



Case Study

Continuous algae monitoring in remote location
Sierra Mountains, CA

Siting:

One AlgaeTracker deployed in a narrow flow zone near a dam.

Waterway overview:

600 acre drinking water impoundment fed by aqueduct and surrounded by canyon.

Objectives:

Collect continuous data from source water and reduce visits to remote site

Pre-deployment Conditions

Algae blooms are an increasing threat to waterways and cause both toxicity and taste and odor issues for water utilities. Current monitoring of algae at this location includes manual sampling with a sonde unit once every two weeks, up to once a week in high algae growth season. Due to site location, manual samples required a six hour drive and a boat scheduled with a third party.

Objectives

The drinking water utility company wanted more frequent data collection than possible with manual samples because blooms could occur between samples. Knowing that they had multiple locations that needed testing, the team was seeking a solution that would be scalable and relatively low cost.

Results

The customer deployed the AlgaeTracker buoy before the peak algae season began in spring 2021. The unit was tethered to an existing buoy in a narrow flow section of their reservoir. The Tracker took measurements on a 30 minute schedule, with data streamed to the cloud every two hours. The utility staff were able to log in and see updates on their web dashboard immediately, enabling them to see long term trends as well as short term events in the progression of algae growth throughout the spring, summer, and fall. The time series plot shows the data for chlorophyll-a from the Tracker as well as from sonde based samples taken every two weeks. Good matching between the two instruments was evident with a R^2 linearity score of 0.84.

