

# Instructions for Accessing Unregulated Contaminant Monitoring Rule (UCMR) Results

# **Data Summary Documents and the UCMR Webpages**

Before conducting your own assessment of the UCMR results, please review the EPA's <u>UCMR Data Summary</u> document for each monitoring cycle (UCMR 1, UCMR 2, UCMR 3, UCMR 4, UCMR 5), particularly noting the <u>Data Considerations</u> and <u>Data Definitions</u> sections. More information about each UCMR cycle can be found on the <u>UCMR webpages</u>, including the list of contaminants and analytical methods, types of PWSs required to monitor, frequency and location of sample collection, and sampling design.

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# **Option 1: Using the UCMR 5 and UCMR Archival Data Finders**

The <u>UCMR 5 Data Finder</u> allows people to easily view, filter, and download analytical results and summary metrics from the fifth Unregulated Contaminant Monitoring Rule from a web browser. Similarly, the <u>UCMR Archival Data Finder</u> allows people to easily view, filter, and download analytical results and summary metrics from the first through fourth monitoring cycles (UCMR 1-4).

- 1. Begin by reviewing the **Data Definitions** for the UCMR 5 and UCMR Archival Data Finders in <u>Table 1</u> and <u>Table 2</u>, respectively.
- 2. Watch the **walkthrough video demonstration** on the <u>UCMR Occurrence Data webpage</u> for the Data Finder you will be using.
- 3. Access the Data Finders through the EPA's <u>UCMR website</u> in the <u>Occurrence Data</u> section.
  - a. The UCMR 5 Data Finder includes two main sections with a total of four tabs:
    - i. All Contaminant Information contains a filterable table with *all* UCMR 5 contaminants, their respective minimum reporting levels (MRLs), and available health-based reference concentrations (ref conc) and reference doses for some of the contaminants.
    - Unregulated Contaminant Summary contains an expandable and filterable table of single analytical results for *unregulated* UCMR 5 contaminants summarized by contaminant, EPA Region, and state.
    - iii. All Contaminant Results contains a filterable table of single analytical results for *all* UCMR 5 contaminants.
    - iv. Regulated Contaminant Summary (bottom section) contains an expandable and filterable table summarizing sampling location annual averages of analytical results for regulated UCMR 5 contaminants by contaminant, EPA Region, and state, in comparison

to the Maximum Contaminant Levels (MCLs) from the EPA's April 2024 PFAS National Primary Drinking Water Regulation (NPDWR). For more information, refer to the UCMR 5 Data Summary.

- b. The <u>UCMR Archival Data Finder</u> includes the following three tabs:
  - i. The **Summary Pivot Table** contains an expandable and filterable table of UCMR 1-4 analytical results summarized by UCMR cycle, contaminant, EPA Region, and state.
  - ii. The Result Data Table contains a filterable table of UCMR 1-4 analytical results.
  - iii. Contaminant Information contains a filterable table with the UCMR 1-4 contaminants, their respective UCMR cycle, UCMR MRL, CASRN, DTXSID, classification, and UCMR monitoring requirement. If a contaminant was monitored under multiple UCMR cycles, it will be included in this table multiple times.

# Filtering and Sorting Occurrence Data

- 4. There are multiple ways to filter occurrence data in the Data Finders. Two options are:
  - Use one or more quick filter options along the left side of the screen to filter by: UCMR Cycle
    (Archival Data Finder only), EPA Region, State, PWS, PWS Size, Facility Water Type,
    Contaminant, Results ≥ MRL, or Results > Ref Conc (UCMR 5 Data Finder only).
  - b. Use the magnifying glass icon to the right of any column in the Result Data Table.
- 5. After clicking on a quick filter or a magnifying glass icon, all available options will show in a listbox. From there, either type to search for a specific option or choose from the list. Click to select the option(s); selected options will be highlighted green. Once selected, click on the check mark icon in the upper right corner of the listbox or press **Enter** on the keyboard.
  - a. Numerical fields (e.g., the **Result** field) can be searched and filtered by value using numerical operators (i.e., < [less than], > [greater than], <= [less than or equal to], >= [greater than or equal to], = [equal to]).
    - i. For example, to search for any result greater than 0.01, click on the magnifying glass to the right of the **Result** field, type >0.01, and press **Enter** on the keyboard.
    - ii. Note: If you have other filters applied before filtering for results above a certain Result value and there are no records meeting all of the criteria, the other selected filters will be overridden in order to apply the result filter. In this case, the total result count displayed in the blue summary numbers at the top of the tool will show the total number of all contaminant results above the searched value instead of zero for the originally selected contaminant. Check the Selections bar at the top of the section to see which filters are applied. To avoid overriding an applied filter, you can lock the filter by clicking on it in the Selections bar and then clicking the lock icon in the top left of the drop-down menu.
- 6. All filter selections will be applied to all tables and summary numbers in the Data Finder and will be shown in green in the **Selections** bar at the top.
  - a. To clear individual selections, click the X icon to the right of a filter in the current Selections bar.
  - b. To clear all selections, click the blue **Clear Selections** button on the bottom left side below the quick filters.
- 7. To sort the data within a table, click on the column heading you wish to sort by. The first time you click on a column heading, the data will sort in ascending order (*i.e.*, low to high for numbers, A to Z for letters). If you click on the heading a second time, the data will sort in descending order (*i.e.*, high to low for numbers, Z to A for letters).

#### **Downloading Data**

- 8. All tables in the UCMR Data Finders are downloadable to a Microsoft Excel file (.xlsx) which can be opened directly in Excel or imported into another software program. All filters that are applied when you click the download button will apply to the data included in the downloaded file. To download each table, click on the associated button specified in the steps below and follow the instructions on the screen to save the file. Note: The data for each table must be filtered to 1,000,000 total results or less before the table can be downloaded.
  - a. For the UCMR 5 Data Finder:
    - To download All Contaminant Information, click on Download Contaminant Info.
    - ii. To download the Unregulated Contaminant Summary, click on Download Unregulated Summary.
    - iii. To download All Contaminant Results, click on Download Contaminant Results.
    - iv. To download the Regulated Contaminant Summary, click on Download Regulated Contaminant Summary.
  - b. For the UCMR Archival Data Finder:
    - i. To download the Summary Pivot Table, click on Download Summary Table.
    - ii. To download the Result Data Table, click on Download Data Table.
    - iii. To download Contaminant Information, click on Download Contaminant Info.

## **Option 2: Using the UCMR Occurrence Data Text Files**

For those interested in large-scale data processing using statistical or data analysis software, the EPA recommends using the <u>occurrence data text files</u> containing the UCMR analytical results as well as additional information reported during monitoring, if applicable. The UCMR datasets are available for download in a tab-delimited text file format and can be imported into various programs. To improve accessibility and transparency across the UCMR datasets, the UCMR 1-5 occurrence data text files have the same data fields. The following steps review how to import the text files into Microsoft Excel. A basic understanding of Excel is necessary to effectively use the instructions. Microsoft Excel 2013 or a newer version is recommended due to the size of the datasets. These instructions were created using Excel in Microsoft 365.

- 1. Begin by reviewing the **Data Definitions** for the occurrence data text files in the EPA's <u>UCMR Data Summary</u> document for each monitoring cycle.
- 2. Access the text files through the EPA's UCMR website in the Occurrence Data section.
- 3. Determine which dataset you are interested in and then Save the zip file to your computer.
  - a. Select UCMR 1, 2, 3, 4, or 5 Occurrence Data Text Files to view all the analytical results (i.e., results for all contaminants reported by all PWSs; those reported to date for UCMR 5). The UCMR\_All.txt files may be too large to be imported into Excel, in which case you can try other applications (e.g., Microsoft Access) or import a subset of the data described in 3b and 3c.
  - b. Select UCMR 1, 2, 3, 4, or 5 Occurrence Data Text Files by State to view all the analytical results (those reported to date for UCMR 5), organized by Tribes and states. Within each zip file, one text file will have all results for Tribal PWSs and for the states starting alphabetically with A through L (e.g., UCMR5\_All\_Tribes\_AK\_LA.txt); another file will have all results for the states starting alphabetically with M through W (e.g., UCMR5\_All\_MA\_WY.txt). The results are organized this way to address file size limitations and streamline data management.
  - c. Select UCMR 1, 2, 3, 4, or 5 Occurrence Data Text Files by Method Classification to view all the analytical results (those reported to date for UCMR 5), organized by analytical method. Within each zip file, you will find individual text files with results organized by method (e.g., a Method 200.7 file with results for lithium).

- 4. Navigate to the location on your computer where you saved the zip file and unzip or extract the zip file contents.
- 5. Open a blank workbook in Microsoft Excel.
- 6. In the workbook, select **Data** among the tabs at the top of the page.
- 7. On the far left top of the screen in the **Get & Transform Data** section, select **From Text/CSV**. (Alternate option: Click **Get Data** and select **From File** from the dropdown menu and then choose **From Text/CSV**).
- 8. You will be prompted to select a text file. Find a text file you unzipped or extracted in Step 4 and click **Import**.
- 9. A preview of the file will appear. The default settings will be displayed. Under **Delimiter**, make sure **Tab** is selected. Click **Transform Data**.
- 10. The Query Editor will appear. In the **Applied Steps** section on the right side of the Query Editor under **Promoted Headers**, click on the X next to **Changed Type** to remove it. This will change the data type of all columns to "Text" format, which is useful for most columns in the file.
- 11. In the preview of the file, change data types for the following columns:
  - a. Scroll to the right until you see the **CollectionDate** column. Click on the data type options (icon: ABC) to the left of the column name and select **Date** from the dropdown menu.
  - b. Scroll to the MRL column and select Decimal Number from the data type dropdown menu.
  - c. Scroll to the **AnalyticalResultValue** column and select **Decimal Number** from the data type dropdown menu. **Note:** The preview will show *null* for any results that are below the MRL.
- 12. In the Home tab at the far left click Close & Load. The import may take several minutes.
  - a. Excel worksheets have a limit of 1,048,576 rows. If the text file you are importing has more rows than this, you will see the message: "The query returned more data than will fit on a worksheet." In this case, you may consider downloading and importing a subset of the data; see Step 3.
  - b. This import created a "link" between the Excel spreadsheet and the text file. If you want to "unlink" the Excel workbook and the text file, go to the **Table Design** tab at the top of the screen and in the **External Table Data** section, click **Unlink** (icon: broken chain). A popup window will appear saying, "This will permanently remove the query definition from the sheet. Continue?" Click **Yes**.
  - c. All fields (except CollectionDate) are currently stored in a "General" format. To ensure text fields that may contain numbers (e.g., PWSID, FacilityID, SamplePointID, ZIPCode) remain in a "Text" format, highlight the column or range of columns you want to convert and navigate to the Number section of the Home tab. Click on the dropdown field that reads General and select Text. This prevents leading zeros from being removed from cells in these columns.
- 13. Save the Excel file. **Note:** You will need to repeat the above Steps to review updated UCMR 5 datasets posted by the EPA quarterly until completion of data reporting in 2026.

#### Filtering Occurrence Data

- 14. Each column header will have a small dropdown arrow displayed allowing you to filter the results.
  - a. To look for results for a specific PWS, click the dropdown arrow for PWSID or PWSName. Within the search field, type the ID or name and select from the displayed list. Click OK.
    - To search for a different PWS, click the dropdown arrow and Clear Filter From [field name].
  - b. To filter the results by **Contaminant**, click the column dropdown arrow and select from the list.
    - i. To further filter for results by **AnalyticalResultValue**, click the column dropdown arrow and hover the cursor over the **Number Filters** option. From there, you can select a

method for filtering the data (e.g., greater than, greater than or equal to). After you select a filtering method, a **Custom Autofilter** pop up box will appear allowing you to enter one or more values and optional other methods for filtering the data (e.g., greater than X, less than Y).

- c. Multiple filters can be applied, allowing you to look for data for a specific PWS and for a specific contaminant of interest.
- 15. To remove all filters at once, select **Data** among the tabs at the top of the page and in the **Sort & Filter** section, click **Clear** or de-select **Filter** and the entire dataset will again be displayed.

#### **Additional Data Element and Indicators Text Files**

- 16. The following text files include information reported beyond the analytical results for UCMR contaminants. The files are contained in the respective occurrence data zip files for each UCMR cycle, as described in Step 3. For **Data Definitions** specific to each of the files listed below, please see the corresponding <u>UCMR Data Summary</u>.
  - a. UCMR[3, 4, 5]\_ZIPCodes.txt U.S. Postal Service ZIP Code(s) for all areas served by a PWS, available for UCMR 3, UCMR 4, and UCMR 5
  - b. UCMR1\_Aeromonas\_AddtlDataElem.txt Supplemental data from Screening Survey
    monitoring for Aeromonas (pH, pH Method, Temperature, Temperature Units, Temperature
    Method, Turbidity, Turbidity Units, Turbidity Method, Free Disinfectant Residual, Free
    Disinfectant Residual Units, Free Disinfectant Residual Method, Total Disinfectant Residual, Total
    Disinfectant Residual Units, Total Disinfectant Residual Method)
  - c. UCMR2\_Disinfectant\_AddtlDataElem.txt Disinfectant Type
  - d. UCMR3\_Virus\_Indicators.txt Analytical results from Pre-Screen Testing monitoring for microbiological indicators including total coliforms, E. coli, Enterococci, aerobic spores, male specific phage, and somatic phage
  - e. UCMR3\_Disinfectant\_AddtlDataElem.txt Disinfectant Type
  - f. UCMR4\_Cyanotoxins\_AddtlDataElem.txt Disinfectant Type, Treatment Information,
    Cyanotoxin Bloom Occurrence, Cyanotoxin Occurrence, Cyanotoxin Possible Bloom Treatment,
    Cyanotoxin Possible Bloom Source Water
  - g. UCMR4\_HAA\_AddtlDataElem.txt Disinfectant Type, Disinfectant Residual, Treatment Information
  - h. UCMR4\_HAA\_Indicators.txt Analytical results for total organic carbon and bromide
  - UCMR5\_AddtlDataElem.txt Disinfectant Type, Treatment Information, Lithium Occurrence, Lithium Treatment, PFAS Occurrence, PFAS Treatment, Potential PFAS Sources, Potential PFAS Sources Detail
- 17. To look at the text files described in the previous Step, you will need to import the associated datasets into new worksheets.
  - a. To add a worksheet to the workbook that contains your occurrence data worksheet, click the plus (+) symbol in the bottom left corner of the screen next to the existing worksheet.
  - b. Follow Steps 1-13 to import another text file into the new worksheet.
    - i. See Step 12c to ensure that the **ZIPCode** field remains in a "Text" format to prevent leading zeros from being removed from cells.
  - c. In your occurrence data worksheet, follow Step 14a to filter for a specific PWSID or PWSName and note the PWSID for this system.
    - i. In the additional data elements worksheet, use the dropdown arrow for PWSID. Within the search field, type the PWSID you noted into the search box and click OK. You will

now see the available additional data elements for sampling locations and events for the selected PWS.

- 1. You can apply other filters to view the additional data elements for a specific facility, sample point, or sample event.
- 2. Note: For UCMR 5, PWSs may have entered additional data elements for sample events that do not yet have analytical results, and additional data elements may not yet be available for all sample events with analytical results.
- ii. In the **ZIP Codes** worksheet, use the dropdown arrow for **PWSID** and within the search field, type the PWSID you noted into the search box and click **OK**. You will now see the reported ZIP Code(s) served by the PWS.
  - 1. Note: For UCMR 5, PWSs that do not yet have analytical results may have entered ZIP Codes, and ZIP Codes may not yet be available for all PWSs with analytical results.

# If you cannot find results for a public water system (PWS):

- In the Data Finders, <MRL in the Result field indicates the result was less than the UCMR minimum reporting level (MRL). Only analytical results at or above the UCMR MRL are reported to the EPA.
- In the text files, a null value (or blank) in the AnalyticalResultValue field indicates the result was less
  than the UCMR MRL. The AnalyticalResultSign field also indicates whether the analytical result is less
  than [<] the UCMR MRL or equal to [=] a numeric value at or above the UCMR MRL, which would be
  reported under AnalyticalResultValue.</li>
- The PWS may not have been required to monitor for the UCMR cycle.
  - The PWS may serve less than 3,300 individuals under UCMR 5 (or served 10,000 or fewer individuals under UCMR 1 through UCMR 4) and was not selected for UCMR monitoring as part of the nationally representative random sample of 800 PWSs serving that size group.
  - The PWS may be a transient non-community water system (TNCWS). UCMR requirements apply to community water systems (CWSs) and non-transient non-community water systems (NTNCWSs). For UCMR 3 only, TNCWSs that were sourced by ground water and served 1,000 or fewer people may have been selected for virus monitoring.
- PWS IDs, names, and sampling location information (*i.e.*, facility and sample point IDs and names) can change between UCMR cycles.
- A PWS may have had a valid reason for missing results at certain sampling locations after multiple resampling attempts (e.g., quality control or matrix issues during sample analysis).
- A PWS may have been out of compliance, failing to collect all or some of their samples.
- For UCMR 5 only:
  - The UCMR 5 monitoring for a PWS may not have occurred yet. PWSs monitor during a single 12-month timeframe in the three years of monitoring (2023–2025).
  - The UCMR 5 monitoring results for a PWS may not have been reported yet. Laboratories supporting UCMR 5 are obligated to report their data to SDWARS within 90 days of sample collection. The PWS then has up to 30 days to review the data.
  - o A resample may be in process due to laboratory or PWS sampling errors.

Please refer to the UCMR webpages for more information on each UCMR cycle.

Table 1. Data Definitions for the UCMR 5 Data Finder

Field Name	Definition	
PWS ID	Public Water System (PWS) Identification Code. The code used to identify each PWS. The code begins with the standard 2-character postal state abbreviation or Region code for Tribes; the remaining 7 numbers are unique to each PWS in the state. Utah PWS IDs begin with 4 letters (UTAH) followed by 5 numbers	
PWS Name	Name of the PWS	
Contaminant	The UCMR 5 contaminant analyzed	
Result (μg/L)	Numeric value of the analytical result in $\mu g/L$ for the contaminant. Results less than the UCMR MRL are indicated by <mrl< td=""></mrl<>	
Health-Based Ref Conc (μg/L)	Non-regulatory Health-Based Reference Concentration in µg/L for the contaminant, if available	
Collection Date	Date of sample collection (month, day, year)	
Facility ID	Identification code for each applicable facility associated with water treatment or delivery at the PWS	
Facility Name	Name of the facility at the PWS	
Sample Point ID	Identification code for each sample point location at the PWS	
Sample Point Name	Name of the sample point at the PWS	
Sample Event Code	Identification code for each sample event: SE1, SE2, SE3, SE4	
Sample ID	Identification code for each sample	
Method ID	Identification code of the analytical method	
PWS Size	Size category of the PWS for UCMR 5, based on retail population as indicated by the Safe Drinking Water Information System (Federal) (SDWIS/FED) as of February 1, 2021: S (≤ 10,000), L (> 10,000)	
Facility Water Type	Source of water at the facility: SW (surface water), GW (ground water), GU (ground water under the direct influence of surface water), MX (any combination of SW, GW, and GU)	
Sample Point Type	Sampling Point Type Code: EP (entry point to the distribution system)	
EPA Region	EPA Region (states): Region 1 (CT, ME, MA, NH, RI, VT), Region 2 (NJ, NY, PR [Puerto Rico], VI [Virgin Islands]), Region 3 (DE, DC, MD, PA, VA, WV), Region 4 (AL, FL, GA, KY, MS, NC, SC, TN), Region 5 (IL, IN, MI, MN, OH, WI), Region 6 (AR, LA, NM, OK, TX), Region 7 (IA, KS, MO, NE), Region 8 (CO, MT, ND, SD, UT, WY), Region 9 (AZ, CA, HI, NV, AS [American Samoa], GU [Guam], MP [Northern Marianas Islands], NN [Navajo Nation]), Region 10 (AK, ID, OR, WA)	
State	State abbreviation. Tribal PWSs without primacy are attributed to an EPA Region (01, 02, 03, 04, 05, 06, 07, 08, 09, 10)	
Minimum Reporting Level (MRL, μg/L)	Minimum Reporting Level defined by UCMR 5 in $\mu$ g/L for the contaminant. Based on laboratory capability; not related to contaminant health effects information	

**Table 2. Data Definitions for the UCMR Archival Data Finder** 

Field Name	Definition
UCMR Cycle	UCMR cycle and monitoring years. Results may have sample collection dates outside the designated UCMR sample collection timeframe (e.g., resample collection): UCMR 4 (2018–2020), UCMR 3 (2013–2015), UCMR 2 (2008–2010), UCMR 1 (2001–2005)
PWS ID	Public Water System (PWS) Identification Code. The code used to identify each PWS. The code begins with the standard 2-character postal state abbreviation or Region code for Tribes; the remaining 7 numbers are unique to each PWS in the state. Utah PWS IDs for UCMR 2-4 begin with 4 letters (UTAH) followed by 5 numbers
PWS Name	Name of the PWS
Contaminant	The UCMR contaminant analyzed
Result	Numeric value of the analytical result in µg/L for the chemical contaminants, GC/L or MPN/L for the viruses, and CFU/100mL for the microbial contaminants. Results less than the UCMR MRL are indicated by <mrl< td=""></mrl<>
Units	Units of the UCMR MRL and analytical results: µg/L (micrograms per liter), GC/L (genomic copies per liter), MPN/L (most probable number per liter), CFU/100mL (colony forming units per one-hundred milliliters)
Collection Date	Date of sample collection (month, day, year)
Facility ID	Identification code for each applicable facility associated with water treatment or delivery at the PWS
Facility Name	Name of the facility at the PWS. This field is blank for some UCMR 1 records

Field Name	Definition
Sample Point ID	Identification code for each sample point location at the PWS
Sample Point Name	Name of the sample point at the PWS. This field is blank for some UCMR 1 records
Associated Facility	Identification code for the facility of the associated MR (UCMR 2 and 3 only; null for UCMR 1 and 4)
ID	
Associated Sample	Identification code for the sample point of the associated MR (UCMR 2 and 3 only; null for UCMR 1 and 4)
Point ID	, , , , , , , , , , , , , , , , , , ,
Sample Event Code	Identification code for each sample event: SE1, SE2, SE3, SE4 for all contaminants, where "SE1" and "SE2" represent the first and second sample event for all water types and "SE3" and "SE4" represent the third and fourth sample event for SW and GU sources only; SE5, SE6, SE7, SE8 for UCMR 4 cyanotoxins (SW and GU sources only). (UCMR 2-4 only; null for UCMR 1)
Sample ID	Identification code for each sample. For UCMR 1 this field was created using a concatenation of PWS ID, Facility ID, Sample Point ID, Collection Date, Method ID, and UCMR1 Sample Type
Method ID	Identification code of the analytical method
PWS Size	Size category [S (≤ 10,000), L (> 10,000)] of the PWS based on retail population as indicated by the Safe Drinking Water Information System (Federal) (SDWIS/FED) as of the applicability date for the cycle:  UCMR 5: February 1, 2021  UCMR 4: December 31, 2015  UCMR 3: December 31, 2010  UCMR 2: June 30, 2005  UCMR 1: 2000¹
Facility Water Type	Source of water at the facility: SW (surface water), GW (ground water), GU (ground water under the direct influence of surface water), MX (any combination of SW, GW, and GU). This field is blank for some UCMR 1 records where facility water type was not definitively known
Sample Point Type	Sampling Point Type Code: <b>EP</b> (entry point to the distribution system), <b>SR</b> (source water – untreated water), <b>DS</b> (distribution system), <b>LD</b> (location in the distribution system where the disinfectant residual is the lowest which is approved by the state for THM [DBP] and/or total coliform sampling), <b>MD</b> (midpoint in the distribution system where the chlorine residual would be expected to be typical for the system such as the location for sampling coliform indicator bacteria as described in 40 CFR 141.21), <b>MR</b> (point of maximum retention is the point located the furthest from the entry point to the distribution system that is approved by the state for trihalomethane [THM] (disinfectant byproducts [DBP]) and/or total coliform sampling), <b>UK</b> (not definitively known)
EPA Region	EPA Region (states): Region 1 (CT, ME, MA, NH, RI, VT), Region 2 (NJ, NY, PR [Puerto Rico], VI [Virgin Islands]), Region 3 (DE, DC, MD, PA, VA, WV), Region 4 (AL, FL, GA, KY, MS, NC, SC, TN), Region 5 (IL, IN, MI, MN, OH, WI), Region 6 (AR, LA, NM, OK, TX), Region 7 (IA, KS, MO, NE), Region 8 (CO, MT, ND, SD, UT, WY), Region 9 (AZ, CA, HI, NV, AS [American Samoa], GU [Guam], MP [Northern Marianas Islands], NN [Navajo Nation]), Region 10 (AK, ID, OR, WA)
State	State abbreviation. Tribal PWSs without primacy are attributed to an EPA Region (01, 02, 04, 05, 06, 07, 08, 09, 10)
Monitoring Requirement	AM (Assessment Monitoring), SS (Screening Survey), PST (Pre-Screen Testing)
Minimum Reporting Level (MRL)	Minimum Reporting Level defined by UCMR in $\mu$ g/L for the chemical contaminants, GC/L or MPN/L for the viruses, and CFU/100mL for the microbial contaminants. Based on laboratory capability; not related to contaminant health effects information
UCMR1 Sample Type	RFS (raw field sample), RDS (raw duplicate field sample), TFS (treated field sample), TDS (treated duplicate field sample) (UCMR 1 only, blank for some records; null for UCMR 2-4)
CASRN	Chemical Abstracts Service Registry Number (CASRN) is a unique identifier assigned by the Chemical Abstracts Service (a division of the American Chemical Society) to every chemical substance (organic and inorganic compounds, polymers elements, nuclear particles, etc.) in the open scientific literature. It contains up to 10 digits, separated by hyphens into three parts
DTXSID	Distributed Structure-Searchable Toxicity Substance Identifier (DTXSID) is a unique substance identifier used in the EPA's CompTox Chemicals database, where a substance can be any single chemical, mixture, or polymer

<sup>&</sup>lt;sup>1</sup> A fixed PWS applicability date was not codified for UCMR 1, unlike the subsequent UCMR cycles, resulting in some revisions to population served that occurred during the UCMR 1 monitoring period.