



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE  
GOVERNOR

PAUL MERCER  
COMMISSIONER

May 15, 2017

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-D-R  
**Proposed Draft Permit**

Dear Mr. Shaw:

Attached is a proposed draft MEPDES permit/WDL (permit hereinafter) which the Department proposes to issue to MSAD #75 as a final document after opportunity for your review and comment. By transmittal of this letter, you are provided with an opportunity to comment on the proposed draft permit/license and its special and standard conditions. If it contains errors or does not accurately reflect present or proposed conditions, please respond to the Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies and from any other parties who have notified the Department of their interest in this matter.

All comments on the proposed draft permit must be received in the Department of Environmental Protection office on or before the close of business **Tuesday, June 13, 2017.** Failure to submit comments in a timely fashion will result in the proposed draft/license permit document being issued as drafted.

MSAD #75, Bowdoinham Comm. Sch.  
May 15, 2017  
Page 2 of 2

Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection  
Bureau of Water Quality  
Division of Water Quality Management  
17 State House Station  
Augusta, ME 04333-0017  
[Irene.Saumur@maine.gov](mailto:Irene.Saumur@maine.gov)

If you have any questions regarding the matter, please feel free to contact me.

Sincerely,



Irene Saumur  
Division of Water Quality Management  
Bureau of Water Quality

Enc.

cc: Bill Johnson, DEP/CMRO  
Lori Mitchell, DEP/CMRO  
Alex Rosenberg, EPA  
David Webster, EPA  
Olga Vergara, EPA  
Marelyn Vega, EPA  
Richard Carvalho, EPA  
DMR Environmental Review  
IF&W Environmental Review



STATE OF MAINE  
Department of Environmental Protection  
17 State House Station  
Augusta, ME 04333

DEPARTMENT ORDER

**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-D-R )	<b>RENEWAL</b>
<b>APPROVAL</b> )	

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et seq. and Maine Law 38 M.R.S. 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 (MSAD #75, hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

**APPLICATION SUMMARY**

MSAD #75 has applied to the Department for renewal of overboard discharge (OBD) Waste Discharge License (WDL) #W001003-5D-C-R/Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102776 which was issued by the Department on October 3, 2012, and is scheduled to expire on October 3, 2017. 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. Terms and conditions - This permitting action is carrying forward all conditions of the October 3, 2012 permitting action except:
  1. This permitting action is reducing the monitoring frequency for Total Residual Chlorine from 2/wk to 1/wk.

## CONCLUSIONS

BASED on the findings in the attached **PROPOSED DRAFT FACT SHEET** dated May 15, 2017, 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, *Classification of Maine waters*, 38 M.R.S. § 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 natural resource, that water quality will be maintained and protected;
  - (c) Where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
  - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
  - (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharges will be subject to effluent limitations that require application of best practicable treatment as defined in *Conditions of licenses*, 38 M.R.S. § 414-A(1)(D) and 414-A(1-B).
5. The overboard discharge system was in continuing existence for the 12 months preceding June 1, 1987.
6. On September 14, 2007, 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 no authority to require the permittee to obtain a land use easement from the Town to install a subsurface system on property owned by the Town.
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 becomes effective upon the date of signature below and expires at midnight five (5) years thereafter. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of the this permit, the terms and conditions of the this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [Maine Administrative Procedure Act, 5 M.R.S. § 10002 and Rules Concerning the Processing of Applications and Other Administrative Matters, 06-096 CMR 2(21)(A) (effective October 19, 2015)].

DONE AND DATED AT AUGUSTA, MAINE, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
for Paul Mercer, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 28, 2017.

Date of application acceptance: May 5, 2017.

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

This Order prepared by Irene Saumur, BUREAU OF WATER QUALITY

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

- 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<sup>(1)</sup>:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow <i>[50050]</i>	7,500 GPD <i>[07]</i>	---	Report GPD <i>[07]</i>	---	---	---	1/Month <i>[01/30]</i>	Measured <i>[MS]</i>
BOD <sub>5</sub> <i>[00310]</i>	1.9 lbs/day <i>[26]</i>	2.8 lbs/day <i>[26]</i>	3.2 lbs/day <i>[26]</i>	30 mg/L <i>[19]</i>	45 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/Month <i>[01/30]</i>	Grab <i>[GR]</i>
BOD <sub>5</sub> Percent Removal <sup>(2)</sup> <i>[81010]</i>	---	---	---	85% <i>[23]</i>	---	---	---	---
TSS <i>[00530]</i>	1.9 lbs/day <i>[26]</i>	2.8 lbs/day <i>[26]</i>	3.2 lbs/day <i>[26]</i>	30 mg/L <i>[19]</i>	45 mg/L <i>[19]</i>	50 mg/L <i>[19]</i>	1/Month <i>[01/30]</i>	Grab <i>[GR]</i>
TSS Percent Removal <sup>(2)</sup> <i>[81011]</i>	---	---	---	85% <i>[23]</i>	---	---	---	---
Settleable Solids <i>[00545]</i>	---	---	---	---	---	0.3 ml/L <i>[25]</i>	1/Month <i>[01/30]</i>	Grab <i>[GR]</i>
<i>E. Coli.</i> Bacteria <sup>(3)</sup> <i>[31633]</i>	---	---	---	64/100 ml <i>[13]</i>	---	427/100 ml <i>[13]</i>	1/Month <i>[01/30]</i>	Grab <i>[GR]</i>
Total Residual Chlorine <sup>(4)</sup> <i>[50060]</i>	---	---	---	---	---	0.3 mg/L <i>[19]</i>	1/Week <i>[01/07]</i>	Grab <i>[GR]</i>
pH <i>[00400]</i>	---	---	---	---	---	6.0 – 9.0 SU <i>[12]</i>	1/Year <i>[01/YR]</i>	Grab <i>[GR]</i>
<i>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.</i>								

**FOOTNOTES:** See Page 5 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 as to be representative of end-of-pipe effluent characteristics. 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. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (last amended April 1, 2010). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR.
2. **Percent Removal** – The permittee must maintain a minimum of 85 percent removal of both BOD<sub>5</sub> and TSS for all flows receiving secondary treatment. The percent removal must be calculated based on influent and effluent concentration values. The permittee’s wastewater treatment system does not contain an influent sampling location that is representative of raw wastewater conditions. Therefore, this permitting action authorizes the permittee to assume an influent BOD<sub>5</sub> and TSS concentration value of 286 mg/L for purposes of calculating the monthly percent removal value.
3. ***E. coli* bacteria** – *E. coli* bacteria limits and monitoring requirements are seasonal and apply between May 15<sup>th</sup> and September 30<sup>th</sup> 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 are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. For instances when a facility has not disinfected with chlorine based compounds for an entire reporting period, the facility shall report “NODI-9” for this parameter on the monthly DMR. The permittee shall utilize approved test methods that are capable of bracketing the limitations in this permit.

## **SPECIAL CONDITIONS**

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

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

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

1. The permittee must not discharge effluent that contains a visible oil sheen, foam or floating solids at any time which would impair the uses designated for the classification of the receiving waters.
2. The permittee must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the uses designated for the classification of the receiving waters.
3. The permittee must not discharge effluent that causes visible discoloration or turbidity in the receiving waters or otherwise impairs the uses designated for the classification of the receiving waters.
4. The permittee must not discharge effluent that lowers the quality of any classified body of water below such classification, or lowers the existing quality of any body of water if the existing quality is higher than the classification.

### **D. TREATMENT PLANT OPERATOR**

The treatment facility must be operated by a person holding a minimum of a Maine **Grade I** certificate (or Registered Maine Professional Engineer) pursuant to Title 32 M.R.S. §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.

### **E. AUTHORIZED DISCHARGES**

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on May 5, 2017; 2) the terms and conditions of this permit; and 3) only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four hour reporting*, of this permit.



## **SPECIAL CONDITIONS**

### **F. 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.

### **G. SITE EVALUATION FOR TRANSFERRED AND RENEWED PERMITS**

**Prior to permit transfer or transfer of the property** occupying the permitted overboard discharge system, 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 M.R.S. §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 M.R.S. §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.

### **H. OPERATION & MAINTENANCE (O&M) PLAN**

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

## SPECIAL CONDITIONS

### H. 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 must evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan must be kept on-site at all times and made available to Department and EPA personnel upon request.

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

### I. SEPTIC TANK MAINTENANCE

1. All septic treatment tanks and other holding or treatment tanks must 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 must be checked for damage at key joints and the inlet and outlet baffles, and repaired promptly if damaged. The permittee must keep a pumping log including the date of pumping, quantity of material removed, name and number of licensed contractor, pumping frequency and other relevant observations. The logs must be kept current and available to the Department for inspection upon request.

### J. MONITORING AND REPORTING

#### Electronic Reporting

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

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

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

Documentation submitted in support of the electronic DMR may be attached to the electronic DMR. Toxics reporting must be done using the DEP Toxsheet reporting form included as **Attachment C** of this permit. An electronic copy of the Toxsheet reporting document must be submitted to the Department assigned compliance inspector as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to the Department assigned compliance inspector, or a copy attached to your NetDMR submittal will suffice.

## **SPECIAL CONDITIONS**

### **J. MONITORING AND REPORTING (cont'd)**

Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15<sup>th</sup> day of the month following the completed reporting period.

An electronic copy of the secondary treatment bypass reporting document must be submitted to the Department assigned compliance inspector and the CSO Coordinator as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to the Department assigned compliance inspector, or a copy attached to your NetDMR submittal will suffice. Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15<sup>th</sup> day of the month following the completed reporting period.

#### Non-electronic Reporting

If you have received a waiver from the Department concerning the USEPA electronic reporting rule, or are permitted to submit hardcopy DMR's to the Department, then your monitoring results obtained during the previous month must be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and postmarked on or before the thirteenth (13<sup>th</sup>) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15<sup>th</sup>) day of the month following the completed reporting period.

Toxsheet reporting forms must be submitted electronically as an attachment to an email sent to your Department compliance inspector. In addition, a signed hardcopy of your Toxsheet must also be submitted.

A signed copy of the DMR and all other reports required herein must be submitted to the Department assigned compliance inspector (unless otherwise specified) following address:

Department of Environmental Protection  
Bureau of Water Quality  
Division of Water Quality Management  
17 State House Station  
Augusta, Maine 04333

### **K. REOPENING OF PERMIT FOR MODIFICATIONS**

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

**SPECIAL CONDITIONS**

**L. SEVERABILITY**

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

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

**PROPOSED DRAFT FACT SHEET**

Date: **May 15, 2017**

MEPDES PERMIT: **#ME0102776**  
WASTE DISCHARGE LICENSE: **#W001003-5D-D-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 (MSAD #75 hereinafter) has applied to the Department for renewal of overboard discharge (OBD) Waste Discharge License (WDL) #W001003-5D-C-R/Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0102776 which was issued by the Department on October 3, 2012, and is scheduled to expire on October 3, 2017. 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 169 students and 38 faculty and staff. See Attachment A of this Fact Sheet for location maps. 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. Wastewater 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 qualify 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. The Department has no authority to require the permittee to obtain a land use easement from the Town to install a subsurface system on property owned by the Town.

## 2. PERMIT SUMMARY

- a. Terms and conditions: This permitting action is carrying forward all condition of the October 3, 2012 permitting action except:

(1) This permitting action is reducing the monitoring frequency for Total Residual Chlorine from to 1/wk.

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

*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.

*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.

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

*December 21, 2007* – The Department issued WDL #W001003-5D-B-R for a five year term.

*July 16, 2012* – MSAD #75, Bowdoinham Community School, submitted a timely and complete application to the Department for renewal of WDL #W001003-5D-B-R.

*October 3, 2012* - The Department issued combination MEPDES Permit #ME0102776 / WDL #W001003-5D-C-R for a five year term.

*April 28, 2017* - MSAD #75, Bowdoinham Community School, submitted a timely and complete application to the Department for renewal of combination MEPDES Permit #ME0102776 / WDL #W001003-5D-C-R. The application as accepted for processing on May 5, 2017 and assigned application tracking #W001003-5D-D-R.

### 3. CONDITIONS OF PERMIT

*Conditions of licenses*, 38 M.R.S. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require the 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, *Certain deposits and discharges prohibited*, 38 M.R.S. § 420 and Department rule *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective March 21, 2012), require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective July 29, 2012), 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. §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. §465(3) contains the classification standards for Class B waterbodies.

### 5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2014 Integrated Water Quality Monitoring and Assessment Report. The 305b Report lists all of Maine's fresh waters as, "*Category 5C: 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.

All freshwaters are listed in Category 5C (TMDL Completed) due to US EPA approval of Regional Mercury TMDL. Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many waters, and many fish from any given water, do not exceed the action level for mercury. However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources.

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 M.R.S. §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.



## 5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

- (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 M.R.S. §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) - The Department will find that the discharge meets the requirements of best practicable treatment pursuant to 38 M.R.S. § 414-A(1-B) for purposes of licensing when it finds that there are no technologically proven alternative methods of wastewater disposal consistent with the plumbing code adopted by the Department of Health and Human Services pursuant to Title 22, section 42 that will not result in an overboard discharge. Pursuant to *Overboard Discharges: Licensing and Abandonment*, 06-096 CMR 596(9), *Criteria and Standards for Waste Discharge Licenses* 06-096 CMR 524(2) (effective January 12, 2001) and 06-096 CMR 525(3)(III), BPT for overboard discharges is secondary treatment.
- b. Flow: The previous established monthly average discharge flow limitation of 7,500 gallons per day (gpd), which is based on the design flow for the treatment system, is being carried forward in this permitting action.

The Department reviewed the discharge monitoring reports (DMR) that were submitted for the period of January 1, 2014 through January 1, 2017. A review of data indicates the following:

### Flow (n = 35)

Value	Limit (GPD)	Range (GPD)	Mean (GPD)
Monthly Average	7,500	0 - 576	384
Daily Maximum	Report	0 - 576	386

- c. Biochemical Oxygen Demand (BOD<sub>5</sub>) and Total Suspended Solids (TSS): This permitting action is carrying forward a technology-based monthly average and daily maximum BOD<sub>5</sub> 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<sub>5</sub> and TSS concentration limits of 50 mg/L were based on a Department best professional judgment (BPJ) of best practicable treatment (BPT). In addition, this permitting action is carrying forward the weekly average BPT concentration limit of 45 mg/L pursuant to Department rule, 06-096 CMR Chapter 525(3)(III).

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

This permitting action carries forward the monthly average, weekly average and daily maximum BOD<sub>5</sub> 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: (0.0075 MGD)(8.34 lbs./gallon)(30 mg/L) = 1.9 lbs/day  
 Weekly Average Mass Limit: (0.0075 MGD)(8.34 lbs./day) (45 mg/L) = 2.8 lbs/day  
 Daily Maximum Mass Limit: (0.0075MGD) (8.34 lbs./day)(50 mg/L) = 3.2 lbs/day

All mass limits are being carried forward in this permitting action. The Department reviewed DMRs that were submitted for the period of January 1, 2014 through January 1, 2017. A review of data indicates the following:

**BOD<sub>5</sub> Mass (n=35)**

Value	Limit (lbs./day)	Range (lbs./day)	Average (lbs./day)
Monthly Average	1.9	0 – 0.03	0.002
Weekly Average	2.8	0 – 0.03	0
Daily Maximum	3.2	1 - 1	0.859

**BOD<sub>5</sub> Concentration (n=35)**

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	1 - 11	3.38
Weekly Average	45	1 - 11	3.38
Daily Maximum	50	1 - 11	3.38

**TSS mass (n=35)**

Value	Limit (lbs./day)	Range (lbs./day)	Average (lbs./day)
Monthly Average	1.9	0 – 0.05	0.004
Weekly Average	2.8	0 – 0.05	0
Daily Maximum	3.2	0.01 – 1	0.861

**TSS concentration (n=35)**

Value	Limit (mg/L)	Range (mg/L)	Average (mg/L)
Monthly Average	30	2.50 - 19	9.73
Weekly Average	45	2.50 - 19	9.73
Daily Maximum	50	2.50 - 19	9.73

This permitting action is carrying forward a 1/Month minimum monitoring frequency requirement for BOD<sub>5</sub> and TSS.

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

This permitting action is also carrying forward the 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. This permitting action is carrying forward the authorization for 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.

- d. Settleable Solids: The previous permitting action established a technology based daily maximum concentration limit for settleable solids 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 and is being carried forward in this permitting action. During the period between January 1, 2014 through January 1, 2017, the permittee has reported settleable solid concentrations at 0.0 ml/L.
- e. Escherichia coli Bacteria: The pervious permitting action established a seasonal 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. §465(3)(B), and a minimum monitoring frequency requirement of once every month between May 15 and September 30 of each year to be consistent with the time frame established in Maine law, 38 M.R.S. §465(C). Subsequent to issuance of the previous permit, the State Legislature adopted more stringent AWQC for *E. coli* bacteria. The newer criteria for Class B waste 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 daily maximum BPT limit established in the previous permitting action is protective of the newer AWQC for bacteria.

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 January 1, 2014 through January 1, 2017 indicates the monthly (geometric mean) and daily maximum *E. coli* bacteria discharged has ranged from <1 colonies/100 ml to 48 colonies per 100 ml. The DMR indicates the facility has been in compliance with the limitation 100% of the time.

***E. coli* Bacteria (n=14)**

<b>Value</b>	<b>Limit (col/100 ml)</b>	<b>Range (col/100 ml)</b>	<b>Mean (col/100 ml)</b>
Monthly Average	64	1 – 48	9.29
Daily Maximum	427	1 – 48	9.28

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

- f. Total Residual Chlorine (TRC): The previous licensing action established a daily maximum technology based concentration limit of 0.3 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 carrying forward the daily maximum limitation of 0.3 mg/L.

During the period of January 1, 2014 through January 1, 2017 the DMRs indicate the TRC discharged was 0.0 ml/L throughout the entire period. Therefore, this permitting action is reducing the monitoring requirements for TRC to 1/week.

- g. pH: The previous licensing action established a pH range limit of 6.0 – 9.0 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 Brunswick Times Record newspaper on or about April 30, 2017. 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:

Irene Saumur  
Division of Water Quality Management  
Bureau of Water Quality  
Department of Environmental Protection  
17 State House Station  
Augusta, Maine 04333-0017 Telephone: (207) 485-2404  
e-mail: [irene.saumur@maine.gov](mailto:irene.saumur@maine.gov)

## **10. RESPONSE TO COMMENTS**

*Reserved until the close of the formal 30-day public comment period.*

# ATTACHMENT A

Source: USGS 7.5 minute topographic map obtained from the Maine Office of GIS.



Source: Aerial orthophoto flown in May 2003  
obtained from the Maine Office of GIS.



Bowdoinham  
Community School

Outfall #001A

Branch

West

Cathance River

Post Rd

Center St

Cemetery Rd

Ridge Rd

Vine St

Church St

Main St

School St

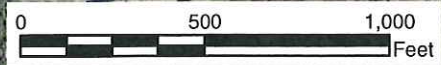
Back Hill St

Spring St

Railroad Av

Bay Rd

River Rd



**Bowdoinham, Maine**  
**Bowdoinham Community School**  
**23 Cemetery Rd**  
**Aerial Orthophoto**

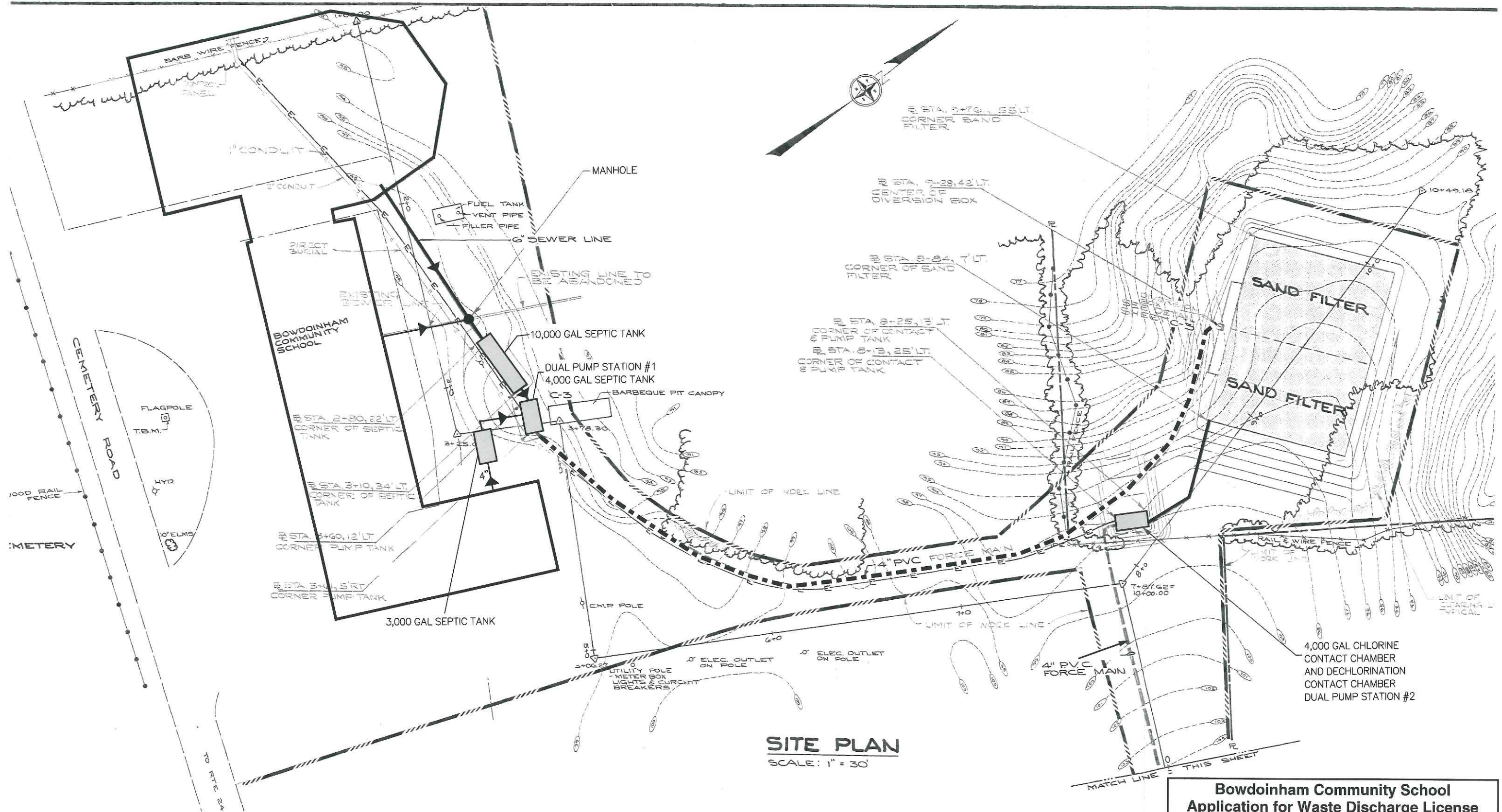
PROJ NO 13470A  
DATE April 2017  
SCALE 1" equals 500'



FIGURE:  
**2**



# ATTACHMENT B



**SITE PLAN**  
SCALE: 1" = 30'

**Bowdoinham Community School**  
**Application for Waste Discharge License**  
**MEPDES Permit**  
 April 2017  
**WWTF Site Plan**