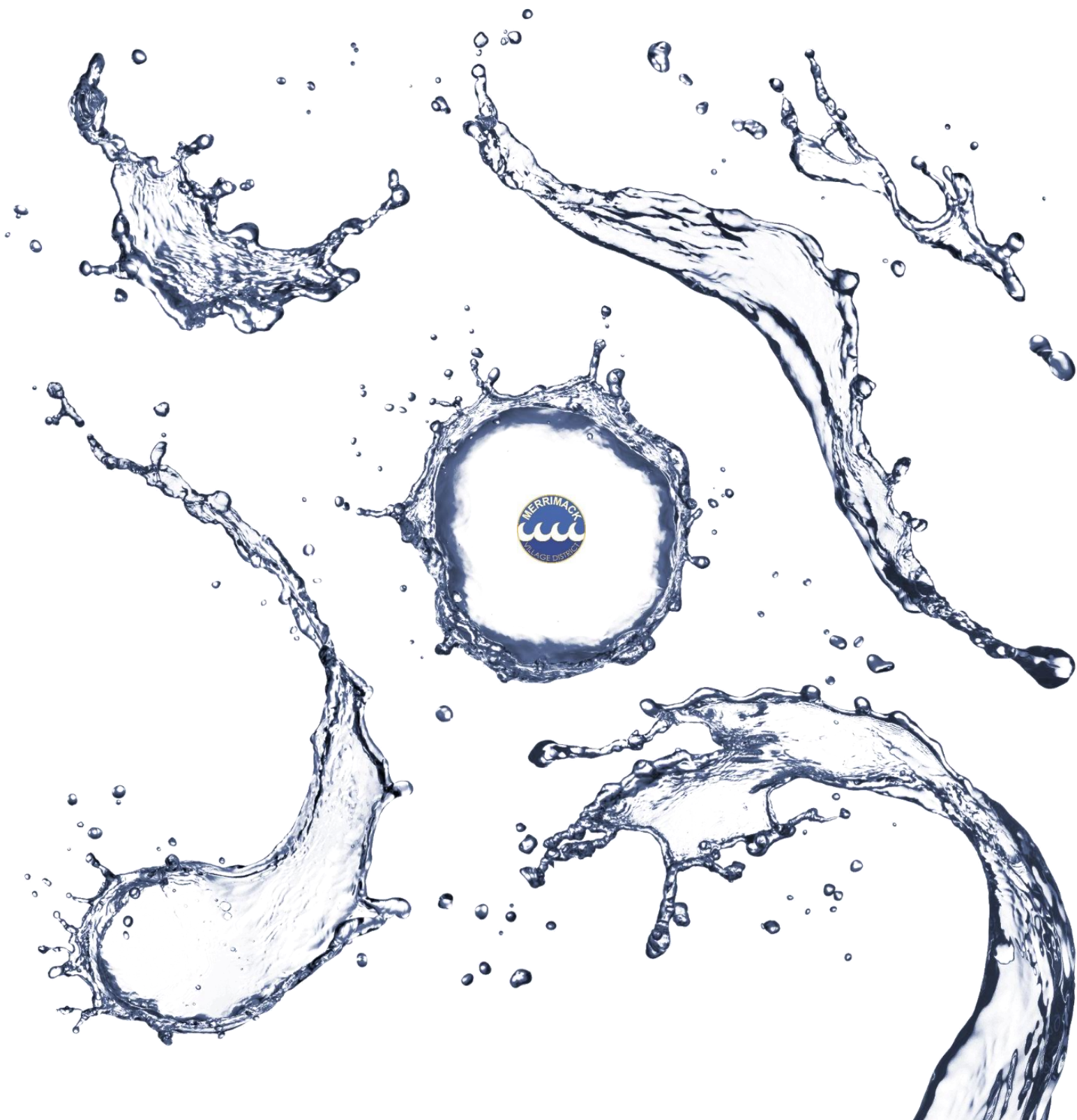


MERRIMACK VILLAGE DISTRICT



2018 CONSUMER CONFIDENCE REPORT
EPA ID #: 1531010

Merrimack Village District (MVD) 2018 Consumer Confidence Report

(2017 Data)



What is a Consumer Confidence Report? The Consumer Confidence Report (CCR) details the quality of your drinking water, where it comes from, and where you can get more information. This annual report documents all detected primary and secondary drinking water parameters, and compares them to their respective standards known as Maximum Contaminant Levels (MCLs).

The sources of drinking water: Both tap water and bottled water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

What is the source of my drinking water? MVD The District is supplied by 6 “groundwater” wells known locally as Wells 2, 3, 4, 5, 7 and 8. Water from each well is treated on-site at each pumping station and then distributed through a network of water mains to residential properties, businesses and schools.

In order to ensure that tap water is safe to drink: The EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The US Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water 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 storm water runoff, and septic systems.

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

Why are there contaminants in my water? Drinking water, including bottled water, may reasonably be expected to contain at least a small amount 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791) or online at www.epa.gov/safewater.

Do I need to take special precautions? 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 infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Source Water Assessment Summary: In an effort to assess the vulnerability of each of the states' public water supply sources NH DES prepared drinking water source assessment reports for all public water systems between 2000 and 2003. Included in the report is a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection options. The results of the assessment, prepared for well 7 in 2000 and the remainder of the wells in 2002 indicates that four (4) wells were rated low, the other two (2) wells were rated in the medium range as noted below.

Well #	Susceptibility Rating		
	High	Medium	Low
1	1	2	9
2	1	2	9
3	1	2	9
4	3	4	5
5	4	3	5
7	1	2	9
8	1	2	9

Note: This information is over 10 years old and includes information that was current at the time the report was completed. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data. The complete Assessment Report is available for review at MVD, 2 Greens Pond Road, Merrimack, NH or can be obtained from the NHDES website at:

<http://des.nh.gov/organization/divisions/water/dwgb/dwspp/reports/documents/merrimack.pdf>. For more information, contact Superintendent, Ronald Miner, Jr at 603-424-9241 x107 or ron.miner@mvdwater.org.

Violations and Other information: On 1/29/2018 the Merrimack Village District water system was issued a Notice of Violation for failure to monitor and report (M/R) the system's disinfection byproducts chlorine residual level by January 10, 2018, for Q4-2017. EPA and DES categorize this type of violation as a monitoring /reporting (M/R) violation. Public notice was not required for the M/R violation, because DES received documentation subsequent to the violation to show that the disinfection byproducts chlorine residual levels were taken/measured timely during Q4-2017. Please note that the violation remains valid; however, because the report was received by DES, the violation has been closed.

How can I get involved? For more information about your drinking water please contact MVD's Water Quality Testing Specialist, Jill Lavoie at 603-424-9241 x: 103 or email jill.lavoie@mvdwater.org. Or contact MVD's Superintendent, Ronald Miner, Jr. at 603-424-9241 x 107 or email ron.miner@mvdwater.org. The MVD Board of Commissioners meets the 3rd Monday of each month except holidays. You may submit questions in writing to MVD by sending them to 2 Greens Pond Road, Merrimack, NH 03054.

Water Quality

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. Last year MVD tested for over 100 contaminants, including inorganic contaminants (salts, metals), organic chemical contaminants (synthetic and volatile chemicals), and radioactive contaminants. The following table only shows the substances that were detected in your water in 2017 or earlier. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the last calendar year. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Water Quality Results

Contaminant	MCLG or MRDLG	MCL, SMCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source	
				Low	High				
Inorganic Contaminants									
Nitrate [measured as Nitrogen] (ppm)	10	10	.078		ND	1.1	2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	NA		79.72		29.9	236	2017	No	Erosion of natural deposits; Leaching
Barium	2	2	.02		.011	.033	15/16	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Haloacetic acids (HAA5) (ppm)	.060	NA	.01695		.0127	.0212	10/18/17	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppm)	.080	NA	.0069		.0005	.0133	10/18/17	No	Byproduct of drinking water disinfection
Secondary Contaminants									
Copper (ppm)		1.0	.024		ND	.11	2017	No	Corrosion of household plumbing systems; Erosion of natural deposits
Iron (mg/L)		0.3	0.5		ND	1.73	2017	No	Naturally occurring
Manganese		0.05	0.19		ND	0.39	2017	No	Naturally occurring
Chloride (mg/L)		250	178		66.5	489	2017	No	Erosion of natural deposits; Leaching
pH		6.5-8.5	5.9		5.6	6.79	2017	No	pH is an expression of the intensity of the basic or acidic condition of a liquid.
Additional Testing									
Alkalinity			22.78		13	49	2017	No	The capacity of water to neutralize acids.
Hardness (ppm)	100		85.82		46.5	190	2017	No	A characteristic of water.
Microbiological Contaminants									
Turbidity (NTU)	NA	TT	.10		ND	1.44	2017	No	Soil runoff

Lead & Copper	AL	Your Water	Sample Date	# Samples Exceeding AL	Violation	Typical Source
Copper - action level at consumer taps (ppm)	1.3	.337	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	15	0	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

If present, elevated levels of lead can cause serious 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. MVD 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

PFAS Results

Well ID/Contaminant	EPA advisory / AGQS	Average Level PFOA/PFOS in MVD Wells	Range		Sample
	70 ppt combined		Low	High	Date
Well #2 perfluorooctanoic acid (PFOA) (ppt)	70	12.75	8	17	2017
perfluorooctane sulfonate (PFOS) (ppt)	70	0.92	ND	3	2017
perfluorobutanesulfonate	NA	1.33	ND	2	2017
perfluorodecanoic acid	NA	0.08	ND	1	2017
perfluoroheptanoic acid	NA	ND	ND	ND	2017
perfluorohexanesulfonate	NA	0.29	ND	1	2017
perfluorohexanoic acid	NA	2.9	ND	8	2017
perfluorononanoic acid	NA	0.12	ND	0.6	2017
perfluoropentanoic acid	NA	2.25	ND	4	2017
Well #3 perfluorooctanoic acid (PFOA) (ppt)	70	18.75	13	26	2017
perfluorooctane sulfonate (PFOS) (ppt)	70	1.2	ND	2	2017
perfluorobutanesulfonate	NA	3.3	ND	5.1	2017
perfluorodecanoic acid	NA	.075	ND	.9	2017
perfluoroheptanoic acid	NA	7.2	6.7	7.6	2017
perfluorohexanesulfonate	NA	.167	ND	0.9	2017
perfluorohexanoic acid	NA	7.6	5	10	2017
perfluorononanoic acid	NA	0.5	ND	0.9	2017
perfluoropentanoic acid	NA	5.33	3	11	2017
Well #7 perfluorooctanoic acid (PFOA) (ppt)	70	25.8	21	30	2017
perfluorooctane sulfonate (PFOS) (ppt)	70	2.8	ND	4	2017
perfluorobutanesulfonate	NA	1.4	ND	2	2017
perfluorodecanoic acid	NA	0.2	ND	2	2017
perfluorohexanesulfonate	NA	1.5	ND	2	2017
perfluorohexanoic acid	NA	2.97	ND	5.7	2017
perfluorononanoic acid	NA	0.069	ND	1	2017
perfluoropentanoic acid	NA	2.7	ND	4	2017
Well #8 perfluorooctanoic acid (PFOA) (ppt)	70	18.4	16	20	2017
perfluorooctane sulfonate (PFOS) (ppt)	70	1.3	ND	3	2017
perfluorobutanesulfonate	NA	0.9	ND	2	2017
perfluorohexanesulfonate	NA	0.9	ND	2	2017
perfluorohexanoic acid	NA	0.1	ND	3	2017
perfluorononanoic acid	NA	0.14	ND	0.6	2017
perfluoropentanoic acid	NA	1.9	ND	3	2017
Blend of wells 7&8 Iron/ Manganese Treatment Plant					
perfluorooctanoic acid (PFOA) (ppt)	70	21.17	18	26	2017
perfluorooctane sulfonate (PFOS) (ppt)	70	1.67	ND	3	2017
Perfluorobutanesulfonate	NA	1.41	ND	2	2017
perfluorodecanoic acid	NA	0.075	ND	0.9	2017
perfluorohexanesulfonate	NA	1.25	ND	2	2017

(PFAS Results continued)

perfluorohexanoic acid	NA	2.63	ND	4.5	2017
perfluorononanoic acid	NA	0.42	ND	0.7	2017
perfluoropentanoic acid	NA	2.42	ND	3	2017

MVD Turkey Hill Booster	11/16/2017	MVD Parker Tank	11/16/2017
perfluorobutanesulfonate	2	perfluorobutanesulfonate	2
perfluoroheptanoic acid	2	perfluorohexanesulfonate	1
perfluorohexanesulfonate	3	perfluorohexanoic acid	3
perfluorohexanoic acid	0.7	perfluorononanoic acid	0.6
perfluorooctanesulfonate (PFOS)	3	perfluorooctanesulfonate (PFOS)	3
perfluorooctanoic acid (PFOA)	23	perfluorooctanoic acid (PFOA)	21
perfluoropentanoic acid	3	perfluoropentanoic acid	3

To view more information on PFOA/PFOS along with testing results please visit our web site at www.mvdwater.org and click on the link provided.

As part of an on-going evaluation program the EPA has required us to monitor some additional contaminants/chemicals (UCMR). Information collected through the monitoring of these contaminants/chemicals will help to ensure that future decisions on drinking water standards are based on sound science.

Unregulated Contaminant Results

UCMR	Results Average	Results Low	Results High	Date	AL (Action Level), MCL, SMCL, MRL, AGQS	Typical Source
Chromium	0.27 ug/L	ND	0.40 ug/L	14/15	100 ppm	Found naturally in rocks, plants, soil, volcanic dust and animals.
Cobalt	0.38 ug/L	ND	1.6 ug/L	14/15	1 ug/L	A natural element found throughout the environment.
Molybdenum	0.42 ug/L	ND	3.5 ug/L	14/15	1 ug/L	Found naturally in rocks, plants, soil and animals.
Strontium	192.8 ug/L	72.7 ug/L	356 ug/L	14/15	0.3 ug/L	Naturally occurring element.
Vanadium	1.58 ug/L	0.14 ug/L	2.5 ug/L	14/15	0.2 ug/L	Naturally occurring element.
1,4 Dioxane	0.016 ug/L	ND	0.056 ug/L	14/15	0.07 ug/L	Used as a solvent or solvent stabilizer in manufacturing.
Chlorate	71.91 ug/L	ND	290 ug/L	14/15	20 ug/L	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide.
Chromium, Hexavalent	0.15 ug/l	0.11 ug/L	0.27 ug/L	14/15	100 ppm	Found naturally in rocks, plants, soil, volcanic dust and animals.

Important Drinking Water Definitions

Term	Definition
AGQS	AGQS: Ambient Groundwater Quality Standard: An enforceable standard set by NHDES under Chapter 485 of the New Hampshire Safe Drinking water Act.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MCL	MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level
MRDL	MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRL	Minimum reporting level.
NA	not applicable
ND	Not detected
NR	Monitoring not required but recommended.
NTU	Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
ppb	ppb: parts per billion, or micrograms per liter ($\mu\text{g/L}$)
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppt	ppt: parts per trillion
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
UCMR	UCMR: Unregulated Contaminant Monitoring Rule

If you have any questions regarding this report or if you would like additional information about the water system please contact MVD's Water Quality & Testing specialist, Jill Lavoie. Jill can be reached by phone at 603-424-9241 x: 103, email at jill.lavoie@mvdwater.org, or by visiting our office located at 2 Greens Pond Rd Merrimack NH, 03054. MVD's normal business hours are Monday - Friday, from 8:00 AM - 4:30 PM. Additionally, you may contact any of the offices listed below for information.

Name:	Contact Phone/Website
US EPA	www.epa.gov
US EPA Safe Drinking Water Hotline	800-426-4791
NH DES Drinking Water & Groundwater Bureau	603-271-2513
American Water Works Association	www.awwa.org
New England Water Works Association	www.newwa.org
NH Water Works Association	www.nhwwa.org

Watering Restrictions/Bans

The purpose of MVD's watering restrictions is to assist in managing the water distribution system. Watering restrictions allow water withdrawal from the aquifer in a controlled manner which helps protect against seasonal fluctuations and aids in maintaining sufficient supply. MVD continuously monitors the water distribution system, the weather conditions & forecasts to determine if additional watering restrictions or bans are necessary. MVD will update customers of any change to Watering Restriction statuses.

MVD has a year-round Odd/Even Scheduled Watering Restriction which limits the use of irrigation and sprinkler systems based on your street address and the calendar date.

What type of watering is restricted. . . ? Irrigation & Sprinkler Systems

The following *does not* apply to the Odd/Even Scheduled Restrictions: Hand-held hoses & watering cans for flower & vegetable gardens/car washing/pool filling and pressure washers. While these are permitted any time, we ask that customers use discretion and be conservative when it comes to water usage.

When can I water. . . ? Check Your Calendar

If the *last* digit of the property address ends in an *even* number (0, 2, 4, 6 or 8) you may water only on even-numbered calendar dates. For example, if the address is 1234 Main St., you would water on *EVEN* calendar days such as the 2nd, 4th, 6th, etc... Likewise, if the *last* digit of the property address ends in an *odd* number (1, 3, 5, 7 or 9) you may water only on odd-numbered calendar dates.

On the 31st of March, May, July August, and October ALL customers may water outside, but only from 5AM to 8AM.

As a reminder - All irrigation and sprinkler systems must be set to comply with the odd/even schedule. Additionally, they must also be adjusted/aligned appropriately to prevent unnecessary watering of areas such as driveways, roadways, parking lots, etc . . . customerservice@mvdwater.org

Merrimack Village District
2 Greens Pond Rd. Merrimack, NH 03054

p: 603-424-9241 e: customerservice@mvdwater.org w: www.mvdwater.org