

August 28, 2008

Mr. Arthur Wittine  
Superintendent of School Union 93  
P.O. Box 630  
Blue Hill, ME. 04614

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit # ME0101974  
Maine Waste Discharge License (WDL) Application #W002465-5D-B-R  
**Final Permit**

Dear Mr. Wittine:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL **renewal** which was approved by the Department of Environmental Protection. This permit/license replaces the National Pollutant Discharge Elimination System (NPDES) permit #ME0101974, last issued by the Environmental Protection Agency (EPA). Please read the permit/license renewal and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding the matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood  
Division of Water Quality Management  
Bureau of Land and Water Quality

Enc.

cc: Sterling Pierce, DEP/CMRO  
Sandy Lao, USEPA

**IN THE MATTER OF**

SCHOOL UNION 93	)	MAINE POLLUTANT DISCHARGE
PENOBSCOT, HANCOCK COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
OVERBOARD DISCHARGE	)	AND
ME0101974	)	WASTE DISCHARGE LICENSE
W0024653-5D-B-R	)	<b>RENEWAL</b>
<b>APPROVAL</b>	)	

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et seq. and Maine Law 38 M.R.S.A. Section 414-A, et seq., and applicable regulations, the Department of Environmental Protection (the Department hereinafter) has considered the application of SCHOOL UNION 93 (SU 93 hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

**APPLICATION SUMMARY**

SU 93 has submitted an application to the Department for the renewal of overboard discharge (OBD) Waste Discharge License (WDL) #2465 which was issued by the Department on May 9, 1984 for a five-year term. The WDL authorized a year-round daily maximum discharge of up to 2,500 gallons per day of secondary treated waste waters to the tidewaters of Penobscot (Northern Bay), Class SB, in Penobscot, Maine. The U.S. Environmental Protection Agency's (EPA) assigned National Pollutant Discharge Elimination System (NPDES) permit #ME0101974 for the discharge from the school.

**PERMIT SUMMARY**

a. Regulatory - On January 12, 2001, the Department received authorization from the EPA to administer the NPDES permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) permit program and permit #ME0101974 (same as the NPDES permit number) will be utilized as the primary reference number for the SU 93 facility.

b. Terms and conditions

**This permitting action is similar to the 5/9/84 licensing action in that it is:**

1. Carrying forward the monthly average technology-based concentration limitations for biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids (TSS);
2. Carrying forward the daily maximum flow limitation of 2,500 gpd.

## PERMIT SUMMARY

**This permitting action is different from the 5/9/84 licensing action in that it is:**

3. Requiring the permittee to collect and report discharge flow data to the Department on a monthly basis.
4. Establishing weekly average technology based concentration limits for BOD and TSS.
5. Establishing monthly average, weekly average, and daily maximum technology-based mass limitations for BOD<sub>5</sub> and TSS;
6. Establishing a requirement for at least 85% removal of BOD and TSS on a monthly basis.
7. Increasing the daily maximum technology based concentration limitation for settleable solids from 0.1 ml/L to 0.3 ml/L.
8. Establishing a more stringent daily maximum water quality based limitation for total residual chlorine along with a schedule of compliance to meet said limit.
9. Reducing the monitoring frequencies for settleable solids from 1/Week to 1/Month and increasing the monitoring frequency for fecal coliform bacteria from 1/Quarter to 1/Month.
10. Establishing a requirement for the permittee to have a site evaluation performed by a licensed site evaluator with experience in designing systems for the replacement of overboard discharge systems prior the expiration date of the permit.
11. Establishing a requirement for the permittee to develop and keep current, an Operations and Maintenance (O&M) plan for the waste treatment system and appurtenances.
12. Establishing a requirement for a tidally timed discharge such that there is water over the crown of the terminus of the outfall pipe in order to discharge.

## CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated May 23, 2008, 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) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
  - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
  - (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharges will be subject to effluent limitations that require application of best practicable treatment as defined in Maine law, 38 M.R.S.A., §414-A(1)(D).
5. The overboard discharge system was in continuing existence for the 12 months preceding June 1, 1987.
6. A non-discharging sub-surface waste water disposal system could not be installed in compliance with the Maine Subsurface Waste Water Disposal Rules at the time the renewal application was accepted for processing by the Department.
7. A publicly owned sewer line is not located on or abutting land owned or controlled by the permittee or is not available for the permittee's use.
8. The discharge is not located within the boundaries of a sanitary district or sewer district.

**ACTION**

THEREFORE, the Department APPROVES the above noted application of SCHOOL UNION 93 to discharge a daily maximum flow of up to 2,500 gpd of secondary treated sanitary waste water to the tidewaters of Penobscot (Northern Bay), Class SB, in Penobscot, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable to All Permits," revised July 1, 2002, copy attached.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS \_\_\_ DAY OF \_\_\_\_\_, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 10, 2001.

Date of application acceptance: January 30, 2001.

Date filed with Board of Environmental Protection: \_\_\_\_\_.

This Order prepared by Gregg Wood, BUREAU OF LAND & WATER QUALITY

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- Beginning the effective date of this permit, the permittee is authorized to discharge secondary treated sanitary waste water from **Outfall #001A** to Northern Bay, Class SB. Such discharges shall be limited and monitored by the permittee as specified below<sup>(1)</sup>:

***Tidally Timed Discharged***<sup>(2)</sup>

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow <i>[50050]</i>	Report gpd <i>[07]</i>	---	2,500 gpd <i>[07]</i>	---	---	---	1/Month <i>[01/30]</i>	Meter <i>[MT]</i>
BOD <sub>5</sub> <i>[00310]</i>	1.0 lbs/day <i>[26]</i>	1.0 lbs/day <i>[26]</i>	1.0 lbs/day <i>[26]</i>	30 mg/L <i>[19]</i>	45 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/Quarter <i>[01/90]</i>	Grab <i>[GR]</i>
BOD <sub>5</sub> Percent Removal <sup>(3)</sup> <i>[81010]</i>	---	---	---	85% <i>[23]</i>	---	---	---	Calculate <i>[CA]</i>
TSS <i>[00530]</i>	1.0 lbs/day <i>[26]</i>	1.0 lbs/day <i>[26]</i>	1.0 lbs/day <i>[26]</i>	30 mg/L <i>[19]</i>	45 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/Quarter <i>[01/90]</i>	Grab <i>[GR]</i>
TSS Percent Removal <sup>(3)</sup> <i>[81011]</i>	---	---	---	85% <i>[23]</i>	---	---	---	Calculate <i>[CA]</i>
Settleable Solids <i>[00545]</i>	---	---	---	---	---	0.3 ml/L <i>[25]</i>	1/Month <i>[01/30]</i>	Grab <i>[GR]</i>
Fecal Coliform Bacteria <sup>(4)</sup> <i>[31616]</i>	---	---	---	15/100 ml <sup>(5)</sup> <i>[13]</i>	---	50/100 ml <i>[13]</i>	1/Month <i>[01/30]</i>	Grab <i>[GR]</i>
<b>Total Residual Chlorine</b> <i>[50060]</i> <i>Through May 31, 2009</i> <i>Beginning June 1, 2009</i>	---	---	---	---	---	1.0 mg/L <sup>(6a)</sup> 0.03 mg/L <sup>(6b)</sup> <i>[19]</i>	1/Week 1/Week <i>[01/07]</i>	Grab Grab <i>[GR]</i>
pH <i>[00400]</i>	---	---	---	---	---	6.0 – 9.0 SU <i>[12]</i>	---	---

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

**Footnotes See Page 6 of this permit for applicable footnotes.**

## SPECIAL CONDITIONS

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

#### Footnotes

1. **Sampling** – Sampling shall be conducted after the last treatment process such that samples are representative of what is actually being discharged to the receiving waters. Sampling shall be conducted in accordance with federally approved methods for sampling, handling and preservation. Samples shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services and in accordance with methods approved by 40 Code of Federal Regulations (CFR) Part 136. Samples that are sent to a POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 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).

All detectable analytical test results shall be reported to the Department including results which are detected below the respective reporting limits (RLs) specified by the Department or as specified by other approved test methods. If a non-detect analytical test result is below the respective RL, the concentration result shall be reported as <Y where Y is the detection limit achieved by the laboratory for each respective parameter. Reporting a value of <Y that is greater than an established RL is not acceptable and will be rejected by the Department. For mass, if the analytical result is reported as <Y or if a detectable result is less than a RL, report a <X lbs/day, where X is the parameter specific limitation established in the permit.

2. **Tidally Timed Discharge** – The permittee is only authorized to discharge when there is water over the crown of the outfall pipe at its terminus.
3. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both BOD<sub>5</sub> and TSS for all flows receiving secondary treatment. If required to do so, the percent removal shall be calculated based on an assumed influent value of 286 mg/L and measured effluent concentration values.
4. **Bacteria Limits** – Fecal coliform bacteria limits and monitoring requirements are in effect on a year-round basis to protect the health, safety, and welfare of the public.
5. **Bacteria Reporting** – The monthly average fecal coliform bacteria limitation is a geometric mean limitation and sample results shall be reported as such.

## **SPECIAL CONDITIONS**

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

#### **Footnotes**

6. **Total residual chlorine (TRC)** – Total Residual Chlorine shall be tested using an USEPA-approved method found in Title 40, *Code of Federal Regulations*, part 136, that brackets the permittee's applicable limit.
  - a. **Beginning upon issuance of this permit and lasting through May 31, 2009**, the permittee is limited to a daily maximum concentration limit of 1.0 mg/L. The permittee
  - b. **Beginning June 1, 2009**, the permittee is limited to a daily maximum limit of 0.03 mg/L. Compliance will be based on EPA's minimum level (ML) of detection of 0.05 mg/L. All analytical test results shall be reported to the Department including results which are detected below the ML of 0.05 mg/L.

### **B. ANNUAL DISCHARGE FEES**

Pursuant to Maine law, 38 M.R.S.A. §353-B, the permittee is required to pay an applicable annual fee for discharges authorized by this permit. Failure to pay an annual fee within 30 days of the billing date of a license/permit is sufficient grounds for revocation of the license, permit or privilege under Maine law, 38 M.R.S.A. §341-D, subsection 3.

### **C. NARRATIVE EFFLUENT LIMITATIONS**

1. The effluent shall 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 shall 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 discharges shall 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.

## **SPECIAL CONDITIONS**

### **D. DISINFECTION**

If chlorination is used as the means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized followed by a dechlorination system if the imposed total residual chlorine (TRC) limit cannot be achieved by dissipation in the detention tank. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall provide a TRC concentration that will effectively reduce fecal coliform bacteria levels to or below those specified in Special Condition A, "*Effluent Limitation and Monitoring Requirements*," of this permit.

### **E. TREATMENT PLANT OPERATOR**

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

### **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 January 30, 2001; 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.

### **G. NOTIFICATION REQUIREMENT**

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

1. Any substantial change or proposed change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:
  - (a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and
  - (b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment system.

## SPECIAL CONDITIONS

### H. SITE EVALUATION FOR TRANSFERRED AND RENEWED PERMITS

**Prior to permit transfer or transfer of the property** occupying the permitted overboard discharge system **or renewal of this permit**, a site evaluation must be performed by a licensed site evaluator with experience in designing systems for the replacement of overboard discharge systems. The Department may not grant approval for permit transfer or renewal if the site evaluation concludes that a non-discharging wastewater disposal system designed in compliance with the Maine Subsurface Waste Water Disposal Rules administered by the Maine Department of Health and Human Services, Division of Environmental Health can be installed as a replacement system for the overboard discharge.

### I. OPERATION & MAINTENANCE (O&M) PLAN

This facility shall have 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 wastewater 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 (excepting the current yet to be completed substantial upgrade), the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

### J. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13<sup>th</sup>) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15<sup>th</sup>) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the Department's compliance inspector (unless otherwise specified) at the following address:

Overboard Discharge Inspector  
Department of Environmental Protection  
Bureau of Land and Water Quality  
Division of Water Quality Management  
17 State House Station  
Augusta, Maine 04333-0017

## **SPECIAL CONDITIONS**

### **K. 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 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.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
AND  
WASTE DISCHARGE LICENSE**

**FACT SHEET**

Date: **May 23, 2008**

MEPDES PERMIT: **ME0101974**  
WASTE DISCHARGE LICENSE: **W002465-5D-B-R**

NAME AND ADDRESS OF APPLICANT:

**SCHOOL UNION 93  
P.O. Box 630  
Blue Hill, Maine 04614**

COUNTY: **Hancock County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**Penobscot Community Elementary School  
Route 199  
Penobscot, Maine**

RECEIVING WATER / CLASSIFICATION: **Tide Waters of Penobscot (Northern Bay)/Class SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Arthur Wittine, Supt. of Schools  
(207) 374-9927**

**1. APPLICATION SUMMARY**

- a. Application - School Union 93 has submitted an application to the Department for the renewal of overboard discharge (OBD) Waste Discharge License (WDL) #2465 which was issued by the Department on May 9, 1984 for a five-year term. The WDL authorized a year-round monthly average discharge of up to 2,500 gallons per day of secondary treated waste waters to the tidewaters of Penobscot (Northern Bay), Class SB in Penobscot, Maine. See Attachment A of this Fact Sheet for a location map.
- b. Source description: The source of waste waters treated is generated at an elementary school that currently has a population of 85 students and staff members during the school year and 15 staff members during the summer months.
- c. Waste water treatment: The school has one grease trap and three (3) 1,000-gallon septic tank where primary settling takes place. The primary treated waste water is then conveyed by gravity or force main to a sand filter that provides a secondary level of treatment and disinfection via a tablet chlorinator. The pump station conveys the treated and disinfected waste water to Northern Bay via a two (2) inch diameter outfall pipe that extends out into the receiving water but is currently exposed at low tide.

## 1. APPLICATION SUMMARY (cont'd)

- d Replacement Options: In May of 2003, the State Legislature adopted several amendments to the licensing of overboard discharges and the Department revised its rule Chapter 596, *Overboard Discharges: Licensing and Abandonment*, accordingly. One of the amendments in the revised rule required OBD owners that were applying to the Department to renew their OBD license, to hire a licensed site evaluator (LSE) to determine whether there is a technologically feasible replacement of the existing system prior to license renewal and install the replacement system within 180 days if grant money is offered by the Department.

Pursuant to Department rule Chapter 2, since the application for license renewal for SU 93 was accepted by the Department prior to May 2003, the licensing amendments cited are not applicable to this permitting action. However, it is noted a LSE has indentified a parcel of land adjacent to the school that is suitable for a replacement system. In a letter dated September 6, 2007, the Department offered SU 93 grant money to partially fund the replacement system. As of the date of this permitting action, SU 93 has not designed or fully evaluated the cost associated with a replacement system. Both parties will continue evaluate said costs and if economically feasible, will proceed with the construction of the replacement system accordingly.

## 2. PERMIT SUMMARY

- a. Regulatory - On January 12, 2001, the Department received authorization from the EPA to administer the NPDES permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) permit program, and permit #ME0101947 (same as the NPDES permit number) will be utilized as the primary reference number for the SU 93 facility.
- b. Terms and conditions

**This permitting action is similar to the 5/9/84 licensing action in that it is:**

1. Carrying forward the monthly average technology-based concentration limitations for biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids (TSS);
2. Carrying forward the daily maximum flow limitation of 2,500 gpd.

## 2. PERMIT SUMMARY (cont'd)

**This permitting action is different from the 5/9/84 licensing action in that it is:**

3. Requiring the permittee to collect and report discharge flow data to the Department on a monthly basis.
4. Establishing weekly average technology based concentration limits for BOD and TSS.
5. Establishing monthly average, weekly average, and daily maximum technology-based mass limitations for BOD<sub>5</sub> and TSS;
6. Establishing a requirement for at least 85% removal of BOD and TSS on a monthly basis.
7. Increasing the daily maximum technology based concentration limitation for settleable solids from 0.1 ml/L to 0.3 ml/L.
8. Establishing a more stringent daily maximum water quality based limitation for total residual chlorine along with a schedule of compliance to meet said limit.
9. Reducing the monitoring frequencies for settleable solids from 1/Week to 1/Month and increasing the monitoring frequency for fecal coliform bacteria from 1/Quarter to 1/Month.
10. Establishing a requirement for the permittee to have a site evaluation performed by a licensed site evaluator with experience in designing systems for the replacement of overboard discharge systems prior the expiration date of the permit.
11. Establishing a requirement for the permittee to develop and keep current, an Operations and Maintenance (O&M) plan for the waste treatment system and appurtenances.
12. Establishing a requirement for a tidally timed discharge such that there is water over the crown of the terminus of the outfall pipe in order to discharge.

## 3. CONDITIONS OF PERMIT

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. §469(2)(E-1) classifies the Northern Bay at the point of discharge as a Class SB waterbody. Maine law, 38 M.R.S.A. §465-B(2) contains the standards for Class SB waterbodies.

#### 5. RECEIVING WATER QUALITY CONDITIONS

The 2006 Integrated Water Quality Monitoring and Assessment Report published by the Department pursuant to Section 305(b) of the Federal Water Pollution Control Act lists Northern Bay as marine waters with insufficient data or information to determine attainment of water quality standards. Attainment in this context is in regard to the designated use of harvesting of shellfish. Currently, DMR shellfish harvesting Area 36-A, Northern Bay (Penobscot) is either closed or restricted to the harvesting of shellfish. The DMR closed or restricted Area 36-A on December 19, 2007 based on ambient water quality data at that time indicated the area did not meet or marginally met the standards in the National Shellfish Sanitation Program. Therefore, the areas remain closed or restricted as of the date of this permitting action. Compliance with the year-round fecal coliform bacteria limits in this permitting action will ensure that the discharge from the SU 93 facility will not cause or contribute to the shellfish harvesting closure. See Attachment B of this Fact Sheet for a map of Area 36-A.

The 2006 305(b) report also lists all estuarine and marine waters in a category entitled, *Category 5-D: Estuarine and Marine Waters Impaired by Legacy Pollutants*. The waters are listed as partially supporting fishing (“shellfish consumption) due to elevated levels of PCBs and other persistent, bioaccumulating substances in lobster tomally. Department rule Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, establishes controls on the discharge of mercury to the surface waters of the State through interim effluent limits and implementation of pollution prevention plans. However, Section 1(A)(1) of the Chapter 519 rule states in part:

*“This rule applies to all persons licensed or permitted pursuant to 38 MRSA §413 to discharge pollutants to the surface waters of the State except as described below. For the purposes of this rule, the term licensee also means permittee.*

*(1) Categorical exclusions. This rule does not apply to the following categories of licensees: combined sewer overflows, snow dumps, pesticide applications, and over board discharges licensed pursuant to 38 MRSA §413.[emphasis added] Except, however, specific members of these categories may be required by the department to comply with this rule on a case by case basis...”*

The Department has no information at this time that the discharge from the SU 93 facility is causing or contributing to the impairment status of the receiving waterbody as monthly Discharge Monitoring Report data for the period 2003 – 2007 indicates the permittee has been in substantial compliance with the permit limitations for fecal coliform bacteria.

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

- a. Best Practicable Treatment (BPT) - Overboard discharges may be permitted only where no technologically proven alternative exists. Overboard discharge treatment systems must be capable of meeting secondary treatment standards as described in CMR Chapter 525, Section 3 and Chapter 596 section 9, unless the Department finds that alternate limits are appropriate. After accepting a renewal application as complete for processing, the Department shall approve an overboard waste discharge license only if all of the following criteria are met.
- (1) A publicly owned sewer line is not located on or abutting land owned or controlled by the applicant or is not available for the applicant's use.
  - (2) A subsurface wastewater disposal system cannot be installed in compliance with the Subsurface Rules, 10-144 CMR 241, on land owned or controlled by the applicant. Or, a subsurface wastewater disposal system can be installed on land owned or controlled by the applicant and the applicant is eligible for grant funding pursuant to 38 M.R.S.A § 411-A but no funding is available.
  - (3) The discharge is not located within the boundaries of a sanitary or sewer district and the district has not agreed to service and maintain a holding tank at an annual fee that does not exceed those fees charged to other similar users of the district's services who are physically connected to the sewers of the district.
  - (4) For a school, the volume or quantity of waste water that is discharged does not exceed;
    - (a) the limit imposed by the previous license.
    - (b) the actual or estimated flow at the time of current application if a license volume increase is necessary.
  - (5) The receiving water is not:
    - (a) A Class GPA, AA, A, or SA water;
    - (b) A tributary to Class GPA water; or
    - (c) A waterbody with a drainage area of less than 10 square miles,
  - (6) The discharge meets the requirements of *Maine's Pollution Control Laws* 38 M.R.S.A. §414-A, and *Maine's Water Classification Laws* 38 M.R.S.A. §§ 464 to 469.
  - (7) The discharge receives best practicable treatment consistent with requirements in Section 9 of Department rule Chapter 596.

The discharge from the SU 93 has met all the above criteria with the exception of Section 6(a)(2) above. See the discussion in Section 1(d) of this Fact Sheet.

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

- b. Flow: The previous licensing action established a daily maximum discharge flow limitation of 2,500 gallons per day (gpd) that is being carried forward in this permitting action. The flow limitation is based on a value requested by the permittee in the 5/9/84 application for license renewal. The 5/9/84 license did not require the licensee to monitor and or report flow values therefore, no information on flow is available. Being that water use at the school is metered, this license requires the permittee to record and report flow data on the monthly DMR.
- c. Dilution Factors – Department rule 06-096 CMR, 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.*

With a permitted flow of 2,500 gpd, the location and configuration of the outfall structure, and a restriction to tidally time the discharge, the Department has made a best professional judgment that dilution factors are follows:

Acute = 2.4:1

Chronic = 14.8:1

Harmonic Mean<sup>(1)</sup> = 44.4:1

### 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.

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

- d. Biochemical Oxygen Demand (BOD<sub>5</sub>) and Total Suspended Solids (TSS): The previous licensing action established technology-based monthly average and daily maximum BOD<sub>5</sub> and TSS concentration limits of 30 mg/L and 45 mg/L, respectively. The monthly average concentration limit is based on secondary treatment requirements as defined in Department rule, 06-096 CMR Chapter 525(3)(III). The basis for the daily maximum concentration limit of 45 mg/L is unknown. This permitting action is establishing a weekly average technology-based concentration limit of 45 mg/L based on secondary treatment requirements as defined in Department rule, 06-096 CMR Chapter 525(3)(III). This permitting action is increasing the daily maximum concentration limit in the previous licensing action from 45 mg/L to 50 mg/L based on a Department best professional judgment (BPJ) of best practicable treatment (BPT).

The previous licensing action did not establish mass limitations for BOD<sub>5</sub> and TSS. Department rule Chapter 523, *Waste Discharge License Conditions*, Section 6, *Calculating NPDES permit conditions*, sub-section f(1) states that, "all pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass...." Therefore, this permitting action is establishing monthly average, weekly average and daily maximum BOD<sub>5</sub> and TSS mass limitations based on calculations using the daily maximum permitted flow limitation for the facility of 2,500 gpd (0.0025 MGD) and the applicable concentration limits as follows:

Monthly Average Mass Limit:  $(30 \text{ mg/L})(8.34 \text{ lbs./gallon})(0.0025 \text{ MGD}) = 1.0 \text{ lbs/day}$   
 Weekly Average Mass Limit:  $(45 \text{ mg/L})(8.34 \text{ lbs./day})(0.0025 \text{ MGD}) = 1.0 \text{ lbs/day}$   
 Daily Maximum Mass Limit:  $(50 \text{ mg/L})(8.34 \text{ lbs./day})(0.0025 \text{ MGD}) = 1.0 \text{ lbs/day}$

The previous licensing action established a minimum monitoring frequency requirement of once every calendar quarter for BOD<sub>5</sub> and TSS that is being carried forward in this permitting action. A review of the quarterly discharge flow data as reported on the DMR submitted to the Department for the period January 2003 – December 2007 (n=20) indicates the following:

**BOD Concentration**

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	<2.0 - 14	4
Daily Maximum	45	<2.0 - 14	4

**TSS concentration**

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	<1.0 – 8.5	2
Daily Maximum	45	<1.0 – 8.5	2

This permitting action is also establishing a new requirement for a minimum of 85% removal of BOD<sub>5</sub> and TSS pursuant to Chapter 525(3)(III)(a)(3) and (b)(3) of the Department's rules.

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

- e. Settleable Solids: The previous licensing action established a technology based daily maximum limitation of 0.1 ml/L for settleable solids with a monitoring frequency of 1/Week. The Department has since reconsidered its position on the limitation for settleable solids for OBDs and to be consistent with BPT limits established for all other MEPDES permits issued for like discharges. The Department has concluded that a daily maximum concentration limit of 0.3 ml/L is a more appropriate BPT limitation. A review of the DMR data for the period January 2003 – December 2007 indicates the permittee has reported a value of <0.1 ml/L for the entire reporting time frame. This permitting action is establishing a daily maximum limit to 0.3 ml/L and reducing the monitoring frequency to 1/Month based on the aforementioned compliance history.
  
- f. Fecal coliform bacteria: The previous licensing action established year-round water quality based monthly average and daily maximum concentration limits for fecal coliform bacteria of 15 colonies/100 ml (geometric mean) and 15 colonies/100 ml (instantaneous level), respectively. This permitting action is modifying the daily maximum limit by increasing it to 50 colonies/100 ml to be consistent with the limits associated with the National Shellfish Sanitation Program. This permitting action is increasing the monitoring frequency from 1/Quarter in the previous licensing action to 1/Month given the sensitivity to the waterbody as it pertains to shellfish harvesting.

A review of the monthly average and daily maximum data as reported on the DMRs submitted to the Department for the period January 2003 – December 2007 indicates the monthly (geometric mean) and daily maximum fecal coliform bacteria discharged has ranged from <0.0 colonies/100 ml to 1400 colonies/100 ml. The DMR data indicates the facility has been in compliance with the geometric mean limitation 92% of the time and in compliance with the daily maximum limitation 95% of the time during said reporting period.

- g. Total Residual Chlorine (TRC): The previous licensing action established a daily maximum technology based concentration limit of 1.0 mg/L for TRC along with a 1/Week monitoring requirement. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department permitting actions impose the more stringent of either a water quality-based or BPT-based limit. With dilution factors as determined above, end-of-pipe (EOP) water quality-based concentration thresholds for TRC may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated	
			Acute Limit	Chronic Limit
0.013 mg/L	0.0075 mg/L	2.4:1 (A) 14.8:1 (C)	0.03 mg/L	0.1 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. For facilities that need to dechlorinate the discharge in order to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The SU 93 facility must dechlorinate the effluent prior to discharge in order to consistently achieve compliance with the calculated water quality-based thresholds. Therefore, this permitting action is establishing a daily maximum water quality-based concentration limit of 0.03 mg/L.

Compliance shall be based on EPA's minimum level (ML) of detection of 0.05 mg/L. All analytical test results shall be reported to the Department including results which are detected below the ML of 0.05 mg/L.

The permittee has indicated it can not comply with the more stringent water quality based limit immediately upon issuance of the permit as doing so will require additional funding not yet budgeted and likely require physical modifications to their existing infrastructure. As a result, the Department is carrying forward the technology based daily maximum limit of 1.0 mg/L in the previous permitting action through May 31, 2009. Beginning June 1, 2009, the new daily maximum water quality based limit of 0.03 mg/L will become effective.

A review of the daily maximum data as reported on the DMRs submitted to the Department for the period September 2003 - December 2007 indicates the maximum TRC discharged has ranged from 0.0 mg/L to 3.5 mg/L with an arithmetic mean (n=18) of 1.9 mg/L. The DMR data indicates the facility has had 25 exceedences of the previous license limit of 1.0 mg/L. Due to the number of exceedences of the previous daily maximum license limit and that a much more stringent TRC limitation is being established in this permitting action, the Department is carrying forward the monitoring frequency of 1/Week.

- h. pH: The previous licensing action established a pH range limit of 6.0 – 8.5 standard units (SU), considered by the Department at the time as BPT for secondary treated waste water, but did not establish any monitoring frequency requirements. Pursuant to Department rule found at Chapter 525(3)(III)(c), (promulgated subsequent to issuance of the previous licensing action) the pH range limitation is being revised to 6.0 – 9.0 SU, which is considered BPT for secondary treated domestic like waste water. This permitting action is not establishing a regular monitoring frequency to determine compliance on an on-going basis but the limitations are in effect and enforceable at all times.

## 7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

## 8. PUBLIC COMMENTS

Public notice of this application was made in a local newspaper on or about January 10, 2001. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits 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 sent to:

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

## 10. RESPONSE TO COMMENTS

During the period of May 23, 2008, through the issuance date of the permit/license, the Department solicited comments on the proposed draft permit/license to be issued for the discharge(s) from the SU 93 facility. Department personnel attend a special Board of Selectman's meeting on June 11, 2008 to entertain concern(s) about the permit.

*Comment #1* - The only concern raised that resulted in a substantive change in the permit was the new more stringent water quality based limit for total residual chlorine. The Selectman indicated the more stringent limit would put them in immediate non-compliance upon issuance of the permit. To meet the limit, the Town would need to raise additional monies to pay for physical modifications to the existing infrastructure as well as purchase more chemicals on an annual basis.

*Response #1* - Maine law 38 M.R.S.A. §414(2) *Schedules of Compliance*, authorizes the Department to establish schedules of compliance for water quality based limitations within the terms and conditions of a license. The schedule may include interim and final dates for attainment of specific standards and must be as short as possible based on consideration of the technological, economic and environmental impact of the steps necessary to attain those standards. The Department has consulted with the Town on a schedule and determined that June 1, 2009 is an appropriate date in which to impose the more stringent TRC limit. This will give the Town ample time to secure the necessary funding and make the physical modifications to the existing infrastructure. Special Condition A, *Effluent Limitations and Monitoring Requirements*, footnote #6 establishes said schedule of compliance.

The Department did not receive comments from any state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit.