

**CONSUMER CONFIDENCE REPORT**  
**2022**  
**RAYNHAM CENTER WATER DISTRICT**  
***Public Water Supply #4245000***

PO BOX 160

RAYNHAM MA. 02767

COMMISSIONERS  
Barrett Johnson --Chairman  
John A. Dolan  
James Wagner

SUPERINTENDENT  
Jon R. Chase

**GENERAL INFORMATION**

The main sources of drinking water for the Raynham Center Water District are 9 gravel packed wells located within various areas of the district. Five are located at the Nip Treatment Facility, three at the John P Lynn, and 1 located at the North Main st Treatment facility.

High levels of iron and manganese are removed at all well sites. Three filter plants are capable of treating 4 million gallons per day. Once the iron and manganese has been removed the water is also chlorinated to prevent contamination. The pH is then adjusted to approximately 7.6 to prevent corrosion in the water distribution system.

The Board of Water Commissioners meet on the second Monday of each month, at 6 PM in the Water District Office located at 280 Pleasant Street. These meetings are open to the public and residents are encouraged to attend.

The day to day operations are overseen by the superintendent, Jon R Chase. He can be reached at 508-824-0020 during regular business hours. If you have any questions about the content of this report, or any other questions or comments, please feel free to contact him at the district office.

The Source Water Assessment and Protection (SWAP) report is available at the district office. This report assesses the susceptibility of our wells due to potential contamination by microbiological pathogens and chemicals. The overall susceptibility to contamination was rated as high due to the fact there is filling station located in the Gushee Pond-Lake Nip Zone II area.

**WATER QUALITY INFORMATION**

*The Raynham Center Water District* is committed to supplying you with safe, clean, dependable drinking water 24 hours per day, 365 days per year. The Raynham Center Water District met all federal and state requirements for water quality in the year 2019. If you have any suggestions or complaints, or would like to discuss anything pertaining to the water district please call the office at 508-824-0020.

*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.

*If present*, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Raynham Center Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

*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 the water is unsafe. Call EPA's Safe Drinking Water Hotline @ 1-800-426-4791 for more information about contaminants and potential health effects.

*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 and human activity.

*Contaminants* that may be present in source water before treatment 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 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 and residential uses. Radioactive contaminants are naturally occurring

*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, stormwater runoff, and septic systems.

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

**Per- and Polyfluoroalkyl Substances (PFAS)**, are caused by discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.

**In order to insure that tap water is safe to drink**, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. We treat our water according to EPA regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

### **Cross Connections**

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

The Raynham Center Water District recommends the installation of backflow prevention devices, such as low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase these at a plumbing supply store or hardware store.

For additional information on cross connections and on the status of the districts cross connection control program please contact Belcher Stanley III at the district office.

#### **WATER SAMPLING RESULTS 2021**

| <b>Volatile Organics</b>              | <b>Date Taken</b> | <b>Highest reading</b> | <b>MCL</b> | <b>Detection Limit</b> | <b>Range detected</b> | <b>violation</b> | <b>MCLG</b> | <b>Typical Cause of Contamination</b>     |
|---------------------------------------|-------------------|------------------------|------------|------------------------|-----------------------|------------------|-------------|---|
| TTHM'S<br>Total Trihalomethanes (ppb) | 2022              | 73.4                   | 80         | .5                     | 67.8 – 73.4           | N                |             | By-product of drinking water chlorination |
| Halocetic Acids (ppb)                 | 2022              | 31.4                   | 60         | .5                     | 15.6 – 31.4           | N                |             | By-product of drinking water chlorination |
| Chloroform (ppb)                      | 2022              | 14.8                   |            | .5                     | 3.8 -14.8             | N                |             | By-product of drinking water chlorination |
| Bromodichloromethane (ppb)            | 2022              | 7.2                    |            | .5                     | 2.3 – 7.2             | N                |             | By-product of drinking water chlorination |
| Bromoform (ppb)                       | 2022              | ND                     |            | .5                     | ND                    | N                |             | By-product of drinking water chlorination |
| Dibromochloromethane (ppb)            | 2022              | 2                      |            | .5                     | 1 - 2                 | N                |             | By-product of drinking water chlorination |

#### **Misc.**

|                   |      |      |     |      |             |   |    |  |
|-------------------|------|------|-----|------|-------------|---|----|--|
| Perchlorate (ppb) | 2022 | .32  | 2.0 | .012 | .16 -.32    | N |    | Flares, Fireworks, Batteries, naturally occurring                |
| Manganese (ppm)   | 2022 | .025 | .05 | .005 | ND - .025   | N |    | Naturally Occurring in found in soils, ground and surface waters |
| Sodium (ppm)      | 2022 | 85.6 | 20  | .02  | 62.2 - 85.6 | N |    | Erosion of natural deposits and runoff                           |
| Nitrates (ppm)    | 2022 | .99  | 10  | .5   | .27-.99     | N | 10 | Fertilizer runoff  |

#### **PCE's**

|                           |      |     |   |    |         |   |    |                                   |
|---------------------------|------|-----|---|----|---------|---|----|-----------------------------------|
| Tetrachloroethylene (ppb) | 2022 | 1.4 | 5 | .5 | ND- 1.4 | N | 10 | Vinyl lining in older water mains |
|---------------------------|------|-----|---|----|---------|---|----|-----------------------------------|

#### **Radionuclides**

|                     |      |     |    |     |           |   |   |  |
|---------------------|------|-----|----|-----|-----------|---|---|--|
| Gross Alpha (pCi/l) | 2021 | 2.0 | 15 | 1.5 | 1.7 – 2.0 | N | 0 | Naturally occurring, erosion of natural deposits |
|---------------------|------|-----|----|-----|-----------|---|---|--|

| Disinfectants        | Collected | Annual Average | Monthly Range | MRDL | MRDLG | Violation Y or N | Source(s)                               |
|----------------------|-----------|----------------|---------------|------|-------|------------------|---|
| Total Chlorine (RAA) | Monthly   | .255 mg/l      | .201 to .298  | 4    | 4     | N                | Water Additive used to control microbes |

**Regulated - Per and Polyfluoroalkyl Substances (PFAS)**

| Regulated Contaminant | Date(s) Collected | Detect Result or Range | Quarterly Average | MCL | Violation | Possible Sources  | Health Effects  |
|-----------------------|-------------------|------------------------|-------------------|-----|-----------|---|---|
| PFAS6 (ng/l)          | 2022              | 2 to 34                | 28                | 20  | Yes       | Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams. | Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers. |

**Unregulated - Per and Polyfluoroalkyl Substances (PFAS)**

| Unregulated Contaminant (CASRN)                      | Date Collected | Detect Result or Range | Average |   | Possible Sources | Health Effects |
|--|----------------|------------------------|---------|---|------------------|----------------|
| Perfluorobutane sulfonic acid (PFBS) (375-73-5) ng/l | 2022           | 1.5-4.9                | 2.56    | * | -                | -              |
| Perfluorhexanoic acid (PFHxA) (307-24-4) ng/l        | 2022           | 1.5-19                 | 6.59    | * | -                | -              |

| Lead and Copper | Date Collected | AL   | MCLG | 90 <sup>th</sup> Percentile | Sites Above AL | Number Samples | Violation | Typical Source     |
|-----------------|----------------|------|------|-----------------------------|----------------|----------------|-----------|--------------------|
| Lead (ppb)      | 2020           | .015 | 0    | .005                        | 0              | 20             | N         | Household plumbing |
| Copper (ppm)    | 2020           | 1.3  | 1.3  | .34                         | 0              | 20             | N         | Household plumbing |

**Terms and Abbreviations**

**ppb**...parts per billion                      **ppt** ... parts per trillion                      **ng/l**...nanogram per liter

**ppm**...Parts per million                      **ND**... Not detected                      **RAA**...Running Annual Average

**MCL**...Maximum containment level. The highest allowable level

**MCLG**...Maximum containment level goal. The level of a contaminant below which there is no known health risk.

**AL**...Action level. The concentration of a contaminant which when exceeded triggers treatment or other requirements.

**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 (ex. Chlorine, chloramines, chlorine dioxide)

**MRDLG**---**Maximum Residual Disinfectant Level Goal**---The level of a drinking water disinfectant below which there is no known of expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**pCi/l**---picocuries per liter (a measure of radioactivity)

**Sprinkling Restrictions**

**Beginning May 1, 2023 through September 30, 2023**

Outdoor Lawn watering will be allowed mornings from 5AM to 9AM based on the ODD/EVEN street addresses. ODD days will begin on May 1. Hand held hoses will be allowed anytime. Water restrictions may be reduced depending on Mass DEP drought restrictions.

## About Lead

Due to the increased awareness concerning lead in drinking water we at the Raynham Center Water District would like to reassure our customers that the District is in compliance with all State and Federal drinking water standards concerning lead and copper. There are no lead service lines located within the Raynham Center Water District. If you have any questions or concerns on this or any other matter, please do not hesitate to call the district office at 508-824-0020.

## About Manganese

Manganese is a naturally occurring mineral found in rocks, soil, groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but can have undesirable effects on certain sensitive populations at elevated concentrations. The United States Environmental Protection Agency (EPA) and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ug/L (micrograms per liter), or 50 parts per billion (ppb). In addition, MassDEP's Office of Research and Standards (ORS) has set a drinking-water guideline for manganese (ORSG), which closely follows the EPA public health advisory for manganese. Drinking water may naturally have manganese, and when concentrations are greater than 50 ug/L, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people limit their consumption of water with levels over 1,000 ug/L, primarily due to concerns about the possible neurological effects. Children up to one year of age should not be given water with manganese concentrations over 300 ug/L, nor should formula for infants be made with that water for longer than 10 days. The ORSG differs from the EPA's health advisory because it expands the age group to which a lower manganese concentration applies from children less than six months of age to children up to one year of age to address concerns about children's susceptibility to manganese toxicity

## Per and Polyfluoroalkyl Substances (PFAS) exceedance

In August of 2022 the Gushee well field exceeded the Quarterly MMCL of 20 ng/l. Residents were all notified by mail of the exceedance as required by the Mass Department of Environmental Protection (DEP). With water restrictions and taking the wells off line that were found to be contributing to the problem, PFAS levels went back to below the Quarterly MCL by September of 2022. The District continues to monitor PFAS levels on a Monthly basis at the Gushee wellfield and Quarterly at the Lake Nip treatment facility and the North Main Street treatment facility.

To permanently resolve the problem, the District has been working with our consulting engineers to design and construct additional treatment facilities with the goal of removing PFAS substances from the drinking water to meet all state and Federal regulations. With the assistance of the Town of Raynham we were able to acquire APRA funds to assist with design costs. Working with our consulting engineers and the Mass DEP the District was able to secure funding through the Massachusetts Clean Water Trust revolving loan program. This funding will come in the form of 0% interest loan with principal forgiveness. The District's goal is to have the design completed and approved by DEP by the end of this year, with construction beginning in early 2024.

## About Per and Polyfluoroalkyl Substances (PFAS)

Per and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time. The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them. Some products that may contain PFAS include: • Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes • Nonstick cookware • Stain-resistant coatings used on carpets, upholstery, and other fabrics • Water-resistant clothing • Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup) • Cleaning products • Paints, varnishes, and sealants Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit <https://www.atsdr.cdc.gov/pfas/index.html>.

## About Cross Connections

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (back pressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (back siphonage). Outside water taps and garden hoses tend to be the most common source of cross-connection contaminations at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination. Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed, and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.