Per- and Polyfluoroalkyl Substances (PFAS)

WHAT DID THE PUBLIC NOTICE SAY?

November 29, 2023 Public Notice

The notice of Public Notice (PN) provided to all customers receiving a water bill on November 29, 2023 is a required notice by the Massachusetts Department of Environmental Protection (MassDEP). Additional recipients included managers of multi-unit housing (apartments and condominiums), who were asked to communicate the message to residents of those communities, and individuals signing up for our per-and polyfluoralkyl substances (PFAS) email updates. All recipients are asked to share this information with anyone else who drinks this water. Please note that this PN is for a past exceedance of the Massachusetts PFAS standard for the months of July, August, and September 2023. All results may be viewed below on this website under Current Data and Updates.

If you have not read the public notice document, reviewed our webpage, or visited the informative links below, we highly encourage you to do so. This may seem like a large request, however, PFAS is a complicated matter with multiple aspects to understand.

The Acton Water District has been conducting monthly sampling of its operating sources for PFAS since the beginning of 2021. Our compliance with the Massachusetts drinking water standard, which was adopted in October 2020, is calculated for each treatment plant on a quarterly average basis. Since February 2021, we have been intermittently utilizing the North Acton Water Treatment Plant (NAWTP) to facilitate meeting the community's demand for water. When our sampling results for July, August, and September 2023 were reviewed and averaged for compliance by MassDEP, an exceedance of the maximum contaminant level (MCL) for the third quarter was triggered at this facility. Our other operating facilities were in compliance with the MCL, representing approximately 93% of water supplied to our customers. We have been working with MassDEP to communicate this violation and provide the required public notice to our customers.

The current notice is similar to the previous notices sent between June 2020 and April 2023. The continued focus is to make the community aware that PFAS is present in Acton and to remind members of the sensitive sub-population of the potential risks of consuming the water. Please see the section below on our bottled water rebate program for members of the sensitive sub-population as we work toward implementation of long term solutions. We have heard from many customers that they believe being an older adult or senior puts them at risk. We would like to clarify that older adults would only be at higher risk if they have a medically diagnosed compromised immune system. Older adults should consult with a medical provider if they have questions.

Actions to address PFAS in the public water system are ongoing. Of note, we have altered how we operate our wells and treatment plants, reactivated idle wells, and identified the best available treatment technology for PFAS removal at all our operational facilities. This work is ongoing, and we continue to review the latest water quality data and adjust our course as needed. Based on the past several months of data, these actions are having a positive impact on reducing PFAS below the MCL. Additional information on our actions is described below.

At this time, the District is not the only impacted water system in Acton and all direct neighboring communities have identified PFAS in varying concentrations. This includes both public and private wells in these communities.

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CURRENT DATA AND UPDATES

March 25, 2024 Data Table
Calendar Year 2023 Data Table
Calendar Year 2022 Data Table
Calendar Year 2021 Data Table
Calendar Year 2020 Data Table

The Acton Water District proactively began sampling in early 2020 for PFAS, based on the presence of two Superfund Sites in Acton and the growing momentum towards regulation of PFAS at the state and federal level. Once PFAS were identified in our community, we moved forward with sampling all of our sources of supply, both treated and untreated. At this time, the Superfund sites do not appear to be the source of PFAS in our community although changing Federal regulations could impact that assessment. Efforts to understand the source(s) of PFAS in Acton are ongoing.

Monthly monitoring of our treated water was initiated at the start of the 2021 calendar year. This will determine our compliance with the drinking water MCL of 20 parts per trillion (ppt) established for water systems in Massachusetts. It should be noted that compliance is based on a quarterly average and an individual sample above the MCL does not mean we are not in compliance. Previous monitoring in 2020 improved our knowledge of how PFAS is impacting our water system, and we continue to work with State regulators, consultants, and others to address PFAS in Acton's drinking water.

The NAWTP continues to be used intermittently to meet demand for water. A pilot test was conducted between September 2020 and January 2021, and a design for a PFAS treatment system was completed and approved by MassDEP. At the Annual District meeting on April 13, 2022, voters appropriated $1,000,000 to implement a PFAS treatment system to realize full use of this facility going forward. We are utilizing an emergency loan approved on April 8, 2022, from the Massachusetts Drinking Water State Revolving Fund (SRF) to finance construction of this treatment system. Additionally, money was appropriated that will allow the District to access American Rescue Plan Act (ARPA) funds committed from the Town of Acton's Federal ARPA allocation to cover the engineering costs of this treatment system. D&C Construction Co., Inc. of Weymouth, MA was awarded the construction contract in March 2023 and work began on the project in July 2023. Major system components, including the filter vessels and equalization tank, were delivered to the site in early December 2023. Carbon delivery is scheduled for the last week of February 2024 with commissioning and start-up to follow.

The CAWTP, which consolidated the Conant 1 and Conant 2 wells into a single treatment plant, was placed into service on February 18, 2022. Monthly sampling results indicated increasing levels of PFAS6 over time, prompting us to alter the pumping schedule in late November 2022; this strategy has proven successful in reducing PFAS6 concentrations at this facility, which has had results below the MCL since February 2023. Additionally, two new sources of supply that have exhibited minimal PFAS concentrations are being pursued in this area, which may also help reduce PFAS concentrations at the CAWTP. A long duration pumping test was conducted on these bedrock wells during the spring of 2021 to support permitting by MassDEP. At the Annual District meeting on April 13, 2022, voters

appropriated $200,000 to conduct a pilot test to determine PFAS treatment feasibility and estimated costs at the CAWTP. The pilot test concluded on February 13, 2023 and a pilot study report was subsequently reviewed and approved by MassDEP. At the Annual District meeting on March 15, 2023, voters appropriated $4.9 Million to acquire the 549 Main Street parcel, an important step in getting final approval for the two bedrock wells from MassDEP; this acquisition was completed in December 2023 and final approval for these wells is imminent. Voters also appropriated $2.4 Million to construct these wells at this meeting, which will enable the District to move forward with connecting them to the CAWTP. Finally, voters appropriated $5.42 Million to implement PFAS treatment at the CAWTP. Wright-Pierce began design work for this project in July 2023 and a preliminary treatment plan design has been reviewed by MassDEP. Bidding for this project and the construction of the bedrock wells is expected to be completed this spring, with construction to begin this summer.
Wells serving the South Acton Water Treatment Plant (SAWTP) have been operating at a reduced capacity to help maintain PFAS levels at or below the MCL. To help restore the volume of water at this location, the Assabet 2 well was reactivated in October 2020. At our Annual District meeting on May 5, 2021, voters authorized funding to connect the previously permitted Assabet 3 well to the SAWTP; this well was placed into service in February 2023. Water quality testing has been initiated and we will continue to monitor the effectiveness of this solution, as to date, this well has remained in the single digits for PFAS6. The addition of the Assabet 2 and 3 wells helps us manage PFAS concentrations in treated water while maintaining a measure of flexibility in our system to meet customer demand for water. At the Annual District meeting on April 13, 2022, voters appropriated $200,000 to conduct a pilot test to determine treatment feasibility and estimated costs at the SAWTP. The pilot test was conducted from September to December 2022, and a pilot study report was subsequently reviewed and approved by MassDEP. At the Annual District meeting on March 15, 2023, voters appropriated $8.7 Million to implement PFAS treatment at this location. Weston & Sampson, the design engineer for this project, submitted a preliminary treatment plant design to MassDEP in late November 2023 and MassDEP approved the design in February 2024. Bidding for this project is expected to be completed this spring, with construction to begin this summer.

The Clapp/Whitcomb Water Treatment Plant (CWWTP) utilizes granular activated carbon (GAC) filters as part of its treatment process. GAC has been identified as an effective treatment technology for reducing PFAS concentrations in drinking water, and sampling results from CWWTP in 2020 and 2021 support this. Unfortunately, the CWWTP has not been operated since the end of 2021 due to iron concentrations that are not being effectively reduced by the GAC filters.

The District began additional PFAS sampling in accordance with the Unregulated Contaminant Monitoring Rule (UCMR) in March 2023. This program seeks to collect nationally representative drinking water occurrence data for priority unregulated contaminants. This data supports United States Environmental Protection Agency's (US EPA) future regulatory determinations and as appropriate, assists in the development of national primary drinking water regulations (NPDWRs). UCMR5, the current program, requires all public water systems serving 3,300 or more persons to test for 29 PFAS analytes and lithium between January 2023 and December 2025.

During this monitoring, seven of the 29 PFAS analytes were detected above the Minimum Reporting Level (MRL) at one or more of the District's treatment plants. These results are comparable with those from routine monitoring conducted in accordance with Massachusetts' PFAS6 MCL. Three of the detected analytes are currently regulated in the Commonwealth, while the other four do not currently have any proposed regulatory standards. The District's UCMR5 sampling will conclude in February 2024. A summary of data collected during this program and additional information are available **here**.

Multi-district Litigation (MDL) Settlements

At the September 14, 2020 Board of Water Commissioners' meeting, the Board voted to sign on to PFAS litigation against manufacturers of these chemicals. The law firm of Napoli Shkolnick, PLLC with offices in New York and Massachusetts, was selected to represent the District as an affected party.

In June 2023, two landmark class action settlements emerged from the ongoing multi-district litigation (MDL) over the contamination of drinking water with PFAS resulting from the widespread use of aqueous film-forming foam (AFFF). The first settlement was a $1.185 billion agreement with DuPont, Chemours, and Corteva. The second was a historic $10.3 billion agreement with 3M Company. Both settlements are subject to approval by the United States District Court for the District of South Carolina, a process that is expected to take many months. These settlements will provide funding for public water systems to conduct testing for PFAS and for PFAS treatment technologies. Details on how and when the funds will be distributed amongst claimants are emerging, however it appears any payments will be made over a number of years.

While the settlements reached by DuPont, Corteva, Chemours and 3M mark a significant milestone in the litigation, there are still other chemical manufacturers who have not reached a settlement for the public drinking water PFAS related liabilities. As a result, the litigation against these remaining chemical manufacturers persists.

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PROPOSED FEDERAL DRINKING WATER REGULATION

On March 14, 2023, the US EPA released proposed National Primary Drinking Water regulations for PFOA, PFOS and four other PFAS compounds. Comments on this proposal were provided by the District to US EPA for consideration and may be reviewed **here**. The US EPA is proposing to set a MCL of 4.0 parts per trillion (ppt) for PFOA and 4.0 ppt for PFOS and is proposing to address four additional PFAS (GenX, PFBS, PFNA, and PFHxS) as a mixture using a Hazard Index (HI). The Hazard Index is a tool used to evaluate health risks of simultaneous exposure to mixtures of related chemicals. Additionally, EPA is proposing Maximum Contaminant Level Goals (MCLGs) for each of the six PFAS. A breakdown of the MCLs and MCLGs is shown in the table below.

PFAS Compound	Proposed MCLG	Proposed MCL
PFOA	0 ppt	4.0 ppt
PFOS	0 ppt	4.0 ppt
PFNA	1.0 (unitless Hazard Index)	1.0 (unitless Hazard Index)
PFHxS		
PFBS		
HFPO-DA (GenX)		

The proposed MCLs for PFOS and PFOA are lower than the enforceable Massachusetts PFAS MCL, and two of the four compounds that the US EPA is proposing to address are not currently regulated in Massachusetts. It is anticipated that the US EPA's standards will be finalized in early 2024. Once finalized, MassDEP will need to adopt standards that are at least as stringent as the federal ones. For more information about US EPA's proposed PFAS in drinking water regulation, visit: https://www.epa.gov/system/files/documents/2023-04/Public%20FAQs_PFAS_NPDWR_Final_4.4.23.pdf

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REVISED HEALTH ADVISORIES

On June 15, 2022 the US EPA, issued new health advisories (HAs) for four of the PFAS chemicals. Information on this announcement is available at: https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs. Two of the HAs are considered final and two are considered interim. The HAs for PFOA and PFOS are significantly lower than previous US EPA HAs, lower than current analytical methods can detect, and lower than the enforceable Massachusetts PFAS MCL and proposed US EPA MCL. While the District awaits further guidance and definitive actions from both the US EPA and MassDEP, we continue to make progress on reducing PFAS exposure through drinking water and meeting the enforceable standards promulgated by MassDEP. The actions we are taking support US EPA's goals of informing the public and reducing overall exposure. At this time no additional actions will be taken in response to this announcement.

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BOTTLED WATER REBATE PROGRAM

In recognition of the ongoing presence of PFAS in certain sources of water utilized by the Acton Water District, the Board of Water Commissioners voted on August 2, 2021 to offer rebates to residential water customers in the sensitive subgroup, as defined by the MassDEP, to assist with the purchase of bottled water. You do not need to directly receive a water bill to be eligible for the rebate. Details of the program and an application are available at https://www.actonwater.com/customer-service/bottled-water-rebate-program-for-sensitive-subgroups.

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HOW DOES PFAS GET INTO MY DRINKING WATER?

According to the US EPA, PFAS are a group of thousands of manufactured chemicals that have been used in industry and consumer products worldwide since the 1940s because of their useful properties, like their fire resistance and ability to repel stains, grease, and water. PFOA and PFOS are two of the most widely used and studied PFAS; they have been replaced in the US in recent years with newer PFAS like GenX and PFBS. Many PFAS compounds break down very slowly, meaning concentrations can accumulate in people, animals, and the environment over time.

PFAS can get into drinking water in a variety of ways. The compounds can leach from landfills, disposal sites, and hazardous waste sites into nearby soil and source waters. They can impact water in areas where aqueous film-forming foams (AFFFs) have been applied to extinguish fires. Manufacturing or chemical production facilities that use or produce PFAS may release the compounds into the air or water. Biosolids containing PFAS applied to agricultural lands can run off into local surface waters or percolate into groundwater.

Current scientific research suggests that exposure to high levels of certain PFAS may lead to adverse health outcomes. Research is underway to better understand the health effects of long-term exposure to low levels of PFAS, especially in children, and to determine how different levels of PFAS exposure can lead to a variety of health effects.

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HOW AM I EXPOSED TO PFAS?

PFAS can be present in our water, soil, air, and food as well as in materials found in our homes or workplaces, including:

- **Drinking water** – in public drinking water systems and private drinking water wells.
- **Food** – for example, in fish caught from water contaminated by PFAS and dairy products from livestock exposed to PFAS.
- **Food packaging** – for example, in grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and candy wrappers.
- **Household products and dust** – for example, in stain and water-repellent used on carpets, upholstery, clothing, and other fabrics; cleaning products; non-stick cookware; paints, varnishes, and sealants.
- **Personal care products** – for example, in certain shampoo, dental floss, and cosmetics.

While certain PFAS chemicals are no longer manufactured in the US as a result of phase outs, like the PFOA Stewardship Program , they are still produced internationally and can be imported into the US in consumer goods such as carpet, leather and apparel, textiles, paper and packaging, coatings, rubber and plastics.

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PART PER TRILLION

In order to understand what a chemical measurement means, one needs to have a basic understanding of the type of measuring units used and what they represent. Prior to regulation of PFAS, most of our contaminants were measured using concentration units such as parts per million (ppm) and parts per billion (ppb). But what is a ppm, ppb, or ppt for that matter**,** in plain English?

To illustrate, let's use an example of liquid chlorine added to our water in the treatment process at 1.0 ppm. This value refers to one part of chemical (in this case, liquid chlorine) found in one million parts of our water. To realize how small a value this is, see the following analogies:

One part per million (ppm) equals:

- 1 inch in 16 miles

One part per billion (ppb) equals:

- 1 inch in 16,000 miles

One part per trillion (ppt) equals:

- 1 inch in 16 million miles (600+ times around the earth)

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HOW CAN I STAY INFORMED?

If you do not typically receive a water bill from the Acton Water District and wish to receive future updates regarding PFAS, please visit this website periodically or send an email to wq@actonwater.com with "Updates" in the subject line. Please include your name, address, and email to be informed of new information and future developments related to PFAS.

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WHAT TREATMENT PLANT SERVES MY HOME?

Many people have asked which source the water serving them is from. Our water system is a dynamic system that includes four treatment plants, four treated water storage tanks, and over 130 miles of water pipes. Because the water all pumps into the system, and system hydraulics (how the water moves around in the pipes) can change based on time of day, season, water demand, and how we are operating the various treatment systems, it can be difficult to pinpoint this information. For some customers it is relatively easy to pinpoint but other areas are more challenging, and an answer provided today could be different in a week. Given our current knowledge of PFAS, the numbers reported at our treatment plants should represent a worst-case scenario; because the water blends in the piping distribution system and storage tanks, it is anticipated that PFAS concentrations would be lower at a consumer's tap. Currently, the SAWTP is supplying approximately 81% of the system demand and this facility continues to comply with the PFAS6 MCL.

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WHAT IF I AM NOT SUPPLIED WATER BY AWD?

The December 2022 Public Notice regarding PFAS was sent to every Postal Patron in Acton. This included many people who do not receive water from the District but may have an interest in knowing that PFAS is present in the community. If you have questions regarding PFAS in your primary water supply, you may wish to contact one of the following water systems that may serve recipients of our Public Notice. Contact phone numbers listed are from publicly available records and may not be current.

Concord Water Division 978-318-3250

Littleton Water Department 978-540-2222

Pine Hill Condominium 978-264-0166

Acton Indoor Tennis/Nashoba Sportsman's Club 978-263-9059

Planet Gymnastics/All Seasons Tennis 978-263-1900

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PRIVATE WELL RESOURCES

In the spring of 2020, the Acton Board of Health mailed a fact sheet regarding PFAS to owners of private wells that they had contact information for. Additional resources and information are available for private well owners which can be found here: https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas-in-private-well-drinking-water-supplies-faq. You may contact the Acton Health Department at 978-929-6632 for additional information on private wells.

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WATER FILTERS

Customers wishing to reduce exposure from PFAS in drinking water by filtration in the home should follow the guidance of MassDEP featured below. The Acton Water District does not make recommendations on filters. If you currently own a filter, it is best to contact the manufacturer directly to determine its effectiveness at reducing or removing PFAS. If a current filter is not effective, the manufacturer may be able to advise you on an alternate filter that can be installed using existing equipment.

Some studies have been conducted on the effectiveness of different water filters at reducing PFAS concentrations in drinking water. MassDEP and its partner UMass Amherst evaluated the effectiveness of commercially available Point of Use (POU) devices to remove PFAS from drinking water in Massachusetts. You can access this report and view the results from this study here.

From MassDEP:

Home Water Filters

There are also home water treatment filters capable of removing PFAS from drinking water for the countertop or under the sink. Treatment systems and devices are not specifically designed to meet Massachusetts' drinking water standard for PFAS6. There are systems that have been designed to reduce the sum of PFOS and PFOA to below EPA's former Health Advisory of 70 ng/L. Any treatment device you use should be certified to meet the National Sanitation Foundation (NSF) standards to remove PFOS and PFOA compounds so that the sum of their concentrations is below 70 ng/L. **Please be aware that 70 ng/L is significantly greater than the MassDEP's drinking water standard of 20 ng/L for the PFAS6 compounds.** Many of these treatment devices certified to meet NSF standards will likely be able to reduce PFAS6 levels to well below 70 ng/L, but there are no federal or state testing requirements for these treatment devices. If you choose to install a treatment device, you should check to see if the manufacturer has independently verifiable PFAS6 monitoring results demonstrating that the device can reduce PFAS below 20 ng/L. See more detailed information on treatment systems in the Private Well Factsheet.

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DISCHARGE OF REVERSE OSMOSIS REJECT WATER

MassDEP's Title 5 regulations prohibit the discharge of water purification or filtration devices to septic systems. The groundwater discharge regulations provide that such discharges to a dry well or otherwise to the ground would need a permit, unless they are registered with MassDEP through the Underground Injection Control (UIC) program. Here is the link to MassDEP's guidance on UIC wells:

Standard Design Guidelines for Shallow UIC Class V Injection Wells

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ARCHIVE OF STATUS UPDATES

As new updates are provided, the previous information will be available here organized by date.

2024: February 26, 2024 Data Table; February 12, 2024; February 12, 2024 Data Table

2023: December 11, 2023 Data Table; December 11, 2023; November 28, 2023; November 16, 2023 Data Table; October 31, 2023 Data Table; September 12, 2023 Data Table; September 12, 2023; August 14, 2023 Data Table; August 2, 2023 Data Table; July 17, 2023 Data Table; July 17, 2023; June 28, 2023 Data Table; May 16, 2023 Data Table; April 5, 2023; March 24, 2023 Data Table; March 27, 2023; February 23, 2023 Data Table; February 23, 2023

2022: December 14, 2022 Data Table; December 14, 2022; November 21, 2022 Data Table; October 27, 2022 Data Table; August 15, 2022; August 15, 2022; July 20, 2022 Data Table; July 20, 2022; June 15, 2022 Data Table; May 16, 2022 Data Table; April 11, 2022 Data Table; March 9, 2022 Data Table ; February 9, 2022 Data Table; February 10, 2022; January 12, 2022
2021: December 9, 2021; November 8, 2021 Data Table; October 1, 2021 Data Table; October 1, 2021; July 20, 2021; June 17, 2021 Data Table; May 19, 2021 Data Table; April 1, 2021; February 18, 2021
2020: December 16, 2020; September 29, 2020; August 10, 2020; July 22, 2020; July 9, 2020; June 25, 2020
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RESOURCES/LINKS

USEPA PFAS Resources
https://www.epa.gov/pfas
MassDEP PFAS Resources for Public Water Supplies
https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas
MassDEP PFAS Regulatory Process
https://www.mass.gov/lists/development-of-a-pfas-drinking-water-standard-mcl
MassDPH Bottled Water Standards
https://www.mass.gov/info-details/water-quality-standards-for-bottled-water-in-massachusetts
MassDEP Certified Labs
https://eeaonline.eea.state.ma.us/DEP/Labcert/Labcert.aspx
MassDPH
https://www.mass.gov/service-details/per-and-polyfluoroalkyl-substances-pfas-in-drinking-water
Green Acton
https://greenacton.org/2020/07/06/pfas-101/
Agency for Toxic Substances and Disease Registry (ATSDR) Guide for Clinicians
https://www.atsdr.cdc.gov/pfas/docs/clinical-guidance-12-20-2019.pdf
American Water Works Association PFAS Cycle
https://www.awwa.org/Portals/0/AWWA/ETS/Resources/HowPFASCycleThroughtheEnvironmentV2.jpg?ver=2019-11-14-104702-713
Safe Water Massachusetts
https://www.safewatermass.org/
July 13, 2020 Acton Water District PFAS Meeting
https://www.youtube.com/watch?v=5UEzewmQ4mE
October 14, 2020 Green Acton and the League of Women Voters Virtual PFAS Forum
https://greenacton.org/2020/10/29/pfas-panel-discussion-follow-up#more-6421
June 11, 2021 Acton in Focus - State of Acton's Water with the Acton Water District
http://actontv.org/on-demand/post-video/acton-in-focus-state-of-actons-water-with-the-acton-water-district
November 18, 2022 Acton in Focus – PFAS in our Water – Acton Water District Update
http://actontv.org/on-demand/post-video/pfas-in-our-water-acton-water-district-update
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