



2014 Annual Drinking Water Quality Report
For
The Cherry Valley and Rochdale Water District
Leicester, MA

MassDEP PWS ID # 2151001

Serving Cherry Valley, Rochdale and North Oxford with quality drinking water since 1910

This report is a snapshot of the drinking water quality 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. The Cherry Valley and Rochdale Water District (CVRWD) is committed to providing you with this information because informed customers are our best allies.

PUBLIC WATER SYSTEM INFORMATION

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	Michael L. DellaCava, Sr.		

Water System Improvements

On February 24, 2014 the District received the Sanitary Survey Report for the Sanitary Survey conducted by the Massachusetts Department of Environmental Protection (MassDEP) October 8, 2013. The report cited numerous deficiencies with operational, technical, financial and managerial procedures of which all have been addressed and corrected to the satisfaction of MassDEP. However, three of the cited deficiencies; "conduct and submit an updated hydraulic study to correct and resolve hydraulic pressure deficiencies throughout the distribution system, implement corrective action to prevent flooding in the chemical injection manhole located on the grounds of the Henshaw Water Treatment Plant and install booster chlorination stations at each standpipe location. These deficiencies will be added to the revised conditions listed within the MassDEP issued Administrative Consent Order and will be addressed as part of the overall capital improvement plan. As previously reported the District conducted a Pilot Study utilizing the existing Slow Sand Filtration Technology by incorporating a new treatment technology to operate in conjunction with the slow sand filters. Unfortunately the two technologies evaluated in the Pilot Study, the Miex™ and Granular Activated Carbon (GAC) treatment, did not meet the District's expectations. Both systems underperformed in the removal of Total Organic Compounds (TOC). TOC removal is critical in resolving the elevated Total Trihalomethane levels experienced in the distribution system.

The District continued to meet with MassDEP to study and evaluate available options that included the purchase of water from the City of Worcester, the development of a new groundwater source, the construction of a new water treatment facility and financially share in the cost to develop Moose Hill Reservoir as a town-wide drinking water source. Results relating to the options evaluated included significant increases to the current rate structure, source supply limitations and site limitations. The two groundwater sources had limited capacity and the cost of development didn't support this type of source. The construction of new water treatment facility presented problems with the actual footprint of the new facility greater than the space available at the existing treatment facility. Sharing in the cost to develop the Moose Hill Reservoir included high capital costs, the overbearing regulations associated with the approval process and the uncertainty that the source could be use by this District.

To that end, MassDEP has instructed the District to initiate the process that would enable the District to purchase water from the City of Worcester. The District has begun the process by preparing and submitting an Inter Basin Transfer Act Determination of Insignificance application to Massachusetts Department of Conservation and Recreation (MassDCR) and further associated with the construction of a permanent interconnection between the City of Worcester and the CVRWD. The MassDCR is the state regulatory agency charged with the initial review prior to submission to the Massachusetts Water Resource Commission (MassWRC) for review and action. The schedule

developed with the scope of work for a permanent interconnection between the City of Worcester and the CVRWD runs from March 2015 to May 2017. The Board of Water Commissioners has informed MassDEP that as part of the local requirements the District is required to schedule a Special District Meeting to revise, amend and restate the original March 2012 vote. The Board expects to schedule the Special District Meeting in November 2015.

In June and July 2014, the District conducted the MassDEP mandated Unidirectional Flushing (UDF) throughout the distribution system. Prior to the UDF method the District would flush the distribution system systematically from one hydrant to the next starting from the water treatment plant to the ends of each service area with little to no impact to the water customers. However, as stated in the customer direct mailed public notices, the UDF process is an extremely aggressive method of flushing the distribution system providing positive benefits by enhancing water quality, help maintain chlorine residuals throughout the distribution system and verify proper operation of hydrants and valves. The District’s goal was to complete the UDF process with as little impact as possible to the water customer and for the most part that goal was achieved with the exception of an isolated section of the Rochdale service area.

Apparently, sediment from the UDF process entered the Greenville Water Storage Tank resulting in the need to drain and clean the tank. This work was completed in November 2014. Additionally, customers in the isolated section of the Rochdale service area experienced long term rusty water. This issue was resolved in December 2014. The District will perform the first of two UDF flushing cycles in May-June 2015.

Opportunities for Public Participation

If you would like to participate in discussions regarding your water quality, you may attend the Board of Water Commissioners’ meetings on the 2nd Monday of every month at 148 Henshaw Street. In accordance with the new Open Meeting Law, please refer to official postings of future meeting agendas at your local Town Hall.

YOUR DRINKING WATER SOURCE

Where Does My Drinking Water Come From?

Your water is supplied by one surface water source and one groundwater source.

Source Name	MassDEP Source ID#	Source Type	Location of Source
Henshaw Pond	2151001-01S	Reservoir	148 Henshaw Street, Leicester, MA
Grindstone Well	2151001-01G	Ground Water	148 Henshaw Street, Leicester, MA

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 to protect you against microbial contaminants.*
- *We filter the water to remove small particles and organisms such as sediment, algae and bacteria.*
- *We chemically treat the water to reduce lead and copper concentrations.*
- *We aerate the water to reduce radon concentrations.*
- *We filter the water to remove uranium and other naturally occurring radionuclides.*
- *We filter the water to remove arsenic.*

How Are These Sources Protected? MassDEP has prepared a Source Water Assessment and Protection (SWAP) report for the water supply sources serving this water system. The SWAP Report assesses the susceptibility of public water supplies.

What is My System’s Ranking? The overall ranking of susceptibility to contamination for the system is “**high,**” based on the presence of at least one high- threat land use within the water supply protection areas. The CVRWD has four high-threat activities and land uses within the protection areas: Aquatic Wildlife, Stormwater Drains/Retention Basins, Electric Transmission Line Rights-of-Way and Transportation Corridors (Route 9 & Henshaw Street).

How is the CVRWD Addressing the SWAP Report? The District regularly submits written comments and participates in all Planning Board and Zoning Board of Appeals processes relating to land use within the watershed. In November of 1997, the District developed a comprehensive Surface Water Supply Protection Plan for Henshaw Pond that has been used as a model for other communities state-wide. The District further participated in the development of the Town of Leicester's Zoning By-laws called the Water Resources Protection Overlay District. The District regularly conducts on-site inspections of land use within the watershed and communicates such activities with the Town of Leicester Code Enforcement Officer to implement corrective action as warranted.

What Can I Do to Help? Please do not underestimate your impact on your water supply. You can help protect water supplies by supporting local protection plans and initiatives implemented by the Town of Leicester and the CVRWD. Also, practicing good septic system maintenance, taking hazardous household chemicals to designated collection sites and limiting pesticide and fertilizer use will help ensure a clean water supply.

Where Can I See The SWAP Report? The complete SWAP report is available by contacting the Cherry Valley and Rochdale Water District at 508-892-9616. It is also available online at www.mass.gov/eea/docs/dep/water/drinking/swap/cero/2151001.pdf

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, MassDEP and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. 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 at 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 at 800-426-4791.

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)
radioactivity)

NTU = Nephelometric Turbidity Units
pCi/l = picocuries per liter (a measure of

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.

Unregulated Contaminants: 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.

WATER QUALITY TESTING RESULTS

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 unless otherwise noted in the tables.

	Date(s) Collected	90 TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Exceeds AL (Y/N)	Possible Source of Contamination
Lead (ppb)	9/23/14	2*	15	0	20	1	N	Corrosion of household plumbing systems
Copper (ppm)	9/23/14	0.2	1.3	1.3	20	0	N	Corrosion of household plumbing systems

* 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 home plumbing. The CVRWD is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing and plumbing components. When your water is unused for several hours, you can minimize the potential for lead exposure by running 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/safewater/lead.

Bacteria	Highest # Positive in a month	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Total Coliform	9	1	0	Y	Naturally present in the environment
<i>E. coli</i>	0	*	0	N	Human and animal fecal waste

* Compliance with the *E. coli* MCL is determined upon additional repeat testing.

Regulated Contaminant	Date(s) Collected	Highest Result or Running Annual Average	Range	MCL	MCLG	Violation (Y/N)	Possible Source(s) of Contamination
Inorganic Contaminants							
Barium (ppm)	4/9/14	0.0086	----	2	2	N	Erosion of natural deposits;
Nitrate (ppm)	4/9/14	0.75	----	10	10	N	Runoff from fertilizers; natural deposits
Radioactive Contaminants							
Gross Alpha Activity (pCi/l)	3 quarters 2014	1.74	0 – 1.74	15	0	N	Erosion of natural deposits
Radium (226 & 228) (pCi/l)	6/20/13	1.32	----	5	0	N	Erosion of natural deposits
Disinfectants and Disinfection By-Products							
Total Trihalomethanes (TTHMs) (ppb)	Quarterly	65*	41 - 97	80	-----	N	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	Quarterly	3*	0 – 6	60	-----	N	Byproduct of drinking water disinfection
Free Chlorine (ppm)	Monthly	0.41*	0.02 – 5	4	4	N	Water additive used to control microbes
Chlorite (ppm)	Daily and Monthly	0.25**	0 – 0.84	1	0.8	N	Byproduct of drinking water chlorination
Chlorine dioxide (ppb)	Daily	790	0 - 790	800	800	N	Water additive used to control microbes

* Highest running annual average (RAA) is the highest average of four consecutive quarters. This value is used to determine compliance. TTHM and HAA5 compliance now uses the highest locational RAA.

** The chlorite compliance value is the average of a three-sample set, which is collected monthly.

Turbidity	TT	Lowest Monthly % of Samples	Highest Detected Daily Value	Violation (Y/N)	Possible Source of Contamination
Daily Compliance (NTU)	5	-----	1.198	N	Soil runoff
Monthly Compliance*	At least 95% < 1 NTU	100%	-----	N	
Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.					
*Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.					

Unregulated and Secondary Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG or Health Advisory	Possible Source
Radon (pCi/L)	4/9/14	140*	----	----	10,000	Erosion of natural deposits
Sodium (ppm)	4/9/14	21**	----	----	20	Natural sources; runoff from road salt; by-product of treatment process
Sulfate (ppm)	6/20/13	4	----	250	----	Natural sources
Iron (ppb)	4/9/14	7	----	300	----	Naturally occurring
Manganese (ppb)***	Feb, April, May & Aug 2014	3.4 – 28	15	50	300	Erosion of natural deposits
Strontium (ppb)***	Feb, May & Aug 2014	54 – 63	58	----	4000	Naturally occurring element
Chlorate (ppb)***	Feb, April, May & Aug 2014	53 - 90	69.5	----	----	Agricultural defoliant, disinfection byproduct

* Radon is a radioactive gas that you cannot see, taste, or smell. Radon can move from the ground and into a home through cracks in the foundation. Radon can also get into the air when released from tap water while showering, washing dishes, and cooking. Compared to radon entering the home through soil, radon in tap water is a small source of radon in indoor air. Breathing indoor air containing radon can lead to lung cancer. Drinking water containing radon may also increase the risk of stomach cancer. To learn more about radon in air and water, call EPA's Radon Hotline at 800-SOS-RADON or consult the following EPA factsheet: <http://water.epa.gov/lawsregs/rulesregs/sdwa/radon/upload/Radon-Proposed-Consumer-Fact-Sheet.pdf>

** Sodium-sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the levels of sodium in their drinking water where exposures are being carefully controlled.

***The April sample for manganese was collected as part of our routine monitoring. All other samples for manganese, strontium, and chlorate were collected as special samples under EPA's Unregulated Contaminant Monitoring Rule Third Cycle (UCMR3). We also collected samples for 23 other UCMR3 contaminants, with no detections.

COMPLIANCE WITH DRINKING WATER REGULATIONS

The CVRWD is committed to providing you with the best water quality available. However, some contaminants that were tested in 2014 and in previous years did not meet all applicable health standards regulated by the state and federal government.

Our water system and MassDEP monitor and record the effectiveness of actions taken in response to contaminant violations. In addition, we have signed a Consent Order that requires the CVRWD to take steps to bring the water system into compliance

Administrative Consent Order Action Plan

The MassDEP issued the Cherry Valley and Rochdale Water District an Administrative Consent Order (ACO) in April 2012 for violations of the Surface Water Treatment Rule (SWTR) specifically “turbidity” and “contact time”, the Disinfectant/Disinfection Byproduct Rule (DBPR) specifically Total Trihalomethanes and the Total Coliform Rule (TCR) specifically “total coliform bacteria”. The ACO directed the District to perform several upgrades and expansion of the existing Water Treatment Facility for the Henshaw Pond and the Grindstone Well water supplies.

A Pilot Study performed to evaluate the Treatment technologies proposed as part of the upgrades and expansion of the existing Water Treatment Facility for the Henshaw Pond and Grindstone Well water supplies failed to demonstrate their effectiveness forcing the District to investigate alternate options.

During 2014, the District continued to meet with MassDEP to study and evaluate available options that included the purchase of water from the City of Worcester, the development of a new groundwater source, the construction of a new water treatment facility and financially share in the cost to develop Moose Hill Reservoir as a town-wide drinking water source. Results relating to the options evaluated included significant increases to the current rate structure, source supply limitations and site limitations. The two groundwater sources had limited capacity and the cost of development didn't support this type of source. The construction of new water treatment facility presented problems with the actual footprint of the new facility greater than the space available at the existing treatment facility. Sharing in the cost to develop the Moose Hill Reservoir included high capital costs, the overbearing regulations associated with the approval process and the uncertainty that the source could be use by this District.

To that end, MassDEP has instructed the District to initiate the process that would enable the District to purchase water from the City of Worcester. The District has begun the process by preparing and submitting an Inter Basin Transfer Act Determination of Insignificance application to Massachusetts Department of Conservation and Recreation (MassDCR) and further associated with the construction of a permanent interconnection between the City of Worcester and the CVR Water District. The MassDCR is the state regulatory agency charged with the initial review prior to submission to the Massachusetts Water Resource Commission (MassWRC) for review and action. The schedule developed with the scope of work for a permanent interconnection between the City of Worcester and the CVR Water District runs from March 2015 to May 2017. The Board of Water Commissioners has informed MassDEP that as part of the local requirements the District is required to schedule a Special District Meeting to revise, amend and restate the original March 2012 vote. The Board expects to schedule the Special District Meeting in November 2015.

As previously reported the District completed the partial rebuilding of Slow Sand Filter No. 2 including replacement of gate and control valves and piping; replacement of filter media, valves and controls for the Grindstone Well Treatment System and inspection and cleaning of the water treatment facility Clear Well structure.

Sanitary Survey NON – February 24, 2014

In October 8, 2013 MassDEP conducted a Sanitary Survey. On February 24, 2014 the District received the Survey results that included a MassDEP issued Notice of Non Compliance NON-CE-14-5D027 listing 22 deficiencies. Generally speaking, the District has never received Survey results of this magnitude.

For more detailed information on the items listed in the Survey please contact Superintendent Michael F. Knox at 508-892-9616.

Coliform Bacteria MCL Violations – August, September, and October 2014

CVRWD routinely monitors for the presence of coliform bacteria in the drinking water. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. The standard for coliform bacteria for our system is that no more than one sample collected may show the presence of coliform bacteria.

MassDEP issued NON-CE-14-5D092 to the CVRWD in November 2014 for violating the monthly MCL for total coliform in August, September, and October 2014 and for failure to submit a corrective action plan with 30 days of learning of the violation. Each time bacteria was detected in our water, we contacted MassDEP to report the presence of bacteria in the water; took multiple repeat samples, including upstream and downstream samples; chlorinated the storage tanks; conducted localized flushing; increased the disinfectant residual in the distribution lines, and issued public notification. None of the samples in 2014 had detections of *E. coli*.

Samples collected on August 13, 2014 showed the presence of total coliform bacteria in two sites. Total coliform was also detected in one of the repeat samples taken on August 15. Repeat samples collected on August 18 showed no coliform present, indicating the problem had been resolved.

Samples collected on September 10, 2014 showed the presence of total coliform bacteria in two sites. Seven repeat samples also had detections. Repeat samples collected on September 26 did not find any bacteria, indicating the problem had been resolved.

Samples collected on October 1, 2014 showed the presence of total coliform bacteria in one site. One of the repeat samples taken on October 3 also showed the presence of bacteria. Repeat samples collected on October 6 did not find any bacteria, indicating that this problem had been resolved. An investigation of the sampling sites and the District's sampling protocol found no deficiencies in protocol or causes for contamination.

Chlorite Monitoring and Reporting Violation – June 2014

We are providing Tier 3 public notice in our CCR to close out NON-CE-145D568, issued on September 10, 2014. We violated monitoring and reporting requirements of the drinking water regulations. Even though this was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

In 2014 the District received a notice of noncompliance from MassDEP for a monitoring and reporting violation in the month of June. We are required to take a three-sample distribution set each month and did so on June 11. Due to a lab error our results were invalid. We should have taken another set and reported those results to MassDEP, which we did not. We did sample for chlorite daily at the pump station tap throughout June and had results that ranged from 0.09 to 0.58 ppm, all of which were below the MCL of 1 ppm. Throughout the rest of 2014, all remaining monthly three-sample sets for chlorite were taken on time and the results were reported to MassDEP as required. We will continue to collect samples for all contaminants according to our most recent sampling schedule. For more information or questions regarding this notice, please contact Superintendent Michael F. Knox at 508-892-9616.

Updates on Previous Enforcement

In accordance with the provisions of the Consent Order all previous violations will be reprinted in the 2014 Consumer Confidence Report.

Corrosion Control Treatment System Was Temporarily Off-Line September 2013

The Cherry Valley and Rochdale Water District is required to provide corrosion control treatment to the drinking water it supplies to its customers to reduce the lead and copper levels in customers' tap. On September 20, 2013 at the Henshaw Water Plant one of the chemical feed systems used as part of the treatment to provide corrosion control malfunctioned and was taken off line to make needed repairs. CVRWD customers continued to receive water from the treatment plant, but without all the required corrosion control treatment. On October 10, 2013 the repairs were completed and the corrosion control treatment was fully restored.

District personnel monitor the operation of the corrosion control system daily and further backed up the operation effectiveness through daily residual testing to ensure the standard has been met to date. There were no operational violations experienced in 2014.

Coliform Bacteria - August 2013

CVRWD routinely monitors for the presence of coliform bacteria in the drinking. The standard for coliform bacteria is that no more than 1 sample or greater than 5 percent of samples collected may show the presence of coliform bacteria. Samples collected on August 14, 2013 showed the presence of total coliform bacteria in two samples. Additional repeat samples were collected on August 19, 2013 resulting in no coliform present.

Monitoring and Reporting Violation November 2013

CVRWD violated the monitoring and reporting requirements of the drinking water regulations by not monitoring for Perchlorate, Synthetic Organic Compounds, Nitrite and Uranium at the assigned frequency. CVRWD took corrective action and collected samples on December 5, 2013 and submitted same to MassDEP. CVRWD is required to monitor your drinking water for specific man-made and naturally occurring contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the required monitoring period the contaminants previously listed were not monitored and therefore the District could not be sure of the quality of our drinking water during that time.

Total Trihalomethanes – Four Quarters in 2012 and 2013

Since December 2012 our water system has been in noncompliance with the Drinking Water Standard for Total Trihalomethanes (TTHMs). In all four quarters of 2012 and 2013, our system exceeded the standard or Maximum Contaminant Level (MCL) for TTHMs. The standard for TTHMs is 80 parts per billion and is based upon the Running Annual Average (RAA) results of four consecutive quarters. Trihalomethanes (THMs) are formed when chlorine added to the water for disinfection reacts with natural organic matter commonly found in surface waters. Our MCL violations resulted from the introduction of additional disinfectant at the Water Treatment Facility to manage turbidity levels. The public was notified of this violation by newspaper and in their monthly water bills. 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.

District personnel routinely monitor and measure the disinfectant residual levels at the point of entry to the distribution system and monitor Total Trihalomethane residuals monthly to ensure the standard has been met to date. There were no "Total Trihalomethanes" violations experienced in 2014.

Contact Time "CT" – November 2012 and December 2012

"Contact Time" - In order to ensure proper disinfection, water in the treatment plant must be in contact with chlorine or a similar disinfectant for a minimum amount of time. On November 15, 2012, this did not occur.

November 15, 2012: As you may recall a Public Notice Declaring a Water Use Restriction for November 12, 2012 to November 19, 2012 was direct mailed to you in the November 1, 2012 Water Bill. The notice detailed the fact that the Henshaw Water Treatment Facility would be offline to allow crews to clean, inspect and disinfect the filtered water clear well. On November 13, 2012 contractors working for the District completed the cleaning and inspection of the filtered water clear well. Prior to placing the clear well online, District personnel took preventive measures by introducing a disinfectant directly into the clear well during the refilling process. On November 14, 2012, District personnel collected samples for bacteria analysis to further ensure there was no presence of bacteria. On November 15, 2012, the District received confirmation from a MassDEP certified Lab that there was no presence of bacteria in the filtered water stored in the clear well. The Henshaw Water Treatment Facility was placed back online on November 15, 2012. Unfortunately, due to the activities previously described, the Henshaw Water Treatment Facility did not meet the "Contact Time" standard as measurements of disinfectant residual levels / "contact time" at the point of entry into the system were below the standard during the first test cycle.

December 27, 2012: As part of the daily operations of the Henshaw Water Treatment Facility operators are required to measure the disinfectant residual levels / "contact time" at regularly scheduled intervals throughout the day and then calculate the "contact time" to confirm compliance with the Surface Water Treatment Rule. On December 27, 2012, all measurements met the compliance requirements until the last measurement of the day. At the last measurement there was a drop in the water temperature significant enough to change the fractional calculation of the disinfectant measured versus "contact time" therefore resulting in the treatment technique violation. The operator made adjustments to increase the dosage of the disinfectant and a follow up measurement verified that the required "contact time" had been achieved.

Both situations did not require that you take immediate action. If it had been, you would have been notified immediately.

District personnel routinely monitor and measure the disinfectant residual levels / "contact time" daily to ensure the standard have been met to date. There were no "CT" violations experienced in 2013 or 2014.

2011 Compliance with Drinking Water Regulations Violations

The CVRWD received notices of noncompliance for seven violations in 2011. Those violations included: Turbidity – February, March and July 2011; Coliform Bacteria – November 2011 and Total Trihalomethanes – Four Quarters in 2011.

IMPORTANT INFORMATION

Cross Connections

A cross connection is a connection between a drinking water pipe and a polluted or non-potable source. Fluctuation in water pressure can cause water to be siphoned or sucked backwards through pipes and hoses. Hoses are the most common extension of a plumbing system and the item most likely to cause an accidental poisoning of your water. Hoses are often connected to swimming pools, laundry sinks and lawn chemical sprayers. Water flowing backwards into your home will bring contaminants or poisons with it. To prevent this from happening, every hose faucet connection should have a device called a **Hose Bibb Vacuum Breaker**. These are inexpensive and are available from your local plumbing contractor or supplier. As required by Massachusetts Drinking Water Regulations, 310 CMR 22.22 (3) (b), the District has an approved Cross Connection Program Plan. This means that all cross connections in Cherry Valley and Rochdale Water District's businesses that are supplied by public water are surveyed by a certified backflow tester on an annual basis. For additional information on cross connections and the status of CVRWD's cross connection program, please contact us at (508) 892-9616.

Please see an example of a cross connection below:



Typical Residential Cross-Connections

- ◆ Hose Bibs
- ◆ Lawn Irrigation
- ◆ Jacuzzis
- ◆ Swimming Pools
- ◆ Toilet Ball-cocks



Mandatory Water Ban - May 1, 2015 until September 30, 2015

The Board of Water Commissioners voted on June 13, 2011 to create Article X Outdoor Water Use Regulation which mandates water use restrictions effective **May 1, 2015 until September 30, 2015**. The new Regulation is in response to the **ANNUAL** conservation conditions set forth in the District's Water Management Act Permit issued by MassDEP. The purpose of the Regulation is to protect, preserve and maintain public health, safety, welfare and the environment by ensuring an adequate supply of water for drinking and fire protection and to protect the quality and quantity of water in local aquatic habitats such as ponds, rivers and wetlands.

A copy of this notice was distributed to all building occupants, tenants and water users.



Water Use Restrictions

Mandatory conservation which prohibits the following non-essential outdoor activities from occurring between the hours of 9:00 AM and 5:00 PM.

- a). irrigation of lawns via automatic lawn sprinkler systems;
- b). washing of vehicles except in a commercial car wash; and
- c). washing of exterior building surfaces, parking lots, driveways or sidewalks, except as necessary to apply paint, preservatives, stucco, pavement or cement.

Definitions

Automatic sprinkler system shall mean any system for watering vegetation other than a hand-held hose or bucket.

Any person violating this by-law shall be liable to the District in the amounts listed below:

- 1). First violation: Written warning,
- 2). second violation: \$200.00
- 3). Third violation: \$300.00,
- 4). Fourth and subsequent violations: \$500.00

Each day of violation shall constitute a separate offense. Fines shall be recovered by complaint before District Court, or by non-criminal disposition in accordance with section 21D of chapter 40 of the general laws. For purposes of non-criminal disposition, the enforcing person shall be any police officer of the town or the water superintendent or the superintendent's designee. If a State of Water Supply Emergency has been declared the water Commissioners may, in accordance with G.L. c 40, s. 41A, shut off water at the meter or the curb stop. A complete copy of Article X- Water Use Restriction of the Cherry Valley and Rochdale Water District Rules and Regulations can be viewed at the district's web site www.cvrwd.com



Water Conservation Public Outreach Information Tips and Useful Links:

Water conservation is an important way to protect our drinking water by ensuring that we don't diminish our resource. As much as 97% of the world's water is salt water, leaving 3% freshwater, two-thirds of which is stored as icecaps or glaciers. This leaves 1% of the world's water for drinking. Needless to say, water conservation will help all us sustain the precious 1%.

Cherry Valley and Rochdale Water District water conservation public outreach information, tips and useful links to other water conservation web sites will be published and updated on www.cvrwd.com

Other Conservation Links:

<http://www.wateruseitwisely.com/100-ways-to-serve/index.php>

http://eartheasy.com/live_water_saving.htm

<http://www.ecy.wa.gov/programs/wr/ws/wtrcnsv.html>

Water Conservation Tips for Residents

Outdoors

- When mowing your lawn, set the mower blades to 2-3 inches high. Longer grass shades the soil improving moisture retention, has more leaf surface to take in sunlight, allowing it to grow thicker and develop a deeper root system. This helps grass survive drought, tolerate insect damage and fend off disease.
- Apply mulch around shrubs & flower beds to reduce evaporation, promote plant growth and control weeds.
- Collect rainfall for irrigation in a screened container (to prevent mosquito larvae growth).
- Use a commercial car wash that recycles water - Let Mother Nature wash your car when it rains.
- Always use a broom to clean walkways, driveways, decks and porches, rather than hosing off these areas.
- Install covers on pools and spas and check for leaks around your pumps.
- Winterize outdoor spigots when temperatures dip below freezing to prevent pipes from leaking or bursting.

In the Kitchen

- When cooking, peel and clean vegetables in a large bowl of water instead of under running water.
- Collect the water you use for rinsing fruits and vegetables, then reuse it to water houseplants.
- Fill your sink or basin when washing and rinsing dishes.
- Soak pots and pans instead of letting the water run while you scrape them clean.
- Only run the dishwasher when it's full - When buying a dishwasher, select one with a "light-wash" option.
- Only use the garbage disposal when necessary (composting is a great alternative).

In the Bathroom

- Shorten your shower by a minute or two and you'll save up to 150 gallons per month.
- Turn off the water to brush teeth, shave and soap up in the shower. Fill the sink to shave.
- Repair leaky toilets. Add 12 drops of food coloring into the tank, and if color appears in the bowl one hour later, your toilet is leaking.
- Upgrade older toilets with water efficient models.
- Install a toilet dam, faucet aerators and low-flow showerheads.

Laundry

- Run full loads of laundry - When doing laundry, match the water level to the size of the load.
- When purchasing a new washing machine, buy a water saving model that can be adjusted to the load size.



ADDITIONAL INFORMATION

Important Information about Leaks

Hole Diameter in Inches		Water wasted per month (gallons)	Water wasted per month (cubic feet)	Added cost to homeowner per month *
○	1/4	393,833	52,651	\$6,437.39
○	1/8	98,666	13,190	\$1,571.85
◦	1/16	24,666	3,297	\$364.26
◦	1/32	6,166	824	\$100.10

*Based on CVRWD FY15 rates

Having difficulty paying your bills?

We understand that due to the current economic status, many people are facing difficult decisions and are struggling to make ends meet. We want to inform the CVRWD customers, that if you are having difficulty paying your monthly water bill, we ask that you contact the District office at 508-892-9616 to communicate your situation. We are more than happy to help you to establish a payment plan or provide you with conservation suggestions that could reduce your future water bills. Again, we understand that everyone is experiencing hardships and we want to express our willingness to assist you.

New Payment Options!! Save time, Pay online!!

Since July of 2014, CVRWD has been accepting online payments at cvrwd.com
Simply go to www.cvrwd.com and click on the link at the top of the water district homepage.

"This institution is an equal opportunity provider, and employer."