Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Drinking Water Program

Consumer Confidence Report Template

It is strongly recommended that you consult *Appendix M: Consumer Confidence Reporting Guidelines* which is the official state document for CCR reporting. Also consult *Recommended Tips for Preparing User Friendly Consumer Confidence Reports*. These guidescontain attachments on contaminants, certification forms, and other helpful aids. You can find these documents on the MassDEP Web site: http://www.mass.gov/dep/water/drinking/systems.htm#ccr .

MassDEP encourages all public water systems to use the Consumer Confidence Report (CCR) as a tool to educate customers about their efforts to provide safe drinking water.

If you follow the instructions noted in each section of this template, your report will be in full compliance with the current federal and state CCR requirements.

The template is a Microsoft Word document that can be downloaded to your hard drive. Follow the directions throughout the template, and delete the colored text when you insert your system's information. Once data entry is completed, review for accuracy and print.

- Instructional text in ***[red italic brackets]***concerns**required information**. Delete this text after filling in any required information.
- Instructional text in ***{blue italic brackets}***concerns **recommended or optional information**. Delete this text after filling in any information.

The basic information that is required for each CCR falls into the following sections within the template. In each of the sections you will find explanations of what you need to report. Much of the related information you need is found in *Appendix M: Consumer Confidence Reporting Guidelines* (the Guide) and attachments, you will find references to these sections for additional information.

Before July 1:

- Distribute the CCR to your customers (by mailing, publishing, posting, and any other required methods).

Submit a copy of the CCR, the CCR certification form, and supporting documentation to MassDEP Boston, your regional office, your local health board, and the MA Department of Public Health. Refer to Appendix M – The Guide, for distribution requirements and addresses.

Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA02108-4746

Commonwealth of Massachusetts
Deval L. Patrick, Governor
Timothy P Murray, Lt. Governor

Executive Office of Environmental Affairs
Richard K. Sullivan, Secretary

Department of Environmental Protection
Kenneth L. Kimmell, Commissioner

Produced by the Bureau of Resource Protection

Revised May 2012

Printed on recycled paper.

This information is available in alternate format by calling our Diversity Director at 617-292-5751.

2012 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.
Contact Person: Gary Tuck
Telephone #:978-346-8311 Fax #:978-346-8312
Internet Address:gtuck@townofmerrimac.com

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: We upgraded the Bear hill pumping station. Bear hill water storage tank underwent a complete rehabilitation. We also started the initial engineeringphases on Water Main replacement 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	MassDEPSource 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 MassDEP 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 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.

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 = millimrems 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).

	Date(s) Collected	90TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	7/27/2012 Thru 8/08/2012	.003	15	0	**20**	**0**	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	7/27/2012 Thru 8/08/2012	.409	1.3	1.3	**20**	**0**	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

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. Merrimac had one sample test positive for Coliform bacteria in the month of May, but upon resampling, the second sample tested negative.

	Highest #of Positives a month	MCL	MCLG	Violation Y/N	Possible Source of Contamination
Total Colifom	1	1	0	N	Naturally present in the environment
Fecal Coliform or E. coli	o	*	0		Human and animal fecal waste

Regulated Contaminant	Date(s) Collected	Highest Detection	Range Detected	MCL Or MDRL	MCLG Or MRDLG	Violation Y/N	Possible Source of Contamination
Inorganic Contaminants							
Nitrate (ppm)	5/07/2012	0.37	0.30 to 0.37	10	10	**N**	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate	8/23/2012	.446	0.298 To 0.446	2	N/A	**N**	Rocket propellants, fireworks, munitions, flares, blasting agents
Volatile Organic Contaminants							
Benzene (ppb)	8/23/2012	ND	ND	5	0	**N**	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	8/23/2012	ND	ND	5	0	**N**	Discharge from chemical plants and other industrial activities
o-Dichlorobenzene (ppb)	8/23/2012	ND	ND	600	600	**N**	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	8/23/2012	ND	ND	5	5	**N**	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	8/23/2012	ND	ND	5	0	**N**	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	8/23/2012	ND	ND	7	7	**N**	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	8/23/2012	ND	ND	70	70	**N**	Breakdown product of trichloroethylene and tetrachloroethylene
trans-1,2-Dichloroethylene (ppb)	8/23/2012	ND	ND	100	100	**N**	Discharge from industrial chemical factories
Dichloromethane (ppb)	8/23/2012	ND	ND	5	0	**N**	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)	8/23/2012	ND	ND	5	0	**N**	Discharge from industrial chemical factories

Ethylbenzene (ppb)	8/23/2012	ND	ND	700	700	**N**	Leaks and spills from gasoline and petroleum storage tanks
Styrene (ppb)	8/23/2012	ND	ND	100	100	**N**	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (PCE) (ppb)	8/23/2012	ND	ND	5	0	**N**	Discharge from factories and dry cleaners; residual of vinyl-lined water mains
1,2,4-Triclorobenzene (ppb)	8/23/2012	ND	ND	70	70	**N**	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	8/23/2012	ND	ND	200	200	**N**	Discharge from use in septic system cleaners
1,1,2-Trichloroethane (ppb)	8/23/2012	ND	ND	5	3	**N**	Discharge from industrial chemical factories
Trichloroethylene (TCE) (ppb)	8/23/2012	ND	ND	5	0	**N**	Discharge from metal degreasing sites and other factories
Toluene (ppm)	8/23/2012	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)	8/23/2012	39.6	25.8-39.6	80	**-----**		Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	8/23/2012	27	16-27	60	-----		Byproduct of drinking water disinfection

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

We failed to submit the required sampling results for Nitrates to DEP in a timely manner, which is a monitoring and reporting violation.We did the sample in the required sampling period, but our testing facility did not submit the results in the required time frame. For this reason, we were issued a Notice of Noncompliance (NON). The lab results showed that we were well below the MCL (maximum contaminant level) for Nitrates and no action was required.

Contaminant	Monitoring Period	Number of Samples Required	Number of Samples Taken	Date Sampling Conducted	Health Effects
Nitrates	**4/01/2012-6/30/2012**	**1**	**1**	**5/07/2012**	**Unknown**

7. ADDITIONAL INFORMATION

Cross Connection Education:

A cross connection is a connection between a drinking 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 the 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.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER
Monitoring Requirements Not Met for the Merrimac Water Department

Our water system violated a drinking water standard over the past year. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the 2013 scheduled monitoring period (1st quarter) we did not monitor or test for SOC's and therefore cannot be sure of the quality of our drinking water during that time.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant we did not properly test for during this year, how often we are supposed to sample for and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required sampling frequency	Number of samples taken	When sample should have been taken	When sample was taken
SOC's (Synthetic Organic Compounds)	1 sample every three years	0	2011-2013 2013-1st quarter Jan 1st – Mar 31	May 13th, 2013

What happened? Sample was omitted due to human error.

What is being done? Sample was taken, and results were sent to Mass DEP. Sample results came back ND (Non Detected).

For more information, please contact Gary Tuck at 978-346-8311 or the Merrimac Water Dept., 10 West Main St., Merrimac MA.

This notice is being sent to you by Merrimac Water Department PWS ID#: 318000 Date 6/18/2013