

TECHNICAL NOTES

U.S. Department of Agriculture

Natural Resources Conservation Service

TN – WATER QUALITY - CA - 1

October, 2008

USEFUL WATER QUALITY RELATED WEB SITES

Purpose and Scope

This technical note provides information that is available from state and federal agencies and organizations for use by NRCS personnel to assist in determining the general quality of surface waters in their area. These tools and data are intended to assist landowners in conservation planning by providing knowledge of past or current conditions for surface waters and to help provide data to recommend a conservation practice or a system of practices.

Information gathered from these sources can be used to provide very general, qualitative information to estimate water quality so its use must still be combined with professional judgment, field experience, and common sense. Knowing the past and existing condition of surface waters can help ensure current and planned conservation practices are and will contribute towards the correction and prevention of water quality problems. Collecting existing water quality information, analyzing the results and applying this knowledge to conservation planning will allow landowners and planners to achieve the water quality criteria for resource management systems.

More and more, landowners are being expected by regulatory agencies to understand and, if possible, correct the impacts their operations have on the quality of water bodies on or near their land. In some cases, such as with the Irrigated Lands Conditional Waiver, monitoring and solutions are being handled on a regional basis as opposed to being the responsibility of an individual landowner only. Either way, it is crucial that landowners have a good grasp on what is happening in their area with respect to individual and regional water quality. The first step to having this knowledge is to know where to find this information. This technical note highlights some of the online sites that can provide that information either in a map or data format.

Remember not to over-interpret data. You may find that some data only shows a snapshot of what is happening at that particular time frame when the sample was taken. Information found online is usually best used to obtain a general reference of what is happening in a stream or on the landscape and may help indicate what should be done to resolve any problems.

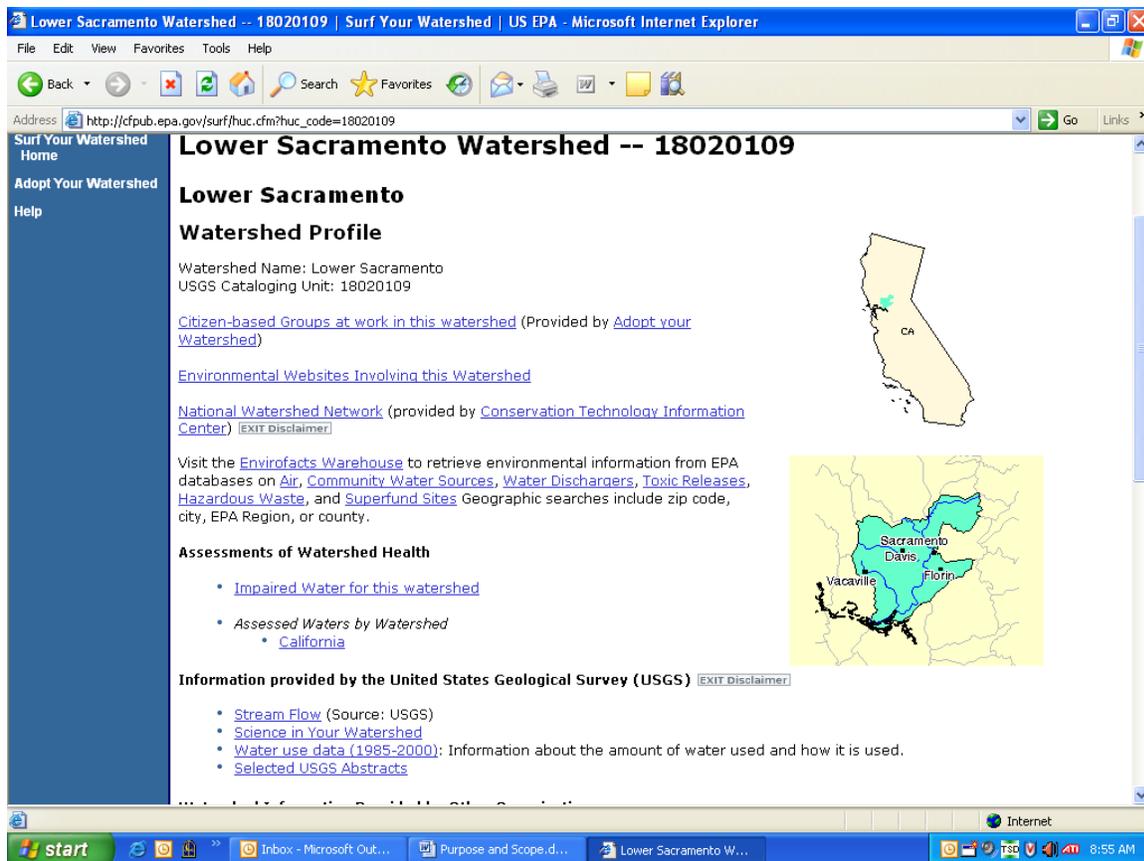
USEFUL ENVIRONMENTAL PROTECTION AGENCY (EPA) WEB SITES

EPA's Surf Your Watershed website provides access to some good information and links to many other useful sites online.

SURF YOUR WATERSHED

EPA's Surf Your Watershed site can help people locate environmental information about their local regions and watersheds including links to other sites and local groups' sites.

For example, if you follow the link [Surf Your Watershed](#), you are taken to a page where you can enter an identifying factor such as zip code, state, stream name, HUC number or other items that will link you to an HUC code related to that factor. If you enter the zip code for Davis, CA (95616) you are taken to a page that shows the links related to that zip code. In this case, the only water body listed is the HUC number 18020109 for the Lower Sacramento River in California. Clicking on the hyperlink for [18020109](#) will take you to the watershed profile page for the Lower Sacramento River. The page will look something like this:



As shown, this page shows maps of the watershed and its location and can link you to many other sites that can provide even more information about this watershed. Examples are: groups having projects in the watershed, other environmental websites involving the

watershed, a link to the National Watershed Network, the Envirofacts Warehouse, impaired water body links, information from the U.S. Geologic Survey (USGS), the Know Your Watershed website, and links to county information for all the counties crossing the watershed boundaries.

Following the Citizen-based Group link takes you to a data base showing the groups with activity in the area, their contact name, address, phone, email, web page URL, a description of the group and number of group members.

The Environmental Websites link takes you to a page showing links to groups involved in the watershed. Resource Conservation Districts (RCDs) will often be listed here.

National Watershed Network

You may also link to the National Watershed Network from this page. The National Watershed Network is connected to the Know your Watershed website. There is good information regarding building a watershed plan on this page that may be of use as well as the active citizen groups involved in that area.

Envirofacts Warehouse

The link to the Envirofacts Warehouse takes you to a page that can provide you with a sampling of information about your watershed. You may also access Envirofacts by clicking [envirofacts site](#). There is a QuickStart feature on the left side of the page that allows you to once again enter a zip code, city, or state and you are directly taken to a page providing information on air, water, waste and toxics information in your watershed. More detailed information can be obtained by clicking the Queries link, also located on the left side of the page.

EPA - Envirofacts Warehouse - Quick Start - Microsoft Internet Explorer

Address: http://oaspub.epa.gov/enviro/ef_home3.html?p_zipcode=95616&p_type=zip&x=19&y=9

Recent Additions | Contact Us | Print Version EF Search: GO

EPA Home > Envirofacts > Quick Start

ZIP Code: 95616

Envirofacts

EF Overview
Queries, Maps, & Reports
Data Update
Technical User
Site Map
Contact Us

Quick Start!
View environmental information for any ZIP Code, City, or County. Use State Abbreviations.

ZIP Code
 City, State Abbr
 County, State Abbr

GO

LEGEND

- Discharges to water
- Superfund sites
- Hazardous waste
- Toxic releases
- Air releases
- Others
- Multiple
- Streets
- Water Bodies
- Counties

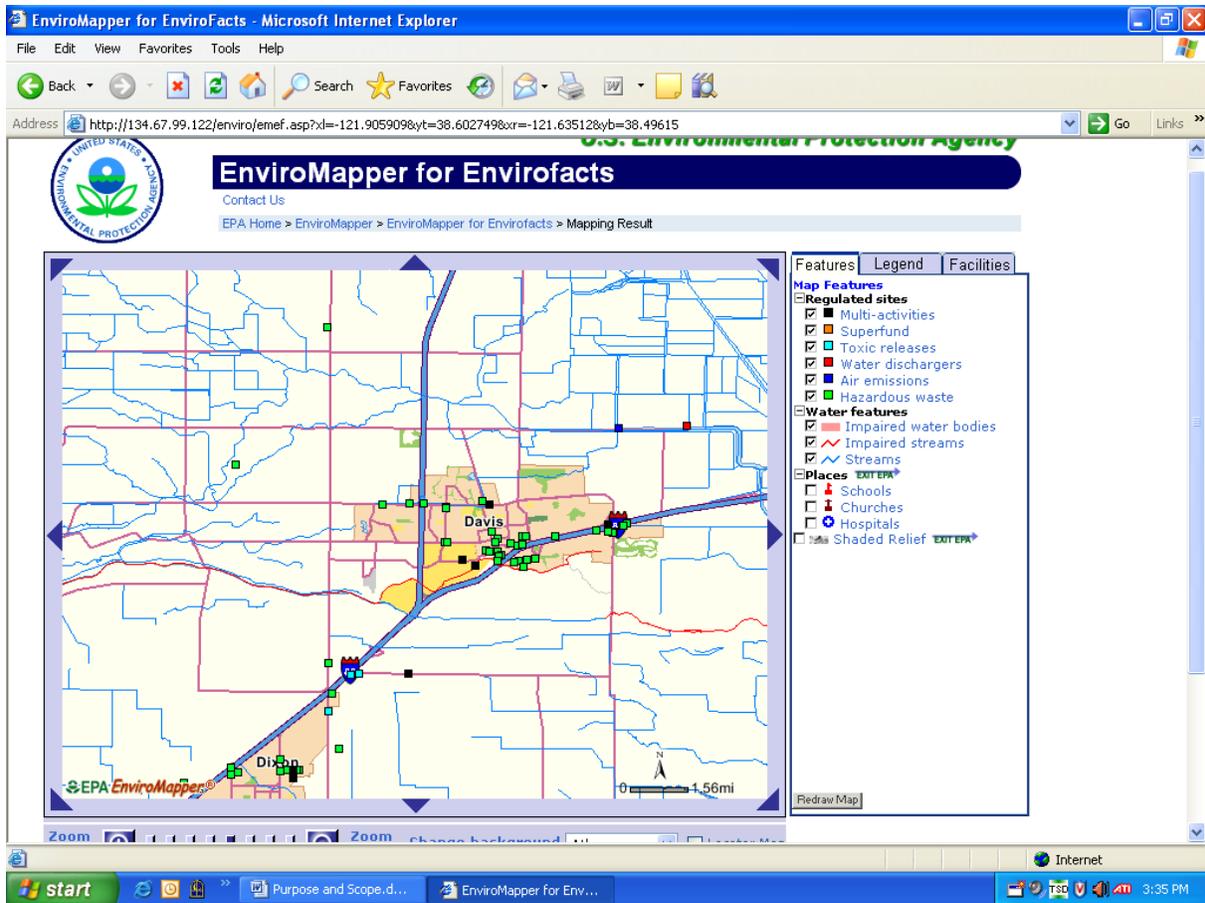
To view the above map interactively, click [EnviroMapper](#)

Additional information about ZIP Code 95616, click [Window To My Environment](#)

Done Internet

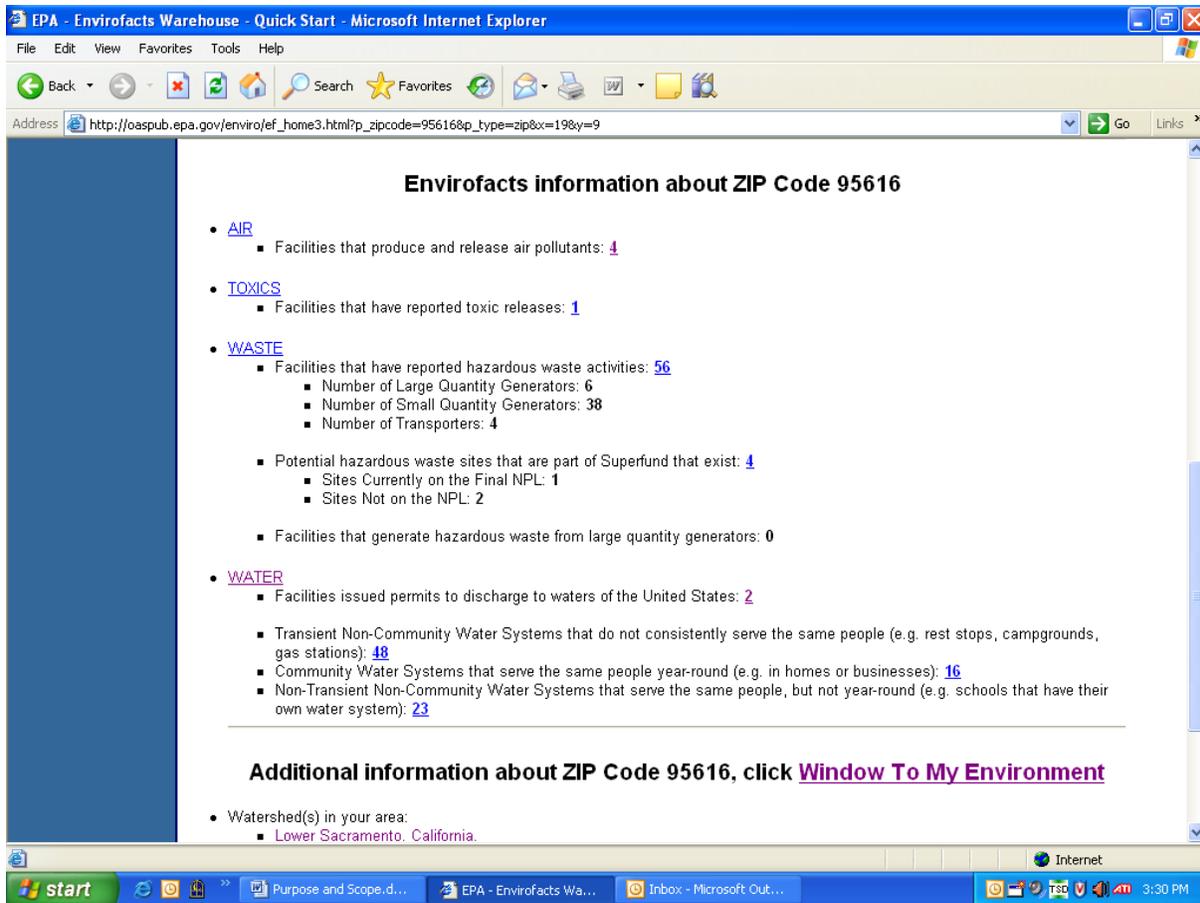
start Purpose and Scope.d... EPA - Envirofacts Wa... Inbox - Microsoft Out... 3:30 PM

Clicking the [EnviroMapper](#) interactive link at the bottom of the page produces a map where you can pick and choose the features you want to display.



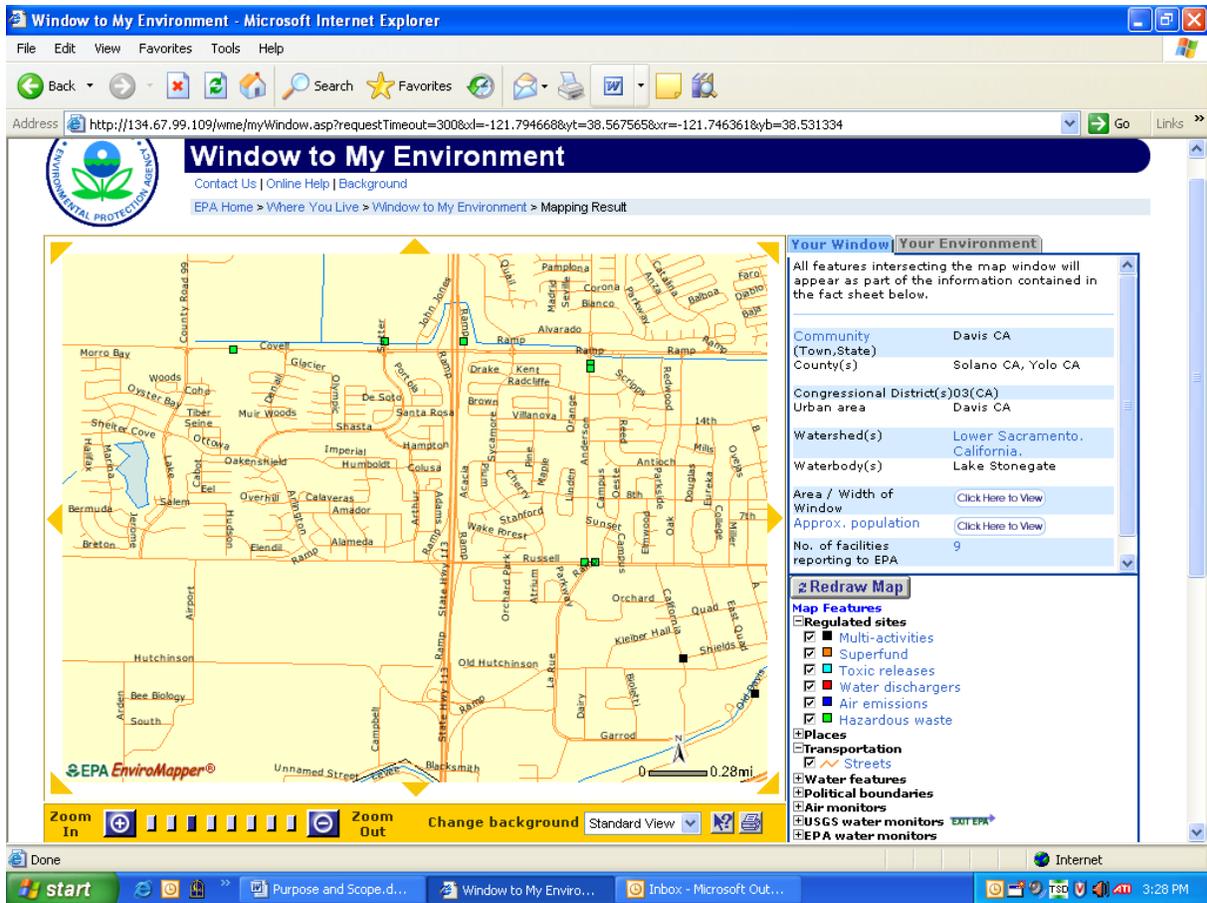
The interactive map allows you to view the locations of superfund sites, registered water dischargers, impaired water bodies including streams, and many other points of interest. You can also pick different backgrounds such as aerial photo, atlas map, or topo map. EnviroMapper for Envirofacts can provide a helpful visual of impaired waters locations in your watershed. Move the mouse over the symbols on the map and a box will appear informing you what site is represented.

Additional links to water quality sites can be found by returning to the [Envirofacts](#) page and scrolling down to find access to information about air, toxics, waste and water. In two places on the site, in the middle and all the way at the bottom of the page, are links to the Window to My Environment website.



Window to My Environment

After using the QuickStart feature, and looking at the information provided for your watershed, the bottom of the page accesses a link to the Window to My Environment (WME) website. You may also access Window to My Environment through this link: <http://www.epa.gov/enviro/wme/>. WME is a web-based tool that provides a wide range of environmental information and conditions in the area you request. Once again you can specify an area by zip code, city, or state and WME will supply you with an interactive map that shows the location of regulated facilities, monitoring sites, water bodies, population density, and perspective topographic views. You will also see a section called Your Window that provides selected geographic statistics about your area of interest, including estimated population, county/urban area designations, local watersheds/waterbodies, etc. Finally, a section called Your Environment links to information from federal, state, and local partners on environmental issues like air and water quality, watershed health, Superfund sites, fish advisories, impaired waters, as well as local services working to protect the environment in your area.

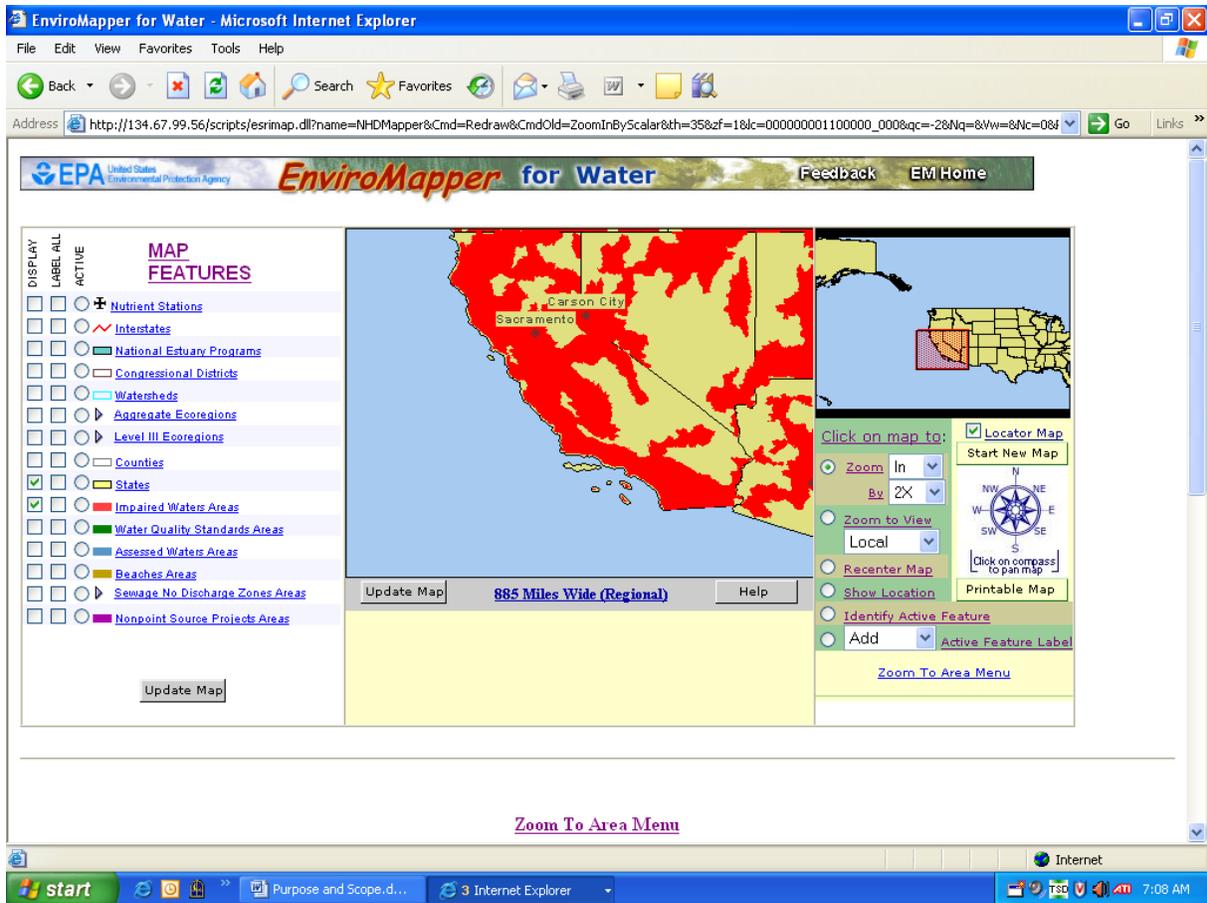


Enviomapper for Water

There is also a version of Enviomapper called Enviomapper for Water that may be accessed from the envirofacts page or [here](#).

The map features a visual way to display impaired waters, assessed waters, nonpoint source project areas, and other items. Shown below is an example of the impaired water bodies in California. The water bodies are highlighted in red. Enviomapper for Water has the ability to zoom in or zoom out to show one small area or the entire country.

Enviomapper for Water applies Geographic Information systems (GIS) to interactively display customized maps containing information about water bodies all around the country.



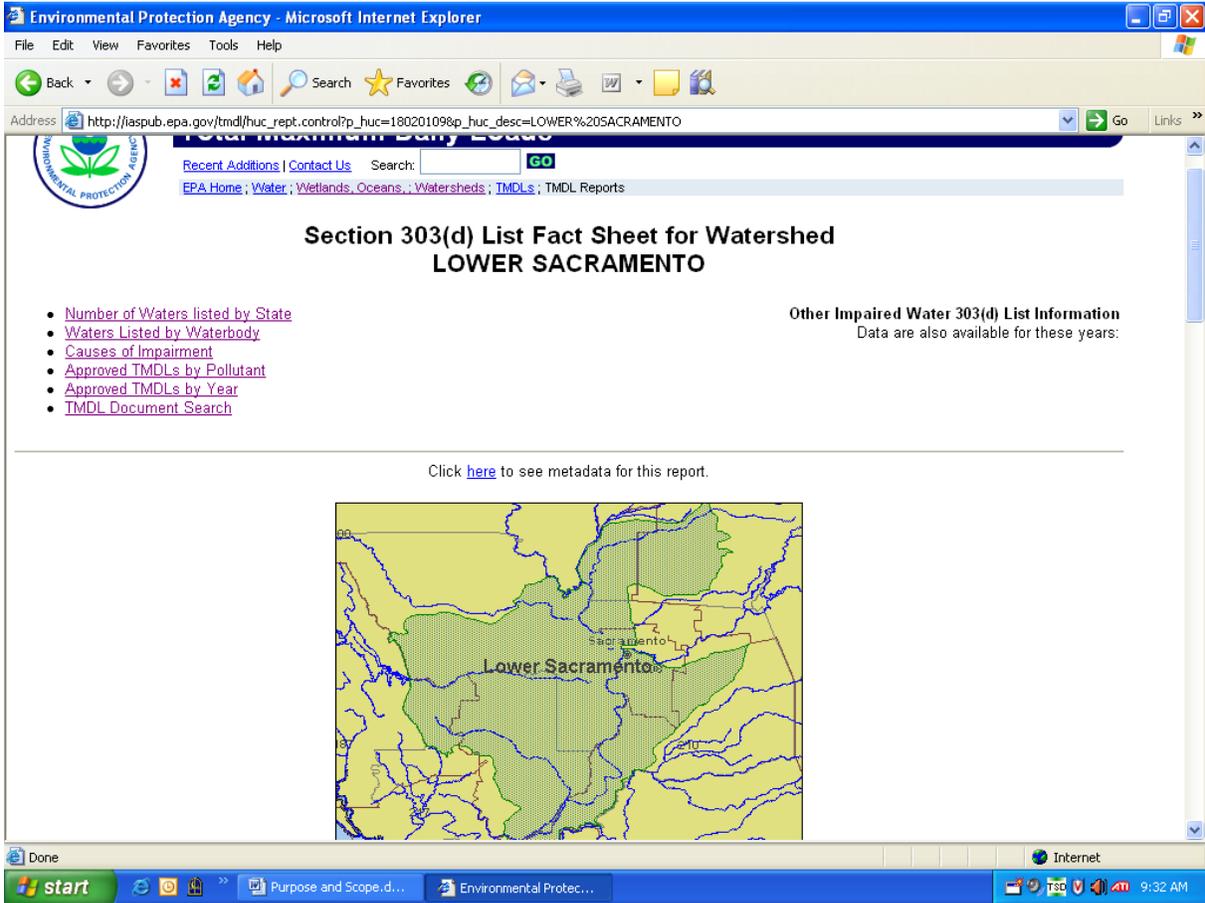
State of California 303(d) List

The next feature that can be accessed from the Surf your Watershed site is the state 303(d) list fact sheet for the watershed. As seen by the screen below, you can find information about particular water bodies in the designated watershed and their impairments from the fact sheet.

Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop a list of water quality limited segments. The waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water on the lists and develop action plans, called as Total Maximum Daily Loads (TMDL), to improve water quality.

Water quality responsibilities in California are under the auspices of the State Water Control Board. The responsibilities are then further divided into nine regions throughout the state. The link to see the 303 (d) list for the entire state as well as for the list for each region is [CA 303\(d\) list](#). The list is organized by region, then lists water bodies alphabetically. The report provides the type of water body, the Calwater watershed number, the pollutant or stressor causing the impairment (such as temperature or nutrients), the potential sources of the

pollutant (such as municipal), the TMDL priority and proposed TMDL completion, and the estimated size of the water body that is impacted.



The other link in the Assessments for Watershed Health section on the Surf Your Watershed website sends you to a site where you can access the assessment data for the entire state of California for the year 2002. A portion of this page is shown below. The 2002 report is the most current list available for California.

The screenshot shows a Microsoft Internet Explorer browser window displaying the U.S. Environmental Protection Agency's National Assessment Database for California. The address bar shows the URL: http://iaspub.epa.gov/waters/w305b_report_v2.state?p_state=CA. The page title is "National Assessment Database" and the header includes the EPA logo and "U.S. Environmental Protection Agency". Below the header, there is a search bar and navigation links: "Recent Additions", "Contact Us", "GO", "EPA Home", "Water", "WATERS", "National Assessment Database", and "California State Assessment Report". The main content area is titled "Assessment Data for the State of California Year 2002" and contains a hierarchical list of links:

- [Total Assessed Waters of California](#)
- [Assessed Waters of California by Watershed](#)
- Water Quality by Waterbody Type
 - Rivers, Streams, and Creeks
 - [Individual Use Support for Assessed Waters](#)
 - [Water Quality Attainment for Assessed Waters](#)
 - [Top State Causes of Impairments](#)
 - [Top State Probable Sources of Impairments](#)
 - Lakes, Ponds, and Reservoirs
 - [Individual Use Support for Assessed Waters](#)
 - [Water Quality Attainment for Assessed Waters](#)
 - [Top State Causes of Impairments](#)
 - [Top State Probable Sources of Impairments](#)
 - Bays and Estuaries
 - [Individual Use Support for Assessed Waters](#)
 - [Water Quality Attainment for Assessed Waters](#)
 - [Top State Causes of Impairments](#)
 - [Top State Probable Sources of Impairments](#)
 - Coastal Shorelines
 - [Individual Use Support for Assessed Waters](#)
 - [Water Quality Attainment for Assessed Waters](#)
 - [Top State Causes of Impairments](#)
 - [Top State Probable Sources of Impairments](#)
 - Oceans, and Near Coastal Waters
 - [Individual Use Support for Assessed Waters](#)
 - [Water Quality Attainment for Assessed Waters](#)
 - [Top State Causes of Impairments](#)

On the right side of the page, there is a box titled "National Assessment Database" with links for "About this Database", "Assessing Water Quality (Questions and Answers)", and "The 2002 National Assessment Database (Fact Sheet)". Below this box, there is a section for "Impaired Water Information" with a link to "2002 303(d) List Report" and another section for "Other Water Assessment Information" stating "The most current report available for this state is 2002." The taskbar at the bottom shows the Windows XP start button, several open applications, and the system clock at 10:49 AM.

USGS Links Available from the Surf Your Watershed Site

You may also link to several USGS sites that can provide you with water quality data. The link labeled Science in Your Watershed can direct you to USGS data bases with real time and legacy water quality data. Access is also through <http://water.usgs.gov/>.

The purpose of the Science in Your Watershed site is to help you find scientific information organized on a watershed basis. This information, coupled with observations and measurements made by the watershed groups, provides a foundation for characterizing, assessing, analyzing, and maintaining the status and health of a watershed. This web site provides a decision-support process by making accessible recent case studies of projects that have occurred, publications that have been produced, developing databases, information assembled, and provides access to free and nearly free software and tools for manipulating spatial information.



EPA's STORET

STORET is a repository for water quality, biological, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and many others. STORET is divided into two sets of data: modern and legacy. In the past, anyone who sampled or monitored water bodies could enter their data into STORET, creating a situation where the STORET user had no way of verifying how accurate the data may be. Data obtained would therefore need to be used with caution since the submitters were unknown to you. However, there has always been much useable data from sources such as USGA, California State Regional Boards, and others. In recent years EPA has been trying to confirm the validity of the supplied data.

WATERS

WATERS (Watershed Assessment, Tracking & Environmental ResultS) combines water quality information from several independent and unconnected databases. WATERS connects these databases and displays the information through maps and reports. This program allows you to query the database by picking the view of interest, the data elements or fields you wish to see, and to specify your search criteria. The advantage of using this

website is that you can query and pinpoint one specific water body and see what impairments are listed.

Access WATERS at the following website: <http://www.epa.gov/waters>.

SITES OTHER THAN EPA

World Water Monitoring Day

World Water Monitoring Day™ is an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by helping citizens come together to conduct basic monitoring of their local water bodies.

In 2006, 3,900 sites were monitored in 39 countries. Many communities around the world are unaware of the condition of their water quality and the impact of their behaviors on the quality of their water resources. Conducting simple monitoring tests teaches participants about some of the most common indicators of water health and encourages further participation in more formal citizen monitoring efforts. Participants are then able to submit their data, resulting in a worldwide data base of basic water quality conditions around the world.

To see some of the California data follow the link: <http://www.worldwatermonitoringday.org/>.

USGS National Water Quality Assessment NAWQA

The USGS began its NAWQA (National Water Quality Assessment) program in 1991, systematically collecting chemical, biological, and physical water quality data from 42 study basins across the nation. The NAWQA Mapper allows you to view chemical concentrations found in streams, lakes, wells, and other sampling sites in the US. The data points presented on the map are generated directly from the 15 million water quality results stored in the NAWQA data warehouse.

For information about the NAWQA program use the following link: [USGS National Water Quality Assessment Data Warehouse](#)

To go directly to the NAWQA mapper: <http://web1.er.usgs.gov/NAWQAMapTheme/>.

California Department of Water Resources (DWR)

DWR is an agency of the State of California. The department provides dam safety and flood control services, assists local water districts in water management and conservation activities, promotes recreational opportunities, and plans for future statewide water needs. DWR also performs some water quality monitoring during the course of its duties. Some of the data received can be located at the DWR [water](#) quality data website.

