



**TOWN OF MERRIMAC
DIRECTOR OF PUBLIC WORKS**

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June 10, 2014

Re: NEWS RELEASE - MERRIMAC WATER DEPT.

Please publish the following notice for the Merrimac Water Dept.

Merrimac Water Department has released its Water Quality Report for the year 2013. The report was mailed to each customer with their June 1st electric bill. Copies of the report will also be made available at the Water Department office.

The report is an annual publication in response to customers' need to know more about their drinking water. It contains information about where our drinking water comes from, what contaminants, if any, were detected during the last calendar year and any related health effects. For more information, contact the MWD office at 978-346-8311.

Merrimac Water Department
Gary Tuck, Department Head

Annual Drinking Water Quality Report
For
Merrimac Water Department
Merrimac, Massachusetts
MASSDEP PWSID #3180000

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: 10 West Main St.
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Water System Improvements

Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP). MassDEP 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. West Main St. water storage tank underwent a complete exterior rehabilitation. We also continued the engineering phases on Water Main replacement for the Town square and West Main St. which will be included in the Town Square Project

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: Public Power Week/ First week in October

2. YOUR DRINKING WATER SOURCE

Where Does My Drinking Water Come From?

Your water is provided by the following sources listed below:

Source Name	MassDEP Source ID#	Source Type	Location of Source
East Main St.	3180000-04G	Groundwater	Wallace Way
Bear Hill	3180000-02G	Groundwater	Sargent's Pit

Is My Water Treated?

- We add potassium Hydroxide for PH Adjustment**
- We add potassium Permanganate as an oxidizer to remove iron and manganese**
- We add Ortho Phosphate for corrosion control**
- We add Sodium Hypochlorite for disinfection**
- We filter the water at Wallace way to remove iron and manganese**

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 MassDEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required.

How Are These Sources Protected?

Our water sources are restricted by gate access to authorized personnel only. The Mass 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 moderate 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 water department, board of health, or other location] and online at <http://www.mass.gov/dep/water/drinking/sourcewa.htm#reports>. For more information, call the Merrimac Water Department at 978-346-8311.

3. 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 (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).

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. The Merrimac Water department 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>.

4. 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 or 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.

90th 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)
- 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 = millirem per year (a measure of radiation absorbed by the body)

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.

5 WATER QUALITY TESTING RESULTS

What Does This Data Represent?

The water quality information presented in the table(s) is 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).

Bacteria testing:

The Merrimac Water department collected bacteria samples at 7 sites each month in 2012. These sites are representative of the distribution system and pre-approved by the DEP. We are also required to sample both pumping stations

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

Regulated Contaminant	Date(s) Collected	Highest Detector	Range Detected	MCL Or MDRL	MCLG Or MRDLG	Violation Y/N	Possible Source of Contamination
Inorganic Contaminants							

Nitrate (ppm)	5/09/2013	0.40	0.29 to 0.40	10	10	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate	8/07/2013	.703	0.408 to 0.703	2	N/A	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Volatile Organic Contaminants							
Benzene (ppb)	8/07/2013	ND	ND	5	0	N	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	8/07/2013	ND	ND	5	0	N	Discharge from chemical plants and other industrial activities
o-Dichlorobenzene (ppb)	8/07/2013	ND	ND	600	600	N	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	8/07/2013	ND	ND	5	5	N	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	8/07/2013	ND	ND	5	0	N	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	8/07/2013	ND	ND	7	7	N	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	8/07/2013	ND	ND	70	70	N	Breakdown product of trichloroethylene and tetrachloroethylene
trans-1,2-Dichloroethylene (ppb)	8/07/2013	ND	ND	100	100	N	Discharge from industrial chemical factories
Dichloromethane (ppb)	8/07/2013	ND	ND	5	0	N	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)	8/07/2013	ND	ND	5	0	N	Discharge from industrial chemical factories
Ethylbenzene (ppb)	8/07/2013	ND	ND	700	700	N	Leaks and spills from gasoline and petroleum storage tanks
Styrene (ppb)	8/07/2013	ND	ND	100	100	N	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (PCE) (ppb)	8/07/2013	ND	ND	5	0	N	Discharge from factories and dry cleaners; residual of vinyl-lined water mains
1,2,4-Trichlorobenzene (ppb)	8/07/2013	ND	ND	70	70	N	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	8/07/2013	ND	ND	200	200	N	Discharge from use in septic system cleaners
1,1,2-Trichloroethane (ppb)	8/07/2013	ND	ND	5	3	N	Discharge from industrial chemical factories
Trichloroethylene (TCE) (ppb)	8/07/2013	ND	ND	5	0	N	Discharge from metal degreasing sites and other factories

Toluene (ppm)	8/07/2013	ND	ND	1	1	N	Leaks and spills from gasoline and petroleum storage tanks; discharge from petroleum factories
Disinfectants and Disinfection By-Products							
Total Trihalomethanes (TTHMs) (ppb)	8/07/2013	31.6	19.8-31.6	80	----		Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	8/07/2013	15	110-15	60	----		Byproduct of drinking water disinfection

Synthetic Organic Contaminants							
2,4-D (ppb)	5/13/2013a and 8/07/2013	ND	ND	70	70		Runoff from herbicide used on row crops
2,4,5-TP (Silvex) (ppb)	5/13/2013 and 8/07/2013	ND	ND	50	50		Residue of banned herbicide
Alachlor (ppb)	5/12/2013 and 8/07/2013	ND	ND	2	0		Runoff from herbicide used on row crops
Atrazine (ppb)	5/13/2013 and 8/07/2013	ND	ND	3	3		Runoff from herbicide used on row crops

Benzo(a)pyrene (ppt)	5/13/2013 and 8/07/2013	ND	ND	200	0		Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	5/13/2013 and 8/07/2013	ND	ND	40	40		Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	5/13/2013 and 8/07/2013	ND	ND	2	0		Residue of banned termiticide
Dalapon (ppb)	5/13/2013 and 8/07/2013	ND	ND	200	200		Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	5/13/2013 and 8/07/2013	ND	ND	400	400		Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	5/13/2013 and 8/07/2013	ND	ND	6	0		Discharge from rubber and chemical factories
Dibromochloropropane (DBCP) (ppt)	5/13/2013 and 8/07/2013	ND	ND	200	0		Runoff/leaching from soil fumigant used on soybeans, cotton, and orchards
Dinoseb (ppb)	5/13/2013 and 8/07/2013	ND	ND	7	7		Runoff from herbicide used on soybeans and vegetables
Endrin (ppb)	5/13/2013 and 8/07/2013	ND	ND	2	2		Residue of banned insecticide
Ethylene dibromide (EDB) (ppt)	5/13/2013 and 8/07/2013	ND	ND	20	0		Residue of leaded gasoline or runoff from soil fumigant used on tobacco or strawberries

Heptachlor (ppt)	5/13/2013 and 8/07/2013	ND	ND	400	0	Residue of banned pesticide
Heptachlor epoxide (ppt)	5/13/2013 and 8/07/2013	ND	ND	200	0	Breakdown of heptachlor
Hexachlorobenzene (ppb)	5/13/2013 and 8/07/2013	ND	ND	1	0	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	45/13/2013 and 8/07/2013	ND	ND	50	50	Discharge from chemical factories
Lindane (ppt)	5/13/2013 and 8/07/2013	ND	ND	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	5/13/2013 and 8/07/2013	ND	ND	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl (Vydate) (ppb)	5/13/2013 and 8/07/2013	ND	ND	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
Polychlorinated biphenyls (PCBs) (ppt)	5/13/2013 and 8/07/2013	ND	ND	500	0	Runoff from landfills; discharge of waste chemicals; residue of banned use in electrical transformers
Pentachlorophenol (ppb)	5/13/2013 and 8/07/2013	ND	ND	1	0	Discharge from wood preserving factories
Picloram (ppb)	5/13/2013 and 8/07/2013	ND	ND	500	500	Herbicide runoff
Simazine (ppb)	5/13/2013 and 8/07/2013	ND	ND	4	4	Herbicide runoff
Toxaphene (ppb)	5/13/2013 and 8/07/2013	ND	ND	3	0	Runoff/leaching from insecticide used on cotton and cattle

6. COMPLIANCE WITH DRINKING WATER REGS

Does My Drinking Water Meet Current Health Standards?

We are committed to providing you with the best water quality available. We are proud to report that last year your drinking water met all applicable health standards regulated by the state and federal government.

Drinking Water Violations -None

7. ADDITIONAL INFORMATION

Cross Connection Education:

A cross connection is a connection between a water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of fire hydrant use in town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow-prevention device can prevent this problem.