SWAMP
Surface Water
Ambient Monitoring
Program

2011 CENTRAL COAST AMBIENT MONITORING PROGRAM (CCAMP) CONTINUOUS MONITORING

What is it?

The Central Coast Region has been divided into five watershed areas, with one area assessed each year, so that all watershed areas are monitored over a 5-year cycle. Watershed sites are selected to include an "accumulator site" or coastal confluence site at the bottom end of the watershed, and a number of sites along the main stem and at major tributary inputs. This tributary-based design is intended to aide in efficient identification of the general source areas of pollutant problems.

The continuous monitoring element of the Central Coast Ambient Monitoring Program is intended to identify streams where dissolved oxygen and temperature conditions are outside tolerance ranges for resident fish, as well as to better characterize stream temperature and dissolved oxygen concentrations, which fluctuate daily and seasonally. The following continuous monitoring data was collected in 2011:

- Deployment of Hobo Temperature Loggers at 50 sites in the Central Coast Region. Sites included a mixture of coastal confluence project and watershed rotation project sites. Hobos were deployed in May and retrieved in October. All Hobos collected water temperature measurements every 15 minutes for the duration of their deployment.

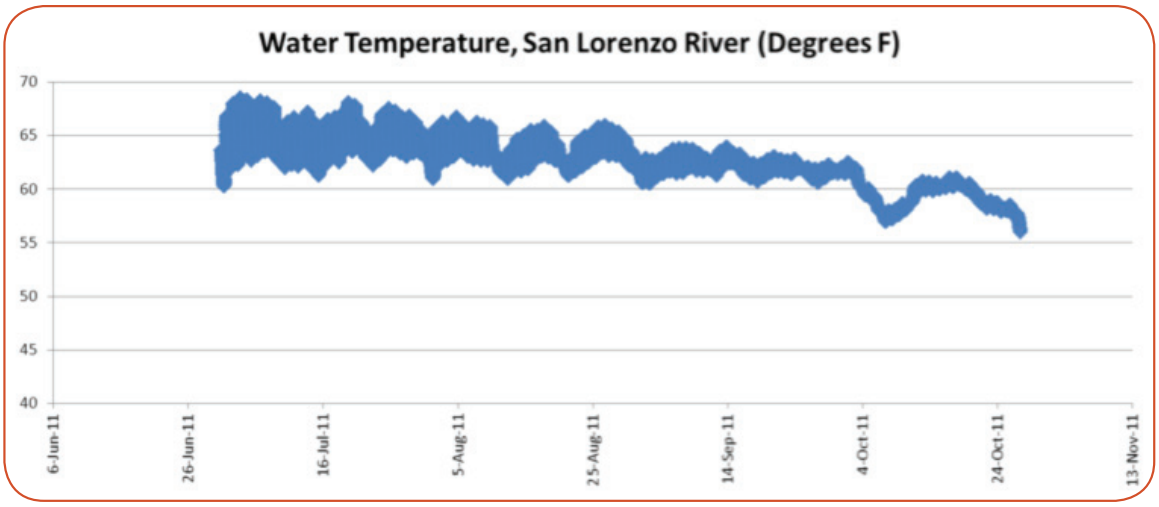
- Deployment of multi-analyte probes which measure dissolved oxygen, water temperature, pH, and specific conductivity at 25 sites in the watershed rotation area. Probes were deployed for a single 24 hour period in September. All probes were set to log data every 30 minutes for the duration of their deployment.

Why is it important?

Stream temperature and oxygen conditions are important for the success of salmonids, which in the Central Coast include coho salmon and steelhead trout. Various condition thresholds are important for the survival of these fish through various live stages. In the Central Coast, salmonids are considered "cold water fish", and their presence confirms that a water body supports the Cold Water beneficial use.

The most sensitive time period is summer, when stream temperatures are warmest and young salmonids are growing, prior to their migration to the ocean. Collection of continuous water temperature and dissolved oxygen data is aimed at identifying exceedances during critical life stage requirements for salmonids during the summer months when these conditions are most likely to be outside of tolerances.

One of the CCAMP questions of concern is "Is there evidence that aquatic life uses are not supported?". Continuous monitoring data provides one important component of the answer to this question.



Example data output from a Hobo Temperature Logger deployed in the San Lorenzo River at Crossing Street in Summer 2011

How will this information be used?

Water temperature, dissolved oxygen, and pH data collected from continuous monitoring will be used to determine whether the following aquatic life beneficial uses are supported:

- Cold Freshwater Habitat
- Warm Freshwater Habitat
- Spawning

Data are also used to update the CCAMP data browser which contains maps, charts and summary statistics for all data collected by the program. This website is publically available and used by multiple programs at the Water Board. In addition, this data is the primary source of data and information supporting the currently approved Clean Water Act Section 303(d) List of Impaired Waters. Continuous monitoring data has also provided valuable information to evaluate potential reference sites as part of regional nutrient numeric endpoint development efforts.

For more information, visit the CCAMP website.