SWAMP

Surface Water Ambient Monitoring Program

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Program

Sound science for informed water quality management.

SWAMP

How well are we managing California's most precious resource—water?

Are we protecting the beneficial uses of our water? …
Is it safe to eat the fish? … Is it safe to swim in the water? …
Are our aquatic ecosystems healthy?

Are we investing our resources effectively and focusing on the right water quality problems?

The Surface Water Ambient Monitoring Program has the tools to answer these questions with the scientific accuracy we need to make informed management decisions.

… Is it safe to eat the fish? … Are our aquatic ecosystems healthy? … Is it safe to swim in the water? | *Is it safe to*
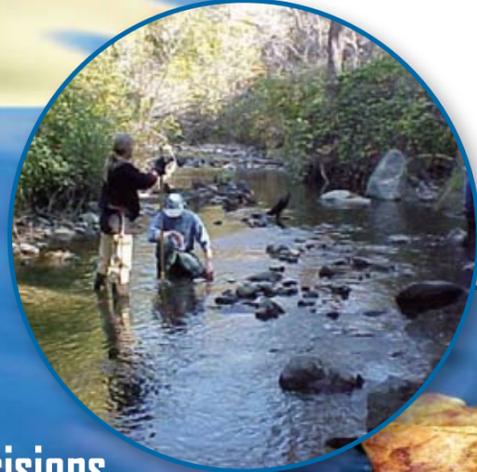
Sound Science Promotes Informed Decisions

Insufficient resources. Conflicting agendas. A growing population.

The complex demands on California's water pose daunting challenges to the management of the state's water quality. Monitoring and assessment are the cornerstones to preserving, enhancing and restoring the state's water quality: They indicate the status and trends of our surface water, thus enabling all of us to make informed decisions about managing water quality.

The Surface Water Ambient Monitoring Program—SWAMP—is a statewide monitoring effort that provides the scientifically sound data we need to effectively manage California's water resources. "Ambient" monitoring refers to the collection of information about the status of the physical, chemical and biological characteristics of the environment. The State Water Resources Control Board and the Regional Water Quality Control Boards introduced SWAMP in 2001. The program's purpose is to monitor and assess water quality to determine whether we are meeting water quality standards and protecting beneficial uses. Data from SWAMP is used to improve the state's water quality assessment and impaired water bodies list, required under Sections 305 (b) and 303 (d) of the federal *Clean Water Act.*

Scientifically sound monitoring lets us know with confidence:

- The overall quality of California's surface waters.
- Trends and the extent to which surface water quality is changing over time.
- Problem areas and areas in need of protection.
- Necessary levels of protection.
- Causes and sources of water quality problems.
- The effects of point and nonpoint source pollution.
- The effectiveness of clean water projects and programs.

SWAMP has four primary responsibilities:

- Monitor, assess and report on California's water quality.
- Create a common framework that coordinates statewide monitoring efforts by offering a uniform and objective approach to monitoring, sampling and analytical methods and by maintaining quality control through consistent data quality assurance protocols, data validation and centralized data management.
- Serve as a technical resource by communicating among project participants and stakeholders and by providing technical expertise.
- Collaborate with other agencies in the state that monitor water quality so that efforts are comprehensive, integrated, non-duplicative and appropriately funded.

Comparable Data = Scientifically Defensible Data

Each year, hundreds of government, industrial, academic and private organizations devote untold time, energy and money to monitor, protect, manage and restore water resources and watersheds. But different approaches to monitoring and interpretation make it difficult to share and use the data efficiently and effectively.

"Comparable" data are collected and documented so that different sets can be combined to provide both more information and increased certainty.

A uniform, consistent approach to ambient monitoring and data collection permits data sharing across projects and agencies. SWAMP's information management system details the format, standards and protocol documentation to standardize data for increased data sharing. The documentation does not restrict users to a particular "method." Rather, it provides a variety of indicators and approaches that meet certain quality assurance standards while giving flexibility to participating agencies.

Comparability is one of our most important tools for creating scientifically defensible data with which to make informed water quality management decisions.

SWAMP: A Resource for Water Quality Management

Organizations that choose to follow SWAMP guidelines have numerous advantages. Because SWAMP gathers national and international experts for discussion and advice, all stakeholders will:

- Have access to outside expertise.
- Stay abreast of methods, indicators and approaches that are cutting edge, technically defensible and superior in quality.
- Be able to address larger scale questions and put local monitoring data into a broader context.
- Maximize their resources and save money.

The Benefits of Collaboration

SWAMP promotes partnerships to foster collaboration; advance the science; improve management in all elements of the water quality monitoring community and heighten public awareness, public involvement and stewardship of our water resources. Collaboration also:

- Balances public, commercial and environmental demands on our water in an objective and publicly transparent way.

- Minimizes duplication of effort among water monitoring entities and makes the most effective use of limited resources.

- Maximizes the effectiveness of monitoring designs to make sure we ask the right questions and get the right data to answer those questions.

- Satisfies *Clean Water Act* section 305(b) and 303(d) requirements.

- Fosters working on the "right" problems, which can result in better water quality data.

- Saves public and private money.

Producing Data for Public Use

In addition to making data available, SWAMP produces data and collaborates with other groups to meet mutual data needs. In addition to producing other products, SWAMP coordinates with the Office of Environmental Health Hazard Assessment to gather and assess the data necessary for fish consumption advisories that inform the public whether particular fish are safe for eating and alerts the public of concerns.

Making Information Available at www.waterboards.ca.gov/swamp

SWAMP serves as a central clearinghouse that makes water quality data accessible. Its comprehensive Web site is an encyclopedia of important, useful and updated information of interest to professionals and stakeholders. It also makes available the methods and quality assurance standards that control the monitoring process. Some of the Web site's highlights include:

- Numerous statewide and regional water quality assessment reports.
- Single-issue fact sheets such as the results of monitoring in coastal estuaries and tests of endocrine disrupting chemical activity in surface waters of the Central Valley and North Coast.
- *The SWAMP Monitor*, a quarterly newsletter.
- Guides for quality assurance and data support available at <www.waterboards.ca.gov/swamp>.

A list serve offers regular communication with those who choose to subscribe (www.waterboards.ca.gov/lyrisforms/swrcb_subscribe.html). All SWAMP data are publicly available on the Internet through the California Environmental Data Exchange Network (CEDEN).

SWAMP on the Web

For more information regarding the SWAMP program, see: www.waterboards.ca.gov/swamp/. To subscribe to The SWAMP Monitor, see: www.waterboards.ca.gov/lyrisforms/swrcb_subscribe.html.

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Get Connected for Better Water Quality

Meeting the data and information challenges that face water quality managers today requires a common view of water quality monitoring and a common vocabulary to facilitate collaboration and communication. To join others to improve California's water quality, contact:

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Better Data + Better Assessment Framework = Better Information