2015 Annual Notice to Local Boards of Health

July 15, 2015

Dear Health Agent:

The Massachusetts Department of Environmental Protection (MassDEP) Drinking Water Program (DWP) annually provides local boards of health (BOH) with information of interest, reminders of annual forms submissions and an inventory of all public water systems (PWS) in the Commonwealth for review and comment and use.

We tried to limit the content of the letter this year to those topics where we continue to receive consumer questions or need to convey important updates on issues. If you are looking for information on a topic that you do not see in this year’s letter, please refer to the list of DWP resource links at the end. The resource list also contains a link to a copy of last year’s letter.

For your convenience, we have reorganized this mailing by topics and placed the items requiring action by you in Part I: Action Items. The forms you will need to respond to these action items can be found in the attachments to this letter. For your convenience you may create a pdf of the form and send a copy electronically to us at Program.Director-DWP@state.ma.us with the name of the form in the subject line. If you prefer, you can return the forms through the regular mail. If you are unable to access or print the attached forms, or need additional information on a topic, you can contact us at the email above or by phone at 617-292-5770.

Please note: If you have a drinking water emergency that occurs outside of normal working hours (evenings and weekends), please contact MassDEP at 1-888-304-1133 (24 hrs, toll-free).

Thank you for continuing to work together with us to protect public health.

Sincerely,

Yvette DePeiza, Program Director
MassDEP/Drinking Water Program

Attachments:
A: Emergency Contacts
B: PWS Inventory
C: Inventory of Title 5 Systems
D: Recreational Camp Form

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This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep
Printed on Recycled Paper
## List of Contents

### Part I: Action Items
- Board of Health Emergency Contacts ............................................ 1
- Inventory of All Registered Public Water Systems ............................ 1
- Certificate Of Registration .......................................................... 1
- Underground Injection Control and Title 5 Systems ......................... 2
- Annual Recreational Camp Requirement ......................................... 2

### Part II: How to Determine if a Facility is a Public or Private System
- Identifying Daycares that Meet the Definition of a Public Water System 3
- Property Conversions that Create Public Systems ............................. 3
- Condominium Developments and Public Water Systems .................. 3

### Part III: Notifications
- Emergency Response Notification .................................................. 5
- Boil Orders and Other Public Orders .............................................. 6
- Unregulated Contaminant Monitoring Rule ...................................... 7

### Part IV: Emerging Issues
- Revised Total Coliform Rule ....................................................... 9
- Control of *Legionella* in Healthcare Facilities and Other Large Buildings 9
- Chlorine Dioxide Secondary Treatment at Hospitals ....................... 10
- Manganese in Drinking Water ..................................................... 10
- Dog Waste ................................................................................. 11
- Cyanobacteria ............................................................................. 11
- Applying Aquatic Herbicides (Pesticides) to Drinking Water Reservoirs 11
- New Fluoride Standard .................................................................. 12

### Part V: Wells
- Recommended Guidance for Private Wells ..................................... 13
- Radionuclide Sampling .................................................................. 13
- Required Disclosure of Water Test Results .................................... 14
- Related to the Sales of Home Water Treatment Devices .................

### Part VI: Small Systems
- Point of Entry/Point of Use Treatment Devices .............................. 15
Annual Transient Non-Community Water Quality Reports/Regulations 15

Part VII: MassDEP Drinking Water Program Initiatives

Lead in Drinking Water at Schools and Early Education and Care Facilities 16
Healthy Communities Grant Project 16
Solar and Wind Projects 17
The Value of Public Drinking Water 17

Part VIII: Specific Drinking Water Information on the MassDEP Website 18

Attachments:

Attachment A: Emergency Contacts
Attachment B: PWS Inventory
Attachment C: Inventory of T5 Systems
Attachment D: Recreational Camp Form
2015 Board of Health Update

Part I: Action Items

Board of Health Emergency Contacts
Please find attached an Emergency Contact Information sheet for your board (Attachment A). It is populated with the information we have in our files.

- If the information on the sheet is correct, no action is needed.
- If the sheet is blank, please fill it out and return it to MassDEP at the below address.

When you are filling out this form, please take into consideration that the contacts should be prioritized in the order that you want to be notified by MassDEP staff in case of an emergency. Contact #1 should contain the name and contact information of the BOH person that you want to have contacted first in an emergency; if Contact #1 cannot be reached then we will attempt to contact the person identified as Contact #2; and so on. If you have any changes, please cross out the incorrect information, add the correct information, and send the sheet back by July 30, 2015, to MassDEP – Drinking Water Program; 1 Winter Street - 5th floor; Boston, MA 02108; Attn.: BOH Emergency Contact. You may also respond by email to Program.Director-DWP@state.ma.us, Subject: BOH Emergency Contact.

Inventory of All Registered Public Water Systems
Please find attached a list of PWS in your city or town (Attachment B). An electronic list of all PWS is available at http://www.mass.gov/eea/agencies/massdep/water/drinking/health-and-safety.html#4 then click on MA Public Water Supplier Contacts Sorted by Town. This information is provided to make you aware of all of the PWS in your city or town that are registered with MassDEP. Please review this information for any discrepancies. Discrepancies may include the following:

- **Systems missing from the list** - Systems should be added to the list if the facility meets the definition of a PWS: has at least 15 service connections or serves an average of at least 25 individuals daily at least 60 days of the year.
- **Systems should be deleted from the list** - if the facility no longer has its own well or source of water.
- **Systems are currently listed as "Inactive" but have re-opened** - should now be listed as "Active." An "Inactive" designation suspends MassDEP’s requirements such as water quality testing and certified operator requirements. It is recommended that licensing departments and agencies contact MassDEP to verify compliance with MassDEP drinking water requirements prior to issuance of licenses or occupancy.
- **Changes in address and ownership** – incorrect information should be crossed out and correct information added.

Please update and return the list by July 30, 2015, to MassDEP - Drinking Water Program, 1Winter St., 5th Floor, Boston, MA, 02108; Attn.: BOH Update. You may also respond by email to Program.Director-DWP@state.ma.us, Subject: BOH Update

Certificate of Registration
MassDEP PWS Certificate of Registration is used by many parties. The certificate is very useful for some PWS, especially Transient Non-Community (TNC) systems. When a survey or an audit is being done or even when applying for permitting or being inspected by a local BOH, this certificate may need to be produced for the agency official to verify.

DWP is no longer mailing a Certificate of Registration to every public water system in the state; certificates are now available electronically. If a PWS does not have Internet access and needs a hard copy of their certificate, please contact: Program.Director-DWP@state.ma.us, Subject: Certificate of Registration.
Go to: http://www.mass.gov/eea/agencies/massdep/water/drinking/pws-documents-search-tool.html. Select either the PWS ID # or PWS Name from the pull down menu and click on the “Search” button. Click on the “Download” link for the Certificate of Registration to download the certificate in PDF format. If you do not remember the PWS ID # you can check the electronic list of PWS located at http://www.mass.gov/eea/agencies/massdep/water/drinking/health-and-safety.html#4 then click on MA Public Water Supplier Contacts Sorted by Town.

Each January, the current year’s Certificate of Registration will be posted and ready for retrieval. Only the current year will be posted.

**Underground Injection Control (UIC) and Title 5 Systems**

The purpose of the federal U.S. Environmental Protection Agency (EPA) UIC program is to prevent contamination of underground sources of drinking water. It is estimated that there are in excess of 190,000 public and private potable water supply wells in Massachusetts that are protected by the UIC program. MassDEP is responsible for the administration of these EPA UIC requirements. This is called primacy and involves permitting and registering subsurface discharges (including wastewater) that meet the definition of a UIC. Title 5 soil absorption systems on properties used for 2 or more residential units and properties used for all non-residential uses are UIC Class V wells.

If you don’t already have a database to maintain your Title 5 system records, you may find the attached Excel document that we have created useful for maintaining an inventory of your approvals.

The attached Excel document (Attachment C) includes two spreadsheets. The spreadsheet labeled “DATA” is where the Title 5 records should be entered. The spreadsheet labeled “Instructions” provides the dropdown menu items that are in the “DATA” spreadsheet columns and instructions on how to use the spreadsheet. A copy of this database is also available at http://www.mass.gov/eea/agencies/massdep/water/drinking/health-and-safety.html#1.

It would be of great benefit to the protection of Massachusetts ground water resources if you shared your information on UIC Class V wells with the UIC program.

You can support us in protecting ground water sources in the Commonwealth by providing us with a list of these systems or by completing the attached Excel spreadsheet document titled “Title 5 Inventory” and sharing it with us.

In particular, MassDEP would appreciate the following information on any Title 5 system that is also a UIC Class V well as described above before the start of the next federal year, October 1, 2015:

1. Facility name and location,
2. Ownership of facility,
3. Name and address of owner’s legal contact, and
4. Operating status of injection well.

If you have any questions on the federal or state UIC program, please contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: UIC.

**Annual Recreational Camp Requirement**

BOHs have the responsibility for licensing local recreational camps. Licenses are issued in accordance with 105 CMR 430.000, which stipulates, “Upon the issuance of a license, the local board of health shall notify Massachusetts Department of Environmental Protection and the Massachusetts Department of Public Health. Said notification shall include the name and address of the camp, the name of the owner, the number of campers and staff, and the number of days per year that the camp will be in operation.” Please remember to submit this information to MassDEP by July 30, 2015, using the form in Attachment D.

Information on drinking water requirements and campgrounds is available on the MassDEP website at http://www.mass.gov/eea/docs/dep/water/drinking/alpha/a-thru-h/cgrndfs.doc.
Part II: How to Determine if a Facility is a Public or Private System

To help the BOH quickly determine whether a facility is a public or private water system, a flowchart has been attached for your use in Attachment C. We encourage you to post this flowchart for easy reference. An electronic copy of the chart is also available at http://www.mass.gov/eea/docs/dep/water/compliance/privpubl.pdf.

If a facility is a PWS and it is not currently registered with MassDEP then the facility must be added to the inventory list (see Part I: Action Items) and referred to MassDEP for oversight. If you have any questions, contact the DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: PWS Inventory.

Attachment C also contains an excerpt of the Massachusetts Drinking Water Regulations, 310 CMR 22.02, containing definitions of what constitutes a PWS and the different categories of PWS.

Identifying Daycares that Meet the Definition of a Public Water System

Daycare facilities that serve 25 or more persons at least 60 days a year and have their own source of drinking water meet the definition of a public water system. If a daycare facility with its own source of water is licensed/ permitted to have a total of 25 or more children and childcare workers, it must be registered and approved by the MassDEP. If you are aware of a daycare facility that is not currently on the inventory list given in Attachment B, please add it to the list and refer the facility to MassDEP for registration to ensure compliance with 310 CMR 22.00 and all applicable MassDEP standards, permits, and approvals. Daycares that meet the definition of a PWS but are not currently registered with MassDEP may be subject to enforcement action (which may include a monetary penalty). If you have any questions, contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: Daycares. You may also contact the Massachusetts Department of Early Education and Care at http://www.mass.gov/edu/government/departments-and-boards/department-of-early-education-and-care.

Property Conversions that Create Public Water Systems

As properties continue to change their locally permitted functions, BOHs must be vigilant in determining when a conversion will result in the creation of a PWS or a change in the type of PWS. If a facility that is currently classified as a private water supply proposes or initiates any changes in the use of the establishment that would cause the system to be classified as a PWS, the facility must meet all applicable MassDEP standards, and obtain the proper MassDEP permits and approvals. Some examples of changes that may affect their drinking water status include:

- A change in the number of permitted occupancy, e.g., increasing the number of children and staff at a daycare or business to 25 or more persons per day.
- A change in the type of permitted occupancy, e.g., changing from a residential home to a daycare or doctor’s office. Changing from a small office or gas station to a daycare, coffee shop, restaurant, or other facility that may serve beverages, handle food, require food permits, or supply water to 25 or more persons on average per day.

Proponents creating any new or potential PWS or changing their PWS type should be directed to contact MassDEP, as they would be subject to 310 CMR 22.00 and all applicable MassDEP standards, permits, and approvals. It should also be noted that if a proponent subsequently creates and operates a facility as a PWS prior to obtaining MassDEP approvals, the facility owner(s) and operator(s) may be subject to enforcement action (including monetary penalties).

Condominium Developments and Public Water Systems

Please be aware that some types of construction, such as residential or business condominium developments, which propose to use two or more wells to serve on-site facilities resulting in each well serving less than 25 persons per day, may still be considered PWS. Massachusetts Drinking Water Regulation, 310 CMR 22.02 Definition of a PWS notes MassDEP “…reserves the right to evaluate and determine whether two or more wells located on commonly owned property, that individually may serve less than 25 people, but collectively serve
more than 25 people for more than 60 days of the year should not be regulated as a public water system, taking into account the risk to public health."

With an increase in development throughout the state, these cases may come before the BOH as private well proposals. In these cases, the applicant should be referred to MassDEP for a written determination of public or private water system status, prior to the issuance of local permits. This information should be communicated to your local planning office, planning board, building inspector’s office, and to the applicant as it could substantially change the outcome of the project.

For any questions or clarifications on property conversions, PWS definitions, applicable permitting requirements, generally or for a specific project, and determining if a system should be regulated as a PWS, contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: PWS Determination.
Part III: Notifications

Emergency Response Notification Requirements

The Massachusetts Drinking Water Regulations, 310 CMR 22.00, include specific notification requirements for reporting emergencies to MassDEP and the local board of health. The regulations identify specific incidents or emergencies that require notification within 2 hours and 24 hours. Section 310 CMR 22.15(9) requires each PWS to notify MassDEP and the local BOH after the occurrence of any of the following incidents or emergencies that result in the consumers of the system receiving water that does not meet required or routine quantity or quality conditions:

1. Emergencies or incidents requiring notification within 2 hours:
   a. Loss of water or drop in pressure to less than 20 psi, affecting 50 percent or more of consumers for a system serving less than 10,000 persons
   b. Loss of water or drop in pressure to less than 20 psi, affecting 5,000 or more of consumers for a system serving 10,000 or more persons
   c. Chemical or microbiological contamination of the water supply in exceedence of limits specified by MassDEP’s Office of Research and Standards as set forth in the Standards and Guidelines for Contaminants in Massachusetts Drinking Waters. This document is available at http://www.mass.gov/eea/agencies/massdep/water/drinking/standards/standards-and-guidelines-for-drinking-water-contaminants.html
   d. Discovery of malicious intent or an act of vandalism, which may impact a system component
   e. Any consumer complaint in which the water may have caused physical injury
   f. A pattern of unusual customer complaints about the water quality such as taste, odor, etc.
   g. Any other emergency as determined by MassDEP in writing

2. Emergencies or incidents requiring notification within 24 hours:
   a. Loss of water supply from a source
   b. Loss of water supply due to major component failure
   c. Damage to power supply equipment or loss of power
   d. Contamination of water in the distribution system from backflow or cross connection incident
   e. Collapse of a reservoir, reservoir roof, or pump house structure
   f. Break in a transmission or distribution line that results in a loss of service to 100 consumers for more than four hours
   g. Chemical or microbiological contamination of the water supply, including overfeed of drinking water treatment chemicals
   h. Any other failure of part or all of the water supply system due to equipment failure, human acts (deliberate or accidental), or natural or human made disasters

More information on the Emergency Response Regulations is available at http://www.mass.gov/eea/agencies/massdep/water/drinking/water-systems-ops.html#10. If you have any questions about this information contact the DWP at 617-292-5770 or Program.Director-DWP@state.ma.us.

Subject: Emergency Response Regulations.

To report an emergency situation outside of normal business hours (evenings and weekends) you can contact MassDEP at 1-888-304-1133 (toll-free, 24 hrs).
Boil Orders and Other Public Health Orders

There are 3 types of public health orders issued by MassDEP. During any of these orders, bottled water or water from an approved MassDEP source may be used during the period of concern.

- Boil Water Order
- Do Not Drink Order
- Do Not Use Order

**Boil Orders** are issued by MassDEP and require the PWS to notify consumers to boil the water or use water from another approved source. This occurs when a PWS exceeds or has the potential to exceed the standard for total coliform bacteria or a fecal indicator. During this type of situation there is no other identified public health risk due to inhalation, skin irritation, or flammability.

**Do Not Drink Orders** are issued by MassDEP when there is a suspected or known synthetic organic compound (SOC), inorganic compound (IOC), volatile organic compound (VOC), or radiological contamination in the drinking water. Continued drinking or other human consumptive uses of the water would or could pose an immediate threat to health. During this type of situation there is no identified public health risk due to inhalation, skin irritation, or flammability.

**Do Not Use Orders** are issued by MassDEP when there is or may be an unknown chemical, radiological or other unknown contamination and there may be a risk from inhalation, skin irritation, or flammability. A Do Not Use Order may also be issued for a known chemical or radiological contamination that exceeds an immediate health and safety risk, e.g., gasoline in the water.

**What happens when sample results or a situation indicates the need for a public health order?**
- The PWS informs MassDEP and their local BOH within 2 hours of learning of the problem.
- MassDEP consults with the PWS and determines the appropriate course of action in accordance with federal and state drinking water regulations. The local BOH is made aware of the situation and may participate in discussions with MassDEP and the PWS. MassDEP verbally notifies the PWS of the situation and issues a written order to the PWS within 24 hours or as soon as possible. The order always includes the actions consumers should take with the drinking water and steps the PWS must take to protect the public health, monitor the situation, and correct the problem. MassDEP keeps Massachusetts Department of Public Health (MDPH) and EPA informed throughout the situation.
- MassDEP lists all public health orders on its website. If the order is issued on a normal business day the information is on the web within 2 hours. If the order is issued on a weekend or a holiday the information is on the webpage within 24 hours of the first business day following the issuance of the order. This information is located at [http://public.dep.state.ma.us/BoilOrder/Search.asp](http://public.dep.state.ma.us/BoilOrder/Search.asp).

**How are consumers notified of a MassDEP public health order or advisory?**
The PWS is required to issue a MassDEP approved notice within 2 hours of the MassDEP notification of the situation or receipt of the written order, whichever occurs first, by the following means:
- Broadcast media (radio, television, newspaper)
- Posting the notice
- Hand delivery
- Any other method approved by MassDEP, e.g., reverse 911

To expedite the consumer notification process MassDEP has pre-approved template notices available for use.

**Where can I get information on Boil Orders and other MassDEP public health orders?**
Most frequently asked questions and other information are available on the MassDEP website at [http://www.mass.gov/dep/water/drinking/boilordr.htm](http://www.mass.gov/dep/water/drinking/boilordr.htm).

**What instructions should a food establishment follow during a drinking water order?**
MDPH has specific guidance for food establishments. Restaurants and other food establishments must follow the *MDPH Guidance for Emergency Action Planning for Retail Food Establishments*. This information is
All questions on food establishment requirements should be referred to the MDPH Food Protection Program at 617-983-6700.

How can MassDEP, the PWS, and the BOH assist each other with drinking water public health orders? BOH and health officials should be familiar with the MassDEP required Emergency Response Plan (ERP) for each of the PWS in their community. For more information on ERP visit http://www.mass.gov/eea/docs/dep/water/drinking/alpha/a-thru-h/erplan.pdf. At a minimum, MassDEP, BOH, and PWS must share up-to-date contact information so that all parties can be kept informed when a public health order is necessary. Here are a few steps that will go a long way to help PWS and BOH address emergencies and other public health orders:

- Before an order or emergency occurs - PWS and BOH should work and train together on the PWS's ERP. Follow all applicable MassDEP regulations, policies, and guidance to maintain a fully compliant system.
- During an order – The PWS and BOH should follow the PWS's ERP and the MassDEP Order.
- After a situation – The PWS and BOH should evaluate the situation and make adjustments to the ERP as needed. The PWS and BOH should continue working and training together on the ERP.

MassDEP DWP Regional Contact Numbers:

<table>
<thead>
<tr>
<th>Region</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Region</td>
<td>508-849-4036</td>
</tr>
<tr>
<td>Northeast Region</td>
<td>978-694-3226</td>
</tr>
<tr>
<td>Southeast Region</td>
<td>508-946-2816</td>
</tr>
<tr>
<td>Western Region</td>
<td>413-755-2148</td>
</tr>
</tbody>
</table>

To contact MassDEP outside of regular business hours call 888-304-1133.

If you have any questions regarding public health orders listed on our website, contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: Public Health Orders

Unregulated Contaminant Monitoring Rule

EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) Program to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act (SDWA). The third rule, UCMR 3, conducted under EPA oversight, was published in the Federal Register on May 2, 2012. UCMR 3 requires monitoring for 30 unregulated contaminants, including: 28 chemicals and 2 viruses. The data assist EPA in determining whether or not to regulate those contaminants. Unlike the first and second UCMR cycles, this round required the reporting of all chemicals detected regardless of the concentration. That means PWS will need to report more results during this round to their customers, even though these detections could be well below any published health advisory or guideline. Published health advisory or guidelines are available at http://www.mass.gov/eea/agencies/massdep/water/drinking/standards/standards-and-guidelines-for-drinking-water-contaminants.html.

PWSs participating in UCMR3 are required to fulfill the following consumer notification requirements:

- **Public Notification (PN):** In addition to requiring notification of violations, the PN rule requires PWS to provide special notices for certain situations, including the availability of unregulated contaminant monitoring data. Public notices of unregulated contaminant monitoring data are different from other public notices because they do not have to contain all the elements required of other types of public notices. Instead, PWS need only report that the results are available, and provide a phone number or contact where the results can be obtained. All PWS must issue special notice within 12 months of
receiving monitoring results, and must submit the PN certification form and copy of the notice within 10 days of issuing PN.

- **Consumer Confidence Reports (CCRs):** All community water systems are required to prepare and distribute CCRs to their customers. *Non-community water systems do not need to produce a CCR but are required to post any CCR MassDEP provides to the water system after they ensure the requirements of 310 CMR 22.16A are met.* One requirement of the CCR Rule is to report all unregulated contaminant monitoring results regardless of the contaminant concentration. A community system should include the average of the year’s monitoring results and the range of detections, and should briefly explain in the CCR why it is monitoring for unregulated contaminants.

- EPA is responsible for the development, review, and distribution of all UCMR3 sample results, as well as the analysis of samples from PWSs serving 10,000 or fewer people. MassDEP has seen a delay in EPA’s distribution of UCMR3 results. Per EPA guidance, CCRs (distributed to customers by July 1 of each year) must include UCMR3 detections received by the PWS during the previous calendar year. For example, if a PWS collected UCMR3 samples in 2014 and received their results in 2015, the PWS would report the results in their 2015 CCR, to be distributed to all customers by July 1, 2016.


MassDEP is in the process of developing and distributing to PWS reminder letters of the customer notification requirements to PWS. Within this letter, MassDEP will notify community water systems that have not yet completed the notification requirements according to the required timeframes to include the required UCMR3 information in their **upcoming 2014 CCR**, to be prepared and distributed to all customers by **July 1, 2015**.

Part IV: Emerging Issues

Revised Total Coliform Rule

EPA revised the Total Coliform Rule for all PWS, effective for compliance purposes on April 1, 2016. All PWS must comply with the rule on April 1, 2016. States with primary enforcement authority, such as Massachusetts, must revise their regulations and request primacy to implement the new Revised Total Coliform Rule (RTCR). The Massachusetts DWP is proposing regulatory changes to 310 CRM 22.00 to incorporate the revised federal rule into the state standards to support Massachusetts’s continuing role as primary administrator of the federal Safe Drinking Water Act in the state. The RTCR establishes a maximum contaminant level (MCL) for \textit{E. coli} and total coliform to initiate a “find and fix” approach to address fecal contamination that could enter into drinking water distribution systems. The MCL for total coliform (an imprecise indicator of contamination) will be replaced with treatment technique requirements for coliforms, including requirements to perform assessments and take corrective action. PWS will be required to meet an MCL for \textit{E. coli}, a more precise fecal indicator. PWS vulnerable to microbiological contamination will be required to perform assessments to identify sanitary defects and take action to correct them.

If you are dealing with a private well that has tested positive for total coliform bacteria, the homeowner should discontinue using their tap water immediately and sample the well for \textit{E. coli}. If the presence of \textit{E. coli} is confirmed, they should consult with a water treatment professional immediately. The water for human consumption should be boiled or bottled water used until the problem is resolved. If \textit{E. coli} is not detected, then the well should be disinfected and retested for total coliforms. If the problem persists, a water treatment professional should be consulted and the possible source of the coliform contamination should be investigated.

If you have any questions on RTCR, contact the DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: RTCR.

Control of \textit{Legionella} in Healthcare Facilities and Other Large Buildings

In the last several years there has been an increasing number of healthcare facilities (e.g., hospitals and nursing homes) and hotels in the U.S. that are providing secondary disinfection to their water to prevent outbreaks of several pathogens (primarily \textit{Legionella pneumophila}) known to grow in the biofilms of the plumbing of large buildings. These pathogens grow best where the water temperature in the pipes is above 68° F, and have been found in cooling towers, hot tubs and hot water tanks. Healthcare facilities are particularly concerned about \textit{Legionella} because older people, and those with weakened immune systems, are especially vulnerable. More information on \textit{Legionella} can be found on the Center for Disease Control’s website at: http://www.cdc.gov/legionella/index.html

Any facility that serves 25 or more persons, 60 or more day a year that intends:

- To install and operate a permanent disinfection treatment system would be considered a PWS and would require prior MassDEP approval.
- Performing shock disinfection on a temporary basis would not result in the facility being considered a PWS by MassDEP. They must notify MassDEP, the local water authority, MDPH and the local Health Agency. The facility should have the procedure overseen by a consultant/engineer who must develop a chlorine dioxide shock disinfection plan, including an emergency response plan and notification protocol to address over-feeds.


If you have any questions on this information contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: Legionella
Chlorine Dioxide Secondary Treatment at Hospitals

Recently, companies that manufacture chlorine dioxide treatment have inquired about the process for installing chlorine dioxide treatment at local hospitals. Some hospitals may want to add chlorine dioxide as a secondary disinfectant to their water supply because it helps to control pathogens such as *Legionella pneumophila*, *Stenotrophomonas maltophilia*, and *Mycobacterium avium* complex. A hospital that serves 25 or more people 60 or more days a year and further treats the water that enters the building with a secondary disinfectant (such as chlorine dioxide) is a PWS and will be regulated by MassDEP, subject to federal and state drinking water standards.

Chlorine dioxide has a maximum disinfection residual drinking water standard of 0.8 milligrams/liter, and is regulated by MassDEP because of the potential health risks associated with its use. MassDEP has identified the following issues:

- Certain populations in hospitals are particularly susceptible to health risks from chlorine dioxide, including fetuses, infants, and those with compromised immune systems.
- Short-term exposure to excessive levels of chlorine dioxide can damage red blood cells and can produce neurotoxic effects in vulnerable populations. Other acute health effects include irritation of the mouth, esophagus, and stomach.
- Long-term exposure to chlorine dioxide and its byproduct, chlorite ions, can lead to an increased risk for certain types of cancer and developmental effects.


If you are aware of any facility that has introduced chlorine dioxide as a secondary treatment or if you have any questions on this information contact the DWP at 617-292-5770 or Program.Director-DWP@state.ma.us.

Subject: Chlorine Dioxide

Manganese in Drinking Water

Based on the EPA Health Advisory (HA) level for manganese in drinking water, MassDEP Office of Research and Standards (ORS) has set a Guidance level (ORSG) for manganese. Manganese is a naturally occurring mineral and is an essential nutrient in our diets. Recent studies have identified possible public health risks associated with the ingestion of elevated levels of manganese, especially among infants and young children.

As a precaution, MassDEP in conjunction with MDPH provided tips for reducing manganese exposure for susceptible individuals at concentrations greater than MassDEP’s ORSG. PWS conducted baseline monitoring for manganese in 2014. Approximately 7 percent of the PWS in the State had a finished water manganese sample from one of their sources exceeding the ORSG Level.

For more information on manganese, including a consumer Q&A, see: [http://www.mass.gov/eea/agencies/massdep/water/drinking/manganese-in-drinking-water.html](http://www.mass.gov/eea/agencies/massdep/water/drinking/manganese-in-drinking-water.html), or email Program.Director-DWP@state.ma.us. Subject: Manganese.

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Exposure Period</th>
<th>ORSG Level in mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>General population</td>
<td>Lifetime</td>
<td>0.3</td>
</tr>
<tr>
<td>General population</td>
<td>10-day</td>
<td>1.0</td>
</tr>
<tr>
<td>Infants/children less than 1 year of age</td>
<td>&lt; 10 days (Address within 10 days or sooner if possible)</td>
<td>0.3</td>
</tr>
</tbody>
</table>
**Dog Waste**

Residents should be reminded to pick up and dispose of their dog’s waste whether on their own property or on public property. The average dog generates ¾ of a pound (lb.) of waste per day. That ¾ lb. contains about 7.8 billion fecal coliform. Fecal coliform can contaminate public and private drinking water supplies and ground water in general. As more and more communities undertake the task of designing dog parks, one of the most important considerations is the proper disposal of pet waste.

When left on the ground, rain water can easily wash dog waste into lakes and rivers or leach it into the water table. At a minimum, a dog park design should include a waste eliminator station and posted notices throughout the park reminding owners to pick up after their pet. Some communities post fines and even the threat of being banned from the park if they leave waste on the ground. MassDEP has developed a fact sheet to help communities protect their drinking water quality when designing a dog park:

http://www.mass.gov/eea/agencies/massdep/water/drinking/source-water-protection-for-drinking-water-supplies.html#1

**Cyanobacteria**

Cyanobacteria (also known as blue-green algae) are photosynthetic bacteria that share similar characteristics of algae and are normally present in all types of waterbodies throughout Massachusetts, including in PWS surface water sources. Like other algae, cyanobacteria can multiply quickly in response to conditions that are favorable for their growth, resulting in “blooms.” Harmful algal blooms composed of cyanobacteria can contribute to taste and odor issues for PWS; however, they also have the potential to produce toxins (cyanotoxins) that can be harmful to the environment, animals and public health. Cyanobacteria, and the cyanotoxins they produce, currently have no federal or state regulations; however, on June 17, 2015, the EPA released 10-day drinking water (DW) health advisory (HA) levels for two cyanotoxins – microcystins and cylindrospermopsin. HAs are non-regulatory concentrations at which adverse health effects are not anticipated to occur by oral ingestion of DW over specific exposure durations. In addition, MDPH has developed guidance levels for recreational exposure to cyanobacteria, which outlines the closure of waterbodies that have cyanobacteria cell counts exceeding 70,000 cells/milliliter (mL) or microcystin (a cyanotoxin) concentrations that exceed 14 parts per billion (ppb). EPA also expects to release draft HAs for recreational waters in 2016.

In response to this emerging contaminant issue, MassDEP has developed a Cyanobacteria Guidance for PWSs with surface water sources that will help assess source vulnerability, and provide monitoring recommendations for response efforts to cyanobacterial blooms. The Guidance recommends that a multiple barrier approach through effective watershed management, monitoring of critical factors associated with blooms, and familiarity with various treatment options, which are currently the most effective methods for preventing and mitigating cyanobacterial blooms. It includes general information on cyanobacteria and the potential cyanotoxins they may produce, a fact sheet on cyanobacteria and watershed management, cyanobacteria vulnerability survey, and extensive additional resources. If you have any questions on this information, contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: Cyanobacteria.

**Applying Aquatic Herbicides (Pesticides) to Drinking Water Reservoirs**

In 310 CMR 22.20B(8), the drinking water regulations require that: No person shall apply herbicides to any surface water body including but not limited to any reservoir and their tributaries, which serve as a public water supply without a permit issued by the Department pursuant to MGL Chapter 111, section 5E. This requirement does not apply to the application of algaecides containing copper by the public water system. However, the public water system shall notify the Department in writing prior to the application of such algaecides. Prior notification in writing of the application by PWS of algaecides containing copper shall be made to the MassDEP Regional Office.

The MassDEP permit application to propose to apply other types of pesticides to reservoirs, tributaries, or other waters of the Commonwealth, is BRP WM 04. This form and instructions are located at http://www.mass.gov/eea/agencies/massdep/service/approvals/brp-wm-04.html. Additional permits and approvals may be required for performing this work.
The application of any pesticide to waters of the Commonwealth, including for algae control, must be conducted by a pesticide applicator that has been appropriately licensed by the Massachusetts Department of Agricultural Resources (MDAR). More information on licensing requirements and MDAR contacts are available at http://www.mass.gov/eea/agencies/agr/pesticides/pesticide-applicator-and-dealer-licensing.html.


**New Fluoride Standard**

On April 27, 2015 the U.S. Department of Health and Human Services released the final Public Health Service (PHS) recommendation for the optimal fluoride level in drinking water to prevent tooth decay. The new recommendation is for a single level of 0.7 milligrams of fluoride per liter of water. It updates and replaces the previous recommended range (0.7 to 1.2 milligrams per liter) issued in 1962. On April 28, 2015 MDPH notified Massachusetts public water systems of the change to the recommended optimal fluoride level. MassDEP also notified public water systems of the change and urged those with fluoridation treatment systems to adopt the change as soon as practical.

The change was recommended because Americans now have access to more sources of fluoride, such as toothpaste and mouth rinses, than they did when water fluoridation was first introduced in the United States. As a result, there has been an increase in fluorosis, which, in most cases, manifests as barely visible lacy white marking or spots on the tooth enamel. The new recommended level will maintain the protective decay prevention benefits of water fluoridation and reduce the occurrence of dental fluorosis.

For the past 70 years, communities across the United States have found that fluoride in their public water systems significantly improved their residents’ oral health. Fluoride occurs naturally in most water systems, but often at levels too low to prevent tooth decay. The practice of adding fluoride to a community’s water system to reach the optimal level for preventing tooth decay has grown steadily over the years. Nearly 75 percent of Americans who are served by public water systems receive fluoridated water.

Community water fluoridation has led to such dramatic declines in both the prevalence and severity of tooth decay that the Centers for Disease Control and Prevention named it one of 10 great public health achievements of the 20th century. If you have any questions on this information please contact: Heather Benabbou, Fluoridation Coordinator in the MDPH Office of Oral Health at Heather.Benabbou@state.ma.us.
Part V: Wells

Recommended Guidance for Private Wells

Many of the local BOH private well regulations were originally adopted over a decade ago and the water quality sampling sections have become outdated and are in need of revision in order to meet current standards and be protective of public health. The MassDEP ORS document *Standards and Guidelines for Contaminants in Massachusetts Drinking Waters* (http://www.mass.gov/eea/agencies/massdep/water/drinking/standards/standards-and-guidelines-for-drinking-water-contaminants.html) should be reviewed by the BOH each year. It contains updated concentration limits and general information on contaminants in public drinking water, and would be a good source of information for local BOH decision-making on private wells. A model BOH private well regulation is available at http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/modwell.pdf.

As a reminder, Section 31 of MGL 111 and Section 8 of MGL 21A requires BOHs to file attested copies of all local regulations affecting public health, including any changes to a private well regulation, with the Central Registry of the MassDEP Watershed Permitting Group in Boston. You may also send an electronic copy to Program.Director-DWP@state.ma.us, Subject: Private Wells.

Radionuclide Sampling

The MassDEP/Drinking Water Well Driller Program has recently received questions from local health officials regarding radionuclide treatment systems installed on private wells without having a complete set of radionuclide analyses.

- MassDEP recommends that all private wells, whether installed in the overburden or bedrock, be tested for Radon.
- For bedrock wells, MassDEP recommends testing for gross alpha in addition to Radon.
  - If the gross alpha result is less than 5 picocuries per liter (pCi/L) then no testing for radium 226, radium 228, or uranium is needed.
  - If the gross alpha result is equal to or greater than 5 pCi/L, then testing for radium 226 and radium 228 should be completed.
  - If the is gross alpha result is equal to or greater than 15 pCi/L then testing for uranium should also be completed.
- The concentration of radioactive minerals in well water can vary substantially based on rainfall and other factors. For this reason, at least two samples (taken a month or two apart, if possible) should be taken before conclusions are reached regarding the average concentration of any radionuclide.

Radionuclide Testing Flow Chart

![Radionuclide Testing Flow Chart](image-url)
**Treatment Systems for Radionuclides**

Treatment systems for radionuclides should be designed to specifically mitigate the radioactive mineral(s) that exceed the drinking water standards indicated by the water analysis. Using a mixed resin bed to treat all possible radionuclides, rather than using the resin type specific to the radionuclide of concern, can be problematic. Due to the ability of the mixed resins to treat a variety of contaminants by design, the resins may become prematurely saturated by other less hazardous contaminants and allow for the breakthrough of the radionuclide of concern. Early saturation and breakthrough will result in additional treatment costs because of the more frequent replacement or regeneration of the resin material. The waste from the regeneration process, which may be radioactive, must be disposed of in accordance with local, state and federal regulations. Not following all analytical steps, or overdesigning a treatment system, may result in more expensive disposal costs and a potential health risk. Careful analysis of the raw water sample, and seeking the appropriate expertise to interpret the result and design an appropriate treatment system, are essential steps to providing safe drinking water.

A factsheet with more information on radionuclides in drinking water can be found on our website at: [http://www.mass.gov/eea/agencies/massdep/water/drinking/fact-sheet-for-radionuclides-including-uranium-in-drin.html](http://www.mass.gov/eea/agencies/massdep/water/drinking/fact-sheet-for-radionuclides-including-uranium-in-drin.html). If you have any questions concerning these recommendations, contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: Radionuclides.

**Required Disclosure of Water Test Results Related to the Sales of Home Water Treatment Devices**

Due to numerous complaints of unethical sales practices for home water treatment devices, Bill No. 6133 was passed in 1991, "An Act Relative to the Testing of Drinking Water", which amended Chapter 111 of the General Laws to further protect Massachusetts consumers. This bill was enacted to address such situations where a salesperson representing a company selling home water treatment devices offers to test a consumer's tap water. The salesperson claims to find "harmful" substances in the water and recommends treatment with his or her company's device. In the meantime, the consumer has no idea of the validity of the tests, or what they mean.

Bill No. 6133 prohibits individuals other than professionals from state-certified laboratories to testing tap water for health parameters. These tests are complicated and require sophisticated laboratory equipment. However, sales persons may still test for aesthetic parameters - things that are not harmful if consumed but affect the taste, color, and smell of drinking water - as long as the test is accompanied by the MassDEP form: "Required Disclosure of Water Test Results." This form must be filled out and signed by the sales person, and given to the prospective purchaser. The form also explains what is legally allowed to be tested for by salespersons, such as: chlorine, chloride, color, iron, manganese, odor, hardness, hydrogen sulfide, pH, sulfate, TDS, and zinc; and explains how each of these parameters may affect drinking water.

Any person who sells, leases, rents, or promotes home water treatment devices and tests the water from either a public or private drinking water supply must fully complete and provide this form to prospective purchasers at the time of reporting water quality results. A civil penalty of not more than $5,000 can be levied against the seller for failure to provide the information on the required form to the prospective home water treatment purchaser.

The MassDEP “Required Disclosure of Water Test Results” form can be found at: [http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/reqdiscl.pdf](http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/reqdiscl.pdf)

If you have any questions on this information contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: Water Test Disclosure Form.
Part VI: Small Systems

Point of Entry/Point of Use Treatment Devices

BOHs are encouraged to review the MassDEP fact sheet titled “Point of Entry/Point of Use Treatment” (POE/POU). This fact sheet was developed to help the PWS, BOH, facility owner, and consumer understand when the installation of a POE/POU treatment device would create a PWS and thereby require MassDEP approval and oversight. The fact sheet also summarizes the minimum requirements for POE/POU installations noted in the Drinking Water Regulations, 310 CMR 22.00. The fact sheet is available on the MassDEP website at http://www.mass.gov/eea/agencies/massdep/water/drinking/home-treatment-devices-point-of-entry-point-of-use-tre.html.

MassDEP is currently updating the Drinking Water Regulations, 310 CMR 22.00, to incorporate additional federal requirements, including:

- Customer education, input, comment opportunity, and agreement requirements.
- Restrictions on POU/POE installation use, including:
  - Microbiological contaminants and nitrate for POU/POE installations, and
  - Volatile organic compounds or radon for POU installations.

MassDEP will be developing additional guidance on these requirements. If you have any questions on this information contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: POE/POU.

Annual Transient Non-Community Water Quality Reports/ Regulations

Every July, MassDEP makes available on the web a water quality report to each TNC system, which is very similar to the CCR that community systems are required to provide to consumers. This water quality report must be downloaded and printed, signed by the operator and owner of the system, and then posted in a conspicuous area for TNC customers to read. Please look for the current report when issuing local permits. The reports can be found on the web at http://www.mass.gov/eea/agencies/massdep/water/drinking/pws-documents-search-tool.html. If you have any questions on this information contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: TNC Water Quality Reports.

Please note water quality reports for Non-Transient Non-Community systems are also available at the above noted link.
Part VII: MassDEP Drinking Water Program Initiatives

Lead in Drinking Water at Schools and Early Education and Care Facilities

MassDEP and its Lead Contamination Control Act (LCCA) partners (Mass Dept. of Public Health, the Dept. of Elementary & Secondary Education and the Dept. of Early Education & Care) continue to work with schools and early education and care facilities to reduce and eliminate sources of lead and copper that are over the MassDEP standards in drinking water. MassDEP and its LCCA Partners inform and educate school and childcare officials on how to identify, evaluate, and reduce or eliminate the sources of lead contamination affecting their facility’s drinking water.

The Massachusetts LCCA Lead Action Level is 15 micrograms per liter (15 ug/L) or 0.015 mg/L. The copper standard is 1300.00 ug/L or 1.3 mg/L.

MassDEP will be sending out a survey to all schools to find out how schools continue to address lead and copper levels in their drinking water. This survey is done every 4-5 years. The last survey was in 2010.


BOH are encouraged to work with their local schools and childcare facilities to help evaluate and to provide technical assistance to correct any lead in drinking water problems.

For more information on the LCCA program see http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/sclcatlg.pdf or contact Program.Director-DWP@state.ma.us, Subject: LCCA.

Healthy Communities Grant Project:

Above Ground Storage Tank (AST) Project – Merrimack River Drinking Water Intakes

MassDEP received a $25,000 grant from EPA to conduct an AST project at the five Merrimack River drinking water intakes. The Massachusetts Department of Fire Services has concerns about commercial above ground storage tanks that hold 10,000 or fewer gallons of fluid since, unlike larger tanks, there is generally not a process to track them after the approval for installation.

The goal of this project is to protect public health and the environment by reducing, and planning for, chemical risks from commercial ASTs with storage capacity of fewer than 10,000 gallons of fluid. Communication among owner/operators of tanks, public water suppliers, and emergency responders will be emphasized. The outcome will be the following key tasks/deliverables:

- Information on commercial ASTs with storage capacity of fewer than 10,000 gallons within the study area, including: location, size, age, product, facility owner/operator, contact information, etc., from local file reviews and a survey to facility owners/operators.
- Spreadsheet of AST information described above.
- A fact sheet to be developed and distributed on potential threats from ASTs and 1) how facility owners/operators can reduce chemical risks to the public, the environment and public drinking water supplies through best management practices, and 2) how facilities, PWS and local emergency responders can plan for, and respond to, chemical emergencies involving ASTs. Direct stormwater discharges, 100 year floodplain, and climate change challenges will also be discussed and linked to this work.

Project information will be shared with BOH and others. If you have any questions on this information contact DWP at 617-292-5770 or Program.Director-DWP@state.ma.us, Subject: AST.

Solar and Wind Projects

Solar and wind installations proposed on lands owned or controlled by PWS must first be approved by MassDEP to be protective of the water supply. MassDEP’s guidance and policy on the review process are located at the following links.
The Value of Public Drinking Water

The public often asks Massachusetts PWS and MassDEP this question: *How do I know that my water is safe to drink?* The answer? The PWS in Massachusetts are among the best in the country and are subject to the most stringent government standards in the world.

Although the federal Safe Drinking Water Act was 40 years old in 2014, it still ensures clean and safe drinking water. The Act is amended by Congress as needed to address drinking water concerns. It has become stricter over time by requiring that water be tested for more contaminants and to protect everyone, including vulnerable populations. The Massachusetts Drinking Water Regulations, 310 CMR 22.00, contain additional protections.

> **Safe Drinking Water Act Regulated Contaminants**

Sometimes we take for granted the good value of the water that flows from our faucets 24/7/365. It is a precious resource yet accounts for only 4 percent of the average United States household’s monthly utility costs. Those utilities include cable television, cell phone, telephone, internet, electricity, gas, garbage, wastewater, and water.

Residents can help to protect local drinking water by:

- conserving water;
- maintaining septic systems;
- picking up pet waste;
- using pesticides and fertilizers properly and infrequently;
- staying informed of local issues that may impact drinking water; and
- supporting their local public water supplier.

For more information about the value of public drinking water, check out MassDEP’s brochure at [http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/water-valuesm.pdf](http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/water-valuesm.pdf) or contact [Program.Director-DWP@state.ma.us](mailto:Program.Director-DWP@state.ma.us), Subject: Value of Water or call 617-292-5770.
Part VIII: Specific Drinking Water Information on the MassDEP Website

Your BOH might find the following information useful:

- Boil orders and other public health orders: [http://www.mass.gov/dep/water/drinking/boilordr.htm](http://www.mass.gov/dep/water/drinking/boilordr.htm)
- Certified Labs: [http://www.mass.gov/dep/water/drinking/certifie.htm](http://www.mass.gov/dep/water/drinking/certifie.htm)
- Local Fairs: [http://www.mass.gov/eea/docs/dep/water/drinking/alpha/a-thru-h/fairfs.doc](http://www.mass.gov/eea/docs/dep/water/drinking/alpha/a-thru-h/fairfs.doc)
- PWS contact information (city/town, PWS name, PWS ID #, location and mailing address, contact person name, phone and fax #): [http://www.mass.gov/eea/docs/dep/about/organization/pwscont.pdf](http://www.mass.gov/eea/docs/dep/about/organization/pwscont.pdf)

**Western**

Statehouse West 5th floor; 436 Dwight St; Springfield, MA 01103 413-784-1100

**Central**

8 New Bond Street.; Worcester, MA 01606 508-792-7650

**Northeast**

205-B Lowell St; Wilmington, MA 01887 978-694-3200

**Southeast**

20 Riverside Dr.; Lakeville, MA 02347 508-946-2700

**Boston**

1 Winter St. 5th floor; Boston, MA 02108 617-292-5770

Email the program at Program.Director-DWP@state.ma.us

You may contact this office for a hard copy of the material in this letter,