# Drought planning and management for urban water suppliers

The goal of this data resource is to pilot an approach for providing usable data for analyses related to drought planning and management for urban water suppliers--ultimately contributing to improvements in communication around drought. These analyses require synthesizing disparate data sources across the Department of Water Resources (DWR) and the State Water Resources and Control Board (SWB) in a standard format and maintaining these derived datasets to ensure access to timely data. The data management plan describing the development and maintenance of this data resource is included. Below are summaries of the datasets included in this package. Additionally, we provide a curated list of external data sources for drought.

**monthly\_water\_shortage\_outlook**

This table provides forecasted monthly (and annual) potable water shortage (or surplus) with and without shortage actions for a dry year. These data are reported in the Annual Water Supply and Demand Assessment (AWSDA). All data reported through the AWSDA are currently available on the Department of Water Resource’s Water Use Efficiency (WUE) portal (<https://wuedata.water.ca.gov/wsda_export>). The most recent AWSDA guidance is available here: <https://wuedata.water.ca.gov/public/public_resources/3517484366/AWSDA-Final-Guidance-4-2022.pdf>. See page 30-35 for information about the data elements contained in the monthly\_water\_shortage\_outlook table. Methodology guidance is included in this report though is not implemented consistently across urban water suppliers.

*Guidance for data use:* The primary function of the AWSDA is to motivate planning processes for water shortage. These data represent forecasts specific to the urban supplier and represent a snapshot in time based on the conditions when the plan was developed. These data are expected to change as conditions change and water shortage plans are updated. These data can only be used within the year they are reported for, though if the forecasted year is not a dry year, these data are not reliable.

**five\_year\_water\_shortage\_outlook**

This table provides anticipated annual potable water levels (both surplus and shortage) with shortage actions and without shortage actions for five years based on the five driest consecutive years on record. These data are reported in the Urban Water Management Plans (UWMP). All data reported through the UWMP are currently available on the WUE portal (<https://wuedata.water.ca.gov/wsda_export>) and the California Natural Resources Open Data Portal (https://data.cnra.ca.gov/dataset/2020-uwmp-data-export-tables). The most recent UWMP guidance is available here: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans/Final-2020-UWMP-Guidebook/UWMP-Guidebook-2020---Final-032921.pdf>. See 7-20 through 7-34 for information about the data elements contained in the five\_year\_outlook table.

*Guidance for data use:*

**source\_number**

This table summarizes the number of unique water supply sources by year and supplier. These data were historically submitted in the Electronic Annual Report (eAR) are currently available on the eAR landing page (<https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/ear.html>). The structure and naming conventions have changed overtime. Beginning in 2024, this information will be captured in the SAFER Clearinghouse through the Drought and Technical Reporting Order.

*Guidance for data use:*

**source\_name**

This table summarizes the water source type, status and location by public water system for a given time period. These data are submitted through the SAFER Clearinghouse.

*Guidance for data use:*

**Other relevant data resources on Open Data**

TODO – insert descriptions for each data resource

* Urban Retail Water Supplier – Water Conservation, Supply, and Demand (June 2014 onwards)
  + Link: <https://data.ca.gov/dataset/urws-conservation-supply-demand>
  + Monthly reports of water use and conservation activities by urban retail water suppliers, which are generally defined as agencies serving over 3,000 service connections or deliveries 3,000 acre-feet of water annually for municipal purposes.
  + Monthly water shortage levels (named “DWR\_STANDARD\_LEVEL”) by retail supplier can be extracted from this dataset. Note that standard water shortage levels were applied beginning in 2022.
* Drinking Water - SAFER Dashboard Failing and At-Risk Drinking Water Systems
  + Link: <https://data.ca.gov/dataset/safer-failing-and-at-risk-drinking-water-systems>
  + Population by water system number data can be extracted from this dataset.
  + TODO: Insert information about why this population data is appropriate opposed to others.

**External drought data resources**

TODO – insert descriptions for each data resource