



2021 Report to Consumers on Water Quality

Devens, Massachusetts Public Water System #2019001

Dear Customer,

We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that all utilities issue an annual “Consumer Confidence” report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains and the risks our water testing and treatment are designed to prevent. MassDevelopment is committed to providing you with the safest and most reliable water supply. Informed consumers are our best allies in maintaining safe drinking water. This report was prepared with the technical assistance provided by the American Water Works Association, MassDEP, and information provided by Suez, the company that operates and maintains the Devens Water System under contract to MassDevelopment.

OVERVIEW

MassDevelopment provides high quality ground water to customers in the Devens Regional Enterprise Zone. The Devens water supply has a permit to pump up to 4.8 million gallons per day. Securing the quality and safety of this resource is extremely important to us.

WATER SOURCE AND TREATMENT

The Devens water system includes three active gravel-packed wells and the inactive well field at the Grove Pond pumping station. It also includes more than 50 miles of water mains and two 1-million-gallon storage tanks.

Iron and manganese are often present in groundwater wells at levels that can discolor the water, or cause it to take on unpleasant odors or tastes. Even though the water is still safe to drink, treatment is often desired. We are currently building new water treatment plants using greensand filtration media to remove iron and manganese from the water produced at the Patton and Shabokin Wells. The new Patton and Shabokin treatment plants will also consist of granular activated carbon and resin exchange filters to remove PFAS. At MacPherson Well we are building a new treatment plant that will remove PFAS only as that well does not have high levels of iron and/or manganese. Additionally, we have installed temporary PFAS treatment plants at each of our 3 wells that will continue to operate until the new permanent plants are up and running. The new Patton and Shabokin treatment plants are expected to come online in 2023 and the new MacPherson plant is expected to come online by mid-2022. Currently, in addition to the temporary PFAS treatment, our treatment at each well consists of adding a blended phosphate solution to water. This results in a chemical reaction known as sequestration and helps prevent iron and manganese from forming nuisance particles. The phosphate treatment also provides a coating to water distribution mains that reduces corrosion. For additional corrosion control we use potassium hydroxide (KOH) to raise the pH of the water chemistry to bring our water up to a less corrosive state that is neutral or slightly alkaline. All chemicals used for this process are approved for water treatment by one of the following organizations: National Sanitation Foundation (now known as NSF International) or UL. Both are accredited by the American National Standards Institute (ANSI). Chemicals also must meet standards established by the American Water Works Association.

It is necessary to disinfect all reservoirs and some ground water sources to eliminate disease-carrying organisms. Nationally, EPA has found that these water sources contain numerous microorganisms, some of which can cause health problems if ingested. Disinfection destroys harmful organisms. Sterilization kills all microorganisms, even though most are not harmful, and is too costly to use on a routine basis. The Devens water system uses sodium hypochlorite (NaOCl) as its disinfectant. Chlorine destroys organisms by penetrating cell walls and reacting with enzymes. Disinfection with chlorine has proven to be effective at ensuring that water is safe to drink. MassDevelopment contracts the operations and maintenance of the water system to one of the world's largest O&M contractors of water systems, Suez.

WATER QUALITY DATA TABLES

The following tables show the results of our water quality analysis during 2021 or during the most recent monitoring period for the water we supplied. Every regulated and unregulated contaminant that was detected in the water, even in the minutest traces, is listed here. All data below is from sampling of the water supplied by the MassDevelopment/Devens Water System.

| Regulated Contaminants | Year Sampled | Highest Detect or Highest RAA | Range Detected | MCL or MRDL | MCLG or MRDLG | Violation (Y/N) | Possible Sources in Drinking Water |
|-------------------------------|--------------|-------------------------------|----------------|-------------|---------------|-----------------|---|
| Inorganic Contaminants | | | | | | | |
| Arsenic (ppb) | 2021 | 6 | 1-25 | 10 | -- | N | Erosion of natural deposits |
| Barium (ppm) | 2021 | 0.02 | NA | 2 | 2 | N | Erosion of natural deposits |
| Nitrate (ppm) | 2021 | 0.69 | 0.05 – 1.0 | 10 | 10 | N | Runoff from fertilizer use; erosion of natural deposits |

| Perchlorate (ppb) | 2021 | 0.36 | 0.05 – 1.0 | 2 | -- | N | Rocket propellants, fireworks, munitions, flares, blasting agents |
|---|-----------------|-------------------------------|----------------|-------------|---------------|-----------------|--|
| Regulated Contaminants | Year Sampled | Highest Detect or Highest RAA | Range Detected | MCL or MRDL | MCLG or MRDLG | Violation (Y/N) | Possible Sources in Drinking Water |
| Disinfectants & Disinfection By-Products | | | | | | | |
| Chlorine (ppm) | Monthly in 2021 | 0.64* | 0.21 – 1.1 | 4 | 4 | N | Water additive to control microbes |
| Total Trihalomethanes (TTHMs) (ppb) | 2021 | 10.4* | -- | 80 | -- | N | By-product of drinking water disinfection |
| Haloacetic Acids (HAA5) (ppb) | 2021 | 3.0* | -- | 60 | -- | N | By-product of drinking water disinfection |
| PFOS, PFOA, PFNA, PFHxS, PFHpA, PFDA (ppt) (combined) | 2021 | 4.0 | 0-4.0 | 20 | | N | Man-made chemicals. Used as surfactants to make products stain or water resistant, in fire-fighting foam, for industrial purposes, and as a pesticide. Used in fluoropolymers (such as Teflon), cosmetics, greases and lubricants, paints, adhesives and photographic films. |

* Highest RAA = highest running annual average of four consecutive quarters.

| Lead and Copper | Year Sampled | 90 th Percentile* | Action Level (AL) | MCLG | # of Sites Sampled | # of Sites Above the AL | Possible Source of Contamination |
|-----------------|--------------|------------------------------|-------------------|------|--------------------|-------------------------|--|
| Lead (ppb) | 2021 | 0 | 15 | 0 | 80 | 0 | Corrosion of interior plumbing materials |
| Copper (ppm) | 2021 | 0.42 | 1.3 | 0 | 80 | 0 | Corrosion of interior plumbing materials |

* Nine out of every 10 homes sampled were at or below this level. This number is then compared to the action level for each contaminant.

| Secondary and Unregulated Contaminants | Year Sampled | Range Detected | Average | ORSG or Health Advisory | Possible Source of Contamination |
|---|--------------|----------------|---------|-------------------------|--|
| Iron (ppb) | 2021 | 0 – <100 | <100 | 300* | Erosion of natural deposits |
| Manganese (ppb) | 2021 | 12 - 260 | 117 | 300* | Erosion of natural deposits |
| Sodium (ppm) | 2021 | NA | 12 | 20** | Natural sources; runoff from road salt |
| Sulfate (ppm) | 2021 | 11 - 33 | 21 | -- | Natural sources |
| PFOS, PFOA, PFNA, PFHxS, PFHpA, PFDA (ppt) (combined) | 2021 | 0-6.8 | 6.31 | 20*** | Man-made chemicals. Used as surfactants to make products stain or water resistant, in fire-fighting foam, for industrial purposes, and as a pesticide. Used in fluoropolymers (such as Teflon), cosmetics, greases and lubricants, paints, adhesives and photographic films. |
| Perfluorobutanesulfonic acid (PFBS) (ppt) | 2021 | 0-0.64 | 0.06 | †† | |
| Perfluorohexanoic acid (PFHxA) (ppt) | 2021 | 3.3-8.2 | 6.38 | †† | |

* **Manganese:** Manganese is a naturally occurring mineral found in rocks, soil and 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. 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 drink water with manganese levels less than 300 ug/L and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ug/L, primarily due to concerns about possible neurological effects. Children up to 1 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 6 months of age to children up to 1 year of age to address concerns about children's susceptibility to manganese toxicity. See:*

EPA Drinking Water Health Advisory for Manganese

https://www.epa.gov/sites/production/files/2014-09/documents/support_ccl_magnese_dwreport_0.pdf and MassDEP Office of Research and Standards Guideline (ORSG) for Manganese <https://www.mass.gov/files/documents/2016/08/nr/mangorsg.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.*

****In January 2020, MassDEP updated its PFAS6 Office of Research and Standards Guideline (ORSG) to 20 ng/L and in October 2020 the MCL was adopted.*

For further information regarding MassDEP PFAS regulation development and consumer information refer to:

<https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

<https://www.mass.gov/doc/massdep-fact-sheet-pfas-in-drinking-water-questions-and-answers-for-consumers/download>

†† There is no ORS Guideline for this compound.

DEFINITIONS:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

ppm: Parts per million, or milligrams per liter (mg/l).

ppb: Parts per billion, or micrograms per liter (ug/l).

ppt: Parts per trillion, or nanograms per liter (ng/l).

pCi/l: Picocuries per liter (a measure of radioactivity).

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum Residual Disinfectant Level (MRDL): 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, chloride dioxide).

Maximum Residual Disinfectant Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Secondary Maximum Contaminant Level (SMCL): These standards are developed to protect the aesthetic qualities of drinking water and are not health related.

Unregulated Contaminants: Unregulated contaminants are those for which the 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.

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 likely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

SOURCE WATER ASSESSMENT & PROTECTION (SWAP) REPORT

In 2003, the Massachusetts Department of Environmental Protection (MassDEP) completed a SWAP report for the Devens Water System. The report is a planning tool to support local and state efforts to improve water supply protection. Your water sources are protected by the establishment of protective barriers known as Zone I and Zone II areas. The Devens susceptibility level is rated at High.

Source Protection Recommendations:

To better protect our sources for the future, MassDEP recommended that we:

- Continue to inspect the Zone I's regularly and where possible, obtain complete ownership of the Zones.
- Educate residents on ways they can help protect drinking water sources.
- Work with emergency response teams to ensure they are aware of the storm water drainage in our Zone II and to cooperate on responding to spills and accidents.
- Develop and implement a Wellhead Protection Plan.

The SWAP report may be viewed at the Devens Utilities office at 33 Andrews Parkway or online at www.mass.gov/eea/docs/dep/water/drinking/swap/cero/2019001.pdf

ADDITIONAL HEALTH INFORMATION

In order to ensure that tap water is safe to drink, MassDEP and the US 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 the Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for human health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

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 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:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- (E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than is 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* or additional information on lead risks are available from the Safe Drinking Water Hotline (800-426-4791).

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. Devens Public Water Supply 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 www.epa.gov/safewater/lead.

PFAS Contaminants: Our system installed temporary PFAS treatment at the Shabokin and MacPherson Wells in July 2019 and the Patton Well was removed from service in August 2019. Subsequent PFAS6 levels in the drinking water have been below the MassDEP's MCL. Additionally, temporary PFAS treatment was installed at the Patton Well in January 2020. The temporary systems will remain in place until the permanent treatment plants are constructed at the MacPherson, Shabokin and Patton wells.

RESIDENTIAL CROSS-CONNECTION EDUCATION

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home, such as a fertilizer spray unit on your garden hose. If the water pressure drops because of fire hydrant use in town or a water main break, fertilizer may be sucked back into the drinking water pipes through the hose. To prevent this problem, the Devens PWS recommends the installation of backflow prevention devices, such as a low-cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase the device at a hardware store or plumbing supply store. For additional information on the Devens cross-connection control program call (978) 784-2931.

CONTACT US

Please call (978) 784-2931 if you have any specific topics you would like to have addressed at any of the residential meetings that MassDevelopment holds as needed. Additional copies of this report are available on request. **This report can also be found on our website at www.devenscommunity.com.** *El informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcalo o hable con alguien que lo entienda bien.*



Consumer Confidence Report Certification

For calendar year _____

A. PWS Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Devens PWS

PWS Name

Devens

City /Town

The community water system named above hereby certifies that its Consumer Confidence Report (CCR) was distributed to customers, appropriate agencies, and notices of availability have been given in compliance with 310 CMR 22.16A. Furthermore, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to MassDEP.

I certify under penalty of law that I am the person authorized to fill out this form and the information contained herein is true, accurate, and complete to the best of my knowledge and belief.

2019001

PWS ID

5,000

Max population

Jim

Name

Manager

Title

(978) 906-4588

Phone

jmoore@massdevelopment.com

E-Mail

6/29/2022

Date

Signature of Owner/Responsible Party or Certified Operator

B. Public Notice Certification

VSS PWS note: if you deliver your CCR by newspaper or postings, that method will not meet PN requirements. You must directly deliver your PN by hand, land mail, or email.

Is this system using this CCR to provide **Tier 3** Public Notice to their customers? Yes No

The PN is for a: Violation UCMR Other

List other

Did you have a consultation with MassDEP? Yes No

Consultation date

The PN can be found on page _____ of the CCR.

Date of PN Occurrence NON-Number

I am reporting multiple Tier 3 PNs. I have listed the additional PN information at the end of this form.

The public water system indicated above hereby affirms that a Tier 3 public notice has been provided within this CCR to consumers in accordance with 310 CMR 22.16(4) including: delivery, content, format requirements, notification deadlines, and that the public water system will meet future requirements for notifying new billing units and new customers of the violation.

If you did not sell water to another community PWS skip Section C.

C. For Systems Selling Water to Other Community Water Systems

My system delivered the applicable information required at 310 CMR 22.16A(3), to the buying system(s) no later than April 1st of this year, or by the mutually agreed upon date specifically included in a written contract between the parties.

D. Annual Cross Connection Education

Is this CCR being used for your system's annual cross-connection education? Yes No
If no, what methods did you use to meet your annual CCCP requirements (citation)?

ALL distribution (posting, land mail, or e-delivery, publication, and good faith efforts) must be completed on or before July 1st.

Instructions for customers to request a hard copy must also be included in e-delivery.

When a URL is used it must be a *direct* link to the document; no other clicks allowed.

E. Consumer Delivery Methods – Based on Population Served

For systems serving fewer than 500 persons: (Choose #1 or #2)

Date of delivery/publication:

1. My system used one or more of the following methods to notify customers that their CCR would not be mailed directly to them but is available to them upon request. (the notice is attached)

Land-mail Door-to-door Newspaper eMail Posted notices

Locations of posted notices

2. My system provided a CCR to each customer by the following method(s):

Published the full CCR in a local newspaper (the published report from newspaper is attached).

Land-mailed or hand-delivered the CCR to consumers.

e-Mailed with the CCR either embedded in the email or attached as a PDF. (e-mail is attached)

Posted the CCR on the web and sent the direct URL to customers by way of land-mail or email (notice/postcard is attached).

List URL

For systems serving 500 to 9,999 persons: (Choose either #1 or #2)

Date of delivery/publication:

1. My system provided a copy of the CCR to each customer by:

Land-mail e-Mail with PDF of CCR e-Mail with embedded CCR

Sent a notice (by land or e-mail) containing a *direct* URL to customers (copy is attached)

<https://www.devenscommunity.com/assets/2021DevensWaterQualityReport.pdf>

List the URL if used.

2. My system provided the CCR to each customer by publishing the full report in a newspaper (a copy of the published CCR is attached) and provided notice to consumers of this action by either:

Published a notice of this in a local newspaper

Land mailed a notice of this to consumers.

e-Mailed a notice of this to consumers.

For systems serving 10,000 or more persons:

Date of delivery/publication:

- My system provided a copy of the CCR to each customer by:

Land mail e-Mail with PDF e-Mail with embedded CCR

Sent a notice (by land or e-mail) containing a *direct* URL to customers

List the URL if used.

- For systems serving greater than 100,000 population: In addition to one of the delivery methods checked above, we have posted the CCR on a publicly accessible Internet site as required.

www.

List the URL used

F. Good Faith Delivery Methods (minimum of 3 is required for any sized systems)

Good Faith efforts are *in addition* to your primary method of delivery.

To reach people who drink our water but are not billed customers the following were conducted in addition to the required delivery:

- Posted the CCR on a publicly accessible Internet site at the following address. (Only for systems under 100,000 population who did not use this method as their primary method)
WWW.
List the URL used.
- Mailed the CCR to all postal patrons within the service area (list of zip codes used is attached).
- Mailed a postcard listing the URL where the CCR can be found, to all postal patrons within the service area (list of zip codes used is attached).

WWW.
List the URL used.
- Advertised availability of the CCR in the following news media (the announcement is attach):
 - Radio
 - Newspaper
 - Television / cable
 - Social media
 - Digital signboard
- Published the CCR in local newspaper (attach the published CCR).
- Posted the CCR in public places i.e., post office, town hall, library (list of locations is attached).
- Delivered multiple CCR copies to single-bill addresses serving several persons i.e., apartments, businesses, large private employers (list of locations is attached).
- Delivered multiple CCR copies to community organizations (list of organizations is attached.)
- Posted the CCR or a notice of availability at locations within the apartment/condo complex (list of the locations is attached).
- Deliver CCR to new residents when they move in.
- Other

G. Mandatory Agency Delivery Requirements

All systems must submit CCR to these three agencies

- 1. Local Board of Health** 6/29/2022
Date completed
Deliver 1 copy of CCR and the Certification Form (Contact your board of health as to whether they would prefer hardcopy or e-delivery of CCR.)
- 2. MA Dept. of Public Health** 6/29/2022
Date completed
Deliver 1-copy of CCR and the Certification Form
 - PDF emailed to: dph.ccr@massmail.state.ma.us
 - or
 - Hardcopy to: 250 Washington St.; Boston, MA 02108
- 3. MassDEP Boston Office*** 6/29/2022
Date completed
Deliver 1 copy of CCR, the Certification Form, and all needed attachments
 - PDF emailed to: Program.Director-DWP@Mass.gov.
Label it [PWSID-PWS Name-year-CCR]
 - or
 - Hardcopy to: MassDEP-CCR Program, 1 Winter St. -5th Fl.; Boston, MA 02108

Agencies and consumers must **receive** CCR on or before July 1.

For e-delivery, scan documents into one PDF file. Make sure Cert Form is first with CCR following it.

*Because of COVID-19 restrictions, the preferred delivery method is email.

--Do not send to MassDEP regional offices--
Only Boston is accepting CCRs