

---

## **Private Drinking Water Testing and the use of MassDEP-Certified Laboratories**

---

Issued by the Senator William X. Wall Experiment Station and the Drinking Water Program

In response to frequently asked questions by homeowners, Boards of Health and licensed well drillers, the Massachusetts Department of Environmental Protection (MassDEP) provides the following guidance:

### **What is the difference between a laboratory that has MassDEP certification and a laboratory that does not?**

MassDEP certification means that the laboratory has been deemed capable of producing valid data for tests of specified contaminants, such as nitrate, volatile organic compounds (VOC's), fecal coliform bacteria, etc. In order to obtain certification by MassDEP, the laboratory has demonstrated it is able to perform accurate testing using scientific methods which have been approved by the United States Environmental Protection Agency. A non-certified laboratory does not have to use any particular method in testing, is not regulated by any governmental agency, and, as a result, the test results might not meet standards for accuracy required of MassDEP-certified laboratories. MassDEP-certified laboratories in Massachusetts are periodically inspected by MassDEP; out-of-state laboratories with Massachusetts certification are inspected by their resident states. All certified laboratories must also successfully analyze proficiency test samples; these are special samples with concentrations known to the providers of the test samples, but not known to the laboratories.

### **If I use a certified laboratory, am I guaranteed to get accurate results?**

Using a certified laboratory does not guarantee that your samples will be handled and analyzed properly or that your results will be accurate. Certification means that a laboratory's facilities, personnel, equipment, analytical methods and quality control procedures have been evaluated and found to meet the Department's minimum requirements. A certified laboratory has been deemed **capable** of producing valid data for tests of specified contaminants.

### **In general, for what chemicals or water quality parameters are there specified tests performed by MassDEP-certified laboratories?**

There are specified tests for all primary drinking water contaminants, meaning those chemicals or water quality parameters for which EPA has identified a health risk from excessive exposure and for which EPA has set an MCL, or Maximum Contaminant Level. The MCL is the maximum concentration of a chemical allowed in public water supplies. Some primary contaminants are coliform bacteria and chemicals such as nitrite, nitrate, volatile organic compounds, lead, copper, arsenic, several pesticides and herbicides, and asbestos. Please note that MCLs have not been assigned to lead and copper; these metals have "action levels" and it is not a violation of regulations to exceed those levels.

There are also specified tests for some secondary contaminants, those contaminants which may present aesthetic problems but which are not generally regarded as a health risk. These water

quality parameters include pH and total dissolved solids. Not all secondary contaminants have a specified test. Two very common metals in groundwater, iron and manganese, have no specified tests for determining their concentration in drinking water. This means there are no MassDEP certification procedures for iron and manganese in drinking water; however, MassDEP recommends you use a laboratory certified in at least some other drinking water parameters even when sampling private well water for parameters for which there is no MassDEP certification.

#### **As the owner of a private well, do I have to test my water?**

The local Board of Health may have by-laws requiring testing of private wells. For example, some Boards of Health require testing to determine if a well meets drinking water standards prior to initial use for drinking water. Boards of Health have the authority to require testing of private wells at other times also. Check with the local Board of Health for the requirements. However, homeowners are strongly urged to have their well water tested at least once a year, whether or not their local Board of Health requires it. The Drinking Water Program has published [Private Well Guidelines](http://www.mass.gov/eea/agencies/massdep/water/drinking/private-wells.html) (<http://www.mass.gov/eea/agencies/massdep/water/drinking/private-wells.html>).

#### **Do I have to use a MassDEP-certified laboratory to test private drinking water?**

DEP recommends the use of MassDEP-certified laboratories for the testing of private drinking water. If the local Board of Health by-laws require that results of testing by a MassDEP certified laboratory be submitted to them, your report should be rejected if you do not use a DEP-certified laboratory. If you are a homeowner testing for your own purposes, you may use any laboratory you wish; however, since the results might not be reliable, DEP strongly encourages you to use a MassDEP-certified laboratory for any water quality analysis.

If you are a licensed well driller and take the sample of the well water, you must check with the local Board of Health for their requirements. Even in the absence of local requirements, you are strongly urged to have the water analyzed by a laboratory with MassDEP-certification for drinking water parameters.

#### **How can I find a certified laboratory?**

You can access a list of MassDEP-certified laboratories [here](#).

#### **What does the list of certified laboratories look like?**

The official title of this list is "Certification Status of Environmental Laboratories Certified by Massachusetts DEP". You will first see a title page with the effective date of the list. (A new list will be approximately every two weeks and there can be changes from day to day).

The next page is a list of code numbers for the parameters for which there is a MassDEP certification. Parameters and their code numbers are listed in various groups: non-potable water chemistry (e.g., sanitary waste discharges), potable water chemistry (drinking water), potable water radiochemistry, and potable water microbiology.

Next, is the list of laboratories alphabetized by laboratory name, followed by the list of laboratories alphabetized by the states and cities in which the laboratories are located; the two-letter postal codes are used for the states. On both alphabetized lists is the laboratory

identification number, such as M-MA059. Use this ID number to find the laboratory in the pages of laboratory descriptions which have the laboratory's name, address and the codes for the water quality parameters for which the laboratory is certified to test. The laboratory descriptions are ordered by state. The Massachusetts section of the laboratory description list displays laboratories only certified for microbiology (with laboratory ID numbers such as M-12345), followed by the other Massachusetts laboratories.

#### **How can I get the most recent certification status of a laboratory?**

You can ask the laboratory to send you its most recent certified parameter list or you may [contact the Wall Experiment Station](#).

#### **What are some other tips on choosing a laboratory?**

- Be aware that laboratories may sell water treatment products or services, or may be affiliated with other companies that do.
- Request price quotes from several MassDEP-certified laboratories, but do not select a laboratory on price alone.
- Consider sending a quality control sample to the laboratory in addition to your water sample(s). Quality control samples contain one or more compounds at known concentrations. When analyzing the quality control sample, the laboratory should produce a result that is within a statistically derived range of acceptable values. The National Institute of Standards and Technology (NIST), a federal government agency, publishes a [list of vendors](#) that may provide these samples for chemical analysis.
- Consider hiring an independent data quality consultant to review the results and raw data for at least some of your samples.

#### **How can I be clear to a laboratory that I want them to use only USEPA-approved methods?**

Laboratories may be certified by MassDEP in any one or more of 132 parameters, analytes or categories. Since a laboratory might not be certified in the tests required or recommended by your local Board of Health, you should put in writing in your contract with the laboratory that it must comply with the requirements of your town's Board of Health. Check the information on the second page of the list of certified laboratories to see if MassDEP offers certification for the analytes you are concerned about.

If you want your water tested by a certified laboratory even though you are not required to use a certified laboratory, make it clear to the laboratory that you want the test done using USEPA approved methods and according to MassDEP's requirements for certified laboratories which are found in Massachusetts regulations at 310 CMR 42.00.

#### **What if the laboratory I want to use isn't certified for everything I need?**

Laboratories are allowed to subcontract to another certified laboratory but must indicate on your report that it has done so and give the MassDEP certification number of the subcontractor.

#### **What if I used a laboratory which later has its MassDEP certification revoked?**

A laboratory may have its certification revoked, in whole or in part, for a variety of reasons. Only in some cases does MassDEP recommend retesting water samples. You can contact your local Board of Health or the [Drinking Water Program](#), at the Regional office near you (Boston, Worcester, Springfield, or Lakeville) or the Boston office for recommendations.

**Whom should I contact if I have a complaint about the laboratory I or the well driller used to test my water?**

Your local Board of Health should be informed of complaints so that it can enforce its own by-laws, or, in the event the Board of Health has no requirements, that they may be made aware of the situation. Whether or not the local Board of Health requires use of MassDEP-certified laboratories, you should [contact the MassDEP Laboratory Certification Program](#) and discuss your complaints about the laboratory. The DEP becomes aware of certified laboratories who are not performing analyses properly or laboratories who are fraudulently claiming MassDEP certification through citizen complaints. Complaints may also be investigated by these Massachusetts agencies:

- Office of the Attorney General: [Web site](#)
- Office of Consumer Affairs & Business Regulation: [Web site](#)

**From whom may a Board of Health request assistance in developing regulations requiring water quality analyses or other questions regarding private wells?**

For assistance with these and other questions regarding private wells, you may contact the Drinking Water Program at the [regional MassDEP office](#) for your town, or MassDEP headquarters in Boston. You may also visit the MassDEP Drinking Water Program's [Web page](#).