STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

AVERY T. DAY
ACTING COMMISSIONER

January 6, 2016

Mr. Thomas Milligan Jr. P.E.
Director of Wastewater / City Engineer
P.O. Box 586
Biddeford, Maine 04005
tmilligan@Biddefordmaine.org

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102741
Maine Waste Discharge License Application #W007581-6B-F-R
Biddeford Pool
Proposed Draft Permit

Dear Mr. Milligan:

Enclosed is a proposed draft MEPDES permit and Maine WDL (permit hereinafter) which the Department proposes to issue as a final document after opportunity for your review and comment. By transmittal of this letter you are provided with an opportunity to comment on the proposed draft permit and its conditions (special conditions specific to this permit are enclosed; standard conditions applicable to all permits are available upon request). 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, as required by our new regulations, and from any other parties who have notified the Department of their interest in this matter.

All comments must be received in the Department of Environmental Protection office on or before the close of business Friday, February 5, 2016. Failure to submit comments in a timely fashion will result in the final 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.

If you have any questions regarding the matter, please feel free to call me at 446-1875.

Sincerely,

Rodney Robert
Division of Water Quality Management
Bureau of Water Quality

Enc.
cc: Stuart Rose, DEP/SMRO
Lori Mitchell, DEP/CMRO
Oliver Cox, DMR
Environmental Review, DMR
Environmental Review, DIFW
Kathleen Leyden, DACF
David Webster, USEPA
David Pincumbe, USEPA
Alex Rosenburg, USEPA
Olga Vergara, USEPA
Marelynn Vega, USEPA
Richard Carvalho, USEPA

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

DEPARTMENT ORDER

IN THE MATTER OF

CITY OF BIDDEFORD	)	MAINE POLLUTANT DISCHARGE
BIDDEFORD, YORK COUNTY, ME.	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
W007581-6B-F-R	)	WASTE DISCHARGE LICENSE
ME0102741 **APPROVAL**	)	**RENEWAL**

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S.A. §§ 411 – 424-B, *Water Classification Program*, 38 M.R.S.A. §§ 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 BIDDEFORD (CITY), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

On July 8, 2015, the Department accepted as complete for processing, a renewal application for Maine Pollutant Discharge Elimination System (MEPDES) #ME0102741 /Waste Discharge License (WDL) #W007581-6B-D-R, which was issued on July 14, 2010 for a five-year term. The 7/14/10 permit authorized the discharge of up to a monthly average flow of 0.030 million gallons per day (MGD) of secondary treated waste waters from the City's Biddeford Pool facility to Saco Bay, Class SB, in Biddeford, Maine.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the previous permitting action except that this permit is;

1. Eliminating the waiver for percent removal requirements for BOD5 and TSS when influent strength is less than 200 mg/L.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated January 6, 2016, and subject to the Conditions listed below, the Department makes the following conclusions:

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

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

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

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

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

   (c) Where the standards of classification of the receiving 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.A. § 414-A(1)(D) and 414-A(1-B).

ACTION

THEREFORE, the Department APPROVES the application of the CITY OF BIDDEFORD to discharge a monthly average of 30,000 gallons per day (GPD) of secondary treated sanitary wastewater from the City's Biddeford Pool facility to Saco Bay, Class SB, in Biddeford, Maine., SUBJECT TO ALL APPLICABLE STANDARDS AND REGULATIONS AND THE FOLLOWING CONDITIONS:

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

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS ___ DAY OF _____ 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
AVERY T. DAY, Acting Commissioner

Date of initial receipt of application July 7, 2015
Date of application acceptance July 8, 2015

Date filed with Board of Environmental Protection _____

This Order prepared by Rod Robert, Bureau of Water Quality

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge secondary treated sanitary waste water from **Outfall #001** to the Atlantic Ocean at Saco Bay, Class SB. Such discharges shall be limited and 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]*	0.030MGD *[03]*	---	Report, MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5[(1)] *[00310]*	8 lbs/day *[26]*	11 lbs/day *[26]*	12 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	24-Hour Composite *[24]*
BOD_5 Percent Removal[(1)] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	8 lbs/day *[26]*	11 lbs/day *[26]*	12 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	24-Hour Composite *[24]*
TSS Percent Removal[(1)] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	5/Week *[03/07]*	Grab *[GR]*
Fecal coliform bacteria[(2)] ***(year-round)*** *[31616]*	---	---	---	15/100 ml[(3)] *[13]*	---	50/100 ml *[13]*	1/Week *[02/07]*	Grab *[GR]*
Total Residual Chlorine[(4)] *[50060]*	---	---	---	---	---	1.0 mg/L *[19]*	5/Week *[05/07]*	Grab *[GR]*
Mercury (Total) [(5)] *[71900]*	---	---	---	17 ng/L *[3M]*	---	25.5 ng/L *[3M]*	1/Year *[01/YR]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	5/Week *[05/07]*	Grab *[GR]*

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

SPECIAL CONDITIONS

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

Footnotes:

Sampling Locations:

Influent sampling for BOD_5 and TSS shall be sampled at the splitter box.

Effluent sampling- All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics.

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

Sampling – Sampling and analysis must be conducted in accordance with; a) methods approved in 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses,* 38 M.R.S.A. § 413 or laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended February 13, 2000).

1. **Percent removal** - The permittee must achieve a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand for all flows receiving secondary treatment. The percent removal is calculated based on influent and effluent concentration values.

2. **Fecal coliform bacteria** - Limits apply on a year-round basis.

3. **Fecal coliform bacteria – The monthly average limitation is a geometric mean limitation and values shall be calculated and reported as such.**

4. **Total residual chlorine (TRC) –** Limitations and monitoring requirements for TRC are applicable any time elemental chlorine or chlorine based compounds are being 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.

SPECIAL CONDITIONS

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

Footnotes:

5. **Mercury –** All mercury sampling (1/Year) required to determine compliance with interim limitations established pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001) shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analyses shall be conducted in accordance with EPA Method 1631E, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry. See **Attachment A,** *Effluent Mercury Test Report*, of this permit for the Department's form for reporting mercury test results.

   Compliance with the monthly average limitation established in Special Condition A.1 of this permit will be based on the cumulative arithmetic mean of all mercury tests results that were conducted utilizing sampling Methods 1669 and analysis Method 1631E on file with the Department for this facility.

B. NARRATIVE EFFLUENT LIMITATIONS

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

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

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

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

SPECIAL CONDITIONS

C. TREATMENT PLANT OPERATOR

The person who has the management responsibility over the treatment facility must hold a **Grade II** certificate (or higher) or must be a Maine Registered Professional Engineer pursuant to *Sewerage Treatment Operators*, Title 32 M.R.S.A., Sections 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.

D. LIMITATIONS FOR INDUSTRIAL USERS

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

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 July 8, 2015; 2) the terms and conditions of this permit; and 3) only from Outfall #001. Discharges of waste water from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

F. NOTIFICATION REQUIREMENT

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

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

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

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

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

SPECIAL CONDITIONS

G. WET WEATHER FLOW MANAGEMENT PLAN

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

The plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

The permittee shall review their plan annually and record any necessary changes to keep the plan up to date.

H. OPERATION & MAINTENANCE (O&M) PLAN

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

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

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

SPECIAL CONDITIONS

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

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

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

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

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

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 annual 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.

J. MONITORING AND REPORTING

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 shall be **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMRs are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein must be submitted to the Department-assigned inspector, unless otherwise specified, by the Department at the 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

SPECIAL CONDITIONS

J. MONITORING AND REPORTING (cont'd)

Alternatively, if the permittee submits an electronic DMR (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory not later than close of business on the 15th day of the month following the completed reporting period. Hard copy documentation submitted in support of the eDMR must be postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period. Electronic documentation in support of the eDMR must be submitted not later than close of business on the 15th day of the month following the completed reporting period.

K. 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 initiate the current Emergency Response Plan prepared in conjunction with the Maine Department of Marine Resources, as appropriate, to prevent or minimize conditions that may endanger health or the environment. The permittee must report the event 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);
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.

L. REOPENING OF PERMIT FOR MODIFICATIONS

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

M. SEVERABILITY

In the event that any provision(s), or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

MERCURY REPORT - Clean Test Only

Data Date Range: 18/Aug/2010-18/Aug/2015

Facility: BIDDEFORD POOL **Permit Number:** ME0102741

Max (ug/l): 0.0034 **Average (ug/l):** 0.0026

Sample Date	Result (ng/l)	Lsthan	Clean
10/12/2010	2.40	N	T
03/14/2011	3.20	N	T
10/12/2011	3.36	N	T
02/28/2012	2.32	N	T
04/22/2013	2.60	N	T
04/15/2014	2.60	N	T
05/13/2015	2.75	N	T

ATTACHMENT B

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHAPTER 530.2(D)(4) CERTIFICATION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
Commissioner

MEPDES#_____Facility Name_____

Since the effective date of your permit, have there been;		NO	YES Describe in comments section
1	Increases in the number, types, and flows of industrial, commercial, or domestic discharges to the facility that in the judgment of the Department may cause the receiving water to become toxic?	☐	☐
2	Changes in the condition or operations of the facility that may increase the toxicity of the discharge?	☐	☐
3	Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge?	☐	☐
4	Increases in the type or volume of hauled wastes accepted by the facility?	☐	☐

COMMENTS:

Name (printed): _____

Signature:_____Date: _____

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

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

Scheduled Toxicity Testing for the next calendar year

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

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

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

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

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

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

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

web site: www.maine.gov/dep

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE
DRAFT FACT SHEET

Date: **January 6, 2016**

PERMIT NUMBER: **ME0102741**
LICENSE NUMBER: **W007581-6B-F-R**

NAME AND ADDRESS OF APPLICANT:

CITY OF BIDDEFORD
P. O. Box 586
205 Main Street
Biddeford, Maine 04005

COUNTY: **York County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

BIDDEFORD POOL
12 Stonecliff Road
Biddeford, Maine 04005

RECEIVING WATER AND CLASSIFICATION: **Saco Bay, Class SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Thomas Milligan**
Director of Waste Water
Email: tmilligan@biddefordmaine.org
(207) 284-9118

1. APPLICATION SUMMARY

a. Application: On July 8, 2015, the Department accepted as complete for processing, a renewal application for Maine Pollutant Discharge Elimination System (MEPDES) #ME0102741 /Waste Discharge License (WDL) #W007581-6B-D-R, which was issued on July 14, 2010 for a five-year term. . The 7/14/10 permit authorized the discharge of up to a monthly average flow of 0.030 million gallons per day (MGD) of secondary treated waste waters from the City's Biddeford Pool facility to Saco Bay, Class SB, in Biddeford, Maine. See **Attachment A** of this Fact Sheet for a location map.

b. Source Description: The City's waste water treatment facility receives waste waters generated by approximately 75 residential users in the area of the City referred to as Biddeford Pool. The collection system is approximately one mile in length (2/3rds gravity and 1/3 force main), has two pump stations served by a portable generator and no combined sewer overflow (CSO) points. The facility is not authorized by this permit to receive transported wastes from septage haulers in the area.

1. APPLICATION SUMMARY (cont'd)

c. Waste Water Treatment: The Town's waste water treatment facility provides a secondary level of treatment via two rotating biological contactors (RBCs). Influent waste water is first processed in two anoxic pretreatment tanks prior to flowing to the flow equalization pump station which distributes the waste water to the two RBCs that are operated in a parallel mode of operation. The waste water exits the RBCs and flows to two settling tanks and is then conveyed to chlorine detention tank for disinfection prior to being discharge to the receiving water via a pipe measuring eight inches in diameter. The outfall pipe is submerged 8.5 feet below the mean low water level. The waste water treatment facility is equipped with an emergency stand-by generator with emergency call-in and high alarm systems. See **Attachment B** of this Fact Sheet for a schematic of the waste water treatment facility.

2. PERMIT SUMMARY

a. Terms and Conditions: - This permitting action is carrying forward all the terms and conditions of the previous permitting action except that this permit is;

1. Eliminating the waiver for percent removal requirements for BOD5 and TSS when influent strength is less than 200 mg/L.

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

November 1989 – The Biddeford Pool waste water treatment facility commenced operations.

April 13, 1990 – The Department issued Natural Resources Protection Act Coastal Wetland Alteration and Water Quality Certification Order that approved the replacement and extension of the outfall pipe for the Biddeford Pool waste water treatment facility. The outfall pipe replacement/extension was completed in July 1991.

March 28, 1994 – The Department issued WDL #W007581-45-A-N for a five-year term.

March 30, 2000 - The Department issued WDL #W007581-5L-B-R for a five-year term.

July 12, 2000 – The Department administratively modified the 3/30/00 WDL by establishing interim mean and maximum technology based concentration limitations of 17.0 ng/L and 25.5 ng/L, respectively for mercury.

June 23, 2005 - The Department issued combination MEPDES permit #ME0102741/WDL #W007581-5L-C-R, for a five-year term.

June 1, 2010 – the City of Biddeford submitted a timely and complete application to the Department to renew the MEPDES permit/WDL for the Biddeford pool facility.

July 14, 2010 - The Department issued combination MEPDES permit #ME0102741/WDL #W007581-6B-D-R, for a five-year term.

2. PERMIT SUMMARY (cont'd)

July 7, 2015 – the City of Biddeford submitted a timely and complete application to the Department to renew the MEPDES permit/WDL for the Biddeford pool facility.

3. CONDITIONS OF PERMITS

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

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A., Section 469 classifies Saco Bay at the point of discharge as a Class SB waterway. Maine law, 38 M.R.S.A., Section 465-B(2) establishes the classification standards for Class SB waters.

5. RECEIVING WATER CONDITIONS

The 2012 Integrated Water Quality Monitoring and Assessment Report published by the Department pursuant to Section 305(b) of the Federal Water Pollution Control Act lists Biddeford Pool, Biddeford to Dyer Point, Cape Elizabeth (waterbody ID 821), as *"Category 2: Estuarine and Marine Waters Attaining Some Designated Uses – Insufficient Information for Other Uses."* The 2012 Report also lists Maine's marine and estuarine waters as *"Category 5-D: Estuarine and Maine Waters Impaired by Legacy Pollutants."* Impairment in this context refers to the estuarine and marine waters partially supporting the designated use of fishing and harvesting of shellfish due to elevated levels of PCBs and other persistent bioaccumulating substances in tissues of lobster tomalley. The Department has made the determination that if the Biddeford Pool facility maintains compliance with the fecal coliform bacteria limits established in this permitting action the facility will not cause or contribute to the closure of the shellfish harvesting area.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow - The previously established a monthly average flow limitation of 0.030 MGD is being carried forward in this permitting action. The limit reflects the monthly average design flow capacity of the existing waste water treatment facility. Also, the daily maximum discharge flow reporting requirement is being carried forward in this permitting action to assist the Department in evaluation of effluent data.

A review of the monthly DMR data for the period September 2010 – July 2015 indicates the permittee has been in compliance with said limit 100% of the time as flow values have been reported as follows:

Flow (DMRs=58)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	0.03	0.01 – 0.02	0.012
Daily Maximum	Report	0.004 – 0.08	0.025

b. Dilution - Department Regulation Chapter 530, *Surface Water Toxics Control Program*, §4(A)(2) 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 or CORMIX. Using plan and profile information provided by the permittee and the PLUMES3 model, the Department has determined the dilution factors for the discharge from the waste water treatment facility are as follows:

Acute = 78:1 Chronic = 540:1 Harmonic Mean: 1,620:1[(1)]

Footnote:

(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 USEPA publication *"Technical Support Document for Water Quality-based Toxics Control"* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): - The previously established monthly and weekly average BOD5 and TSS concentration limits of 30 mg/L and 45 mg/L, respectively, are considered best practicable treatment (BPT), and are based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B) as defined in Department rule 06-096 CMR Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of BPT. All three concentration limits are being carried forward in this permitting action.

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

As for mass limitations, the previous permitting action established monthly average, weekly average and daily maximum limitations based on a monthly average limit of 0.030 MGD that are being carried forward in this permitting action. The limitations were calculated as follows:

Monthly average: (0.030 MGD)(8.34)(30 mg/L) = 7.5 lbs/day
Weekly average: (0.030 MGD)(8.34)(45 mg/L) = 11.3 lbs/day
Daily maximum: (0.030 MGD)(8.34)(50 mg/L) = 12.5 lbs/day

A review of the monthly Discharge Monitoring Report (DMR) data for the period September 2010 – July 2015 indicates the permittee has been in compliance with said limits 100% of the time as BOD and TSS values have been reported as follows:

BOD Mass (DMRs=58)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	8	0.1 – 3.2	0.73
Weekly Average	11	0.2 – 8.9	1.23
Daily Maximum	12	0.2 – 8.9	1.28

BOD Concentration (DMRs=58)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	3.1 – 18	7
Weekly Average	45	2.9 - 23	9.4
Daily Maximum	50	3.8 - 23	9.7

TSS Mass (DMRs=58)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	8	0.1 – 1.9	0.6
Weekly Average	11	0.2 – 7.5	0.9
Daily Maximum	12	0.1 – 7.5	0.9

TSS Concentration (DMRs=58)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	1.9– 11	5
Weekly Average	45	2.5 – 17	7.6
Daily Maximum	50	2.5 - 17	7.5

This permitting action carries forward the requirement of 85% removal for BOD and TSS pursuant to Department rule Chapter 525(3)(III)(a&b)(3).

Monitoring frequencies for BOD and TSS of 1/Week are being carried forward from the previous permitting action and are based on Department policy for facilities with a monthly average flow limitation less than 0.1 MGD.

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

d. Settleable Solids - The previous permit established a daily maximum concentration BPT limit of 0.3 ml/L that is being carried forward in this permitting action. A review of the monthly Discharge Monitoring Report (DMR) data for the period September 2010 – July 2015 indicates the permittee has been in compliance with said limit 100% of the time as settleable solids values have been reported as follows:

Settleable solids (n=58)

Value	Limit (ml/L)	Range (mg/L)	Average (mg/L)
Daily Maximum	0.3	0.1 – 0.1	0.1

e. Fecal coliform bacteria - The previous permitting action established monthly average and daily maximum limits of 15 colonies/100 ml and 50 colonies/100 ml and is based on the Maine Water Classification Program criteria for the receiving waters (including standards in the National Shellfish Sanitation Program) and requires application of the BPT technology. At the request of the State of Maine's Department of Marine Resources, the limitations are in effect on a year-round basis to protect open shellfish harvesting areas in the immediate vicinity of the outfall for the waste water treatment facility.

A review of the monthly Discharge Monitoring Report (DMR) data for the period September 2010 – July 2015 indicates the permittee has been in compliance with the monthly average (geometric mean) limit 100% of the time and in compliance with the daily maximum limit 95% of the time as fecal coliform values have been reported as follows:

Fecal coliform bacteria (n=58)

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	15	1.0 – 16	1.88
Daily Maximum	50	1.0 - 200	12

f. Total Residual Chlorine - The previously established daily maximum technology based limit of 1.0 mg/L for the discharge of total residual chlorine (TRC) is specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. The Department imposes the more stringent of the water quality or technology based limits in permitting actions. End-of-pipe water quality based concentration thresholds may be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Threshold	Chronic Threshold
Chlorine	0.013 mg/L	0.0075 mg/L	78:1	540:1	1.01 mg/L	4.05 mg/L

Example calculation: Acute – 0.013 mg/L (78) = 1.01 mg/L

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

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 unless the calculated acute water quality based threshold is lower than 1.0 mg/L. In the case of Biddeford Pool, both the acute and chronic water quality based thresholds are greater than 1.0 mg/L, therefore, the daily maximum BPT limit of 1.0 mg/L is being carried forward from the previous permitting action.

A review of the monthly Discharge Monitoring Report (DMR) data for the period September 2010 – July 2015indicates the permittee has been in compliance with said limit 100% of the time as total residual chlorine values have been reported as follows:

Total residual chlorine (DMRs=58)

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Daily Maximum	1.0	0.7 – 1.0	0.9

g. pH - A previous permitting action established a pH range limit of 6.0 –9.0 standard units pursuant to a new Department rule found at Chapter 525(3)(III)(c). The limits are considered BPT and are being carried forward in this permitting action.

h. Mercury - Pursuant to *Certain deposits and discharges prohibited*, Maine law, 38 M.R.S.A. § 420 and *Waste discharge licenses*, 38 M.R.S.A. § 413 and *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519 (last amended October 6, 2001), the Department issued a *Notice of Interim Limits for the Discharge of Mercury* on July 12, 2000 to the permittee thereby administratively modifying the WDL by establishing interim monthly average and daily maximum effluent concentration limits of 17.0 parts per trillion (ppt) and 25.5 ppt, respectively, along with a minimum monitoring frequency requirement of two (2) tests per year for mercury.

On February 6, 2012, the Department issued a minor revision of the permit by reducing the monitoring frequency to 1/Year. The mercury effluent limitations and monitoring requirement of 1/Year are being incorporated into Special Condition A, Effluent Limitations And Monitoring Requirements, of this permit.

Maine law 38 M.R.S.A., §420 1-B,(B)(1) states that a facility is not in violation of the AWQC for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413, subsection 11. A review of the Department's data base for the period August 2010 through August 2015 indicates mercury test results reported have ranged from 2.3 ppt to 3.4 ppt with an arithmetic mean (n=7) of 2.8 ppt.

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

i. Nitrogen - The permittee has not been conducting total nitrogen testing on its discharge to date. However, the USEPA requested the Department evaluate the reasonable potential for the discharge of total nitrogen to cause or contribute to non-attainment of applicable water quality standards in marine waters, namely dissolved oxygen (DO) and marine life support. The Department has 50 total nitrogen effluent values with an arithmetic mean of 14.3 mg/L collected from various municipally-owned treatment works that discharge to marine waters of the State. None of the facilities whose effluent data were used are specifically designed to remove total nitrogen. For the MEPDES permitting program, the Department considers 14.3 mg/L to be representative of total nitrogen discharge levels for all facilities providing secondary treatment that discharge to marine waters in the absence of facility specific data.

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

Extrapolating estuarine criteria to an exposed coastal marine environment may result in thresholds that are not appropriate given the lower ambient nutrient concentrations expected in the open ocean. Based on studies in EPA Region I and the Department's best professional judgment of thresholds that are protective of Maine water quality standards, the Department is utilizing a threshold of 0.45 mg/L for the protection of aquatic life in marine waters using dissolved oxygen as the indicator, and 0.32 mg/L for the protection of eelgrass in the vicinity of discharge outfalls. There are eelgrass beds in the immediate vicinity of the outfall.

With the exception of ammonia, nitrogen is not acutely toxic, the Department is considering a far-field dilution to be more appropriate when evaluating impacts of total nitrogen to the marine environment. The permittee's facility has a chronic near field dilution of 540:1. Far field dilutions are significantly higher than the near-field dilution, ranging from 100 – 10,000 times higher depending on the location of the outfall pipe. With outfalls located in protected coves or small embayments without significant flushing, far field dilution factors would tend to be on the order of 100 times the near field dilution. With open ocean discharges, far field dilutions would tend to be 1,000 – 10,000 times the near field dilution. The permittee's facility discharges to a small embayment, thus the far field dilution would likely be 100 times the near field dilution. Using the most protective far field dilution multiplier of 100 times higher than the near field dilution factor becomes 54,000:1 in the far field.

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

Total nitrogen concentrations in effluent = 14.3 mg/L
Far Field dilution factor = 54,000:1

In-stream concentration after dilution: $\frac{14.3 \text{ mg/L}}{54{,}000} = 0.00026$ mg/L

The Department has been collecting ambient total nitrogen data in Maine's marine waters to support development of statewide nutrient criteria for marine waters. For the permittee's facility, the Department calculated a mean background concentration of 0.22 mg/L based on ambient data collected in small, shallow embayments directly exposed to the Gulf of Maine (n=10). As a result, after reasonable opportunity for far field mixing, the increase in the concentration of total nitrogen in the receiving water due to the discharge from the permittee's facility will not be measureable based on typical laboratory detection limits; thus, the instream concentration of total nitrogen will remain 0.22 mg/L. This concentration is lower than the Department's and EPA's best professional judgment of a critical threshold of 0.32 mg/L to protect eelgrass in the vicinity of the permittee's outfall pipe. Therefore, the Department is making a best professional judgment determination that the discharge of total nitrogen from the permittee's facility does not exhibit a reasonable potential to exceed applicable water quality standards for Class SB waters.

j. Whole Effluent Toxicity (WET) and Chemical Specific Testing – WET monitoring is conducted of effluent to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Priority pollutant and analytical chemistry testing is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health AWQC as established in Department rule Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants.*

This permitting action does not contain any WET or chemical specific testing requirements as the Biddeford Pool facility is exempt from said testing pursuant to Department rule Chapter 530, *Surface Water Toxics Control Program*, adopted on October 12, 2005, §2(1) exempting the Biddeford Pool facility from WET and chemical specific testing as it states;

The following dischargers are exempt from testing requirements of this rule unless the Department determines that there is a need for testing based on the nature, location or circumstances of an individual discharge.

(1) *Discharges from individual discharge points licensed to discharge less than 50,000 gallons per day of solely domestic wastewater and with a chronic dilution factor of at least 50 to 1, provided no holding tank wastes containing chemicals are accepted by the facility;*

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

The Biddeford Pool facility meets the exemption criteria at it is permitted to discharge 30,000 gpd and has a chronic dilution factor of 540:1. Pursuant to Chapter 530(2)(D)(4), Special Condition I of this permit requires the permittee to file an annual certification with the Department to maintain the exemption from the testing requirements.

7. 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 waterbody to meet standards for Class SB classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Journal Tribune newspaper on or about July 10, 2015. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

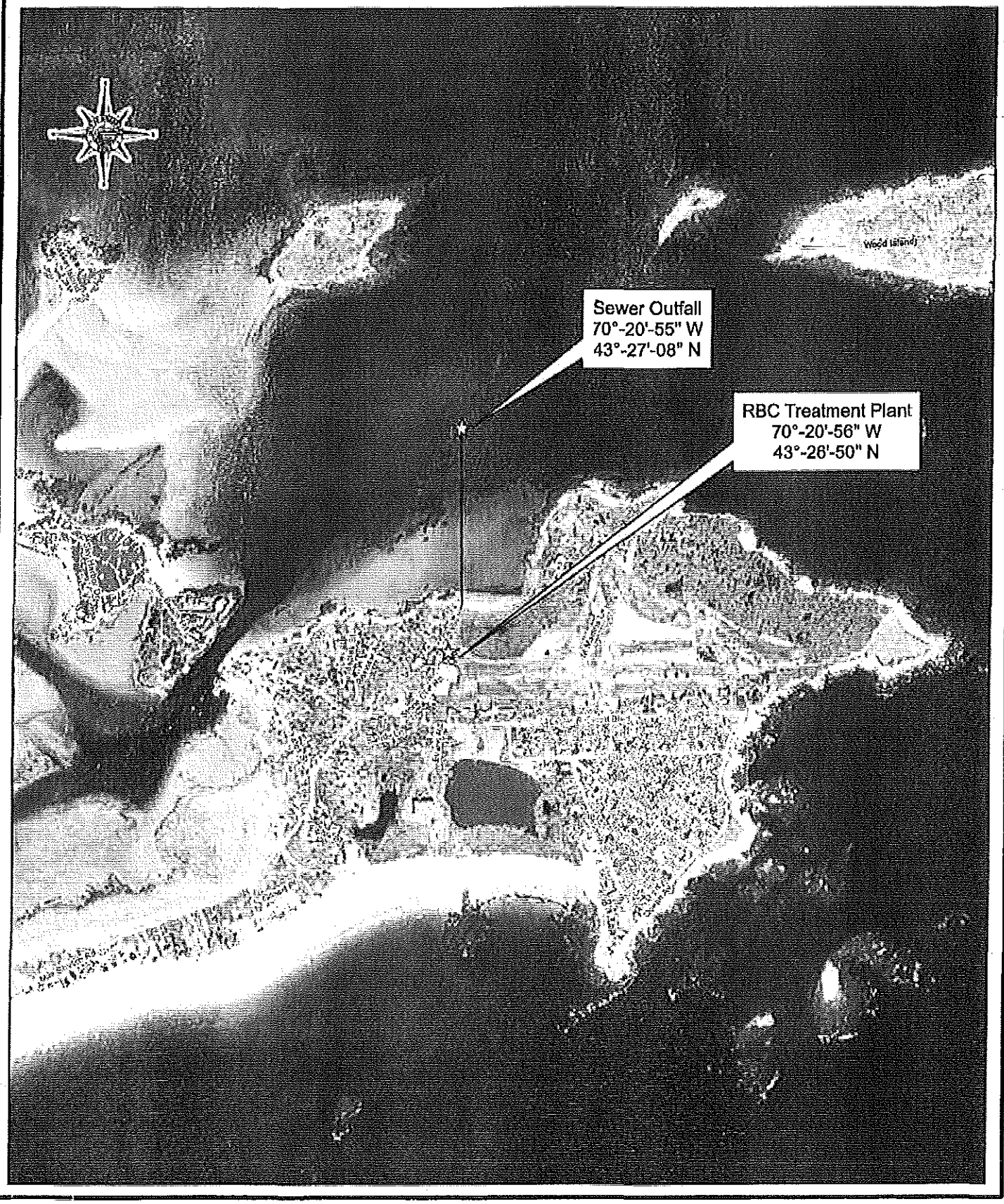
Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Rod Robert
Division of Water Quality Management
Bureau of Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 446-1875
e-mail: rodney.robert@maine.gov

10. RESPONSE TO COMMENTS

Reserved until the end of the formal thirty (30) day comment period.

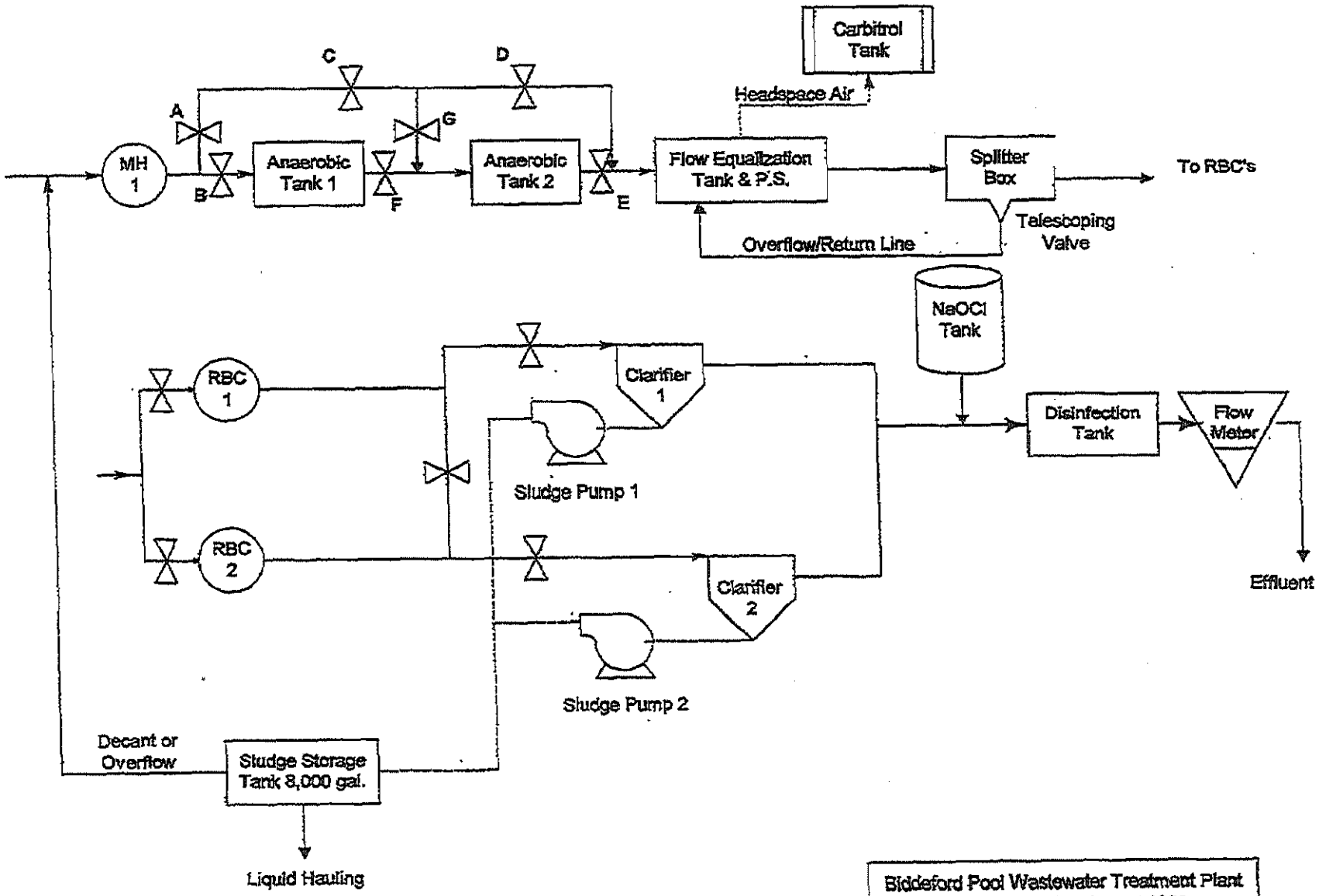
ATTACHMENT A



The City of Biddeford, Maine
Engineering Department - GIS Mapping
205 Main Street · P.O. Box 586 · Biddeford, Maine 04005-0586
Tel. 207 284-9118 · Fax 207 286-9388

Biddeford Pool RBC Location

ATTACHMENT B



Biddeford Pool Wastewater Treatment Plant
Flow Schematic - August 2000