

# Right-Sizing your Wastewater Surveillance Program

## Free and Easy to Access WWS Data Download Guide

### Overview

This guide will give you tips on where to find data you may not have ready access to, helping you right-size your wastewater surveillance program. It is meant to supplement the Right Sizing Your Wastewater Surveillance Program Post-Webinar workbook.

The instructions here will help you find, download, and lightly edit the data. Once you complete this download guide, open the post-webinar workbook. You will copy and paste the data you've downloaded into that workbook.

### Intended Audience

This guide and its accompanying workbook are designed for public health professionals in programs that lack the resources to collect and analyze the data needed to "right-size" a wastewater surveillance program. The intent is to help you find the data you need without extensive coding or statistical analysis, using only Microsoft Excel. Users will need only internet access and a basic working knowledge of copying, pasting, and sorting data in Excel to complete the workbook. You will not need to write any formulas; they are already written for you.



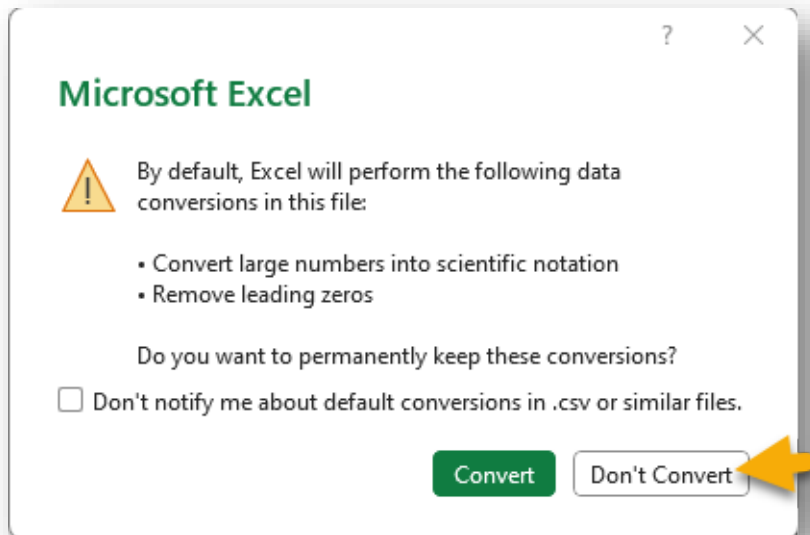
**COLORADO**  
Department of Public  
Health & Environment



## Important Information About Excel

### *Automatic number conversions*

Depending on your Excel settings and version, you may see a pop-up message when you open these data files asking whether you want the numbers in the file converted to a different format. **Choose Don't Convert.**



### *Data Rich Spreadsheets*

Many of the files we will use are very large and can significantly slow down your computer. Therefore, we recommend keeping no more than two open at a time. Once you copy data from a sheet and paste it into the workbook, close the data sheet.

### *Cut/Paste Tips*

Always use Paste (CTRL+V or right-click > Paste) to add data to this workbook. Never use Paste Special (CTRL+SHIFT+V), as it can cause numerical values to lose trailing zeros.

You do not need to copy header rows.

## Data Source 1: United States Environmental Protection Agency (EPA) Clean Water Needs Survey (CWNS)

1. Open the [CWNS Data Download page](#).
2. Select **your state** from the **2022 CWNS Dataset by State** section
3. Click Download **CSVs**

**Data Download**

Download the 2022 Clean Watersheds Needs Survey dataset, as a set of CSV files or Access database. The dataset includes the survey data provided in this dashboard and additional details captured during the survey.

**2022 CWNS Data Dictionary**

The [CWNS Data Dictionary \(XLSX\)](#) (37 KB) provides descriptions of the tables and data elements in the downloads provided below.

**2022 CWNS Dataset by State**

Choose a state and then select "Download CSVs" to download a ZIP file containing CSV files for every table.

Select State:  **Download CSVs**

**Nationwide 2022 CWNS Dataset**

Select "Download CSVs" to download a ZIP file containing individual CSVs for every table in the national dataset. Select "Download Access Database" to download a Microsoft Access Database file with the national dataset.

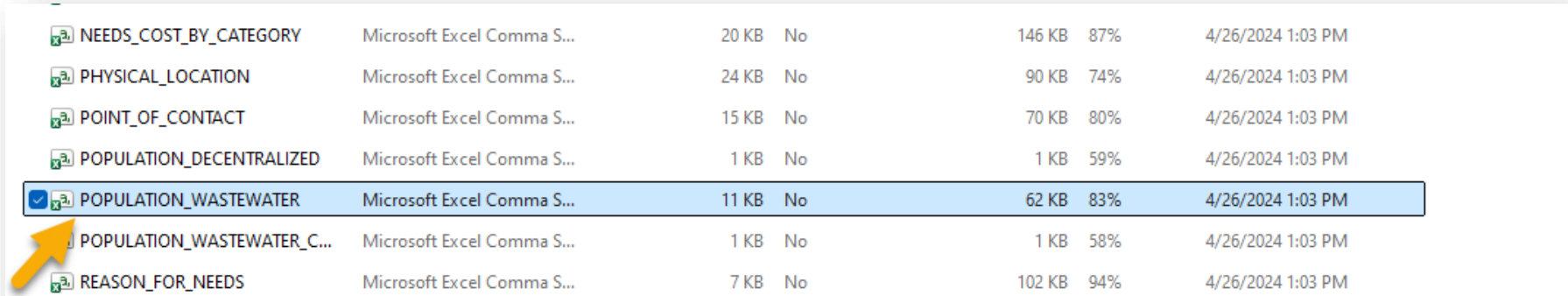
Note: Tables are structured so that users can directly filter by state in the Access database.

**Download CSVs** **Download Access Database**

4. Double-click the file you just downloaded to “unzip” the contents.
5. Rename file to CWNS

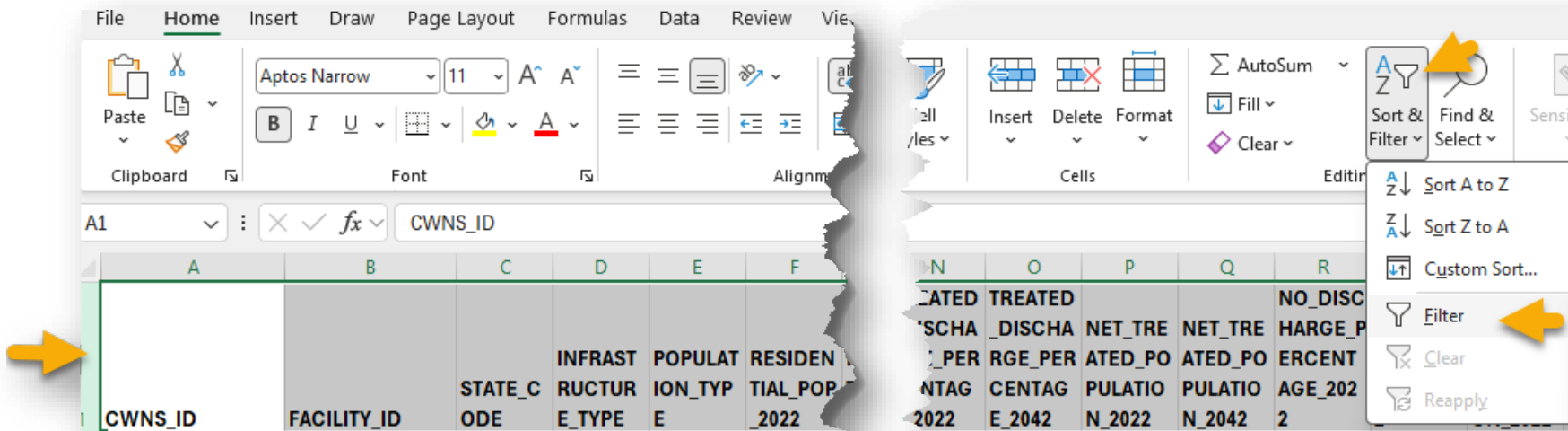
## Open and Edit File- CWNS Population File

1. Open the **CWNS ZIP folder** you just downloaded. Then open the **POPULATION\_WASTEWATER** file.



File Name	File Type	Size	Attributes	Compressed Size	Compression Ratio	Date Modified
NEEDS_COST_BY_CATEGORY	Microsoft Excel Comma S...	20 KB	No	146 KB	87%	4/26/2024 1:03 PM
PHYSICAL_LOCATION	Microsoft Excel Comma S...	24 KB	No	90 KB	74%	4/26/2024 1:03 PM
POINT_OF_CONTACT	Microsoft Excel Comma S...	15 KB	No	70 KB	80%	4/26/2024 1:03 PM
POPULATION_DECENTRALIZED	Microsoft Excel Comma S...	1 KB	No	1 KB	59%	4/26/2024 1:03 PM
<b>POPULATION_WASTEWATER</b>	Microsoft Excel Comma S...	11 KB	No	62 KB	83%	4/26/2024 1:03 PM
POPULATION_WASTEWATER_C...	Microsoft Excel Comma S...	1 KB	No	1 KB	58%	4/26/2024 1:03 PM
REASON_FOR_NEEDS	Microsoft Excel Comma S...	7 KB	No	102 KB	94%	4/26/2024 1:03 PM

2. Add a **filter to Row 1** to make it easier to manipulate the data. An easy way to do this is to place your cursor in cell A1 and press Ctrl+L. If prompted, **be sure to check “My data has headers.”**



The screenshot shows the Microsoft Excel interface. The 'Home' tab is active. The formula bar shows 'CWNS\_ID'. The active cell is A1. The data table below has columns A through R. The 'Filter' menu is open, and the 'Filter' option is highlighted with an orange arrow.

CWNS_ID	FACILITY_ID	STATE_CODE	INFRASTRUCTURE_TYPE	POPULATION_YEAR	RESIDENTIAL_POPULATION_2022	UNTREATED_TREATED	DISCHARGE_PERCENT	NET_TREATED_PO	NET_TREATED_PO	NO_DISCHARGE_PERCENT	AGE_2022

- Sort **column J** (TOTAL\_RES\_POPULATION\_2022) from **smallest to largest**.

A	B	C	D	E	F	G	H	I	J
CWNS_ID	FACILITY_ID	STATE_CODE	INFRASTRUCTURE_TYPE	POPULATION_TYP	RESIDENTIAL_POP_2022	RESIDENTIAL_POP_2042	NONRESIDENTIAL_POP_2022	NONRESIDENTIAL_POP_2042	TOTAL_RES_POPULATION_2022
08000000233	3608948	CO	Wastewater Receiving						
08000000269	3609219	CO	Wastewater Receiving						
08000000348	3611636	CO	Wastewater Receiving						
08000000311	3610295	CO	Wastewater Receiving						
08000328005	1067115	CO	Wastewater Receiving						
08201200008	3526636	CO	Wastewater Receiving						
08201200010	3526676	CO	Wastewater Receiving						

- Delete** any row where the value in **column J is less than 1000**. These sites are too small to affect your wastewater surveillance program.
- Save and close the file.**

## Open and Edit File- AREAS\_COUNTY File

1. Open the **CWNS ZIP** folder you just downloaded, then open the **AREAS\_COUNTY** file.

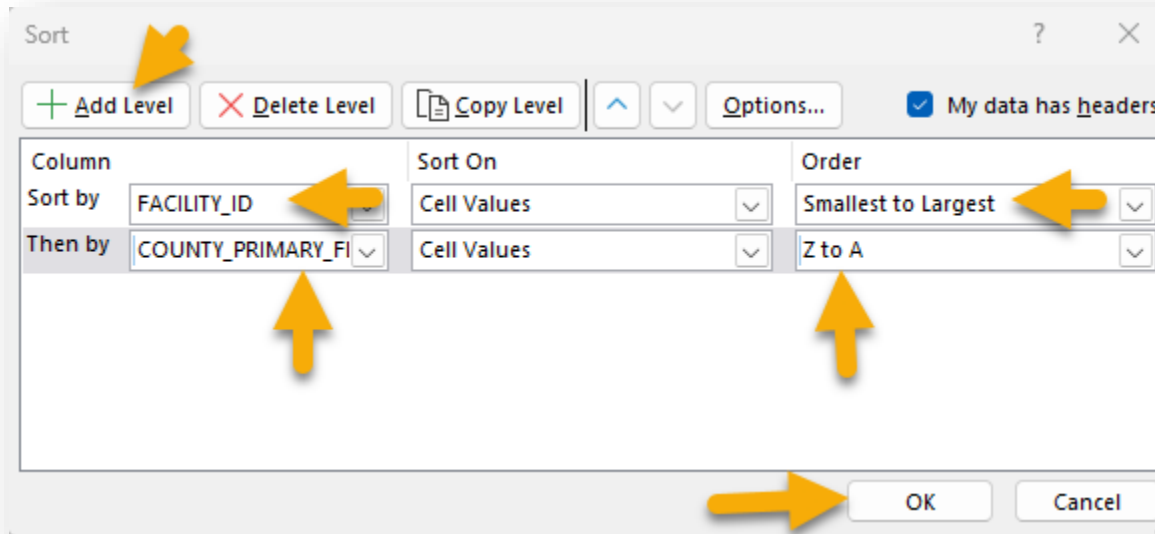
Name	Type	Compressed size	Password ...	Size	Ratio	Date modified
AREAS_CONGRESS_DISTRICT	Microsoft Excel Comma S...	5 KB	No	24 KB	82%	4/26/2024 1:03 PM
AREAS_COUNTY	Microsoft Excel Comma S...	7 KB	No	34 KB	82%	4/26/2024 1:03 PM
AREAS_WATERSHED	Microsoft Excel Comma S...	7 KB	No	42 KB	84%	4/26/2024 1:03 PM
ASSET_MANAGEMENT	Microsoft Excel Comma S...	1 KB	No	1 KB	19%	4/26/2024 1:03 PM
CET_INPUTS_DECENTRALIZED	Microsoft Excel Comma S...	1 KB	No	1 KB	44%	4/26/2024 1:03 PM

2. Highlight the **entire dataset** and then navigate to **Sort & Filter > Custom Sort**

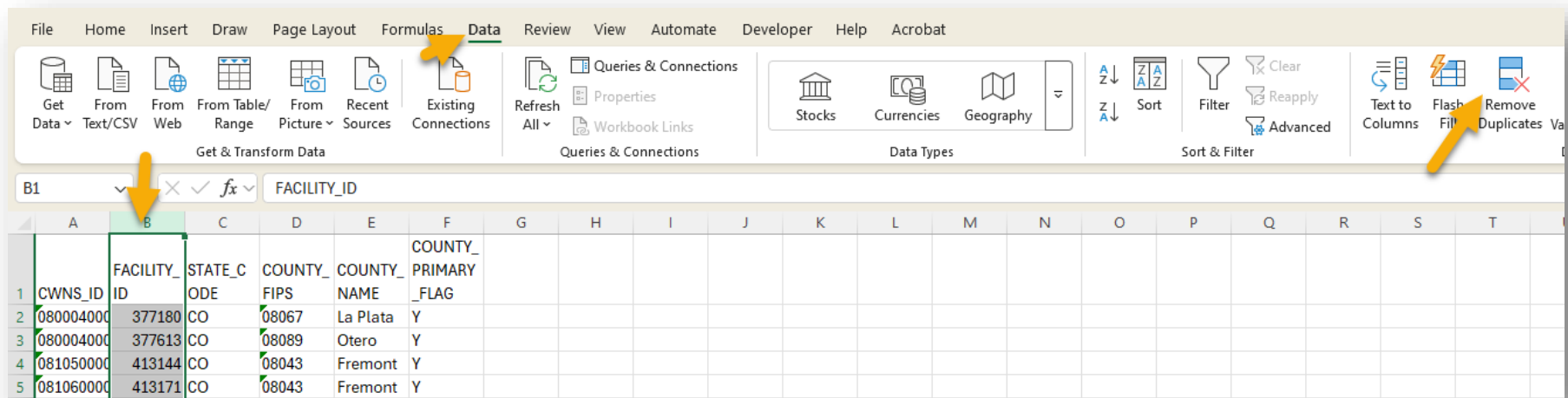
The screenshot shows the Microsoft Excel interface. The ribbon is set to 'Home'. The 'Sort & Filter' group is expanded, and the 'Custom Sort...' option is selected. The spreadsheet below shows a table with columns A through G. The first row is the header, and the next three rows contain data. The 'CWNS\_ID' column is highlighted in green, and an orange arrow points to the 'Custom Sort...' option in the menu.

	A	B	C	D	E	F	G
1	CWNS_ID	FACILITY_ID	STATE_CODE	COUNTY_FIPS	COUNTY_NAME	COUNTY_PRIMARY_FLAG	
2	080000500	1066854	CO	08069	Larimer	Y	
3	080004060	1067151	CO	08023	Costilla	Y	

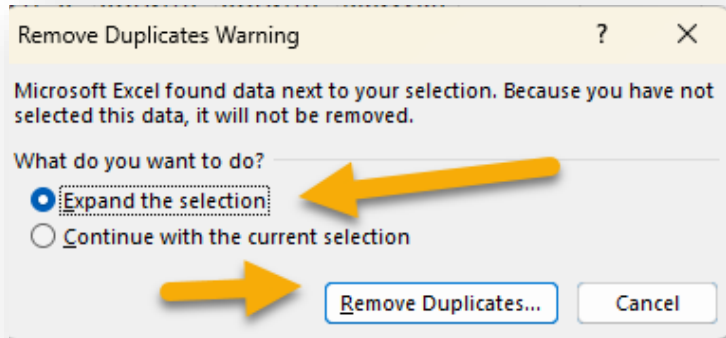
3. Sort by **FACILITY\_ID** from smallest to largest. Then click **Add Level**, sort by **COUNTY\_PRIMARY\_FLAG** from Z to A, and click **OK**.



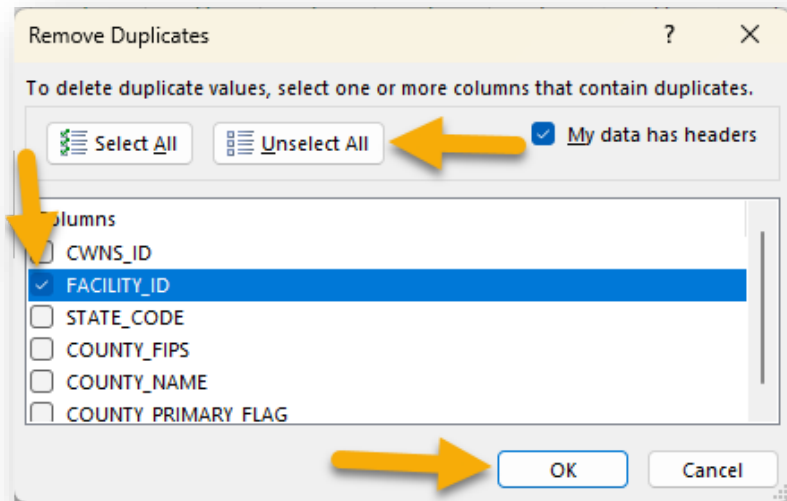
4. Select all of **column B** (FACILITY\_ID), then navigate to **Data > Remove Duplicates**



5. Choose **Expand the Selection**, then **Remove Duplicates**



6. **Unselect All**, then check the **Facility ID** box. Click the **OK** button.



7. **Save and close the file.**

## Data Source 2: Agency for Toxic Substances and Disease Registry Social Vulnerability Index (SVI) Data & Documentation Download

### **Social Vulnerability Index (SVI) By County**

The Centers for Disease Control and Prevention (CDC) Agency for Toxic Substances and Disease Registry (ATSDR) publishes a robust SVI database as a CSV file on its website.

SVI scores include a wide range of factors. For ease, we will use the overall SVI score, a composite of all social determinants of public health.

### **Downloading the File**

1. Navigate to the [SVI Data and Documentation Download](#) page.

2. Under the **Data & Documentation** heading, select the following options:

- **Year:** 2022
- **Geography:** Your State
- **Geography Type:** Counties
- **File Type:** CSV File

**Data & Documentation**

**Data**

**Year**

2022

**Geography**

Colorado

**Geography Type**

Counties

**File Type**

CSV File (table data)

ESRI Geodatabase (map data)

If you choose "United States" as your option under Geography, all U.S. census tracts, or counties, are ranked against one another. Use "United States" for U.S.-wide or multi-state mapping and analysis.

If you choose an individual state, or "District of Columbia," or "Puerto Rico," tracts or counties are ranked against other tracts or counties in that state/district/territory.

If you choose Tribal Tracts, the database contains only estimates, percentages and their respective margins of error, and adjunct variables. Tribal tracts are not ranked against each other nor against standard census tracts and are not available for 2000 or 2010.

ZIP Code Tabulation Areas are currently only available for 2022.

Go

**Documentation**

[CDC/ATSDR SVI Documentation 2022](#)

[CDC/ATSDR SVI Documentation 2020](#)

[CDC/ATSDR SVI Documentation 2018](#)

[CDC/ATSDR SVI Documentation 2016](#)

[CDC/ATSDR SVI Documentation 2014](#)

[CDC/ATSDR SVI Documentation 2010](#)

[CDC/ATSDR SVI Documentation 2000](#)

3. Click **“GO.”**

4. A file will be downloaded to the folder you have designated for downloads.

## Data Source 3: US Department of Agriculture (USDA) Rural-Urban Continuum (RUCC) Codes

1. Navigate to the USDA Rural-Urban Continuum Codes [Download page](#).
2. Under **File Downloads**, click **2023 Rural-Urban Continuum Codes > Download XLSX**

**Rural-Urban Continuum Codes**

Updated: 12/30/2025 Contact: [Austin Sanders](#)

**In this section**

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The 2023 Rural-Urban Continuum Codes distinguish U.S. metropolitan (metro) counties by the population size of their metro area, and nonmetropolitan (nonmetro) counties by their degree of urbanization and adjacency to a metro area. The division of counties as either metro or nonmetro, based on the 2023 Office of Management and Budget (OMB) delineation of metro areas, is further subdivided into three metro and six nonmetro categories. Each county and census-designated county-equivalent in the United States, including those in outlying territories, is assigned one of these nine codes. The codes allow researchers, policy makers, and others to view county-level data by finer residential groups—

see the [documentation](#) for details and a map of the codes.

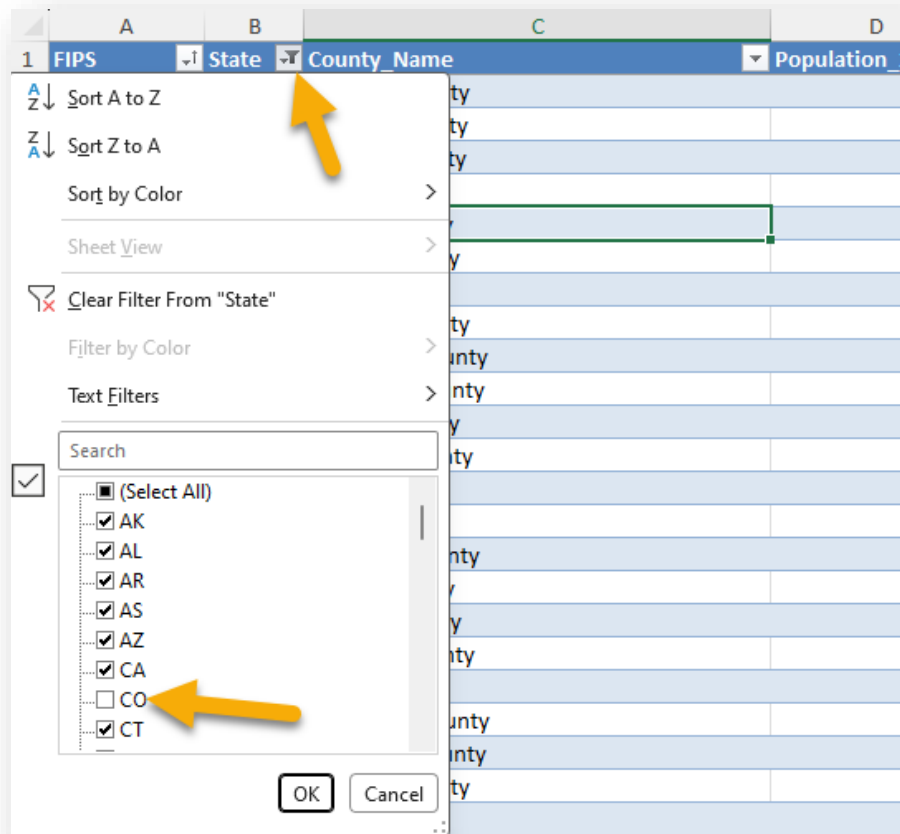
### File Downloads

**2023 Rural-Urban Continuum Codes**  
[Download \(XLSX, 158.4 KB\)](#) | [Download \(CSV, 614.57 KB\)](#)  
Last Updated 1/22/2024

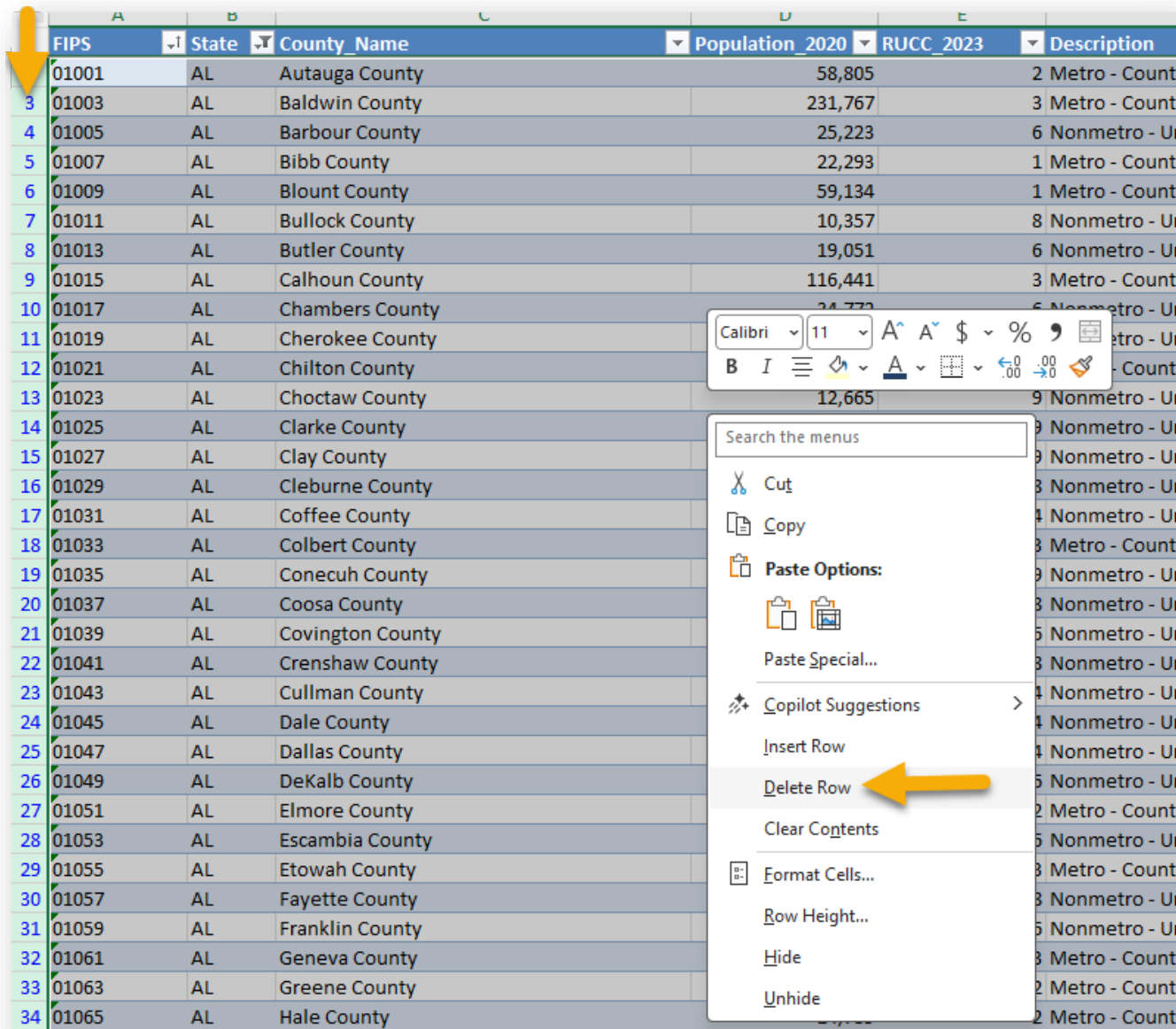
3. The file will automatically download.

## Open and Edit File- US Department of Agriculture (USDA) Rural-Urban Continuum Codes

1. Open the **RUCC file** you downloaded. The file name is likely **Ruralurbancontinuumcodes2023**.
2. Use the filter at the top of **Column B (State)** to display **all states except your own**



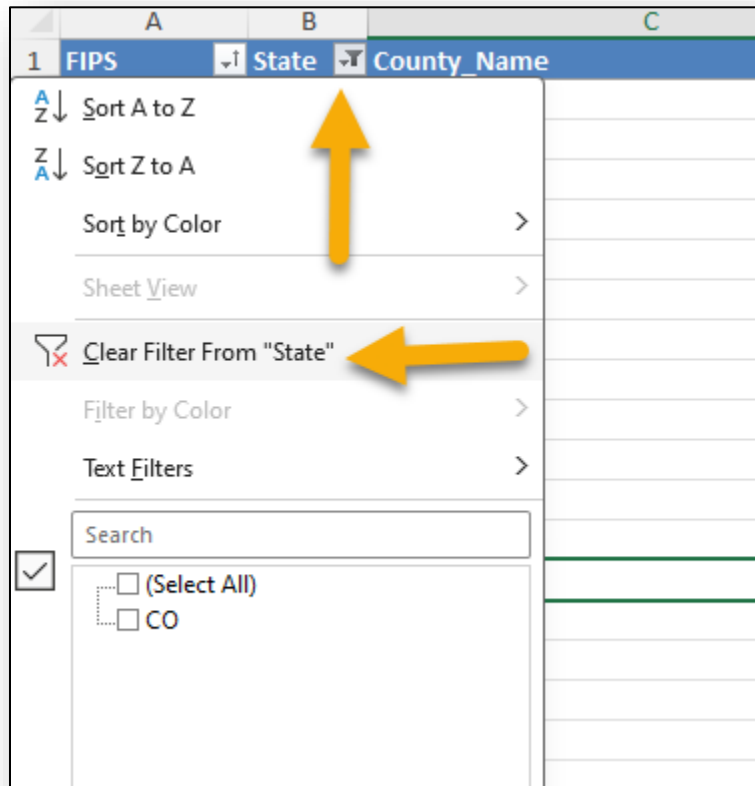
3. **Select all rows** and **delete** them. Hint: Select them quickly by clicking the row number next to the top record (NOT the header row), then pressing CTRL+SHIFT+Down Arrow. Then, right-click> Delete Row



The screenshot shows an Excel spreadsheet with columns for FIPS, State, County Name, Population\_2020, RUCC\_2023, and Description. The rows are numbered 3 through 34. A context menu is open over the spreadsheet, and the 'Delete Row' option is highlighted with a yellow arrow. The menu also includes options like Cut, Copy, Paste Options, Copilot Suggestions, Insert Row, Clear Contents, Format Cells..., Row Height..., Hide, and Unhide.

FIPS	State	County Name	Population_2020	RUCC_2023	Description
01001	AL	Autauga County	58,805		2 Metro - Count
01003	AL	Baldwin County	231,767		3 Metro - Count
01005	AL	Barbour County	25,223		6 Nonmetro - Ur
01007	AL	Bibb County	22,293		1 Metro - Count
01009	AL	Blount County	59,134		1 Metro - Count
01011	AL	Bullock County	10,357		8 Nonmetro - Ur
01013	AL	Butler County	19,051		6 Nonmetro - Ur
01015	AL	Calhoun County	116,441		3 Metro - Count
01017	AL	Chambers County	24,772		6 Nonmetro - Ur
01019	AL	Cherokee County			metro - Ur
01021	AL	Chilton County			- Count
01023	AL	Choctaw County	12,665		9 Nonmetro - Ur
01025	AL	Clarke County			9 Nonmetro - Ur
01027	AL	Clay County			9 Nonmetro - Ur
01029	AL	Cleburne County			8 Nonmetro - Ur
01031	AL	Coffee County			4 Nonmetro - Ur
01033	AL	Colbert County			8 Metro - Count
01035	AL	Conecuh County			9 Nonmetro - Ur
01037	AL	Coosa County			8 Nonmetro - Ur
01039	AL	Covington County			5 Nonmetro - Ur
01041	AL	Crenshaw County			8 Nonmetro - Ur
01043	AL	Cullman County			4 Nonmetro - Ur
01045	AL	Dale County			4 Nonmetro - Ur
01047	AL	Dallas County			4 Nonmetro - Ur
01049	AL	DeKalb County			5 Nonmetro - Ur
01051	AL	Elmore County			2 Metro - Count
01053	AL	Escambia County			5 Nonmetro - Ur
01055	AL	Etowah County			8 Metro - Count
01057	AL	Fayette County			8 Nonmetro - Ur
01059	AL	Franklin County			5 Nonmetro - Ur
01061	AL	Geneva County			8 Metro - Count
01063	AL	Greene County			2 Metro - Count
01065	AL	Hale County			2 Metro - Count

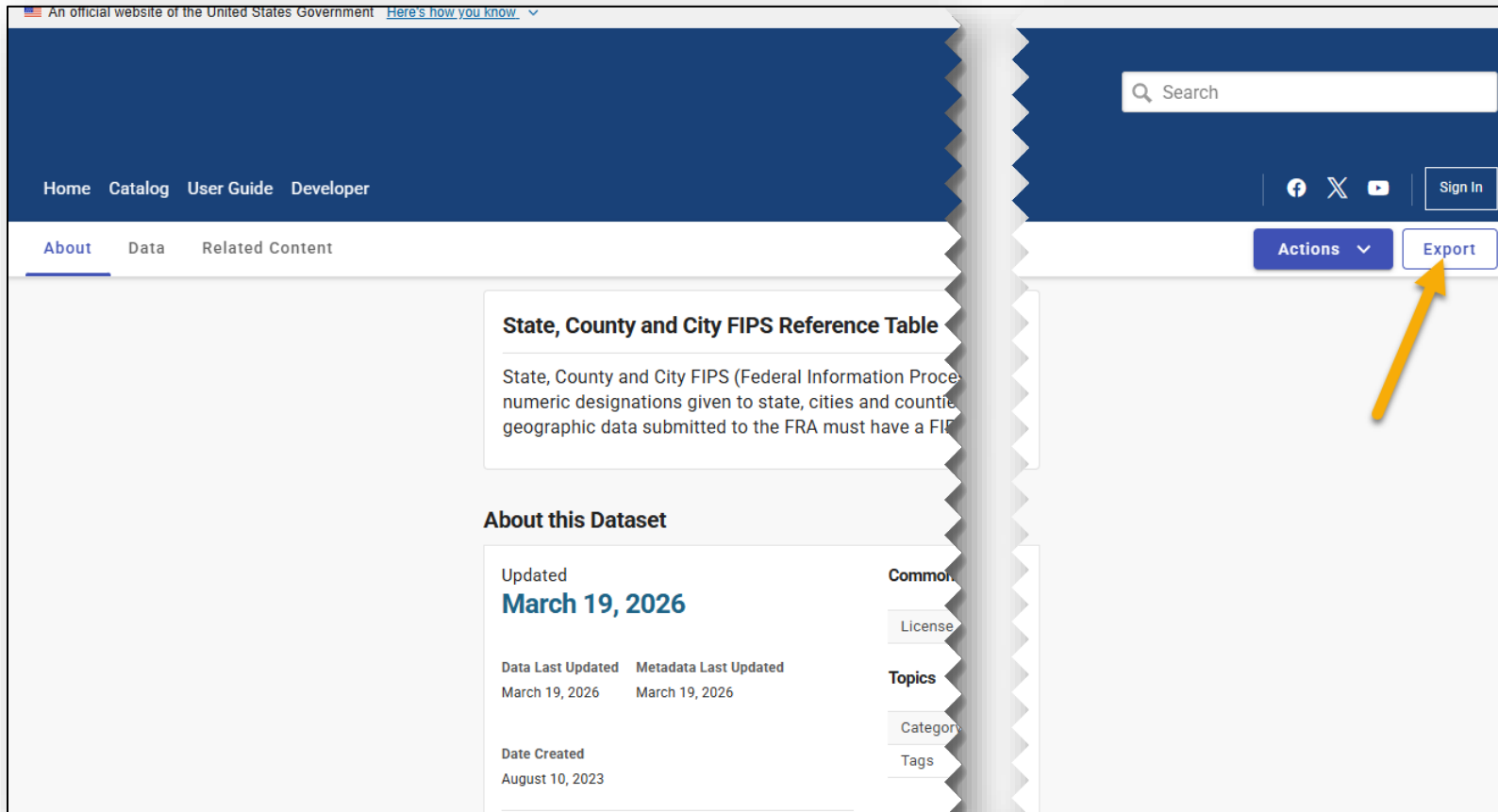
4. **Clear the filter** from column B



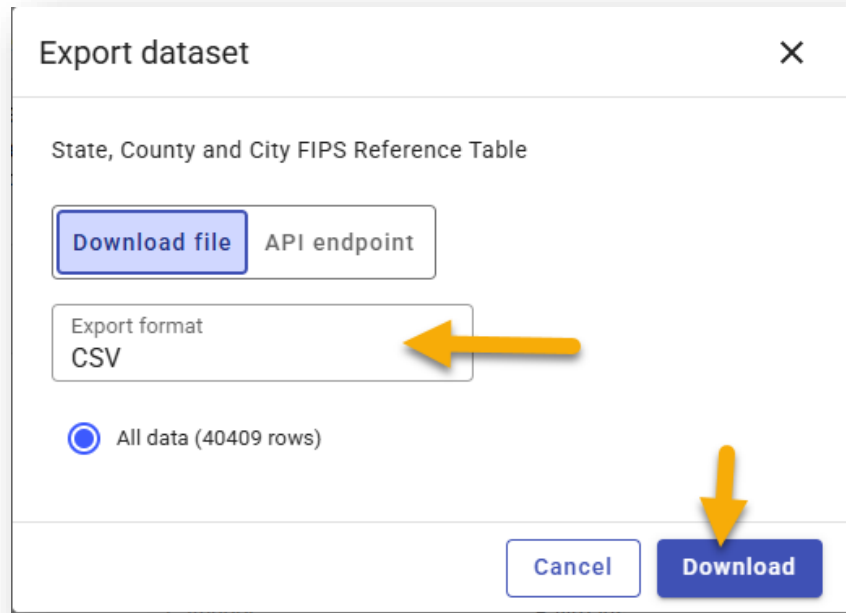
5. **Save and close the file.**

## Data Source 4: US Department of Transportation State, County, and City FIPS Reference Table

1. Open the Transportation.gov [State, County, and City FIPS Reference Table download page](#).
2. In the top right corner of the page, select **Export**.



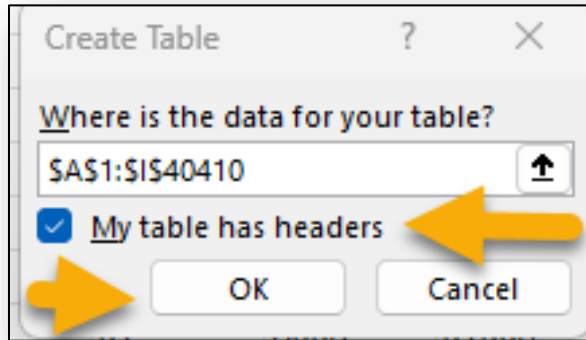
3. Make sure that the **export format** is set to **CSV**, then click **Download**



4. The file will automatically download.

## Open and Edit File- US Department of Transportation State, County, and City FIPS Reference Table

1. **Open** the state, county, and city FIPS Reference Table file you just downloaded. The file name should be **State, \_County\_and\_City\_FIPS\_Reference\_Table\_(DOWNLOAD DATE)**.
2. Place your cursor in **cell A1**, then use **CTRL+L** to add a filter to the sheet so that you can easily manipulate the data. If prompted, be sure to check **My table has headers** before clicking **OK**.





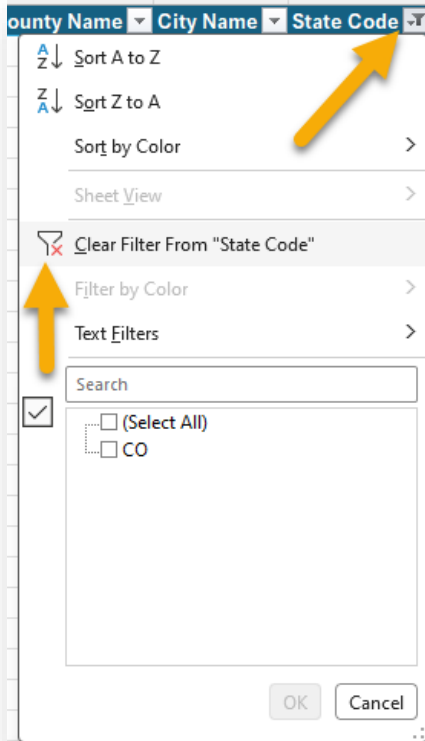
4. **Delete** all of the visible rows. Hint: Select them quickly by clicking the row number next to the top record (NOT the header row), then using **CTRL+SHIFT+Down Arrow**. Then, use **right click> Delete Row**

The image shows a data table with columns: State Name, County Name, City Name, State Code, State FIPS Code, County Code, StCnty FIPS Code, City Code, and StCntyCity FIPS Code. Row 2 is selected, and a context menu is open over it. The 'Delete Row' option is highlighted with a yellow arrow. Another yellow arrow points to the row number '2' in the first column.

	State Name	County Name	City Name	State Code	State FIPS Code	County Code	StCnty FIPS Code	City Code	StCntyCity FIPS Code
2	ALABAMA	AUTAUGA	AUTAUGAVILLE	AL	01	C001	01001	0220	010010220
3	ALABAMA	AUTAUGA	BILLINGSLEY	AL	01	C001	01001	0340	010010340
4	ALABAMA	AUTAUGA	BOOTH	AL	01	C001	01001	0425	010010425
5	ALABAMA	AUTAUGA	JONES	AL	01			1796	010011796
6	ALABAMA	AUTAUGA	MARBURY	AL	01			2002	010012002
7	ALABAMA	AUTAUGA	PRATTVILLE	AL	01			2540	010012540
8	ALABAMA	BALDWIN	BAY MINETTE	AL	01			0240	010030240
9	ALABAMA	BALDWIN	BON SECOUR	AL	01			0423	010030423
10	ALABAMA	BALDWIN	DAPHNE	AL	01			0860	010030860
11	ALABAMA	BALDWIN	ELBERTA	AL	01			1011	010031011
12	ALABAMA	BALDWIN	FAIRHOPE	AL	01			1120	010031120
13	ALABAMA	BALDWIN	FOLEY	AL	01			1210	010031210

- Search the menus
- Cut
- Copy
- Paste Options:
- Paste Special...
- Copilot Suggestions
- Insert Row
- Delete Row**
- Clear Contents
- Format Cells...
- Row Height...
- Hide
- Unhide

5. **Clear the filter** from Column D (State Code). You should now only see records for your state.



6. **Save and close**

7. the file.

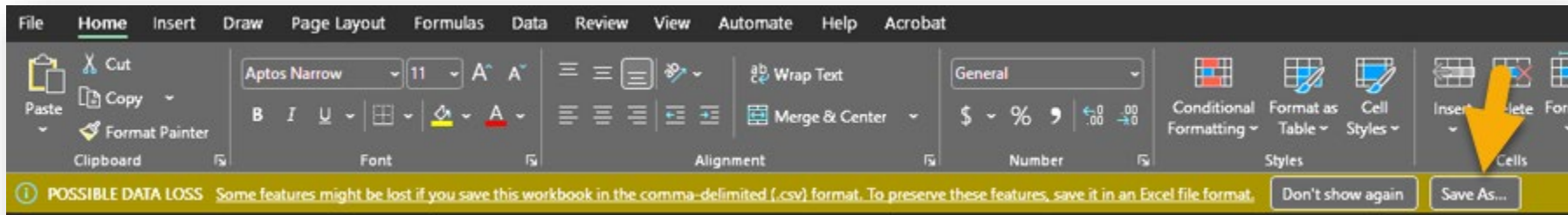
## Open and Edit the Right Sizing Workbook


You have completed all the necessary data downloads. The next step is to open the **Right Sizing Workbook** and paste your data into it.

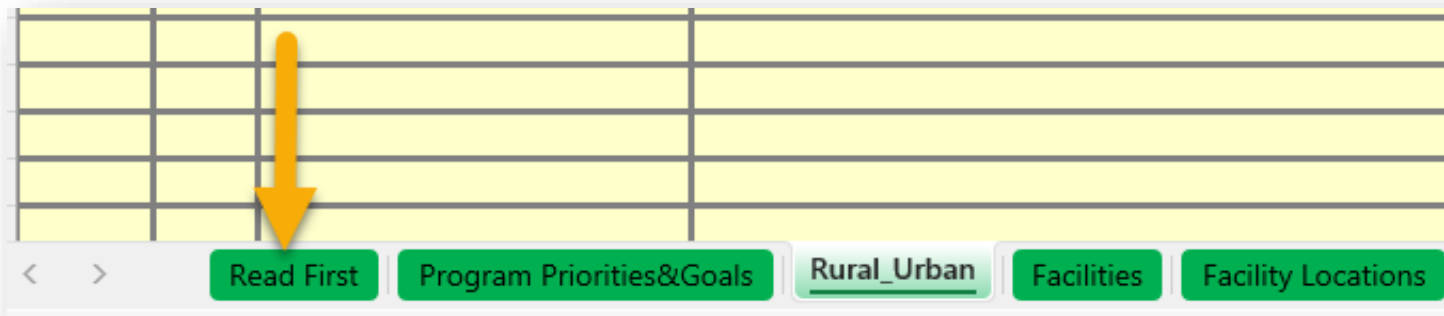
Use the link below to download and open the workbook.

### A Few Notes:

1. When you open the file, you may see an error message warning of possible data loss. If this happens, click Save As and save the file to your computer with a new name.



2. Before entering any data, review the “Read First” tab for complete instructions on using the workbook. 



[Right Sizing Workbook Download Link](#) (control + click to open)