



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

GENERAL PERMIT
For Small Privately Owned Wastewater
Treatment Facilities That Discharge Treated
Effluent to the Ground Water and the
Discharge from Said Facilities

Date of Issuance: 9/14/2009 Date of Expiration: 9/14/2014

AUTHORITY FOR ISSUANCE

Pursuant to authority granted by Chapter 21, Sections 26-53 of the Massachusetts General Laws, as amended, and 314 CMR 5.00, the Massachusetts Department of Environmental Protection (the Department or MassDEP) hereby issues this General Permit to regulate certain small **privately** owned wastewater treatment facilities that are designed to provide and do provide secondary treatment to less than 50,000 gallons of sewage per day and the discharge of effluent to the ground water from those facilities (the "General Permit"). A person granted coverage under the General Permit is a permittee authorized to construct, operate and maintain the covered wastewater treatment facilities and to discharge effluent from said facilities only in accordance with all the terms and conditions of the General Permit. A violation of the terms and conditions set forth herein is a violation of the General Permit, 314 CMR 5.00, and the Massachusetts Clean Waters Act, M.G.L. c. 21, sec. 26-53. MassDEP has also prepared a Fact Sheet for the General Permit. This Fact Sheet is incorporated and made part of the General Permit. The Fact Sheet outlines the factual and legal basis for the General Permit, identifies the types of facilities that are eligible for coverage under the General Permit and the process for requesting coverage under the General Permit.

A handwritten signature in black ink, appearing to read "Glenn Haas".

Glenn Haas, Acting Assistant Commissioner

Date 9/14/2009

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD Service - 1-800-298-2207.

MassDEP on the World Wide Web: <http://www.mass.gov/dep>

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I. SPECIAL CONDITIONS

A. **Effluent Limits**

(1) 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 within one month of start-up and continuing thereafter shall not exceed the following values:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>
Biochemical Oxygen Demand (BOD5) (5 Day at 20°C)	30 mg/l
Total Suspended Solids (TSS)	30 mg/l
Nitrate Nitrogen	10 mg/l
Total Nitrogen (NO2 + NO3 + TKN)	10 mg/l
Oil & Grease	15 mg/l

(2) Except as otherwise provided herein, the pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time. If under natural conditions, the pH of the receiving ground water is less than 6.5 or greater than 8.5, the pH of the effluent shall not vary from the naturally occurring pH by more than 0.2 units.

(3) The discharge of the effluent shall not interfere with the use of the ground water as an actual or potential source of potable water and the use of surface waters for their existing and designated uses. The discharge of effluent shall not cause or contribute to a violation of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00.

(4) The monthly average concentration of BOD5 and TSS in the discharge shall not exceed 15 percent of the monthly average concentrations of BOD5 and TSS in the influent into the permittee's wastewater treatment facility.

(5) The average daily flow shall not exceed the average daily flow specified in the Notice of Intent requesting coverage under the General Permit. When the average daily flow exceeds 80 percent of the flow specified in the Notice of Intent, the permittee shall submit a report to the Department describing what steps the permittee will take in order to keep its average daily flow at or below the flow specified in the Notice of Intent.

(6) If the effluent goes to an open sand bed prior to discharge to the ground water

(a) The effluent shall be disinfected to meet an effluent

limitation of no more than 200 fecal coliform organisms per 100 ml; and

(b) If chlorine is used for disinfection, the chlorine residual in the effluent shall not exceed 1.0 mg/l.

For purposes of this requirement, an open sand bed is a disposal system where effluent is spread onto the surface of the disposal area having a sand media so that the effluent may percolate through the sand media and then through the soil and the unsaturated zone before entering the ground water.

B. Monitoring and Reporting

The permittee shall monitor and record the quality of the influent to the wastewater treatment facility and the quality and quantity of the effluent from the wastewater treatment facility prior to discharge to the disposal area according to the following schedule and other provisions:

(1) INFLUENT TO THE WASTEWATER TREATMENT FACILITY:

<u>Parameter</u>	<u>Minimum Frequency of Analysis</u>	<u>Sample Type</u>
BOD5	Monthly	24 Hr. Composite
TSS	Monthly	24 Hr. Composite
Total Solids	Monthly	24 Hr. Composite
Ammonia Nitrogen	Monthly	24 Hr. Composite

(2) EFFLUENT FROM THE WASTEWATER TREATMENT FACILITY:

<u>Parameter</u>	<u>Minimum Frequency of Analysis</u>	<u>Sample Type</u>
Flow	Daily	Reading-report Max-Min-Avg
pH	Daily	Grab
BOD5	Monthly	24 Hr. Composite
TSS	Monthly	24 Hr. Composite
TS	Monthly	24 Hr. Composite
Nitrate Nitrogen	Monthly	24 Hr. Composite
Total Nitrogen (NO ₂ +NO ₃ +TKN)	Monthly	24 Hr. Composite
Oil & Grease	Monthly	Grab
Total Phosphorus	Quarterly	Grab
Orthophosphate	Quarterly	Grab
Volatile Organic	Annually	Grab US EPA Method 624

Compounds

(3) If the wastewater is discharged to an open sand bed prior to discharge to the ground water, the permittee shall perform additional monitoring as follows:

- (a) The permittee shall take a monthly grab sample of the effluent to monitor the effectiveness of the disinfection and measure the number of colonies of fecal coliform per ml in the effluent and record the results;
- (b) If chlorine is used for disinfection, the permittee shall also take a daily grab sample of the effluent to monitor the chlorine residual in the effluent and record the results of this monitoring; and
- (c) If UV is used for disinfection, the permittee shall monitor the UV intensity daily and record the results of this monitoring.

For purpose of this requirement, an open sand bed is a disposal system where effluent is spread onto the surface of the disposal area having a sand media so that the effluent may percolate through the sand media and then through the soil and unsaturated zone prior to entering the ground water.

(4) Prior to submission of a Notice of Intent requesting coverage under the General Permit, the permittee obtained approval from the Department for a Hydrogeological Report. In accordance with 314 CMR 5.09, this Hydrogeological Report included a detailed monitoring plan (the "Monitoring Plan"). At least ninety (90) days prior to the start-up of the wastewater treatment facility, the permittee shall install monitoring wells in accordance with the Monitoring Plan as approved by the Department.

(5) The permittee shall monitor, record, and report the quality of water in the monitoring wells installed in accordance with the Monitoring Plan as approved by the Department according to the following schedule and other provisions:

<u>Parameter</u>	<u>Frequency of Analysis</u>
pH	Monthly
Static Water Level*	Monthly
Specific Conductance	Monthly
Nitrate Nitrogen	Quarterly
Total Nitrogen (NO ₂ + NO ₃ + TKN)	Quarterly

Total Phosphorus	Quarterly
Orthophosphate	Quarterly
Volatile Organic Compounds (US EPA Method #624)	Annually

* Static 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.

(6) 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.

(7) The Department may require the permittee to replace damaged monitoring wells, to install additional monitoring wells, to monitor for additional parameters or to perform more frequent monitoring if it determines that such requirements are necessary to protect the public health, safety, welfare, or the environment.

(8) The permittee shall submit all monitoring reports within thirty (30) days of the last day of the reporting month. Reports shall be on an acceptable form, properly filed and signed and shall be sent to the Regional Office that issues permits for discharges located within the municipality where the permittee's discharge occurs and to the Program Director, Wastewater Management Program, Department of Environmental Protection, One Winter Street/5th Floor, Boston, MA 02108.

(9) 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 a proposed transfer of ownership of the facility for which this permit is written. Said notification shall include a written agreement between the existing and proposed new permittee containing a proposed date for the transfer of the permit, the proposed new permittee's assumption of responsibility for compliance with all the terms and conditions of the permit and if applicable, the allocation of liability and financial responsibility for the financial assurance mechanism requirements.

The transfer shall be subject to the automatic transfer provisions of 314 CMR 5.12(5), unless the facility treats at least some wastewater from residential uses, hospitals, nursing or personal care facilities, residential care facilities, and/or assisted living facilities. For facilities subject to the automatic transfer provisions of 314 CMR 5.12(5), the transfer shall take effect on the proposed transfer date unless the Department notifies the permittee before that proposed transfer date that it intends to modify or revoke and reissue the permit or that it needs additional information. For facilities that treat at least some wastewater from residential uses, hospitals, nursing or personal care facilities, residential care facilities and/or assisted living facilities, the transfer shall not take effect until it is approved by the Department in accordance with 314 CMR 5.12(4).

(2) An operation and maintenance plan and staffing plan (the "Operations and Maintenance Plan") for the wastewater treatment facility including without limitation the sewer system, pump stations, and disposal fields, shall be submitted to the Department for its review and approval at least ninety (90) days prior to the operation of the treatment works or forty-five (45) days before the permit takes effect, whichever last occurs.

(3) If the facility is constructed after coverage is granted under the General Permit, an Engineering Report and as-built plans for the wastewater treatment facility shall be submitted to the Department at least ninety (90) days prior to the operation of the facility. These submissions shall be prepared in accordance with the Department's Guidelines by a Massachusetts Registered Professional Engineer with a concentration in civil, sanitary, or environmental engineering and accompanied by a certification from the Engineer that the wastewater treatment facility has been constructed in accordance with the as-built plans and Engineering Report and that the wastewater treatment facility if operated and maintained in accordance with the Operations and Maintenance Plan, the General Permit, 314 CMR 5.00, and 314 CMR 12.00, shall be able to meet all the terms and conditions of this General Permit including without limitation the effluent limits set forth herein.

(4) If the facility is constructed after coverage is granted under the General Permit, the permittee shall not operate the facility, unless and until the Department has inspected the facility and authorized operation of the facility in writing.

(5) A revised Operations and Maintenance Plan shall be submitted to the Department whenever there are significant modifications to the wastewater treatment facility, the standard operating procedures for the facility, or the staff of the facility.

(6) The permittee shall operate and maintain the wastewater treatment facility in accordance with the Operations and Maintenance Plan approved by the Department.

(7) At least ninety (90) days before entering into a contract with an independent contractor (the contract operator) for the operation and maintenance of the treatment works, the permittee shall submit a draft unsigned copy of the contract to the Department for its review and approval in accordance with 314 CMR 12.04(3) and 314 CMR 5.10(8)(j)(5). The contract shall provide that the contract operator shall operate and maintain the facility in accordance with the approved Operation and Maintenance Plan, 314 CMR 20.00, 314 CMR 12.00, and 257 CMR 2.00. The permittee shall not execute the contract and authorize the contract operator to operate the facility unless and until the Department has approved the contract in writing.

(8) All tests or analytical procedures to determine compliance with permit standards and requirements shall be done using tests and methods found in the most recent version of *Standard Methods for the Examination of Water and Wastewater*.

(9) The permittee shall notify the Department, in writing, within thirty (30) days of any the following events:

(a) The date the wastewater treatment facility starts operation;

(b) Any interruption of the operation of the wastewater treatment facility other than routine maintenance; and

(c) Final shutdown of the wastewater treatment facility.

(10) The permittee shall contract to have any and all solids and sludges generated by the wastewater treatment facility for which this permit is issued removed off site by a properly licensed waste hauler for disposal at an EPA/MassDEP approved facility. The name and license number of the hauler along with the schedule for the removal shall be reported by the permittee in writing to the Department at least thirty (30) days prior to the start-up of the wastewater treatment facility for new facilities and at least thirty (30) days prior to the start of any new contract for the removal of solids and sludges for existing facilities.

(11) The permittee shall not allow industrial users to discharge wastewater other than sewage to the facility.

(12) The General Permit is in effect for a period of five years from the date of issuance.

(13) The permittee shall file a Notice of Intent requesting continued coverage under the General Permit or shall file an application for an individual permit, at least one hundred eighty (180) days prior to the expiration date of the General Permit, regardless of when coverage was granted.

D. Special Conditions for Privately Owned Wastewater Treatment Facilities (PWTFS) that Treat At Least Some Sewage From Residential Uses, Hospitals, Nursing or Personal Care Facilities and or Assisted Living Facilities. The following conditions apply to PWTFS that treat at least some sewage from residential uses, hospitals, nursing or personal care facilities and/or assisted living facilities:

(1) The permittee shall establish and maintain a financial assurance mechanism that provides for the continued availability of an immediate repair and replacement account to be used by the permittee solely for the immediate repair and replacement of any failing components of the PWF. To create an immediate repair and replacement account, the permittee shall deposit at least 15% of the estimated construction cost of the PWF into an interest bearing escrow account in accordance with the financial assurance mechanism and 314 CMR 5.15. The permittee shall also establish and maintain a financial assurance mechanism in accordance with 314 CMR 5.15 that provides for the accumulation in a capital reserve account of sufficient funds to make any necessary modifications to the PWF and other related equipment within twenty years from the date the PWF commenced operation or such other period determined to be appropriate by the Department based on the age and condition of the PWF. The financial assurance mechanism shall provide for the accumulation in the capital reserve account of an amount equal to at least 25% of the estimated construction cost of the PWF. On or before January 31st of each year, the permittee shall submit an annual financial report identifying the initial and current balances in the immediate repair and replacement account and the capital reserve account and confirming the continuing availability of the funds in said account for the purposes specified in the permit and 314 CMR 5.15. Said report shall be prepared in accordance with generally accepted accounting principles. Reports pertaining to the required financial assurance mechanism(s) shall be sent to the Program Director, Wastewater Management Program, Department of Environmental Protection, One Winter Street, 5th Floor, Boston, MA 02108

(2) The permittee shall meet the obligation to establish all required financial assurance mechanisms by using Department-approved form documents and shall submit said Department-approved form documents to the Department for its review and approval.

(3) The permittee shall maintain the current form documents evidencing all required financial assurance mechanisms approved by the Department. The permittee shall perform all its obligations under the required financial assurance mechanisms as approved by the Department.

(4) For purpose of the financial assurance mechanism requirement, the estimated construction cost of the wastewater treatment facility shall include the cost of constructing the wastewater treatment plant, collection system, associated mechanical equipment, but not including the land, ground and disposal area.

(5) Except as otherwise provided herein, the financial assurance mechanism(s) required by this General Permit, 314 CMR 5.10(8)(1) and 314 CMR 5.15 shall be approved by the Department and in effect on the date coverage under the General Permit is granted by the Department. A permittee that constructs the wastewater treatment facility after coverage is granted under the General Permit may submit the financial assurance mechanism(s) to the Department for its review and approval no later than ninety (90) days prior to the start-up of the facility. Such a permittee shall not operate the facility unless and until the Department has approved the required financial assurance mechanism(s), the financial assurance mechanisms are in full force and effect, and the permittee has made all contributions required prior to the start-up of the facility.

The General Permit Conditions set forth in 314 CMR 5.16 are hereby incorporated and made part of the General Permit