2015 WATER QUALITY REPORT
For
SALISBURY WATER SUPPLY
Salisbury, Massachusetts
DEP PWSID # MA3259000

This report is a snapshot of drinking water quality that we provided last 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

Address: *Pennichuck Water, 25 Manchester St., Merrimack, NH 03054*

Contact Person: *Gary Tetley*

Telephone #: *603-913-2378* Fax #: *603-913-2379*

Internet Address: *gary.tetley@pennichuck.com*

Water System Improvements
Our water system is routinely inspected by the Department of Environmental Protection (DEP). 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.

Opportunities for Public Participation
If you would like to participate in discussions regarding your water quality, you may attend Selectman meetings held during the second and fourth Mondays of the month. The exact date and time can be found on Salisbury's public TV broadcasts and on the Town's Web Site http://www.salisburyma.gov/index.html.

II. YOUR DRINKING WATER SOURCE

Where Does My Drinking Water Come From?
Your water is provided by the following sources listed below:

Source Name	DEP Source ID#	Source Type	Location of Source
Well # 5	3259000-04G	Groundwater	Lena May Way
Well # 6	3259000-05G	Groundwater	Lena May Way
Well # 7	3259000-06G	Groundwater	Black Snake Road

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 add the following chemicals:

Chlorine: A disinfectant to protect you against microbial contaminants.
Potassium Hydroxide: A pH adjustment chemical used to increase the pH of water to make it less corrosive.
Phosphates: A sequestering agent used to sequester minor amount of iron and manganese improving the aesthetic quality of the water. In addition, phosphates also aid in corrosion protection.

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

Our water system makes every effort to provide you with safe and pure drinking water. The water quality of our system is constantly monitored by us and the DEP to determine if any treatment may be 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.

What is My System's Ranking?
A susceptibility ranking of high, for Wells 5 and 6, and moderate, for Well 7, was assigned to this system using the information collected during the assessment by the DEP.

Residents can help protect sources by:

- *Practicing good septic system maintenance*
- *Taking hazardous household chemicals to hazardous materials collection days*
- *Limiting pesticide and fertilizer use, etc.*

Where Can I See The SWAP Report?
The complete SWAP report is available at *Pennichuck Water* and online at *http://www.mass.gov/dep/water/drinking/neroreps.htm*. For more information, call *Gary Tetley at 603-913-2378.*

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 Department of Environmental Protection (DEP) 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

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.

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^{th} Percentile – Out of every 10 homes sampled, 9 were at or below this level.

ppm = parts per million, or milligrams per liter (mg/l)
ppb = parts per billion, or micrograms per liter (ug/l)
pCi/L = picocuries per liter (a measure of radioactivity)
nd = Not Detected
n/a = Not Applicable
RAA = Running Annual Average
T.O.N. = Threshold Odor Number

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 services as an indicator of the potential need for further action.

V. WATER QUALITY TESTING RESULTS

What Does This Data Represent?
The water quality information presented in the tables is from the most recent round of testing done in accordance with the regulations. All data shown was collected during the last calendar year (2014) unless otherwise noted in the tables.

	Date(s) Collected	90^{TH} percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	7/30/14-8/11/14	4	15	0	20	0	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper (ppm)	7/30/14-8/11/14	0.909	1.3	1.3	20	1	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Regulated Contaminant	Date(s) Collected	Highest Result or Highest Running Average Detected	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
Inorganic Contaminants							
Arsenic (ppb)	7/22/14	1.9	nd – 1.9	10	-----		Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	7/22/14	0.0347	nd to 0.0347	2	2	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	7/22/14	1.1	nd – 1.1	100	100		Discharge from pulp mills; erosion of natural deposits
Nitrate (ppm)	5/27/14	1.34	1.28 – 1.34	10	10	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate (ppb)	7/22/14	0.203	0.167 – 0.203	2	N/A	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Disinfectants and Disinfection By-Products							
Chlorine (ppm)	2014	0.38	0.01 – 1.52	4	4	N	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	2/4/14 5/5/14 7/22/14 8/6/14 11/15/14	9.6	nd - 25	60	-----	N	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppb)	2/4/14 5/5/14 7/22/14 8/6/14 11/15/14	24.5	Nd - 47	80	-----	N	Byproduct of drinking water chlorination
Radioactive Contaminants							
Radium 226 & 228 (pCi/L) (combined values)	7/22/14	1.47	0.192 – 1.47	5	0	N	Erosion of natural deposits

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	Date(s) Collected	Result or Range Detected	SMCL	ORSG	Possible Source
Inorganic Contaminants					
Hardness (ppm as $CaCO_3$)	2/19/14	72.4 - 131	----	----	Natural sources
Sodium (ppm)	2014	27.8 - 149	----	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process
Sulfate (ppm)	2/19/14	18 - 29	250	----	Natural sources
Radiological Contaminants					
Radon (pCi/L)	4/30/13	1,000 – 1,110	----	10,000	Natural sources

Secondary Contaminant	Date(s) Collected	Result or Range Detected	SMCL	Possible Source
Iron (ppb)	**2/19/14**	280 - 520	300	Naturally occurring, corrosion of cast iron pipes
Manganese (ppb)	**2/19/14**	76.5 - 273	50*	Erosion of natural deposits
Chloride (ppm)	**2/19/14**	50 - 156	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
Copper (ppm)	**2/19/14**	0.082 – 0.127	1	Naturally occurring organic material
pH	**2/19/14**	6.88 – 7.01	6.5-8.5	-----
Total Dissolved Solids (TDS) (ppm)	**2/19/14**	275 - 413	500	Erosion of natural deposits.
Zinc (ppm)	**2/19/14**	0.0396 - 0.279	5	Erosion of natural deposits, leaching from plumbing materials

* The EPA has established a lifetime health advisory (HA) value of 300 ppb for manganese to protect against concerns of potential neurological effects, and a one-day and 10-day HA of 1,000 ppb for acute exposure.

VI. COMPLIANCE WITH DRINKING WATER REGULATIONS

Drinking Water Violations

We failed to report sampling results in a timely manner, which is a monitoring and reporting violation. The contaminants for which monitoring was not reported on time are listed in the table below, with the period during which the samples should have been taken, the number of samples required, the number taken, and when the required sampling was conducted.

Contaminant	Monitoring Period	Number of Samples Required	Number of Samples Taken	Date Sampling Conducted
Gross Alpha Particle Activity	7/1/14 – 9/30/14	1	1	9/29/14
Manganese	1/1/14 – 3/31/14	1	1	3/4/14

We have made changes to the way we report results to the State in order to avoid sample results arriving late.

VII. EDUCATIONAL INFORMATON

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

Lead

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. Haystack Estates is responsible for providing high quality drinking water, but 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 http://www.epa.gov/safewater/lead.

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 human 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 cause increase risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/l) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call the

Massachusetts Department of Public Health, Radon Program at 413-586-7525 or call EPA's Radon Hotline (800-SOS-RADON).

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.