



Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Water Supply
Zone II Determination for Existing Sources of Drinking Water
BRP WS 08 Approval of Zone II Delineation
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 <http://www.mass.gov/eea/agencies/massdep/service/approvals/> 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.



Permit Fact Sheet

1. What is the purpose of this approval?

The approval is to determine technical acceptability of supporting data and recommended Zone II delineation for existing wells. Zone II is that area of an aquifer which contributes water to a well under the most severe pumping conditions that can be realistically anticipated (180 days of pumping at safe yield with no recharge from precipitation). Procedures used to delineate Zone II boundaries must follow *Guidelines and Policies for Public Water Systems*, available from the State House Bookstore. The Zone II is delineated to accurately identify land areas which may be appropriate for certain land use restrictions or prohibitions to protect groundwater quality. Zone II approvals are required when implementing various MassDEP programs.

2. Who must apply?

A public water supply system must apply if it has been approved to pump 100,000 gallons per day or greater, but has not yet delineated the existing well's Zone II, and is required to pursue a Water Management Act Permit. Municipalities must apply if they are conducting town-wide or localized groundwater studies for the purpose of enacting zoning and non-zoning controls to protect groundwater recharge areas.

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

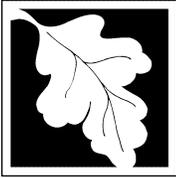
Prior to applying, applicants must be sure that the information provided and the delineation procedure used are consistent with specific requirements outlined in *Guidelines and Policies for Public Water Systems*. Pay careful attention to model documentation because this information weighs heavily in MassDEP's decision to approve the delineation.

Note: Approvals 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 251 Causeway Street, Suite 900, Boston MA 02114 (617) 626-1020. **MassDEP cannot begin technical review of the application until the MEPA process has been completed, unless otherwise agreed to in writing.** 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.

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

4. What is the application fee?

The application fee is \$3,235.



Permit Fact Sheet

5. What is the Primary Permit Location?

PRIMARY PERMIT LOCATION:

Department of Environmental Protection
* Regional Office

Water Supply

*Find your region: <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>

What is the Reserve Copy Location?

RESERVE COPY LOCATION:

None required.

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 the annual compliance fee?

There is no annual compliance fee for this approval.

8. How long is this approval in effect?

The approval of a Zone II delineation is valid until there is a change (increase or decrease) in the withdrawal characteristics of the existing well or until superseded by a subsequently submitted MassDEP-approved Zone II.

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

- Be sure all Application Completeness Checklist items are completed and included with submitted application.
- Review the Division of Water Supply's *Guidelines and Policies for Public Water Systems* regarding what technical criteria are necessary for an approvable submission.
- Submit fee and *one* copy of the MassDEP Transmittal Form to: Department of Environmental Protection, P. O. Box 4062, Boston, MA 02211.

10. What are the regulations that apply to this approval?

Where can I get copies?

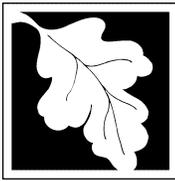
These regulations include, but are not limited to:

- Drinking Water Regulations, 310 CMR 22.00.
- Timely Action and Fee Provisions, 310 CMR 4.00.
- Administrative Penalty Regulations, 310 CMR 5.00.

These 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



Application Completeness Checklist

- The MassDEP Transmittal Form is completed:
<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-and-application-forms.html>

- Application Form BRP WS Application has been completed.

A Conceptual Zone II delineation for a well with planned yields of 100,000 gallons per day and greater must include:

- A description and discussion of the stratigraphy and hydrology of the aquifer using USGS geologic maps, any pertinent USGS or other reports, well logs, and borings from all available sources, including private wells.
- A discussion of water quality as it relates to the groundwater flow system.
- A map of the surficial geology based on USGS GQ series surficial geologic maps, topographic maps, Hydrologic Investigations Atlas, field mapping, and review of the available subsurface data.
- A regional water table or potentiometric surface map showing groundwater flow directions in the region where the Conceptual Zone II is located; the map should be constructed based on water levels obtained from production and monitoring wells, USGS observation well network, and hydraulically connected surface water features.
- For aquifers under confined conditions, a discussion of the hydraulic connection among overlying stratigraphic units, including any overlying unconfined aquifer, the lateral extent of the confining layer, and estimates of leakage through the confining layer.
- A complete land use/sanitary survey of the Conceptual Zone II.
- A discussion of the hydrogeologic system and the likely sources of recharge to the production well.
- Detailed cross-sections through the pumping well site focusing on lateral extent of stratigraphic units.
- Other geological data.

To submit application package:

- Checklist items have been completed.
- Send one copy of the application along with the one page from the MassDEP Transmittal Form to:

Department of Environmental Protection
_____ * Regional Office

Water Supply

*Find your region: <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>

- Send fee of \$3,235 in the form of check or money order made payable to *Commonwealth of Massachusetts*, along with one copy from the MassDEP Transmittal Form to:
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211



BRP WS Application

For Drinking Water Program (Water Supply) Permits or Approvals

A. Application

1. Is this application for an Original or a Resubmittal?

2. Applicant:

Name _____			Address _____	
City _____	State _____	Zip _____	Contact _____	Telephone _____

3. Consultant:

Name _____			Address _____	
City _____	State _____	Zip _____	Contact _____	Telephone _____

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



B. Permit

Please check the permit or approval for which you are applying:

Zone II Determination for Existing Sources

- BRP WS 07 Approval to Conduct Pump Test for Zone II Delineation
- BRP WS 08 Approval of Zone II Delineation

New Technology

- BRP WS 11 Minor New Technology Approval; where no field test required
 - Drinking Water Additive
 - Cross Connection Device
 - Water Vending Machine
 - Other (specify): _____
- BRP WS 12 Major New Technology Approval: where field testing is required
- BRP WS 27 New Technology with Third-party Approval
- BRP WS 28 Vending Site/Source Prototype
- BRP WS 31 Vending and POU/POE Devices with Third-party Approval

New Source Approvals <70 gpm

- BRP WS 13 Exploratory Phase, Site Examination, Land Use Survey and Approval to Conduct Pumping Test
- BRP WS 15 Pumping Test Report Approval and Approval to Construct Source
- BRP WS 37 Approval of Transient Non-Community Source Less than 7 Gallons per Minute (combines BRP WS 13 and BRP WS 15 submittals)

New Source Approvals = or > 70 gpm

- BRP WS 17 Exploratory Phase, Site Examination, Land Use Survey, and Conduct Pumping Test
- BRP WS 19 Pumping Test Report Approval
- BRP WS 20 To Construct Source

Water Treatment Approvals

- BRP WS 21A To Conduct Pilot Study < 40,000 gpd
- BRP WS 21B To Conduct Pilot Study = or > 40,000 gpd and < 200,000 gpd
- BRP WS 21C To Conduct Pilot Study = or > 200,000 gpd and < 1 mgd
- BRP WS 21D To Conduct Pilot Study = or > 1 mgd
- BRP WS 22A Pilot Study Report < 40,000 gpd
- BRP WS 22B Pilot Study Report = or > 40,000 gpd and < 200,000 gpd
- BRP WS 22C Pilot Study Report = or > 200,000 gpd and < 1 mgd
- BRP WS 22D Pilot Study Report = or > 1 mgd
- BRP WS 23A To Construct Facility <40,000 gpd
- BRP WS 23B To Construct Facility = or > 40,000 gpd and < 200,000 gpd
- BRP WS 23C To Construct Facility = or > 200,000 gpd and < 1 mgd
- BRP WS 24 To Construct Facility = or > 1 mgd
- BRP WS 25 Treatment Facility Modification
- BRP WS 29 Water Treatment: Chemical Addition Retrofits of Water Systems > 3,300 people
- BRP WS 30A Vending Installation Approval
- BRP WS 30B POU/POE Installation Approval
- BRP WS 34 Water Treatment: Chemical Addition Retrofits of Water Systems = or < 3,300 people
- BRP WS 35A Multiple Vending Installation Approval
- BRP WS 35B Multiple POU/POE Installation Approval

Water Quality Assurance

- BRP WS 26 Sale or Acquisition of Land for Water Source
- BRP WS 36 Abandonment of Water Source

Distribution System Modifications

- BRP WS 32 Systems > 3,300 people
- BRP WS 33 Systems = or < 3,300 people



Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Drinking Water Program

BRP WS Application

For Drinking Water Program (Water Supply) Permits or Approvals

Transmittal Number

Facility ID# (if known)

C. Certification

“I certify, under penalty of law, that this application and all attachments were prepared under my supervision, in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted in this application, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.”

Authorized Signature

Date

Print Name

Position/Title