



**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection – Residuals Management Program  
Residuals Facility Design Approvals

## **BRP WP 35**

**Approval of Design Plans and Specifications for Residuals Treatment  
Facilities**

### **Instructions and Supporting Materials**

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#### **Introduction**

MassDEP *Permit Applications*, as well as *Instructions & Support Materials*, are available for download from the MassDEP Web site at [mass.gov/dep](http://mass.gov/dep) in two file formats: Microsoft Word™ and Adobe Acrobat PDF™. Either format allows documents to be printed.

*Instructions & Support Materials* files in Microsoft Word™ format contain a series of documents that provide guidance on how to prepare a permit application. Although we recommend that you print out the entire package, you may choose to print specific documents by selecting the appropriate page numbers for printing.

*Permit Applications* in Microsoft Word™ format must be downloaded separately. Users with Microsoft Word™ 97 or later may complete these forms electronically.

Permitting packages in Adobe Acrobat PDF™ format combine *Permit Applications* and *Instructions & Support Materials* in a single document. Adobe Acrobat PDF™ files may only be viewed and printed without alteration. *Permit Applications* in this format may not be completed electronically.



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# **Permit Fact Sheet**

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#### **1. What is the purpose of this approval?**

Approval for design plans and specifications for wastewater residuals management treatment facilities is required pursuant to the legislative authority as stated in Massachusetts General Laws, Chapter 21, s. 27 and 43(2); Chapter 83, s. 6 and 7; and Chapter 14, s. 17; and 314 CMR 12.00.

This approval serves to protect the public health, welfare, and environment by ensuring the proper design of treatment facilities such as composting, pelletizing, and alkaline stabilization. These facilities must be properly designed and operated to ensure continuous treatment of sludge and other residuals and allow for subsequent beneficial use of the final products generated.

#### **2. Who must apply?**

Any individual, commercial establishment or business that proposes to design and construct facilities for the purposes of treating residuals generated from commercial and municipal wastewater treatment facilities.

#### **3. What other requirements should be considered when applying for this approval?**

##### **a. What prerequisites should be considered when applying for this approval?**

Ownership of the property and any restrictive covenants on the land should be determined. The extent of any property use restrictions should also be determined to site a facility. Authority must be obtained from all parties with ownership of, or rights to the property.

Identification should be made of all local abutters and the approximate distance from the proposed facility to those receptors. Caution should be exercised to identify an acceptable buffer area to minimize odor migration and potential impacts on nearby receptors.

Permits of this type may require MEPA review. Please carefully examine 301 CMR 11.00, the MEPA Regulations, to determine if your project exceeds the MEPA review thresholds, or for more information contact the MEPA Unit of the Executive Office of Environmental Affairs (100 Cambridge Street, Boston, MA 02202; (617-727-5830). MassDEP cannot complete technical review of the permit application until the MEPA process has been concluded. Copies of MEPA filings (with reference to any applicable Transmittal numbers) should be sent to the appropriate program offices in Boston and the MEPA Coordinator in the appropriate Regional Office.

##### **b. What concurrent applications are related to this approval?**

A site hearing may be required pursuant to M.G.L. Chapter 21, Section 21-43 or Chapter 83, Section 6 and 7 after submission of design plans and after completion of the MEPA process but prior to final MassDEP approval of plans and specifications.

Depending on site location and facility design, a Wetland Order or Conditions (310 CMR 10.00), or Air Quality permit (310 CMR 7.00) may be required.

Notification and submittal of process flow schematic is required to the wastewater operator certification board (257 CMR 2.0) for any new facilities and significant operational changes to existing facilities.



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Note: These additional requirements are intended to serve as a guide to the applicant. It does not necessarily include all requirements.

#### 4. What is the application fee for this approval?

The application fee is \$5,350.

#### 5. What is the Primary Permit Location? What is the Reserve Copy Location?

Primary Permit Location:

Reserve Copy Location:

Department of Environmental Protection  
\_\_\_\_\_ \* Regional Office

None.

Wastewater Permitting

\* Find your region: <http://www.mass.gov/eea/agencies/massdep/about/contacts/>

#### 6. Where can I get a copy of the timelines?

The timelines are available on the MassDEP Website:

<http://www.mass.gov/eea/agencies/massdep/service/approvals/timely-action-fees-and-payments.html>

#### 7. What is annual compliance fee?

Current annual compliance fees can be found on the MassDEP Website at.

<http://www.mass.gov/eea/agencies/massdep/service/approvals/timely-action-fees-and-payments.html>

#### 8. How long is the approval in effect?

This approval shall remain in effect for as long as the residual composting or pelletizing facility is operated in compliance with the original approval. A new application form must be submitted for any substantive changes in site, design, or operation of the facility.

#### 9. How can I avoid the most common mistakes made in applying for this approval?

- a. Provide all information detailed on the checklist for submittals of conceptual approval including site evaluation criteria and engineering report items.
- b. Provide all detailed engineering drawings and specifications for final approvals.
- c. Make sure a Massachusetts Registered Professional Engineer stamps and signs all submittals for design approvals.
- d. Submit the fee and one copy of the MassDEP Transmittal Form to: Department of Environmental Protection, P.O. Box 4062, Boston, MA 02201.

#### 10. What are the regulations that apply to this approval? Where can I get copies?

The regulations include, but are not limited to:



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- a. Operation and Maintenance and Pre-Treatment Standards for Wastewater Treatment Works and Indirect Discharges, 314 CMR 12.00.
- b. Timely Action and Fee Provisions, 310 CMR 4.00.
- c. Administrative Penalty Regulations, 310 CMR 5.00.

They may be purchased at:

State House Bookstore  
Room 116  
Boston, MA 02133  
617-727-2834

State House West Bookstore  
436 Dwight Street  
Springfield, MA 01103  
413-784-1376



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# Guidance

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Submittals for Approval:

#### A. Site Evaluation Report

1. Project Name, Address, Owner.
2. Type of facility.
3. Total area of project including buffer zones.
4. Locus Map:
  - a. site boundaries;
  - b. access roads.
5. Site plans showing:
  - a. Water Resources:
    - location of wetlands;
    - surface waters;
    - perennial streams draining to surface drinking water supplies;
    - all 100 year floodplains;
    - all private wells within ½ mile;
    - all public wells within ½ mile;
    - all interim wellhead protection areas or Zone II.
  - b. Land Use Plan:
    - all wildlife management areas;
    - areas of critical environmental concern;
    - active agricultural land;
    - residential dwellings within 500 feet;
    - occupied commercial buildings within 500 feet;
    - sensitive receptors within ½ mile (hospitals, schools, nursing homes, prisons);
    - all proposed waste handling areas on site;
    - all proposed waste deposition areas;
    - all buildings and other facilities proposed on site;
    - all abutting properties and their zoning designation;
6. Surrounding Site Description.
7. Facility Description with Locus Map:
  - a. proposed site boundaries;
  - b. access roads.



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8. Description of Potential Traffic Impacts:

- a. number and type estimated;
- b. peak traffic periods;
- c. problem areas (back-ups at intersections);
- d. mitigation measures;
- e. alternative routes.

9. Air Quality Impacts Description.

10. Potential for Nuisance Conditions:

- a. identify the type of nuisance and mitigation measures to be employed.

11. Applicability of MEPA Regulations.

### **B. Engineering Report**

An engineering report shall be submitted for all projects involving sewage treatment and disposal systems. The purpose of this report is to present in clear, concise form a description of the project, the results of site evaluations, solutions examined, the basis of design of the recommended systems, and the potential associated environmental and public health impacts. The report shall be written for easy public understanding, and serve as a permanent summary of the principle information needed by the Department for conceptual approval of the project. Data on the structural, mechanical, electrical, and HVAC designs may be excluded at this point of project development except that reference to such elements shall be made as necessary to understand the functional operation of the proposed systems.

The engineering report shall include, at a minimum, the following items:

- owner name and address;
- a detailed description of the project;
- all pertinent data concerning relevant local, state and federal permits, approvals, orders of conditions and variances;
- a description of the geographic location and setting of the project including a locus map and preliminary site plan at an appropriate scale;
- a description of the geology, hydrology and topography with an appropriate plan showing key features, surface drainage and contours of the project site;
- the location of all public and private water supply wells, springs, surface reservoirs including tributaries, and other features of public health significance within ½ mile of the project site;
- a delineation of all wetlands resource area (as defined in 310 CMR 10.00) within the project boundaries and/or within 100 feet of any proposed construction activity;



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- an explanation of the relationship between the point of generation of sludge and the proposed treatment facility;
- a description of the various locations within the project site available for sludge treatment, storage, and disposal and the reasons for choosing the one recommended;
- an identification of the proximity of residences or developed areas to the treatment, storage and disposal areas;
- a discussion of the type of treatment and disposal, processes studies, and the reasons for choosing the recommended alternative;
- a complete description of the basis of design of the treatment and disposal systems, including the quantity and quality of residuals to be treated and proposed method of disposal, mass balances and moisture calculations, c/n ratios, air and water requirements, storage capacity required, etc.;
- a description of all major unit processes giving capacity, equipment type and operation factors under varying conditions, and method of operation;
- schematic drawings on standard sized blue prints (24" x 36") to include residuals stream piping, unit operations, instrumentation, material storage areas, etc.;
- a complete description/discussion of the proposed use or disposition of the final product generated;
- detailed discussion of odor abatement facilities and/or contingency plans for odor abatement, if necessary;
- a discussion of the degree and type of treatment and adequacy for present and future needs;
- a general layout and materials flow diagram must be provided;
- the results of all site testing and evaluations including the location and logs for all soil tests, borings and groundwater observation wells if applicable.
- Detailed engineering drawings and specifications, and descriptions of the treatment facility components including:
  - a. civil;
  - b. sanitary;
  - c. structural;
  - d. electrical;
  - e. mechanical;
  - f. HVAC;
  - g. operation and maintenance manual;
  - h. monitoring plan.



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# **Application Completeness Checklist**

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- The MassDEP Transmittal Form has been completed: <http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html>. If municipality, "Fee Exempt" has been selected from among the Special Provisions under Section F of the Transmittal Form.
- All material on the "Submittals for Approval" list has been submitted.
- Detailed engineering drawings and specifications for final approvals have been submitted.
- A Massachusetts Registered Professional Engineer has stamped and signed all submittals for design approvals.

To submit the application package:

- All appropriate application materials have been submitted.
- Send a copy of the application package along with one copy of the MassDEP Transmittal Form to:

Department of Environmental Protection  
\_\_\_\_\_ \* Regional Office  
Water Pollution Control

\* Find your region: <http://www.mass.gov/eea/agencies/massdep/about/contacts/>

- Send fee of \$5,350 for BRP WP 35 in the form of a check or money order, made payable to Commonwealth of Massachusetts, along with one copy of the MassDEP Transmittal Form to:

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