

December 24, 2008

Dr. James C. Morse Sr.
Superintendent, MSAD #47
41 Heath Street
Oakland, ME. 04963

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit ME0102822
Maine Waste Discharge License (WDL) Application #W002012-5D-C-R
James H. Bean Elementary School
Final Permit

Dear Dr. Morse:

Enclosed please find a copy of your final Maine WDL and MEPDES permit which was approved by the Department of Environmental Protection. Please read the license 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 this matter, please feel free to call me at 287-7658.

Sincerely,

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

Enc.

cc: Bill Johnson, DEP/CMRO
Sandy Lao, USEPA

IN THE MATTER OF

MSAD #47 – JAMES H. BEAN SCHOOL)	MAINE POLLUTANT DISCHARGE
SIDNEY, KENNEBEC COUNTY, MAINE)	ELIMINATION SYSTEM PERMIT
OVERBOARD DISCHARGE)	AND
ME0102822)	WASTE DISCHARGE LICENSE
W002012-5D-C-R)	RENEWAL
	APPROVAL	

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 (Department hereinafter) has considered the application of the MAINE SCHOOL ADMINISTRATIVE DISTRICT #47 (MSAD #47, hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The MSAD #47 has filed a timely and complete application with the Department for renewal of overboard discharge (OBD) Waste Discharge License (WDL) #W002012-ZC-B-R which was issued by the Department on November 4, 1996, and expired on November 4, 2006. The WDL authorized a year-round monthly average discharge of up to 6,000 gallons per day (gpd) of secondary treated waste waters to Goff Brook, Class B, in Sidney, Maine.

PERMIT SUMMARY

- a. Regulatory - On January 12, 2001, the Department received authorization from the EPA to administer the National Pollutant Discharge Elimination System (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 the permit compliance tracking number #ME0102822 will be utilized as the primary reference number for the MSAD #47 facility. It is noted compliance data submitted prior to the issuance of this permit can be found under permit number MEU502012.

PERMIT SUMMARY

b. Terms and conditions

This permitting action is similar to the November 4, 1996 licensing action in that it is:

1. Carrying forward the monthly average discharge flow limitation of 6,000 gpd.
2. Carrying forward the monthly average and daily maximum technology-based concentration limitations for biochemical oxygen demand (BOD₅) and total suspended solids (TSS).
3. Carrying forward the seasonal (May 15th to September 30th) water quality based monthly average (geometric mean) and daily maximum *E. coli* bacteria limitations.

This permitting action is different from the November 4, 1996 licensing action in that it is:

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 BOD₅ and TSS;
6. Establishing a requirement to achieve a minimum 30-day average of 85 percent removal for BOD₅ and TSS;
7. Establishing a daily maximum technology based concentration limit for settleable solids.
8. Establishing more stringent water quality based limitations for total residual chlorine.
9. 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 and submitted to the Department for review.
10. 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.
11. Requiring the operation and responsible charge of the treatment system by an individual who has been certified by the Department in the operation of waste water treatment facilities (refer to Special Condition E of this license).

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 24, 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 subsurface wastewater disposal system can be installed in compliance with the Maine Subsurface Waste Water Disposal Rules at the time the renewal application was accepted by the Department but the Department has not offered the permittee funding to eliminate the discharge.

CONCLUSIONS (cont'd)

- 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 the MAINE SCHOOL ADMINISTRATIVE DISTRICT #47 to discharge a monthly average flow of up to 6,000 gpd of secondary treated sanitary waste water from the James H. Bean Elementary School to Goff Brook, Class B, in Sidney, 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 29th DAY OF December, 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: October 31, 2006.

Date of application acceptance: November 13, 2006.

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

- The permittee is authorized to discharge **secondary treated sanitary wastewater from Outfall #001** to Goff Brook, Class B. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u> ⁽⁶⁾	<u>Sample Type</u> ⁽⁷⁾
Flow <i>[50050]</i>	6,000 GPD <i>[07]</i>	---	Report GPD <i>[07]</i>	---	---	---	1/2 Months <i>[01/60]</i>	Estimate <i>[ES]</i>
BOD₅ <i>[00310]</i>	1.5 lbs/day <i>[26]</i>	2.2 lbs/day <i>[26]</i>	2.5 lbs/day <i>[26]</i>	30 mg/L <i>[19]</i>	45 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/2 Months <i>[01/60]</i>	Grab <i>[GR]</i>
BOD₅ Percent Removal ⁽²⁾ <i>[81010]</i>	---	---	---	85% <i>[23]</i>	---	---	---	Calculate <i>[CA]</i>
TSS <i>[00530]</i>	1.5 lbs/day <i>[26]</i>	2.2 lbs/day <i>[26]</i>	2.5 lbs/day <i>[26]</i>	30 mg/L <i>[19]</i>	45 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/2 Months <i>[01/60]</i>	Grab <i>[GR]</i>
TSS Percent Removal ⁽²⁾ <i>[81011]</i>	---	---	---	85% <i>[23]</i>	---	---	---	Calculate <i>[CA]</i>
Settleable Solids <i>[00545]</i>	---	---	---	---	---	0.3 ml/L <i>[25]</i>	---	---
<u>E. Coli. Bacteria</u> ⁽³⁾ <i>(May 15 – Sept. 30) [31633]</i>	---	---	---	64/100 ml ⁽⁴⁾ <i>[13]</i>	---	427/100 ml <i>[13]</i>	2/Month <i>[02/30]</i>	Grab <i>[GR]</i>
<u>Total Residual Chlorine</u> <i>[50060]</i> <i>Through May 14, 2010</i> <i>Beginning May 15, 2010</i>	---	---	---	---	---	1.0 mg/L ^(5a)	2/Week	Grab
	---	---	---	0.1 mg/L	---	0.16 mg/L ^(5b) <i>[19]</i>	2/Week <i>[02/07]</i>	Grab <i>[GR]</i>
pH <i>[00400]</i>	---	---	---	---	---	6.0 – 9.0 SU ^[12]	---	---
The italicized numeric values bracketed in the table and in subsequent text are code numbers 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. **Monitoring** – All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process and shall be representative of the effluent discharged to the receiving water. Sampling and analysis must be conducted in accordance with; a) methods approved in 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. Samples that are sent to another POTW licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 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. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both BOD₅ 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.
3. **Bacteria limits** – *E. coli* bacteria limits and monitoring requirements are seasonal and apply between May 15th and September 30th of each year. The Department reserves the right to impose bacteria limits on a year-round basis to protect the health, safety, and welfare of the public. There shall be at least 14 days between sampling events.
4. **Bacteria reporting** – The monthly average *E. coli* 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:

5. **Total Residual Chlorine (TRC)** – Limitations and monitoring requirements are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. The permittee shall utilize approved test methods that are capable of bracketing the TRC limitation in this permit.
 - a. **Beginning upon issuance of this permit and lasting through May 14, 2010**, the permittee is limited to a daily maximum concentration limit of 1.0 mg/L.
 - b. **Beginning May 15, 2010**, the permittee is limited to a daily maximum limit of 0.16 mg/L and a monthly average limit of 0.1 mg/L.
6. **2/week & 1/2 months sampling** – There shall be at least 3 days between sampling events when monitoring on a 2/week frequency. There shall be at least 30 days between sampling events when monitoring on a 1/2 months frequency.

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 accruing interest charges, penalties or revocation of the license.

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 on November 13, 2006; 2) the terms and conditions of this permit; and 3) from Outfall #001A only. 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), *Bypasses*, 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

On or before January 1, 2012, prior to permit transfer or transfer of the property occupying the permitted overboard discharge system, 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 a **permit transfer** 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.

The Department may not grant approval for a **permit renewal** if the site evaluation concludes that a non-discharging wastewater disposal system can be installed as a replacement system for the overboard discharge and the Department has offered the permittee funding for the removal of the 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.

SPECIAL CONDITIONS

J. SEPTIC TANKS AND GREASE TRAPS

1. Septic tanks, grease traps and other treatment tanks shall be regularly inspected (at least once per calendar year) and maintained to ensure that they are providing best practicable treatment. The licensee shall maintain logs of inspections/maintenance that records the date, notes on observations, repairs conducted etc. The logs shall be maintained on site at all times and made available to Department personnel upon request.
2. Tank contents should 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 shall be checked for damage at key joints and the inlet and outlet baffles, and repaired promptly if damaged. The licensee shall keep a pumping log including the date of pumping, quantity of material removed, name and number of licensed contractor, pumping frequency and other relevant observations.

K. MONITORING AND REPORTING

Monitoring results obtained shall be summarized every two months and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department except for the months of June, July, August and September; when results for flow, bacteria and chlorine will be reported monthly. The DMR's must be postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following address:

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

L. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at 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.

SPECIAL CONDITIONS

M. 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: **November 24, 2008**

MEPDES PERMIT: **ME0102822**
WASTE DISCHARGE LICENSE: **W002012-5D-C-R**

NAME AND ADDRESS OF APPLICANT:

**MAINE SCHOOL ADMINISTRATIVE DISTRICT #47
41 Heath Street
Oakland, ME. 04963**

COUNTY: **Kennebec County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**John H. Bean Elementary School
2896 Middle Road
Sidney, Maine**

RECEIVING WATER / CLASSIFICATION: **Goff Brook/Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Dr. James Morse Sr., Supt.
(207) 465-7384**

1. APPLICATION SUMMARY

- a. Application - The MSAD #47 has filed a timely and complete application with the Department for renewal of overboard discharge (OBD) Waste Discharge License (WDL) #W002012-ZC-B-R which was issued by the Department on November 4, 1996, and expired on November 4, 2006. The WDL authorized a year-round monthly average discharge of up to 6,000 gallons per day (gpd) of secondary treated waste waters to Goff Brook, Class B in Sidney, Maine. See Attachment A of this Fact Sheet for a location map.

1. APPLICATION SUMMARY

- b. Source Description and Waste Water Treatment – The discharge is from the James Bean Elementary School, a public school serving approximately 420 students and staff. The waste water currently receives a secondary level of treatment via septic tanks and two sand filters with tablet chlorination for seasonal disinfection of the discharge. The treated waste water is discharged into the receiving waterbody via a PVC outfall pipe that measures four inches in diameter that extends out into the thread of Goff Brook.

2. PERMIT SUMMARY

- a. Regulatory - On January 12, 2001, the Department received authorization from the EPA to administer the National Pollutant Discharge Elimination System (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 the permit number #ME0102822 will be utilized as the primary reference number for the MSAD 47 facility. It is noted compliance data submitted prior to the issuance of this permit can be found under permit number MEU502012.

- b. Terms and conditions

This permitting action is similar to the November 4, 1996 licensing action in that it is:

1. Carrying forward the monthly average discharge flow limitation of 6,000 gpd.
2. Carrying forward the monthly average and daily maximum technology-based concentration limitations for biochemical oxygen demand (BOD₅) and total suspended solids (TSS).
3. Carrying forward the seasonal (May 15th to September 30th) water quality based monthly average (geometric mean) and daily maximum *E. coli* bacteria limitations.

This permitting action is different from the November 4, 1996 licensing action in that it is:

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 BOD₅ and TSS;
6. Establishing a requirement to achieve a minimum 30-day average of 85 percent removal for BOD₅ and TSS;
7. Establishing a daily maximum technology based concentration limit for settleable solids.
8. Establishing more stringent water quality based limitations for total residual chlorine.

2. PERMIT SUMMARY (cont'd)

9. 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, and submitted to the Department for review.
 10. 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.
 11. Requiring the operation and responsible charge of the treatment system by an individual who has been certified by the Department in the operation of waste water treatment facilities (refer to Special Condition E of this license).
- c. Replacement Options: The MSAD 47 has submitted documentation with the 2006 application indicating that replacement options are feasible at this location. Department rule Chapter 596, *Overboard Discharges: Licensing and Abandonment*, Section 5(A)(2) states in part "...the Department may approve an overboard discharge only if all of the following criteria are met." "...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." In a letter dated October 25, 2006, a license site evaluator determined that there is a viable alternative to the overboard discharge. However, the Department has determined there is currently no funding available to assist in the removal of the 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., §464(4)(A)(4) states;

4. General provisions. The classification system for surface waters established by this article shall be subject to the following provisions.

A. Notwithstanding section 414-A, the department may not issue a water discharge license for any of the following discharges:

(1) Direct discharge of pollutants to waters having a drainage area of less than 10 square miles, except that:

(a) Discharges into these waters that were licensed prior to January 1, 1986 are allowed to continue only until practical alternatives exist;

Goff Brook at the point of discharge is less than 10 square miles. Given the Department has made the determination that there is currently no funding available to assist in the removal of the discharge, the viable alternative cited in the LSE's 11/25/06 is not practical at this time. Therefore, the discharge is being permitted for another five-year term.

5. RECEIVING WATER QUALITY CONDITIONS

The 2008 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, indicates Goff Brook is meeting Class B water quality standards pursuant to Maine law 38 M.R.S.A. §465(3).

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 Department rule 06-096 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.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

- (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 such as the permittee's facility, 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,

unless it is demonstrated to the Department's satisfaction that no alternative to the discharge exists.
- (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.

All the criteria cited above have been met with the exception of Section 5(c). See the discussion in Section 4, *Receiving Water Quality Standards*, of this Fact Sheet.

- b. Flow: The previous licensing action established a monthly average discharge flow limitation of 6,000 gallons per day (gpd) based on the design flow for the treatment system and established a monitoring frequency of 1/Month via metering.

Department rule, 06-096 CMR Chapter 523 Section 6(b)(1), specifies, "*effluent limitations, standards, or prohibitions shall be calculated based on design flow.*" A review of the daily maximum discharge flow data as reported on the Discharge Monitoring Reports (DMRs) submitted to the Department for the period January 2003 – January 2008 indicates the following;

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

Flow

Value	Limit (gpd)	Range (gpd)	Mean (gpd)
Daily maximum	6,000	1003 – 8,280	4,190 (n=38)

This permitting action is carrying forward the monthly average discharge flow limit of 6,000 gpd, which is considered representative of the design flow for the facility.

- c. Dilution Factors - The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in Department Rule Chapter 530, Surface Water Toxics Control Program, October 2005. With a monthly average flow limit of 0.0060 MGD the dilution factors are as follows:

$$\text{Acute: } 1\text{Q}10 = 0.071 \text{ cfs}^{(1)} \Rightarrow \frac{(0.071 \text{ cfs})(0.6464) + (0.0060 \text{ MGD})}{(0.0060 \text{ MGD})} = 8.6:1$$

$$\text{Chronic: } 7\text{Q}10 = 0.083 \text{ cfs}^{(2)} \Rightarrow \frac{(0.083 \text{ cfs})(0.6464) + (0.0060 \text{ MGD})}{(0.0060 \text{ MGD})} = 9.9:1$$

$$\text{Harmonic Mean: } = 0.25 \text{ cfs}^{(3)} \Rightarrow \frac{(0.25 \text{ cfs})(0.6464) + (0.0060 \text{ MGD})}{(0.0060 \text{ MGD})} = 28:1$$

Footnotes:

(1) 85% of the 7Q10.

(2) The 7Q10 was calculated by USGS equation using a watershed area of 3 mi².

(3) The harmonic mean dilution factor is approximated by multiplying the chronic receiving water flow (7Q10) by a factor of three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the USEPA publication "*Technical Support Document for Water Quality-Based Toxics Control*" (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

- c. Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS): The previous licensing action established, technology-based monthly average and daily maximum BOD₅ and TSS concentration limits of 30 mg/L and 50 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 daily maximum BOD₅ and TSS

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

concentration limits of 50 mg/L were based on a Department best professional judgment (BPJ) of best practicable treatment (BPT). This permitting action is carrying forward both technology based concentration limitations. In addition, pursuant to Department rule, 06-096 CMR Chapter 525(3)(III), this permitting action is establishing a weekly average BPT concentration limit of 45 mg/L.

The previous licensing action did not establish mass limitations for BOD₅ 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 BOD₅ and TSS mass limitations based on calculations using the design flow for the facility of 6,000 gpd (0.0060 MGD) and the applicable concentration limits as follows:

- Monthly Average Limit: (30 mg/L)(8.34 lbs./gallon)(0.0060 MGD) = 1.5 lbs/day
- Weekly Average Limit: (45 mg/L)(8.34 lbs./day)(0.0060 MGD) = 2.2 lbs/day
- Daily Maximum Limit: (50 mg/L)(8.34 lbs./day)(0.0060 MGD) = 2.5 lbs/day

The previous licensing action established a minimum year-round monitoring frequency requirement of every other month for BOD₅ and TSS. This permitting action is continuing the requirement to sample every two months (year-round) in order to provide representative samples throughout the discharge year and is based on Department guidance for the MEPDES permit program for dischargers permitted to discharge less than 10,000 gpd.

This permitting action is also establishing a new requirement for a minimum of 85% removal of BOD₅ and TSS pursuant to Chapter 525(3)(III)(a)(3) and (b)(3) of the Department's rules. The school's waste water treatment system does not have an influent sampling port location that is representative of raw waste water conditions. According to the USEPA's Onsite Wastewater Treatment Systems Manual, dated February 2002, table 3-7 entitled "*Constituent Mass Loadings and Concentrations in Typical Residential Wastewater*" a reasonable influent value for BOD₅ and TSS may be assumed to be 286 mg/L. Therefore, this permitting action authorizes the permittee to assume an influent BOD₅ and TSS concentration value of 286 mg/L if required to calculate the monthly percent removal rate.

For BOD₅, a review of the monthly average effluent concentration data as reported on the DMRs submitted to the Department for the period January 2003 – January 2008 indicates the following:

BOD Concentration

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	<1 – 19	4.5 (n=27)
Daily Maximum	50	<1 – 19	4.5 (n=27)

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

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	30	1 – 15	4.8 (n=27)
Daily Maximum	50	1 – 15	4.8 (n=27)

The facility has been in compliance with the monthly average and daily maximum concentration limitations for both BOD and TSS 100% of the time during said reporting period.

- d. Settleable Solids: The previous licensing action did not establish any limitations or monitoring requirements for settleable solids. To be consistent with other like permitting actions by the Department, this permit is establishing a daily maximum BPT concentration limit 0.3 ml/L. No monitoring requirements have been established as sand filter systems tend not to discharge settleable solids provided the systems are well maintained and operated. However, the concentration limit is in effect and enforceable at all times.

- e. Escherichia coli Bacteria: The previous licensing action established seasonal (May 15 – September 30) monthly average and daily maximum concentration limits for *E. coli* bacteria of 64 colonies/100 ml (geometric mean) and 427 colonies/100 ml (instantaneous level), respectively, which were based on the State of Maine Water Classification Program criteria for Class B waters found at 38 M.R.S.A. §465(3)(B), and a minimum monitoring frequency requirement of once every two months. Subsequent to issuance of the 11/4/96 license, the State Legislature adopted more stringent AWQC for *E. coli* bacteria. The newer criteria for Class B water are 64 colonies/100 ml as a monthly average and 236 colonies/100 ml as a daily maximum. The Department has made the determination that after taking into consider the dilution associated with the discharge, the BPT limits established in the previous licensing action are protective of the newer AWQC for bacteria and are therefore being carried forward in this permitting action. Although *E. coli* bacteria limits are seasonal, the Department reserves the right to impose year-round bacteria limits if deemed necessary to protect the health, safety and welfare of the public.

A review of the monthly average and daily maximum data as reported on the DMRs submitted to the Department for the period May 2003 – September 2007 indicates the monthly (geometric mean) and daily maximum *E. coli* bacteria discharged as follows;

***E. coli* bacteria**

Value	Limit (col/100 ml)	Range (col/100 ml)	Mean (col/100 ml)
Monthly Average	64	0 - TNTC	N/A
Daily Maximum	427	0 -TNTC	N/A

Due to the numerous excursions of the *E.coli* bacteria limits established in the previous licensing action, the Department is increasing the monitoring frequency from 1/2 Months to 2/Month with at least 14 days in between sampling events.

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

- f. Total Residual Chlorine (TRC): The previous licensing action established monthly average and daily maximum BPT based concentration limits of 1.0 mg/L respectively, for TRC with a monitoring frequency of 2/Week. 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 calculated in Section 6(b) of this Fact Sheet, 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	
0.019 mg/L	0.011 mg/L	8.6:1 (A)	9.9:1 (C)	0.16 mg/L	0.11 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge in order to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively unless the water quality based thresholds calculated are lower than the BPT limits. The MSAD 47 facility does need to dechlorinate the effluent prior to discharge in order to consistently achieve compliance with the calculated acute and chronic water quality-based thresholds. Therefore, this permitting action is establishing a daily maximum water quality based concentration limit of 0.16 mg/L (lower than the BPT limit of 0.3 mg/L) and a monthly average BPT limit of 0.1 mg/L (lower than the water quality threshold of 0.11 mg/L).

The permittee 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 14, 2010. Beginning May 15, 2010, the new daily maximum water quality based limit of 0.16 mg/L and the new monthly average technology based limit of 0.1 mg/L will become effective.

A review of the daily maximum data as reported on the DMRs submitted to the Department for the period May 2003 – September 2007 indicates the maximum TRC discharged has been as follows;

Total residual chlorine

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly average	1.0	0.22 – 0.65	0.41
Daily Maximum	1.0	0.22 – 0.9	0.46

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

- g. 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 wastewater. This permitting action is not establishing a regular monitoring frequency to determine compliance 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 B waters.

8. PUBLIC COMMENTS

Public notice of this application was made in the local newspaper on or about October 25, 2006. 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

10. RESPONSE TO COMMENTS

During the period of November 24, 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 permittee's facility. The Department did not receive any comments on the draft permit. Therefore, the Department has not prepared a Response to Comments.