STATE OF MAINE
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

November 18, 2016

Ms. LeeAnna Libby
Great Salt Bay Sanitary District
P.O. Box 23
Damariscotta, ME. 04543
leanna@gsbsd.org

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102431
Maine Waste Discharge License (WDL) Application #W00744-6B-I-R
Proposed Draft MEPDES Permit Renewal

Dear Ms. Libby:

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.

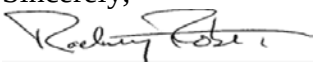
The comment period begins on November 18, 2016 and ends on December 19, 2016. All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business Monday December 19, 2016. Failure to submit comments in a timely fashion will 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
rodney.robert@maine.gov

If you have any questions regarding the matter, please feel free to call me at 207-446-1875.

Sincerely,



Rodney Robert
Division of Water Quality Management
Bureau of Water Quality

Enclosure

ec:
Beth DeHaas, DEP
Lori Mitchell, MDEP
David Webster, USEPA
David Pincumbe, USEPA
Alex Rosenberg, USEPA
Olga Vergara, USEPA
Marelyn Vega, USEPA
Maine Dept. Inland Fisheries and Wildlife Environmental Review
Maine Dept. Marine Resources Environmental Review

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

DEPARTMENT ORDER

DEPARTMENT ORDER

IN THE MATTER OF

GREAT SALT BAY SANITARY DISTRICT	)	MAINE POLLUTANT DISCHARGE
NOBLEBORO, LINCOLN COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
DAMARISCOTTA MILLS PLANT	)	WASTE DISCHARGE LICENSE
ME0102431	)	
W007044-6B-I-R **APPROVAL**	)	**RENEWAL**

In compliance with the provision of the *Federal Water Pollution Control Act*, Title 33 U.S.C. § 1251, *Conditions of licenses*, 38 M.R.S. § 414-A, and applicable regulations, the Department of Environmental Protection (Department) has considered the application of the GREAT SALT BAY SANITARY DISTRICT (GSBSD), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The GSBSD submitted a complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0102431/ Maine Waste Discharge License (WDL) #W007044-5L-G-R (permit hereinafter), which was issued by the Department on April 20, 2011. The 4/20/11 MEPDES permit/WDL (permit hereinafter) authorized the discharge of up to a monthly average flow of 0.015 million gallons per day (MGD) of secondary treated sanitary waste water from a municipal waste water treatment facility. The waste water treatment facility is referred to as the "Damariscotta Mills" sand filter system and discharges to the Damariscotta River Estuary "Great Salt Bay", Class SB, in Nobleboro, Maine.

PERMIT SUMMARY

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

1. Establishes a once per year monitoring frequency for pH pursuant to 40 CFR 122.44(i)(2).
2. Establishes an assumed influent concentration value of 286 mg/L when testing for percent removal of BOD and TSS.
3. Revises language in Special Condition I, Monitoring and Reporting.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 18, 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., Section 464(4)(F), will be met, in that:

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

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

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

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

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

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of the GREAT SALT BAY SANITARY DISTRICT to discharge up to a monthly average flow of 0.015 million gallons per day (MGD) of secondary treated municipal waste waters to the Damariscotta River Estuary, Class SB, 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 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. § 10002 and Rules Concerning the *Processing of Applications and Other Administrative Matter*s, 06-096 CMR 2(21)(A) (amended October 19, 2015).

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

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
Paul Mercer, Commissioner

PLEASE NOTE ATTACHED FACT SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 25, 2016.

Date of application acceptance: January 25, 2016.

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. **OUTFALL #001A – Final Effluent**
   The permittee is authorized to discharge secondary treated sanitary wastewater from **OUTFALL #001A** to the Damariscotta River Estuary. Such discharges must be limited and monitored by the permittee as specified below:

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]*	0.0150 MGD *[03]*	---	Report MGD *[03]*	---	---	---	Continuous *[99/99]*	Meter *[MT]*
Biochemical Oxygen Demand *[00310]*	2.8 lb/day *[26]*	4.2 lb/day *[26]*	4.6 lb/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	2/Month *[02/30]*	Grab *[GR]*
BOD_5 Percent Removal(1) *[81010]*	---	---	---	85%	---	---	---	Calculate
Total Suspended Solids *[00530]*	2.8 lb/day *[26]*	4.2 lb/day *[26]*	4.6 lb/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	2/Month *[02/30]*	Grab *[GR]*
TSS Percent Removal(1) *[81011]*	---	---	---	85%	---	---	---	Calculate
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	2/Month *[02/30]*	Grab *[GR]*
Fecal Coliform Bacteria(2) *[31616]* **(May 15 – September 30)**	---	---	---	15/100 ml(3) *[13]*	---	50/100 ml *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine(4) *[50060]*	---	---	---	---	---	1.0 mg/L *[19]*	1/Week *[01/07]*	Grab *[GR]*
pH (Std. Unit)(5) *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	1/Year *[01/365]*	Grab *[GR]*
Mercury (Total) (6) *[50286]*	---	---	---	5.7 ng/L *[3M]*	---	15.1 ng/L *[3M]*	1/Year *[01/YR]*	Grab *[GR]*

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

SPECIAL CONDITIONS

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

Footnotes:

Sampling Locations:

Effluent sampling- Samples for pH, fecal coliform bacteria, total residual chlorine and settleable solids must be collected from the sampling valve located in the final effluent monitoring/chlorination pit. Samples for BOD and TSS must be collected from the six-inch sand filter collection pipe located in the chlorine contact/pump station.

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 Title 40 *Code of Federal Regulations* (40 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 Human Services. Samples that are analyzed by laboratories operated by wastewater discharge facilities licensed pursuant to *Waste discharge licenses*, 38 M.R.S. § 413 are subject to the provisions and restrictions of the *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended April 1, 2010). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report.

SPECIAL CONDITIONS

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

Footnotes:

1. **Percent Removal** - The permittee must maintain a minimum of 85 percent removal of both BOD_5 and TSS for all flows receiving secondary treatment. The percent removal must be calculated based on influent and effluent concentration values. The permittee's wastewater treatment system does not contain an influent sampling location that is representative of raw wastewater conditions. Therefore, this permitting action authorizes the permittee to assume an influent BOD_5 and TSS concentration value of 286 mg/L for purposes of calculating the monthly percent removal value. See page 8 of fact sheet for a basis statement.

2. **Fecal coliform bacteria** - Limits and monitoring requirements are seasonal and apply between May 15 and September 30 of each year. The Department reserves the right to impose year-round disinfection to protect the health and welfare of the public.

3. **Fecal coliform bacteria** – Monthly Average is to be calculated and reported as a geometric mean.

4. **Total Residual Chlorine (TRC)** – The limitations apply at the treatment plant's effluent pump station. Limitations and monitoring requirements are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. The permittee must utilize approved test methods that are capable of bracketing the limitations in this permit.

5. **pH** - Effluent pH results outside the range of 6.0 – 9.0 standard units are not to be reported as exceptions provided the cause(s) for the exceedance(s) are naturally occurring. The permittee must provide the Department with written documentation as to the cause(s) of the pH results if found outside the 6.0 – 9.0 range.

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 CMR 519 in accordance with the U. S. Environmental Agency's (USEPA) "clean sampling techniques" found in USEPA Method 1669, *Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels*. All mercury analysis must be conducted in accordance with USEPA Method 1631, *Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.* See **Attachment A** of this permit for a Department report 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.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

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

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

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

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

C. PROHIBITION OF NON-DOMESTIC USERS

The wastewater collection and treatment system may not be used to collect, treat or discharge wastewater other than from domestic users. The permittee is not authorized to receive transported wastes for treatment.

D. TREATMENT PLANT OPERATOR

The person who has the management responsibility over the treatment facility must hold a **Maine Grade I** 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.

SPECIAL CONDITIONS

E. NOTIFICATION REQUIREMENT

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

1. Any introduction of pollutants into the 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.

3. For the purposes of this section, adequate notice must 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 of the change in the quality or quantity of the waste water to be discharged from the treatment system.

F. 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 January 25, 2016; 2) the terms and conditions of this permit, and 3) only from Outfall #001. Discharges of wastewater from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition B(5), Bypasses, of this permit.

G. OPERATION & MAINTENANCE (O&M) PLAN

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

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

SPECIAL CONDITIONS

H. SEPTIC TANKS

1. Septic tanks and other treatment tanks must be regularly inspected and maintained to ensure that they are providing best practicable treatment. The permittee must maintain logs of inspections/maintenance that records the date, notes on observations, repairs conducted etc. The logs must be maintained on site at all times and made available to Department personnel upon request.

2. Tank contents must be removed whenever the sludge and scum occupies one-third of the tank's liquid capacity or whenever levels approach maximum design capacity. Following pumping, the tanks must be checked for damage at key joints and the inlet and outlet baffles, and repaired promptly if damaged. The permittee must keep a pumping log including the date of pumping, quantity of material removed, name and number of licensed contractor, and pumping frequency.

I. MONITORING AND REPORTING

Electronic Reporting

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

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

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

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

SPECIAL CONDITIONS

J. 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 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 effluent or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

L. SEVERABILITY

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

ATTACHMENT A

MERCURY REPORT - Clean Test Only

Data Date Range: 18/Aug/2011-18/Aug/2016

Facility: GSBSD, DAMARISCOTTA MILLS **Permit Number:** ME0102431

Max (ng/l): 15.1000 **Average (ng/l):** 5.7104

Sample Date	Result (ng/l)	Lsthan	Clean
11/29/2011	3.70	N	T
07/11/2012	4.73	N	T
10/17/2013	4.24	N	T
04/29/2014	3.40	N	T
04/29/2015	3.71	N	T

Last permit cycle

MERCURY REPORT - Clean Test Only

Data Date Range: 18/Nov/1998-18/Aug/2016

Facility: GREAT SALT BAY SANITARY DISTRICT (NOBLEBORO) **Permit Number:** ME0102431

Max (ng/l): 15.1000 **Average (ng/l):** 5.9313

Sample Date	Result (ng/l)	Lsthan	Clean
09/29/1999	10.60	N	T
11/04/1999	7.45	N	T
02/29/2000	5.13	N	T
10/27/2000	5.28	N	T
06/18/2001	7.60	N	T
10/17/2001	5.78	N	T
09/27/2002	8.23	N	T
12/20/2002	9.83	N	T
09/16/2003	7.58	N	T
11/21/2003	4.95	N	T
03/26/2004	5.30	N	T
12/20/2004	6.47	N	T
05/19/2005	15.10	N	T
08/29/2005	4.32	N	T
02/17/2006	3.28	N	T
06/05/2007	7.70	N	T
09/28/2007	3.47	N	T
10/17/2008	3.80	N	T
05/29/2009	4.40	N	T
10/27/2009	3.50	N	T
05/17/2010	3.52	N	T
08/23/2010	3.72	N	T
06/09/2011	3.10	N	T
11/29/2011	3.70	N	T
07/11/2012	4.73	N	T
10/17/2013	4.24	N	T
04/29/2014	3.40	N	T
04/29/2015	3.71	N	T

All historic testing 98-16

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

DRAFT FACT SHEET

Date: November 18, 2016

PERMIT NUMBER: **ME0102431**
LICENSE NUMBER: **W007044-6B-I-R**

NAME AND MAILING ADDRESS OF APPLICANT:

GREAT SALT BAY SANITARY DISTRICT
P.O. Box 23
Damariscotta, ME 04543

COUNTY: **Lincoln County**

NAME AND ADDRESS OF FACILITY:

Damariscotta (Mills Facility)
Bayview Road
Nobleboro, Maine

RECEIVING WATER/ CLASSIFICATION: **Damariscotta River Estuary /Class SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **LeeAnna Libby,**
Wastewater Division Manager
(207) 563-5105
E-Mail: LEEANNA@GSBSD.org

1. APPLICATION SUMMARY

a. Application: The Great Salt Bay Sanitary District (GSBSD/permittee hereinafter) has submitted a timely and complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit#ME0102431/ Maine Waste Discharge License (WDL) #W007044-5L-G-R (permit hereinafter), which was issued by the Department on April 20, 2011. The MEPDES permit/WDL (permit hereinafter) authorized the discharge of up to a monthly average flow of 0.015 million gallons per day (MGD) of secondary treated sanitary waste water from a municipal waste water treatment facility. The waste water treatment facility is referred to as the "Damariscotta Mills" sand filter system and discharges to the Damariscotta River Estuary "Salt Bay", Class SB, in Nobleboro, Maine. See **Attachment A** of this Fact Sheet for location map.

b. Source Description – The sand filter system serves a small outlying residential section known as Damariscotta Mills. The wastewater treatment system serves a total of 59 residences of which 6 are not yet connected to the system as of the date of this permitting action. Of the remaining 53 residences, 9 are seasonal dwellings.

In 1997, the GSBSD added ten residences to the system by extending the sewer line along Route 215 across the Damariscotta Lake "Mill Pond" bridge and into the Town of Newcastle. The construction was funded in part by the Department's Small Community Grants program. This added 550 feet of 8-inch sewer interceptor, a submersible pumping station (at the Mill Bridge), 250 feet of 3-inch force main, with a 5,000 gallon septic tank that serves only the immediate neighborhood of ten of the residences. Individual septic tanks serve 46 residences; three residences are served by one of the 2,000 gallon tanks. The second 2,000-gallon tank serves the Mill Pond Inn on the Nobleboro side of the bridge. An additional pumping station is located at the intersection of Ladds and Bayview Roads. Lake Side and Bayview pump stations along with the influent and effluent pumps for the sand filters are monitored with radio telemetry.

c. Waste Water Treatment - The GSBSD provides a secondary level of wastewater treatment via a combination of settling in individual septic tanks, one five thousand (5,000) gallon septic tank and two, two thousand (2,000) gallon septic tanks, and biological treatment which is achieved through a covered sand filter bed system. The permittee reports the tanks are pumped once every three years on a rotating basis, with the exception of the second 2,000-gallon tank serving a Bed & Breakfast which is pumped once per year. A general layout of the sand filter system is shown in **Attachment B** of this Fact Sheet.

Wastewater collected from the individual septic tanks is pumped to two 106' x 52' sand filter beds that are operated in the alternating mode. The effluent is chlorinated (sodium hypochlorite) prior to discharge. The chemical feed disinfection system replaced an ultraviolet light system in 1990. The applicant reports dechlorination was abandoned in 1999 following a dye study showing the effluent dilution factor is 1000:1 or greater at the end of the outfall pipe.

1. APPLICATION SUMMARY (cont'd)

Chlorinated effluent is pumped approximately 500 feet through a 4" polyethylene outfall pipe into the main channel of the Damariscotta River Estuary. The final 50 feet of the pipe is a diffuser with fifteen-1/2" diameter perforations serving as ports to enhance mixing with the receiving waters. The perforated pipe is encased in a five-foot deep bed of crushed stone and rip-rap with approximately six feet of water over the crown of the pipe at mean low tide.

The sand filter system is not authorized to receive transported waste for treatment.

2. PERMIT SUMMARY

a. Terms and conditions – This permit is carrying forward all the terms and conditions of the previous permitting action except that this permit:
   1. Establishes a once per year monitoring frequency for pH pursuant to 40 CFR 122.44(i)(2).
   2. Establishes an assumed influent concentration value of 286 mg/L when testing for percent removal of BOD and TSS.
   3. Revises language in Special Condition I, Monitoring and Reporting.

b. History – The most recent relevant regulatory actions pertaining to the GSBSD facility include, but are not limited to, the following:

December 30, 1991 - The U.S. Environmental Protection Agency (EPA) renewed National Pollutant Discharge Elimination System (NPDES) permit #ME0101516. The permit served to permit both the main plant discharge in Damariscotta (outfall 001) and the sand filter discharge in Damariscotta Mills (outfall 002).

June 5, 1996 - The Department issued WDL #W007044-58-D-R increasing the monthly average flow limit from 11,000 gallons per day to 15,000 gallons per day. The sand filter system was first licensed by the Department in 1986, the year it was built. For a more complete licensing history see WDL #W007044-58-D-R.

December 13, 1996 - The EPA modified NPDES permit #ME0101516 in accordance with the existing WDL and the Section 401 water quality certification requirements issued by the Department.

July 29, 1999 - The Department administratively modified WDL #W007044-58-D-R to include a footnote regarding the reporting of effluent pH results.

January 12, 2001 - The Department received authorization from EPA to administer the NPDES program in Maine. From that point forward the program has been referred to as the MEPDES permit program and this permit has been assigned #ME0102431. The MEPDES permit replaced the NPDES permit #ME0101516 (outfall 002) issued by EPA on December 30, 1991 and modified on December 13, 1996.

2. PERMIT SUMMARY (cont'd)

July 12, 2001 – The Department issued combination MEPDES permit #ME0102431/ WDL #W007044-5L-E-R for a four and one half year term.
April 11, 2006 – The Department issued combination MEPDES permit #ME0102431/ WDL #W007044-5L-E-R for a five-year term.

April 20, 2011 – The Department issued combination MEPDES permit #ME0102431/ WDL #W007044-5L-G-R for a five-year term.

January 25, 2016 – The GSBSD submitted a timely and complete application to renew the MEPDES permit for the Damariscotta Mill's facility.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S. 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., 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

Classification of estuarine and marine waters, 38 M.R.S. § 469(3-A) classifies all estuarine and marine waters lying within the boundaries of Lincoln County and that are not otherwise classified, which includes the Great Salt Bay at the point of discharge, as Class SB waters. *Standards for classification of estuarine and marine waters*, 38 M.R.S. § 465(B)(2) establishes classification standards for Class SB waters.

5. RECEIVING WATER CONDITIONS

The State of Maine 2012 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 Upper Damariscotta River at the point of discharge as:

Category 2: *Estuarine and Marine Waters Attaining Some Designated Uses, Insufficient Information for Other Uses*. Impairment in this context is in regard to the designated use of harvesting of shellfish which is prohibited due to proximity to a Sewage Treatment Plant outfall.

5. RECEIVING WATER CONDITIONS (cont'd)

Currently, the Maine Department of Marine Resources (DMR) shellfish harvesting Area 23-A, Upper Damariscotta River (Newcastle, Nobleboro, Damariscotta) is closed to the harvesting of shellfish. See **Attachment C** of this Fact Sheet for Area 23-A. DMR closes or restricts areas based on ambient water quality data that indicate the area did not meet or marginally met the standards in the National Shellfish Sanitation Program. In addition, DMR closes areas by default in the vicinity of outfall pipes associated with treated sanitary wastewater discharges in the event of a failure of the disinfection system. Therefore, Area 22 F remains closed as of the date of this permitting action.

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

The Department has no information that the discharge from the permittee, as conditioned, causes or contributes to non-attainment of applicable Class SB water quality standards.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Flow: The previous permitting action established a monthly average flow limitation of 0.0150 MGD that is being carried forward in this permitting action as it is representative of the current monthly average design flow capacity of the facility.

A review of the monthly Discharge Monitoring Report (DMR) data for the period August 2011 through July 2016 indicates values have been reported as follows;

Flow (DMRs=58)

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly average	0.0150	0.007 – 0.01	0.007
Daily maximum	Report	0.01 – 0.21	0.020

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

b. Dilution Factors: Department Regulation Chapter 530 *Surface Water Toxics Control Program*, §4(A)(2) states:

> *(2) For estuaries where tidal flow is dominant and marine discharges, dilution factors are calculated as follows. These methods may be supplemented with additional information such as current studies or dye studies.*
>
> *(a) 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.*
>
> *(b) For discharges to estuaries, dilution must be calculated using a method such as MERGE, CORMIX or another predictive model determined by the Department to be appropriate for the site conditions.*
>
> *(c) In the case of discharges to estuaries where tidal flow is dominant and marine waters, the human health criteria must be analyzed using a dilution equal to three times the chronic dilution factor.*

In September of 1999, Bigelow Laboratory for Ocean Sciences conducted a dye study to determine the effluent dilution from the Damariscotta Mills facility. In their November 1999 report they concluded that "the effluent is highly diluted in Salt Bay, with most areas exhibiting dilution rates between 1:1000 and 1:10,000 *[understood by the Department to be 1000:1 and 10,000:1]* or greater at both high tides and low tides on a day with 12,000 gallons of effluent discharged". Therefore, for purposes of this permitting action, the chronic dilution rates for this discharge are presumed to be 1000:1 or greater.

The 1999 report further states that "Higher concentrations to 40 ppb (100 to 1000 times dilution) were found…within 50 to 100 yards of the outfall…at low tide". This would correspond to the near field acute dilution zone so that the acute dilution would be between 100:1 and 1000:1.

For the purposes of this permitting action the Department is carrying forward the dilution factors from the previous permitting actions as follows:

Acute - 100:1 Chronic - 1,000:1 Harmonic mean**(1)** - 3,000:1

Footnote:
(1) See Chapter 530 §4(A)(2)(c) above.

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

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): - This permitting action carries forward the previously established monthly and weekly average BOD5 and TSS best practicable treatment (BPT) concentration limits of 30 mg/L and 45 mg/L respectively, that are based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B) as defined in 40 CFR Part 133.102 and Department rule 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.

As for mass limitations, the previous permitting action established monthly average, weekly average and daily maximum limitations based on a monthly average flow 0.011 MGD that are being carried forward in this permitting action. A flow of 0.011 MGD was utilized in the calculations as this was the original flow limitation established in the first licensing action. The permittee has requested to carry forward the limits for BOD and TSS from the previous permitting action. The limitations were derived as follows:

Monthly average: (0.0110 MGD)(8.34)(30 mg/L) = 2.8 lbs/day
Weekly average: (0.0110 MGD)(8.34)(45 mg/L) = 4.2 lbs/day
Daily maximum: (0.0110 MGD)(8.34)(50 mg/L) = 4.6 lbs/day

A review of the monthly Discharge Monitoring Report (DMR) data for the period August 2011through July 2016 indicates values have been reported as follows;

BOD Mass (DMRs=58)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	2.8	0.15 – 2.43	0.428
Weekly Average	4.2	0.08 – 3.67	0.550
Daily Maximum	4.6	0.04 – 367	0.620

BOD Concentration (DMRs=58)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	2 – 19	8.91
Weekly Average	45	2 – 23	9.98
Daily Maximum	50	2 - 23	9.96

TSS mass (DMRs=58)

Value	Limit (lbs/day)	Range (lbs/day)	Average (lbs/day)
Monthly Average	2.8	0.02 – 0.40	0.054
Weekly Average	4.2	<0.02 – 0.60	0.08
Daily Maximum	4.6	<0.02 – 1.00	0.183

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

TSS concentration (DMRs=58)

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	0.05 - 4	1.96
Weekly Average	45	0.30 – 6.0	2.05
Daily Maximum	50	0.30 – 6.0	2.047

This permitting action is carrying forward the requirement for 85% removal for BOD and TSS pursuant to Department rule Chapter 525(3)(III)(a&b)(3). The facility does not have a location where true representative sampling of influent that has not received any biological treatment can occur. Therefore, the facility is authorized to use the assumed value of 286 mg/L.

Monitoring frequencies for BOD and TSS of 2/Month are being carried forward from the previous permitting action and are based on long standing Department guidance for facilities with a monthly average flow limitation between 0.0 MGD and 0.100 MGD.

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 August 2011 through July 2016 indicates values have been reported as follows;

Settleable solids (DMRs=58)

Value	Limit (ml/L)	Range (ml/L)	Average (ml/L)
Daily Maximum	0.3	<0.1- 1.0	<0.116

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 are 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. The limitations apply seasonally, from May 15 – September 30 of each year.

A review of the monthly Discharge Monitoring Report (DMR) data for the period August 2011 through July 2016 indicates values have been reported as follows;

Fecal coliform bacteria (DMRs=24)

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	15	<1.00 - 1	<1.00
Daily Maximum	50	<1.00 - 5	1

The monitoring frequency of 1/Week in the previous permitting action is being carried forward in the permitting action and is based on a long standing Department guidance for facilities permitted to discharge between 0.0 MGD and 0.1 MGD.

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

f. Total Residual Chlorine - Limits on total residual chlorine (TRC) are specified to ensure attainment of the in-stream water quality criteria for levels of chlorine and that BPT technology is utilized to abate the discharge of chlorine. Permits issued by this Department impose the more stringent of the calculated water quality based or BPT based limits. The previous permitting action established a daily maximum limit of 1.0 mg/L. With dilution factors as determined above, water quality based thresholds for TRC may be calculated as follows:

Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Threshold	Chronic Threshold
13 ug/L	7.5 ug/L	100:1	1,000:1	1.3 mg/L	7.5 mg/L

Example calculation: Acute – 0.013 mg/L (100) = 1.3 mg/L

The Department's BPT limitation of 1.0 mg/l is more stringent than the calculated water quality based limit. Therefore, the BPT limitation of 1.0 mg/l is being carried forward from the previous permitting action along with the 1/Week monitoring requirement. It is noted TRC is currently measured at the effluent pump station and it is anticipated that substantial reduction in TRC values occurs prior to the actual discharge at the end of outfall pipe.

A review of the monthly Discharge Monitoring Report (DMR) data for the period August 2011 through July 2016 indicates 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	0.14 – 0.99	0.492

g. pH – The previous permitting action established a pH range limitation of 6.0 –9.0 standard units (SU) pursuant to Department regulation, Chapter 525(3)(III)(c). The limits are considered BPT by the Department. In addition, during the previous permitting cycle the monitoring requirement had been suspended pursuant to Department rule Chapter 525(3)(III)(c) as excursions were due to natural causes and not from inorganic chemicals added to the waste stream as part of the treatment process or caused by contributions from industrial sources that would cause the pH to outside said range. Pursuant to 40 CFR 122.44(i)(2), this permitting action is establishing a once per year monitoring frequency for pH.

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

h. Mercury: Pursuant to 38 M.R.S. §420 and Department rule, 06-096 CMR Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W007044-5L-E-R by establishing interim monthly average and daily maximum effluent concentration limits of 12.4 parts per trillion (ppt) and 18.5 ppt, respectively, and a minimum monitoring frequency requirement of two (2) tests per year for mercury. The interim mercury limits were scheduled to expire on October 1, 2001. However, effective June 15, 2001, the Maine Legislature enacted Maine law, 38 M.R.S. §413, sub-§11 specifying that interim mercury limits and monitoring requirements remain in effect. The interim mercury limits remain in effect and enforceable and modifications to the limits and/or monitoring frequencies will be formalized outside of this permitting document pursuant to Maine law, 38 M.R.S. §413 and Department rule Chapter 519.

Maine law 38 M.R.S., §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 database for the previous 60-month period indicates mercury test results reported have ranged from 3.4 ppt to 4.73 ppt with an arithmetic mean (n=5) of 3.95 ppt.

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

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

Chapter 530 §2(A)(1) that 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;*

Based on the criteria cited above, the GSBSD's Damariscotta Mills facility is not categorically subject to Chapter 530 testing requirements. However, should circumstances at the facility change such that the Department has a reason to believe the discharge has a reasonable potential to exceed ambient water quality criteria as established in Department rule Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants,* this permit may be reopened pursuant Special Condition J, *Reopening of Permit For Modifications,* to establish appropriate WET, priority pollutant and or analytical testing.

j. 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, namely algal blooms, in marine waters. As of the date of this permitting action, the State of Maine has not promulgated numeric ambient water quality criteria for any of the nitrogen compounds. The Department has 50 total nitrogen data results collected on effluent from five municipally-owned treatment works and one industrial facility that discharge to Casco Bay. The mean discharge concentration was calculated to be 14.3 mg/L and is being considered by the Department as being representative of the total nitrogen concentration from a municipal wastewater treatment facility in the absence of facility specific effluent data.

Therefore, with an arithmetic mean total nitrogen discharge concentration of 14.3 mg/L and a near field dilution factor of 1,000:1 for the Great Salt Bay Sanitary District facility, an in-stream concentration can be calculated as follows:

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

In-stream concentration after dilution: $\frac{14.3 \text{ mg/L}}{1{,}000} = 0.0143 \text{ mg/L}$

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

Because nitrogen is not acutely toxic, the Department is considering a far-field dilution to be more appropriate when evaluating impacts of total nitrogen to a marine environment. 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, the far field dilutions factors would tend to be on the order of 100 – 1,000 times higher. With open ocean discharges, far field dilutions would tend to be 1,000 – 10,000 times higher.

The in-stream concentration is less than the Department and USEPA's best professional judgment based total nitrogen threshold of 0.45 mg/L considered necessary to protect aquatic life in the receiving water, using dissolved oxygen as the indicator of whether this designated use is achieved. 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 and, therefore, is not establishing a requirement for the facility to conduct testing.

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 water body to meet standards for Class SB classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Lincoln County News newspaper on or about January 25, 2016. 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 must 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

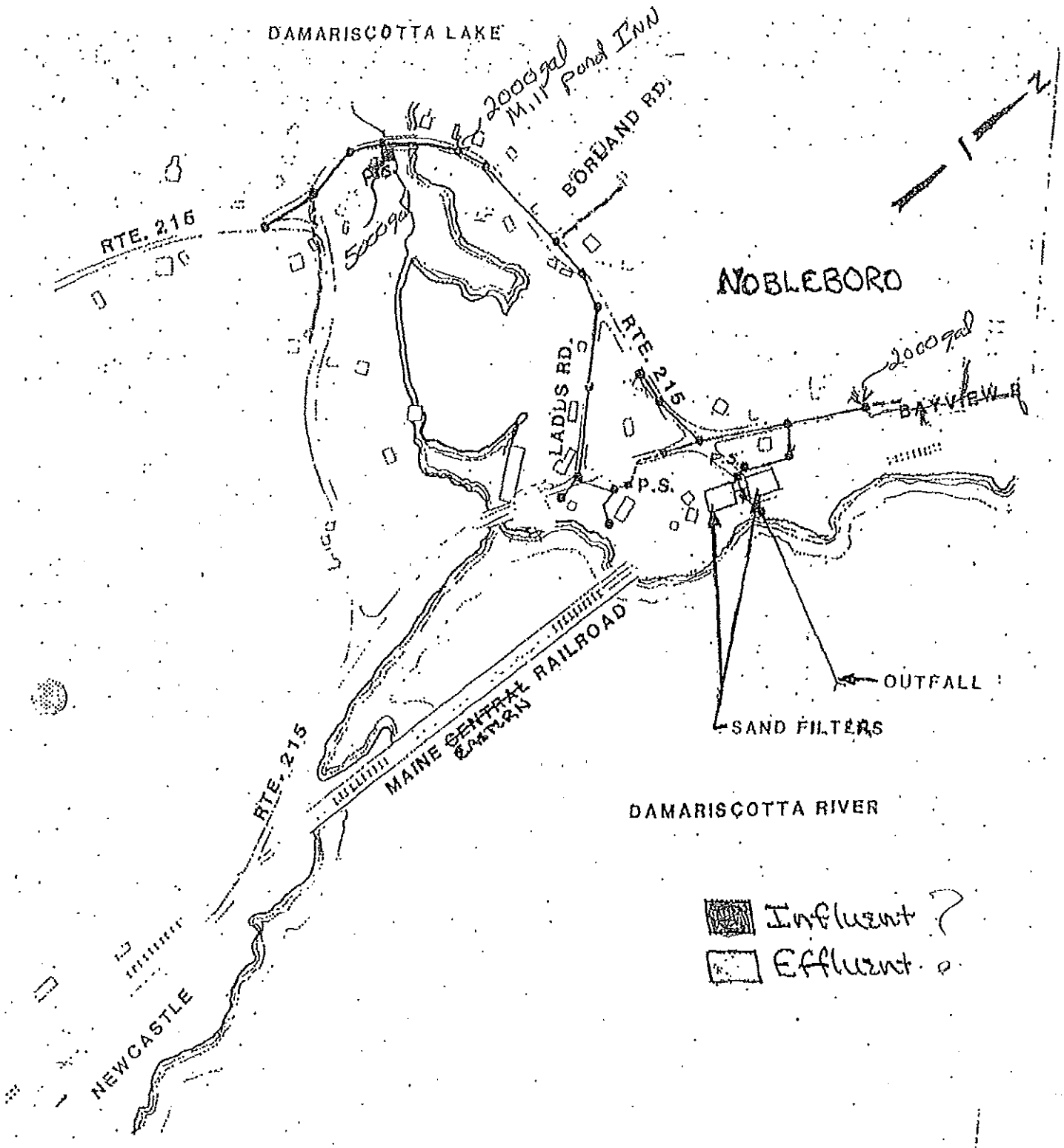
Additional information concerning this permitting action may be obtained from and written comments should be sent to:

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

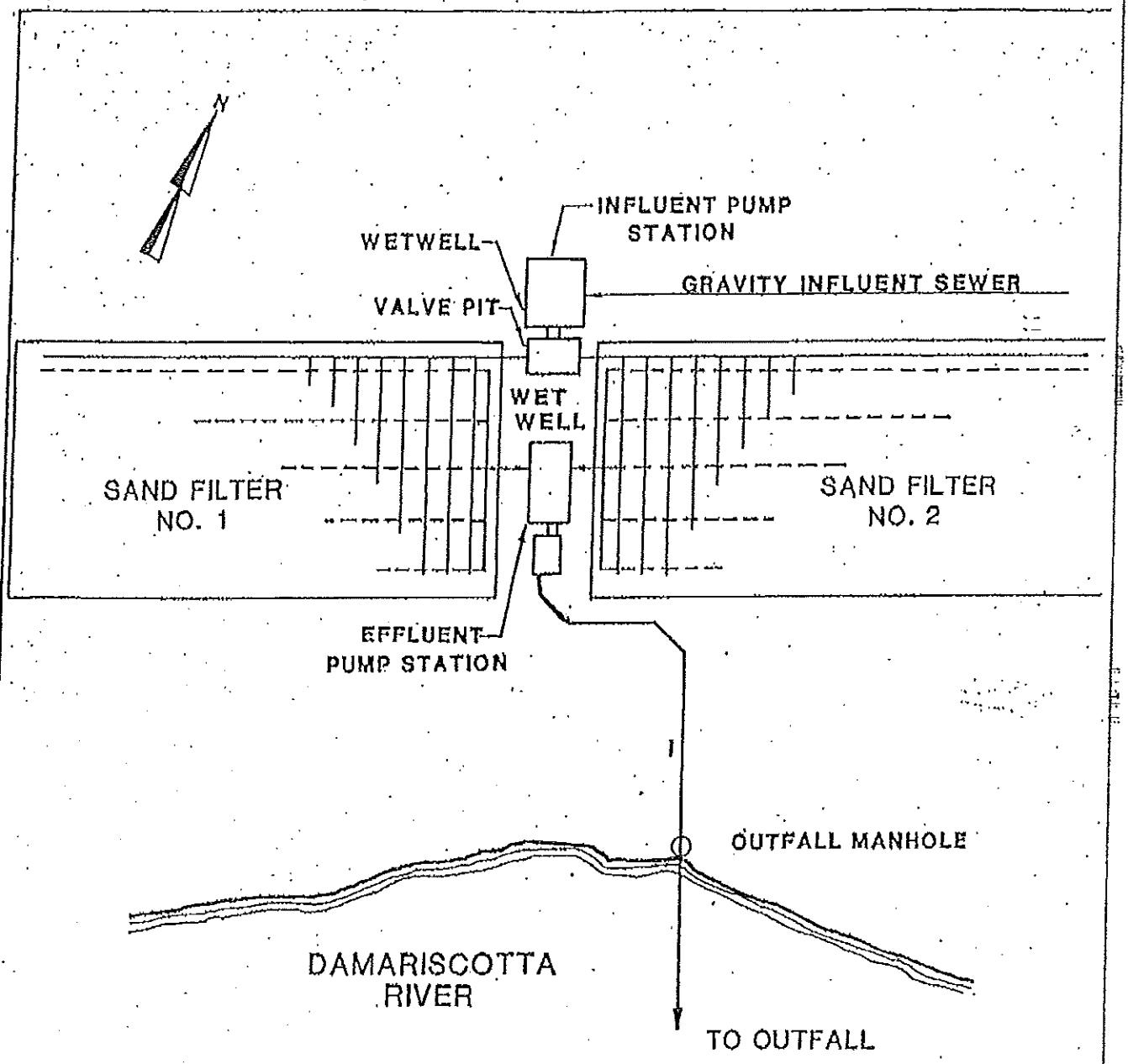
ATTACHMENT A



LOCATION PLAN

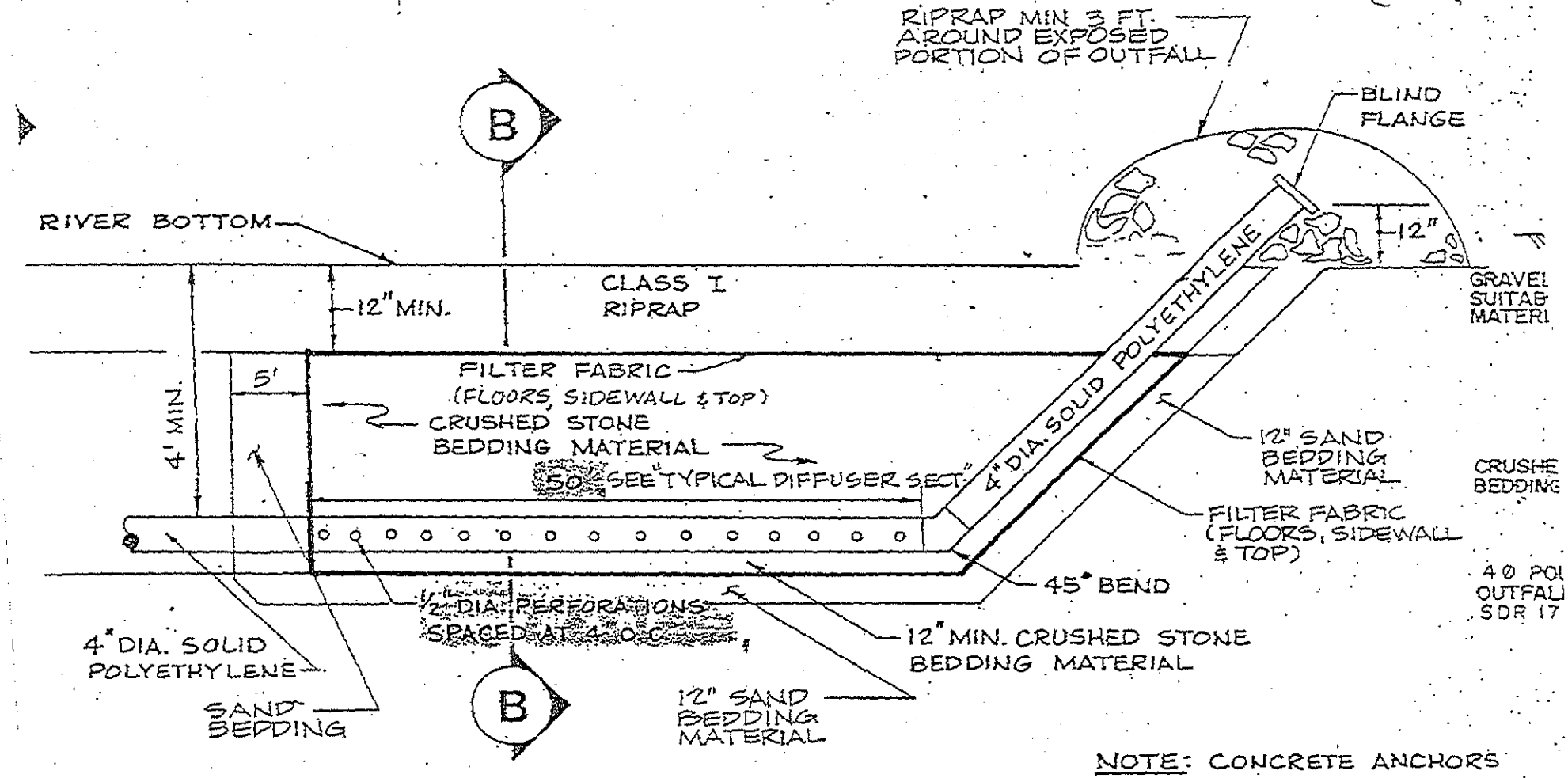
1" = 400'

ATTACHMENT B



GENERAL LAYOUT
DAMARISCOTTA MILLS

DETAIL OF DIFFUSER DISCHARGE - [illegible] MILLS (WIBCEBORO



NOTE: CONCRETE ANCHORS OMITTED FOR CLARITY

OUTFALL DETAIL

N.T.S.

ATTACHMENT C

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

PAUL R. LEPAGE
GOVERNOR

PATRICK C. KELIHER
COMMISSIONER

Shellfish Harvesting Area Classification-Notification of Changes

April 29,2015

Ladies and Gentlemen:

Under the authority of Maine statute 12 M.R.S.A., Chapter 607, Section 6172; the Commissioner has made the following classification change to Area No. 23-A, Upper Damariscotta River (Newcastle, Nobleboro, Damariscotta): This notice reclassifies Days Cove from Restricted to Prohibited due to water quality no longer meeting Restricted standards. All existing pollution and red tide/psp closures remain in effect.

The boundary descriptions of the area are as follows (struck text is being removed and underlined text is being added):

A. Effective immediately, because of pollution, it shall be unlawful to dig, take or possess any clams, quahogs, oysters or mussels taken from the shores, flats and waters of the following Prohibited areas:

1. Great Salt Bay (Newcastle, Nobleboro, Damariscotta), north of a line running west to east between two unnamed points of land, locally known as The Narrows, located approximately 600 yards north of the Route 1 bridge.

2. Damariscotta River (Newcastle, Damariscotta): south of the Route 1 bridge; AND north and east of a line beginning at a red painted post located on the southwest tip of Jacks Point (Newcastle), then running south to Green Can buoy #23, then running southwest ~~to 300 feet~~ approximately 91 yards west of the southwest tip of Hall Point (Damariscotta), then running east to the southwest tip of Hall Pt. ; ~~AND west of a line beginning due north of the end of Chase Point Lane (Damariscotta), then running northeast to the western tip of Norris Point (Damariscotta).~~

B. Effective immediately because of pollution, it shall be unlawful to dig, take or possess any clams, quahogs, oysters or mussels taken from the shores, flats and waters of the following Restricted area without a special MDMR permit: Huston Cove (Damariscotta): north and east of a line beginning at the southwestern tip of Hall Point running southeast to the opposite shore. ~~Inside and shoreward of a line drawn across the mouth of Huston Cove, beginning at the southwest tip of Halls Point and running southeast to the next point of land. This area is classified Restricted and harvest requires a special MDMR permit:~~

~~1. Days Cove (Damariscotta): east of a line beginning due north of the end of Chase Point Lane (Damariscotta), then running northeast to the western tip of Norris Point (Damariscotta).~~

~~2. Huston Cove (Damariscotta): east of a line beginning at the southwestern tip of Halls Point and running southeast to the opposite shore.~~

C. Effective immediately, because of proximity to a Sewage Treatment Plant (STP) outfall, it shall be unlawful to dig, take or possess any clams, quahogs, oysters or mussels from the shores, flats and waters of the following Conditionally Approved area: the upper Damariscotta River south of a line running west to east between two unnamed points of land, locally known as The Narrows, located approximately 600 yards north of the Route 1 bridge; AND north of the Route 1 bridge during any malfunction of the Great Salt Bay STP (Mills Facility).

~~C. Effective immediately, because of pollution, the shores, flats and waters of the): south of a line running between two unnamed points of land, locally known as The Narrows, located approximately 600 yards north of the Route 1 bridge; AND north of the Route 1 bridge; have been classified as "Conditionally Approved," and~~

April 29, 2015

Maine Department of Marine Resources

Pollution Area No. 23-A

Upper Damariscotta River (Newcastle, Nobleboro, Damariscotta)