

# California Safe-to-Swim Workgroup

## Freshwater Safe to Swim – Subworkgroup Meeting

July 10, 2013 – Held Online Via Webex & Conference Call



Agenda: [www.mywaterquality.ca.gov/monitoring\\_council/swim\\_workgroup/docs/agenda\\_071013.pdf](http://www.mywaterquality.ca.gov/monitoring_council/swim_workgroup/docs/agenda_071013.pdf)

## Introduction to Project Assistant Research Scientist:



Sonia Djordjevic

Assistant Research Scientist – SWRCB (intern)

Biography: 2nd year MPH student at **UCLA** School of Public Health in the Environmental Health Science Department. Bachelor's degree in Biochemistry and Cell Biology from UCSD '11. Born and raised in the **San Francisco Bay Area**.

# Discussion of Webportal



[Home](#)

## Welcome to My Water Quality

- » Cal/EPA
- » Natural Resources Agency
- » About the California Water Quality Monitoring Council
- » Web Portal Partners
- » Monitoring & Assessment Programs, Data Sources & Reports
- » Water Quality Standards, Plans and Policies
- » Regulatory Activities
- » Enforcement Actions
- » Research
- » State & Regional Water Boards
  - » Performance Report
  - » About SWAMP
  - » SWAMP Tools

This web portal, supported by a wide variety of public and private organizations, presents California water quality monitoring data and assessment information that may be viewed across space and time. Initial web portal development concentrates on four theme areas, with web portals to be released one at a time. Click the [Contact Us](#) tab for more information.

The Monitoring Council seeks to provide multiple perspectives on water quality information and to highlight existing data gaps and inconsistencies in data collection and interpretation, thereby identifying areas for needed improvement in order to better address the public's questions. Questions and comments should be addressed through the [Contact Us](#) tab.



### 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. [\[Future Portal\]](#)



### 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. [\[Future Portal\]](#)





**My Water Quality Monitoring Council: This site is hosted by the Surface Water Assessment Monitoring Program (SWAMP)**



- [Home](#)
- [What to Know](#)
- [What to Do](#)
- [What to Do for You](#)
- [Compliance Tools](#)
- [News & Press](#)
- [Contact Us](#)

**Welcome to My Water Quality**

The web portal, supported by a wide variety of public and private organizations, presents California water quality monitoring data and assessment information that may be shared across water and time. Initial web portal development concentrated on five theme areas. With web portals to be released one at a time. Click the [Contact Us](#) link for more information.

The Monitoring Council exists to provide multiple perspectives on water quality information and to highlight existing data gaps and inconsistencies in data collection and interpretation. Finally, identifying areas for needed improvement in order to better address the public's questions. Questions and comments about the web portal should be addressed through the [Contact Us](#) link.



**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 >>](#)

- [Home](#)
- [What to Know](#)
- [What to Do](#)
- [What to Do for You](#)
- [Compliance Tools](#)
- [News & Press](#)
- [Contact Us](#)



- 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 water in which they live. [More >>](#)
- WHAT FACTORS AND PROCESSES AFFECT OUR WATER QUALITY?**  
 Recreational uses of our waters are affected by emerging contaminants, invasive species, trash, ground-water, sedimentation, pollutant loads, and flow. [More >>](#)



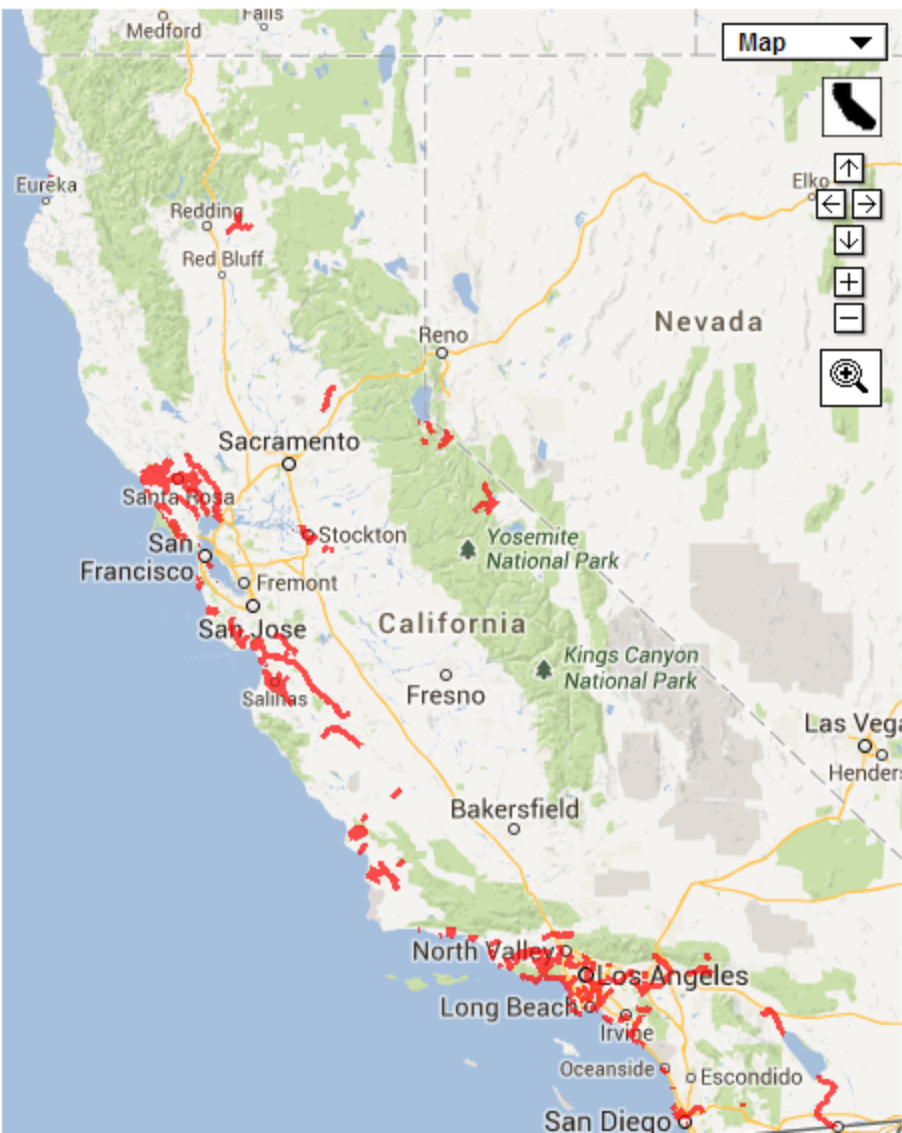
# Which Beaches, Lakes, and Streams Are Listed as Impaired for Bacterial Indicators?

County:

Water Body:

All

Show county



This interactive map shows which of California's waters are listed as impaired for recreation related factors and which pollutants are involved. Also shown are potential sources of pollutants and 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 in the **Water Body** menu, or;
- Select (or type) the water body name directly in the **Water Body** box.

### Impaired Water Bodies

Listing a water body as impaired in California is governed by the [State Water Board Listing Policy](#).

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 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 water contact recreation, including swimming, surfing, scuba diving, snorkeling, and other related uses where incidental water ingestion may occur.

➤ [View entire California 2006 303\(d\) List](#)

### Total Maximum Daily Loads (TMDLs)

Placement of a water body and its offending pollutant on the 303(d) list, initiates development of a Total Maximum Daily Load (TMDL). TMDLs may establish "daily" limits of the pollutant, or in some cases require other regulatory measures, with the goal of reducing the amount of the pollutant entering the water body to meet water quality standards.

This map also provides the current status of TMDL development for these water bodies containing pollutants that adversely impact water contact recreation, including swimming, surfing, scuba diving, snorkeling, and other related uses where incidental water ingestion may occur.

## Is it Safe to Swim In Our Waters?



Show County Info:



Beach water quality monitoring and strong pollution prevention measures are critical for protecting beach goers from waterborne diseases. Monitoring is performed by city and 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.

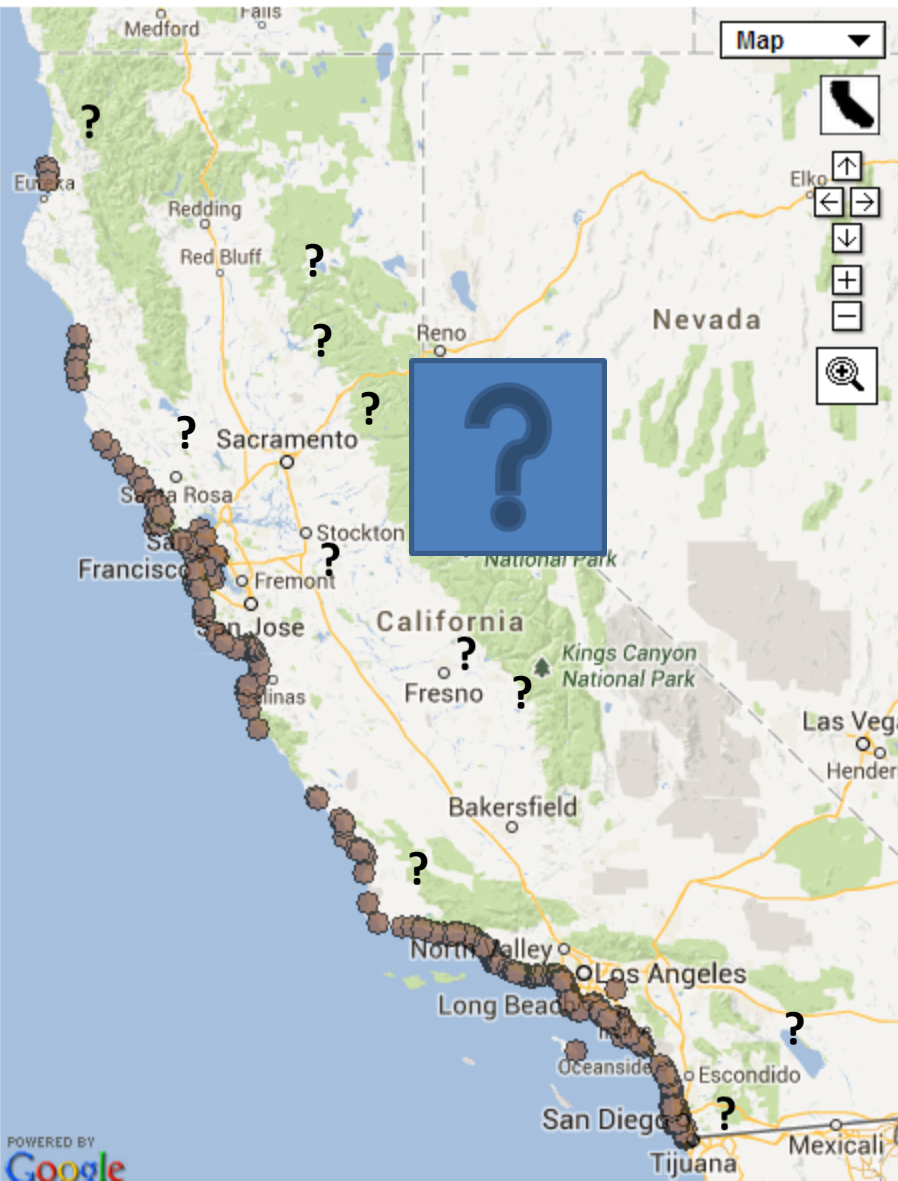
### QUESTIONS ANSWERED

- [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?](#)

# What are the Long-Term Bacteria Trends at My Beach, Lake, or Stream?



All  Show county



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 over time. A few county health agencies provide creek and lake information along with 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 a site location. The results will appear to the right of the map. **Results may take some time to appear.**
- Place your mouse cursor over a point on the chart to see the date and sample results for a particular sample event.

Horizontal lines on the charts represent bacterial water quality objectives specified in the [2009 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 recent samples from each site. *Note: Individual sample results above this line do not necessarily represent violations.*

## National Beach Closures and Postings Trends

Beach water quality information for coastal and Great Lakes beaches. This information is up to a year out of date.

- [U.S. Environmental Protection Agency's Beaches Environmental Assessment and Coastal Health \(BEACH\) Program](#)



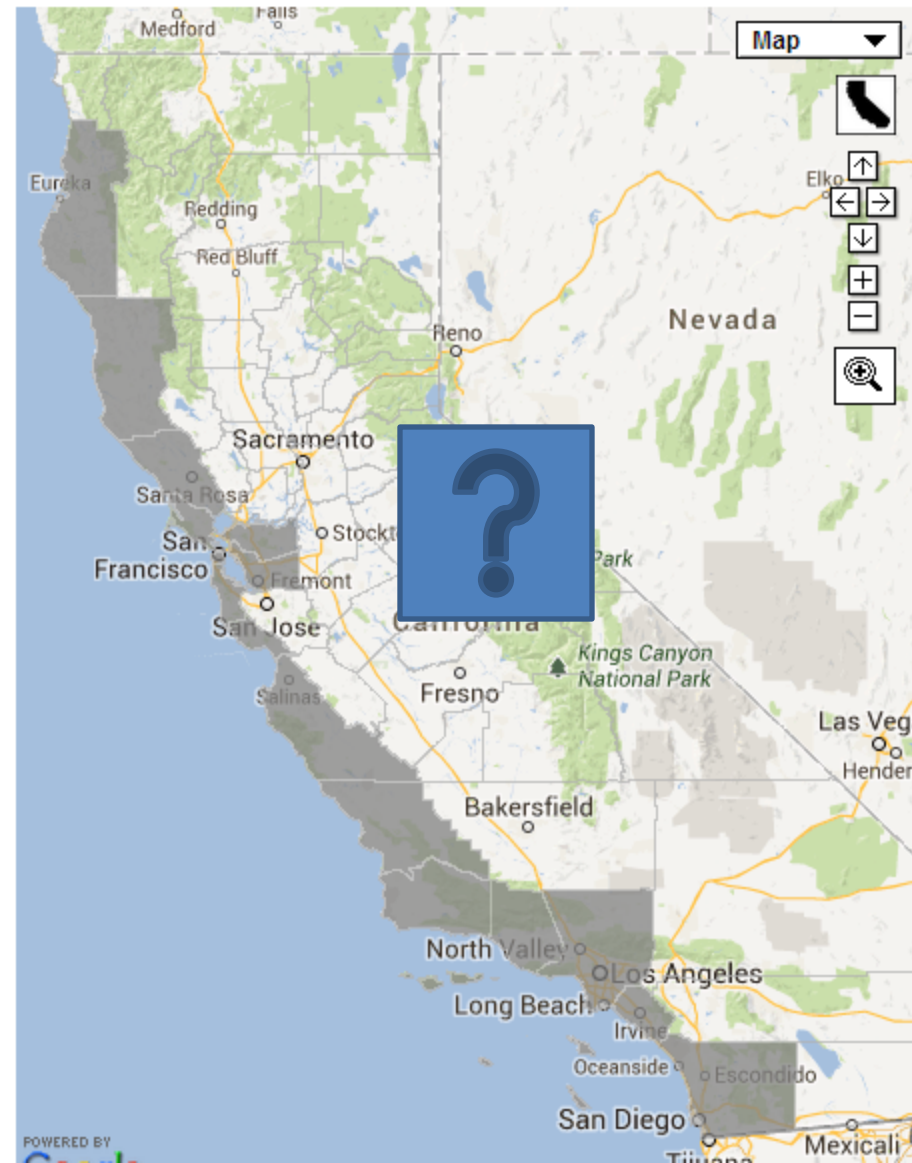




# Which Beaches, Lakes, or Streams are Currently Closed or Posted by County Health Agencies?

---

Show County Info:



## Ocean Beaches

This interactive map provides access to the most current information on postings and closures.

- Postings - Warnings to avoid contact with the water. Monitoring shows bacteria exceed standards.
- Closures - Prohibitions on uses of water. Imminent public health threats, such as sewage spills.

This information is updated daily to weekly, depending on the county.

## View Posting and Closure Information

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

## Freshwater Lakes and Streams

A few county health agencies provide creek and lake information along with ocean information. Otherwise, lake and stream information is currently unavailable electronically.

# SWAMP - Surface Water Ambient Monitoring Program

---

## BACTERIA MONITORING INVENTORY OF CALIFORNIA'S FRESHWATER BEACHES MARCH 2008



- [Bacteria Monitoring Inventory of California's Freshwater Beaches](#)
- [California Freshwater Beaches Bacteria Monitoring Inventory Spreadsheet - by County](#)
- [California's Surface Waters \(Freshwater\) Needing Bacterial Total Maximum Daily Load Limits Developed \(TMDL's\)](#)
- [California's Surface Waters with Bacterial Limits as Waste Discharge Orders - by Region](#)

[http://www.waterboards.ca.gov/water\\_issues/  
programs/swamp/bacteria\\_monitoring.shtml](http://www.waterboards.ca.gov/water_issues/programs/swamp/bacteria_monitoring.shtml)

# Discussion of SWAMP Study

Bacteria Monitoring Inventory of  
California's Freshwater Beaches  
March 31, 2008

Prepared for the  
State Water Resources Control Board's  
Surface Water Ambient Monitoring Program  
(SWAMP)

Ling-ru Chu  
Anja Wehrmann  
Bruce Hammock  
Henry Calanchini  
Patrick Grof-Tisza  
Melissa Turner  
Michael Johnson

Aquatic Ecosystems Analysis Laboratory  
Center for Watershed Sciences  
John Muir Institute of the Environment  
University of California, Davis

[www.waterboards.ca.gov/water\\_issues/programs/swamp/docs/bacteria\\_monitoring/bacteria\\_monitoring\\_inventory\\_report.pdf](http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/bacteria_monitoring/bacteria_monitoring_inventory_report.pdf)



Final report

2008

**Bacteria Monitoring Inventory of  
California's Freshwater Beaches**

March 2008



1	California Fresh Water Beaches Bacteria Monitoring Inventory ["NA" indicate								
2	County	Contact Name	Organization	Title	Address	Phone	Fax	Email	Name of designated freshwater beach / swimming area
3	Alameda	Cynthia Bartus Jep	Alameda County	NA	NA	510-567-NA	NA	NA	NA
4	Alameda	Hal MacLean	East Bay Regional Park District	Water	2590 Per	510-649-510-204-0664		<a href="mailto:hmaclean@ebparks.org">hmaclean@ebparks.org</a>	Del Valle East Beach
5	Alameda	Hal MacLean	East Bay Regional Park District	Water	2590 Per	510-649-510-204-0664		<a href="mailto:hmaclean@ebparks.org">hmaclean@ebparks.org</a>	Del Valle West Beach

Latitude	Longitude	Type	Size	Season open for swimming	Number visitors per day	Number of beach closures
NA	NA	NA	NA	NA	NA	NA
37° 35' 4.77" N	121° 41' 58.58" W	Lake	~400 feet	Year Round	2006: ~87,728 for both Del Valle Beaches	0

Chlorinated	Monitoring Program	Years in Existence	Analytes	Monitoring frequency	Method of anlysis	Laboratory
NA	Yes (through EBRPD)	NA	NA	NA	NA	NA
No	Yes	Data since 1992	Total coliform, fecal coliform, E. coli	2006:39 monitoring days	Colilert, Coliform:MF M9222D	East Bay Municipal C

Quality Assurance / Quality Control	Regulatory standards	Other water quality information	Where does this info reside?	Existing Database?	Data publicly available?
NA	NA	NA	NA	NA	NA
NA	CA DPH Draft Guidance for Freshwater Beaches (5/8/06), Single sample values	NA	EBPRD	Excel (since 2000)	Upon request

### Comments

EBRPD monitors all freshwater in Alameda county

3 sampling sites; April - Oct: weekly sampling; Nov - March: 2x/month

# California's Surface Waters with Bacterial Limits as Waste Discharge Orders - by Region

## Region 5

1	A	B	C	D	E	F	G	H	
	County	Organization	Order Number	Type of monitoring	Parameter	Units	Type of Sample	Frequency	Notes
2	Alpine	Bear Valley Water District	R5-2005-0133	Receiving water monitoring	Fecal Coliform	MPN/100ml		Quarterly	R-1, R-2 (Bloods Cr as far US, but far DS from point of discharge, b
3	Amador	CDC, Preston Youth Corr Facility, CDF Fire Training Academy, Mule Creek State Prison	R5-00-088-rev	Surface water	Total Coliform	MPN/100ml	Grab	Monthly	Stormwater channels surroundin
4	Amador	City of Jackson, Wastewater Trt Plant	R5-2007-0133	Receiving water - surface and gro	Fecal Coliform	MPN/100ml	Grab	Quarterly	Locations RSW-001 and RSW-00
5	Butte	City of Biggs, Wastewater Trt Plant	R5-2007-0032	Receiving Water	Fecal Coliform	MPN/100ml	Grab	Monthly	Locations R-001 and R-002
6	Calaveras	Calaveras County Water District Saddle Creek Golf Course...	R5-2006-0081	Surface water and groundwater	Fecal Coliform	MPN/100ml	Grab	Monthly	Monitoring location Littlejohns C
7	Calaveras	San Andreas Sanitary District, Wastewater Trt Plant	R5-2003-0151	Receiving Water	Fecal Coliform	MPN/100ml	Grab	Monthly	Locations: R-1 and R-2 or R-3 an

## Region 4

County	Organization	Order Number	Type of monitoring	Parameter	Units	Type of Sample	Sampling/Reporting Frequency	Notes
Los Angeles County	LA county dept of public works Malibu Mesa wastewater reclamation facility	R4-2007-0002	Receiving Water	Fecal Coliform	MPN/100ml	Grab	Weekly	
Los Angeles County	LA county dept of public works Malibu Mesa wastewater reclamation facility	R4-2007-0002	Receiving Water	Total Coliform	MPN/100ml	Grab	Weekly	
Los Angeles County	LA county dept of public works Malibu Mesa wastewater reclamation facility	R4-2007-0002	Receiving Water	E. Coli	MPN/100ml	Grab	Weekly	
Los Angeles County	Long Beach Water Reclamation Plant	R4-2007-0047	Receiving Water	Total Coliform	MPN/100ml or CFU/100ml	Grab	Monthly	
Los Angeles County	Long Beach Water Reclamation Plant	R4-2007-0047	Receiving Water	Fecal Coliform	MPN/100ml or CFU/100ml	Grab	Monthly	
Los Angeles County	Long Beach Water Reclamation Plant	R4-2007-0047	Receiving Water	E. Coli	MPN/100ml or CFU/100ml	Grab	Monthly	

[http://www.waterboards.ca.gov/water\\_issues/programs/swamp/docs/bacteria\\_monitoring/ca\\_freshwater\\_region\\_waste\\_dishcharge\\_orders\\_final.xls](http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/bacteria_monitoring/ca_freshwater_region_waste_dishcharge_orders_final.xls)

## Surface Water Ambient Monitoring Program - Region 5 Activities

---

### Seasonal Trend Monitoring at Central Valley Integrator Sites

Starting in spring 2009, the Central Valley Water Board SWAMP will begin monitoring multiple water quality parameters at 30 integrator sites in the Central Valley. The study is designed to help establish a framework of monitoring sites to facilitate Regionwide assessments of water quality and to add value to existing monitoring efforts. Eleven of the sites are being monitored as part of the [Sacramento Watershed Coordinated Monitoring Program](#), a coordinated monitoring effort between the Central Valley Water Board SWAMP and DWR, Northern District. Additionally, this monitoring is coordinated with the [SWAMP Statewide Contaminant Trend Monitoring at Integrator Sites](#), a study to monitor contaminant trends in sediment. Water quality assessments will benefit from the added value of all three monitoring programs..

→ Monitoring Plan - [Seasonal Trend Monitoring at Central Valley Integrator Sites](#), 1.29 MB\*, PDF ([PDF Info](#))

### Source ID Study

The Source ID Study is a coordinated monitoring effort between the University of California at Davis (UCD) and the Central Valley Regional Water Quality Control Board (Regional Board) Surface Water Ambient Monitoring Program (SWAMP). This program will monitor and assess ambient water quality of the Sacramento and San Joaquin River Watersheds at targeted locations during distinct seasons (snowmelt, irrigation, dry, and storm events) to further assess previously noted elevated levels of pathogen indicators and conduct a preliminary screening on potential sources (human, cow, dog, other).

→ Monitoring Plan - [Central Valley Bacteria Source Identification Study](#), 368 KB, PDF ([PDF Info](#))

→ Quality Assurance Project Plan - [Central Valley Bacteria Source Identification Study](#), 995 KB, PDF ([PDF Info](#))

### Safe to Swim Studies

The Central Valley Water Board conducted five Safe-to-Swim (Recreation Beneficial Use) studies: an initial screening study in 2007, a region-wide study in 2008, and a follow-up study in 2009. In the first two studies, local swimming holes were sampled before, during, and after Labor Day weekend. *E.coli* was used as a pathogen indicator. The 2009 follow-up study included analyses for *E. coli*, *E. coli* O157:H7, *Salmonella*, *Cryptosporidium* and *Giardia* in the watersheds with previously elevated *E. coli* levels. Two Safe-to-Swim studies were conducted in 2010. In June 2010, a small follow-up study was conducted in the Sacramento River Basin and included sampling several popular beach spots at Lake Natoma (Sacramento County) and Folsom Lake (Placer County). A larger region-wide study of popular swimming holes was conducted in Aug-Sept. 2010 over a 5 week period.

[http://www.waterboards.ca.gov/centralvalley/water\\_issues/swamp/r5\\_activities/index.shtml](http://www.waterboards.ca.gov/centralvalley/water_issues/swamp/r5_activities/index.shtml)

# Discussion of CEDEN





# CEDEN

CALIFORNIA ENVIRONMENTAL DATA EXCHANGE NETWORK



HOW DO I? ▾

[contact us](#) | [site map](#)

Search

[Find Data](#)

[Submit Data](#)

[About CEDEN](#)

Visit the  
Water Quality Monitoring Council's



[data interpretation web portal](#)

## The California Environmental Data Exchange Network (CEDEN)

is a central location to find and share information about California's water bodies, including streams, lakes, rivers, and the coastal ocean. Many groups in California monitor water quality, aquatic habitat, and wildlife health to ensure good stewardship of our ecological resources. CEDEN aggregates this data and makes it accessible to environmental managers and the public.

For more information, a two page [CEDEN Fact Sheet](#) and eight page [Information Document](#) are available for download.

## News & Highlights

Welcome to the CEDEN website. Please subscribe to our Twitter feed: [@CEDEN News](#) for occasional updates about CEDEN products and data.

8/10/12: New guidance documents for Taxonomy and Tissue data have been added to the data templates page.

# Parameters already within CEDEN

Anatoxin-A, Total

Bacteroidales, Cow, Total

Bacteroidales, Dog, Total

Bacteroidales, Human

Bacteroidales, Human, Total

Bacteroidales, Universal

Bacteroidales, Universal, Total

Coliform, Fecal

Coliform, Total

Cryptosporidium

Cylindrospermopsin, Total

Domoic Acid, Particulate

E. coli

E. Coli O157:H7

Enterococcus

Giardia

Lyngbyatoxin-a, Total

Microcystin-LA, Total

Microcystin-LR, Total

Microcystin-RR, Total

Microcystin-YR, Total

Salmonella

Saxitoxins, Total

# Discussion of Draft Survey

*A draft survey tool was webposted at:*

[http://survey.constantcontact.com/survey/a07e64yqfq5h4ixnxb7/start?TEST ONLY RESPONSES NOT SAVED=t](http://survey.constantcontact.com/survey/a07e64yqfq5h4ixnxb7/start?TEST_ONLY_RESPONSES_NOT_SAVED=t)

\* 1. Please enter the information indicated below.

First Name:

Last Name:

Company Name:

Work Phone:

Email Address:

emailaddress@xyz.com

\* 2. Type of Organization? (Please select best fit.)

- City
- County
- Water Purveyor
- Joint Powers Authority
- State
- Federal
- Tribal
- Non-Governmental Organization

\* 3. What does your agency or organization want to know about swimming safety on a local basis?

350 characters left.

- \*4. What does your agency or organization want to know about swimming safety on a regional basis?

350 characters left.

- \*5. What does your agency or organisation want to know about swimming water quality on a statewide basis?

350 characters left.

\* 6. Does your agency or organization inform the public about water quality for swimming safety in surface waters (not swimming pools)?

Yes

No

7. If yes to question number 6, for what types of waters?

Marine

Brackish

Freshwater

\* 8. Does your agency or organization have a monitoring program?

Yes

No

9. Name(s) of your monitoring program(s) if you have one/any?

50 characters left.

10. Who's data do you use for your assessments and or "beach" postings?

Own agency or organization's

Other agency's

Other non-governmental organisation

Other

11. How do you access the data used by your agency or organization?

Program database (offline)

Internet database

Internet other (ftp site...)

Intranet database

Email

Spreadsheet

CD/Digital copies of data

Paper copy of data

Other



\* 12. Does your monitoring program currently monitor for these safe to swim related water quality parameters?

	Yes	No			
<b>Enterococcus</b>	<input type="radio"/>	<input type="radio"/>			
<b>Total coliform</b>	<input type="radio"/>	<input type="radio"/>			
<b>Fecal coliform</b>	<input type="radio"/>	<input type="radio"/>			
<b>e. coli</b>	<input type="radio"/>	<input type="radio"/>			
<b>Bacteroides</b>	<input type="radio"/>	<input type="radio"/>			
<b>Giardia</b>	<input type="radio"/>	<input type="radio"/>			
<b>Blue green algae / Microcystin</b>	<input type="radio"/>	<input type="radio"/>			
<b>Other (State your other parameters within "Comment")</b>	<input type="radio"/>	<input type="radio"/>			

Comment:

500 characters left.

- \* 13. Have your previous monitoring programs monitored for these safe to swim related water quality parameters?

	Yes	No			
<b>Enterococcus</b>	<input type="radio"/>	<input type="radio"/>			
<b>Total coliform</b>	<input type="radio"/>	<input type="radio"/>			
<b>Fecal coliform</b>	<input type="radio"/>	<input type="radio"/>			
<b>e. coli</b>	<input type="radio"/>	<input type="radio"/>			
<b>Bacteroides</b>	<input type="radio"/>	<input type="radio"/>			
<b>Giardia</b>	<input type="radio"/>	<input type="radio"/>			
<b>Blue green algae / Microcystin</b>	<input type="radio"/>	<input type="radio"/>			
<b>Other (State your other parameters within "Comment")</b>	<input type="radio"/>	<input type="radio"/>			

Comment:

<>

500 characters left.

\* 14. What are your safe to swim water quality monitoring interest(s)/requirements?

	Current Interest/ Requirement	Non-current but Historic Interest/ Requirement	NA
<b>AB 411</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>NPDES</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Stormwater</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>TMDL</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>County ordinance</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Ambient monitoring</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Grant activity</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Other (Please explain in comments.)</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment:

^  
v

<
>

500 characters left.

15. How many monitoring stations are in your current monitoring program?

50 characters left.

16. In reference to question number 15, for how many years have you monitored them?

50 characters left.

17. How often does your program monitor for Fecal Indicator Bacteria (FIB's)?

Daily

Weekly

Monthly

Quarterly

Once annually

Other

18. How do you share or submit your safe to swim water quality data?

Beach Watch Database

CIWQS Database

SWAMP Database

CEDEN Database

Via a Smartphone App

On a Website

Other