December 19, 2007

Mr. Christopher R. Shaw
MSAD 75
50 Republic Avenue
Topsham, Maine 04086

RE: Maine Pollutant Discharge Elimination System (MEPDES) #ME0102776
Maine Waste Discharge License (WDL) Application # W001003-5D-B-R
Final Permit

Dear Mr. Shaw:

Enclosed please find a copy of your **final** MEPDES permit/WDL (permit hereinafter) which was approved by the Department of Environmental Protection. Please read the permit 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 287-7693.

Sincerely,

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

Enc.
cc: Chris Johnson, DEP/CMRO
Sandy Lao, USEPA

IN THE MATTER OF

MAINE SCHOOL ADMINISTRATIVE DIST. #75	)	MAINE POLLUTANT DISCHARGE
BOWDOINHAM, SAGADAHOC CO., MAINE	)	ELIMINATION SYSTEM PERMIT
OVERBOARD DISCHARGE	)	AND
#ME0102776	)	WASTE DISCHARGE LICENSE
#W001003-5D-B-R **APPROVAL**	)	**RENEWAL**

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 ADMINISTRATION DISTRICT #75 (School, hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The school has applied to the Department for renewal of overboard discharge (OBD) Waste Discharge License (WDL) #W001003-58-A-R which was issued by the Department on March 31, 1993, and expired on March 31, 1998. The WDL authorized a year-round monthly average discharge of up to 7,500 gallons per day (gpd) of secondary treated waste waters to the West Branch of the Cathance River, Class B in Bowdoinham, Maine.

PERMIT SUMMARY

a. Regulatory - On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine. 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 #ME0102776 will be utilized as the primary reference number for the school's discharge permit.

b. Terms and conditions - This permitting action is similar to the March 31, 1993 licensing action in that it is:

1. Carrying forward the monthly average discharge flow limitation of 7,500 gpd of secondary treated waste water and a daily maximum reporting requirement for flow;

2. Carrying forward the monthly average and daily maximum technology-based concentration limitations for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) and establishing a 1/Month monitoring requirement;

3. Carrying forward water quality based monthly average (geometric mean) and daily maximum *E. coli* bacteria limitations. The bacteria limitations apply seasonally (May 15th through September 30th) rather than year-round as was the case in the previous WDL.

PERMIT SUMMARY

4. Carrying forward a daily maximum technology based limitation for total residual chlorine (TRC) and monitoring requirements. It is noted the numeric limitation in this permit is more stringent (0.3 mg/L, down from 1.0 mg/L) to be consistent with all other like permits where dechlorination is utilized. The TRC limitations are in effect anytime elemental chlorine or chlorine based compounds are utilizerd to disinfect the discharge.

5. Carrying forward the daily maximum effluent limitation for settleable solids. It is noted the numeric limitation is less stringent (0.3 ml/L, up from 0.1 ml/L) to be consistent with all other MEPDES permits for like discharges.

This permitting action <u>is different</u> from the March 31, 1993 licensing action in that it is:

6. Establishing weekly average technology based concentration limits for BOD and TSS.

7. Establishing monthly average, weekly average, and daily maximum technology-based mass limitations for BOD_5 and TSS;

8. Establishing a requirement to achieve a minimum 30-day average of 85 percent removal for BOD_5 and TSS;

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.

10. Establishing a requirement for the permittee to inspect and pump all septic tanks at a minimum of once every three years.

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. Requiring the person in responsible charge of the treatment system be certified by the Department in the operation of waste water treatment facilities.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 9, 2007, 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. At the time the renewal application was accepted by the Department, a licensed site evaluator determined subsurface waste water disposal system could be installed (on property not owned or controlled by the school district) in compliance with the Maine Subsurface Waste Water Disposal Rules provided variances afforded by the Rule are granted due to soils limitations. The Department has not offered the permittee funding to eliminate the discharge, therefore the existing OBD will be maintained until such time the school district is offered funding.

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 MSAD #75 (BOWDOINHAM COMMUNITY SCHOOL) to discharge a monthly average flow of up to 7,500 gpd of secondary treated waste water to the West Branch of the Cathance River, Class B, in Bowdoinham, 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 21st DAY OF December, 2007.

DEPA RTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAVID P. LITTELL, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 13, 2007.

Date of application acceptance: June 25, 2007.

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

1. The permittee is authorized to discharge **secondary treated waste water from Outfall #001A** to the West Branch of the Cathance River, Class B. Such discharges shall be limited and monitored by the permittee as specified below[(1)]:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow ***[50050]***	7,500 GPD *[07]*	---	Report GPD *[07]*	---	---	---	1/Month *[01/30]*	Measured *[MS]*
BOD_5 ***[00310]***	1.9 lbs/day *[26]*	2.8 lbs/day *[26]*	3.2 lbs/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Month *[01/30]*	Grab *[GR]*
BOD_5 Percent Removal[(2)] ***[81010]***	---	---	---	85% *[23]*	---	---	---	---
TSS ***[00530]***	1.9 lbs/day *[26]*	2.8 lbs/day *[26]*	3.2 lbs/day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Month *[01/30]*	Grab *[GR]*
TSS Percent Removal[(2)] ***[81011]***	---	---	---	85% *[23]*	---	---	---	---
Settleable Solids ***[00545]***	---	---	---	---	---	0.3 ml/L *[25]*	1/Month *[01/30]*	Grab *[GR]*
E. Coli.* Bacteria[(3)]*[31633]	---	---	---	64/100 ml *[13]*	---	427/100 ml *[13]*	1/Month *[01/30]*	Grab *[GR]*
Total Residual Chlorine[(4)] ***[50060]***	---	---	---	---	---	0.3 mg/L *[19]*	2/Week *[02/07]*	Grab *[GR]*
pH ***[00400]***	---	---	---	---	---	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. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services. Samples that are sent to a publicly owned treatment works (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 BOD_5 and TSS for all flows receiving secondary treatment. This permitting action does not require the permittee to demonstrate on-going compliance with this limitation. If a circumstance arises during the term of this permit that necessitates demonstration, the percent removal shall be calculated based on an assumed influent value of 286 mg/L and the measured effluent concentration value.

3. ***E. coli* bacteria –** *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.

4. **Total residual chlorine (TRC) – –** Limitations and monitoring requirements for TRC are applicable any time elemental chlorine or chlorine-based compounds are being utilized to disinfect the discharge(s). TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The EPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (Most current edition), Method 4500-CL-E and Method 4500-CL-G or U.S.E.P.A. Manual of Methods of Analysis of Water and Wastes.

SPECIAL CONDITIONS

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 permit under Maine law, 38 M.R.S.A. §341-D, subsection 3 and is subject to penalties for non-payment.

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.

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 *E. coli*. bacteria levels to or below those specified in Special Condition A, "*Effluent Limitation and Monitoring Requirements*," of this permit.

E. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade I** certificate (or Registered Maine Professional Engineer) pursuant to Title 32 M.R.S.A. §4171 *et seq*. 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 June 25, 2007; 2) the terms and conditions of this permit; and 3) only from Outfall #001A. 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.

SPECIAL CONDITIONS

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 waste water treatment system. For the purposes of this section, notice regarding substantial change shall include information on:

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

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

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 (if not done so within the most recent five-year period) by a licensed site evaluator with experience in designing systems for the replacement of overboard discharge systems.

Transfers - The Department may not grant approval for permit transfer if the site evaluation concludes that a non-discharging waste water 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 an alternative system for the overboard discharge. Pursuant to Maine law 38 MRSA, §413(3) the alternative system would need to be installed within 90 days of property transfer, except that, if soil conditions are poor due to seasonal weather, the alternative system may be installed as soon as soil conditions permit.

Renewals – Pursuant to Maine law 38 MRSA, §414-A(1-B), if a technologically proven alternative is identified, the alternative must be installed within 180 days of the application's being accepted by the department, subject to availability of funding under section 411-A. If the applicant is not eligible for funding under section 411-A, the alternative system must be installed within 180 days. If the applicant is eligible for funding but no funding is available, the installation of an alternative system may be postponed until funding is available.

I. OPERATION & MAINTENANCE (O&M) PLAN

On or before March 1, 2008 *[PCS Code 15599]* The permittee 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.

SPECIAL CONDITIONS

I. OPERATION & MAINTENANCE (O&M) PLAN (cont'd)

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, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment**.**

J. SEPTIC TANK MAINTENANCE

1. All septic treatment tanks and other holding or treatment tanks shall be regularly inspected (at least once every three years) and maintained to ensure that they are providing best practicable treatment.

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 whichever is less. Following pumping, the tanks shall be checked for damage at key joints and the inlet and outlet baffles, and repaired promptly if damaged. The permittee 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. The logs must be kept current and available to the Department for inspection upon request.

K. 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 (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
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333-0017

SPECIAL CONDITIONS

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.

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 9, 2007**

MEPDES PERMIT: **#ME0102776**
WASTE DISCHARGE LICENSE: **#W001003-5D-B-R**

NAME AND ADDRESS OF APPLICANT:

MAINE SCHOOL ADMINISTRATIVE DISTRICT #75
50 Republic Avenue
Topsham, Maine 04086

COUNTY: **Sagadahoc County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

23 Cemetary Road
Bowdoinham, Maine 04008

RECEIVING WATER / CLASSIFICATION: **West Branch of the Cathance River/Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Christopher R. Shaw**
Facilities & Projects Director
(207) 729-1548

1. APPLICATION SUMMARY

a. Application - Maine School Administrative District #75 (school hereinafter) has applied to the Department for renewal of overboard discharge (OBD) Waste Discharge License (WDL) #W001003-58-A-R which was issued by the Department on March 31, 1993, and expired on March 31, 1998. The WDL authorized a year-round monthly average discharge of up to 7,500 gallons per day of secondary treated waste waters to the West Branch of the Cathance River, Class B in Bowdoinham, Maine.

b. Source Description: The discharge is from an elementary school complex with approximately 200 students and 50 staff. See Attachment A of this Fact Sheet for a layout of the school campus. It is noted the northern half of the layout shows land owned by the Town of Bowdoinham (not MSAD #75) on which the replacement system option discussed in section 1(d) of this Fact Sheet would be located.

1. APPLICATION SUMMARY (cont'd)

c. Waste water Treatment: Residential like waste water generated at the school receives a secondary level of treatment via a septic tank and a sand filter bed treatment system. The waste water generated by the school is directed to two septic tanks with capacities of 4,000 and 8,000 gallons. After receiving primary treatment in the septic tank, waste water is conveyed to a splitter box that directs one-half of the flow to each of two sand filter beds.

Waste Water is collected from the sand filters and then conveyed by gravity to a tablet chlorinator for seasonal disinfection, conveyed to a tablet dechlorination chamber and then to the wet well of a pump station. The pump station consists of a wet well with a volume of 2,000 gallons and two pumps. Both pumps are typically set to operate automatically after activated by float switches that are set to initiate one pump when the water level in the wet well rises to a certain height. If waste water is generated at a flow rate exceeding the initial pump capacity and the wet well water level rises to activate the float switch for the second pump, then both pumps will operate to remove waste water from the wet well. When the water level diminishes below the level of the floats due to the pumping cycle, then the pumps will deactivate and no further discharge to the outfall pipe would occur until the next pumping cycle. From the pump station, the waste water is pumped under Ridge Road via a 4-inch diameter force main that leads to an outfall pipe that discharges to the West Branch of the Cathance River. The outfall pipe extends out into the receiving waters approximately 25 feet with approximately five foot of water over the crown of the pipe at low flow conditions. See Attachment B of this Fact Sheet for a layout of the septic tank, sand filters, pump station and outfall pipe discharge area.

d. Replacement Options: The school has submitted documentation (October 4, 2007) indicating that replacement options are feasible at this location**.** However, the report notes that the proposed disposal area would require variances afforded by the *Subsurface Waste Water Disposal Rules*, 10-144 CMR, Chapter 241, (Plumbing Code) due to soil limitations consisting of a high perched ground water table and low permeability. The proposed disposal area would be located on land that is owned by the Town of Bowdoinham and not the school district.

The Plumbing Code authorizes a reduction of the leachbed disposal area by using an adjustment factor that is dependent on the quality of the effluent produced via pre-treatment technologies and devices. Sand filters used at the school pre-treat the effluent to a high quality level and would qualify for a reduced leachbed area. Using this adjustment factor, the school would quality for a 50% reduction of leachbed sizing for subsurface waste water disposal (combined BOD & TSS concentrations less than 30 mg/L). Refer to Table 603.1 for sizing adjustment factors. The replacement system(s) would consist of a three sub-surface systems with a total area of 18,750 sq. ft. located just northeast of the existing sandfilter at an estimated cost of $150,000 - $175,000. The sub-surface systems would consist of a total of 375 plastic chambers. One system would be 300 feet long x 45 feet wide and the two other systems would be 200 feet long x 69 feet wide each. 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."* The Department has determined no funding is available at this time for replacement of the school's OBD system.

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. 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 #ME0102776 will be utilized as the primary reference number for the school facility.

b. Terms and conditions

This permitting action is similar to the March 31, 1993 licensing action in that it is:

1. Carrying forward the monthly average discharge flow limitation of 7,500 gpd of secondary treated waste water and a daily maximum reporting requirement for flow;

2. Carrying forward the monthly average and daily maximum technology-based concentration limitations for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) and establishing a 1/Month monitoring requirement;

3. Carrying forward water quality based monthly average (geometric mean) and daily maximum *E. coli* bacteria limitations. The bacteria limitations apply seasonally (May 15th through September 30th) rather than year-round as was the case in the previous WDL.

4. Carrying forward a daily maximum technology based limitation for total residual chlorine (TRC) and monitoring requirements. It is noted the numeric limitation in this permit is more stringent (0.3 mg/L, down from 1.0 mg/L) to be consistent with all other like permits where dechlorination is utilized. The TRC limitations are in effect anytime elemental chlorine or chlorine based compounds are utilizerd to disinfect the discharge.

5. Carrying forward the daily maximum effluent limitation for settleable solids. It is noted the numeric limitation is less stringent (0.3 ml/L, up from 0.1 ml/L) to be consistent with all other MEPDES permits for like discharges.

This permitting action <u>is different</u> from the March 31, 1993 licensing action in that it is:

6. Establishing weekly average technology based concentration limits for BOD and TSS.

7. Establishing monthly average, weekly average, and daily maximum technology-based mass limitations for BOD_5 and TSS;

8. Establishing a requirement to achieve a minimum 30-day average of 85 percent removal for BOD_5 and TSS;

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.

2. PERMIT SUMMARY (cont'd)

10. Establishing a requirement for the permittee to inspect and pump all septic tanks at a minimum of once every three years.

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. Requiring the person in responsible charge of the treatment system be certified by the Department in the operation of waste water treatment facilities.

c. Facility History: This section provides a summary of the most significant historical events for the School.

1950s - The original school was constructed at its current site location.

November 28, 1973 – The Department issued WDL #579 that authorized the discharge of treated sanitary waste water generated by the school with a flow limitation of 7,500 gpd.

January 11, 1977 – The Department issued WDL #1003 that renewed authorization to discharge up to 7,500 gpd of treated sanitary waste water. WDL #1003 expired on January 11, 1982.

July 26, 1983 – The Department renewed WDL #1003 for a five year term.

March 31, 1993 -- The Department issued WDL #W001003-58-A-R that renewed authorization to discharge up to 7,500 gpd generated by the school. The March 31, 1993 WDL was issued for a five-year term and expired on March 31, 1998.

June 12, 2007 – The School submitted a complete application to the Department to renew the WDL for its waste water treatment facility.

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. §468(6) states that the West Branch, a tributary of the Cathance River, or those waters draining directly or indirectly into tidal waters of Sagadahoc County above the Chops, with the exception of tributaries of the Androscoggin River Estuary, the Kennebec River Estuary and Merrymeeting Bay is a Class B water body. Maine law 38 M.R.S.A. §465(3) contains the classification standards for Class B waterbodies.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2006 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists a 3.4-mile Class B reach of Merrymeeting Bay, including tidal portions of tributaries from the Androscoggin River to the Chops (Hydrologic Unit Code #ME0103000312 / Waterbody ID #427R) as, *"Category 4-B-1: Rivers and Streams Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment."* Impairment in this context refers to the designated use of fishing and a fish consumption advisory due to the presence of dioxin in fish tissues.

The 305b Report lists all of Maine's fresh waters as, *"Category 4-B-3: Waters Impaired by Atmospheric Deposition of Mercury. Regional or National TMDL may be required."* Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. 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 school causes or contributes to the impairment status of the receiving waterbody.

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 waste water 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 such as the Bowdoinham 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,

(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.

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

b. Flow: The previous licensing action established a monthly average discharge flow limitation of 7,500 gallons per day (gpd) based on the design flow for the treatment system.

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 June 2003 – December 2006 indicates the daily maximum flow has ranged from 569 to 6,732 gpd with an arithmetic mean (n=13) of 3,619 gpd. This permitting action is carrying forward the monthly average discharge flow limit of 7,500 gpd, which is considered representative of the design flow for the facility, and is establishing a daily maximum discharge flow reporting requirement to assist in compliance evaluations.

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous licensing action established technology-based monthly average and daily maximum BOD_5 and TSS concentration limits of 30 mg/L and 50 mg/L, respectively. The monthly average concentration limit is based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B), as defined in Department rule, 06-096 CMR Chapter 525(3)(III). The daily maximum BOD_5 and TSS 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 BOD_5 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_5 and TSS mass limitations based on calculations using the design flow for the facility of 7,500 gpd (0.0075 MGD) and the applicable concentration limits as follows:

Monthly Average Mass Limit: (30 mg/L)(8.34 lbs./gallon)(0.0075 MGD) = 1.9 lbs/day
Weekly Average Mass Limit: (45 mg/L)(8.34 lbs./day)(0.0075 MGD) = 2.8 lbs/day
Daily Maximum Mass Limit: (50 mg/L)(8.34 lbs./day)(0.0075MGD) = 3.2 lbs/day

The previous licensing action established a minimum monitoring frequency requirement of four samples per year for BOD_5 and TSS during the active discharge period (September to June). This permitting action is establishing a 1/Month monitoring frequency to provide a more representative sampling regime throughout the discharge year and is based on Department guidance for the MEPDES permit program for dischargers permitted to discharge between 0 and 100,000 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

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

action authorizes the permittee to assume an influent BOD5 and TSS concentration value of 286 mg/L for purposes of calculating the monthly percent removal value until such time that the infrastructure is modified or replaced such that collection of a representative raw influent sample is practical.

For BOD_5, a review of the monthly average effluent concentration data as reported on the Discharge Monitoring Reports (DMRs) submitted to the Department for the period June 2003 – December 2006 indicates the monthly average BOD_5 concentration discharged has ranged from 2 mg/L to 18 mg/L with an arithmetic mean (n=14) of 4.7 mg/L. The facility has been in compliance with the monthly average limitation of 30 mg/L 100% of the time during said reporting period. For TSS, a review of the monthly average effluent concentration data as reported on the DMRs submitted to the Department for the period November 2001 – October 2006 indicates the monthly average TSS concentration discharged has ranged from 5 mg/L to 34 mg/L with an arithmetic mean (n=14) of 16.5 mg/L. The facility has been in compliance with the monthly average limitation of 30 mg/L 85% of the time during said reporting period.

d. Settleable Solids: The previous licensing action established a technology based daily maximum concentration limit of 0.1 ml/L for settleable solids. The origin of the numeric limit is unknown. This permitting action is establishing a less stringent technology based limit of 0.3 ml/L with a 1/Month monitoring frequency. The limit is a Department BPT limit and is consistent with all other MEPDES permits issued by the Department for like discharges. During the period between June 2003 to December 2006, the permittee has reported settleable solid concentrations at 0.0 ml/L.

e. *Escherichia coli* Bacteria: The pervious licensing action established year-round 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 requirements of once every calendar quarter. These limitations are being carried forward in this permitting action based on Department guidance for systems permitted to discharge between 0 and 100,000 GPD. The bacteria limitations established in this permitting action are being changed from year-round to seasonal and apply between May 15 and September 30 of each year to be consistent with the time frame established in Maine law, 38 M.R.S.A., §465(C). 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 June 2003 – December 2006 indicates the monthly (geometric mean) and daily maximum *E. coli* bacteria discharged has ranged from 0 colonies/100 ml to 20,000 colonies per 100 ml. The DMR indicates the facility has been in compliance with the limitation 92% of the time.

f. Total Residual Chlorine (TRC): The previous licensing action established a daily maximum technology based concentration limit of 1.0 mg/L for TRC. 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. 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 or a daily maximum technology based limit of 0.3 mg/L if the permittee dechlorinates the discharge. This school dechlorinates the effluent prior to discharge. Therefore, this permitting action is establishing a daily maximum limitation of 0.3 mg/L.

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

A review of the daily maximum data as reported on the DMRs submitted to the Department for the period June 2003 – December 2006 indicates the TRC discharged has ranged from 0.0 mg/L to 1.0 mg/L with an arithmetic mean (n=13) of 0.22 mg/L. The DMR data indicates the facility has been in compliance with the daily maximum limitation 100% of the time during said reporting period. This permitting action is carrying forward the monitoring frequency of 2/Week as established in the previous licensing action.

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 waste water generated by domestic sources. 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 Times Record newspaper on or about June 7, 2007. 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 November 9, 2007, through the issuance date of the permit, the Department solicited comments on the proposed draft license for the MSAD 75 facility. The Department did not receive comments from the permittee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the license. Therefore, the Department has not prepared a Response to Comments.