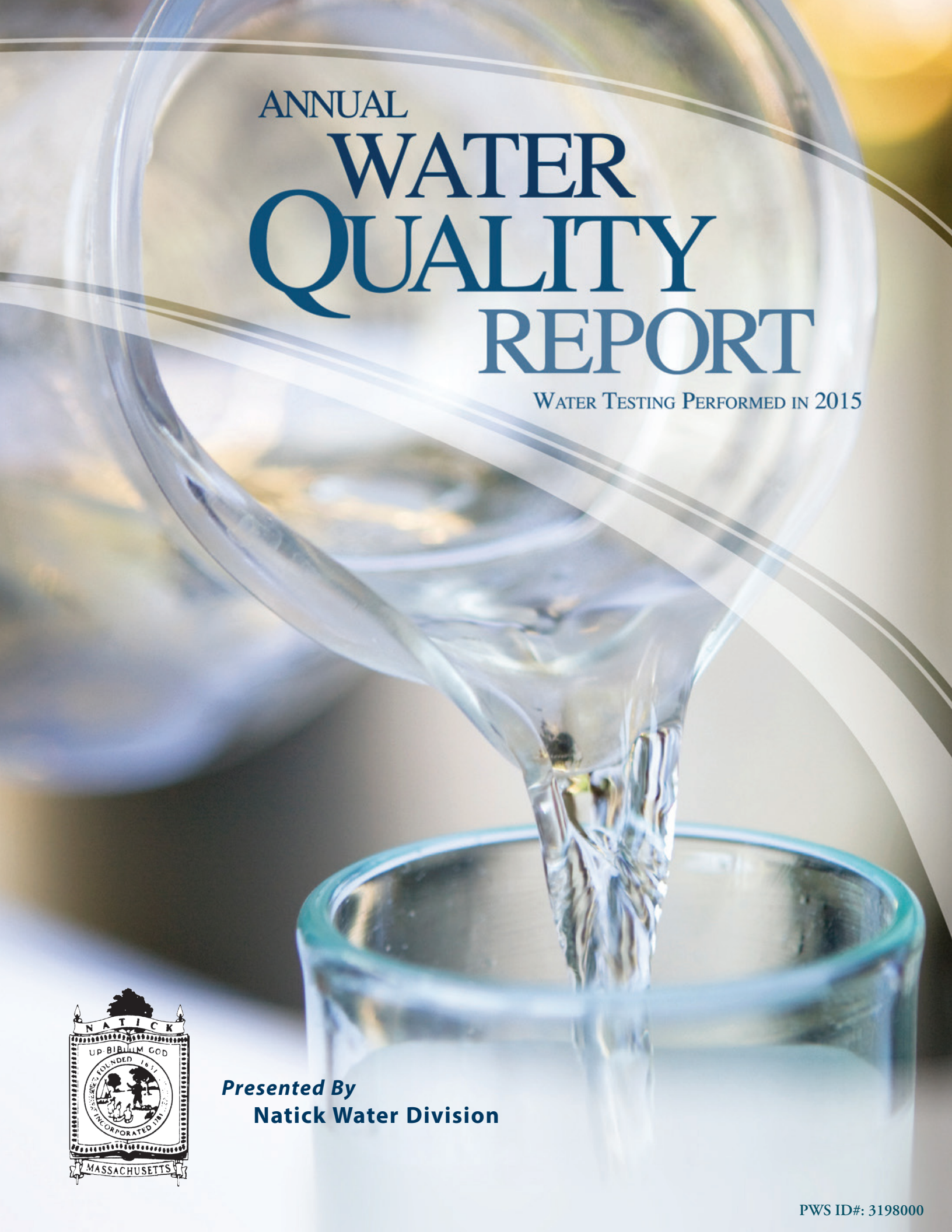
ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2015



Presented By

Natick Water Division

PWS ID#: 3198000

Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to your homes and businesses. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or http://water.epa.gov/drink/hotline.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the Massachusetts Department of Environmental Protection (MassDEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations limiting 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. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The 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. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or 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 which may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

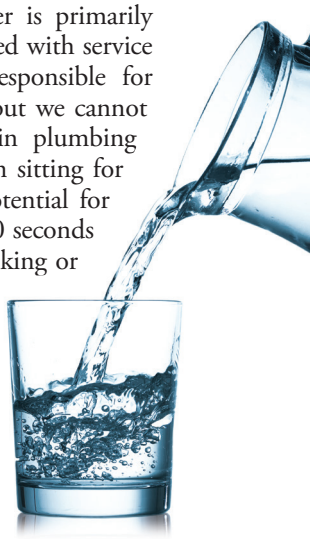
Where Does My Water Come From?

The Town of Natick obtains its water from ten groundwater wells at five locations. Eight of the sources, located in Natick, are known as the Springvale, Evergreen, Pine Oaks, and Morses Pond wells. The Elm Bank wells are located in Dover, Massachusetts. The Springvale, Evergreen, and Elm Bank wells are the primary sources. The Morses Pond and Pine Oaks wells serve as backup wells and are used to supplement water supplies during high demand conditions. The Springvale Water Treatment Facility, located off of Route 9, provides treatment for the Springvale and Evergreen wells. The water distribution system also includes approximately 196 miles of water mains and two water storage facilities that have a combined capacity of 9 million gallons.

To find more information about drinking water on the Internet, go to the U.S. EPA's Web site at http://water.epa.gov/drink/info/.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your 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 www.epa.gov/lead.



Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Raw Water Sampling

On June 2, 2015, we were informed that one of our routine bacteria samples of raw water collected from the Morses Pond Well tested positive for E. coli. As required by the Ground Water Rule, we completed public notification to our customers within 24 hrs of learning of this positive sample. Five follow-up raw water samples were taken from Morses Pond Well on June 4, 2015, and all were E. coli negative. That first sample was from the raw water before treatment. No distribution samples tested positive. Modifications are being made to this well to help prevent future issues.

Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Anthony Comeau, Water & Sewer Supervisor, at (508) 647-6557.

Source Water Assessment Program

The Department of Environmental Protection (MassDEP) has prepared a Source Water Assessment Program (SWAP) report for the water supply sources serving this water system. The SWAP report notes the key issues of activities in Zone 1: hazardous material storage and use, residential land use, transportation corridors, oil or hazardous material contamination sites, and wellhead protection planning in the water supply protection area for all sources. The report commends the water system on our existing source protection measures.

What Can Be Done to Improve Protection?

The SWAP report recommends that the town:

1. Develop and implement a wellhead protection plan,
2. Expand on the scope of the emergency response teams to ensure that they are aware of the stormwater drainage in Zone II.

Natick Water & Sewer Division plans to address the protection recommendations by:

1. Continuing to develop and implement a wellhead protection plan,
2. Continuing to locate and map the stormwater drainage systems within Zone II,
3. Implementing the best management practices identified in the Town of Natick Phase II Stormwater Management Plan.

Residents can help protect sources by:

1. Practicing good septic system maintenance,
2. Supporting water supply protection initiatives at future town meetings,
3. Taking hazardous household chemicals to hazardous materials collection centers on specified days,
4. Limiting pesticide and fertilizer use, etc.,
5. Taking waste motor oil to the Natick Recycling Center.

What Is My System's Ranking?

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

Where Can I See the SWAP Report?

The complete SWAP report is available at the Town of Natick Department of Public Works and online at http://www.mass.gov/eea/docs/dep/water/drinking/swap/nero/3198000.pdf. For more information, call the Natick Water & Sewer Division Supervisor Anthony Comeau, at (508) 647-6557.

What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test each backflow preventer to make sure that it is providing maximum protection.

For more information on backflow prevention, call the Safe Drinking Water Hotline at (800) 426-4791.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UMCR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of unregulated contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact the EPA UMCR Coordinator at UMCR_Sampling_Coordinator@epa.gov or call the UMCR Reference Line at (800) 949-1581 for more information on this program.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2013	10	NA	0.25	ND–1	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2013	2	2	0.026	0.020–0.038	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2015	[4]	[4]	0.49	0.08–0.99	No	Water additive used to control microbes
Fecal Indicators [*E. coli*, enterococci or coliphage] Ground Water Rule (# positive samples)	2015	TT	NA	1	NA	No	Human and animal fecal waste
Fluoride (ppm)	2015	4	4	0.83	ND–1.20	No	Water additive that promotes strong teeth
Haloacetic Acids [HAAs] (ppb)	2015	60	NA	8.50	ND–11.80	No	By-product of drinking water disinfection
Nitrate (ppm)	2015	10	10	1.30	0.60–1.90	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2013	2	NA	0.12	0.09–0.16	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
Selenium (ppb)	2013	50	50	0.5	ND–2	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes] (ppb)	2015	80	NA	41.18	0.02–54.80	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2014	1.3	1.3	0.19	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2014	15	0	0	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2015	250	NA	175	140–200	No	Runoff/leaching from natural deposits
Sulfate (ppm)	2015	250	NA	17.25	15–21	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES [2]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Hardness[1] (ppm)	2015	132.88	102–152	Naturally occurring
Sodium (ppm)	2013	65.25	41–82	Natural sources; Runoff from use of salt on roadways

UNREGULATED CONTAMINANT MONITORING REGULATION PART 3 (UCMR3) [2]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
1,4-Dioxane (ppb)	2013	0.013	ND–0.13
Chlorate (ppb)	2013	62.5	ND–380
Chromium 6+ (ppb)	2013	0.068	ND–0.26
Chromium, Total (ppb)	2013	0.171	ND–2.0
Strontium, Total (ppb)	2013	170	140–210
Vanadium, Total (ppb)	2013	0.115	ND–0.34

[1] Use this information to adjust your appliances (measured as CaCO3): <75 ppm - soft; 75 - 100 ppm - moderately hard; 150 - 300 ppm - hard; >300 ppm - very hard.

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

Definitions

90th Percentile: Out of every 10 homes sampled, 9 were at or below this level.

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

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

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water for the secondary contaminants. SMCLs are established to regulate the aesthetics of drinking water like appearance, taste and odor.