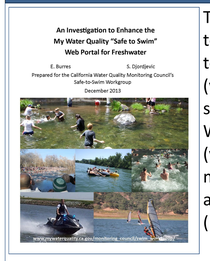
“SAFE TO SWIM” WATER QUALITY WEB-PORTAL DEVELOPMENT SURVEY TO SUPPORT FRESHWATER RECREATION

Erick Burres and Sonia Djordjevic
California State Water Resources Control Board

Abstract


An Investigation to Enhance the
My Water Quality “Safe to Swim”
Web Portal for Freshwater

E. Burres S. Djordjevic
Prepared for the California Water Quality Monitoring Council’s
Safe-to-Swim Workgroup
December 2013

The “Is It Safe to Swim In Our Waters?” (aka “Safe to Swim”) My Water Quality Portal (www.mywaterquality.ca.gov/safe_to_swim) run by the California Water Quality Monitoring Council (www.mywaterquality.ca.gov/monitoring_council) aims to inform and protect swimmers and waders (REC-1) from waterborne diseases.

The monitoring of “beach” water quality is done by city and county health agencies, sewage treatment plants, environmental groups, citizen monitoring groups and others. While data is available for marine beach water quality, data for freshwater beaches and swimming areas are not as readily available. Help is needed in all 58 counties of California with collecting, interpreting, transforming, and sharing freshwater safe to swim water quality data.

In 2013 a project was conducted to investigate how to enhance the usability of an existing website to inform the public about safe to swim water quality for freshwater recreation. The project also investigated how the web-portal could promote collaboration, data sharing and otherwise assist agencies to provide better protection for swimmers/bathers within their jurisdictions and provide usable information for the recreating public.

Information was collected using an online survey from organizations that conducted water quality monitoring which included “safe to swim” water quality parameters, informed the recreating public about water quality or were otherwise involved with protecting freshwater swimmers and waders. Recom-

SAFE TO SWIM WORK GROUP

IS IT SAFE TO SWIM IN OUR WATERS?

Web-Portal
Is It Safe to Swim In Our Waters?

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.

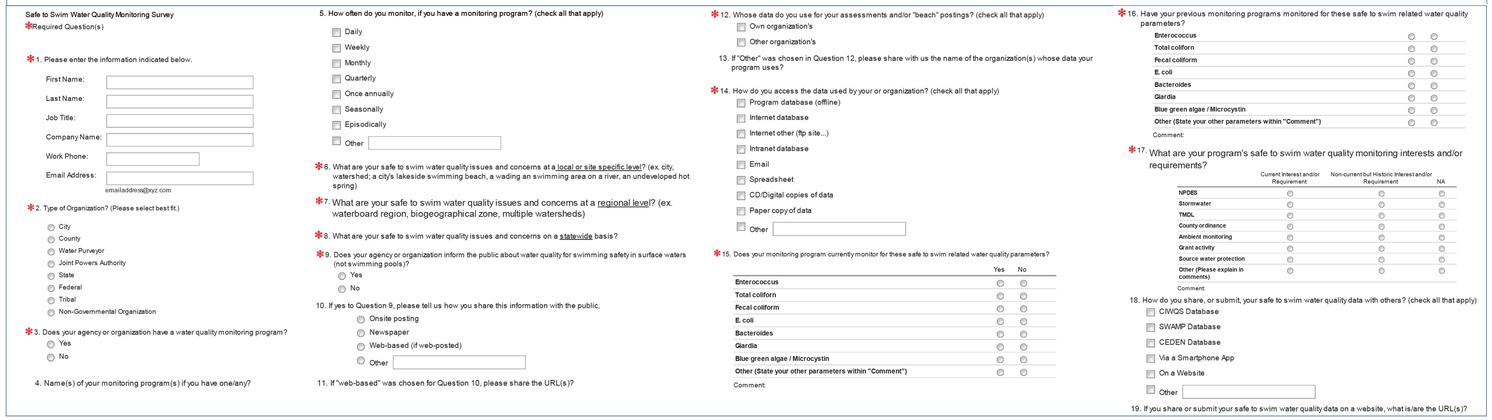
QUESTIONS ANSWERED

- 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?

Methods

This project’s primary interest was to improve the My Water Quality portal for “safe to swim” and to assist those in need of information on freshwater “safe to swim” water quality. Our research methodology consisted of surveying water quality monitors and public health programs with basic questions that would help inform the Safe-to-Swim Workgroup (www.mywaterquality.ca.gov/monitoring_council/swim_workgroup) about the collection of freshwater “safe to swim” water quality data, the uses and application of fresh water “safe to swim” water quality data and the ways programs inform the public of water quality issues related to REC1. To assist with this endeavor a subgroup was formed within the Work Group and meetings were held to assist researches. The sub-working group met to discuss the development of the survey tool and suggested changes to be made regarding the phrasing of some questions to allow better understanding by the general public. The sub-working group also helped decide some primary research goals which the survey would help us answer.

The survey was conducted using Constant Contacts email and survey services.


Safe to Swim Water Quality Monitoring Survey
*Required Question(s)

*1. Please enter the information indicated below.
First Name:
Last Name:
Job Title:
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. Does your agency or organization have a water quality monitoring program?
Yes
No

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

5. How often do you monitor, if you have a monitoring program? (check all that apply)
Daily
Weekly
Monthly
Quarterly
Once annually
Seasonally
Episodically
Other

*6. What are your safe to swim water quality issues and concerns at a local or site specific level? (ex. city, watershed; a city’s lakeside swimming beach, a wading an swimming area on a river, an undeveloped hot spring)

*7. What are your safe to swim water quality issues and concerns at a regional level? (ex. waterboard region, biogeographical zone, multiple watersheds)

*8. What are your safe to swim water quality issues and concerns on a statewide basis?

*9. Does your agency or organization inform the public about water quality for swimming safety in surface waters (not swimming pools)?
Yes
No

10. If yes to Question 9, please tell us how you share this information with the public.
Onsite posting
Newspaper
Web-based (if web-posted)
Other

11. If “web-based” was chosen for Question 10, please share the URL(s)?

*12. Whose data do you use for your assessments and/or “beach” postings? (check all that apply)
Own organization’s
Other organization’s

13. If “Other” was chosen in Question 12, please share with us the name of the organization(s) whose data your program uses?

*14. How do you access the data used by your or organization? (check all that apply)
Program database (offline)
Internet database
Internet other (ftp site...)
Intranet database
Email
Spreadsheet
CD/Digital copies of data
Paper copy of data
Other

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

	Yes	No
Enterococcus		
Total coliform		
Fecal coliform		
E. coli		
Bacteroides		
Giardia		
Blue green algae / Microcystin		
Other (State your other parameters within “Comment”)		

Comment:

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

Enterococcus		
Total coliform		
Fecal coliform		
E. coli		
Bacteroides		
Giardia		
Blue green algae / Microcystin		
Other (State your other parameters within “Comment”)		

Comment:

*17. What are your program’s safe to swim water quality monitoring interests and/or requirements?

	Current Interest and/or Requirement	Non-current but Historic Interest and/or Requirement	NA
NPDES			
Stormwater			
TMDL			
County ordinance			
Ambient monitoring			
Grant activity			
Source water protection			
Other (Please explain in comments)			

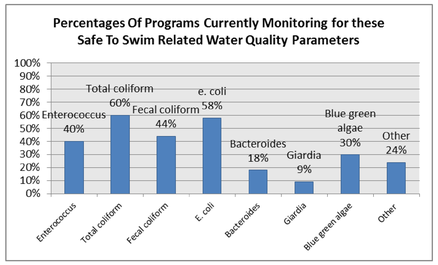
Comment:

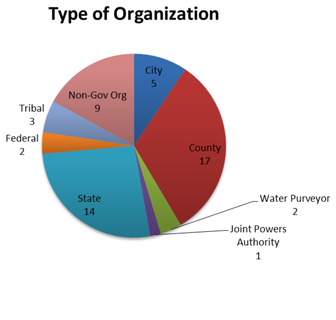
18. How do you share, or submit, your safe to swim water quality data with others? (check all that apply)
CIWQS Database
SWAMP Database
CEDEN Database
Via a Smartphone App
On a Website
Other

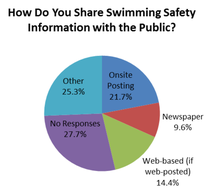
19. If you share or submit your safe to swim water quality data on a website, what is/are the URL(s)?

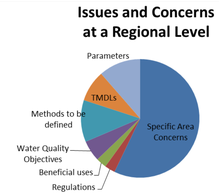
Summary of Results

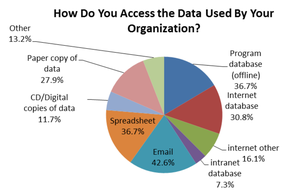
Out of 74 total survey attempts. The survey generated 53 usable responses. These were spread statewide.

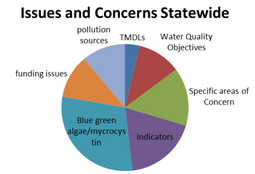


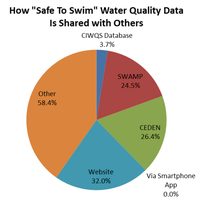












Conclusion—Next Steps

This survey helped us understand who is actively engaged with safe to swim activities and maybe interested in helping with freshwater safe to swim web-portal activities. Learning where these organizations were located helped us understand what types of problems are being addressed within the many region of the state and why they are monitoring. It was learned that many of these organizations also could use assistance so that their data California Environmental Data Exchange Network (CEDEN) so that their data can be used in the portal. This is an area the Work Group can provide assistance. Doing so will also allow the Work Group to better enhance the web-portal with information that will be more useful to those doing “safe to swim” water quality outreach. Those who are not conducting water quality monitoring (13.2%) may need tools, methods or other guidance to begin their own monitoring program. These programs may also benefit by greater CEDEN usage which would lead to a more robust data set for their needs. Through this survey we learned that the programs monitoring freshwater are not as advanced as coastal beach programs. The Work Group can foster the development and growth of these programs by enhancing not the web-portal but the Work Group’s webpage with information on all aspects of supporting REC 1 (monitoring, assessments, communication…).

Contacts

Erick Burres
Clean Water Team - Citizen Monitoring Coordinator
Email: eburres@waterboards.ca.gov | Phone: 213-576-6788
Website: www.waterboards.ca.gov/water_issues/programs/swamp/cwt_volunteer.shtml

Sonia Djordjevic
Intern– Research Assistant (UCLA School of Public Health)
sdjordje1@gmail.com

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

Resources

My Water Quality Web-Portal IS IT SAFE TO SWIM IN OUR WATERS?
www.mywaterquality.ca.gov/safe_to_swim/
Safe to Swim Work Group
www.mywaterquality.ca.gov/monitoring_council/swim_workgroup/
CWQMCN Webinar Videos
www.youtube.com/CWQMCN