

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Town of Marion

is authorized to discharge from the facility located at

**Benson Brook Road
Marion, MA 02738**

to unnamed brook which discharges to Aucoot Cove (Buzzards Bay Watershed - 95)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on December 1, 2006.

This permit and the authorization to discharge expire at midnight on November 30, 2011.

This permit supersedes the permit issued on September 30, 1998.

This permit consists of 12 pages in Part I including effluent limitations, monitoring requirements, etc., and 27 pages in Part II including General Conditions and Definitions and Attachments A and B.

Signed this 29th day of September, 2006

/s/ SIGNATURE ON FILE

Linda M. Murphy, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, Massachusetts

Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, Massachusetts

PART I**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from outfall serial number 001. Such discharge shall be limited and monitored by the permittee as specified below.

<u>Effluent Characteristic</u>	<u>Units</u>	<u>Discharge Limitation</u>			<u>Monitoring Requirement</u>	
		<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type³</u>
Flow ²	MGD	0.5 88	----	Report	Continuous	Recorder
Flow ²	MGD	Report	----	Report	Continuous	Recorder
BOD ⁴	mg/l	9	13	Report	1/Week	24-Hour Composite ⁵
	lbs/day	42	63			
TSS ⁴	mg/l	9	13	Report	1/Week	24-Hour Composite ⁵
	lbs/day	42	63			
pH ¹		(See Condition I.A.1.b. on Page 6)			Daily	Grab
Fecal Coliform Bacteria ^{1,6}	cfu/100 ml	14	----	43	2/Week	Grab
Total Ammonia Nitrogen, as N (May 1- May 31)	mg/l	2.6	----	Report	1/Week	24-Hour Composite ⁵
Total Ammonia Nitrogen, as N (June 1 - October 31)	mg/l	1.74	----	Report	1/Week	24-Hour Composite ⁵

(Part A.1 continued)

<u>Effluent Characteristic</u>	<u>Units</u>	<u>Discharge Limitation</u>			<u>Monitoring Requirement</u>	
		<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Total Ammonia Nitrogen, as N (November 1 - April 30)	mg/l	Report	----	Report	1/Month	24-Hour Composite ⁵
Total Nitrogen (Total of TKN + Nitrate + Nitrite)	mg/l	Report	----	Report	1/Month	24-Hour Composite ⁵
Total Phosphorus	mg/l	Report	----	Report	2/Month	24-Hour Composite ⁵
Copper, Total, Recoverable ⁷	ug/l	7.7	----	11.3	1/Month	24-Hour Composite ⁵
LC-50 ^{8,9,11}	%	----	----	>= 100	4/Year	24-Hour Composite ⁵
Chronic NOEC ^{8, 10,11}	%	----	----	100	4/Year	24-Hour Composite ⁵
Dissolved Oxygen (June 1- October 31]	mg/l	----	----	>= 5.0	1/Week	Grab

Effluent samples are required to be collected following disinfection by the UV unit; dissolved oxygen samples may be taken at the point of entering the unnamed receiving stream

Footnotes:

1. Required for State Certification.
2. Report annual average, monthly average, and the maximum daily flow. The limit is an annual average, which shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the eleven previous months.
3. All required effluent samples shall be collected at the point specified on page 3. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report.

All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. All samples shall be 24 hour composites unless specified as a grab sample in 40 CFR §136.

4. Sampling required for influent and effluent.
5. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during one consecutive 24 hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.
6. Fecal coliform limitations and monitoring requirements are in effect year-round. The monthly average limit for fecal coliform is expressed as a geometric mean. The limits will become effective one year from the effective date of the permit. Interim limits will be a geometric monthly mean of 200 cfu/100 ml and a maximum daily discharge of 400 cfu/100 ml.
7. The minimum level (ML) for copper is defined as 3 ug/l. This value is the minimum level for copper using the Furnace Atomic Absorption analytical method (EPA Method 220.2). For effluent limitations of less than 3 ug/l, compliance/non-compliance will be determined based on the ML from this method, or another approved method that has an equivalent or lower ML, one of which must be used. Sample results of 3 ug/l or less shall be reported as zero on the Discharge Monitoring Report.
8. The permittee shall conduct chronic (and modified acute) toxicity tests four times per year. The chronic test may be used to calculate the acute LC₅₀ at the 48 hour exposure interval.

The permittee shall test the daphnid, *Ceriodaphnia dubia*, and the fathead minnow, *Pimephales promelas*. Toxicity test samples shall be collected during the second week of the months of March, June, September and December. The test results shall be submitted by the last day of the month following the completion of the test. The results are due April 30, July 31, October 31 and January 31, respectively. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit.

Test Dates Second Week in	Submit Results By:	Test Species	Acute Limit LC ₅₀	Chronic Limit C-NOEC
March June September December	April 30 July 31 October 31 January 31	<i>Ceriodaphnia dubia</i> - (daphnid) <i>Pimephales promelas</i> - [fathead minnow] See Attachment A	≥ 100%	≥ 100%

After submitting **one year** and a **minimum** of four consecutive sets of WET test results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction in the WET testing requirements. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from the EPA that the WET testing requirement has been changed.

9. The LC₅₀ is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.
10. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The "100%" limit is defined as a sample which is composed of 100% effluent.
11. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A (Toxicity Test Procedure and Protocol) Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain

automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs) which is sent to all permittees with their annual set of DMRs and may also be found on the EPA, Region I web site at <http://www.epa.gov/region1/enforcementandassistance/dmr2005.pdf>. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this guidance will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

Part I.A 1. Continued

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.5 nor greater than 8.3 at any time, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
- e. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent removal shall be based on monthly average values.
- f. Samples taken in compliance with the monitoring requirements specified in the permit shall be taken at a representative point prior to mixing with other streams.
- g. The permittee shall operate the upgraded treatment system to achieve total nitrogen removal consistent with the design total nitrogen projections in the report titled "Town of Marion, Wastewater Treatment Plant Upgrade, Conceptual Design Package" [CDM, March 2002]. The "target effluent quality" projected is 7 -10 mg/l. The permittee shall operate the treatment plant to achieve the "target effluent quality" whenever possible. The "target effluent quality" is not considered a numerical effluent limit.

In addition, the permittee shall evaluate the upgraded treatment plant's ability to remove phosphorus, and evaluate necessary changes/additions to the process to achieve a monthly average effluent limitation of 0.2 mg/l. The evaluation shall be completed and submitted to EPA and MassDEP within **one year from the effective date of the permit**. The evaluation is needed to determine removal capabilities, if a future Total Daily Maximum Load [TMDL] indicates the need for phosphorus removal.

2. All POTWs must provide adequate notice to the Director of the following:
 - a. Any new introduction of pollutants into that POTW from an indirect discharger in a primary industry category discharging process water; and
 - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - c. For purposes of this paragraph, adequate notice shall include information on:
 - (1) The quantity and quality of effluent introduced into the POTW; and
 - (2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
3. Development of Limitations for Industrial Users:

Pollutants introduced into POTW's by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.
4. This permit may be modified, or revoked and reissued, on the basis of new information in accordance with 40 C.F.R. 122.62.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part I A.1. of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes MassDEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at <http://www.mass.gov/dep/water/approvals/surffms.htm#sso>.

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions:

1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Infiltration/Inflow

The permittee shall develop and implement a plan to control infiltration and inflow (I/I) to the separate sewer system. The plan shall be **submitted to EPA and MassDEP within six months of the effective date of this permit** (see page 1 of this permit for the effective date) and shall describe the permittee's program for preventing infiltration/inflow related effluent limit violations, and all unauthorized discharges of wastewater, including overflows and by-passes due to excessive infiltration/inflow.

The plan shall include:

- An ongoing program to identify and remove sources of infiltration and inflow. The program shall include the necessary funding level and the source(s) of funding.
- An inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts. Priority should be given to removal of public and private inflow sources that are upstream from, and potentially contribute to, known areas of sewer system backups and/or overflows.
- Identification and prioritization of areas that will provide increased aquifer recharge as the result of reduction/elimination of infiltration and inflow to the system.
- An educational public outreach program for all aspects of I/I control, particularly private inflow.

Reporting Requirements:

A summary report of all actions taken to minimize I/I during the previous calendar year **shall be submitted to EPA and the MassDEP annually, by the anniversary date of the effective date of this permit**. The summary report shall, at a minimum, include:

- A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- Expenditures for any infiltration/inflow related maintenance activities and corrective actions taken during the previous year.
- A map with areas identified for I/I-related investigation/action in the coming year.

- A calculation of the annual average I/I and the maximum month I/I for the reporting year.
- A report of any infiltration/inflow related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to the Unauthorized Discharges section of this permit.

3. Alternative Power Source

In order to maintain compliance with the terms and conditions of this permit, the permittee shall continue to provide an alternative power source with which to sufficiently operate its treatment works (as defined at 40 CFR §122.2).

D. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.
2. The permittee shall comply with the more stringent of either the state or federal (40 CFR part 503), requirements.
3. The requirements and technical standards of 40 CFR part 503 apply to facilities which perform one or more of the following use or disposal practices.
 - a. Land application - the use of sewage sludge to condition or fertilize the soil
 - b. Surface disposal - the placement of sewage sludge in a sludge-only landfill
 - c. Sewage sludge incineration in a sludge-only incinerator
4. The 40 CFR part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons or reed beds), or are otherwise excluded under 40 CFR 503.6.
5. The permittee shall use and comply with the attached (see Attachment - B) compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:
 - General requirements
 - Pollutant limitations
 - Operational Standards (pathogen reduction requirements and vector attraction

- reduction requirements)
- Management practices
- Record keeping
- Monitoring
- Reporting

Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year:

less than 290	1/ year
290 to less than 1500	1 /quarter
1500 to less than 15000	6 /year
15000 +	1 /month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.
8. The permittee **shall submit an annual report containing the information specified in the guidance by February 19.** Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to **submit an annual report by February 19** containing the following information:
 - Name and address of contractor responsible for sludge disposal
 - Quantity of sludge in dry metric tons removed from the facility by the sludge contractor

E. SPECIAL REQUIREMENT

The permittee is required to develop and submit to the Massachusetts Department of Environmental Protection a monitoring plan to address: 1.) The level of impact on the receiving stream from the wastewater treatment plant discharge. The permittee is required to submit the plan within six months from the effective date of the permit. This requirement is a condition of state certification as outlined in Section G. of this permit.

F. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and **reported on separate Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the completed reporting period.**

Signed and dated originals of these and all other reports required herein, shall be submitted to the Director and the State at the following address:

EPA- New England
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

The State Agency is:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection
20 Riverside Drive
Lakeville, Massachusetts 02347

Signed and dated Discharge Monitoring Report Forms, monitoring plans and toxicity test reports required by this permit shall also be submitted to the State:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street
Worcester, Massachusetts 01608

G. STATE PERMIT CONDITIONS

This discharge permit is issued jointly by the U. S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection under federal and state law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Massachusetts Department of Environmental Protection pursuant to M.G.L. Chap. 21, §43. Each agency shall have the independent right to enforce the terms and conditions of this permit.

Any modification, suspension or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification,

suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under state law as a permit issued by the Commonwealth of Massachusetts.

The Massachusetts Department of Environmental Protection is requiring the permittee to develop a monitoring program of the freshwater receiving stream which has been shown to have biological impairments downstream of the discharge. The monitoring requirement is established pursuant to 314 CMR 3.11(2)(a) which allows the Department to require monitoring to verify compliance of the discharge with the permit and with the state water quality standards 314 CMR 4.00. The permittee should develop and submit to this Department, within six months of the effective date of this permit, a monitoring plan to address the items noted above.