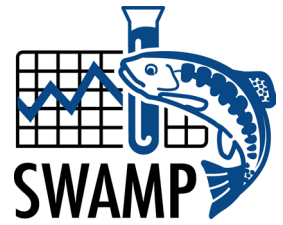


# Algae Samples



2009 SWAMP Achievements Report

## Standard Operating Procedures for Collecting Stream Algae Samples

### What is it?

The document is the SWAMP approved Standard Operating Procedure (SOP) for collecting and field-processing stream algae in California. Instructions are provided for the collection of samples for taxonomic identification of diatoms and soft-bodied algae, the collection of samples for determination of biomass based on chlorophyll a and ash-free dry mass, and the estimation of percent algal cover. The document is designed to serve as a stand-alone SOP if algae are the only bioindicators being assessed at a site or as an add-on module to the existing SWAMP SOP for bioassessment using benthic macroinvertebrates.

### Why is it important to the State?

Bioassessments integrate the effects of multiple stressors in waterbodies over time, including chemical pollutants and physical alterations. The value of biological assessments is that they more directly measure whether aquatic life beneficial uses of receiving waters are supported compared to chemically-derived water quality objectives. While SWAMP has focused most of its bioindicator development effort to date on benthic macroinvertebrates, it has now developed capacity for the use of algae based on the US EPA recommendation to use multiple indicators of biological condition. It will facilitate the "weight-of-evidence" approach for the interpretation of biomonitoring results.

### Why is it important to me?

Algae will provide information beyond that which is currently obtainable through bioassessment with benthic macroinvertebrates alone. As primary producers, algae are the most directly responsive of the common bioindicators to nutrients, and can be a very valuable tool for assessing nutrient impairment.



To ensure data comparability and data quality throughout the state, the new SOP for collecting stream algae samples is recommended. The SOP also discusses the most appropriate indicator (percent algal cover, algal biomass, and/or algal assemblages) to include in a given program. Until now, no Standard Operating Procedures (SOP) for collecting stream algae existed in California.

## How will this information be used?

The use of the algae SOP is required for SWAMP funded projects whenever algae bioassessment is conducted. Depending upon the program goals, different components of the SOP might be incorporated or omitted. For other projects and programs, the use of this SOP is recommended to ensure data comparability and data quality.

**To access the SOP click here.**

