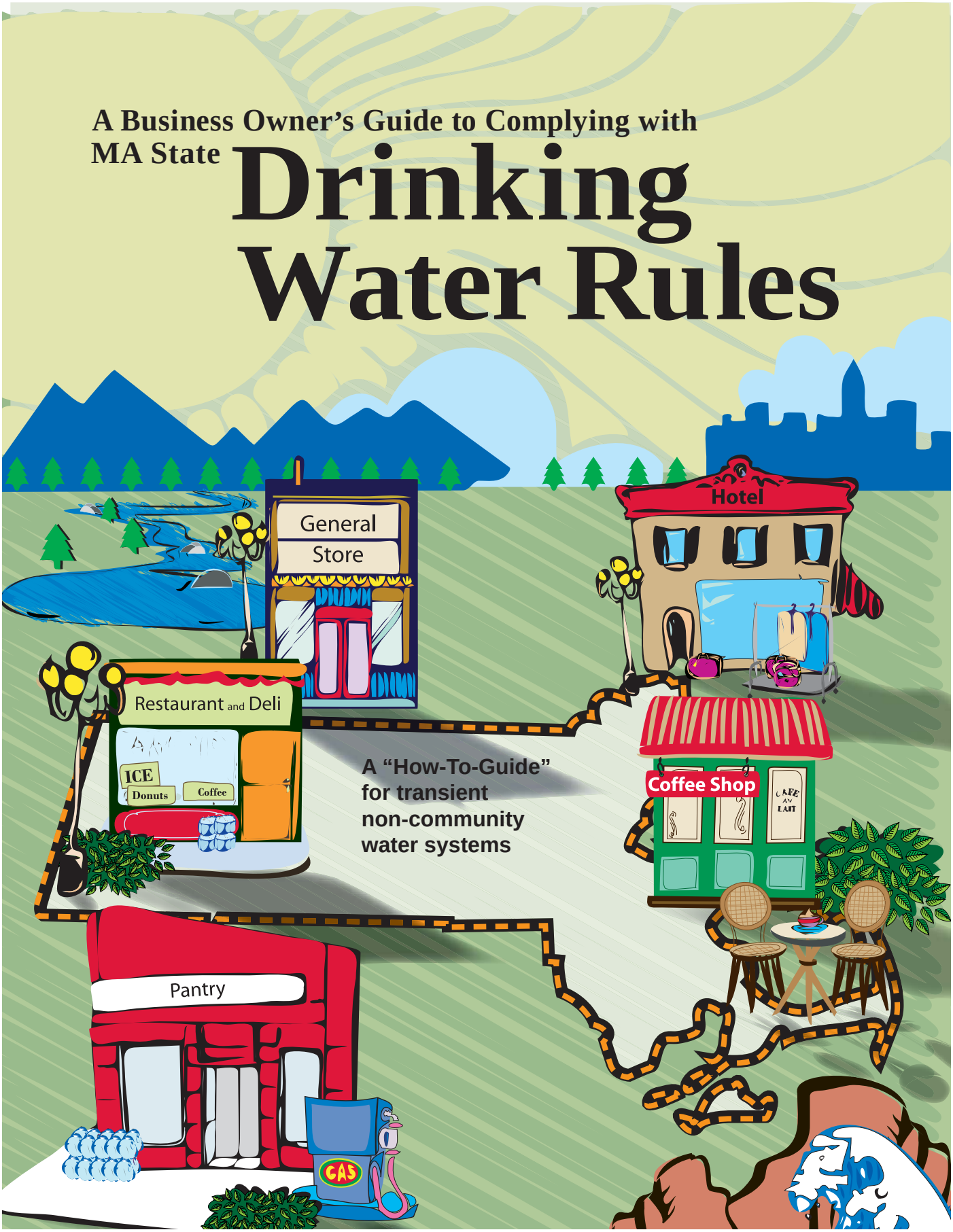
A Business Owner's Guide to Complying with MA State

Drinking Water Rules



Printed by New England Water Works Association with MassDEP SRF Funding from the Massachusetts Coalition of Small Systems Association.

MassDEP thanks the New England Water Pollution Control Commission for letting us use this guide design, which NEIWPCC's Cindy Bernard developed for a similar guide produced for New Hampshire. This New Hampshire guide has been updated to include MassDEP requirements.

IMPORTANT CONTACT INFORMATION

Complete and keep information readily available.

System Owner _____

Address _____

_____

Telephone ( ) _____ - _____

System Operator _____

Address _____

_____

Telephone ( ) _____ - _____

Certified Lab _____

Address _____

_____

Telephone ( ) _____ - _____

Pump Company _____

Telephone ( ) _____ - _____

Treatment Equipment Repair _____

Telephone ( ) _____ - _____

IN CASE OF EMERGENCY

Police Department

Address _____

_____

Telephone ( ) _____ - _____

Fire Department

Address _____

_____

Telephone ( ) _____ - _____

MassDEP Emergency Response (24 hrs.)

Telephone (888) 304 - 1133

Massachusetts Department of Environmental Protection
Drinking Water Program
One Winter Street, 5th Floor
Boston, MA 02108
(617) 292 - 5770
www.mass.gov/dep

What's in this guide?

What is a TNC water system?

Examples of drinking water uses of TNC include, but are not limited to, bubblers, coffee makers, post-mixed beverage machines, and restroom facilities. If your water system meets the below definition your system is a TNC.

A Transient Non-Community public water system (TNC) is any public water system that has at least 15 service connections or that serves water to 25 or more different people per day for more than sixty days each year. If your business or facility has its own well or spring and has the capacity to provide services for at least 25 people every day, you operate a TNC. Common examples of TNCs include restaurants, convenience stores, ski areas, campgrounds, motels, and water vending operators.

As an owner/operator of a public water system, it is your duty to ensure that your water system is operating in a way that protects the health of you, your employees, and your customers. This guide will help you provide safe potable water for your customers and keep your water system in compliance with Massachusetts Drinking Water Regulations, 310 CMR 22.00.

To obtain more information about requirements for TNC systems, please refer to **TNC, Managing Your TNC Drinking Water System - *A Guide to the Massachusetts Requirements for Transient Non-Community Public Water Systems***, available at http://www.mass.gov/dep/water/compliance/tncman.pdf.

2
Where do I start?

Register

As an owner/operator of a public water system, you must register your water system with the Massachusetts Department of Environmental Protection (MassDEP), and keep that information current. All TNC systems must register with MassDEP's Drinking Water Program (DWP). Call (617) 292-5770 for details.

Water Quality Testing

TNCs are required to test their water for coliform bacteria, nitrate, nitrite, and sodium. Other contaminants may be required by MassDEP as needed. MassDEP will provide your system with a sampling schedule to help you meet all of the water quality monitoring requirements on time. An example of a TNC sampling schedule is provided. Once you have taken your samples, you must send them to a Massachusetts certified lab for analysis. Work with your lab to make sure that your sample has been taken properly and that you have submitted all required information to avoid delays in processing your sample. A list of state approved labs is available at http://www.mass.gov/dep/service/compliance/wespub02.htm or may be obtained through MassDEP's Wall Experiment Station at (978) 682-5237.

Report

The lab that performs your water quality testing must report all results of their analysis directly to MassDEP on required forms. To ensure that the proper reporting occurs, you must enter into a written agreement with an accredited lab to process your samples. This written agreement should require the lab to submit the results of all water quality analyses to you as well as to immediately contact you when your laboratory results exceed a state maximum contaminant level. You may also contract with your lab to send results directly to MassDEP. All monitoring results must be submitted to MassDEP within ten (10) days after the end of the monitoring period.

Record Type	Keep on File For:
Bacteria Monitoring Results	5 Years
Nitrate/Nitrite, Sodium Monitoring Results	12 Years
Sanitary Survey Records	10 Years
Public Notices Issued	3 Years

Inspect

Every five years, MassDEP will contact you to schedule an appointment for a site visit, referred to as a "sanitary survey." This site visit is completed by a MassDEP employee or designee with your cooperation. During this detailed field inspection, you and the operator of the system must be present to provide the MassDEP employee with the access they need to complete the survey, answer any questions they have, and provide any records they request. You should also prepare for each sanitary survey by following the instructions in MassDEP's guide **Preparing for a Sanitary Survey - *Information to Help Small Water Systems***, available at http://www.mass.gov/dep/water/laws/policies.htm#dwguid.

Record

You are required to keep a copy of all official monitoring reports, survey records, and violation reporting related to your system on file for a certain amount of time (see table). After the given amount of time has passed, you may dispose of the records.

Note: If you sell the property/water system you must transfer all records to the new owner and notify MassDEP.

Hire a Certified Operator

You must get the training to operate your system or have a professional operator oversee your system. You can locate a certified operator at www.mass.gov/dep/water/drinking/certop.htm.

Provide Public Notice

If your system exceeds a monitoring maximum contaminant level (MCL) for any of the contaminants monitored, fails to monitor, or does not submit monitoring reports to MassDEP as required, the public has a right to know. The system must notify the public and these public notices of violations must be posted in a conspicuous location for all customers to read.

Submit your Annual Statistical Report in January Each Year

The Annual Statistical Report provides current information about your system. It is essential to provide this information in a timely manner because it is used to calculate your annual compliance fee. If you don't file, your fee might go up.

Pay Your Annual Compliance Fee

Every public water system is assessed an annual compliance fee that provides funding for the many technical assistance programs for water systems. Prompt payment allows MassDEP to fully implement all of its drinking water protection programs.

Perform a Cross Connection Survey

Your water system needs to be protected from non-potable equipment and non-potable water (e.g. boilers and air conditioning corrosion inhibiting chemicals). A cross connection control plan is submitted with the annual statistical report.

Post a Consumer Confidence Report (CCR)

MassDEP will provide you with a report of your water quality results for the prior year. This report is commonly referred to as a CCR. You will be expected to keep this report in a conspicuous place in your facility until MassDEP sends you the next year's report.

Meter Your Source and Service Connections

It is required that your system be metered. Metering water consumption helps provide early warning of leaks and distribution problems, thus saving you money.

4

Have an Emergency Response Plan

You must have a plan to protect the health of your workers and consumers in case of a problem with your water supply or system. If you serve food your plan must include the Department of Public Health emergency response steps. For a copy of the DPH guide visit http://www.mass.gov/Eeohhs2/docs/dph/environmental/foodsafety/emergency_action_plans.pdf or call your local Board of Health.

Protect Your Source of Water

The area of protection around your source is known as the Zone 1. The Zone 1 is a 100 to 400 foot protective radius around the well, which must be owned or controlled by the TNC using conservation restrictions. If you do not know the radius of your Zone 1, contact MassDEP for assistance.

To protect your well from possible sources of contamination, only activities that are directly related to the PWS and are non-threatening to the water quality are allowed in the Zone 1. Some examples are to restrict access to your well, slope parking areas away from the well, and remove septic tanks and leach fields from Zone 1.

New Construction or Replacement of a Well

Contact your MassDEP regional office for guidance and technical assistance if you are constructing a new well or replacing a well. Plans and permits must be submitted and approved by MassDEP before the well is drilled and placed on-line.

Treatment Devices and System Improvements

Your system may have treatment or you may want to install treatment such as a water softener, filter, disinfection, other chemical additives, or install other system modifications. Your system may also be required to install treatment to comply with rules like the groundwater or surface water treatment rule. All devices and major system modifications must have prior MassDEP approval. Submit plans and specifications, designed by a professional engineer, to the regional office for review and approval. You will be charged a permit fee.

New Requirements

From time to time MassDEP may promulgate new program requirements that affect TNC systems. When this occurs MassDEP will contact each TNC in writing to inform them of the requirement. The groundwater rule is the next requirement. A summary of the rule can be found at http://www.mass.gov/dep/water/laws/regulati.htm.

Shared Compliance

TNC systems such as restaurants and campgrounds must also comply with local Board of Health and Massachusetts Department of Health Requirements. TNCs must work closely with their local health authority.

Where can I find additional assistance?

MassDEP, Drinking Water Program

Your first stop for additional information or technical assistance should be the MassDEP Drinking Water Program. They can provide you with advice specific to your system and work with you to solve any problems that you might encounter. See back cover to locate the region for your system.

MassDEP Boston (Main Office)
(617) 292-5770
Drinking Water Program
One Winter Street, 5th Floor
Boston, MA 02108

MassDEP Western Region
(413) 784-1100
436 Dwight Street
Springf eld, MA 01103

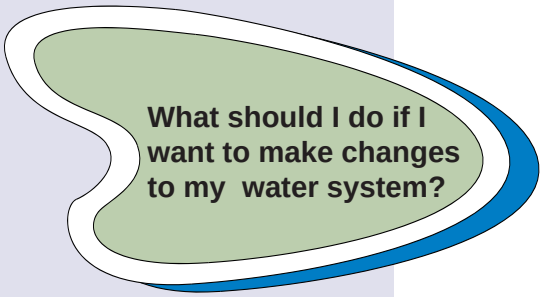
MassDEP Central Region
(508) 792-7650
627 Main Street
Worcester, MA 01608

MassDEP Northeast Region
(978) 694-3200
205B Lowell Street
Wilmington, MA 01887

MassDEP Southeast Region
(508) 946-2700
20 Riverside Drive
Lakeville, MA 02347

MassDEP Wall Experiment Station - State Laboratory
(978) 682-5237

Division of Professional Licensure
Certified Operator Requirements
Division of Professional Licensure - (617) 727-3072
MassDEP Contact - (617) 556-1191
http://www.mass.gov/dep/water/drinking/certop.htm
Contact for temporary certification, training certification, and training guidance.



Most routine maintenance, including repairs and piping or valve replacements, can be completed without any design oversight or approval from MassDEP. However, changes such as changing sampling sites, adding or removing treatment, extending pipes, increasing capacity, changing the type of facility, or drilling a new well may require state review and approval. You should contact MassDEP for a full description of these requirements and any further instructions before you make any changes to your system.

MassDEP Drinking Water Home Page
http://www.mass.gov/dep/water/drinking.htm

MassDEP Home Page
http://www.mass.gov/dep/

MassDEP Comment Box
Email the Drinking Water Program with your questions or comments on rules or regs by e-mail. The address is: Program.Director-DWP@state.ma.us.

MassDEP "In The Main"
(617) 292-5885
Newsletter published by MassDEP, Drinking Water Program to inform PWS officials about new state and federal activities, regulations, training programs, and workshops.

US Environmental Protection Agency (EPA)
Region I - Source Water Protection
(617) 565-3616 or (617) 565-4721
Contact for New England source water protection issues, cross-state source water protection and national legislation

US EPA Home Page
http://www.epa.gov/

Safe Drinking Water Act Hotline (EPA)
800-426-4791 (9:00 AM - 5:00 PM EST)
The Hotline's primary function is to assist the regulated community and the public with the regulations and programs developed in response to the Safe Drinking Water Act Amendments. Also contact for information on water quality, drinking water, technical publications, public education materials, and source protection planning.

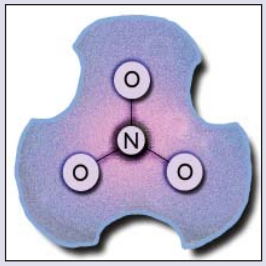
The TNC Manual
This easy-to-read guide is for TNC systems. The manual is a full directory of information on all the requirements for TNC systems and information that the owner or operator of a small public water system should be familiar with. A copy can be downloaded at http://www.mass.gov/dep/water/compliance/tncman.pdf

What testing is required?

The MassDEP prepared **sampling schedule** is the most important document that describes testing requirements for your public water system (An example of this sampling schedule is on the following page). Consider it your ticket to regulatory compliance. It lets you know exactly when to conduct each water quality test. It also describes where the sample(s) should be taken (the sampling point). Your sampling schedule can be obtained from your regional office.

BACTERIA

Coliform bacteria are common in the natural environment. They are found in the intestines of warm-blooded animals (including humans), and in plants, soil, air, and water. Coliform bacteria are usually not harmful, however their presence in water may indicate that the water is polluted and may contain more serious disease-causing organisms. TNCs must monitor for coliform bacteria every three months the system is in operation. Additional testing may be required depending on the type and size of your system. Consult your sampling schedule for your system's monitoring requirements and sampling location for coliform bacteria.



NITRATE/NITRITE

Nitrate and nitrite are inorganic chemicals found in fertilizer, sewage, and wastes from animals. High levels of nitrate and/or nitrite in drinking water have caused serious illness and sometimes death in infants less than six months of age. Increasing levels can indicate problems in your wellhead area and require further investigation. TNCs are required to monitor for nitrates every year, and nitrites every three years. Consult your sampling schedule for your system's monitoring requirements and sampling location for nitrate and nitrite.

8

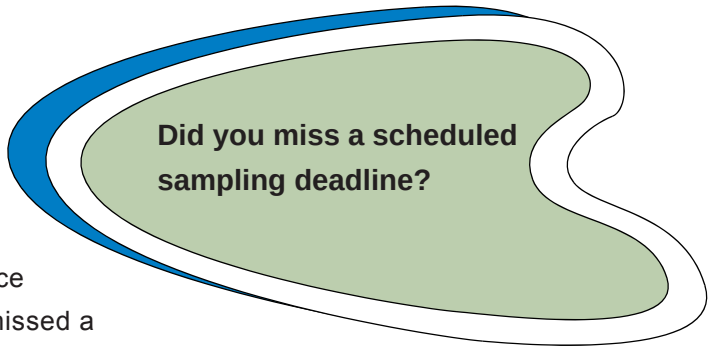
SODIUM

11	281
Na	
Sodium	
22.989770	

Sodium is a naturally occurring common element found in soil and water. This chemical is of concern to sodium sensitive individuals, such as those with high blood pressure, who should be aware of their sodium intake.

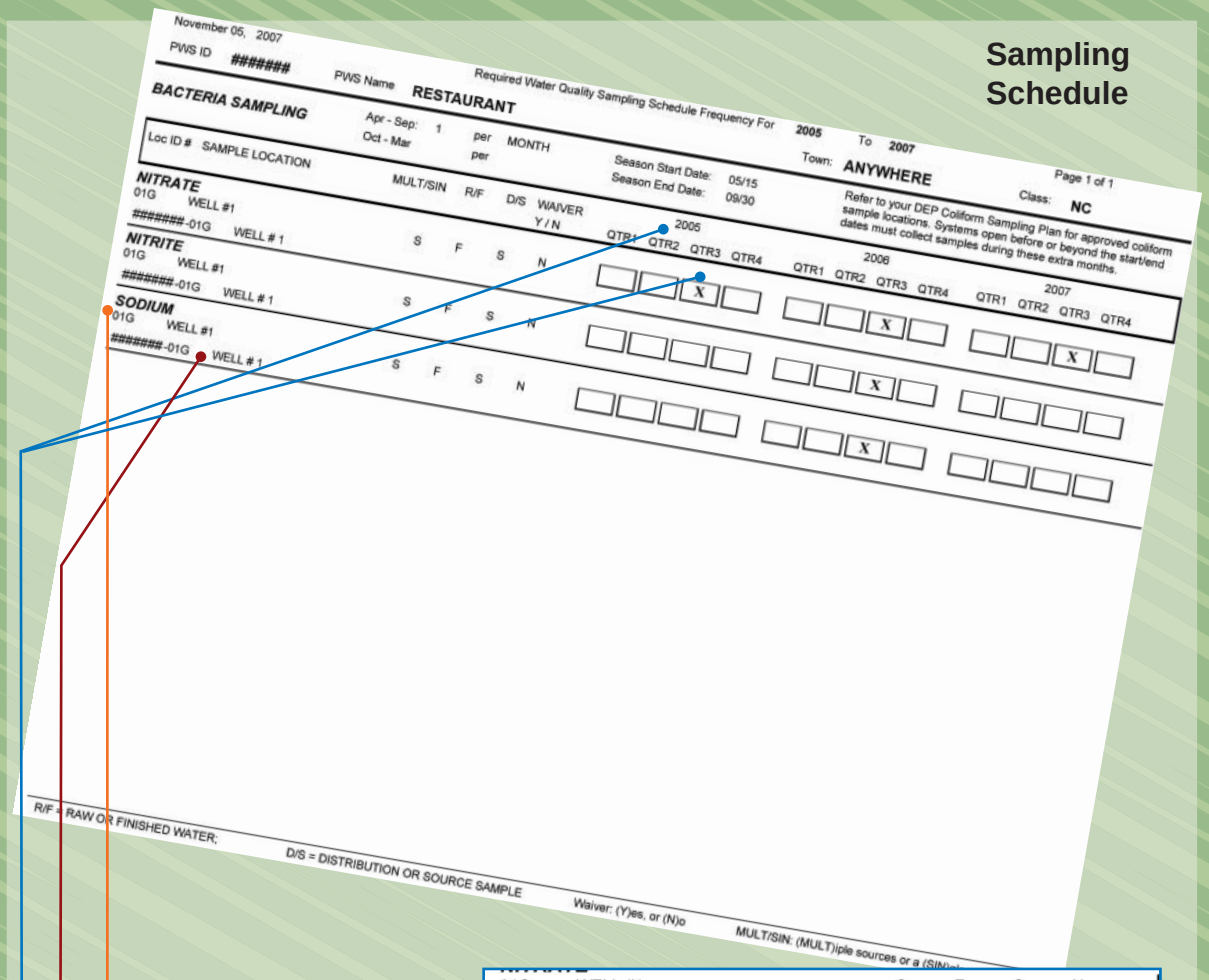
Sodium must be sampled at the entry point to the distribution system which is representative of each well after treatment.

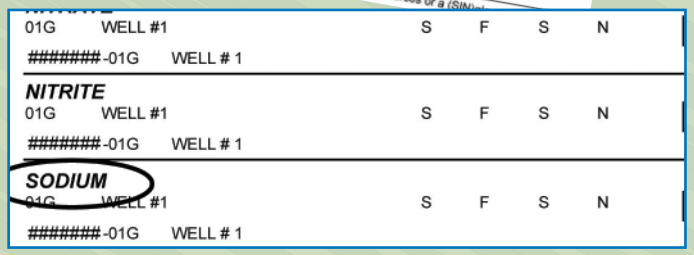
In addition to reporting sodium results to the MassDEP, you must also notify your local Board of Health and the Massachusetts Department of Public Health (DPH) of your sodium result.



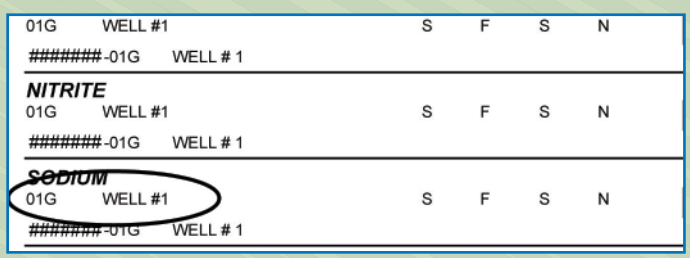
If you miss a sampling deadline, it is important that you call and notify MassDEP of the oversight as soon as you become aware of the problem. Complete your required testing as soon as you can, and within thirty days, issue a public notice informing customers that you have missed a required sampling deadline. MassDEP will help guide you through this process.

Sampling Schedule





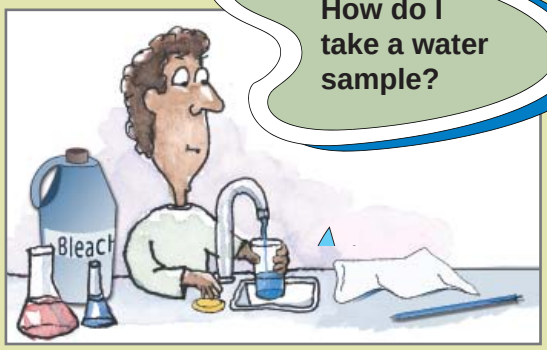
What



Where

When

How do I take a water sample?



1. Obtain sample bottles from your laboratory.

2. Collect all materials you'll need, including a cloth, bleach solution, and a waterproof pen to label your bottles.

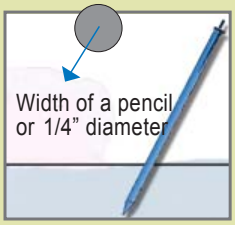
3. Choose the tap to sample from. If the location is not designated on your sampling schedule, choose a location that is representative of your system, like a bathroom or kitchen faucet or drinking water bubbler, and notify MassDEP of the change.

4. Avoid using swivel taps or mixing valves.

5. Remove all devices from the tap, including aerators and screens. They may contaminate the sample. If they can't be removed, it is best to choose another tap.

6. If you are collecting a bacteria sample, sterilize the faucet rim with a cloth dampened with bleach and water.

7. Turn the cold water on vigorously and let it run for 4 or 5 minutes. Reduce the flow to eliminate splashing and air bubbles. The stream of water should be no greater than the width of a pencil.



8. Complete the label on the bottle, using a waterproof pen, including all information required by the lab.

9. Remove the cap of your sample bottle and hold it to prevent it from becoming contaminated.

10. Fill the container to just below the neck of the bottle, leaving airspace. Do not rinse the container or fill a second time, and do not remove anything that is already in the bottle. There may be a liquid or solid preservative already in the bottle.

11. Carefully replace the cap on the bottle and tighten securely.

12. Refrigerate the sample, but do not freeze it.

13. If possible, it is best to take the sample to the lab the same day. Bacteria samples must be delivered to the lab within 30 hours after collection, and nitrate samples must be delivered within 48 hours to be valid.

14. When you are ready to take the sample to the lab, place it in a cooler with ice to keep it cool. Bacteria samples should be kept at 50 degrees F and nitrate samples should be kept at about 40 degrees F.

How do I protect my well from contamination?

Taking action to protect your drinking water source is your responsibility as a public water supply owner. Many land use activities can pollute a drinking water supply, so protecting the land around your water source is your first barrier against contamination. Identifying what the potential sources of contamination are in your area, and eliminating those that you can control are two ways that you can protect your water supply.

- Know exactly where your well is located;
- Avoid excessive use of pesticides, fertilizers, and other chemicals on your property, especially near the wellhead;
- Dispose of hazardous chemicals and wastes properly, never dumping them down drains, or on your property;
- Make sure your septic system is maintained in good operating condition;
- Slope the area around the well to keep surface runoff drained away from the well;
- Keep a careful watch of activities around your well area;
- Identify potential sources of contamination nearby, such as gas stations, manufacturing facilities, live stock pens/pastures, and dry cleaners, and test for contaminants that are associated with these activities.

How do I respond to a water sample that tests positive?

If your water quality samples test positive for bacteria, you must notify MassDEP, and MassDEP will let you know what you need to do to f x the problem.

Some water quality violations are more serious than others. If nitrate (concentration over 10mg/L) or E. Coli or Fecal coliform bacteria are found DO NOT DRINK THE WATER. Immediately notify your employees and customers that the water is not safe to drink.

Call MassDEP for FURTHER INSTRUCTIONS. While you may boil the water for at least 1 minute at a rolling boil to kill the bacteria, boiling does not remove nitrate contamination.

After you f nd out that contamination has been found in your system, there are several things MassDEP will require you to do.

- You must let your customers and employees know of the problem as soon as possible, and issue a public notice to spread the word to anyone who may have recently used your facility.
- You must gather more water quality samples to conf rm that the contamination exists.
- You should immediately f nd and eliminate the source of the contamination.

MassDEP will work closely with you to make sure you complete all of these steps correctly. They will help you to protect your own health, and that of your employees, and your customers. Once you've eliminated contamination from your system and completed all public notice requirements, MassDEP will consider your system in compliance. You should have information in your Emergency Response Plan on how to handle these types of emergencies.

How do I disinfect my water system?

When to disinfect your water system:

- After construction
- After repairs
- When water tests show contamination (You must contact MassDEP **before** initiating disinfection of your source)
- For seasonal systems, before opening and after closing for the season

How to disinfect your water system:

1. Disconnect, remove, or bypass all water treatment devices such as activated carbon f lters and water softeners.
2. Fully open all the faucets. Run the water vigorously for several minutes to f ush out any sediment in the plumbing.
3. If you have a dug well, scrub the inside of the well with a brush and chlorine bleach solution (one part bleach to four parts water).
4. Add chlorine bleach directly into the well to achieve 50 ppm in dose. Check the table below to f nd the right amount of store-bought chlorine bleach for your well's depth and diameter. Do not over chlorinate or the chlorine will be diff cult to remove.
5. Run the chlorinated water through a garden hose back into the well for an hour so the chlorinated water washes down the inside of the casing.
6. Recap the well.
7. Open one faucet at a time throughout your facility. Run the water until you smell a strong chlorine odor, then turn the tap off. Repeat for all faucets. Don't forget bathtubs, showers, washing machines, and toilets (one f ush is enough). Do not consume the chlorinated water.
8. Allow the chlorinated water to sit in the entire system for at least 12 hours, and preferably 24 hours. This is the amount of time that chlorine must be in contact with your system to kill all bacteria. Minimal toilet f ushing is allowed.
9. After waiting for the chlorine to disinfect the system, connect a hose to a tap or outside faucet and drain the chlorinated water to a safe, outdoor location. Do not drain the water into a septic system, a lake or stream, or a storm drain. A gravel driveway or brushy area may be a good place to drain the water. (note: chlorine will kill grass)
10. Continue draining your system until the chlorine odor is gone from the water. (note: it takes about 3-4 days of normal water usage after the initial draining before the chlorine smell completely disappears.)
11. The well should be sampled after the odor of chlorine disappears.

WELL DIAMETER

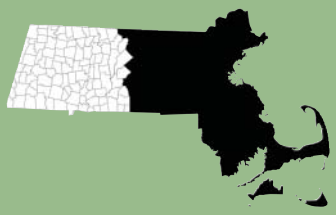
DEPTH	6 in.	8 in.
50 ft.	1 cup	2 cups
100 ft.	2 cups	1 qt.
150 ft.	1 qt.	1/2 gal.

DUG WELL DIAMETER

DEPTH	3 ft.	4 ft.
5 ft.	1 qt.	1/2 gal.
10 ft.	1/2 gal.	1 gal.
20 ft.	1 gal.	1-3/4 gal.

MassDEP Western Region

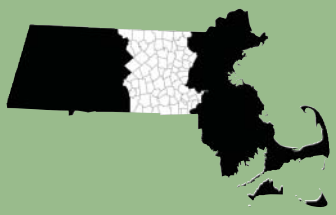
436 Dwight Street
Springf eld, MA 01103
Phone: 413-784-1100
Fax: 413-784-1149



Adams
Agawam
Alford
Amherst
Ashf eld
Athol
Becket
Belchertown
Bernardston
Blandford
Brimf eld
Buckland
Charlemont
Cheshire
Chester
Chesterf eld
Chicopee
Clarksburg
Colrain
Conway
Cummington
Dalton
Deerf eld
Easthampton
East Longmeadow
Egremont
Erving
Florida
Gill
Goshen
Granby
Granville
Great Barrington
Greenf eld
Hadley
Hampden
Hancock
Hatf eld
Hardwick
Hawley
Heath
Hinsdale
Holland
Holyoke
Huntington
Lanesborough
Lee
Lenox
Leverett
Leyden
Longmeadow
Ludlow
Middlef eld
Monroe
Montague
Monterey
Montgomery
Monson
Mount Washington
New Ashford
New Marlborough
New Salem
North Adams
Northampton
Northf eld
Orange
Otis
Palmer
Pelham
Peru
Petersham
Pittsf eld
Plainf eld
Richmond
Rowe
Royalston
Russell
Sandisf eld
Savoy
Sheff eld
Shelburne
Shutesbury
Southampton
South Hadley
Southwick
Springf eld
Stockbridge
Sunderland
Tolland
Tyringham
Wales
Ware
Warren
Warwick
Washington
Wendell
Westf eld
Westhampto
West Springf eld
West Stockbridge
Whately
Wilbraham
Williamsburg
Williamstown
Windsor
Worthington

MassDEP Central Region

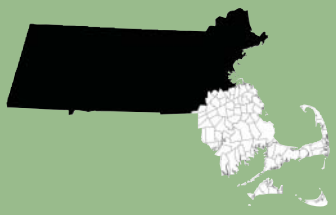
627 Main Street
Worcester, MA 01608
Phone: 508-792-7650
Fax: 508-792-7621



Acton
Ash
Ashby
Auburn
Ayer
Barre
Bellingham
Berlin
Blackstone
Bolton
Boxborough
Boylston
Brookf eld
Charlton
Clinton
Douglas
Dudley
Dunstable
East Brookf eld
Fitchburg
Franklin
Gardner
Grafton
Groton
Harvard
Holden
Hopedale
Hopkinton
Hubbardston
Hudson
Holliston
Lancaster
Leicester
Leominster
Littleton
Lunenburg
Marlborough
Maynard
Medf eld
Medway
Mendon
Milford
Millbury
Millis
Millville
New Braintree
Norfolk
Northborough
Northbridge
North Brookf eld
Oakham
Oxford
Paxton
Pepperell
Phillipston
Princeton
Rutland
Shirley
Shrewsbury
Southborough
Southbridge
Spencer
Sterling
Stow
Sturbridge
Sutton
Templeton
Townsend
Upton
Uxbridge
Webster
Westborough
West Boylston
West Brookf eld
Westminster
Winchendon
Worcester

MassDEP Southeast Region

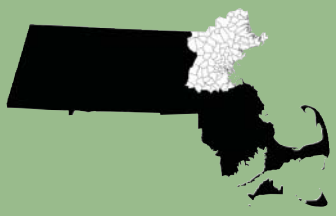
20 RIverside Drive
Lakeville, MA 02347
Phone: 508-946-2700
Fax: 508-947-6557
TDD: 508-946-2795



Abington
Acushnet
Aquinnah
Attleboro
Avon
Barnstable
Berkley
Bourne
Braintree
Brewster
Bridgewater
Brockton
Canton
Carver
Chatham
Chilmark
Cohasset
Dartmouth
Dennis
Dighton
Duxbury
Eastham
East Bridgewater
Easton
Edgartown
Fairhaven
Fall River
Falmouth
Foxborough
Freetown
Gosnold
Halifax
Hanover
Hanson
Harwich
Hingham
Holbrook
Hull
Kingston
Lakeville
Mansf eld
Marion
Marshf eld
Mashpee
Mattapoisett
Middleborough
Nantucket
New Bedford
North Attleborough
Norton
Norwell
Norwood
Oak Bluffs
Orleans
Pembroke
Plainville
Plymouth
Plympton
Provincetown
Randolph
Raynham
Rehoboth
Rochester
Rockland
Sandwich
Scituate
Seekonk
Sharon
Somerset
Stoughton
Swansea
Taunton
Tisbury
Truro
Walpole
Wareham
Wellf eet
West Bridgewater
Westport
West Tisbury
Weymouth
Whitman
Wrentham
Yarmouth

MassDEP Northeast Region

205B Lowell Street
Wilmington, MA 01887
Phone: 978-694-3200
Fax: 978-694-3499



Amesbury
Andover
Arlington
Ashland
Bedford
Belmont
Beverly
Billerica
Boston
Boxford
Brookline
Burlington
Cambridge
Carlisle
Chelmsford
Chelsea
Concord
Danvers
Dedham
Dover
Dracut
Essex
Everett
Framingham
Georgetown
Gloucester
Groveland
Hamilton
Haverhill
Ipswich
Lawrence
Lexington
Lincoln
Lowell
Lynn
Lynnf eld
Malden
Manchester-By-The-Sea
Marblehead
Medford
Melrose
Merrimac
Methuen
Middleton
Milton
Nahant
Natick
Needham
Newbury
Newburyport
Newton
North Andover
North Reading
Peabody
Quincy
Reading
Revere
Rockport
Rowley
Salem
Salisbury
Saugus
Sherborn
Somerville
Stoneham
Sudbury
Swampscott
Tewksbury
Topsf eld
Tyngsborough
Wakef eld
Waltham
Watertown
Wayland
Wellesley