

# ANNUAL 2015 DRINKING WATER QUALITY REPORT

## FOR THE AUBURN WATER DISTRICT

**Auburn, Massachusetts (MassDEP PWS ID #2107000)**

This report is a snapshot of drinking water quality that we provided during the 2015 calendar year. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards. We are committed to providing you with information because informed customers are our best allies.

### I. PUBLIC WATER SYSTEM INFORMATION

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#### Water System Improvements

The Department of Environmental Protection (DEP) routinely monitors our water system, while the District inspects and monitors the water system daily. The DEP inspects our system for its technical, financial and managerial capacity to provide safe drinking water to you. To ensure that we provide the highest quality of water available, your water system is operated by a Massachusetts certified operator who oversees the routine operations of our system. As part of our ongoing commitment to you, last year we made the following improvements to our system:

We are aggressively working to complete the approval testing and to start the operation of the new filtration plant for our West St, wells which have remained off line since May of 2013 due to elevated arsenic levels.

We replaced control valves and upgraded chemical feed equipment in our twenty year old treatment plants.

We held a household hazardous waste collection day in May 2016 in conjunction with the Board of Health.

We support town wide cleanups.

We replaced numerous valves, and over 1,400 feet of piping, approximately 10 hydrants and various residential and commercial meters within our distribution system.

We work closely with the Board of Health on any pertinent water supply issues.

We work closely with the Auburn Fire Department on any hazardous waste spills.

#### Opportunities for Public Participation

If you would like to participate in discussions regarding your water quality, you may attend the following meetings or educational events: The Public is invited to attend any of our Water Commissioner's meetings. Meetings are usually held the 3<sup>rd</sup> Wednesday of each month at 9:00 A.M. at the Water District office located at 75 Church St., Auburn, MA. Unless otherwise posted.

### II. YOUR DRINKING WATER SOURCE

#### Where Does My Drinking Water Come From?

Your water is provided by the following sources listed below (as of June 2016):

Source Name	DEP Source ID#	Source Type	Location of Source
Well # 1	2017000-01G	Groundwater	75 Church St
Well # 2	2017000-02G	Groundwater	75 Church St
Well # 3	2017000-03G	Groundwater	75 Church St
Well # 4	2017000-04G	Groundwater	74 Walsh Ave
Well # 13	2017000-13G	Groundwater	74 Walsh Ave
Well # 6	2017000-06G	Groundwater	74 Walsh Ave
Well # 7	2017000-07G	Groundwater	9 A Pine Valley Dr
Well # 8	2017000-08G	Groundwater	9 A Pine Valley Dr
Well # 9	2017000-09G	Groundwater	25 Southbridge St. Court
Well # 10	2017000-10G	Groundwater	25 Southbridge St. Court
Well #11	2017000-11G	Groundwater	71 West St. (Off Line as of 5/2013)
Well # 12	2017000-12G	Groundwater	71 West St. (Off Line as of 5/2013)

## Is My Water Treated?

Our water system makes every effort to provide you with safe and pure drinking water. To improve the quality of the water delivered to you, we treat it to remove several contaminants.

- We add a disinfectant (chlorine) to protect you against microbial contaminants.
- We chemically treat the water to adjust the ph to reduce lead and copper concentrations.
- We chemically treat and filter the water to reduce levels of iron and manganese.

The water quality of our system is constantly monitored by us and the MassDEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required.

## How Are These Sources Protected?

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program (SWAP) Report for the water supply source(s) serving this water system. The SWAP Report assesses the susceptibility of public water supplies.

The SWAP Report includes the following;

1. Description of the water system.
2. Land uses within the system.
3. Source water protection conclusions and recommendations.
4. Appendices.

## What is My System's Ranking?

A susceptibility ranking of "high" was assigned to this system using the information collected during the assessment by the DEP.

## What Can Be Done To Improve Protection?

The SWAP report recommends:

1. Continue to inspect the Zone I areas and when possible, remove any non-water supply activities.
2. Educate residents on ways they can help us to protect our drinking water.
3. Work with emergency response teams to ensure that they are aware of the storm water drainage in our Zone II and to cooperate on responding to spills or accidents with potential releases.
4. Partner with local businesses to insure the proper handling, and disposal of hazardous wastes.
5. Monitor progress on any ongoing remedial actions conducted for known oil or contamination sites.

Our public water system plans to address the protection recommendations by:

1. Our staff monitors these wells at least 2 times daily.
2. Fences are installed around all our wells and gates are locked.
3. Alarms are installed at all our treatment plants.
4. A radio-based monitoring system that provides us with many facets of information of our system is on line since 2006 and scheduled for an software upgrade this year.
5. Our best source of protection is a set of maps that were funded by two Department of Environmental Protection grants to map the drainage systems of the Mass Pike, Route 12, Route 395, Route 290, and other roads that pass near our well fields. These maps have been used many times by response teams from the Mass D.E.P., the Auburn Fire Department and our department when accidents involving hazardous waste spills occur in these areas. Through the efforts of the Mass. Department of Transportation, the MassDOT will be updating and expanding our mapping of the interstate highways in Auburn to be better prepared to respond to spills of potentially hazardous materials as the result of motor vehicle crashes.

Residents can help protect water sources by:

- *Practicing good septic system maintenance.*
- *Supporting water supply protection initiatives at the next town meeting.*
- *Taking hazardous household chemicals to hazardous materials collection days.*
- *Contacting the Water District or Board of Health to volunteer for monitoring or education outreach to schools.*
- *Limiting pesticide and fertilizer use, etc.*

## Where Can I See The SWAP Report?

The complete SWAP report is available at the Auburn Water Department, the Auburn Board of Health and online at [www.state.ma.us/dep/brp/dws/](http://www.state.ma.us/dep/brp/dws/). For more information, call the Auburn Water District office at 508-832-5336 and speak to Kenneth Smith, Water Superintendent..

### III. SUBSTANCES FOUND IN TAP WATER

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

**Microbial contaminants** -such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

**Inorganic contaminants** -such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.

**Pesticides and herbicides** -which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

**Organic chemical contaminants** -including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

**Radioactive contaminants** -which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Massachusetts Department of Environmental Protection (MassDEP) and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on lowering the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

### IV. IMPORTANT DEFINITIONS

#### **Massachusetts Department of Environmental Protection (MassDEP)**

**Maximum Contaminant Level (MCL)** – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG)** –The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** -- The highest level of a disinfectant (chlorine, chloramines, chlorine dioxide) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG)** -- The level of a drinking water disinfectant (chlorine, chloramines, chlorine dioxide) below which there is no known of expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Secondary Maximum Contaminant Level (SMCL)** – These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

**Massachusetts Office of Research and Standards Guideline (ORSG)** – This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

**Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.

**Action Level (AL)** – The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

**90<sup>th</sup> Percentile** – Out of every 10 homes sampled, 9 were at or below this level.

**Variances and Exemptions** – State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

### **Abbreviations**

MCL = maximum contaminant level  
MCLG = maximum contaminant level goal  
ppm = parts per million, or milligrams per liter (mg/l)  
ppb = parts per billion, or micrograms per liter (ug/l)  
ppt = parts per trillion, or nanograms per liter  
pCi/l = picocuries per liter (a measure of radioactivity)  
NTU = Nephelometric Turbidity Units  
ND = Not Detected  
N/A = Not Applicable  
mrem/year = milliremms per year (a measure of radiation absorbed by the body)

## **V. WATER QUALITY TESTING RESULTS**

The Environmental Protection Agency (EPA) in conjunction with the Department of Environmental Protection (MassDEP) develop standards for which compounds are required to be tested and at what frequency and periodically may add to or make change our testing schedule whenever they see a need for a change to improve water quality and to protect the public health. Some standards are developed to protect the public health while other standards are developed to improve the aesthetic qualities of drinking water and are not health related.

The frequency of testing can range from monthly bacteria testing of our wells and from 15 sites within our distribution system, to less frequent testing for lead and copper which may be on a multi-year cycle providing the results are compliant with established standards. Failure to comply results in an increased frequency schedule.

### **What Does This Data Represent?**

The water quality information presented in the table(s) are from the most recent round of testing done in accordance with the regulations. All data shown was collected during the last calendar year unless otherwise noted in the table(s).

The Massachusetts Department of Environmental Protection (MassDEP) has reduced the monitoring requirements for Synthetic organic Compounds because the source is not at risk of contamination. The last sample collected for these contaminants was taken in January 2016 and was found to meet all applicable EPA and DEP standards.

## LEAD AND COPPER

COPPER – Elevated levels of copper may upset your stomach, but there are no long-term effects unless you suffer from Wilson’s Disease. If this is the case, consult your personal physician.

LEAD – Elevated levels of lead are known to cause learning impairments in young children and may cause delays in mental and physical development. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children.

Lead that is found in drinking water is primarily from piping materials and components associated with the water service lines and plumbing found within the home. Since the mid 1980’s, lead was banned from water service materials including the solder that is used with copper piping. Whereas the Auburn Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components within a customer’s home. We add chemicals to the water to adjust the ph of the water up to be neutral which minimizes the internal corrosion of the copper pipes and lead solder joints.

As the data below indicates, the water provided by the Auburn Water District complies with the established levels for lead and copper.

	Date(s) Collected	90 <sup>TH</sup> percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
<b>Lead (ppb)</b>	5/10/2015 - 8/14/2015	<b>0.002 ppm</b>	<b>0.015 ppm</b>	<b>0.015</b>	<b>60</b>	<b>0</b>	Corrosion of household plumbing systems; Erosion of natural deposits
<b>Copper (ppm)</b>	5/10/2015- 8/14/2015	<b>0.715 ppm</b>	<b>1.3 ppm</b>	<b>1.3</b>	<b>60</b>	<b>0</b>	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

The longer that water stays within the home’s plumbing, the greater opportunity exists for lead and copper to leach out from the piping into the water. You can minimize the potential for copper and/ or lead exposure is by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in the water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>

Due to ongoing compliance with our past rounds of sampling, we have been granted a waiver to reduce our lead and copper sampling to 30 sites and at an annual sampling cycle. Our next round of testing for lead and copper will be done in during the third quarter of 2016. We urge our customers who have been pre-selected to submit their lead and copper samples, to return those samples in a timely manner as we must get all of our required samples to the laboratory for analysis within a prescribed schedule. Failure to do so will result in an Notice of Non-Compliance issued by MassDEP which would result in a denial of our sampling waivers.

## COLIFORMS

### Total Coliforms

Total Coliforms are bacteria that are normally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. If Total Coliforms were found in more samples than allowed this would be a warning of potential problems.

### Fecal Coliforms

Fecal coliforms and e-coli are bacteria whose presence indicates that the water may be contaminated with human or other warm blooded animal waste. Microbes in these wastes may cause short-term effects as diarrhea, cramps, nausea, headaches or other symptoms. They may pose a special risk for infants, young children, and people with compromised immune systems.

	Highest # Positive in a month	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Total Coliform	4	0	0	Y	Naturally present in the environment
Fecal Coliform or E.coli	0	0	0	N	Human and animal fecal waste

In as much as we had several positive Total Coliform Bacteria samples, none of our sampling for Total Coliform testing that was conducted during 2015 calendar year was negative for any E-coli.

The Auburn Water District routinely tests the sources and sites throughout the distribution system each month for coliform bacteria. Coliform are bacteria that are normally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. When a positive total coliform test is received, we immediately contact the Auburn Board of Health and contact MassDEP and follow their recommendations. The testing that we utilize for total coliform also has the feature to immediately indicate if a positive total coliform sample is also positive for E.Coli. During the re-testing procedure, we obtain repeat samples at the sites testing positive for total coliform as well as obtaining samples from two customers who are adjacent to, or as near to the original sampling site as possible.

Repeat samples are taken at all three sampling sites following water quality improvement measures such as increasing the chlorine levels in the water as well as some isolated flushing of the mains in the area. Repeat samples are taken until such time as all the samples (the original site and nearby sites) all site test negative for total coliform.

### REGULATED CONTAMINANTS

Highest Detect	Regulated Contaminant	Date(s) Collected	Range Detected	Highest Average	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
<b>Inorganic Contaminants</b>								
0.28 ppm	Barium (ppm)	5/19/2015	0.0023 - 0.28 ppm	0.0739 ppm	2 ppm	2 ppm	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
0.0029 ppm	Chromium	8/20/2012	0.0029 ppm	0.0071 ppm	0.1 ppm	0.1 ppm	N	Discharge from pulp mills and erosion of natural deposits
0.0042 ppm	Nickel	5/19/2015	0.0025--0.0042 ppm	0.00375	None	None	N	Discharge from industrial processes
2.0 ppm	Nitrate (ppm)	5/19/2015	0.2 - 2.0 ppm	0.968 ppm	10 ppm	10 ppm	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
0.0063 mg/L	Arsenic	2/11/2015 5/19/2015 8/11/2015 11/30/2015	N/D - 0.0063	0.013 mg/L	0.01 mg/L	0.01 Mg/L	Y	Naturally occurring compound from eroding / decomposing natural deposits, runoff from orchards; runoff from glass and electronics production wastes.

Volatile Organic Contaminants								
0.58 ppb	1,1-Dichloroethylene (ppb)	5/13/13	N/D-0.58 ppb	0.295 ppb	7 ppb	7 ppb	N	Discharge from industrial chemical factories
3.3 ppb	Total Haloacetic Acids (HAA5) (ppb)	2/11/2015 8/11/2015	1.1 – 3.3 ppb	2.016 ppb	60	----	N	Byproduct of drinking water disinfection
24 ppb	Total Trihalomethanes (TTHMs) (ppb)	2/11/15 8/11/15	3.4 - 24 ppb	12.016 ppb	80	----	N	Byproduct of drinking water chlorination
Radioactive Contaminants								
5.84	Gross Alpha (pCi/l) (minus uranium)	5/19/15	0.52 - 5.84	3.476	15	0	N	Erosion of natural deposits
0.92	Radium 226 & 228 (pCi/L) (combined values)	5/19/15	0.28 – 0.92	0.586	5	0	N	Erosion of natural deposits
6800	Radon ( pCi/l)	5/13/13	< 100- 6800	3200	---	ORSG 10,000	N	Erosion of Natural deposits

### RADON

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known carcinogen.

Breathing air-containing radon can lead to lung cancer. Drinking water containing radon can lead to lung cancer. Drinking water containing radon may also increase risk of stomach cancer. The Massachusetts guideline for Radon is 10,000 pCi/l. The E.P.A. has proposed a radon MCL of 300 – 4000 pCi/l.

If you are concerned about radon in your home, you can test the air in your home. Testing is inexpensive and easy. Radon removal systems are generally required if your air is 4 picocuries per liter of air or higher. For additional information call the Massachusetts Department of Public Health, Radon Program at 413-586-7525 or call E.P.A's Radon Hotline (800-SOS-RADON)

## UNREGULATED CONTAMINATES

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

### Unregulated Contaminant Monitoring Rule (UMCR)

In the year 2001, the Auburn Water District was chosen by the EPA and the Massachusetts DEP to perform a single round of monitoring for eleven (11) unregulated contaminants in drinking water. This required two tests of all of the wells. One series of tests was completed in January of that year followed by a second series in June. One contaminant that was found was DCPA or Dimono Acid Degregate at a concentration of 1.2 PPB. The possible source of this contaminant was herbicides found in home gardens. Any possible health affect has not been determined at this time.

Unregulated Contaminant	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
<b>Inorganic Contaminants</b>						
Sodium (ppm)	5/19/15	28 -190 ppm	131.2 ppm	----	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process
Sulfate (ppm)	5/5/15	12-34 ppm	22.3 ppm	250	----	Natural sources
<b>Organic Contaminants</b>						
<b>TRIHALOMETHANES</b>						
Bromodichloromethane (ppb)	2/11/15 8/11/15	N/D – 4.1 ppb	2.12 ppb	---	---	By-product of drinking water chlorination
Bromoform (ppb)	2/11/15 8/11/15	01.3 – 5.1 ppb	2.96 ppb	---	---	By-product of drinking water chlorination
Chloroform (ppb)	2/11/15 8/11/15	N/D – 5.7 ppb	2.168 ppb	---	---	By-product of drinking water chlorination
Dibromodichloromethane (ppb)	2/11/15 8/11/15	0.85 – 7.6 ppb	3.775 ppb	---	---	By-product of drinking water chlorination
Methyl tertiary Butyl ether ( mbte )	5/13/13	0.75 ppb	0.75 ppb	---	---	Byproduct of gasoline

		<b>HALOACETIC ACIDS</b>				
<b>Trichloroacetic acid</b>	2/11/15 8/11/15	N/D - 1.4 ppb	0.616 ppm	---	---	BY-product of drinking water chlorination
<b>Dichloroacetic acid</b>	2/11/15 8/11/15	N/D – 0.56 ppb	0.093 ppm	---	---	Byproduct of drinking water chlorination
<b>Monochloroacetic acid</b>	2/11/15 8/11/15	N/D – 1.1 ppb	0.183 PPM	---	---	Byproduct of drinking water chlorination
<b>Monobromoacetic acid</b>	2/11/15 8/11/15	N/D ppb	N/D ppm	---	---	Byproduct of drinking water chlorination
<b>Dibromoacetic acid</b>	2/11/15 8/11/15	N/D – 3.3 ppb	1.116 ppm			Byproduct of drinking water chlorination

Trihalomethanes and Haloacetic Acids are chemical compounds which are byproducts of treatment of disinfecting of the drinking the water by chlorination and the chlorine reacts with naturally occurring organic compounds. The EPA and MassDEP have developed standards for acceptable levels of trihalomethanes and haloacetic acids in drinking water. The benefits of the chlorination of the water and the resulting elimination of bacterial contaminates far outweigh the risk associated with low acceptable levels of these compounds in drinking water. The Auburn Water District periodically samples the water in the Woodland Water District at pre-determined MassDEP locations at a frequency determined by MassDEP. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline, 1-800-426-4791.

## SECONDARY CONTAMINANTS (SMCL'S)

These standards are developed to protect the aesthetic qualities of drinking water and are not Health related The chart below contains the secondary contaminants found in Auburn Water Districts drinking water.

Secondary Contaminant	Date(s) Collected	Result or Range Detected	SMCL	Possible Source
Iron (ppm)	2/11/15 5/19/15 11/30/15	N/D – 0.098 Mg/L	0.3	Naturally occurring, corrosion of cast iron pipes
Manganese	5/5/2015	N/D – 0.04 Mg/L	0.05	Naturally occurring
Alkalinity	5/5/2015	53 - 130 mg/l as CaCo	none	Naturally occurring
Chloride mg/L	5/5/2015	55 -420	250	Runoff from road de-icing, use of inorganic fertilizers, landfill leachates, septic tank effluents, animal feeds, industrial effluents, irrigation drainage, and seawater intrusion in coastal areas
Color (C.U.)	5/5/2015	0	15	Naturally occurring organic material
Copper (ppm)	5/5/2015	0.0059 – 0.16	1	Naturally occurring organic material
Odor (T.O.N.)	5/5/2015	N/D - 1	3 T.O.N	Erosion of natural deposits; Leaching from wood preservatives
PH	5/5/2015	6.3 – 6.8	6.5-8.5	-----
Silver (ppm)	5/5/2015	N/D	0.10	Erosion of natural deposits
Total Dissolved Solids (TDS) (ppm)	5/5/2015	220 - 770	500	Erosion of natural deposits.
Zinc (ppm)	5/5/2015	0.0076 – 0.025	5	Erosion of natural deposits, leaching from plumbing materials
Hardness	5/5/2015	49 - 200		CaCO3 calcium carbonate
Calcium mg/ L	5/5/2015	15 - 120	None	
Magnesium mg/ L	5/5/2015	2.5 – 8.1	none	
Turbidity NTU	5/5/2015	N/D - 0.0.5	none	Soil runoff
Aluminum	5/5/2015	N/D – 0.24	0.2	
Potassium	5/5/2015	38 - 77	none	
Sulfate	5/5/2015	12 - 25	250	Naturally occurring

## MANGANESE

Manganese is a naturally occurring mineral found in rocks, soil and groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but can have undesirable effects on certain sensitive populations at elevated concentrations. The United States Environmental Protection Agency (EPA) and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ug/L (micrograms per liter), or 50 parts per billion, and health advisory levels. In addition, EPA and MassDEP have also established public health advisory levels.

Drinking water may naturally have manganese and, when concentrations are greater than 50 ug/L, the water may be discolored and taste bad. Over a lifetime, EPA recommends that people drink water with manganese levels less than 300 ug/L and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ug/L, primarily due to concerns about possible neurological effects. Children up to 1 year of age should not be given water with manganese concentrations over 300 ug/L, nor should formula for infants be made with that water for longer than 10 days.

See: [http://www.epa.gov/safewater/ccl/pdfs/reg\\_determine1/support\\_cc1\\_magnese\\_dwreport.pdf](http://www.epa.gov/safewater/ccl/pdfs/reg_determine1/support_cc1_magnese_dwreport.pdf)."

## VI. COMPLIANCE WITH DRINKING WATER REGULATIONS

### Does My Drinking Water Meet Current Health Standards?

We are committed to providing you with the best water quality available. However some contaminants that were tested for last year did not meet all applicable health standards regulated by the state and federal government. One is the sodium levels in many of our wells. The source is the salt contaminated runoff from the nearby highways. The Auburn Water District has been working with the Massachusetts Department of Transportation (MassDOT) to work together to reduce the salt which infiltrates the aquifer from which are wells draw your water. Currently, a group from the University of Massachusetts is studying the salt program and to identify majors source locations and to suggest possible solutions to reduce the salt levels.

Our water system and the MassDEP monitor and record the effectiveness of actions taken in response to contaminant violations.

### Health Effects Statements

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight defects in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

### Is My System Exempt from Meeting Certain Requirements?

Synthetic organic compounds are a large diverse group of chemicals of manmade origin. It is composed of pesticides, herbicides, and other industrial materials used in manufacturing and agriculture. The Auburn Water District tested for synthetic organic compounds (SOC'S) in 2016 and no (SOC'S) were present in any of our testing. We will test again when notified by D.E.P.

## VII. SPECIAL NOTICES

### **AUBURN WATER DISTRICT MANDATORY WATER BAN ON NON ESSENTIAL WATER USE FROM MAY 1 THRU SEPTEMBER 30**

As part of the Massachusetts Department of Environmental Protection (MassD.E.P.) Water Management Act (WMA) the permit issued to the Auburn Water District now mandates that the Auburn Water District to impose a seasonal water ban restriction from May 1<sup>st</sup> through September 30<sup>th</sup> for non-essential outdoor water use between the hours of 9 A.M. to 5 P.M.

Non-Essential water uses that are subject to the mandatory water restrictions between 9 A.M to 5 P.M. are as follows:

- Irrigation of lawns via lawn sprinklers connected to hoses or automatic irrigation systems.
- Washing of motor vehicles , except in commercial car washes or as necessary for operator safety
- Washing of exterior building surfaces, parking lots, driveways or sidewalks except as necessary to apply surface treatments such as paint, preservatives, stucco, pavement, or cement.
- The following uses may be allowed when mandatory non-essential use restrictions are in place:
  - Irrigation to establish new lawn and new plantings during the months of May and September.
  - Irrigation of public parks and recreational fields by means of automatic sprinklers outside the hours of 9 A.M. to 5 P.M.
  - Irrigation of lawns, gardens, flowers and ornamental plants by means of a hand-held hose.

Water uses NOT subject to mandatory restrictions are those required

- For health or safety reasons
- For the production of food and fiber
- For the maintenance of livestock

To meet the core functions of a business ( for example, irrigation by golf courses as necessary to maintain tees, greens, and limited fairway watering or irrigation by plant nurseries as necessary to maintain stock )

Since the average residential average water use per person per day for the preceding year does not exceeds the threshold of 65 gallons per person per day, watering between the hours of 5 P.M. and 9 A.M. is not limited but in the interest of water conservation, should be limited to only water 2 – 3 days a week. Over frequent watering significantly affects the ability of the plants to tolerate even the slightest of dry weather conditions.

These restrictions are not that difficult or imposing to follow. It is hoped that these restrictions will promote smart water use and to lessen the loss of valuable water that is evaporated from irrigation systems as well as reducing the peak water demands that water suppliers face during warmer, dry weather periods. Watering at night improves the effectiveness of the watering as well as reducing the amount of water needed for plant growth. Established lawns need no more than a one inch total depth application of water per week. Watering more than that results in shallow root systems and with decreased tolerance to drier weather conditions and does not make for a better or healthier lawn.

The Auburn Water District would appreciate your help in complying these restrictions between the months of May and September. If everybody co-operates, we and other towns in the state may not have to institute future stricter mandatory conservation requirements. These restrictions were instituted by the Department of Environmental Protection to try and insure that the water suppliers within the state to have sustainable water supply for years to come. This requirement is not just our commitment to have sufficient water but it should be everybody's commitment to insure that we have sufficient water for years to come. Water is a very precious resource and if it is not managed properly it can be lost and not easily returned if ever.

**Failure to comply with this non-essential use restriction will result in more stringent, mandatory water use restrictions which may include severely restricted or prohibited irrigation of lawns and other outdoor water uses.**

We all should make a commitment to do our little share of conservation and statewide it will make a large improvement to save our water supply for our children and their children. The Auburn Water District wells fall within the Blackstone River Basin. The aquifer within this basin has been increasingly stressed. Failure to curtail our water needs will result in the basin becoming increasingly stressed resulting in future problems and resulting restrictions. With your co-operation we can work to prevent this and to insure that we have sufficient water for our present and future needs. Thank you for your help in this matter.

## IMPORTANT UPDATE ABOUT YOUR DRINKING WATER

To all customers of the AUBURN WATER DISTRICT located in Auburn, Massachusetts

*This is an important notice - please translate it for anyone who does not understand English.*

This notice is an update to our customers regarding noncompliance with the drinking water standard for **arsenic**.

The two wells that were removed from service on May 15, 2013 for elevated levels of arsenic, as of this time are still off line and will remain off line until such time as MassDEP grants permission to put them back on line.

The construction of a new multi-million dollar water filter system at the West Street Water Treatment Plant is nearing completion and is expected to be ready for testing sometime in June 2016 or soon thereafter. As indicated, the wells and water treatment plant will remain off line until such time as MassDEP has inspected and approved the new filter treatment system to be placed back on line. As previous testing throughout the distribution system, no sample exceeded the allowable level for arsenic due to the extensive blending of water from multiple sources.

For more information please contact Kenneth Smith, Superintendent, at 508-832-5336 or at the AWD office located at 75 Church St., Auburn, MA. You may also refer to our website for additional information at <http://www.auburnwater.com/index.htm> *Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses).*

## VII. EDUCATIONAL INFORMATION

### Do I Need To Be Concerned About Certain Contaminants Detected In My Water?

**Lead:** Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at 800.426.4791.

**Nitrate:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months old. High nitrate levels in drinking water can cause Blue Baby Syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

**Total Trihalomethanes:** Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer.

**Sodium-sensitive individuals,** such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the sodium levels where exposures are being carefully controlled. Since we have elevated levels of sodium in our wells we report these values as a guide for anyone that may be on a low sodium diet for health reasons.

The sodium in our wells is caused by runoff of de-icing materials from the roads that traverse near our well sites. This is a safety issue and as such we have to balance the use of salt with the public safety of our roads. The Auburn Water District is aggressively working MassDEP and MassDOT to develop alternatives to reduce the sodium levels in our wells in the area of the highways within our watershed.

Our sodium levels in wells from which supply water to customers are at values vary from a high of 190ppm to a low of 28 ppm. The water is pumped from our 10 wells to our storage tanks and the water is combined during this process. There is probably no water at 190 ppm or none at 28 ppm, in the distribution system, but rather a value somewhere in between these figures. If you average all these figures together the result is 110 ppm. Although there is no way to tell how well the water is mixed during passage from pump to storage tank to eventual users, the figure of 131 ppm may be a fair figure. If you use these figures you get about 27mg.of sodium in an 8 ounce glass of water

In evaluating the amount of salt in the water verses the amount of salt in some foods, be aware of the salt content on the labels. Some examples of the amount of sodium in foods are:

- |                                    |                  |
|------------------------------------|------------------|
| 1.Campbells Cream of Mushroom Soup | 790mg of sodium  |
| 2. V-8 juice                       | 880 mg of sodium |
| 3. Hot dog (Ballpark Frank)        | 620 mg of sodium |

There are many more examples of hidden sodium in your diet that contain more sodium than your water contains. If you are on low sodium or no sodium diets, you should consult your physician regarding the sodium in your drinking water

*PLEASE BE AWARE THAT BOTTLED WATER WHICH IS NOT SUBJECT TO THE DRINKING WATER STANDARDS AND REGULATIONS, MAY ALSO CONTAIN SODIUM, AND IN SOME CASES THIS INFORMATION MAY NOT BE REQUIRED TO BE ON THE LABEL.*

## **VIII. ADDITIONAL INFORMATON**

### **Q: HOW TO CONTACT THE AUBURN WATER DISTRICT?**

A: The District office is open from 8:00 a.m. to 4:00 p.m. Monday thru Friday. We are located at 75 Church St., Auburn MA 01501 at the corner of Southbridge and Church Streets. Our office telephone number is (508) 832-5336 and our fax number is (508) 832-5338. Please stop in, or call and our staff would be happy to answer any questions you may have regarding the operation of the Water District.

***FOR AFTER HOURS EMERGENCIES, PLEASE CALL (508) 832-5336 FOR THE TELEPHONE NUMBER OF THE ON-CALL SERVICE TECHNICIAN***

### **Q. HOW WOULD I KNOW IF THERE WAS A PROBLEM WITH THE DISTRICTS WATER SUPPLY?**

R.

A. The Auburn Water District and the local Department of Environmental Protection keep a close watch on your water system. If a problem were found, all affected water users would be made aware of the problem via radio, local cable television, local newspapers, telephone alerting systems, the District and the Auburn Board of Health.

### **Q. MY WATER IS OCCASIONALLY DISCOLORED. IS IT SAFE TO DRINK?**

A. You can safely drink, cook, and bathe in the water. Yellow color is caused by small particles of iron in the water. When there is a distruption in the system such as a water main break or when hydrants are flushed or used for a fire, the heavy flows of water can cause the water to flow in different directions and speeds than that are normal conditions. This disruption can cause small particles of iron (rust) to become dislodged and to cause the water to become discolored. Try running the water for a while and wait until the water runs clear before doing laundry.

**Q. MY WATER IS SOMETIMES CLOUDY, BUT IT CLEARS UP QUICKLY. CAN I DRINK IT?**

A. This cloudiness is caused by air being trapped in the water. The water is completely safe to drink and will clear up very quickly.

**Q: I HAVE HEARD ABOUT CHLORINATION BY-PRODUCTS CAUSED BY TREATMENT WITH CHLORINE TO KILL BACTERIA IN DRINKING WATER. IS IT SAFE?**

A. Due to treatment with chlorine there are small residuals of trihalomethanes found in drinking water. As long as these residuals do not exceed the MCL for these compounds the water is completely safe to drink. Our system is periodically tested for these compounds and are all below the MCL

**Q. SOMETIMES, ESPECIALLY DURING THE SUMMER, MY WATER MAY SMELL FUNNY. WHAT IS THE CAUSE OF THIS?**

A. Ground water as the source of our water, is usually not affected the same as surface water with respect to algae and other problems. However, ground water is susceptible to concentrations of hydrogen sulfide, especially during periods of heavy prolonged water use, These tastes and smells are usually not signs of harmful water but please let your water supplier know if you do encounter a strange smell or taste in your water.

**Q. WHAT IS THE BOTTOM LINE ON WATER QUALITY IN THE AUBURN WATER DISTRICT?**

A. The Auburn Water District performed over 800 tests concerning water quality last year. Most of our testing found no contaminants over the MCL's. That does not mean that the water does not have trace amounts of some contaminants but it does meet all of the current E.P.A. and MassDEP Drinking Water Standards and is safe to drink.

## **IX. AUBURN WATER DISTRICT FACTS**

We are one of two water districts in town. The other District, which purchases water from the City of Worcester, is the Elm Hill Water District. The Woodland Water District, which has been incorporated in the Auburn Water District, and is supplied with water from the City of Worcester.

We were chartered in 1947 by chapter 585 of the Commonwealth of Massachusetts. We, being a separate water district, are independent from the Town of Auburn. And as such, we do not receive any tax dollars to operate our system. All of our operating funds is generated solely from water fees.

We service about 80 % of the town. We have approximately 4800 service connections which provides water service to approximately 11,000 persons.

We process about a million gallons of water through our treatment plants daily. Our daily consumption during the winter months is about 1.0 million gallons a day. During the summer months is 1.8 million gallons a day. Our maximum safe yield is about 2.4 millions gallons a day.

We have about 70 miles of pipe in our distribution system varying in size from 2 to 16 inches.

We have 3.5 millions gallons of water storage, two and one half million gallons are stored in two tanks at the Prospect Street site with one million gallons being stored in the Bryn Mawr Ave Tank.

The District is made up of twelve gravel packed wells. We have three treatment plants for the removal of substances such as iron, manganese and radon from our water.

We have 424 hydrants in town and another 82 private hydrants that we service. The hydrants located on the public ways are maintained at no cost to the Town.

The District maintains a cross-connection control program to protect our water from cross-connection contamination. All backflow devices shall be tested annually, with some types requiring semi-annual testing.

We also own and maintain 5 dams in the Town of Auburn, which include three dams on Dark Brook Reservoir and one each on Upper and Lower Stoneville Reservoirs respectfully. Even though we do not use these reservoirs for our drinking water they are a very important recharge area for all our wells

The District works very hard to try to educate people on hazardous waste issues. We continue to co-sponsor various hazardous waste pickups in Town in conjunction with the Auburn Board of Health. We work with the Department of Environmental Protection and the Auburn Fire Department to respond to any hazardous waste spills that may affect our water supplies. We monitor existing hazardous waste releases to ensure remedial actions are completed.

We are on call 24 hrs a day 365 days a year. We do the majority of our service connections and repair work. We are a public water supplier and are subject to E.P.A. and MassDEP drinking water regulations. The Commonwealth of Massachusetts licenses all our staff.

## **XI. SUMMARY**

The Auburn Water District has prepared this report as required under the Safe Drinking Water Act and in accordance with the Environmental Protection Agency and the Massachusetts Department of Environmental Protection.

We hope this report has been of value to the customers of the Auburn Water District. As always it is the mission of the Auburn Water District to supply you with the best and safest drinking water possible.

If you have any questions regarding this Water Quality / Consumer Confidence Report, please call the Auburn Water District Office and ask to talk to Ken Smith at 508-832-5336.

PLEASE VISIT OUR WEBSITE AT [WWW.AUBURNWATER.COM](http://WWW.AUBURNWATER.COM)

# WATER RATES AND FEES

As of June 2016  
(AS SET BY THE BOARD OF WATER COMMISSIONERS)

**Water Rates Based on Cubic Feet (CF) Used.** (One Cubic Foot (CF) of water equals 7.48 gallons)

Minimum Charge for up to 600 CF per quarter	\$40.00
Charge for 601 CF to 4999 CF per quarter	\$40.00 + \$4.32 per each 100 CF over 601 CF
Charge for 5000 CF per quarter	\$230.08
Charge for over 5000 CF per quarter	\$230.08 +\$5.81 per each 100 CF over 5000 CF

**Fire Sprinkler Charges**

Minimum Charge (Up to 100 Heads) per quarter	\$32.50
Additional Charge per head per quarter	\$.15 each head

**Fire Hydrant Charges** (Private)

Charge per hydrant per quarter	\$ 25.00 per hydrant
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**Backflow Device Testing**

\$ 75.00 each per test

**Service Rates**

Service Rate from 7:30 a.m. to 4:00 p.m.	\$ 45.00 / man / hour
Service Rate after 4 p.m., & weekends / holidays	\$ 67.50 / man / hour
Backhoe Rate (w/ operator) 7:30 a.m. to 4:00 p.m	\$ 65.00 / hour
Backhoe Rate (w/ operator) after 4:00 p.m & weekends / holidays	\$ 85.00 / hour

## ENTRANCE FEES

**DOMESTIC SERVICE**

**FIRE SERVICE**

<u>SIZE</u>	<u>COST</u>	<u>SIZE</u>	<u>COST</u>
3/4" - 1"	\$ 800.00	4 "	\$ 3,500.00
1 1/2 "	\$1500.00	6 "	\$ 4,500.00
2 "	\$2,000.00	8 "	\$ 6,500.00
4"	\$3,500.00	10 "	\$ 8,500.00

**Notes:** All domestic services over 1" require backflow protection  
All Fire Protection Services Systems, require backflow protection  
All underground irrigation systems require backflow protection.