

Appendix 2-3

**Marstons Mills WWTF Groundwater Discharge
Permit, March 2010**



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

GROUNDWATER DISCHARGE PERMIT

Name and Address of Applicant: *Town of Barnstable, 617 Bears's Way, Hyannis, Massachusetts 02601.*

Date of Application: *August 1, 2008*

Application/Permit No. *576-2*

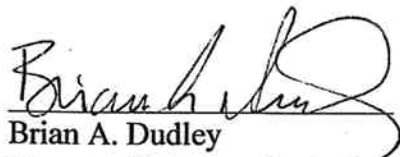
Date of Issuance: *March 2, 2010*

Date of Expiration: *March 2,, 2015*

Effective Date: *March 2, 2010*

AUTHORITY FOR ISSUANCE

Pursuant to authority granted by Chapter 21, Sections 26-53 of the Massachusetts General Laws, as amended, 314 CMR 2.00, and 314 CMR 5.00, the Massachusetts Department of Environmental Protection (the Department) hereby issues the following permit to: Town of Barnstable (hereinafter called "the permittee") authorizing discharges from the Horace Mann Charter School, 730 Osterville – West Barnstable Road, Marstons Mills, Massachusetts (school with a population of 1,751 and a 30 unit affordable housing development) on-site wastewater treatment facility to the ground, such authorization being expressly conditional on compliance by the permittee with all terms and conditions of the permit hereinafter set forth.


Brian A. Dudley
Bureau of Resource Protection

March 2, 2010
Date

I. SPECIAL CONDITIONS

A. Effluent Limits

The permittee is authorized to discharge into the ground from the wastewater treatment facilities for which this permit is issued a treated effluent whose characteristics shall not exceed the following values:

Effluent Characteristics	Discharge Limitations
Flow	42,900 GPD
Oil and grease	15 mg/l
Total Suspended Solids (TSS)	10 mg/l
Total Nitrogen (NO ₂ + NO ₃ + TKN)	10 mg/l
Nitrate-Nitrogen	10 mg/l
Biochemical Oxygen Demand, 5-day @20°C (BOD ₅)	30 mg/l
Turbidity	5 NTU
Fecal Coliform	200 colonies / 100 ml

- a) The pH of the effluent shall not be less than 6 nor greater than 9 at any time or not more than 0.2 standard units outside the naturally occurring range.
- b) The discharge of the effluent shall not result in any demonstrable adverse effect on the groundwater or violate any water quality standards that have been promulgated.
- c) The monthly average concentration of BOD and TSS in the discharge shall not exceed 15 percent of the monthly average concentrations of BOD and TSS in the influent into the permittee's wastewater treatment facility.
- d) When the average annual flow exceeds 80 percent of the permitted flow limitations, the permittee shall submit a report to the Department describing what steps the permittee will take in order to remain in compliance with the permit limitations and conditions, inclusive of the flow limitations established in this permit.

B. Monitoring and Reporting

1) **INFLUENT:**

The permittee shall monitor and record the quality of the **influent** waste stream to the facility according to the following schedule and other provisions:

Parameter	Minimum Frequency of Analysis	Sample Type
BOD ₅	Monthly	24-Hour Composite
Total Suspended Solids	Monthly	24-Hour Composite
Total Solids	Monthly	24-Hour Composite
Ammonia Nitrogen	Monthly	24-Hour Composite

EFFLUENT:

The permittee shall monitor and record the quality and quantity of **effluent** at the effluent pump chamber to the leaching area according to the following schedule and other provisions:

Parameter	Minimum Frequency of Analysis	Sample Type
Flow	Daily	Meter reading
pH	Daily	Grab
UV Intensity	Daily	Continuous
Total Suspended Solids	Weekly	24-Hour Composite
Total Solids	Monthly	24-Hour Composite
Oil & Grease	Monthly	Grab
BOD ₅	Weekly	24-Hour Composite
Nitrate Nitrogen	Weekly	24-Hour Composite
Total Nitrogen (NO ₂ + NO ₃ + TKN)	Weekly	24-Hour Composite

Turbidity	Continuous	Meter reading
Fecal Coliform	2 / Week	Grab
Total Phosphorus ² (as P)	Quarterly	Grab
Orthophosphate ² (as P)	Quarterly	Grab
Volatile Organic Compounds ¹	2 x Annually	Grab

¹USEPA Method #624

²After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgment of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors.

- 2) The permittee shall sample the upgradient monitoring well: GWMW# 8 and the downgradient monitoring wells GWMW# 5, GWMW# 6, GWMW# 4, GWMW# 3 and GWMW# 2 as shown on a plan titled “Existing Site Plan, Marstons Mills Middle School, Barnstable, Massachusetts” dated August, 2003, submitted by Stearns & Wheler, LLC. Labels identifying each monitoring well’s identification in accordance with the above-referenced approved plan shall be affixed to the steel protective casing of each monitoring well.

The permittee shall monitor, record and report the quality of water in the monitoring wells according to the following schedule and other provisions:

Parameter	Frequency of Analysis
Static Water Level ¹	Monthly
pH	Monthly
Total Nitrogen (NO ₂ +NO ₃ +TKN)	Quarterly
Nitrate-Nitrogen	Quarterly
Total Phosphorus (as P) ³	Quarterly
Orthophosphate (as P) ³	Quarterly
Volatile Organic Compounds ²	Annually

¹Static Water Level shall be expressed as an elevation and shall be referenced to the surveyed datum established for the site. It shall be calculated by subtracting the depth to

the water table from the surveyed elevation of the top of the monitoring well's PVC well casing/riser.

²USEPA Method #624

³After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgement of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors.

- 3) Any grab sample or composite sample required to be taken less frequently than daily shall be taken during the period of Monday through Friday inclusive. All composite samples shall be taken over the operating day.

The permittee shall submit all monitoring reports within 30 days of the last day of the reporting month. Reports shall be on an acceptable form, properly filled and signed and shall be sent to the Department of Environmental Protection, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347, and to the Director of Watershed Permitting, Department of Environmental Protection, Watershed Permitting Group, One Winter Street, Boston, MA 02108, and to the Board of Health, P.O. Box 534, Hyannis, MA 02601. Submission of monitoring reports in electronic format is available through eDEP and serves as data submission to both the Regional and Boston offices. To register for electronic submission go to:

<http://www.mass.gov/dep/service/compliance/edeponlf.htm>

C. Supplemental Conditions

1. The permittee shall notify the Department at least thirty (30) days in advance of the proposed transfer of ownership of the treatment works for which this permit is written. Said notification shall include a written agreement between the existing and new permittees containing a specific date for transfer of permit, responsibility, coverage and liability between them.
2. A staffing plan for the treatment works shall be submitted to the Department once every two years and whenever there are staffing changes. The staffing plan shall include the following components:
 - a) The operator(s)'s name(s), operator grade(s) and operator license number(s);
 - b) The number of operational days per week;
 - c) The number of operational shifts per week;
 - d) The number of shifts per day;
 - e) The required personnel per shift;
 - f) Saturday, Sunday and holiday staff coverage;
 - g) Emergency operating personnel
3. The permittee is responsible for the operation and maintenance of all sewers, pump stations, and treatment units for the permitted facility, which shall be operated and maintained under the direction of a properly certified wastewater operator.
4. The permittee shall contract to have any and all solids and sludges generated by the treatment works for which this permit is issued removed off site by a properly licensed

- waste hauler for disposal at an EPA/DEP approved facility. The name and license number of the hauler along with the quantity of wastes removed and the date(s) of removal shall be reported by the permittee in writing to the Department.
5. Operation and maintenance of the proposed facility must be in accordance with 314 CMR 12.00, "Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges", and, 257 CMR 2.00, "Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities."
 - a. The facility has been rated (in accordance with 257 CMR 2.00), to be a Grade 4 facility. Therefore, the permittee shall provide for oversight by a Massachusetts Certified Wastewater Treatment plant operator (Chief Operator) Grade 4 or higher. The permittee will also provide for a backup operator who shall possess at least a valid Grade 3 license.
 - b. The date and time of the operator's inspection along with the operator's name and certification shall be recorded on the required monthly monitoring reports.
 6. If the operation and maintenance of the facility is to be contracted to a private concern, the permittee shall submit a copy of the contract, consistent with what is required by the approved Operation & Maintenance manual and signed only by the contractor, to the appropriate MassDEP Regional Office for review and approval ninety (90) days prior to the start up of the facility. Along with the contract, a detailed listing of all contract operation obligations of the proposed contractor at other facilities shall also be submitted. The permittee shall not begin operation of the treatment facility until the Department approves the contract.
 7. All tests or analytical determinations to determine compliance with permit standards and requirements shall be done using tests and procedures found in the most recent version of *Standard Methods for the Examination of Water and Wastewater* and shall be performed by a Massachusetts certified laboratory.
 8. The permittee shall notify the Department, in writing, within thirty (30) days of the following events:
 - a. Any interruption of the treatment system operation, other than routine maintenance.
 - b. Final shutdown of the treatment system.

D. Appeal Rights

This Permit is an action of the Department. Any person aggrieved by this action may request an Adjudicatory Hearing. A request for a hearing must be made in writing and postmarked within thirty (30) days of the Permit issuance date. Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought.

The Hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. The Department may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

II. GENERAL PERMIT CONDITIONS

The following conditions apply to all individual and general permits:

- (1) No discharge authorized in the permit shall cause or contribute to a violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or any amendments thereto. Upon promulgation of any amended standard, this permit may be revised or amended in accordance with such standard and 314 CMR 2.10 and 3.13 or 5.12. Except as otherwise provided in 314 CMR 5.10 (3)(c), 310 CMR 5.10(4)(a)2 and 314 CMR 5.10(9), no discharge authorized in the permit shall impair the ability of the ground water to act as an actual or potential source of potable water. Evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water includes, without limitation, analysis of samples taken in a downgradient well that shows one or more exceedances of the applicable water quality based effluent limitations set forth in 314 CMR 5.10. In those cases where it is shown that a measured parameter exceeds the applicable water quality based effluent limitations set forth in 314 CMR 5.10 at the upgradient monitoring well, evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water is deemed to exist if a measured parameter in any downgradient well exceeds the level of that same measured parameter in the upgradient well for the same sampling period. A statistical procedure approved by the Department shall be used in determining when a measured parameter exceeds the allowable level.
- (2) Duty to comply. The permittee shall comply at all times with the terms and conditions of the permit, 314 CMR 5.00, M.G.L. c. 21, §§ 26 through 53 and all applicable state and federal statutes and regulations.
- (3) Standards and prohibitions for toxic pollutants. The permittee shall comply with effluent standards or prohibitions established under § 307(a) of the Federal Act, 33 U.S.C § 1317(a), for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (4) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to achieve compliance with the terms and conditions of the permit, and the regulations promulgated at 314 CMR 12.00 entitled "Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges, and 257 CMR 2.00, Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities".
- (5) Duty to halt or reduce activity. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

(6) Power Failure. In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- (a) provide an alternative power source sufficient to operate the wastewater control facilities;
or
- (b) halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

(7) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any adverse impact on human health or the environment resulting from non-compliance with the permit.

(8) Duty to provide information. The permittee shall furnish to the Department within a reasonable time as specified by the Department any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine whether the permittee is complying with the terms and conditions of the permit.

(9) Inspection and entry. The permittee shall allow the Department or its authorized representatives to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records required by the permit are kept;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (c) Inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit; and
- (d) Sample or monitor at reasonable times for the purpose of determining compliance with the terms and conditions of the permit.

(9A) The permittee shall physically secure the treatment works and monitoring wells and limit access to the treatment works and monitoring wells to those personnel required to operate, inspect and maintain the treatment works and to collect samples.

(9B) The permittee shall identify each monitoring well by permanently affixing to the steel protective casing of the well a tag with the identification number listed in the permit.

(10) Monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless other test procedures are specified in the permit.

(11) Recordkeeping. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and all records of all data used to complete the application for the permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time. Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurements;
 - (b) The individual(s) who performed the sampling or measurement;
 - (c) The date(s) analyses were performed;
 - (d) The individual(s) who performed the analyses;
 - (e) The analytical techniques or methods used; and
 - (f) The results of such analyses.
- (12) Prohibition of bypassing. Except as provided in 314 CMR 5.16(13), bypassing is prohibited, and the Department may take enforcement action against a permittee for bypassing unless:
- (a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (c) The permittee submitted notice of the bypass to the Department:
 - 1. In the event of an anticipated bypass, at least ten days in advance, if possible; or
 - 2. In the event of an unanticipated bypass, as soon as the permittee has knowledge of the bypass and no later than 24 hours after its first occurrence.
- (13) Bypass not exceeding limitations. The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if necessary for the performance of essential maintenance or to assure efficient operation of treatment facilities.
- (14) Permit actions. The permit may be modified, suspended, or revoked for cause. The filing of a request by the permittee for a permit modification, reissuance, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition.
- (15) Duty to reapply. If the permittee wishes to continue an activity regulated by the permit after the expiration date of the permit, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department in writing.
- (16) Property rights. The permit does not convey any property rights of any sort or any exclusive privilege.
- (17) Other laws. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, and local laws and regulations.
- (18) Oil and hazardous substance liability. Nothing in the permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Federal Act, 33 U.S.C. § 1321, and M.G.L. c. 21E.

- (19) Removed substances. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed in a manner consistent with applicable Federal and State laws and regulations including, but not limited to, the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53 and the Federal Act, , 33 U.S.C. § 1251 *et seq.*, the Massachusetts Hazardous Waste Management Act, M.G.L. c. 21C, and the Federal Resource Conservation and Recovery Act, 42 U.S.C. § 6901, *et seq.*, 310 CMR 19.000 and 30.000, and other applicable regulations.
- (20) Reporting requirements.
- (a) Monitoring reports. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) at the intervals specified elsewhere in the permit. If the permittee monitors any pollutant more frequently than required by the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
 - (b) Compliance schedules. Reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date.
 - (c) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility or activity which could significantly change the nature or increase the quantity of pollutants discharged. Unless and until the permit is modified, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.
 - (d) Anticipated non-compliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in non-compliance with permit requirements.
 - (e) 24 hour reporting. The permittee shall report any non-compliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. The following shall be included as information which must be reported within 24 hours:
 - 1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - 2. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.
 - (f) Other non-compliance. The permittee shall report all instances of non-compliance not reported under 314 CMR 5.16(20)(a), (b), or (e) at the time monitoring reports are submitted. The reports shall contain the information listed in 314 CMR 5.16(20)(e).
 - (g) Toxics. All manufacturing, commercial, mining, or silvicultural dischargers must notify the Department as soon as they know or have reason to believe:
 - 1. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant listed in 314 CMR 3.17 which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - a. 100 micrograms per liter (100 ug/l);

- b. 200 micrograms per liter (200 ug/l) for acrolein and acrylonitrile; 500 micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - c. Five times the maximum concentration value reported for that pollutant in the permit application; or
 2. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
 - (h) Indirect dischargers. All Publicly Owned Treatment Works shall provide adequate notice to the Department of the following:
 1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to § 301 or 306 of the Federal Act, 33 U.S.C. § 1311 or 1316, if it were directly discharging those pollutants; and
 2. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (i) Information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
- (21) Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified in accordance with 314 CMR 3.15 and 5.14.
- (22) Severability. The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.
- (23) Reopener clause. The Department reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53 or the Federal Act, 33 U.S.C. §1251 *et seq* in order to bring all discharges into compliance with said statutes.
- (24) Approval of treatment works. All discharges and associated treatment works authorized herein shall be consistent with the terms and conditions of this permit. Any modification to the approved treatment works shall require written approval of the Department prior to the construction of the modification.
- (25) Transfer of Permits.
 - (a) RCRA facilities. Any permit which authorizes the operation of a RCRA facility which is subject to the requirements of 314 CMR 8.07 shall be valid only for the person to whom it is issued and may not be transferred.
 - (b) Transfers by modification. Except as provided in 314 CMR 5.16(25)(a) and (c), a permit may be transferred by the permittee to a new owner or operator provided that the permit has been modified or revoked and reissued or a minor modification is made to identify the

new permittee in accordance with 314 CMR 5.12(3) and (4).

- (c) Automatic transfers. For facilities other than Privately Owned Wastewater Treatment Facilities (PWTFs) that treat at least some sewage from residential uses, hospitals, nursing or personal care facilities, residential care facilities, and/or assisted living facilities, PWTFs that have been required to establish financial assurance mechanism(s) pursuant to 314 CMR 5.15(6), and RCRA facilities subject to the requirements of 314 CMR 8.07, a permit may be automatically transferred in accordance with 314 CMR 5.12(5).

(26) Permit Compliance Fees and Inspection Information. Except as otherwise provided, any permittee required to obtain a surface water or ground water discharge permit pursuant to M.G.L. c. 21, § 43 and 314 CMR 3.00 and 5.00, shall be required to submit the annual compliance assurance fee established in accordance with M.G.L. c. 21A, § 18 and 310 CMR 4.00 as provided in 314 CMR 2.12. The requirement to submit the annual compliance fee does not apply to any local government unit other than an authority. Any permittee required to obtain a surface water or ground water discharge permit pursuant to M.G.L. c. 21, §43 and 314 CMR 3.00 and 5.00 may be required to submit inspection information annually as a condition of the permit as provided in 314 CMR 2.12.