



2022 CONSUMER CONFIDENCE REPORT

(2021 Data)

EPA ID #: 1531010



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).

Introduction:

The Merrimack Village District's mission is to develop, operate and maintain our water system in a cost-effective manner. MVD achieves this by servicing and maintaining 930,800 feet of Water Mains, 930 Fire Hydrants, 6 Groundwater Wells, 3 Water Storage Tanks, an Iron & Manganese Treatment Plant, 3 Booster Stations, as well as the new PFAS Treatment Plant for wells 4 & 5. Aging infrastructure presents challenges to drinking water safety. Continuous improvements are necessary in order to maintain the water quality throughout the distribution system.

In the past year, MVD has continued with improvements to the water system including renewing the Large Groundwater Withdrawal Permit for Mitchell Woods, continued exploring options and feasibility of Artificial Recharge to the aquifer at Wells 4 and 5, formed a Salt Mitigation Committee with the intention of lowering Sodium and Chloride usages to reduce the levels in the aquifer. Construction of the PFAS Treatment Plant for Wells 7 & 8 has been completed and is operational as of spring 2022. Construction of the Wells 2 & 9 PFAS Treatment Plant is currently under construction and is anticipated to be operational in the Fall of 2022. The cost of these PFAS Treatment Plants are approximately \$14.5 million. These investments, along with on-going operations and maintenance costs, are supported by the voter approved budget as well as grants and loans. MVD continues to pursue additional grants through NHDES. Additionally, MVD has filed suit in New Hampshire Superior Court against the parties responsible for the PFOA contamination of MVD's wells.

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?

100% of Merrimack water comes from groundwater. Groundwater is precipitation that has soaked through the ground's surface and is stored where there are open spaces between rocks and soil. This water is pumped from wells located in various parts of Merrimack and Hollis. Water from each well is treated on-site at each pumping station and distributed through a network of water mains to residential, municipal, commercial and industrial locations. The water from MVD's wells is distributed through MVD's water mains which are an interconnecting looped system. Depending on the situation wells may be on/off at any given point in time. The well source for the water provided may vary based on which wells are on and producing water.



In order to ensure that tap water is safe to drink, the Environmental Protection Agency (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/Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* (found in surface water) and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791 or online at www.epa.gov/safewater.



| Well # | Date Assessment Completed | Susceptibility Rating | | |
|--------|---------------------------------|-----------------------|--------|-----|
| | | High | Medium | Low |
| 001 | 02/20/2002 | 1 | 2 | 9 |
| 003 | 02/20/2002 | 1 | 2 | 9 |
| 004 | 02/20/2002 | 3 | 4 | 5 |
| 005 | 02/20/2002 | 4 | 3 | 5 |
| 007 | 03/31/2000 | 1 | 2 | 9 |
| 008 | 02/20/2002 | 1 | 2 | 9 |
| 009 | 02/20/2002 | 1 | 2 | 9 |

Source Water Assessment Summary: In an effort to assess the vulnerability of each New Hampshire’s public water supply sources, the New Hampshire Department of Environmental Services (NHDES) prepared drinking water Source Water Assessment Reports for all public water systems between 2000 and 2003. The Source Water Assessment Reports include a map of each Source Water Protection Area (SWPA), a list of potential and known contamination sources, as well as a summary of available protection options. The Susceptibility Rating can be viewed on the chart located on this page.

Note: As indicated on the chart, the results of Merrimack Village District’s Source Water Assessment Report are from 2000 and 2002. This information is twenty to twenty-two 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 Source Water Assessment Report is available for review at MVD’s office located at 2 Greens Pond Rd Merrimack, NH. For more information, call MVD’s Water Quality Testing Specialist, Jill Lavoie at 603-424-9241 x: 103 or email jill.lavoie@mvdwater.org, or visit the [NHDES website](https://www.nhdes.org).

How can I get involved?

For more information about your drinking water please contact MVD’s Water Quality Testing Specialist, Jill Lavoie by phone at 603-424-9241 x: 103 or email jill.lavoie@mvdwater.org or contact MVD’s Superintendent, Ronald Miner, Jr. by phone at 603-424-9241 x: 107 or email ron.miner@mvdwater.org.

MVD’s Board of Commissioners meet the 3rd Monday of each month (except holidays). The Public Session Agenda of the BOC Meeting includes “Questions from the Public/Press”. Questions can be submitted in writing to MVD via email at customerservice@mvdwater.org, or by mail to 2 Greens Pond Road, Merrimack, NH 03054. Please refer to MVD’s website www.mvdwater.org for further details (including dates, times, full agendas).

Drinking Water Contaminants:

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water system is responsible for high quality drinking water but cannot control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water from your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking and 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 1-800-426-4791 or at [US EPA Basic Information about Lead in Drinking Water](https://www.epa.gov/lead).



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 various contaminants, including inorganic contaminants (salts, metals), organic chemical contaminants (synthetic and volatile chemicals), and radioactive contaminants. The following tables only show the substances that were detected in MVD's water in 2021 or earlier. Please note, during 2021 MVD temporarily obtained water from Pennichuck Water Works to provide customers with PFAS complaint water. As such, we have included the Pennichuck Water Works testing results from their CCR. Pennichuck Water Works complete CCR can be found on their website at <https://pennichuck.com/pdf/CCR-A0.pdf>.

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 completed in the prior calendar year. The EPA and/or the NHDES 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. The data tables included in this report may have terms and abbreviations that are not familiar; to help with understanding this information we have provided "IMPORTANT DRINKING WATER DEFINITIONS".

QUESTIONS REGARDING THIS CCR REPORT

If you have any questions regarding this report or would like additional information about the water system please contact MVD's Business Manager/Water Quality & Testing Specialist, Jill Lavoie by phone at 603-424-9241 x: 103, by emailing jill.lavoie@mvdwater.org or in-person at MVD 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: | Phone/Website |
|---|--|
| US EPA | www.epa.gov |
| US EPA Safe Drinking Water Hotline | 800-426-4791 |
| NHDES 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 |

VIOLATIONS

| VIOLATIONS | Date of Violation | Explanation of Violation | Length of Violation Return to Compliance | Action Taken to Resolve | Health Effects (Env-Dw 804-810) |
|--|--|---|--|--|---------------------------------|
| DBP Monitoring and Reporting (M/R) - Chlorine | Listed on NHDES OneStop as 07/01/2021. Violation Letter reflects date as 10/11/2021. | This was a reporting violation only. Samples were taken as required per the NHDES Sampling Schedule. Results are required to be received by NHDES by the 10 th of the month following sampling. These results were received by NHDES on 10/14/2021 | 10/15/2021 | Reports were submitted to NHDES. | N/A |
| Monitoring and Reporting (M/R) - Combined Radium (-226 and -228) | 01/01/2021 | Federal rules require a new well perform an initial round of 4 consecutive quarters of radionuclide's and VOCs. Radionuclide's need to be sampled in each quarter to determine seasonal variability. MVD missed the quarter 1 of 2021 required sampling. | 08/27/2021 | The radionuclide's samples were collected in quarter 1 of 2022. The VOC initial round requires 4 consecutive quarters; the first sample was collected in Quarter 2 of 2021 and continued quarterly until Quarter 1 of 2022 | N/A |
| Monitoring and Reporting (M/R) - Compliance Gross Alpha (A.G.A. – Uranium) | 01/01/2021 | | 08/27/2021 | | N/A |
| Monitoring and Reporting (M/R) - Uranium /(Mass units in ug/L) | 01/01/2021 | | 08/27/2021 | | N/A |
| Monitoring and Reporting (M/R) - Volatile Organic Compounds (VOC) | 01/01/2021 | | 01/27/2021 | | N/A |

VIOLATIONS

(CONTINUED)

| VIOLATIONS | Date of Violation | Explanation of Violation | Length of Violation Return to Compliance | Action Taken to Resolve | Health Effects (Env-Dw 804-810) |
|--|-------------------|--|---|--|--|
| MCL/Sample Average Violation - Perfluorooctanoic ACID (PFOA) | 07/01/2021 | <p>The Running Annual Average (RAA) calculation represents the average of all sample results collected within a one-year period. MVD drinking water RAA calculation was above the enforceable MCL for the following:</p> <p>Site ID 504-GPW 3 Camp Sargent Treat House/003: Perfluorooctanoic Acid (PFOA) RAA = 20 ng/L</p> <p>Site ID 505-GPW 2A Berry Ln Treatment House/008 Perfluorooctanoic Acid (PFOA) RAA = 13 ng/L</p> <p>Site ID 508-Finished Water/WTP/Blend 007 009 Perfluorooctanoic Acid (PFOA) RAA = 25 ng/L</p> | Anticipated to Return to Compliance in Fall 2022. | <p>Wells 4 & 5 currently have treatment for PFOA.</p> <p>MVD completed construction for the PFAS Treatment Plant for Wells 7 & 8 in spring of 2022; the PFOA Treatment Systems is online.</p> <p>The construction of the PFAS Treatment Plant for Wells 2 & 9 is scheduled to be complete in the Fall of 2022.</p> <p>MVD has been intermittently flowing water from Pennichuck Water Works that is below the PFOA MCL into the MVD system until the aforementioned treatment systems are complete. MVD Wells that have been found to be over the MCL will only be used if they are absolutely necessary to provide additional supply or in case of emergency. Additionally, MVD has filed suit in NH Superior Court against the parties responsible for PFOA contamination of MVD's wells. MVD is also pursuing grant funding through NHDES for PFOA treatment.</p> | <p>"Some people who drink water containing perfluorooctanoic acid (PFOA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a woman's chance of getting pregnant."</p> |

LEAD AND COPPER

| Contaminant (Units) | Action Level | 90th Percentile Sample Value | Date | # of Sites Above AL | Violation Yes/No | Likely Source of Contamination | Health Effects of Contaminant |
|---------------------|--------------|------------------------------|------------|---------------------|------------------|--|---|
| Copper (ppm) | 1.3 | 0.216 | 11/17/2021 | 0 | No | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives | Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor. |
| | | 0.222 | 06/16/2021 | 0 | No | | |
| Lead (ppb) | 15 | 0.000 | 11/17/2021 | 0 | No | Corrosion of household plumbing systems, erosion of natural deposits | (15 ppb in more than 5%) Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791). (Above 15 ppb) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. |
| | | 0.002 | 06/16/2021 | 0 | No | | |

DETECTED WATER QUALITY RESULTS

Inorganic Contaminants:

| Contaminant (Units) | Level Detected* | Date | MCL | MCLG | Violation YES/NO | Likely Source of Contamination | Health Effects of Contaminant |
|-----------------------------|-----------------|------|-----|------|------------------|---|---|
| Barium (ppm) | 0.086 | 2021 | 2 | 2 | NO | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits | Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure. |
| Nitrate (as Nitrogen) (ppm) | 1.71 | 2021 | 10 | 10 | NO | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits | (5 ppm through 10 ppm) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider. (Above 10 ppm) Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. |

Volatile Organic Contaminants:

| Contaminant (Units) | Level Detected* | Date | MCL | MCLG | Violation YES/NO | Likely Source of Contamination | Health Effects of Contaminant |
|---|---------------------------------------|------|-----|------|------------------|---|--|
| Haloacetic Acids (HAA) (ppb) | Low = ND High = 15 Average = 15 | 2021 | 60 | NA | NO | By-product of drinking water disinfection | Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. |
| Total Trihalomethanes (TTHM) (Bromodichloromethane Bromoform Dibromochloromethane Chloroform) (ppb) | Low = 1 High = 30 Average = 7.5 | 2021 | 80 | N/A | NO | By-product of drinking water chlorination | Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. |

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) CONTAMINANTS

| Contaminant (Units) | Level Detected | MCL | MCLG | Violation YES/NO | Likely Source of Contamination | Health Effects of Contaminant |
|--|-------------------|-----|------|---------------------|---|--|
| Perfluorohexane sulfonic acid (PFHxS) (ppt) | ND | 18 | 0 | NO | Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems | Some people who drink water containing perfluorohexane sulfonic acid (PFHxS) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, or may experience increased cholesterol levels. It may also lower a women's chance of getting pregnant. |
| Perfluorononanoic acid (PFNA) (ppt) | ND | 11 | 0 | NO | Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems | Some people who drink water containing perfluorononanoic acid (PFNA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, or may experience increased cholesterol levels. |
| Perfluorooctane sulfonic acid (PFOS) (ppt) | 2.87 | 15 | 0 | NO | Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems | Some people who drink water containing perfluorooctane sulfonic acid (PFOS) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant. |
| Perfluorooctanoic acid (PFOA) (ppt) | 17.07 | 12 | 0 | YES | Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems | Some people who drink water containing perfluorooctanoic acid (PFOA) in excess of the MCL over many years could experience problems with their liver, endocrine system, or immune system, may experience increased cholesterol levels, and may have an increased risk of getting certain types of cancer. It may also lower a women's chance of getting pregnant. |



RESOURCE INFORMATION FOR PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

The most up to date information can be found on the following websites:

NH PFAS Investigation

<https://www4.des.state.nh.us/nh-pfas-investigation/>

NH Department of Health and Human Services

<https://www.dhhs.nh.gov/programs-services/environmental-health-and-you/poly-and-fluoroalkyl-substances-pfas>

United States Environmental Protection Agency

<https://www.epa.gov/pfas>

MVD PFAS Information

Detailed information, including “Frequently Asked Questions”, Notices, Planning/Financial info, Announcements, Media/Press Releases, as well as the analysis reports of water sampling test results, can be found on our website at www.mvdwater.org.

Additionally, MVD offers email notification of the analysis reports of water sampling test results to subscribers. Visit www.mvdwater.org to subscribe.

Construction of the PFAS Treatment Plant for Wells 7 & 8 has been completed and is operational as of spring 2022. Construction of the Wells 2 & 9 PFAS Treatment Plant is currently under construction and is anticipated to be operational in the Fall of 2022. The cost of these PFAS Treatment Plant is approximately \$14.5 million. These investments, along with on-going operations and maintenance costs, are supported by the voter approved budget as well as grants and loans. MVD continues to pursue additional grants through NHDES. Additionally, MVD has filed suit in New Hampshire Superior Court against the parties responsible for the PFOA contamination of MVD’s wells.

SECONDARY CONTAMINANTS

| Secondary MCLs (SMCL) | Level Detected | Date | Treatment technique (if any) | AL (Action Level), SMCL or AGQS (Ambient groundwater quality standard) | Specific contaminant criteria and reason for monitoring |
|-----------------------|----------------|------|------------------------------|--|---|
| Chloride (ppm) | 153 | 2021 | N/A | 250 | Wastewater, road salt, water softeners, corrosion |
| Iron (ppm) | < 0.25 | 2021 | N/A | 0.3 | Geological |
| Manganese (ppm) | 0.003 | 2021 | N/A | 0.05 | Geological |
| PH (ppm) | 7.083 | 2021 | N/A | 6.5-8.5 | Precipitation and geology |
| Sodium (ppm) | 88 | 2021 | N/A | 100-250 | We are required to regularly sample for sodium |
| Sulfate (ppm) | 22.01 | 2021 | N/A | 250 | Naturally occurring |
| Zinc (ppm) | 0.01 | 2018 | N/A | 5 | Galvanized pipes |

ADDITIONAL TESTING

| Additional Tests | Description of Data Requested | Date | Treatment Technique (if any) | Results (with units) | Specific contaminant criteria and reason for monitoring |
|----------------------------------|-------------------------------|------|------------------------------|---|--|
| Iron | Average | 2021 | N/A | .96 mg/L | Samples taken for Corrosion Control Study |
| Orthophosphate-P | Average | 2021 | N/A | .441 mg/L | |
| Total Organic Compounds Combined | Average | 2021 | N/A | 1.098 mg/L | |
| Turbidity (NTU) | Average | 2021 | TT | 1.71 NTU | Samples taken for System Evaluation Study Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. |
| Bromide | Average & Range | 2021 | N/A | Low – 25.9 High – 75.2 Average – 46.3 | UCMR – Unregulated Contaminant Monitoring Rule EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act (SDWA). |
| Manganese | Average & Range | 2021 | N/A | Low – 2.5 High – 390 Average – 99.8 | |

PENNICHUCK WATER WORKS

During 2021 MVD temporarily obtained water from Pennichuck Water Works provide customers with PFAS complaint water. As such, we have included the Pennichuck Water Works testing results from their CCR. Pennichuck Water Works complete CCR can be found on their website at <https://pennichuck.com/pdf/CCR-A0.pdf>.

| Pennichuck Water- Nashua Core- 2021 Results | | | | | | EPA # 1621010 | | |
|--|----------------|-----------------------------|------------------------------|--|--|----------------------------|--|--|
| Turbidity | TT | Lowest Monthly % of Samples | | Highest Detected Daily Value | | Violation Yes/No | Typical Source of Contaminant | |
| Daily Compliance (NTU) | 5 | ----- | | 0.90 on July 20, 2021 | | No | Soil Runoff | |
| Monthly Compliance* | At least 95% | 99.62 % - November of 2021 | | ----- | | No | | |
| 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. | | | | | | | | |
| Inorganic Contaminants | Year Collected | Highest Detect | Range Detected | MCL | MCLG | Violation Yes/No | Typical Source of Contaminant | |
| Barium (ppm) | 2021 | 0.0078 | NA | 2 | 2 | No | Discharge of drilling wastes; discharge from metal refineries; erosion or the natural deposits | |
| Nitrate (ppm) | 2021 | 0.40 | NA | 10 | 10 | No | Runoff from fertilize use; leaching from septic tanks, sewage; erosion of natural deposits | |
| Total Organic Carbon (ppm) | 2021 | Average 0.81 | 0.54 – 0.98 | TT | NA | No | Naturally present in the environment | |
| Organic Chemical Contaminants | | | | | | | | |
| Perfluorooctanoic acid (PFOA)(ppt) | 2021 | RAA 2.50 | ND - 6.12 | 12 | 0 | No | Discharge from industrial processes, wastewater treatment, residuals from firefighting foam, runoff/leachate from landfills and septic systems | |
| Disinfectants and Disinfection By-Products | Year Collected | Level Detect | Range Detected | MCL | MCLG | Violation Yes/No | Typical Source of Contaminant | |
| Chlorine (ppm) | 2021 | Average 0.61 | 0.02 - 1.66 | 4-MRDL | 4-MRDLG | No | Water additive used to control microbes | |
| Total Trihalomethanes (TTHM) (ppb) | 2021 | RAA 35.5 | 10.0 - 48.0 | 80 | NA | No | By-product of drinking water disinfection | |
| Haloacetic Acids (ppb) | 2021 | RAA 12.5 | 7.0 – 15.0 | 60 | NA | No | By-product of drinking water disinfection | |
| | Year Collected | 90th Percentile | Action Level | MCLG | # of Sites Sampled | # sites above Action Level | Violation Yes/No | Typical Source of Contaminant |
| Lead (ppb) | 2020 | 0 | 15 | 0 | 26 | 0 | No | Corrosion of household plumbing systems, erosion of natural deposits |
| Copper (ppm) | 2020 | 0.05 | 1.3 | 1.3 | 26 | 0 | No | Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives |
| Radiological Contaminants | Year Collected | Highest Detect | Range Detected | MCL | MCLG | Violation Yes/No | Typical Source of Contaminant | |
| Radium 226 & 228 (pCi/L) | 2015 | 0.5±0.8 | NA | 5 | 0 | No | Erosion of natural deposits | |
| Secondary Contaminants | | | | | | | | |
| Secondary MCLs (SMCL) | Level Detected | Date | Treatment technique (if any) | AL (Action Level), SMCL or AGQS (Ambient groundwater quality standard) | Specific contaminant criteria and reason for monitoring | | | |
| Chloride (ppm) | 63 | 2021 | N/A | 250 | Wastewater, road salt, water softeners, corrosion | | | |
| Hardness (ppm) | 17.3 | 2021 | N/A | N/A | Geological | | | |
| Iron (ppm) | 0.032 | 2021 | N/A | 0.3 | Geological | | | |
| Manganese (ppm) | 0.0096 | 2021 | N/A | 0.05 | Geological | | | |
| Nickel (ppm) | 0.0023 | 2021 | N/A | N/A | Geological; electroplating, battery production, ceramics | | | |
| pH (SU) | 7.76 | 2021 | N/A | 6.5-8.5 | Precipitation and geology | | | |
| Sodium (ppm) | 40.1 | 2021 | N/A | 100-250 | Road salt, septic systems (salt from water softeners) We are required to regularly sample for sodium | | | |
| Sulfate (ppm) | 5 | 2021 | N/A | 250 | Naturally occurring | | | |
| Zinc (ppm) | 0.277 | 2021 | N/A | 5 | Galvanized pipes | | | |

PENNICHUCK WATER WORKS

(Continued)

Pennichuck Water- Nashua Core- 2021 Results

| ADDITIONAL TESTING | | | | |
|---|----------------|----------------|----------------|--|
| Unregulated Contaminant Monitoring Regulation 3 | Year Collected | Highest Detect | Range Detected | Reason for Monitoring |
| Strontium (ppb) | 2015 | 86 | 56 - 86 | The elements listed in this section are contaminants that do not have a standard set. These <i>contaminants</i> are monitored in order to provide information to the US Environmental Protection Agency, while they conduct evaluation on whether these contaminants should have a standard established. |
| Chromium, Hexavalent (ppb) | 2015 | 0.06 | BDL – 0.06 | |
| Chlorate (ppb) | 2015 | 100 | 72 - 100 | |
| Unregulated Contaminant Monitoring Regulation 4 | | | | |
| Haloacetic Acids HAA5 (ppb) | 2018/2019 | 21.6 | 4.4 - 21.6 | The elements listed in this section are contaminants that do not have a standard set. These <i>contaminants</i> are monitored in order to provide information to the US Environmental Protection Agency, while they conduct evaluation on whether these contaminants should have a standard established. |
| Haloacetic Acids HAA6Br (ppb) | 2018/2019 | 8.5 | 4.6 - 8.5 | |
| Haloacetic Acids HAA9 (ppb) | 2018/2019 | 28.9 | 8.6 – 28.9 | |
| Manganese (ppb) | 2018/2019 | 4.06 | 0.7 - 4.6 | |
| Germanium (ppb) | 2018/2019 | BDL | BDL | |
| Cyanotoxin Assessment Monitoring | | | | |
| Total microcystin (ppb) | 2020 | BDL | BDL | The elements listed in this section are contaminants that do not have a standard set. These <i>contaminants</i> are monitored in order to provide information to the US Environmental Protection Agency, while they conduct evaluation on whether these contaminants should have a standard established. |
| Cylindrospermopsin (ppb) | 2020 | BDL | BDL | |
| Anatoxin-a (ppb) | 2020 | BDL | BDL | |

IMPORTANT DRINKING WATER DEFINITIONS

| TERM | DEFINITION |
|----------------------|--|
| AGQS | Ambient Groundwater Quality Standard: An enforceable standard set by NHDES under Chapter 485 of the New Hampshire Safe Drinking water Act. |
| AL | Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. |
| BDL | Below Detection Limit |
| LEVEL I ASSESSMENT: | A study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system. |
| LEVEL II ASSESSMENT: | A very detailed study of the water system to identify potential problems and determine, if possible, why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions. |
| 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 | 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. |
| mg/L | Milligrams per Liter |
| MNR | Monitored Not Regulated |
| MPL | State Assigned Maximum Permissible Level |
| 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 | 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 |
| N/A or 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 | Parts per Billion or Micrograms per Liter (µg/L) |
| ppm | Parts per million or Milligrams per Liter (mg/L) |
| ppt | Parts per Trillion |
| RAA | Running Annual Average |
| TTHM | Total Trihalomethanes |
| TT | Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water. |
| UCMR | Unregulated Contaminant Monitoring Rule |
| ug/L | micrograms per Liter |



WATER RESTRICTIONS/BANS

Purpose:

1. To assist in managing the water distribution system – ensuring we maintain adequate supply for residential and commercial usage.
2. Maintain the required level of water in the storage tanks to ensure ample pressure for potential use by the Town of Merrimack's Fire Department.
3. Comply with the New Hampshire Department of Environmental Services (NHDES) Drinking Water and Groundwater Bureau (DWGB) rules and regulations which requires water providers to submit and enforce a "Conservation Plan".

Reasoning:

MVD's water is supplied from groundwater wells, not surface water such as rivers, lakes, and reservoirs. The New Hampshire Department of Environmental Services (NHDES) Drinking Water and Groundwater Bureau (DWGB) permits each of MVD's wells to withdraw a maximum specified quantity of water from the ground per minute – this limits the amount of water we are permitted to produce at a time. Limiting the production amount allows water withdrawal from the aquifer in a controlled manner, which helps protect against seasonal fluctuations, and aids in maintaining sufficient supply. Irrigation and sprinklers have the highest rate of water consumption and causes substantially increased demands. Increased demand is supplied by three storage tanks; the tanks cannot fill up faster than what we are allowed to produce – having Water Restrictions allows the tanks to replenish and be ready for peak usage demands.

Details:

Information about the current Watering Restriction as well as any changes to the Level of the Watering Restrictions can be found posted on signs/banners located throughout town, through email notification for subscribers, as well as on MVD's Facebook page and website.

Other useful information on the Watering Restrictions/Bans page of our website is a "*Frequently Asked Questions*" document, an "*Irrigation Calculator*", links to the "*US Drought Monitor for NH*" and to the "*Known Water Use Restrictions*".

MVD staff adjusts production rates to match demand and continuously monitors the water distribution system, the weather conditions and forecasts to determine if additional Watering Restrictions are necessary.

Please be advised - MVD's Watering Restrictions and Bans are strictly enforced.

Per MVD By-Law 1.D.: "*The first violation will result in a warning letter. Further violations will result in termination of water service as well as fees.*"

MVD has FOUR levels for Water Restrictions as follows:

| | |
|--------------------------------|--|
| YEAR-ROUND ODD/EVEN | <p>Address/Calendar Day - Watering is permitted based on number of the street address.</p> <ul style="list-style-type: none"> ◦ Odd Street Address: ODD calendar days ◦ Even Street Address: EVEN calendar days ◦ <i>Condo Units – please contact your Property Management Company</i> <p>31st of March, May, July, August, and October – all residents may water outside, from 5AM to 8AM only. (Refer to MVD By-Laws 2.D. and 2.J.)</p> |
| LEVEL 1 | <p>ODD/EVEN with <i>TIME LIMIT</i></p> <ul style="list-style-type: none"> ◦ Odd Street Addresses: ODD calendar days ◦ Even Street Addresses: EVEN calendar days ◦ <i>Condo Units – please contact your Property Management Company</i> <p>ONLY between: 5am to 8am and/or 5pm to 8pm</p> <ul style="list-style-type: none"> i. Washing of streets, driveways, sidewalks or other impervious areas is prohibited. ii. Washing of cars and boats at a non-commercial facility shall be restricted to odd/even days by address as described above. |
| LEVEL 2 | <p>DAY AND TIME LIMIT</p> <ul style="list-style-type: none"> ◦ Odd Street Addresses: <i>MONDAYS & THURSDAYS</i> ◦ Even Street Addresses: <i>TUESDAYS & FRIDAYS</i> ◦ <i>Condo Units – please contact your Property Management Company</i> <p>ONLY between: 5am to 8am and/or 5pm to 8pm</p> <ul style="list-style-type: none"> i. Washing of streets, driveways, sidewalks or other impervious areas is prohibited. ii. Washing of cars and boats at a non-commercial facility shall be restricted to odd/even days by address as described above. |
| LEVEL 3 | <p><u>NO OUTSIDE WATER USE</u></p> |

Restriction Exceptions:

- i. Hand irrigation of crops used for food by residents at a residential property shall not be restricted.
- ii. Water to sustain animal life shall not be restricted.
- iii. Despite the authority granted by RSA 41:11-d. water use restrictions shall not apply to uses that obtain water from sources other than the public water supply, unless it can be clearly demonstrated that the use of such water directly affects the public water supply. Note: Municipalities or village districts have the authority to implement lawn watering restrictions in accordance with RSA 41:11-d applicable to all water users (including those using private wells) under state declared drought conditions.



Merrimack Village District

2 Greens Pond Rd Merrimack, NH 03054

Monday – Friday 8:00 AM - 4:30 PM

Phone : 603-424-9241

Fax : 603-424-0563

Email : customerservice@mvdwater.org

Website: www.mvdwater.org

Facebook: www.facebook.com/MerrimackVillageDistrict

Visit MVD's website www.mvdwater.org

Billing, Payment, and Rate Info, Appointment Scheduling, Scheduled Maintenance/Repairs, Water Flushing, Outages, Water Quality, Water Restrictions/Bans, By-Laws, Meetings, and Reports and to access the new Customer Web Portal MyMVD

Want the latest updates...?

Visit the website to sign up for MVD's email notifications and follow us on Facebook



MyMVD is NOW AVAILABLE!!

MVD's new online customer web portal for all-in-one access!

View your bill, account history, make payments, and MORE...Log into MyMVD to view/update your options for:

- **E-bill**
- **AutoPay**
(no fee for ACH bank payment)
- **New Communication Options**

Receive emails, automated calls, and/or texts for the following:

- Billing Statements
- Late Fee/Disconnect Notices
- Payment Receipts
- AutoPay Notifications
- Returned Payments
- High Usage Notifications

www.mvdwater.org

Click the  logo

NOTE: There is a Payment Services Fee (PSF) to process Credit/Debit Card & E-check payments. The PSF is the greater of \$2.50 or 2.5%. The PSF is charged by the payment processing company.

The PSF is non-refundable. Per "NH RSA 80:52c Electronic Payment" MVD cannot absorb any processing fees; all fees must be paid by the customer.

The PSF will appear on your statement as "MERRIMACK VILLAGE". By processing payment you agree to MVD's Terms & Conditions.