Maximizing the Effectiveness of Water Quality Data Collection & Dissemination

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Everyone Needs Data

- 211,000 miles of rivers & streams
- >1.6 million acres lakes
- 1,100 miles of coastline
- 1.3 million acres of bays and estuaries
- 15 million acre-feet of groundwater extracted per year
The Water Quality Information Problem
The Response – Senate Bill 1070

- Became state law in 2006
- Required formation of California Water Quality Monitoring Council
- Memorandum of Understanding between
  - California Environmental Protection Agency
  - California Natural Resources Agency
- By December 1, 2008: Monitoring Council recommendations
  - Maximize efficiency and effectiveness of existing water quality data collection and dissemination
  - Ensure collected data available to decision makers and public
The Monitoring Council’s Solution

Don’t get mired in technical details!

- Focus first on streamlined data access
  - Theme-based web portals
  - Directly address users’ questions
  - Single global point of entry

- Theme-specific workgroups

- Overarching Monitoring Council guidance
Theme-Specific Workgroups
Issue-experts represent key stakeholders

Monitoring Council

Develop web portal

Develop monitoring & assessment methods & data management procedures

Achieve standardization

Coordinate monitoring programs
Role of the Monitoring Council

- Establish policies and guidelines
- Clearinghouse for
  - Standards
  - Guidelines
  - Collaboration
Welcome to My Water Quality

This web portal, supported by a wide variety of public and private organizations, presents California water quality monitoring data and assessment information from a variety of perspectives that may be viewed across space and time.

IS OUR WATER SAFE TO DRINK?
Safe drinking water depends on a variety of chemical and biological factors regulated by a number of local, state, and federal agencies. More >>

IS IT SAFE TO SWIM IN OUR WATERS?
Swimming safety of our waters is linked to the levels of pathogens that have the potential to cause disease. More >>

IS IT SAFE TO EAT FISH AND SHELLFISH FROM OUR WATERS?
Aquatic organisms are able to accumulate certain pollutants from the water in which they live, sometimes reaching levels that could harm consumers. More >>

ARE OUR AQUATIC ECOSYSTEMS HEALTHY?
The health of fish and other aquatic organisms and communities depends on the chemical, physical, and biological quality of the waters in which they live. More >>

WHAT STRESSORS AND PROCESSES AFFECT OUR WATER QUALITY?
Beneficial uses of our waters are affected by emerging contaminants, invasive species, trash, global warming, acidification, pollutant loads, and flow. More >>
Is It Safe to Swim In Our Waters?

Show County Info: -- Select County --

Beach water quality monitoring and strong pollution prevention measures are critical for protecting beachgoers from waterborne diseases. Monitoring is performed by county health agencies, publicly owned sewage treatment plants, other dischargers, environmental groups and numerous citizen-monitoring groups.

View Monitoring and Assessment Information

- Click on a county or;
- Select from the Show County Info menu.

QUESTIONS ANSWERED

- Can I swim at my beach, lake, or stream?
- How clean was my beach, lake, or stream during the past week or month?
- What are the long-term trends at my beach, lake, or stream?
- Which beaches, lakes, and streams are currently closed by county health agencies?
- Which beaches, lakes, and streams are listed by the State as impaired?
- Are the problems getting better?
Understanding trends allows decision makers to determine whether pollution sources are increasing in magnitude and/or frequency and the effectiveness of control measures.

View Trends in Bacterial Indicator Levels

The interactive map below provides sampling results for coastal beach monitoring locations over time. A few county health agencies provide creek and lake information along with ocean beach information. Otherwise, lake and stream information is currently unavailable electronically.

- To find bacterial sample results for a particular site, first select the county, then click on a site location. The results will appear to the right of the map. Results may take time to appear.
- Place your mouse cursor over a point on the chart to see the date and sample result for a particular sample event.

Horizontal lines on the charts represent bacterial water quality objectives specified in the 2005 California Ocean Plan.

- Red is the Single Sample Maximum objective. Sample points above this line represent violations of the objective.
- Blue is the 30-day Geometric Mean objective - the geometric mean of the five most recent samples from each site. Note: Individual sample results above this line do not necessarily represent violations.

National Beach Closures and Postings Trends
What are the Levels and Long-Term Trends in My Lake, Stream, or Ocean Location?

Select location from list.

Zoom to county:

Contaminant Data

This interactive map allows you to explore fish contaminant data for your fishing locations.

- Select parameters of interest from the menus below and click on the "Go" button. The map will display average concentrations for the selected water bodies.
- To view data for all species at your water body, trends, or comparisons with nearby water bodies, click on a map location or select a water body from the menu above the map.
- Thresholds displayed on the map can be modified by clicking the Change Thresholds link in the map legend.

Select Species:

- Species With Highest Avg Concentration

Select Contaminant:

- Mercury

Select Start Date:

- 2005

Select End Date:

- 2007
Which Lakes, Streams, or Ocean Locations Are Listed By The State As Impaired?

This interactive map shows which of California's waters are listed as impaired for uses related to fish or shellfish consumption by humans and which pollutants are involved. Also shown are the Total Maximum Daily Load (TMDL) projects to reduce pollutants to acceptable levels.

View 2006 303(d) Listing and current TMDL Information:

- Click on a water body (shown in red), or
- Select (or type) the county in the County box, then select the water body from the Water Body menu, or
- Select (or type) the water body name directly in the Water Body box
- Use the magnifier tool to zoom into an area of interest (more highlighted water bodies will appear)
- Click on the state outline tool to return to a statewide view

Listed water body in the San Francisco Bay Region.

Impaired Water Bodies

Listing a water body as impaired in California is governed by the State Water Board's 303(d) Listing Policy.

The State and Regional Water Boards assess water quality data for California's waters every two years to determine if they contain pollutants at levels that exceed protective water quality criteria and standards. This biennial assessment is required under Section 303(d) of the federal Clean Water Act.

The map shows California waters that were placed on the State's most current (2006) 303(d) list and which pollutants they contain that adversely impact human health or the environment.
Are Our Aquatic Ecosystems Healthy?

California has many types of aquatic habitats. Follow the links below to learn more...

ESTUARIES
Estuaries are unique habitats found where rivers and the ocean mix. They feature a diverse array of plants and animals adapted to life along this mixing zone. More >>

LAKES
California lakes, supporting deep water, wetlands, riparian woodlands, offer a quiet refuge for plants, animals and humans alike. More >>

STREAMS & RIVERS
California's streams and rivers flow through diverse habitats, from mountain canyons, valleys, deserts, estuaries and urban areas. Riparian woodlands develop along stream banks and floodplains, linking forest, chaparral, scrubland, grassland, and wetlands. More >>

OCEAN
California has 1,100 miles of shoreline and 220,000 square miles of state and federal oceanic habitat, featuring one of the world's most diverse marine ecosystems. More >>

WETLANDS
Wetlands form along the shallow margins of deepwater ecosystems such as lakes, estuaries, and rivers. They also form in upland settings where groundwater or runoff makes the ground too wet for upland vegetation. More >>
ARE OUR AQUATIC ECOSYSTEMS HEALTHY?
- Wetlands – March 2010
- Streams – Future
- Marine Rocky Intertidal – Future

IS IT SAFE TO SWIM IN OUR WATERS?
- Coastal beaches, bays & estuaries – July 2009

IS IT SAFE TO EAT FISH AND SHELLFISH?
- Sport fish – December 2009

IS OUR WATER SAFE TO DRINK?
- Groundwater – Future
California’s Comprehensive Water Quality Monitoring Program Strategy

www.waterboards.ca.gov/water_issues/programs/monitoring_council

My Water Quality Portals

www.CaWaterQuality.net