AquaPortal User Guide

## Table of Contents

Welcome

Welcome to the CAP AquaPortal!

AquaPortal was created to provide users with access to the vast amount of water quality data collected by CAP. The various options provide users with general information, maps to view data throughout the CAP System, and charts that allow for a deeper dive into the data. This Users Guide will help you get started, and we hope you enjoy exploring the many features that this website has to offer. If you have questions, please e-mail us at aquaportal@cap-az.com.

NOTE: Users may be required to Sign-In to AquaPortal to see all of the available data and functionality of the website that is described in this User Guide. If you would like to request unlimited access, please send your request to aquaportal@cap-az.com.

General Navigation

Navigation Tabs (Highlighted in Green) - refers to the tabs on the left side of the webpage that allow you to switch between a variety of views and access data in several different ways.

Controls (Highligted in RED) - displayed at the top of each page (except dashboards) and allows the user to choose parameters, statistics, intervals, locations, etc. based on individual needs.
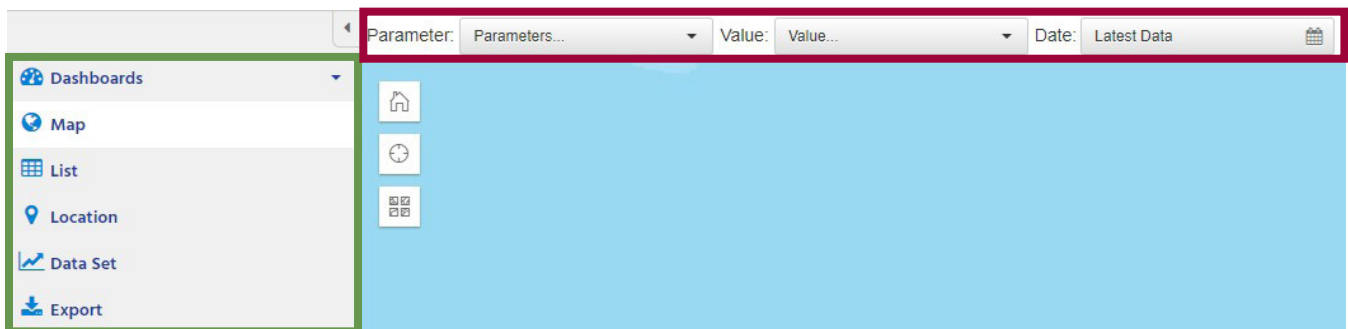
Dashboards Tab

The Dashboards tab contains a number of dashboards that are used to display summary information for the user:

Welcome - general description of the Navigation Tabs and CAP's canal monitoring program.

Water Quality - Current Conditions - displays gauges with current water quality measured at continuous (real-time) stations.

Water Quality - Time-Series Charts - Displays select time-series graphs for the past 7 days at continuous stations.

Lake Pleasant - provides a Lake Pleasant Fact Sheet and displays the current Lake Pleasant elevation, the current inflow/outflow from Lake Pleasant, and a link to the Agua Fria inflow.

Alamo Lake Releases - provides an Alamo Lake Fact Sheet and links to the current discharge from Alamo Dam, current turbidity in the Bill Williams River, and the Alamo Dam Water Control Plan Update. Data collected during high flow events will be posted on this dashboard.

Annual Report - allows users to view and download CAP Annual Water Quality Reports.

Map Tab

The Map tab provides a geographic representation of the data collected by CAP. When initially opened, it will zoom to the CAP System, showing the current data collection locations. Selecting "Location Type" from the Value Control will show the type of data collected at each location. A legend for the selected parameter is displayed on the right panel (green).

In addition, you can turn off the CAP Canal layer, or even overlay the latest NOAA precipitation forecast on your map.

The Location search bar allows you to focus on a particular sampling location.

NOTE: Data sites may be added or removed as necessary.

On left side of the map (red), you will see icons that allow you to reset the map, find your location, and choose a different basemap.
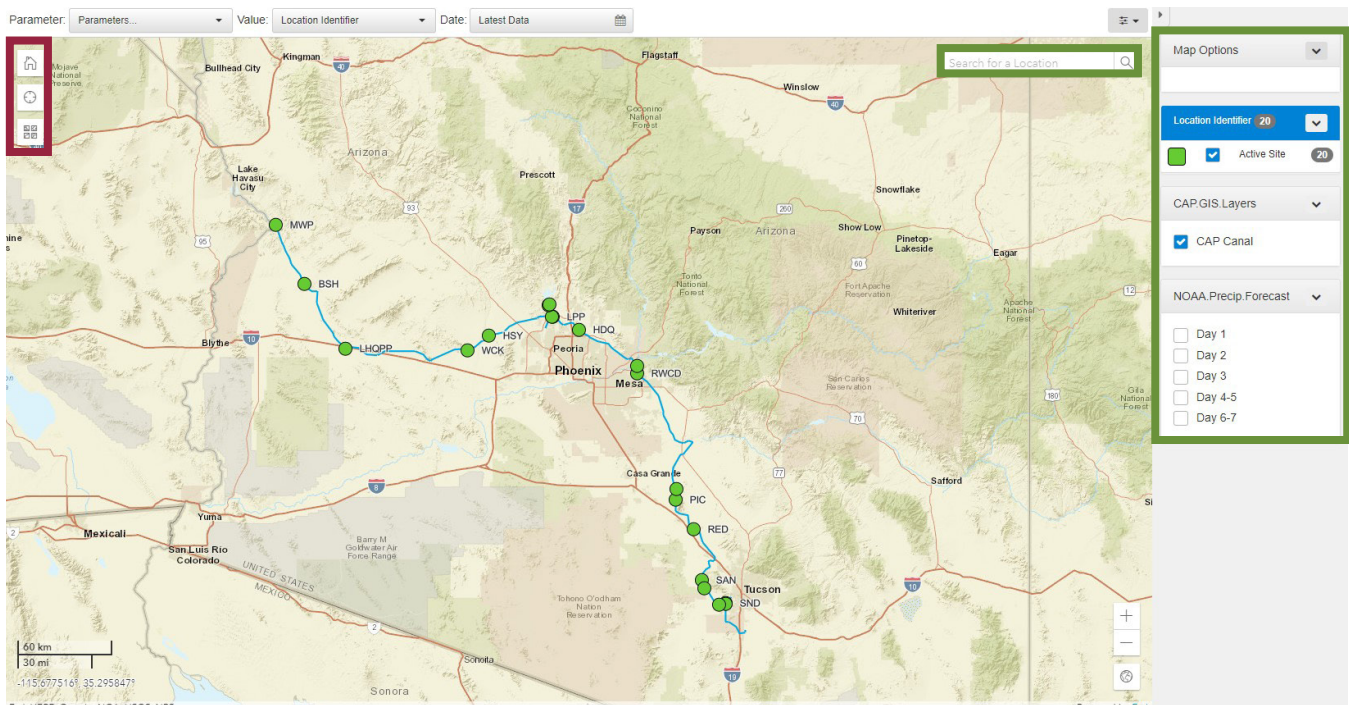
Use the Controls to choose the Water Quality or Operational parameter of interest. The map will show locations where there is data for the selected parameter.

Parameter Control - Any one of 50+ water quality parameters can be chosen to view latest data on the map. For grab samples, this data is from the most recent laboratory report. For continuous monitoring stations, data is updated every hour.

   In addition, operational parameters are also available. These include:

   Canal Flow - current flow through each pumping plant

   Flow Time (Station) - Estimated time (hours) it takes for water to flow from one station to the next (upstream to downstream) based on current flow and typical canal dimensions.

   Flow Time (Cumulative) - Estimated time (hours) it takes for water to flow from Lake Havasu (MWP) to the station of interest. Flows from Lake Pleasant are included in the equation. However, when there is little or no flow at MWP, values west of Lake Pleasant will be rather large.

   Blend Percentage - Percent of total canal flow from Lake Havasu (MWP) and Lake Pleasant (WAD)

NOTE: Only signed-in users can view CAP Operational Data.

Value Control - To view recent values on the map, select the Value control and choose from the available statistics for the selected parameter

Date Control - The Latest Data is the default and will automatically be chosen for the selected parameter. Change the date control to choose between Latest Data (default), Periodic, or Seasonal.

   Latest Data - most recent data collected

   Periodic - select daily, monthly, or annual to view average, minimum, and maximum values for the selected parameter.

   Seasonal (currently disabled) - select monthly or annual to view the 5-year average, minimum, and maximum values for the selected parameter. Daily 5-year averages are not available.

NOTE: Once the Date Control has been changed, it will remain on that selection even when a new parameter is chosen.

NOTE: Only signed-in users can view Periodic and Seasonal statistics, all other users will see

only the Latest Data.

NOTE: Statistics are only calculated for a completed time period (e.g. a monthly average will not be calculated during the middle of a month). Also, note that daily statistics are only available for continuous (real-time) data.

Once controls have been chosen, the data for each location (for which there is data) is displayed on the map. In addition to viewing data along the entire CAP System, you can click on a specific location to see additional details about the site, including the Start and End of Record, the chosen Statistics, and the Introduction and Delivery Standards (determined in the Guidance Document for Introducing Non-Project Water). You can also click on Location or Data Set within the dialogue box to drill into the data even further.
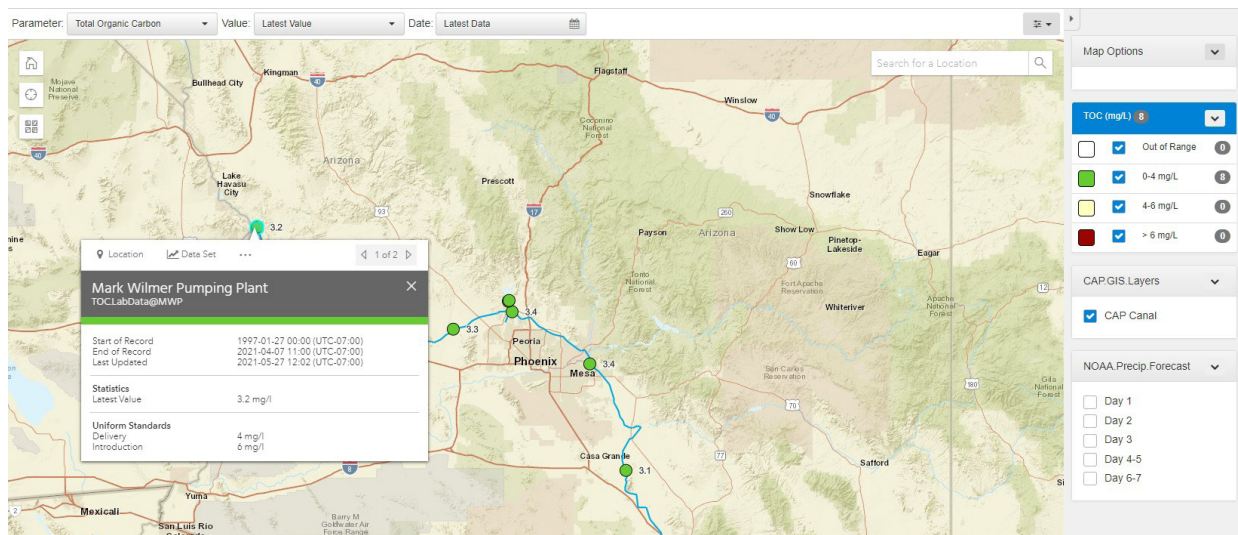
List Tab (Limited Access)

The List tab provides a tabular (grid) format of the data that is displayed on the map. From here, you can view details of the data set, change controls, or select "Go To" and jump to other sections of the website.

Location Tab (Limited Access)

The Location tab allows the user to choose a specific location and view a list of all data sets associated with that location. From here, you can view details of each data set, change location, or select "Go To" and jump to other sections of the webpage.

For Locations with continuous (real-time) measurements, there is a separate tab (Current Conditions) that shows the current water quality values.
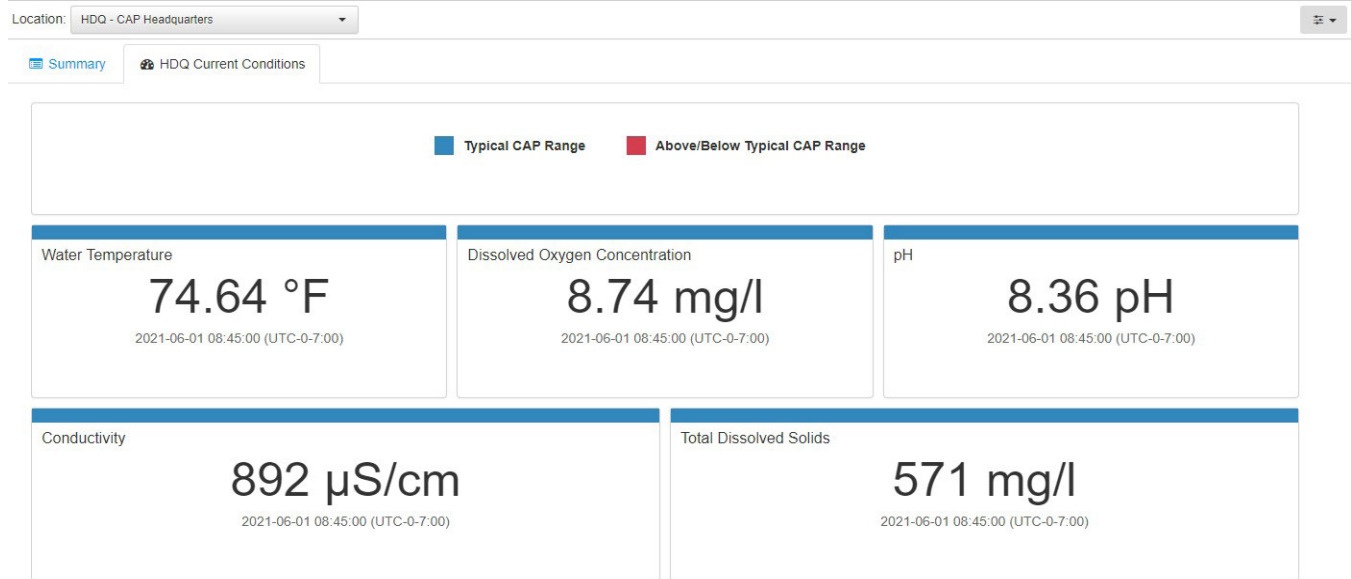
Data Set Tab (Limited Access)

The Data Set view is separated into a number of tabs, including Summary, Chart, Grid, Statistics, and Export. Choose a Location and Data Set from the controls.

Summary - The Summary tab displays standard information about the selected data set, including the Location Name, Parameter, Units, Start and End of Record, and Uniform Water Quality Standards (if applicable).

Chart - The Chart tab is fully interactive, allowing the user to view all data (default) or change the Date control to specify a certain time period. The slider on the bottom of the chart provides the user another method of selecting the displayed data.

Discrete data is shown as individual points and will automatically switch to a line when hovering. Continuous data points are always connected by a line. Continuous data will also have a grade code at the bottom of the chart that is defined in the legend on the right panel. Data Codes are further explained in the CAP Guide to Quality Assurance and Data Grading.
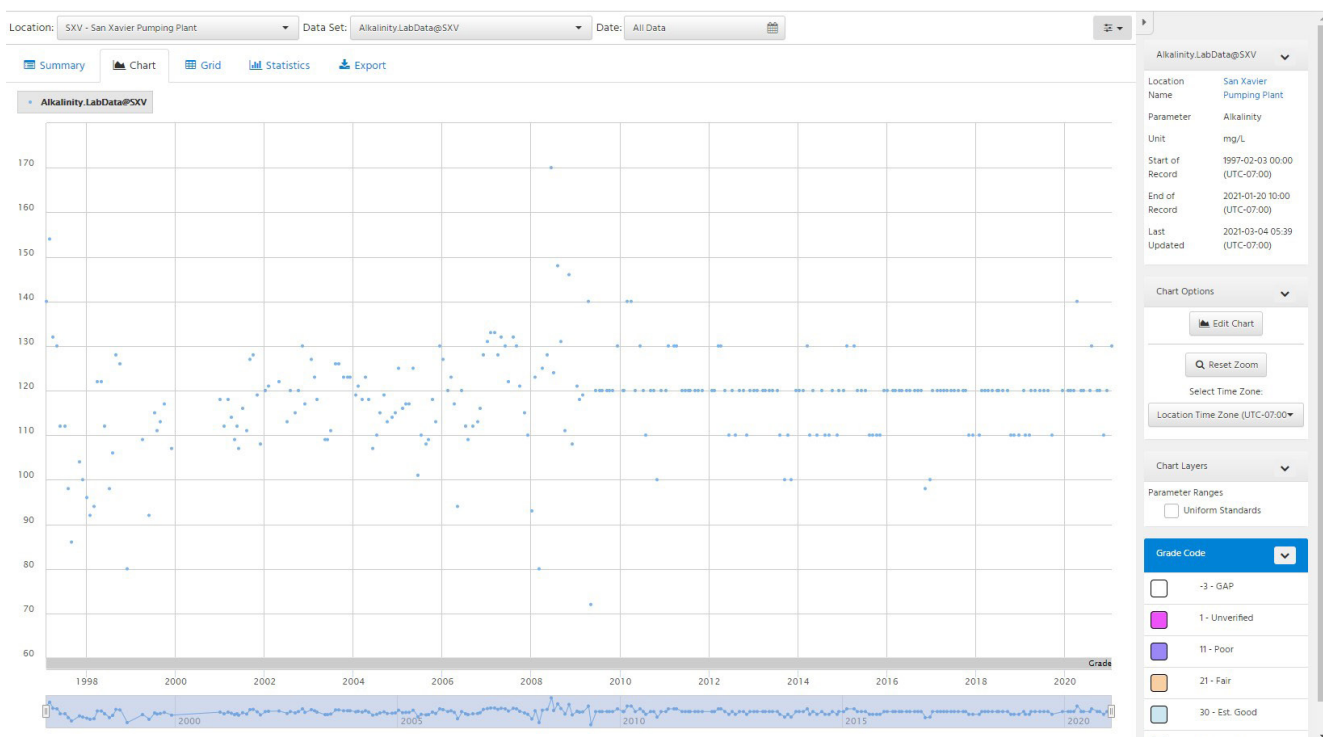
The Chart can be exported as a PNG, PDF, or JPG by selecting the Options Menu in the upper right portion of the chart. The Options Menu is available on all pages and provides various options depending on the content of the page.

Users can edit the displayed chart by choosing "Edit Chart" in the right panel. This allows customization of the displayed chart, such adding chart series, changing colors, modifying axes, changing general settings and applying available layers.

Grid - The Grid tab displays the same data as the Chart in an interactive table. The table allows for sorting, filtering and exporting through the Option Menu.

Statistics - This tab displays the Statistics that have been calculated against the selected Data Set. For discrete data, the average, miminum, and maximum values are displayed for monthly and annual intervals (Periodic). For continuous data, the statistics for daily, monthly, and annual statistics are all available (Periodic).

NOTE: Statistics are only calculated for a completed time period (e.g. a monthly average will not be calculated during the middle of a month). Statistics are not available when "All Data", "Seasonal" or "Custom" dates are selected.

Statistic ↑	Timestamp	Event Timestamp	Value	Grade Code	Interpolation Type
Average	2020-01-01 00:00:00	2019-01-01 00:00:00	75.73 µg/l	-1 - Unspecified	2 - Preceding Avg.
Maximum	2020-01-01 00:00:00	2019-01-23 11:00:00	79 µg/l	-1 - Unspecified	3 - Preceding Max.
Minimum	2020-01-01 00:00:00	2019-08-06 11:00:00	71 µg/l	-1 - Unspecified	4 - Preceding Min.

Export - This tab allows the user to export the selected data set in CSV and Excel formats. Although Units can be chosen, it always reports in the default unit, so this option can be skipped (glitch that software developer is working on).

NOTE: The Export tab within Data Sets allows for exporting data from a single parameter at a single site. The Export Navigation Tab allows for multiple data sets to be exported (see below).

Export Tab (Limited Access)

The Export tab is used for bulk exporting and up to 24 data sets can be exported at one time. The time interval is the same for all Data Sets and several options are available for customization. Data can be exported in CSV, Excel, and JSON formats.

The Data Sets portion of the Export tab allows the user to select the specific data sets to be exported and allows for units to be converted.