4'-DDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** 4,4'-DDT | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** 4,6-DINITRO-O-CRESOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 24.000 | Y |
| **Parameter:** 4-BROMOPHENYLPHENYL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 4-CHLOROPHENYL PHENY | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** 4-NITROPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 19.000 | Y |
| **Parameter:** A-BHC | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** ACENAPHTHENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** ACENAPHTHYLENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** ACROLEIN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 10.000 | Y |

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| **Parameter:** ACRYLONITRILE | **Test date** | **Result (ug/l)** | **Lsthan** |
|---|---|---|---|
| | 06/26/2019 | 25.000 | Y |
| **Parameter:** A-ENDOSULFAN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** ALDRIN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** ALUMINUM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 102.000 | N |
| | 09/19/2019 | 26.400 | N |
| | 12/19/2019 | 84.300 | N |
| | 03/05/2020 | 20.000 | Y |
| **Parameter:** AMMONIA | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4900.000 | N |
| | 09/19/2019 | 4500.000 | N |
| | 12/19/2019 | 4200.000 | N |
| | 03/05/2020 | 4300.000 | N |
| **Parameter:** ANTHRACENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** ANTIMONY | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.340 | N |
| **Parameter:** ARSENIC | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 1.200 | N |
| | 09/19/2019 | 1.400 | N |
| | 12/19/2019 | 1.000 | Y |
| | 03/05/2020 | 1.000 | Y |
| **Parameter:** B-BHC | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** B-ENDOSULFAN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** BENZENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** BENZIDINE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 24.000 | Y |
| **Parameter:** BENZO(A)ANTHRACENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** BENZO(A)PYRENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** BENZO(G,H,I)PERYLENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| | | | |
|---|---|---|---|
| **Parameter:** BENZO(K)FLUORANTHENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** BERYLLIUM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.200 | Y |
| **Parameter:** BIS(2-CHLOROETHOXY)M | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** BIS(2-CHLOROETHYL)ETH | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** BIS(2-CHLOROISOPROPYI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** BIS(2-ETHYLHEXYL)PHTH | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** BROMOFORM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** BUTYLBENZYL PHTHALATE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** CADMIUM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.200 | Y |
| | 09/19/2019 | 0.200 | Y |
| | 12/19/2019 | 0.200 | Y |
| | 03/05/2020 | 0.200 | Y |
| **Parameter:** CARBON TETRACHLORIDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** CHLORDANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** CHLOROBENZENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** CHLORODIBROMOMETHAI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 3.000 | Y |
| **Parameter:** CHLOROETHANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** CHLOROFORM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** CHROMIUM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 1.000 | Y |
| | 09/19/2019 | 1.000 | Y |
| | 12/19/2019 | 1.000 | Y |
| | 03/05/2020 | 1.000 | Y |

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| | | | |
|---|---|---|---|
| **Parameter:** CHRYSENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** COPPER | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.990 | N |
| | 09/19/2019 | 8.160 | N |
| | 12/19/2019 | 6.900 | N |
| | 03/05/2020 | 4.890 | N |
| **Parameter:** CYANIDE AVAILABLE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 12/19/2019 | 5.000 | Y |
| **Parameter:** CYANIDE TOTAL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| | 09/19/2019 | 5.000 | Y |
| | 12/19/2019 | 5.000 | Y |
| | 03/05/2020 | 5.000 | Y |
| **Parameter:** D-BHC | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** DIBENZO(A,H)ANTHRACE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** DICHLOROBROMOMETHAI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 3.000 | Y |
| **Parameter:** DIELDRIN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** DIETHYL PHTHALATE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** DIMETHYL PHTHALATE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** DI-N-BUTYL PHTHALATE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** DI-N-OCTYL PHTHALATE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** ENDOSULFAN SULFATE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** ENDRIN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** ENDRIN ALDEHYDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.019 | Y |
| **Parameter:** ETHYLBENZENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| | | | |
|---|---|---|---|
| **Parameter:** FLUORANTHENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** FLUORENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** G-BHC | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** HEPTACHLOR | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** HEPTACHLOR EPOXIDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.009 | Y |
| **Parameter:** HEXACHLOROBENZENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** HEXACHLOROBUTADIENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** HEXACHLOROCYCLOPENT | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** HEXACHLOROETHANE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** INDENO(1,2,3-CD)PYREN | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** ISOPHORONE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** LEAD | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.837 | N |
| | 09/19/2019 | 0.235 | N |
| | 12/19/2019 | 0.704 | N |
| | 03/05/2020 | 0.688 | N |
| **Parameter:** MERCURY | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 09/29/2016 | 0.001 | N |
| | 08/09/2017 | 0.003 | N |
| | 08/28/2018 | 0.002 | N |
| | 08/28/2019 | 0.003 | N |
| **Parameter:** METHYL BROMIDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** METHYL CHLORIDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** METHYLENE CHLORIDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| | | | |
|---|---|---|---|
| **Parameter:** NAPHTHALENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** NICKEL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 6.180 | N |
| | 09/19/2019 | 4.430 | N |
| | 12/19/2019 | 7.210 | N |
| | 03/05/2020 | 7.620 | N |
| **Parameter:** NITROBENZENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** N-NITROSODIMETHYLAMI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** N-NITROSODI-N-PROPYLA | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** N-NITROSODIPHENYLAMI | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** PCB-1016 | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** PCB-1221 | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** PCB-1232 | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** PCB-1242 | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** PCB-1248 | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** PCB-1254 | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** PCB-1260 | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.094 | Y |
| **Parameter:** P-CHLORO-M-CRESOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** PENTACHLOROPHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 19.000 | Y |
| **Parameter:** PHENANTHRENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** PHENOL | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** PYRENE | **Test date** | **Result (ug/l)** | **Lsthan** |

Facility name: **BATH WPCF** Permit Number: **ME0100021**

| | | | |
|---|---|---|---|
| | 06/26/2019 | 4.700 | Y |
| **Parameter:** SALINITY | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.000 | N |
| **Parameter:** SELENIUM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 1.000 | Y |
| **Parameter:** SILVER | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.200 | Y |
| | 09/19/2019 | 0.200 | Y |
| | 12/19/2019 | 0.200 | Y |
| | 03/05/2020 | 0.200 | Y |
| **Parameter:** TETRACHLOROETHYLENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** THALLIUM | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.200 | Y |
| **Parameter:** TOLUENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** TOXAPHENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 0.190 | Y |
| **Parameter:** TRICHLOROETHYLENE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 3.000 | Y |
| **Parameter:** VINYL CHLORIDE | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 5.000 | Y |
| **Parameter:** ZINC | **Test date** | **Result (ug/l)** | **Lsthan** |
| | 06/26/2019 | 23.200 | N |
| | 09/19/2019 | 49.200 | N |
| | 12/19/2019 | 37.900 | N |
| | 03/05/2020 | 36.400 | N |

# ATTACHMENT F

# MERCURY REPORT - Clean Test Only

**Data Date Range:** 12/01/1999-09/23/2020

**Inspector Name: STUART ROSE**

**Facility: BATH WPCF** **Permit Number:** ME0100021

**Max (ng/l):** 86.0000 **Average (ng/l):** 6.8630

| Sample Date | Result (ng/l) | Lsthan | Clean |
|---|---|---|---|
| 01/17/2000 | 36.00 | N | T |
| 05/22/2000 | 4.20 | N | T |
| 09/18/2000 | 5.20 | N | T |
| 11/29/2000 | 12.00 | N | T |
| 01/24/2001 | 6.90 | N | T |
| 06/13/2001 | 86.00 | N | T |
| 07/18/2001 | 3.40 | N | T |
| 09/17/2001 | 4.40 | N | T |
| 09/24/2001 | 5.70 | N | T |
| 12/17/2001 | 3.30 | N | T |
| 12/19/2001 | 4.10 | N | T |
| 02/27/2002 | 23.00 | N | T |
| 08/21/2002 | 2.80 | N | T |
| 08/26/2002 | 2.60 | N | T |
| 11/04/2002 | 7.60 | N | T |
| 02/24/2003 | 9.10 | N | T |
| 05/29/2003 | 23.00 | N | T |
| 10/01/2003 | 2.00 | N | T |
| 12/24/2003 | 4.70 | N | T |
| 03/30/2004 | 6.00 | N | T |
| 04/27/2004 | 3.80 | N | T |
| 07/18/2004 | 1.80 | N | T |
| 10/13/2004 | 8.80 | N | T |
| 02/16/2005 | 17.00 | N | T |
| 05/23/2005 | 5.40 | N | T |
| 08/15/2005 | 2.80 | N | T |
| 12/06/2005 | 4.20 | N | T |
| 02/21/2006 | 2.00 | N | T |
| 05/08/2006 | 1.80 | N | T |
| 08/29/2006 | 3.00 | N | T |
| 11/07/2006 | 2.90 | N | T |
| 02/28/2007 | 5.80 | N | T |
| 05/09/2007 | 2.91 | N | T |
| 05/17/2007 | 2.91 | N | T |
| 08/06/2007 | 2.84 | N | T |
| 11/06/2007 | 7.85 | N | T |
| 02/08/2008 | 3.28 | N | T |
| 05/12/2008 | 2.30 | N | T |
| 08/11/2008 | 4.60 | N | T |
| 11/12/2008 | 2.60 | N | T |
| 01/08/2009 | 2.70 | N | T |
| 04/15/2009 | 4.90 | N | T |
| 07/07/2009 | 2.00 | N | T |
| 10/13/2009 | 9.80 | N | T |
| 01/12/2010 | 3.00 | N | T |
| 04/12/2010 | 3.50 | N | T |
| 07/13/2010 | 1.52 | N | T |
| 10/06/2010 | 7.66 | N | T |

| | | | |
|---|---|---|---|
| 01/06/2011 | 3.98 | N | T |
| 04/06/2011 | 4.90 | N | T |
| 07/18/2011 | 1.60 | N | T |
| 10/17/2011 | 2.90 | N | T |
| 01/05/2012 | 4.10 | N | T |
| 04/09/2012 | 4.88 | N | T |
| 07/05/2012 | 9.25 | N | T |
| 10/16/2012 | 3.02 | N | T |
| 07/01/2013 | 7.05 | N | T |
| 12/15/2014 | 2.88 | N | T |
| 06/30/2015 | 2.89 | N | T |
| 09/29/2016 | 1.28 | N | T |
| 08/09/2017 | 2.79 | N | T |
| 08/28/2018 | 2.28 | N | T |
| 08/28/2019 | 2.90 | N | T |