

Table of Contents

1.1	CASGEM Online System (OS) Overview	4
1.2	User Guide Layout.....	5
2.1	Public User Registration and Log In	7
2.1.1	Self-Registering	7
2.1.2	How to Log In	11
2.2	Public User Homepage.....	13
2.3	Notifications.....	14
2.4	Well Information and Groundwater Elevation Data.....	17
2.5	Reports.....	24
2.5.1	Program Level Reports.....	24
2.5.2	Water Data Reports	28
2.5.3	Elevation Data Reports	31
2.6	View Map	33
2.7	GIS Functionality	34
2.7.1	View Map / GIS Viewer	35
2.7.2	GIS Minimum Computer Requirements.....	35
2.7.3	Initial Map Layout Presentation.....	36
2.7.4	Top Bar Functions	37
2.7.5	CASGEM Search.....	38
2.7.5.1	Using the Search Menu to Find Wells.....	41
2.7.5.2	Exporting Search Results to Excel	46
2.7.5.3	Using the Search Menu to Find Basin Notifications.....	47
2.7.5.4	Using the Search Menu to Find Unmonitored Basins.....	50
2.7.6	Layer Control.....	52
2.7.6.1	Using the Map Layer Control Menu.....	54
2.7.6.2	Using the Layer Transparency Tool.....	56
2.7.7	Identify	58
2.7.7.1	Working with the Identify Menu.....	59
2.7.7.2	Identifying Features by Point Selection	61
2.7.7.3	Identifying Features by Polyline Selection	63
2.7.7.4	Identifying Features by Rectangle Selection.....	66

2.7.7.5	Identifying Features by Polygon Selection.....	68
2.7.8	Draw and Measure.....	70
2.7.8.1	Measuring the Distance between Two Wells	72
2.7.8.2	Using the Text Tool	75
2.7.9	Print.....	76
2.7.10	Elevation Data Hydrograph.....	79
2.7.10.1	Single Well Hydrograph.....	79
2.7.10.2	Multiple Wells Hydrograph.....	82
2.7.11	Quick Find for Wells and Basins.....	83
2.7.11.1	Searching for Wells Using Quick Find	84
2.7.11.2	Searching for Basins	86
2.7.12	Help Icon	87
2.7.13	Base Map Toggle.....	87
2.7.14	Overview Map.....	91
2.7.15	Scale Bar and Coordinates	93
2.7.16	Navigation	94
2.8	My Profile.....	96
2.8.1	User Profile.....	96
2.8.2	Change Password	98
3.1	Known Errors.....	100
3.2	Further Help	103



1.0 CASGEM Online System (OS) Overview

Section Topics

- 1.1 [CASGEM Online System \(OS\) Overview](#)
- 1.2 [OS User Guide Layout](#)

1.1 CASGEM Online System (OS) Overview

The California Statewide Groundwater Elevation Monitoring (CASGEM) Online System (OS) was developed to help local agencies participate in the CASGEM program and comply with the provisions of Water Code Section 10927, et. seq. An overview of CASGEM is provided on the program web site: <http://www.water.ca.gov/groundwater/casgem/>. The CASGEM System was developed in three separate phases.

Phase 1 of the CASGEM System was released in December 2010, and allows a prospective Monitoring Entity (ME) to do the following:

- Create, edit, and submit ME notifications
- Create and manage user accounts
- Create and manage agency information
- Submit GIS Shape files of mapped monitoring areas and other required information

Phase 2 of the CASGEM System, released in May 2011, made the following additional functions available to a prospective ME:

- Submittal of Groundwater monitoring plans
- Submittal of proposed well construction and coordinate information
- Corrections to initial ME notifications or submittal of additional information requested by DWR
- Ability to view and query maps of groundwater basins, proposed monitoring areas, monitored wells, and other geographic information associated with the CASGEM Program
- Administrative capabilities for Administrator Roles: Organize Profile; Manage Users; Associate with other organizations / agencies

Phase 3 of the CASGEM System, released in November 2011, allows a designated ME to do the following:

- Submit Groundwater elevation measurement data
- View and update their CASGEM data, as needed
- Generate and Save/Print Reports of the data within the CASGEM System
- Use the GIS functionality

Additionally, Phase 3 of the CASGEM System introduced public access to the Statewide CASGEM System. The general public will have the ability to:

- View Notifications, Well Information, Groundwater Elevation Measurement Data and Reports
- Use the GIS functionality

1.2 User Guide Layout

This User Guide was created to provide general step-by-step instructions on how to use the CASGEM OS. If you know which section in the guide you are looking for, you may use the hyperlinked table of contents by holding down the “Ctrl” key while clicking on the line of the specific section to jump to a desired section.

The User Guide is organized into sections as follows:

1.0 CASGEM OS Overview

1.1 [Overview](#)

1.2 [User Guide Layout](#)

2.0 The CASGEM System for the General Public

2.1 [Public User Registration and Log In](#)

2.2 [Public User Homepage](#)

2.3 [Notifications](#)

2.4 [Well Information and Groundwater Elevation Data](#)

2.5 [Reports](#)

2.6 [View Map](#)

2.7 [GIS Functionality](#)

2.8 [My Profile](#)

3.0 Additional Information

3.1 [Known Errors](#)

3.2 [Further Help](#)



2.0 The CASGEM System for the General Public

Section Topics

- 2.1 [Public User Registration and Log In](#)
 - 2.1.1 [Self-Registering](#)
 - 2.1.2 [How to Log On](#)
- 2.2 [Public User Homepage](#)
- 2.3 [Notifications](#)
- 2.4 [Well Information and Groundwater Elevation Data](#)
- 2.5 [Reports](#)
 - 2.5.1 [Program Level Reports](#)
 - 2.5.2 [Water Data Reports](#)
 - 2.5.3 [Elevation Data Reports](#)
- 2.6 [View Map](#)
- 2.7 [GIS Functionality](#)
- 2.8 [My Profile](#)
 - 2.8.1 [User Profile](#)
 - 2.8.2 [Change Password](#)

2.1 Public User Registration and Log In

If you are already a registered user, you can log in using the email and password combination you previously provided to the CASGEM system and may go straight to the [log-in instructions](#). New users must first register with the CASGEM system.

2.1.1 Self-Registering

To register, click on the “Self Register” link on the log-in page.

CA.GOV | DEPARTMENT OF WATER RESOURCES
CASGEM Online System

Log In

Username (Email)*

Login

[Forgot password?](#)

[Self Register](#)

Click here to go to the Self Registration page.

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California
11/17/2011

From the user registration page, fill in your name, email address and the CAPTCHA text. To submit, click “Register”.


Self Registration

User Registration

First Name *

Last Name *

Username (Email) *



[Generate New Image](#)

Type the code from the image

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)

Upon successfully submitting your registration, you will be shown the following confirmation page.

Self Registration

Thank you for registering. You will receive an email shortly containing a link to access the second registration page. Please follow the link in order to complete the registration process.

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

The CASGEM system will send an authentication message to your email account, similar to that shown below. Click on the link (Click Here to Proceed) in the message and you will be taken to the CASGEM “Create User Profile” page.

California Department of Water Resources Online Registration Inbox | X

☆ noreply@water.ca.gov to me show details 5:11 PM (16 hours ago) Reply

Dear User,

You requested to register for DWR Enterprise Authentication.

Please click on the following link to complete your registration:

[Click Here to Proceed](#)

Thank you for your interest and participation.

DO NOT REPLY TO THIS E-MAIL
Your reply will not be seen or responded to.

← Reply → Forward

Click here to go to the "Create User Profile" page.

Enter the personal information associated with your account. Your email address is your user name. All fields bearing a red asterisk are required and you must enter at least one phone number and one mailing address. Review the password guidelines, type in a new password, and retype the password for verification. Also select and answer a secret question to recover you password in case it becomes forgotten. After you have completed the form, click on the "Save & Proceed" button. You may also clear the fields by clicking the "Discard Changes" button.

Create User Profile

User Information

Username (Email) *	<input type="text" value="ilovecaliforniawells@yahoo.com"/>	Title	<input type="text" value="Enter Title"/>
First Name *	<input type="text" value="Another"/>	Last Name *	<input type="text" value="User"/>

Phone Details *at least one phone is required

+ Add New Phone			
Edit	Delete	Type	
No records to display.			

Click "+" sign to add a new phone number.

Address Details *at least one address is required

+ Add New Address			
Edit	Delete	Address	
No records to display.			

Click "+" sign to add a new address.

Password *	<input type="password"/>	Verify Password *	<input type="password"/>
-------------------	--------------------------	--------------------------	--------------------------

[Password Guidelines](#)

Challenge Information

Secret Question *	<input type="text" value="Enter secret question"/>	Secret Answer *	<input type="text" value="Enter secret answer"/>
--------------------------	--	------------------------	--

<input type="button" value="Save & Proceed"/>	<input type="button" value="Discard Changes"/>
---	--

Click "Save & Proceed" to complete your user profile.

After saving your user profile, you will be directed to the login page.

2.1.2 How to Log In

The log-in page allows both new and returning users to sign into the CASGEM OS. If you have previously created a User Profile, you should enter your email address and password in the identified fields and click the “Login” box to enter the system. If you have not created a user profile, return to the [self-registration instructions](#) of the User Guide. If you forgot your password, you can click on “Forgot password?” and answer the secret question to have your password emailed to you.

The screenshot shows the login interface for the CASGEM Online System. At the top, the logo for the Department of Water Resources and CASGEM Online System is displayed. Below the logo, the text "Log In" is centered. There are two input fields: "Username (Email) *" and "Password *". Below these fields is a "Login" button, which is highlighted with a red box. Underneath the "Login" button are two links: "Forgot password?" and "Self Register". At the bottom of the page, there are links for "Back to Top", "Help", and "Comments or Suggestions". Below these links are the "Conditions of Use" and "Privacy Policy" links, along with the copyright information "Copyright © 2010 State of California" and the date "11/17/2011".

If you're a first time user, click here to register and create a user profile.

If you have forgotten your password, click here to have a temporary password e-mailed to you.

The first time you log into the CASGEM OS with your new user profile, you must identify that you are a Public user, as shown in the following screen shot. **NOTE: Selecting a User Type is an irreversible process.**

Sign Out

Select User Type

Please select your user type: Public user Monitoring Entity user **Important : This is an irreversible process**

Continue

You must select the "Public user" option and then click the "Continue" button.

2.2 Public User Homepage

The public user Homepage, seen below, is the first screen that you will see upon successfully logging into the CASGEM system. To return to the homepage at any point, you can simply click on the “Home” tab.

CASGEM
Online System

Welcome: UAT Public User 1

Home Notifications Well Information View Map Reports My Profile Sign Out

Public: Home

Welcome to the California Statewide Groundwater Elevation Monitoring (CASGEM) System - Public Portal

CASGEM provides public access to statewide groundwater elevation and monitoring well data. The online system allows you to:

- View lists of local agencies, counties and associations who have volunteered to serve as CASGEM Monitoring Entities providing groundwater data statewide
- View CASGEM Monitoring Plans and Groundwater Management Plans (via hyperlink)
- Search and view groundwater elevation data
- View a hydrograph that shows groundwater elevations for a well
- Search and view groundwater monitoring well information
- View mapped locations of CASGEM wells, monitoring area boundaries, and other geographic information
- Measure distances between wells and size of monitoring areas and basins
- Download well information, groundwater data, hydrographs and maps
- Download summary reports on wells, groundwater elevations, Monitoring Entities and basin information

Please click on one of the above tabs to begin. Please look at this [help](#) file for answers to common questions.

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California
10/31/2011

Aside from the Home tab, you also have access to the following tabs:

- “Notifications”: for viewing existing notifications submitted by Monitoring Entities.
- “Well Information”: to view existing wells submitted by Monitoring Entities and DWR officials.
- “Groundwater Elevation Data”: to view existing elevation data within the CASGEM system.
- “View Map”: to access the GIS functionality of the system.
- “Reports”: to generate reports of the data within the CASGEM system.
- “My Profile”: to manage their personal profile information.
- “Sign Out”: to log out of the CASGEM OS.

Each of these is described in detail in the sections that follow.

2.3 Notifications

To view Notifications within the CASGEM System, public users have to select Notifications from the Public View tab.

CASGEM
Online System

Welcome: UAT Public User 1

Home Notifications Well Information View Map Reports My Profile Sign Out

Public: Home

Welcome to the California Statewide Groundwater Elevation Monitoring (CASGEM) Online System - Public Portal

CASGEM provides public access to groundwater data. The online system allows you to view and monitoring well data. The online system allows you to:

- View lists of local agencies, counties and associations who have volunteered to serve as CASGEM Monitoring Entities providing groundwater data statewide
- View CASGEM Monitoring Plans and Groundwater Management Plans (via hyperlink)
- Search and view groundwater elevation data
- View a hydrograph that shows groundwater elevations for a well
- Search and view groundwater monitoring well information
- View mapped locations of CASGEM wells, monitoring area boundaries, and other geographic information
- Measure distances between wells and size of monitoring areas and basins
- Download well information, groundwater data, hydrographs and maps
- Download summary reports on wells, groundwater elevations, Monitoring Entities and basin information

Please click on one of the above tabs to begin. Please look at this [help](#) file for answers to common questions.

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California
10/31/2011

The system will open a page showing a table of Notifications. The user can chose to view details for any notification displayed by clicking on the hyperlinked basin name.



Welcome: UAT Public User 1

- [Home](#)
- [Notifications](#)
- [Well Information](#)
- [View Map](#)
- [Reports](#)
- [My Profile](#)
- [Sign Out](#)

Public: Notifications

Please select a basin from the grid below to view details.

Notifications

Basin	Portion Name	Monitoring Entity	Agency	Reviewer	Submit Date	RO
Tule		UAT Organization 4		cmckenzi	10/28/2011	SCRO
Madera		UAT Organization 3		bususert13@ad.water.ca.gov	10/26/2011	SCRO
San Benito River Valley		UAT Organization 4		bususert13@ad.water.ca.gov	10/21/2011	SCRO
Warm Springs Valley				egorman	10/21/2011	NRO
Yolo				bususert13@ad.water.ca.gov	8/15/2011	NCRO
Brite Valley	123 portio		Redeploy 10/12	aahuja	10/12/2011	SCRO
Means Valley		Test Organization	Agency 1234	aahuja	10/7/2011	SRO
Covelo Round Valley		Test Organization		aahuja	10/12/2011	NRO
Ward Valley		CK Trinity Organization		aahuja	10/12/2011	SRO
Prairie Creek Area		Test Organization	East Contra Costa Irrigation District	aahuja	10/6/2011	NRO
Butte Valley		Test Organization	Town of Discovery Bay	aahuja	10/6/2011	NRO
Soquel Valley		SCROtest		cmckenzi	6/16/2011	SCRO

Click a basin name to view details.

Upon clicking on a basin, the Basin Summary page will pop up, showing details about that specific basin.



Welcome: UAT Public User 1

[Home](#) [Notifications](#) [Well Information](#) [View Map](#) [Reports](#) [My Profile](#) [Sign Out](#)

Public: Basin Summary

Monitoring Entity Details

Monitoring Entity Name UAT Organization 3
Monitoring Entity Address 901 P Street, Sacramento, CA
Contact Person UAT User 3, (111) 111-1111
Authority Type Groundwater Management Agency

Basin Information

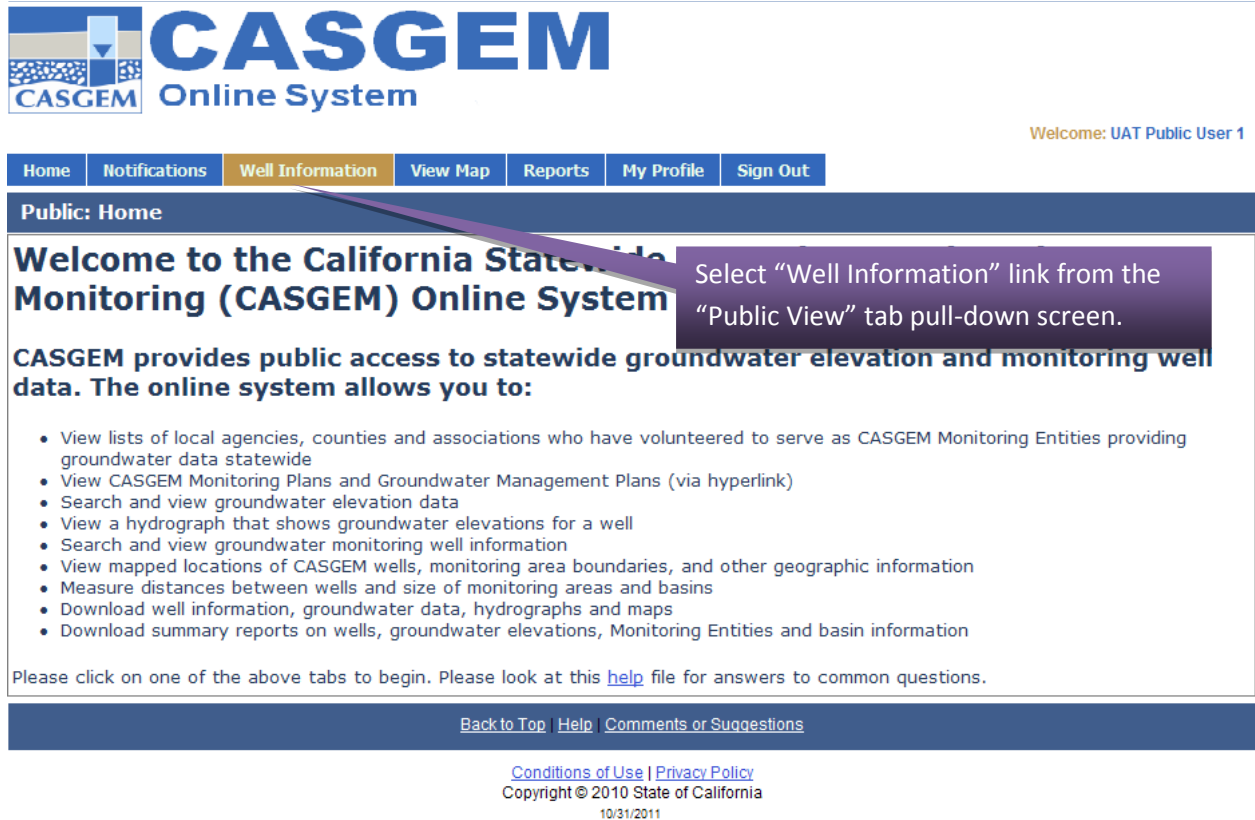
Region of Basin 6-San Joaquin River
Basin Number and Name 5-22.06-Madera
Basin Portion Name
Cooperating Agency

Basin Shape Files

Shape File	Download
010 337 5024 10262011115359.shp	Download
010 337 5024 10262011115359.dbf	Download
010 337 5024 10262011115359.prj	Download
010 337 5024 10262011115359.shx	Download

2.4 Well Information and Groundwater Elevation Data

The Well Information screen can be reached by selecting “Well Information” from the Public View tab pull-down menu.



The screenshot shows the CASGEM Online System homepage. At the top left is the CASGEM logo. To the right of the logo is the text "CASGEM Online System". In the top right corner, it says "Welcome: UAT Public User 1". Below this is a navigation bar with tabs: Home, Notifications, Well Information (highlighted), View Map, Reports, My Profile, and Sign Out. Below the navigation bar is a dark blue header with the text "Public: Home". The main content area has a large heading: "Welcome to the California Statewide Groundwater Monitoring (CASGEM) Online System". Below this heading is a callout box with a purple background and white text that says: "Select 'Well Information' link from the 'Public View' tab pull-down screen." Below the callout box is a paragraph: "CASGEM provides public access to statewide groundwater elevation and monitoring well data. The online system allows you to:". This is followed by a bulleted list of features: "View lists of local agencies, counties and associations who have volunteered to serve as CASGEM Monitoring Entities providing groundwater data statewide", "View CASGEM Monitoring Plans and Groundwater Management Plans (via hyperlink)", "Search and view groundwater elevation data", "View a hydrograph that shows groundwater elevations for a well", "Search and view groundwater monitoring well information", "View mapped locations of CASGEM wells, monitoring area boundaries, and other geographic information", "Measure distances between wells and size of monitoring areas and basins", "Download well information, groundwater data, hydrographs and maps", and "Download summary reports on wells, groundwater elevations, Monitoring Entities and basin information". Below the list is a paragraph: "Please click on one of the above tabs to begin. Please look at this [help](#) file for answers to common questions." At the bottom of the page is a dark blue footer with the text: "Back to Top | [Help](#) | [Comments or Suggestions](#)", "Conditions of Use | [Privacy Policy](#)", "Copyright © 2010 State of California", and "10/31/2011".

The Well Information page requires you to search for wells. Because the public is not associated to any Monitoring Entities, you must search from a data set of all wells within the CASGEM system by using the various search attributes available. You can also search for specific wells by one of their three potential well identification numbers if know.



Welcome: UAT Public User 1

- Home
- Notifications
- Well Information
- View Map
- Reports
- My Profile
- Sign Out

Public: Well Information

Search by Name or Number

Local Well Designation	<input type="text" value="Enter Local Well Designation"/>
CASGEM Well Number	<input type="text" value="Enter CASGEM Well Number"/>
State Well Number	<input type="text" value="Enter State Well Number"/>

Search by Attributes

Hydrological Region	<input type="text" value="Please select a basin region"/>	Well Use	<input type="text" value="Please select a well use type"/>
Basin Name and Number	<input type="text" value="Please select a basin"/>	Well Status	<input type="text" value="Please select well status"/>
Regional Office	<input type="text" value="Please select a regional office"/>	Completion Type	<input type="text" value="Please select a completion type"/>
County	<input type="text" value="Please select a county"/>		
Monitoring Entity	<input type="text" value="Please select a monitoring entit"/>		

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California
10/31/2011

Public: Well Information

Search by Name or Number

Local Well Designation

CASGEM Well Number

State Well Number

Search by Attributes

Hydrological Region Well Use

Basin Name and Number Well Status

Regional Office Completion Type

County


Monitoring Entity

Search Basic Search Options

Click on "View" to view the data attributes for any of the wells, or on "View on Map" to see the well's geographical location.

Local Well Designation	Basin Name and Number	Regional Office	County	Monitoring Entity	Well Use	Depth	View On Map	Well Details
34 Voluntary	Butte Valley				Industrial	Confidential	View On Map	View
Bob's Well No 3	Colusa	Just a little bit of it around my house	15S15E22R002M	345000N1155000W002	Stockwatering	155	View On Map	View
13 Voluntary NTD	Prairie Creek Area			362811N1191723W001	Irrigation	Confidential	View On Map	View
6 CASGEM TD	Mattole River Valley			367510N1221723W001	Irrigation	12	View On Map	View
Erase2	Prairie Creek Area			373421N1212341W001	Observation	Confidential	View On Map	View
26 Voluntary	Butte Valley			374234N1223249W001	Observation	Confidential	View On Map	View
01S08E04R001M	Eel River Valley	Coop Agency 1 Side	01S08E04R001M	378737N1210917W001	Irrigation	Confidential	View On Map	View
8 Voluntary TD	Butte Valley			380098N1221723W001	Irrigation	Confidential	View On Map	View

Upon clicking on the “View” link, a new window will open and the Well Details attributes will be displayed by default for the well selected. You can also expand or minimize the well’s data element displays by clicking on “View Hydrograph” or “View Elevation Data” to see these data elements associated with the well. The following screen shots are examples of the different displays.



Welcome: UAT Public User 1

Public: Well Details

[View Well Data](#)

<p>Identification</p> <p>Local Well Designation: Goose Test</p> <p>Is Local Designation the same as State Well #?: No</p> <p>State Well Number: 04N01E05F001M</p> <p>Master Site Code: 382239N1218929W001</p> <p>Data submittals for this well are under: CASGEM</p>	<p>Coordinates</p> <p>Latitude: 38.2239 North</p> <p>Longitude: 121.8929 West</p> <p style="text-align: center;">View on Map</p> <p>Method: Unknown</p> <p>Accuracy: Unknown</p>
<p>Reference and Ground Surface</p> <p>RP Elevation: 12.30 ft.</p> <p>Description: None Provided</p> <p>GS Elevation: 12 ft.</p> <p>Method: Unknown</p> <p>Accuracy: Unknown</p> <p>Distance from RP: 0.30</p>	<p>Well Construction</p> <p>Completion Type: Single Well</p> <p>Total Depth: Unknown</p> <p>Do you have well construction data?: No</p> <p>Well completion report available?: No</p>
<p>Well Usage</p> <p>Well Use: Stockwatering</p> <p>Well Status: Active</p>	<p>Associated Basin & County</p> <p>Basin/Portion: 5-1.02 - Goose Lake Valley, Fandango test</p> <p>County: Solano</p>

Additional Information

Written description of location of well: Any additional comments

[View Hydrograph](#)

[View Elevation Data](#)

[Close](#)

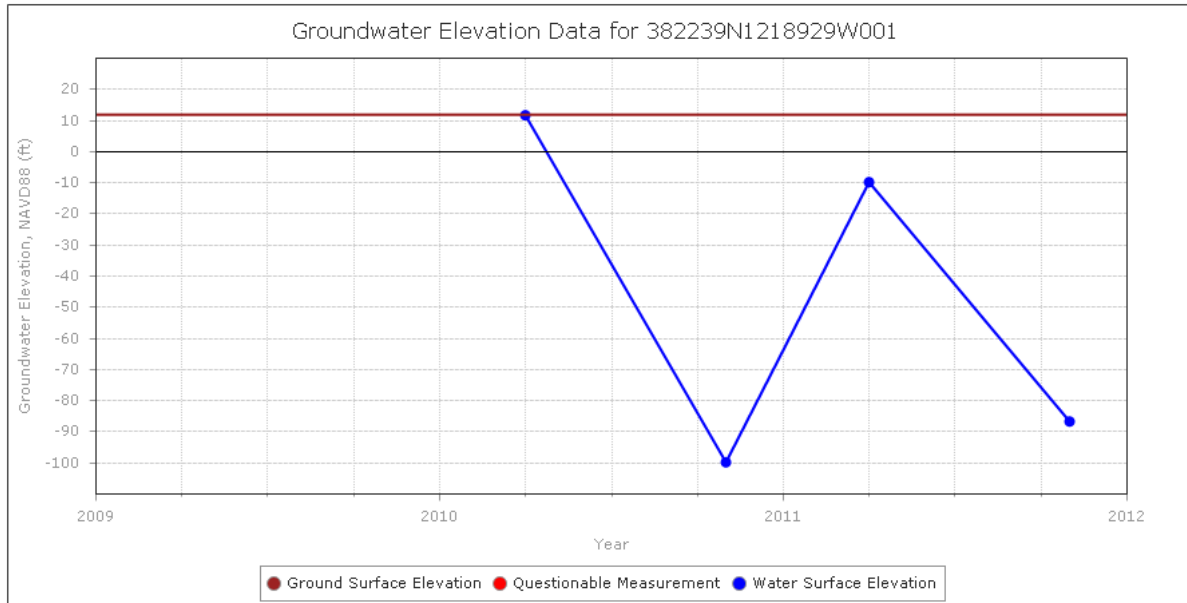
[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
 Copyright © 2010 State of California
 10/31/2011

Public: Well Details

[View Well Data](#)

[View Hydrograph](#)



[View Elevation Data](#)

Close

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

Public: Well Details

[View Well Data](#)

[View Hydrograph](#)

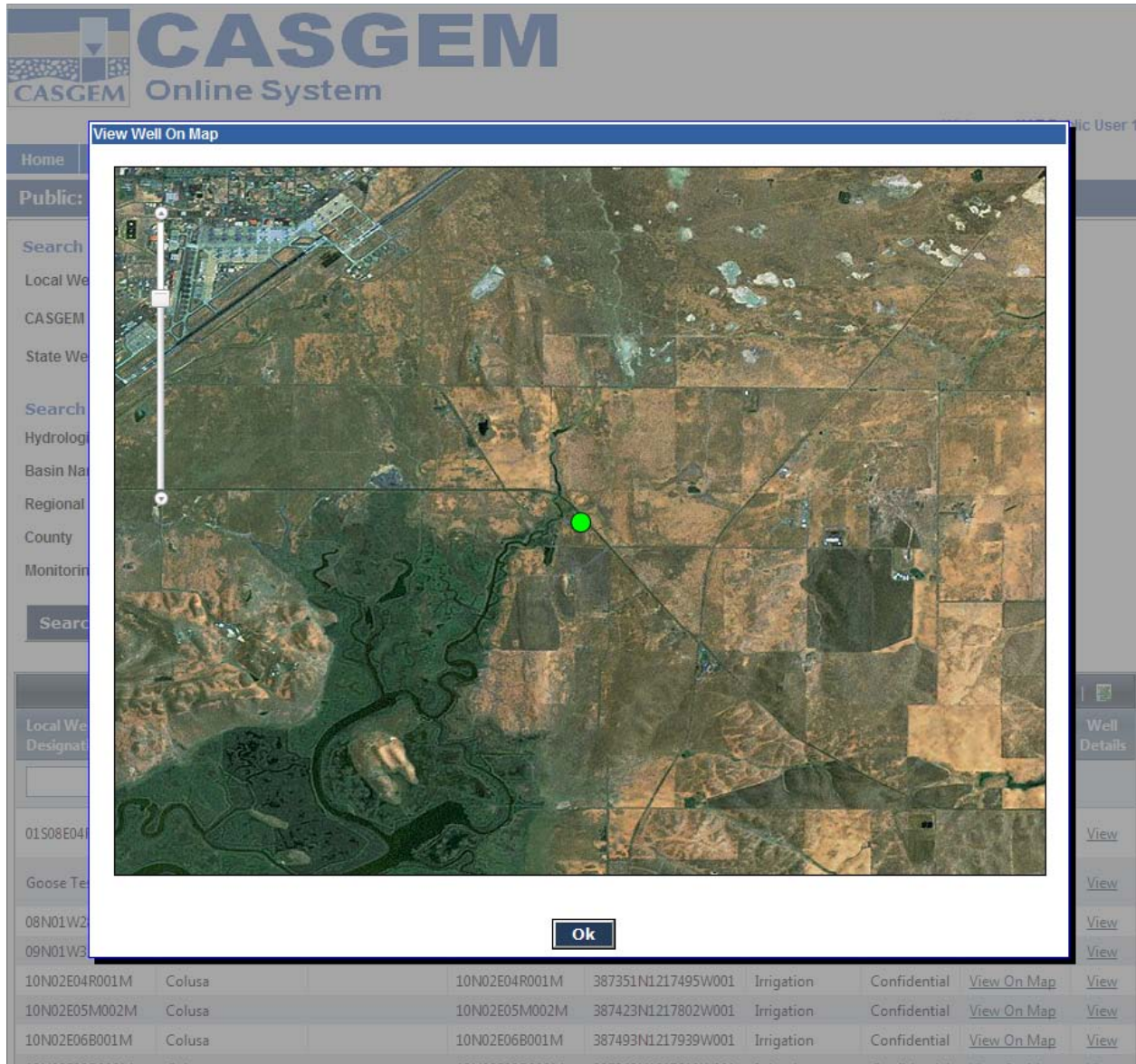
[View Elevation Data](#)

Date	Military Time (PST)	NM	QM	Reading @RP	Reading @WS	RP to WS	RP Elev	GS Elev	WSE	GS to WS	Measurement Method	Measurement Accuracy	Co-op
10/20/2011	00:00			100.000	1.100	98.900	12.300	12.000	-86.600	98.600	ST	0.1 Ft	Senter Compa
03/20/2011	00:00			22.100	0.100	22.000	12.300	12.000	-9.700	21.700	ST	0.1 Ft	Senter Compa
10/15/2010	00:00			112.000	0.000	112.000	12.300	12.000	-99.700	111.700	ST	0.1 Ft	Senter Compa
03/10/2010	00:00			1.000	0.500	0.500	12.300	12.000	11.800	0.200	ST	0.1 Ft	Senter Compa

Close

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

Upon clicking on the “View on Map” link on the Well Information page, another window will open displaying the well’s location on an aerial photo as shown in the following screen shot.



2.5 Reports

The Reports function can be accessed by clicking on “Reports” link from the Public View tab pull-down menu as shown below. The Reports function allows you to generate reports of the data within the CASGEM system, based on different sets of search criteria.



The screenshot displays the CASGEM Online System interface. At the top left is the CASGEM logo. To the right, it says "Welcome: UAT Public User 1". Below this is a navigation bar with tabs: Home, Notifications, Well Information, View Map, Reports (highlighted in orange), My Profile, and Sign Out. Under the Reports tab, a list of report options is shown: Report on Number of Wells, Report on Monitored/Unmonitored Basins, Report on Groundwater Management and Monitoring Plans, Report of Wells, Report of Monitoring Entities, and Report of Groundwater Elevation Data. A purple callout box with a white arrow pointing to the Reports tab contains the text: "Select the 'Reports' tab to view the list of available reports." At the bottom of the page, there are links for "Back to Top", "Help", and "Comments or Suggestions", along with "Conditions of Use" and "Privacy Policy". Copyright information for 2010 State of California and the date 10/31/2011 are also present.

Reports can be viewed within the CASGEM web application, as well as exported to Excel and saved to your local file system, or printed.

Keep in mind that the Reports function has certain limitations; these are described in the sections that follow.

2.5.1 Program Level Reports

Report on Basins

This report provides a list of basins depending on different search criteria. You can search by any of the below listed criteria, but only CASGEM basins that have a “designated” status will be displayed in the results. The search is based on the following criteria:

- a. By Groundwater Basin/Sub-basin Name
- b. By Groundwater Basin/Sub-basin Number
- c. By Monitoring Entity
- d. By Authority type
- e. By Date (mm/yyyy) include in the title (as of date)
- f. By Date Range (To view the Status Changes)

Based on the selection criteria mentioned above, the following search results will be generated:

- Areas being Monitored; containing the following information:
 - a. Total Number of Monitoring Entities
 - b. Total Number of Groundwater Basins/Sub-basins being Monitored (as Oct. 2011.)
 - c. Total Number of CASGEM Wells

- d. Total Number of Voluntary Wells
 - e. Total Number of Wells
 - f. Groundwater Basin/Sub-basin Name
 - g. Groundwater Basin/Sub-basin Number
 - h. County
 - i. Monitoring Entity
 - j. Authority Type
 - k. Number of CASGEM Wells
- Areas not being Monitored; containing the following information:
- a. Total Number of Groundwater Basins/Sub-basins not being Monitored
 - b. Total Number of Counties not being monitored
 - c. Groundwater Basin/Sub-basin Name
 - d. Groundwater Basin/Sub-basin Number
 - e. County

CASGEM Online System

Home | Notifications | Well Information | View Map | Reports | My

Public: Report on Basins

Filter Report

Select a Search Criteria

Select a Filtering Criteria

Authority Type

Monitored Basins Unmonitored Basins
 By Authority Type By Date
 By Groundwater Basin/Subbasin number and name By Date Range
 By Monitoring Entity

Water Master or Water Management Engineer
 Groundwater Management Agency
 Water Replenishment District

Run Report **Clear Selection**

Hit "Run Report".

The resulting report is displayed below.

1 of 1 | Export to the selected format | Export

Areas being Monitored

Groundwater Basin/Subbasin Name	Groundwater Basin/Subbasin Number	Basin Portion	Monitoring Entity	Authority Type	No. of CASGEM Wells
Covelo Round Valley	1-11		Test Organization	Groundwater Management Agency	0
Soquel Valley	3-1		SCROtest	Groundwater Management Agency	0
Santa Maria River Valley	3-12		SCROtest	Groundwater Management Agency	0
Santa Monica	4-11.01		Mac's H2O	Groundwater Management Agency	1
Warm Springs Valley	5-2.02		UAT Organization 1	Groundwater Management Agency	0
Madera	5-22.06		UAT Organization 3	Groundwater Management Agency	0

Report Generated on 11/17/2011 12:09:11 PM Page 1

Report on Plans

This report provides a list of plans depending on different search criteria. The user can search for Groundwater Management Plans or Monitoring Plans.

The search is based on the following criteria:

- a. By Groundwater Basin/Sub-basin Name
- b. By Groundwater Basin/Sub-basin Number
- c. By Monitoring Entity
- d. By Authority Type
- e. By County
- f. By State (California)

Based on the selection criteria mentioned above, the following search results will be generated:

- Total Number of Groundwater basins/sub-basins
- Total number of Groundwater Management Plans
- Total Number of Monitoring Plans
- Authority Type
- Monitoring Entity
- Groundwater Basin/Sub-basin Name
- Groundwater Basin/Sub-basin Number
- County
- Monitoring Plan (including hyperlink to Plan)
- Groundwater Management Plan (including hyperlink to Plan)

Filter Report

Select a Filtering Criteria

- By Authority Type
- By Monitoring Entity
- By Groundwater Basin/Subbasin number and name
- All Plans

Authority Type

Water Master or Water Management Engineer
 Groundwater Management Agency
 Water Replenishment District

Run Report

Clear Selection

The "By Authority Type" and the "Groundwater Management Agency" Authority Type have been selected to run a Report on Basins.

Hit "Run Report".

1 of 1 Export to the selected format Export

The resulting report is displayed below.

Groundwater Management and Monitoring Plans

Authority Type	Monitoring Entity	Groundwater Basin/Subbasin Name	Groundwater Basin/Subbasin Number	Groundwater Management Plan	Monitoring Plan
Groundwater Management Agency	Test Organization	Covelo Round Valley	1-11		Click here to download
Groundwater Management Agency	SCROtest	Soquel Valley	3-1		Click here to download
Groundwater Management Agency	SCROtest	Santa Maria River Valley	3-12		Click here to download
Groundwater Management Agency	Mac's H2O	Santa Monica	4-11.01		Click here to download
Groundwater Management Agency	UAT Organization 1	Warm Springs Valley	5-2.02		Click here to download
Groundwater Management Agency	UAT Organization 3	Madera	5-22.06		Click here to download

Statewide Total Number of Groundwater Basins/Sub basins - 515
 Statewide Total Number of Groundwater Management Plans - 0
 Statewide Total Number of Monitoring Plans - 19

2.5.2 Water Data Reports

Report of Wells

This report provides information on Wells depending on different search criteria. You can search for CASGEM and/or Voluntary Wells.

The search is based on the following criteria:

- a) By Authority type
- b) By Groundwater Basin/Sub-basin Name
- c) By Groundwater Basin/Sub-basin Number
- d) By Monitoring Entity
- e) By County
- f) By State (California)
- g) By Region Office
- h) By Well Group

Based on the selection criteria mentioned above, the following data elements will be generated:

1. State Well Number
2. CASGEM Well Number
3. Local Well Designation
4. ME Authority Type
5. Monitoring Entity
6. Co-operating Agency Association (if Any)
7. Groundwater Basin/Sub-basin Name
8. Groundwater Basin/Sub-basin Number
9. County
10. Type of Well - CASGEM Well/Voluntary Well
11. Status of Well – Active/Inactive
12. Well Usage
13. Measurement Count (No. of Elevation Data records)
14. Earliest Elevation Measurement Date
15. Most recent Elevation Measurement Date
16. Minimum Groundwater elevation measured
17. Minimum Groundwater elevation Measurement Date
18. Maximum Groundwater elevation measured
19. Maximum Groundwater elevation Measurement Date
20. Latitude
21. Longitude

Public: Reports of Wells

Filter Report

Select a Search Criteria

CASGEM Wells Voluntary Wells

Select a Filtering Criteria

By Authority Type By County
 By Groundwater Basin/Subbasin number and name By Region Office
 By Monitoring Entity

Authority Type

Water Master or Water Management Engineer
 Groundwater Management Agency
 Water Replenishment District

Run Report

Clear Selection

The "By Authority Type" and the "Groundwater Management Agency" Authority Type have been selected to run a Report on Basins.

Hit "Run Report".

The resulting report is displayed below.

Well Data

State Well Number	CASGEM Well Number	Local Well Designation	Authority Type	Monitoring Entity (ME)	Co-operating Agency	Groundw Basin/Sut Nam
	360000N1180000W002	002	Groundwater Management Agency	Mac's H20		
	382375N1211232W001	32 CASGEM NTD	Groundwater Management Agency	Test Organization	Santa Cruz Municipal Utilities	Anderson Va
01N04E23A001H	381235N1211235W003	Test 1	Groundwater Management Agency	Senter Water Company		Hoopla Valley
01N04E23A002H	381235N1211235W004	Test 2	Groundwater Management Agency	Senter Water Company		Hoopla Valley
01N04E23A003H	381235N1211235W005	Test 3	Groundwater Management Agency	Senter Water Company		Hoopla Valley
04N22W05L0						Deadman Lal

NOTE: This report has many columns and you must scroll to the bottom to reach the horizontal scroll bar to view all of the columns.

Report of Monitoring Entities

This report provides a listing of MEs within the CASGEM system.

The search is based on the following criteria:

- a) By Authority type
- b) By Groundwater Basin/Sub-basin name
- c) By Groundwater Basin/Sub-basin number
- d) By Region Office

Based on the selection criteria mentioned above, the following data elements will be generated:

- 1. Monitoring Entity Name
- 2. ME Authority Type
- 3. Last Elevation Data Submitted

4. Number of Wells Associated

The "By Authority Type" and the "Groundwater Management Agency" Authority Type have been selected to run a Report on Basins.

Hit "Run Report".

The resulting report is displayed below.

CASGEM Online System

Home | Notifications | Well Information | View Map | Reports | My

Public: Report of Monitoring Entities

Filter Report
Select a Filtering Criteria

By Authority Type
 By Region Office
 By Groundwater Basin/Subbasin number and name

Authority Type

Groundwater Management Agency
Water Replenishment District
Local Agency Pursuant to WC Part 2.75

Run Report Clear Selection

1 of 1 | Export to the selected format | Export

Monitoring Entities

Monitoring Entity	Authority Type	Last Elevation Data Submitted	Associated Well Count
Mac's H2O	Groundwater Management Agency		1
SCROtest	Groundwater Management Agency		0
SCROtest	Groundwater Management Agency		0
Test Organization	Groundwater Management Agency		0
JAT Organization 1	Groundwater Management Agency		0
JAT Organization 3	Groundwater Management Agency		0

Report Generated on 11/7/2011 12:23:52 PM Page 1

2.5.3 Elevation Data Reports

Report of Groundwater Elevation Data

This report provides Elevation Data of wells. The public user can search for CASGEM and/or Voluntary Wells.

The search is based on choosing a data range and one of the following search criteria:

- a) Well Status (CASGEM/Voluntary)
- b) Well Group
- c) Monitoring Entity
- d) Groundwater Basin/Sub-basin name
- e) Groundwater Basin/Sub-basin number
- f) County

Based on the selection criteria mentioned above, the following data elements will be generated:

1. CASGEM ID
2. Local Well Number
3. State Well Number
4. Date
5. Military Time (PST)
6. NM
7. QM
8. Reading @ RP
9. Reading @ GS
10. RP to WS
11. RP Elev
12. GS Elev
13. WSE
14. GS to WS
15. Measurement Method
16. Accuracy
17. Collecting/ Co-op Agency
18. Voluntary or CASGEM measurement
19. Comments

Public: Report of Groundwater Elevation Data

Filter Report

Select a Date Range

From 01/01/2011 To 11/01/2011

Select a Filtering Criteria

- By Well Type
- By Monitoring
- By Groundwater Basin/Subbasin number and name
- By Contaminant

Select a Search Criteria

- CASGEM Wells
- Voluntary Wells

Run Report

Clear Selection

A Date Range is selected along with two filter criteria.

Hit "Run Report".

The resulting report is displayed below.

Groundwater Elevation Data

CASGEM ID	Local Well Number	Date	Military Time (PST)	No Measurement	Questionable Measurement	Reading @RP
340169N1180120W001	Buddy Moss Well	10/3/2011	12:27			1,272.000
340169N1180120W001	Buddy Moss Well	3/31/2011	16:03			1,272.000
340169N1180120W001	Buddy Moss Well	10/12/2011	06:25	1 - Pumping		
340169N1180120W001	Buddy Moss Well	10/25/2011	10:20		1 - Pumping	1,227.000
342112N1223422W001	33 CASGEM	9/1/2011	00:00			0.000
342112N1223422W001	33 CASGEM	10/18/2011	00:00			10.000
342112N1223422W						127.000

NOTE: This report has many columns and you must scroll to the bottom to reach the horizontal scroll bar to view all of the columns.

2.6 View Map

The public user can also utilize the GIS functionality to search for wells and perform analysis using the GIS application. To access the GIS functionality, the public user has to click on the View Map tab.



CASGEM
Online System

Welcome: UAT Public User 1

Home | Notifications | Well Information | **View Map** | Reports | My Profile | Sign Out

Public: View Map

GIS Minimum Requirements

The CASGEM web application has been designed to work most efficiently on:

- CPU : Dual Core - 1.67 GHz
- RAM : 1GB
- OS : Windows XP
- Browser : IE8
- Flash Player : 10.1 and above

If your system does not meet these specifications, the application might not perform optimally.

Note: Make sure that all the pop-up blockers are turned-off, including those that are part of Google, Yahoo, MSN or similar toolbars.

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California
10/31/2011

- Upon entering the Map View, you can do the following:
 1. Search for Wells/Basins/Notifications
 2. Turn on/off Layers on the Map
 3. Identify Wells
 4. Draw & Measure on the Map
 5. Print anything on the Map
 6. Export search results
 7. View Hydrographs for wells
 8. View Designated Basins and Unmonitored/Not Designated basins (any basin where there is not a Designated ME, then it will be an Unmonitored or Not Designated basin)

2.7 GIS Functionality

The CASGEM OS is enabled with a Geographic Information System (GIS) to provide mapping capability for the associated database. Section 2.5 includes basic instructions on how to operate the GIS, as well as instruction on operations that are unique to the CASGEM OS. Topics covered in this section include:

- 2.7.1 [View Map / GIS Viewer](#)
- 2.7.2 [GIS Minimum Computer Requirements](#)
- 2.7.3 [Initial Map Layout Presentation](#)
- 2.7.4 [Top Bar Functions](#)
- 2.7.5 [CASGEM Search](#)
 - 2.7.5.1 [Using the Search Menu to Find Wells](#)
 - 2.7.5.2 [Exporting Search Results to Excel](#)
 - 2.7.5.3 [Using the Search Menu to Find Basin Notifications](#)
 - 2.7.5.4 [Using the Search Menu to Find Unmonitored Basins](#)
- 2.7.6 [Layer Control](#)
 - 2.7.6.1 [Using the Map Layer Control Menu](#)
 - 2.7.6.2 [Using the Layer Transparency Tool](#)
- 2.7.7 [Identify](#)
 - 2.7.7.1 [Working with the Identify Menu](#)
 - 2.7.7.2 [Identifying Features by Point Selection](#)
 - 2.7.7.3 [Identifying Features by Polyline Selection](#)
 - 2.7.7.4 [Identifying Features by Rectangle Selection](#)
 - 2.7.7.5 [Identifying Features by Polygon Selection](#)
- 2.7.8 [Draw and Measure](#)
 - 2.7.8.1 [Measuring the Distance between Two Wells](#)
 - 2.7.8.2 [Using the Text Tool](#)
- 2.7.9 [Save and Print](#)
- 2.7.10 [Elevation Data Hydrograph](#)
 - 2.7.10.1 [Single Well Hydrograph](#)
 - 2.7.10.2 [Multiple Wells Hydrograph](#)
- 2.7.11 [Quick Find for Wells and Basins](#)
 - 2.7.11.1 [Searching for Wells Using Quick Find](#)
 - 2.7.11.2 [Searching for Basins](#)
- 2.7.12 [Help Icon](#)
- 2.7.13 [Base Map Toggle](#)
- 2.7.14 [Overview Map](#)
- 2.7.15 [Scale Bar and Coordinates](#)
- 2.7.16 [Navigation](#)

2.7.1 View Map / GIS Viewer

The GIS Viewer provides the following functionalities:

- Enables users to spatially view the different geographic features related to the CASGEM Program. These features include Groundwater basins, Basin Notifications, monitored wells, and administrative boundaries.
- Enables users to search for Basin Notifications, monitored wells, unmonitored basins, and overlapped Basin Notifications, based on single or multiple search criteria. Results of searches are shown in tabular format as well as on a GIS map.

Note: The GIS Viewer does not verify that the Monitoring Entity boundaries or wells are geographically located in the correct basin.

The following is a list of the major components of the GIS viewer, which are discussed in detail in upcoming sections:

- I. Initial Map Layout Presentation
- II. Top Bar
- III. Base Map Toggle
- IV. Toggle and Scroll button
- V. Overview Map
- VI. Scale Bar and Coordinates
- VII. Navigation
- VIII. Search Results

2.7.2 GIS Minimum Computer Requirements

The CASGEM web application has been designed to work most efficiently on computers that have the following minimum specifications:

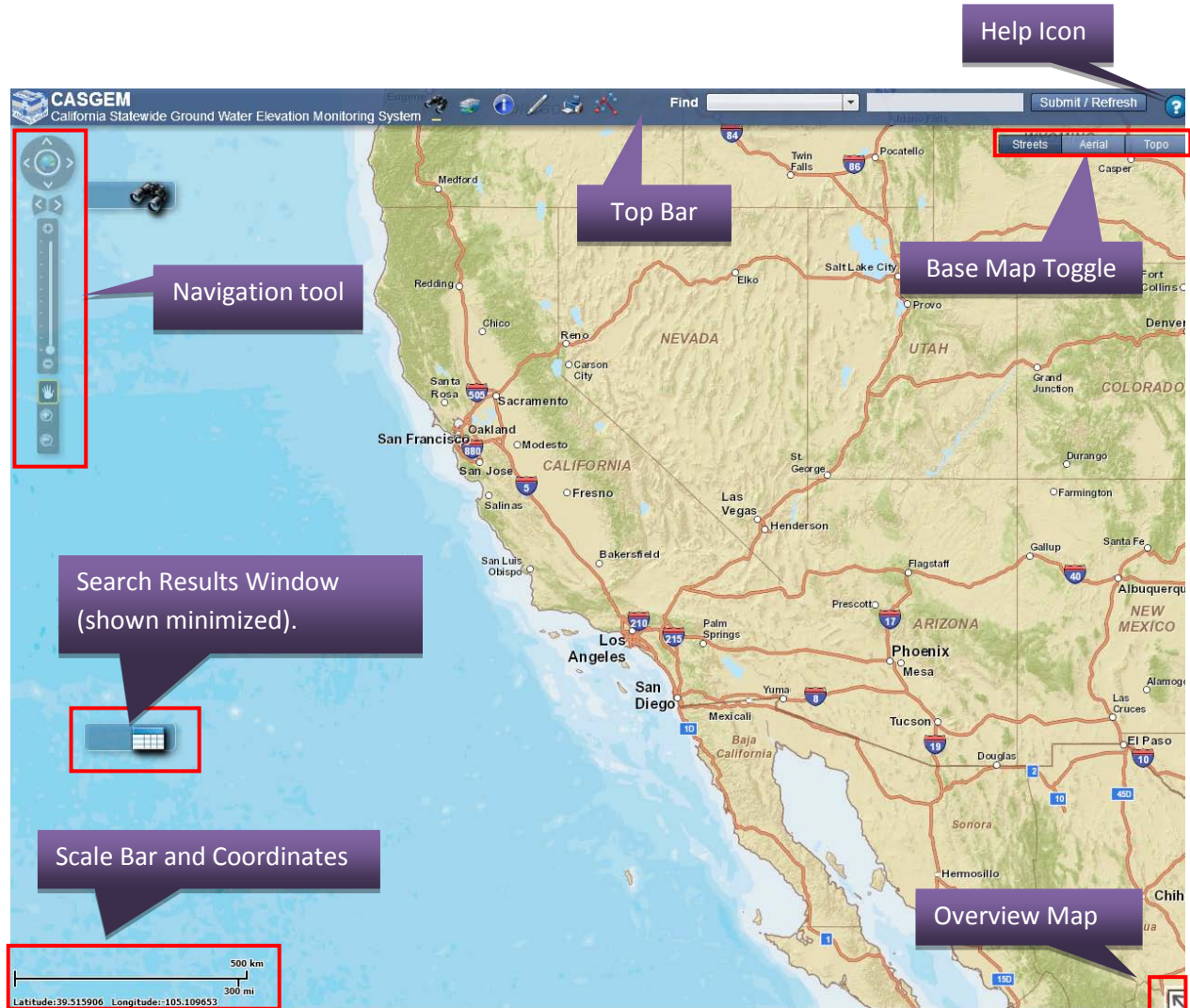
Processor:	Dual Core - 1.67 GHz CPU
Memory:	1 GB RAM
Operating System:	Windows XP or more recent
Browser:	Internet Explorer 8 with Adobe Flash Player (v10.1 or higher)

If your system does not meet these specifications, the application might not perform optimally.

Note: Make sure that all pop-up blockers are turned-off, including those that are part of Google, Yahoo, MSN or similar toolbars.

2.7.3 Initial Map Layout Presentation

This is the default page of the GIS Map viewer which opens up within a new window when the “View Map” tab in the CASGEM application page is clicked.



2.7.4 Top Bar Functions

The Top Bar is located on the top left of the Map View screen.

- The following menu icons are present in the Top Bar:
 1. CASGEM Search
 2. Layer Control
 3. Identify
 4. Draw & Measure
 5. Save and Print
 6. Elevation Data Hydrograph
 7. Quick Find for Wells and Basins
 8. Help Icon

- When clicked, these menu icons open separate related windows on-screen, which can then be minimized, moved or hidden, using the controls on the map view.
- The individual menu items are described in detail in the following sections.



The Top Bar can be minimized or maximized by clicking on the cube with the CASGEM logo on the far left of the Top Bar.



Upon clicking on the CASGEM logo, the Top Bar is hidden. Click on the logo again to re-expand the Top Bar.



2.7.5 CASGEM Search

The CASGEM Search menu provides users with the ability to search for Monitored Wells, Basin Notifications, Unmonitored Basins, and Overlapped Basin Notifications, based on various search criteria defined by the user in the search window. Topics covered in this subsection include:

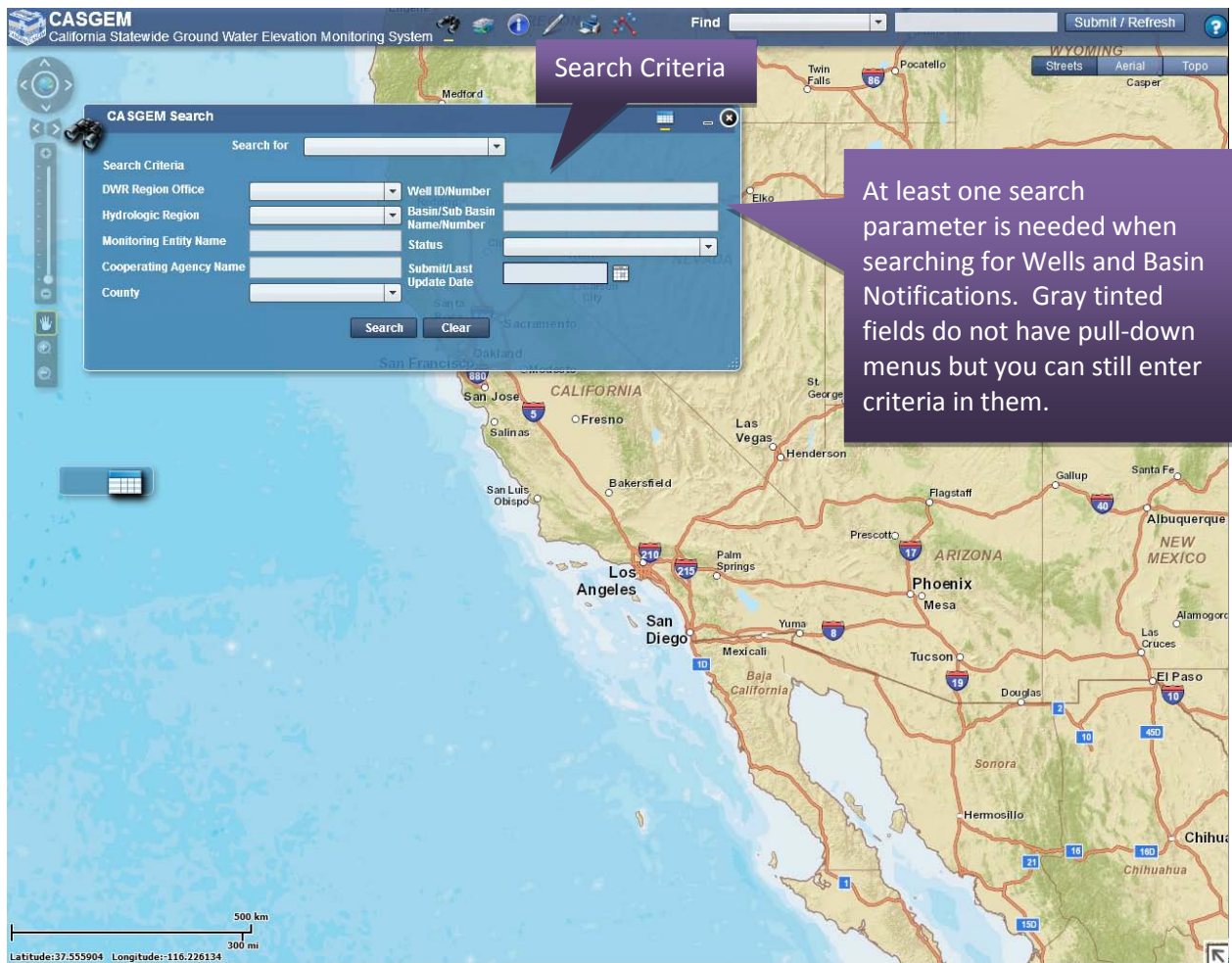
- 2.7.5.1 [Using the Search Menu to Find Wells](#)
- 2.7.5.2 [Exporting Search Results to Excel](#)
- 2.7.5.3 [Using the Search Menu to Find Basin Notifications](#)
- 2.7.5.4 [Using the Search Menu to Find Unmonitored Basins](#)

To access the CASGEM Search widget, click on the Search icon on the Top Bar. The Search Menu will pop up and display its dialog window on the map.

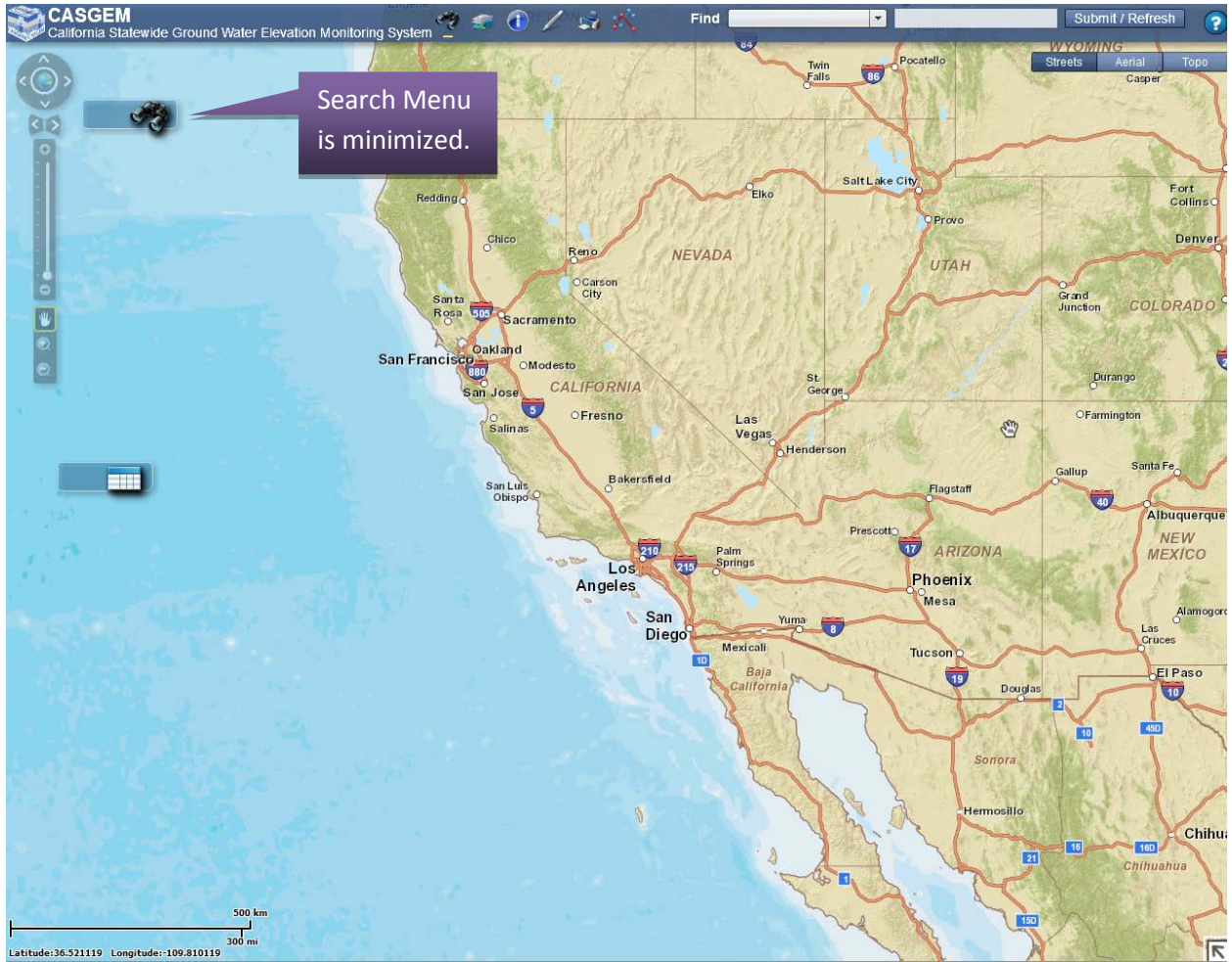


Listed below are some of the characteristics of the CASGEM Search Menu:

- The search can be simple, based on one parameter, or advanced, based on multiple criteria.
 - CASGEM Search criteria are not case sensitive and users can do wild card searches.
 - The CASGEM Search parameter for Submit/Last update date has a calendar to assist the user in selecting a date.
 - Any portion of a valid character string can be entered into the various search fields.
- Upon submitting a search:
 - The Search Results table will open providing the search results in tabular format.
 - The search results will be displayed graphically on the map.



- To minimize the Search Menu, click on the minimize button on the CASGEM Search Menu window dialog. The Search Menu will minimize on the map viewer as shown in the picture below. Clicking on the minimized icon again will re-open the search dialog window on the map.



2.7.5.1 Using the Search Menu to Find Wells

- Upon opening the CASGEM Search Menu, select “Wells” in the “search for” drop-down menu.
- Select your search criteria and click on the Search button.
 - The Search Results table will open, displaying the Well Search Results. **Note: If a well is monitored by more than one agency it will show up twice in the search results.**
 - The results will also be portrayed on the map.

NOTE: The mapped wells cannot be seen due to the CASGEM Search widget. To minimize, click here.

The screenshot shows the CASGEM Search interface. The search criteria are set to 'Wells' and 'ALAMEDA' county. The status is 'Active'. The results table is displayed below the search widget.

Local Well Number	State Well Number	CASGEM Station ID	Monitoring Entity	Basin Name Num	Well Use	CASGEM Well	Total Well Depth
02S03W10G001	02S03W10G001	377737W122176		East Bay Plain-2	Irrigation	No	Confidential
03S03W14K002	03S03W14K002	376679N122157		East Bay Plain-2	Industrial	No	Confidential
01S04W11K001	01S04W11K001	378515N122269		East Bay Plain-2	Irrigation	No	Confidential

- To properly view the results displayed on the map, it will help to minimize the CASGEM Search window. This is done by clicking on the hyphen icon in the upper right hand corner of the CASGEM Search window. The screenshot below displays the CASGEM Search window minimized and the Well Search Results still open.

Click on icon to expand.

Search results can now be seen.

The Search Results table can also be minimized by clicking here.

Local Well Number	State Well Number	CASGEM Station ID	Monitoring Entity	Basin Name Num	Well Use	CASGEM Well	Total Well Depth
02S03W10G001	02S03W10G001	377737N122176		East Bay Plain-2	Irrigation	No	Confidential
03S03W14K002	03S03W14K002	376679N122157		East Bay Plain-2	Industrial	No	Confidential
01S04W11K001	01S04W11K001	378515N122269		East Bay Plain-2	Irrigation	No	Confidential

Latitude: 41.960489 Longitude: -120.962613

- To view details of the search results, it may help to re-size the Well Search Results table. That can be done by dragging the lower right hand corner. The table can also be re-positioned by clicking and holding the outline of the table. Moving your mouse will then move the table. Below, the Search Results table has been re-sized and moved so more of the search results can be seen.

The screenshot shows the CASGEM (California Statewide Groundwater Elevation Monitoring System) interface. A map of California is displayed in the background. In the foreground, a 'Well Search Results' table is shown, which has been re-sized and re-positioned. The table contains the following data:

Local Well Number	State Well Number	CASGEM Station ID	Monitoring Entity	Basin Name-Num	Well Use	CASGEM Well	Total Well Depth	Well Construction	Well Completion
02S03W10G001	02S03W10G001	377737N122476		East Bay Plain-2	Irrigation	No	Confidential	No	Not Available
03S03W14K002	03S03W14K002	376679N122457		East Bay Plain-2	Industrial	No	Confidential	No	Not Available
01S04W11K001	01S04W11K001	378515N122269		East Bay Plain-2	Irrigation	No	Confidential	No	Not Available
03S02W32D002	03S02W32D002	376328N122113		East Bay Plain-2	Irrigation	No	Confidential	No	Not Available
02S04W25A001	02S04W25A001	377332N122245		East Bay Plain-2	Irrigation	No	Confidential	No	Not Available
03S02W29A003	03S02W29A003	376461N122097		East Bay Plain-2	Industrial	No	Confidential	No	Not Available
02S03W22O002	02S03W22O002	377413N122180		East Bay Plain-2	Industrial	No	Confidential	No	Not Available
03S03W36R002	03S03W36R002	376245N122129		East Bay Plain-2	Industrial	No	Confidential	No	Not Available
02S03W28G001	02S03W28G001	377297N122194		East Bay Plain-2	Irrigation	No	Confidential	No	Not Available
02S04W03E001	02S04W03E001	377894N122297		East Bay Plain-2	Irrigation	No	Confidential	No	Not Available
02S03W19O001	02S03W19O001	377369N122330		East Bay Plain-2	Irrigation	No	Confidential	No	Not Available
02S04E29O001	02S04E29O001	377224N121560		Tracy-5-22.15	Unknown	No	Confidential	No	Not Available
02S03W36M002	02S03W36M002	377135N122151		East Bay Plain-2	Industrial	No	Confidential	No	Not Available
03S02W28D003	03S02W28D003	376477N122096		East Bay Plain-2	Residential	No	Confidential	No	Not Available

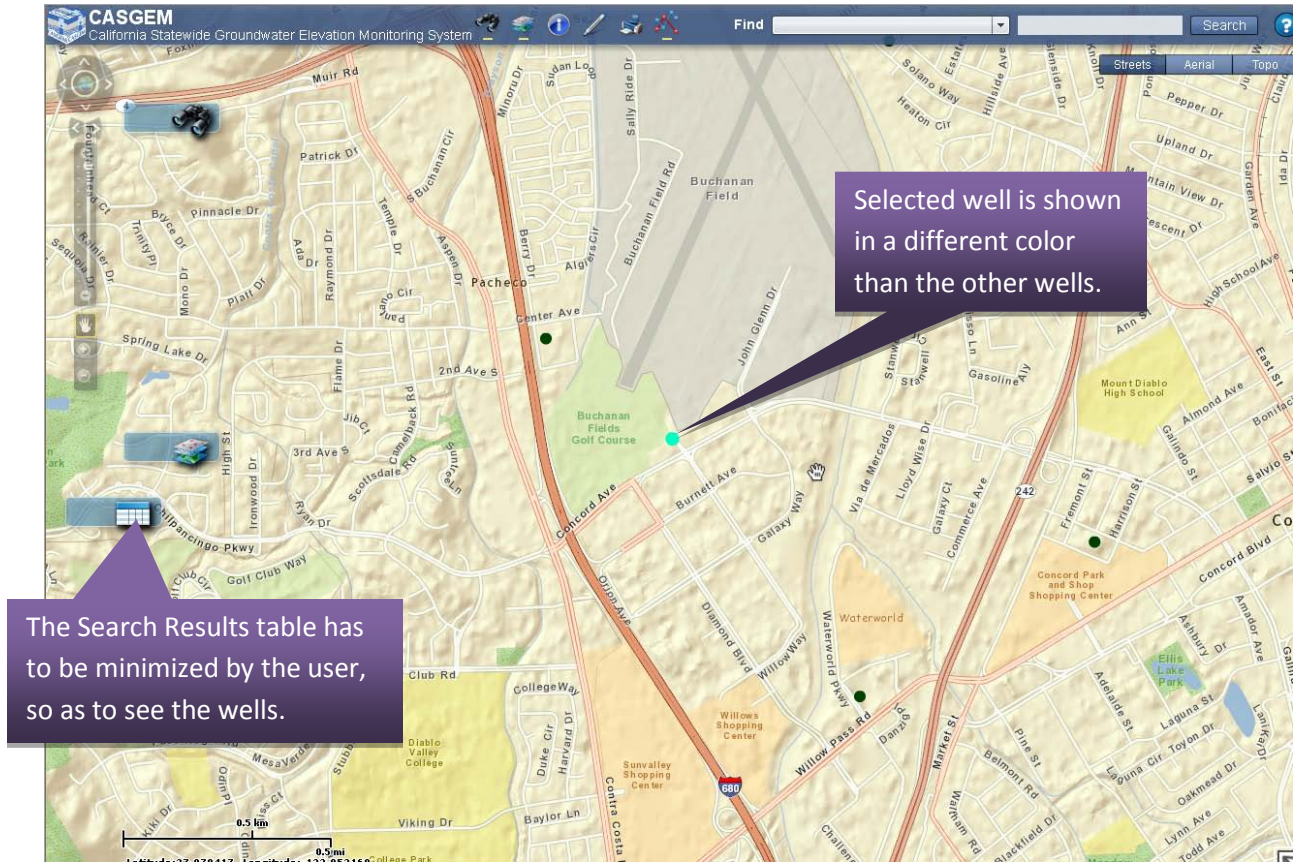
You can re-size the table by clicking here and dragging once the desired shape is seen.

- To view the Well Information of a specific well, click on the CASGEM Station ID hyperlink of that well. A new window will pop up displaying the Well Information page (as seen below). For further information about well data attributes displays, refer to the last portion of [Section 2.4, Well Information and Groundwater Elevation Data](#).

Clicking on the hyperlink causes a new window of the CASGEM application to open.

Local Well Number	State Well Number	CASGEM Station ID	Area	Use	Depth	Flow	Flow Direction	Flow Rate	Latitude	Longitude
01S04W04R001	378630N122071	378630N122071	East Bay Plain-2	Irrigation	200	N	Not Available	37.8515	-122.2698	
03S03W03L023	376970N122186	376970N122186	East Bay Plain-2	Irrigation	630	N	Not Available	37.697	-122.1864	
03S02W34Q022	376230N122071	376230N122071	East Bay Plain-2	Unknown	80	N	Not Available	37.623	-122.0715	
01S04W22J001	378266N122283	378266N122283	East Bay Plain-2	Industrial	163	N	Not Available	37.8266	-122.2833	
03S02W21G004	376602N122089	376602N122089	East Bay Plain-2	Irrigation	135	N	Not Available	37.6602	-122.0898	
03S02W27A001	376471N122061	376471N122061	East Bay Plain-2	Irrigation	300	N	Not Available	37.6471	-122.0611	
03S02W28D003	376477N122096	376477N122096	East Bay Plain-2	Residential	232	N	Not Available	37.6477	-122.0965	
03S02W29A003	376461N122097	376461N122097	East Bay Plain-2	Industrial	429	N	Not Available	37.6461	-122.0976	
03S02W30G005	376445N122122	376445N122122	East Bay Plain-2	Residential	75	N	Not Available	37.6445	-122.1222	
03S02W32E001	376313N122113	376313N122113	East Bay Plain-2	Irrigation	80	N	Not Available	37.6313	-122.113	
03S02W34P006	376234N122069	376234N122069	East Bay Plain-2	Residential	92	N	Not Available	37.6234	-122.069	
03S02W35R001	376235N122049	376235N122049	East Bay Plain-2	Irrigation	570	N	Not Available	37.6235	-122.0496	

- To examine the individual search results within the GIS application, select the row of the well of interest from within the Well Search Results table and click on it.



2.7.5.2 Exporting Search Results to Excel

- To save the search results in a spreadsheet (Excel), expand the Search Results table.
- Click on the Save Data button on the search results table. A dialog box will open prompting the user to save the file on their computer.
- Select a folder to save your search to, provide a file name and click “Save”.

Local Well Number	State Well Number	CASGEM Station ID	Basin Name/Num	Well Use	Total Well Depth	Well Construction	Well Completion	Latitude	Longitude
	01 S04W04R001	378686N122299	East Bay Plain-2	Industrial	320	N	Not Available	37.8686	-122.2993
	01 S04W11K001	378013N122209	East Bay Plain-2	Irrigation	200	N	Not Available	37.8515	-122.2698
	03 S03W03L023	376970N122186	East Bay Plain-2	Irrigation	630	N	Not Available	37.697	-122.1864
	03 S02W34Q022	376230N122071	East Bay Plain-2	Unknown	80	N	Not Available	37.623	-122.0715
	01 S04W22J001	378266N122283	East Bay Plain-2	Industrial	163	N	Not Available	37.8266	-122.2833
	03 S02W21G004	376602N122089	East Bay Plain-2	Irrigation	135	N	Not Available	37.6602	-122.0898
	03 S02W27A001	376471N122061	East Bay Plain-2	Irrigation	300	N	Not Available	37.6471	-122.0611
	03 S02W28D003	376477N122096	East Bay Plain-2	Residential	232	N	Not Available	37.6477	-122.0965
	03 S02W29A003	376461N122097	East Bay Plain-2	Industrial	429	N	Not Available	37.6461	-122.0976
	03 S02W30G005	376445N122122	East Bay Plain-2	Residential	75	N	Not Available	37.6445	-122.1222
	03 S02W32E001	376313N122113	East Bay Plain-2	Irrigation	80	N	Not Available	37.6313	-122.113
	03 S02W34P006	376234N122069	East Bay Plain-2	Residential	92	N	Not Available	37.6234	-122.069
	03 S02W35R001	376235N122049	East Bay Plain-2	Irrigation	570	N	Not Available	37.6235	-122.0496

2.7.5.3 Using the Search Menu to Find Basin Notifications

- Open the CASGEM Search Menu by clicking on either the minimized icon or the Top Bar.
- Select “Basin Notifications” in the “search for” drop-down menu.
- Select the search criteria as shown in the above figure and click on the search button.
- The results will be displayed on the map as well as in the Basin Notification Search Results table.

The screenshot displays the CASGEM web application interface. At the top, the title bar reads "CASGEM California Statewide Ground Water Elevation Monitoring System". A search bar is visible with a "Find" dropdown and a "Submit" button. The main search panel, titled "CASGEM Search", contains the following fields:

- Search for: Basin Notifications
- DWR Region Office: South Central
- Hydrologic Region: Central Coast
- Monitoring Entity Name: (empty)
- Cooperating Agency Name: (empty)
- Well ID/Number: (empty)
- Basin/Sub Basin Name/Number: (empty)
- Status: (empty)
- Submit/Last Update Date: (empty)

Buttons for "Search" and "Clear" are located below the search criteria. A purple callout box with the text "Search criteria selected." points to the "Basin Notifications" dropdown. Below the search panel, a map of California is shown with red arrows pointing to specific locations. A second purple callout box with the text "Search Results -on map -in table" points to these red arrows. At the bottom of the screen, a table titled "Basin Notification Search Results" displays the following data:

Monitoring Entity Name	Notification Status	Basin Name	Basin Number	Contact Name	Contact Email	Notification Date
San Benito Count	Open	Bitter Water Val	3-30		ctaylor@todden	
San Benito Count	Open	Hernandez Valle	3-31		ctaylor@todden	

At the bottom left of the map, the coordinates are displayed as Latitude:36.991922 Longitude:108.508455. A scale bar indicates 300 miles.

- To view the information for a specific Basin Notification, click on the hyperlink of the desired record in the search results. A new window will pop up displaying the Basin Summary for the Notification (as seen below).

The screenshot displays two windows from the CASGEM Online System. The left window shows a map with a search results table. A purple callout box points to a hyperlink in the table with the text: "Clicking on the hyperlink causes a new window of the CASGEM application to open." The right window shows the "Public Basin Summary" page for a specific basin.

Monitoring Entity Name	Notification Status	Basin Name	Basin Number	Contact Name	Contact Email	Contact Phone
San Juan County	Designated	San Juan Basins	3-3.04	Chad Taylor	ctaylor@tdodden.com	1222.2010
Santa Cruz County	Designated	Scotts Valley	3-27	Mike Cloud	emv034@co.san	1222.2010
Santa Cruz County	Designated	Sagehen Valley	3-1	Mike Cloud	emv034@co.san	0922.2010
Santa Cruz County	Designated	West Santa Cruz	3-26	Mike Cloud	emv034@co.san	1222.2010
San Benito County	Designated	Bolsa Area	3-3.02	Chad Taylor	ctaylor@tdodden.com	1222.2010
San Benito County	Designated	Santa Cruz Parts	3-21	Mike Cloud	emv034@co.san	1222.2010
San Benito County	Designated	Hollister Area	3-3.03	Chad Taylor	ctaylor@tdodden.com	1221.2010
Santa Cruz County	Designated	Pajaro Valley	3-2	Mike Cloud	emv034@co.san	1222.2010

Basin Shape Files	
Shape File	Download
3 3 03 Hollister Subbasin of Groyo Hollister Basin.shp	Download
3 3 03 Hollister Subbasin of Groyo Hollister Basin.dbf	Download
3 3 03 Hollister Subbasin of Groyo Hollister Basin.prj	Download
3 3 03 Hollister Subbasin of Groyo Hollister Basin.shx	Download
3 3 03 Hollister Subbasin of Groyo Hollister Basin.sbx	Download

- To examine the individual search results, select a row of interest from within the Basin Search Results and click on it. The map will zoom in to the feature.
- To save the search results in a spreadsheet, the user should click on the Save Data button on the search results table. A dialog box will open for the user to save the file in Excel format on their computer (to see example on exporting search results to Excel, [click here](#)).

Search widget has been minimized.

"Save Data" button.

Monitoring Entry Name	Notification Status	Basin Name	Basin Number	Contact Name	Contact Email	Notification Date
San Benito Count	Designated	San Juan Bautis	3-3.04	Chad Taylor	ctaylor@todden	12/22/2010
Santa Cruz Count	Designated	Scotts Valley	3-27	Mike Cloud	env034@co.san	12/22/2010
Santa Cruz Count	Designated	Soquel Valley	3-1	Mike Cloud	env034@co.san	08/29/2011
Santa Cruz Count	Designated	West Santa Cru	3-26	Mike Cloud	env034@co.san	12/22/2010
San Benito Count	Designated	Bolsa Area	3-3.02	Chad Taylor	ctaylor@todden	12/21/2010
Santa Cruz Count	Designated	Santa Cruz Puris	3-21	Mike Cloud	env034@co.san	12/22/2010
San Benito Count	Designated	Hollister Area	3-3.03	Chad Taylor	ctaylor@todden	12/21/2010
Santa Cruz Count	Designated	Pajaro Valley	3-2	Mike Cloud	env034@co.san	12/22/2010

Latitude: 37.080884 Longitude: -122.009130

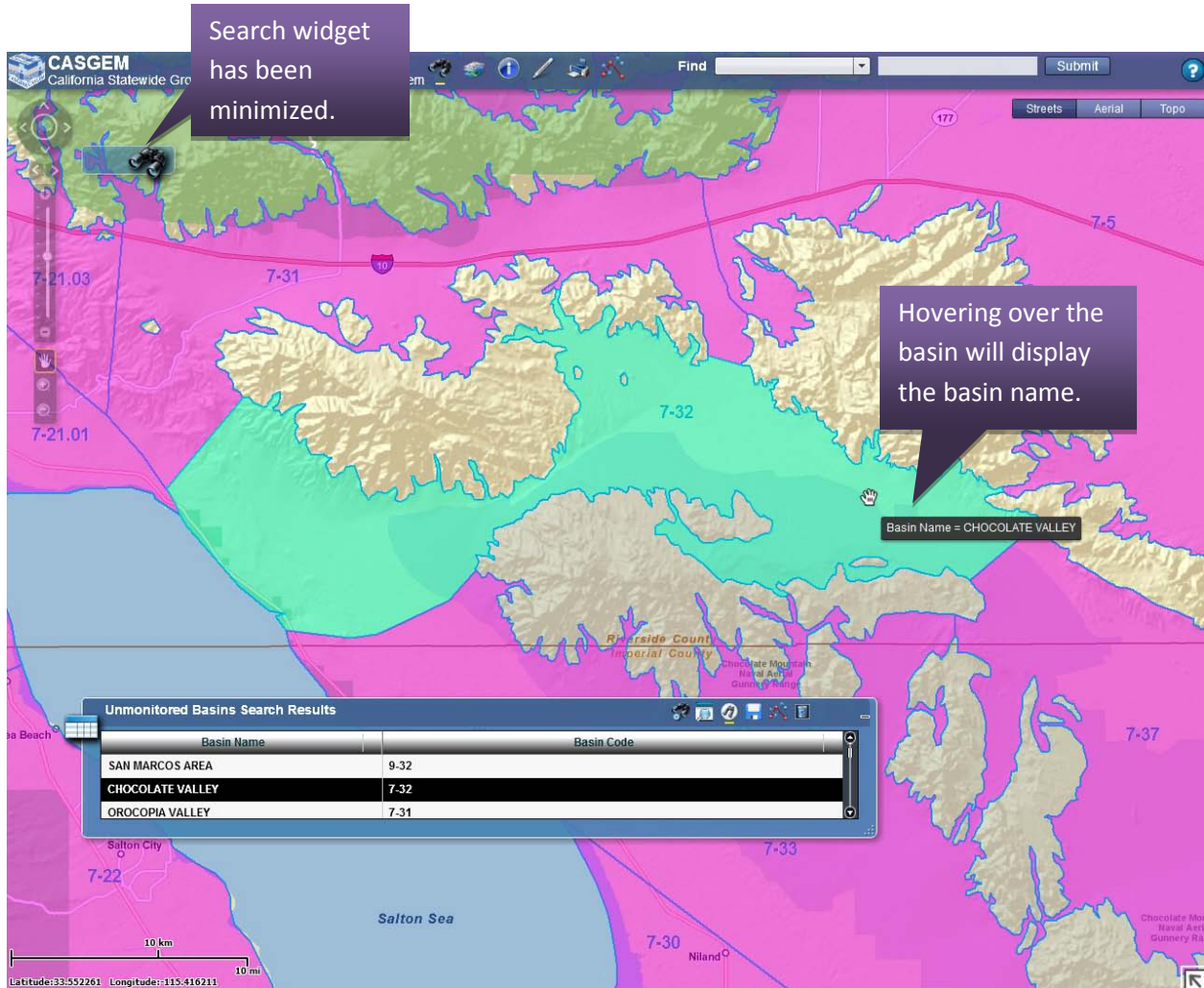
2.7.5.4 Using the Search Menu to Find Unmonitored Basins

- Open the CASGEM Search Menu, by clicking on either the minimized icon or the Top Bar.
- Select “Unmonitored Basins” in the “search for” drop-down and click on the search button.
- The results will be displayed on the map and the Unmonitored Basins Search Results table.

The screenshot displays the CASGEM web interface. At the top, the search bar contains the text "Search criteria selected." Below it, the "CASGEM Search" panel is open, showing the search criteria set to "Unmonitored Basins". The search results are displayed on the map as colored areas (purple, blue, and green) across California. A callout box points to these areas with the text "Search results table will correspond to the mapped areas." Below the map, the "Unmonitored Basins Search Results" table is visible, listing the following data:

Basin Name	Basin Code
SAN MARCOS AREA	9-32
CHOCOLATE VALLEY	7-32
OROCOPIA VALLEY	7-31

- To examine the individual search results, select a row of interest from within the Unmonitored Basin Notification Search Results and click on it. The map will zoom in to the feature.
- To save the search results in a spreadsheet, the user should click on the Save Data button on the search results table. A dialog box will open for the user to save the file in Excel format on their computer (to see example on exporting search results to Excel, [click here](#)).



2.7.6 Layer Control

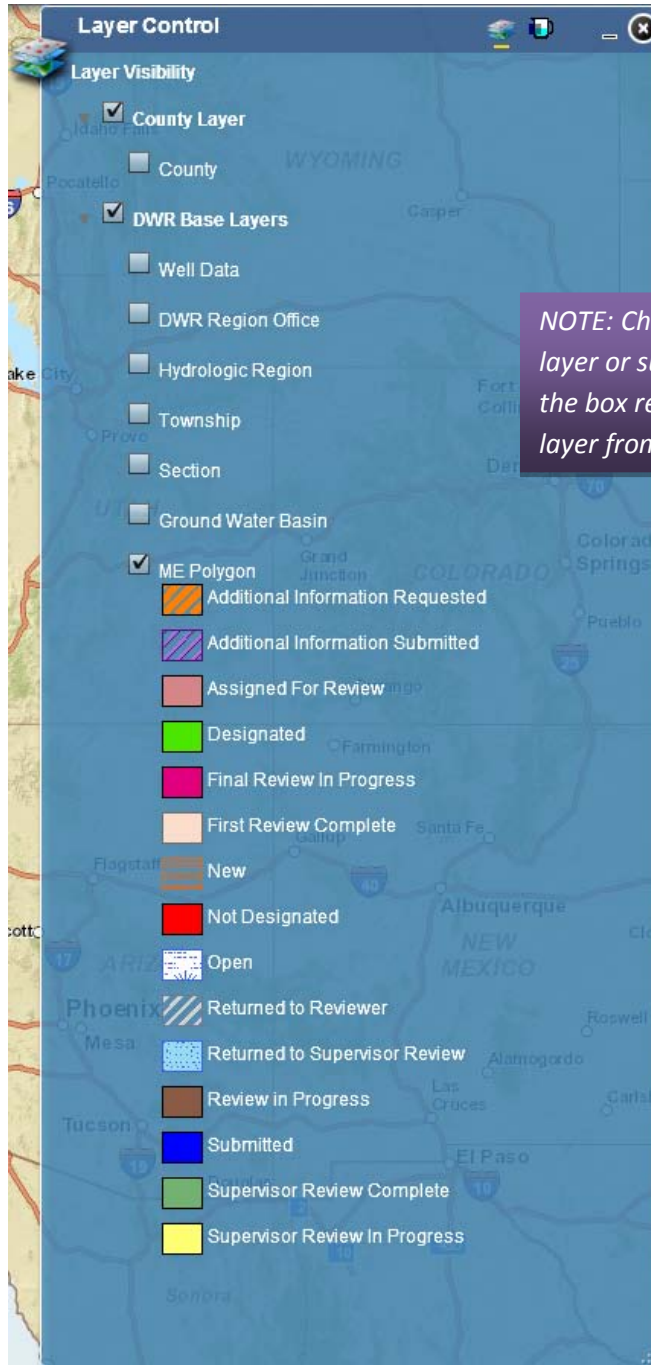
The Layer Control menu provides GIS viewer application users the ability to turn map layers on and off. Topics covered in this subsection include:

- 2.7.6.1 [Using the Map Layer Control Menu](#)
- 2.7.6.2 [Using the Layer Transparency Tool](#)

It can be accessed by clicking on the Layer icon in the Top Bar.

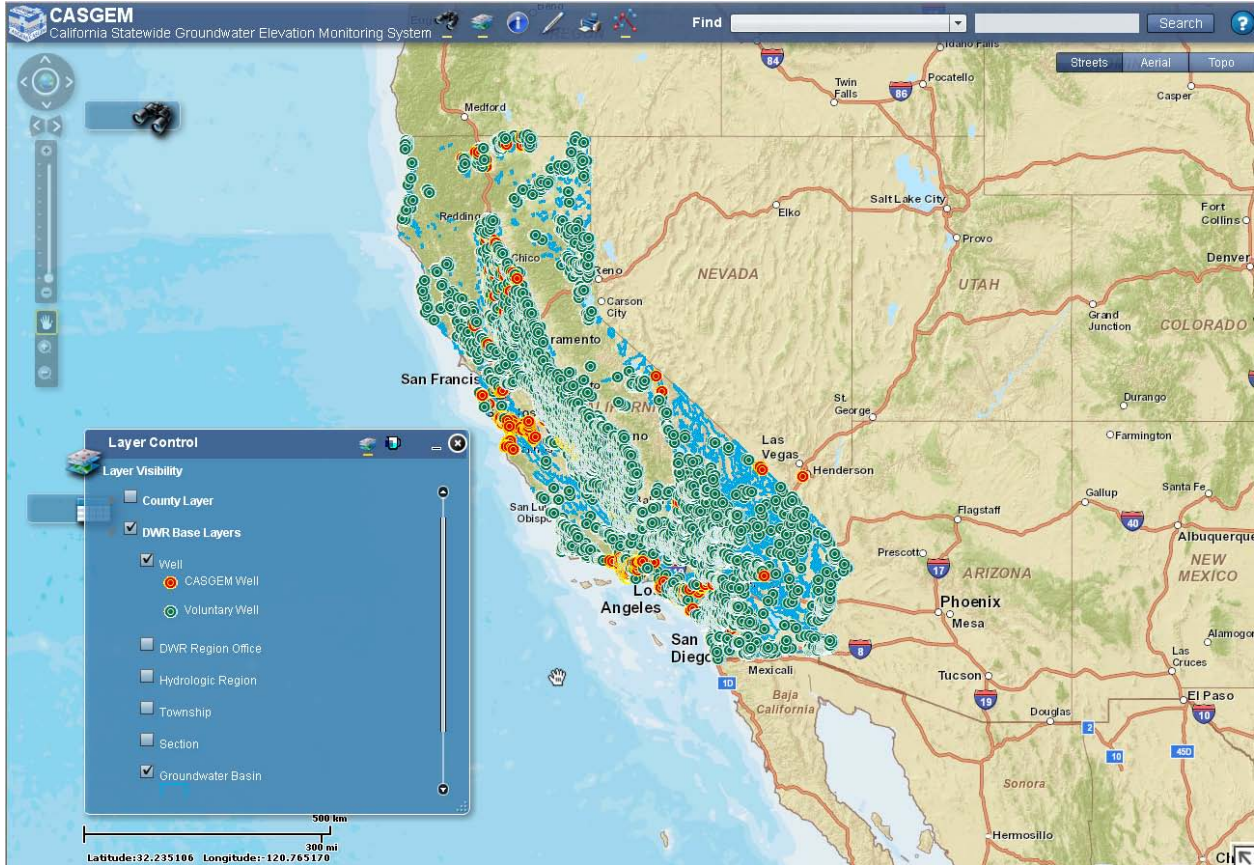


All available layers are represented in the Layer Control table that appears below.

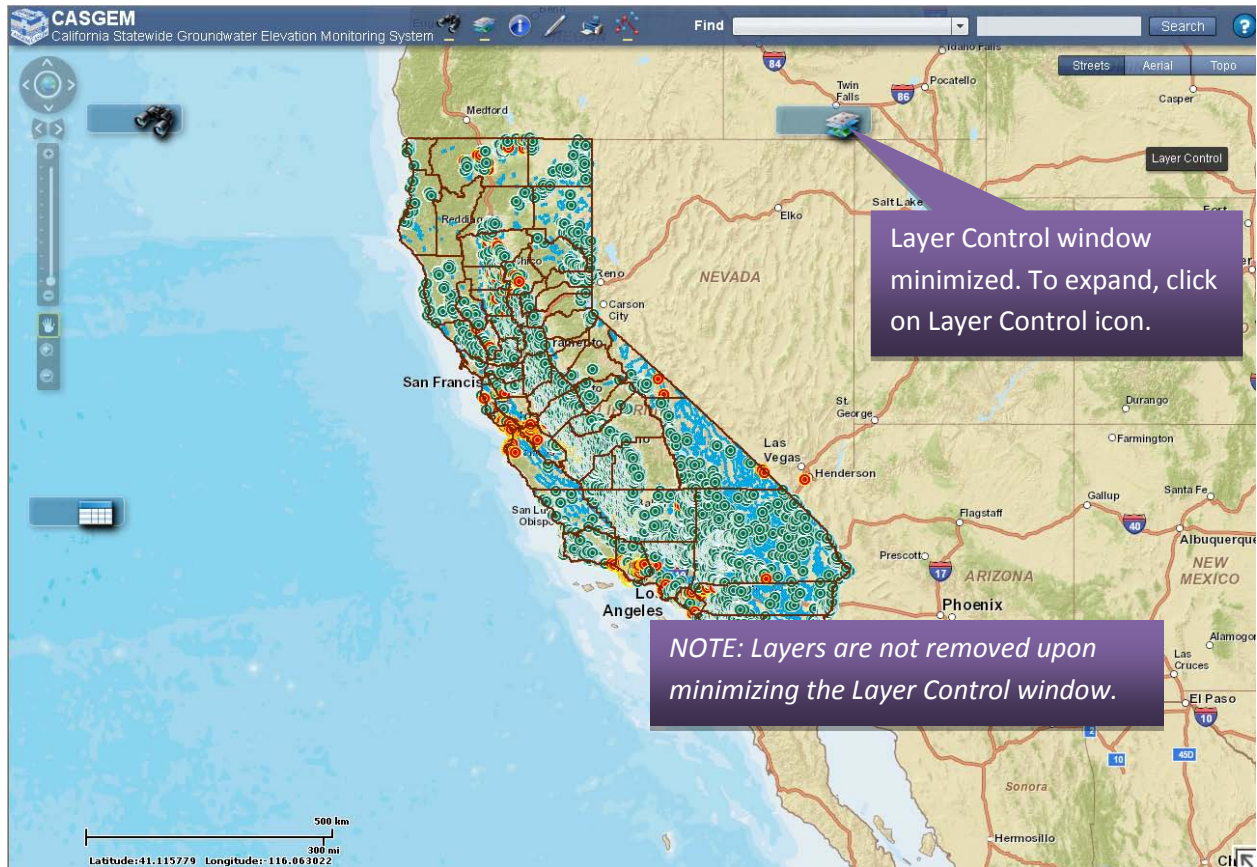


2.7.6.1 Using the Map Layer Control Menu

- Click on the Layer Control Menu icon in the Top Bar. The Layer Control Menu opens as a dialog window listing all available layers with selection boxes to toggle layers on and off.
- All the layers that are turned on (boxes checked) will be displayed on the map.

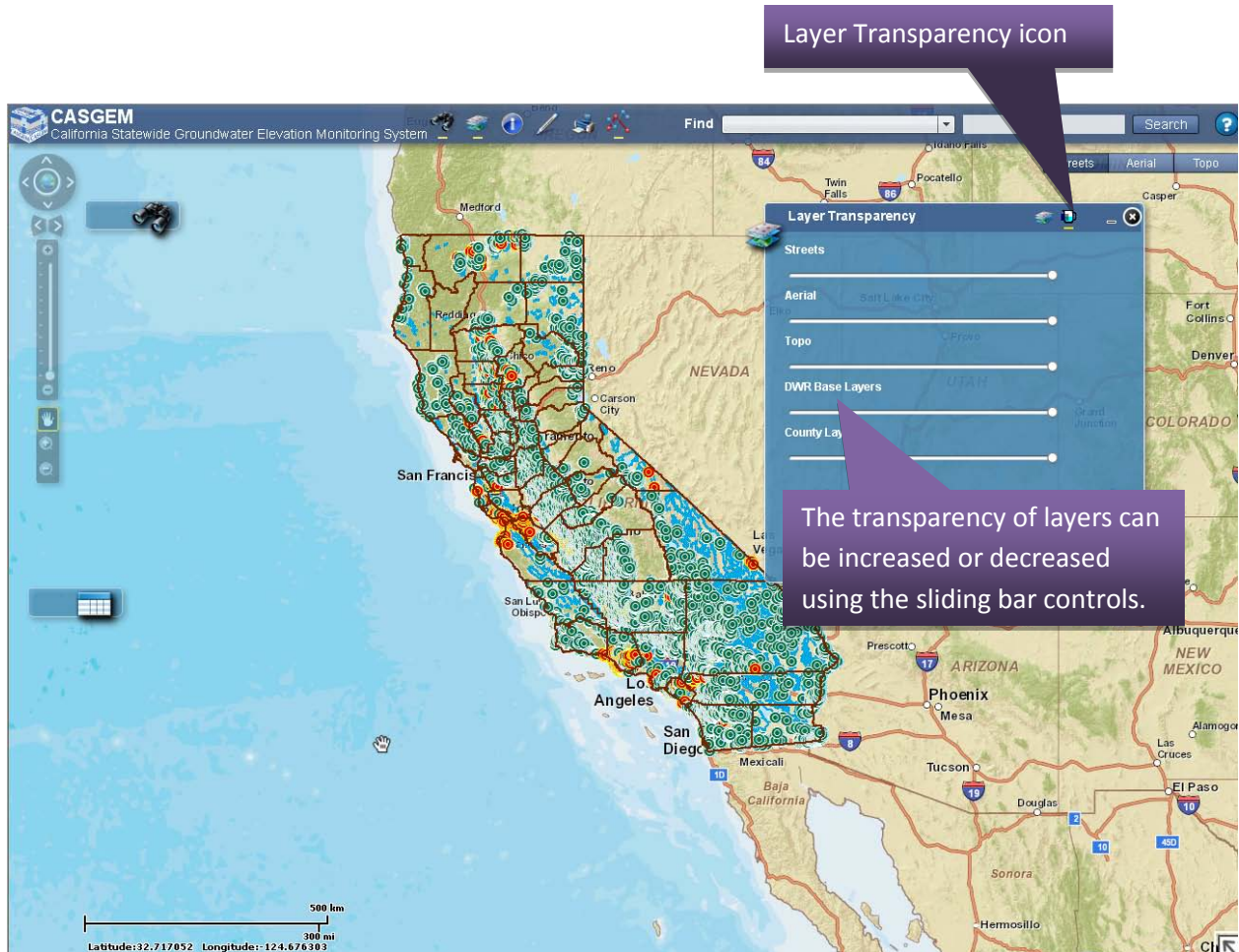


- To minimize the Layer Control Menu on the map, click the minimize button on the Layer Control Menu window dialog. The Layer Control Menu minimizes on the map viewer as shown in the picture below.
- Clicking on the Layer Control icon again will re-open the Layer Control Menu dialog window.

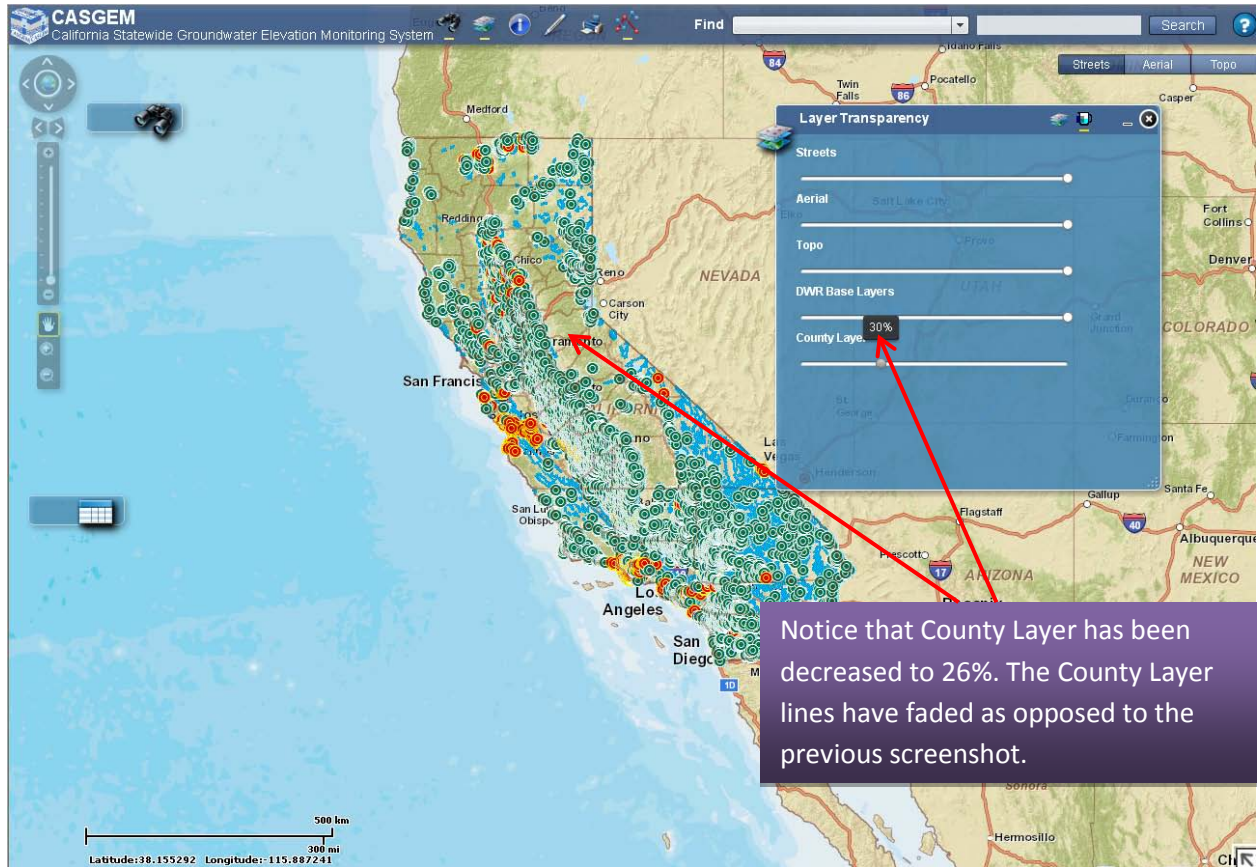


2.7.6.2 Using the Layer Transparency Tool

- The Layer Control menu bar contains a Transparency Tool icon which can be used for setting the transparency of certain map layers.
- When the Layer Transparency icon is clicked, the associated dialog window is opened as shown below. The transparency of layers can be increased or decreased using the sliding bar controls.



To decrease the transparency of a layer, simply move the sliding bar controls. The changes can be seen on the map instantly.



NOTE: Once the desired level of layer transparency is set, the user can click on the Layer list icon to return to the Layer Control Menu.

2.7.7 Identify

This subsection of the User Guide covers the following topics:

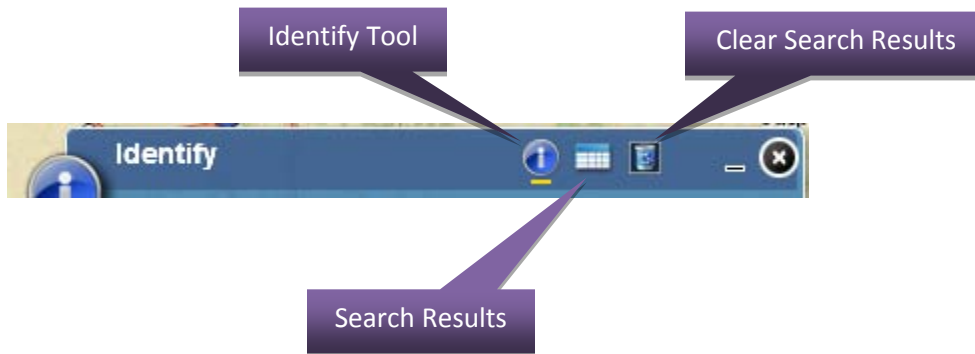
- 2.7.7.1 [Working with the Identify Menu](#)
- 2.7.7.2 [Identifying Features by Point Selection](#)
- 2.7.7.3 [Identifying Features by Polyline Selection](#)
- 2.7.7.4 [Identifying Features by Rectangle Selection](#)
- 2.7.7.5 [Identifying Features by Polygon Selection](#)

The Identify Menu, found in the Top Bar of the GIS application, enables users to identify features, associated with active map layers, on the map.

NOTE: Before using the Identify tool, at least one layer of interest should be turned on using the Layer Control menu.

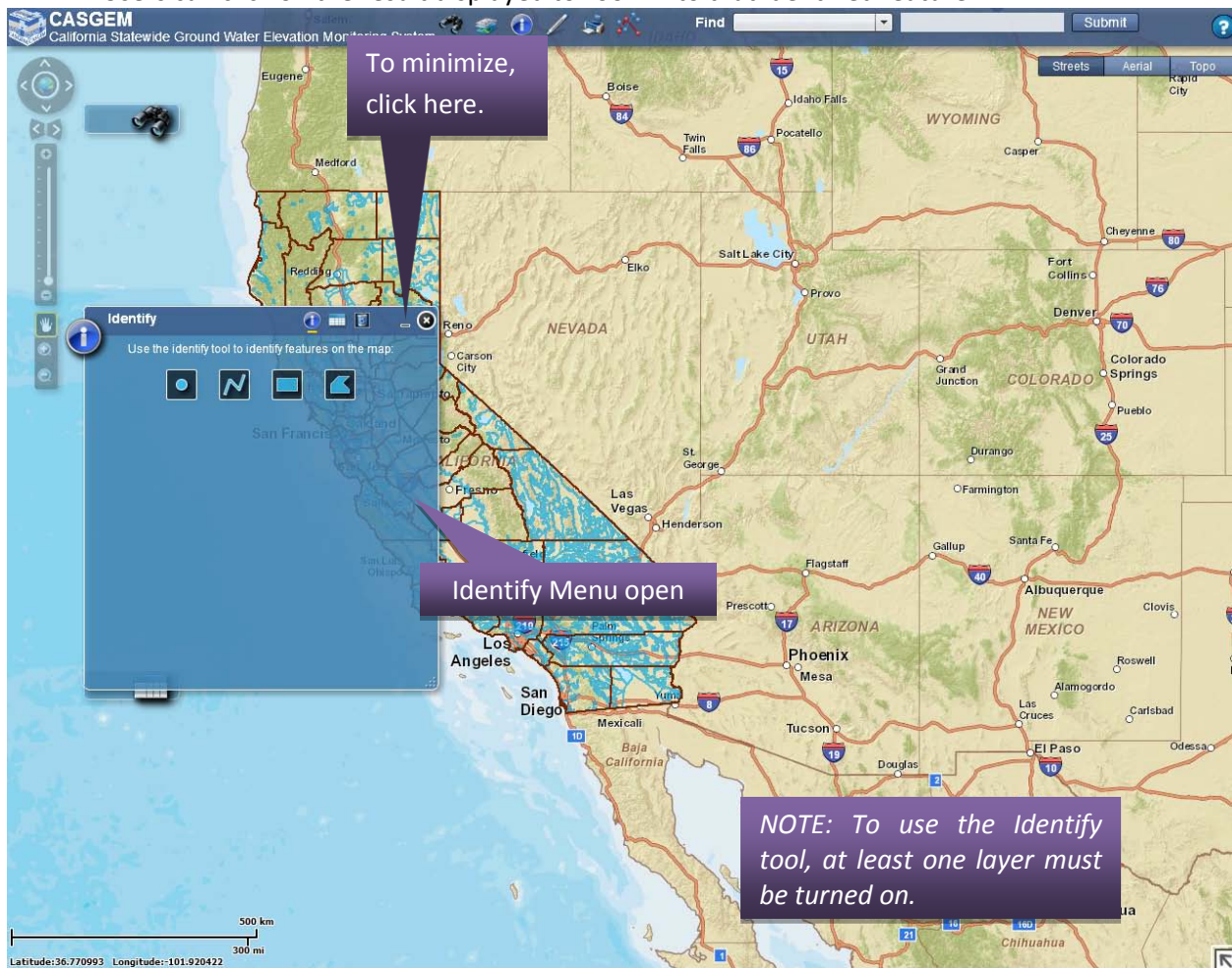


Below are the different functions of the Identify Menu:

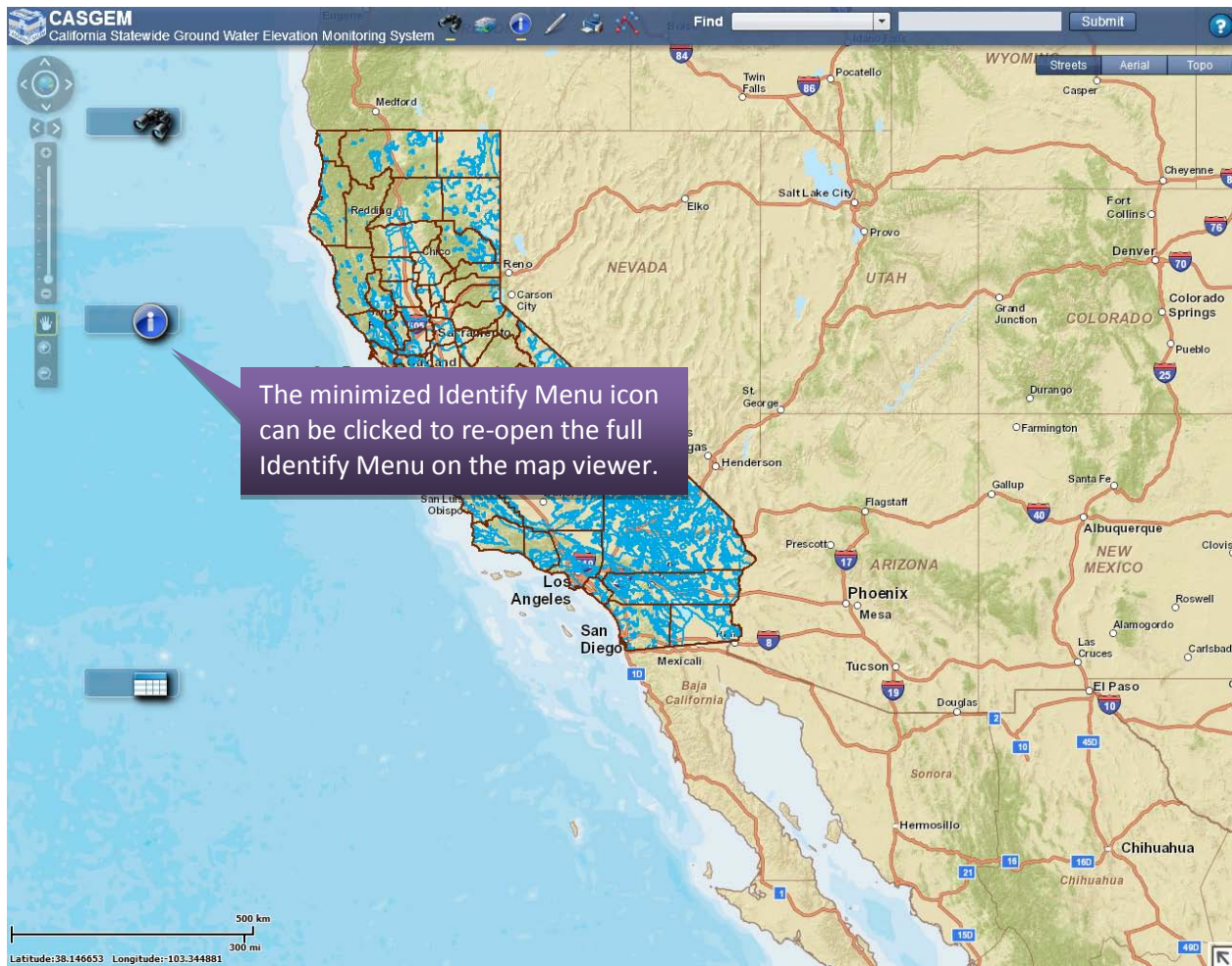


2.7.7.1 Working with the Identify Menu

- Click on the Identify Menu icon on the Top Bar. The Identify Menu opens within the map display as shown below.
- The Identify menu bar has three icons titled Identify, Results and Clear Results.
- The Identify menu contains buttons representing four different ways to select map features to identify them:
 - Select by clicking a point on map features
 - Select by drawing a polyline on map features
 - Select by drawing a rectangle over map features
 - Select by drawing a polygon over map features
- The Identify menu works on the principle of identifying all displayed/visible features on the map.
- Users can click on the result displayed to zoom into that identified feature.

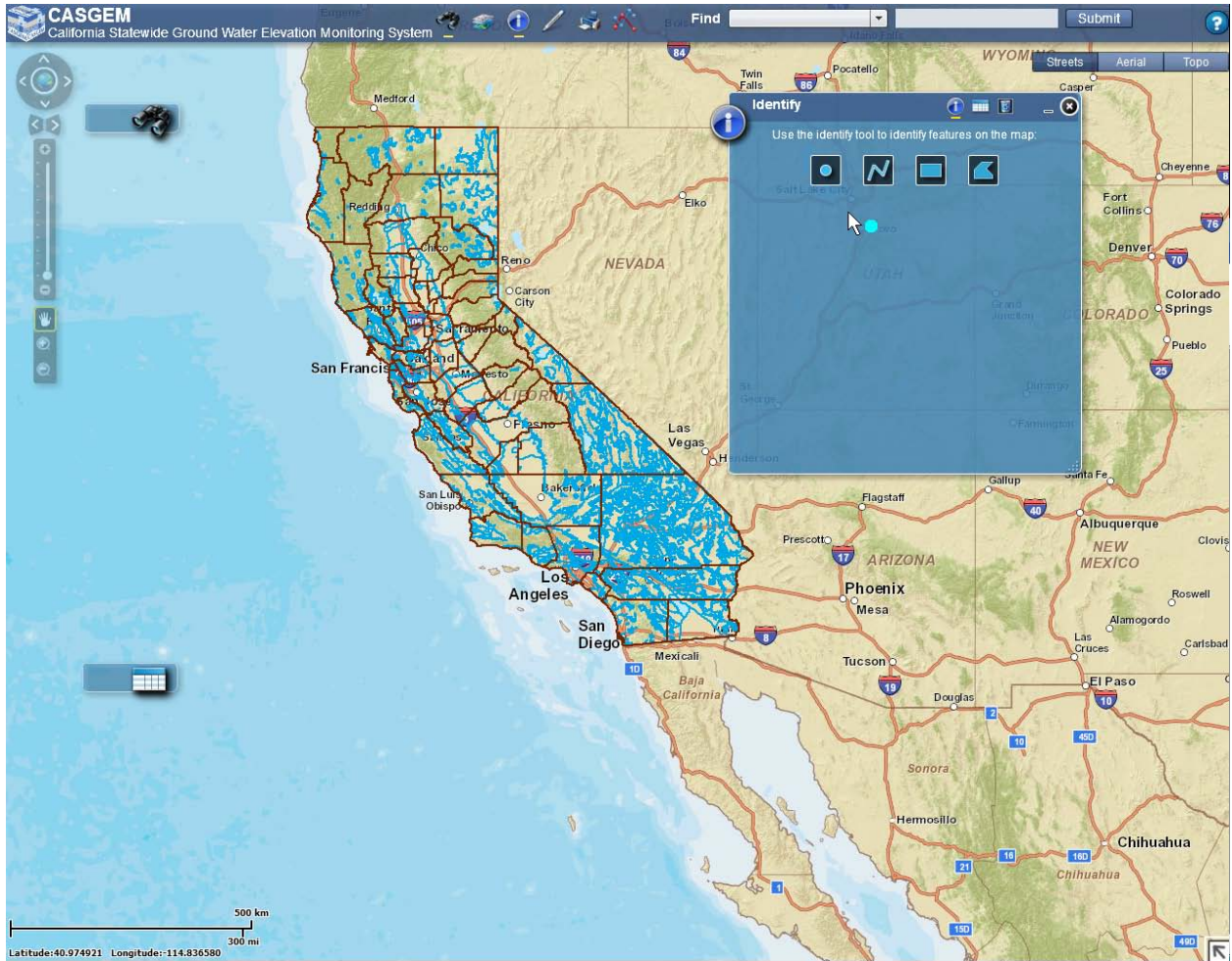


- To minimize the Identify Menu, click on the minimize button on the Identify Menu dialog window. The Identify Menu minimizes on the map viewer as shown below.

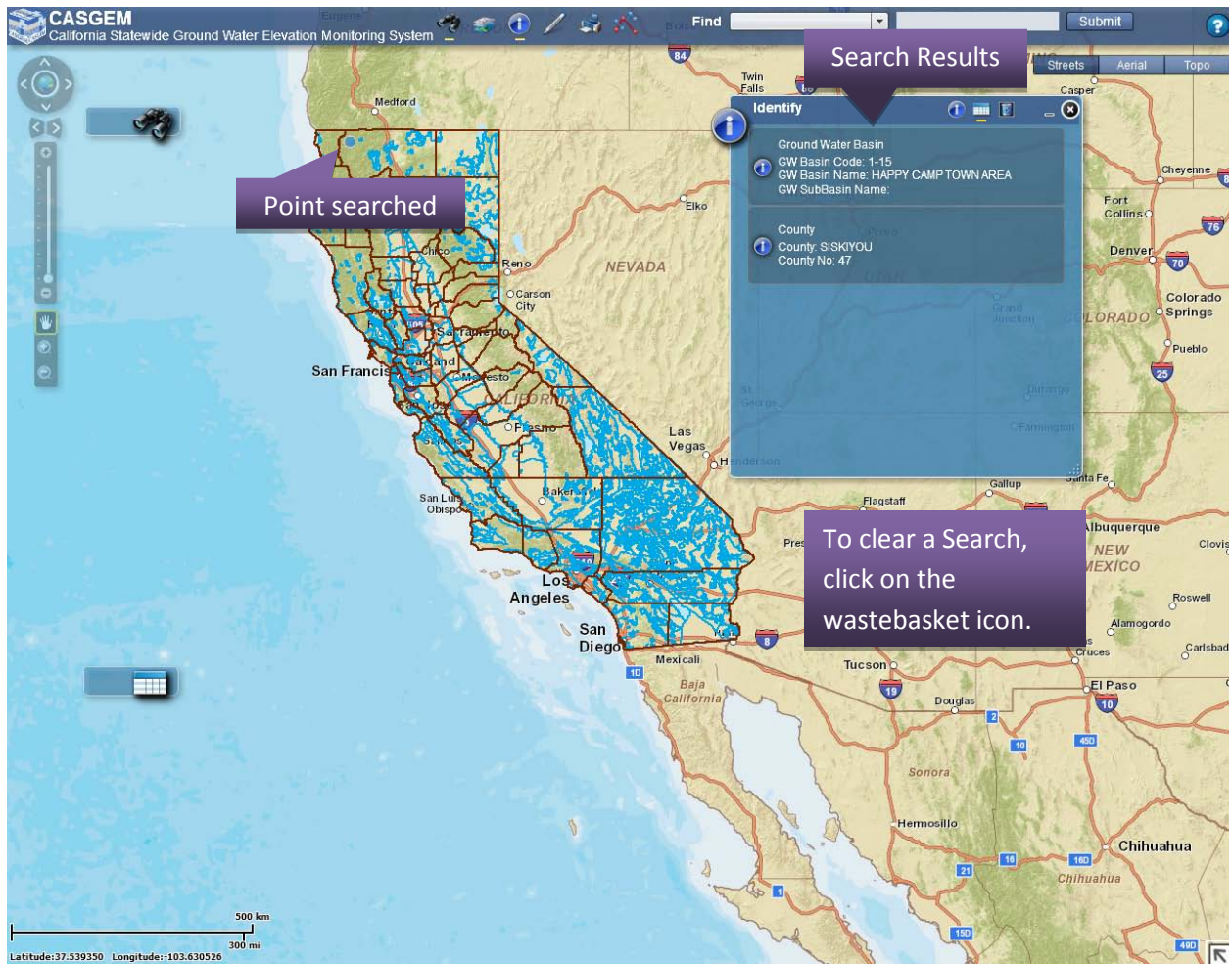


2.7.7.2 Identifying Features by Point Selection

- Select the “Identify by point” icon in the Identify Menu to identify the features on the map.
- To identify a specific area of the map, click on the map and a point will be displayed in addition to a results table (in the Identify Menu) identifying the features present at that location.
- The Identify by point function is not capable of identifying a well feature; rather, use the rectangle, or polygon, identify function.

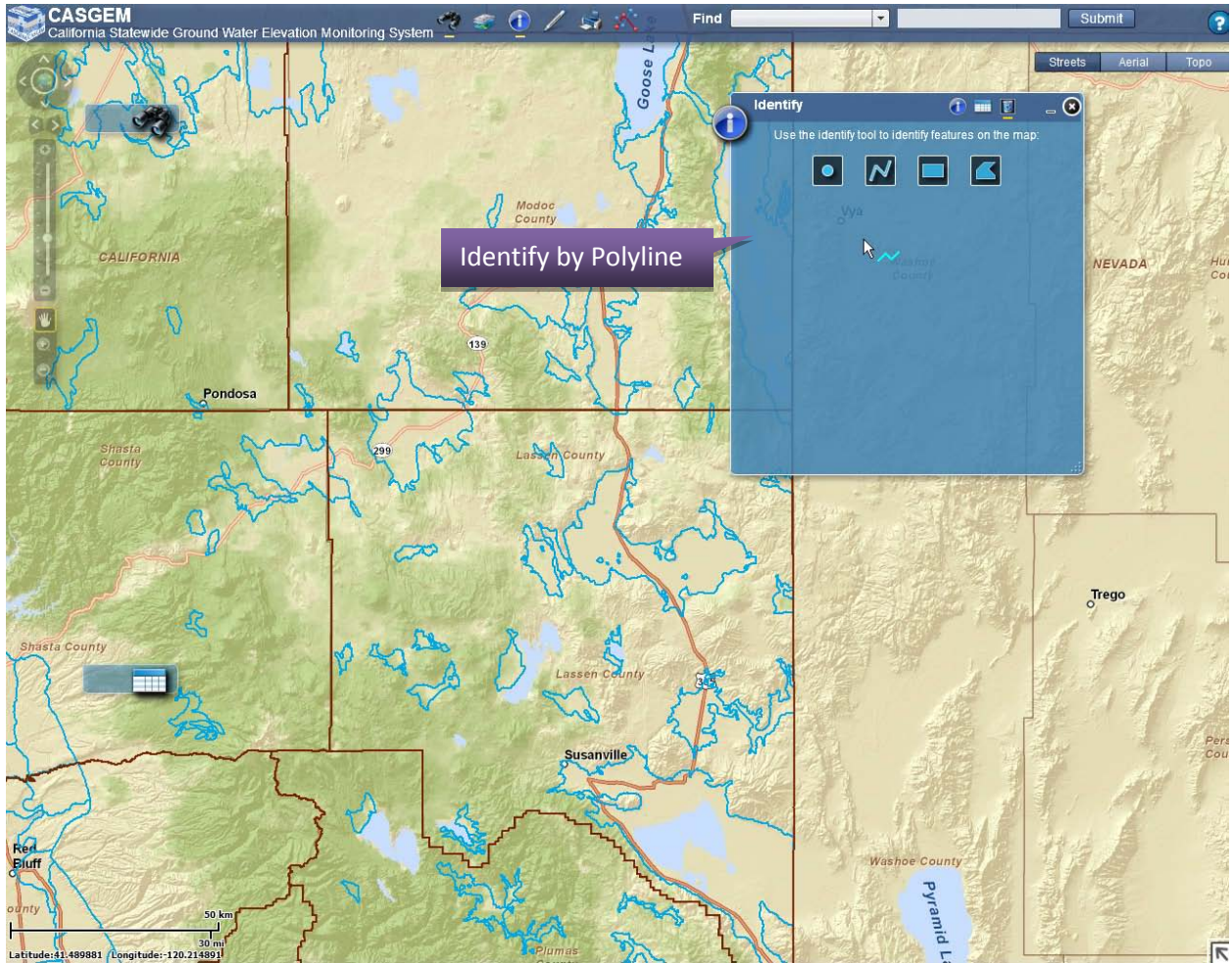


- The individual results in the results table can be selected to highlight those features on the map, along with a pop-up display of the attributes associated with the features.

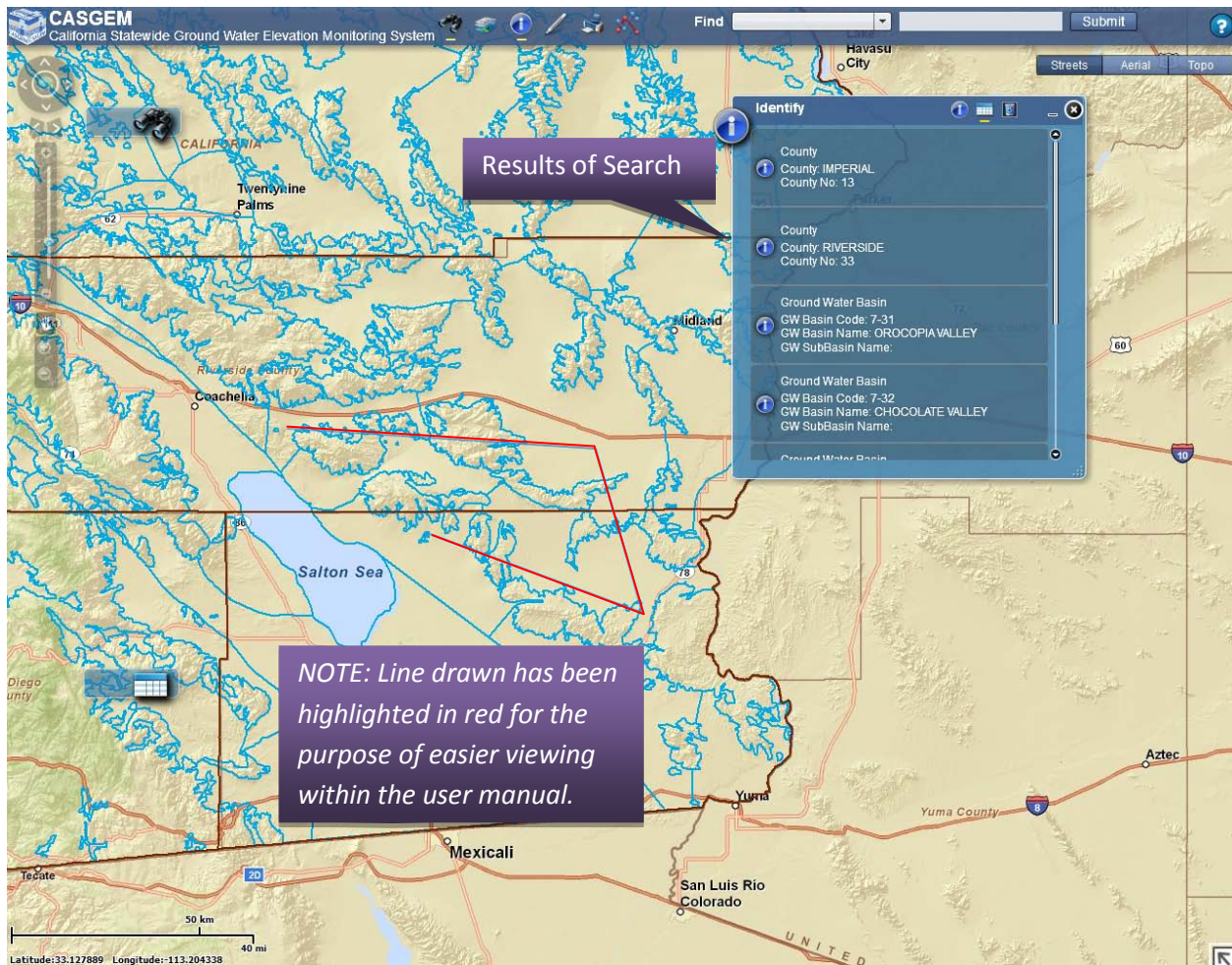


2.7.7.3 Identifying Features by Polyline Selection

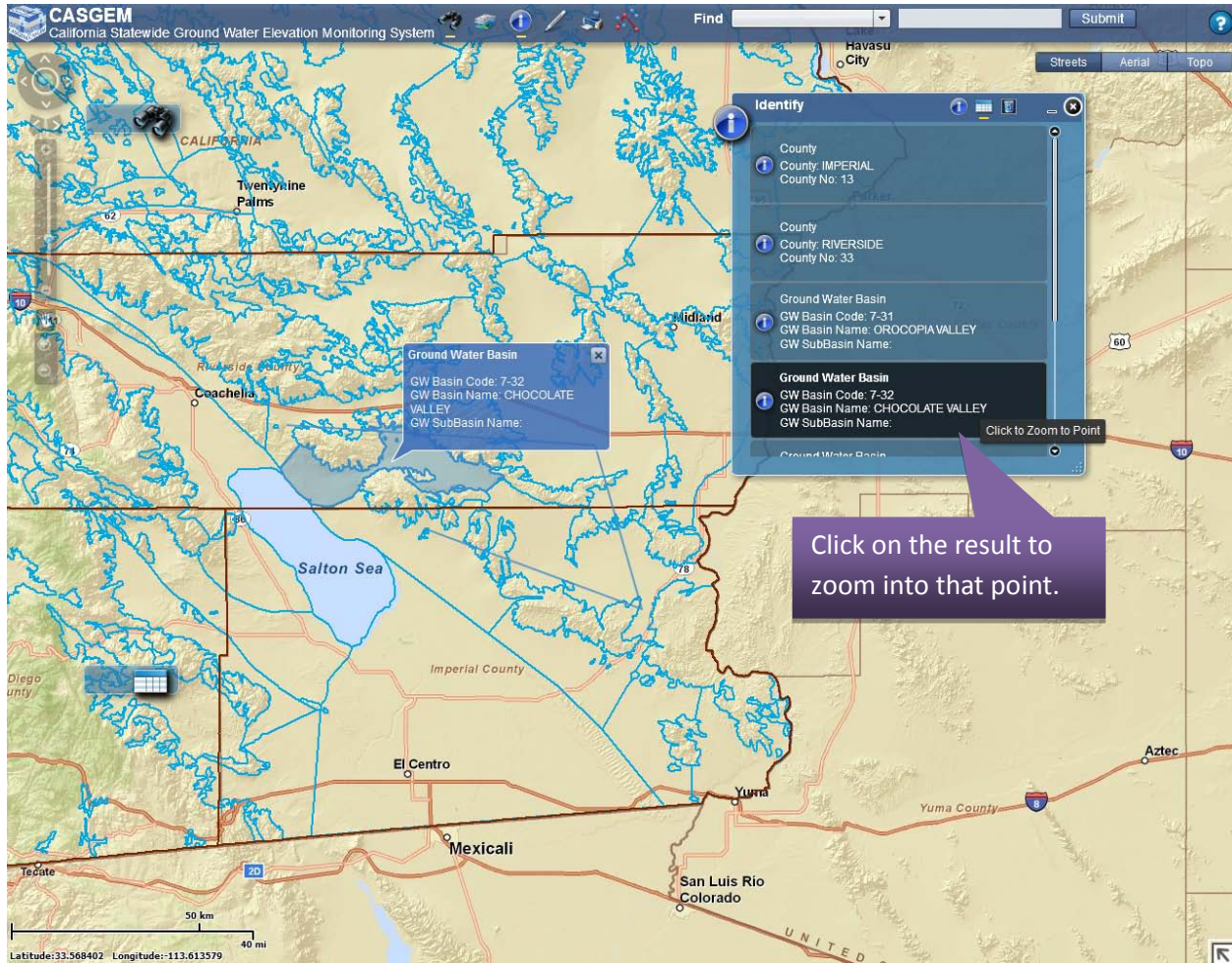
- Select the “Identify by polyline” icon in the Identify Menu to identify the features on the map.



- Click on the map to start drawing a line and double click to stop drawing. The line the user has drawn is displayed and all the features present at the location of the line will be identified in a results table in the Identify Menu.

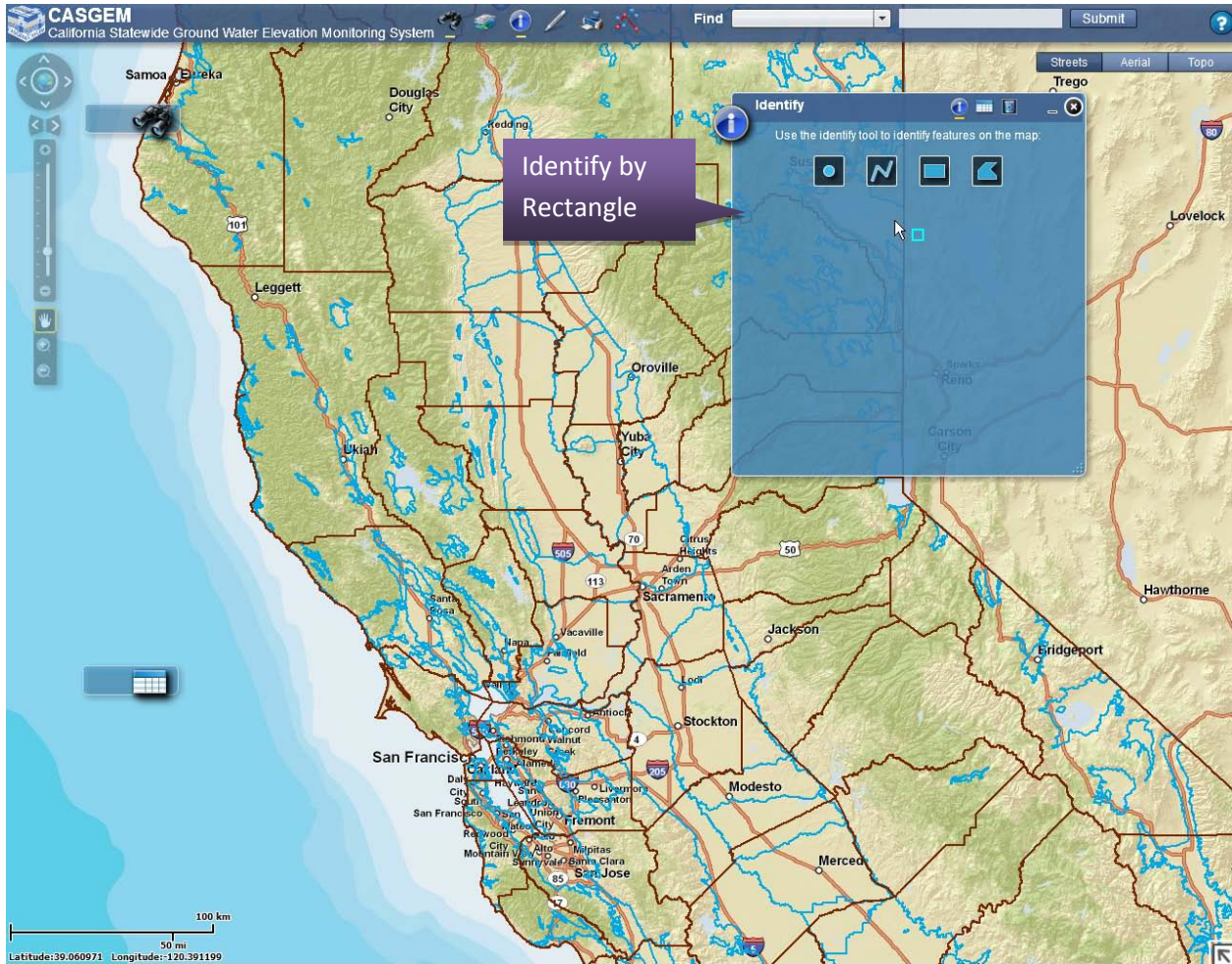


- Select a feature in the results table to highlight the identified feature on the map along with a pop-up display of the attributes associated with the feature.

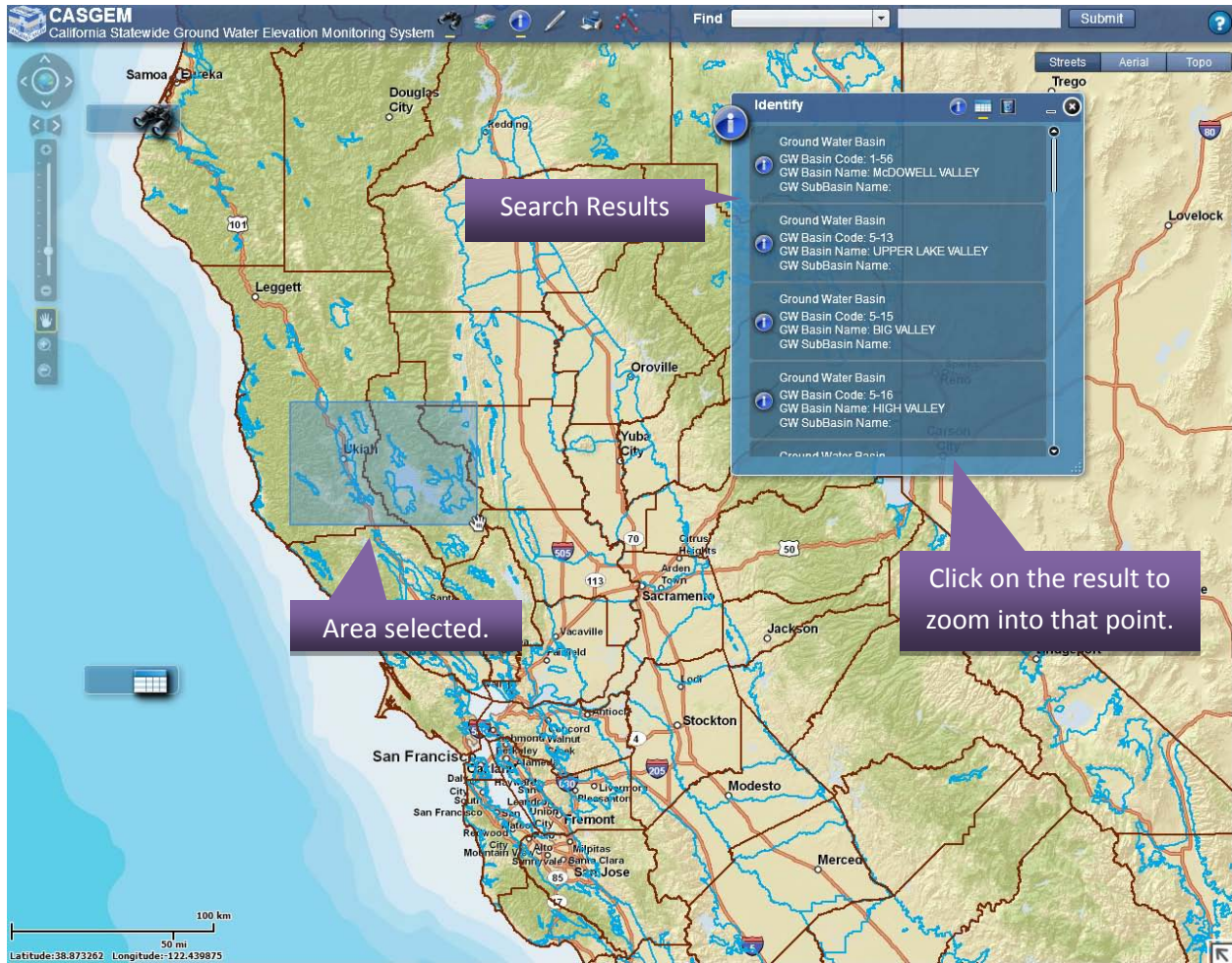


2.7.7.4 Identifying Features by Rectangle Selection

- Select the “Identify by Rectangle” icon in the Identify Menu to identify the features on the map.

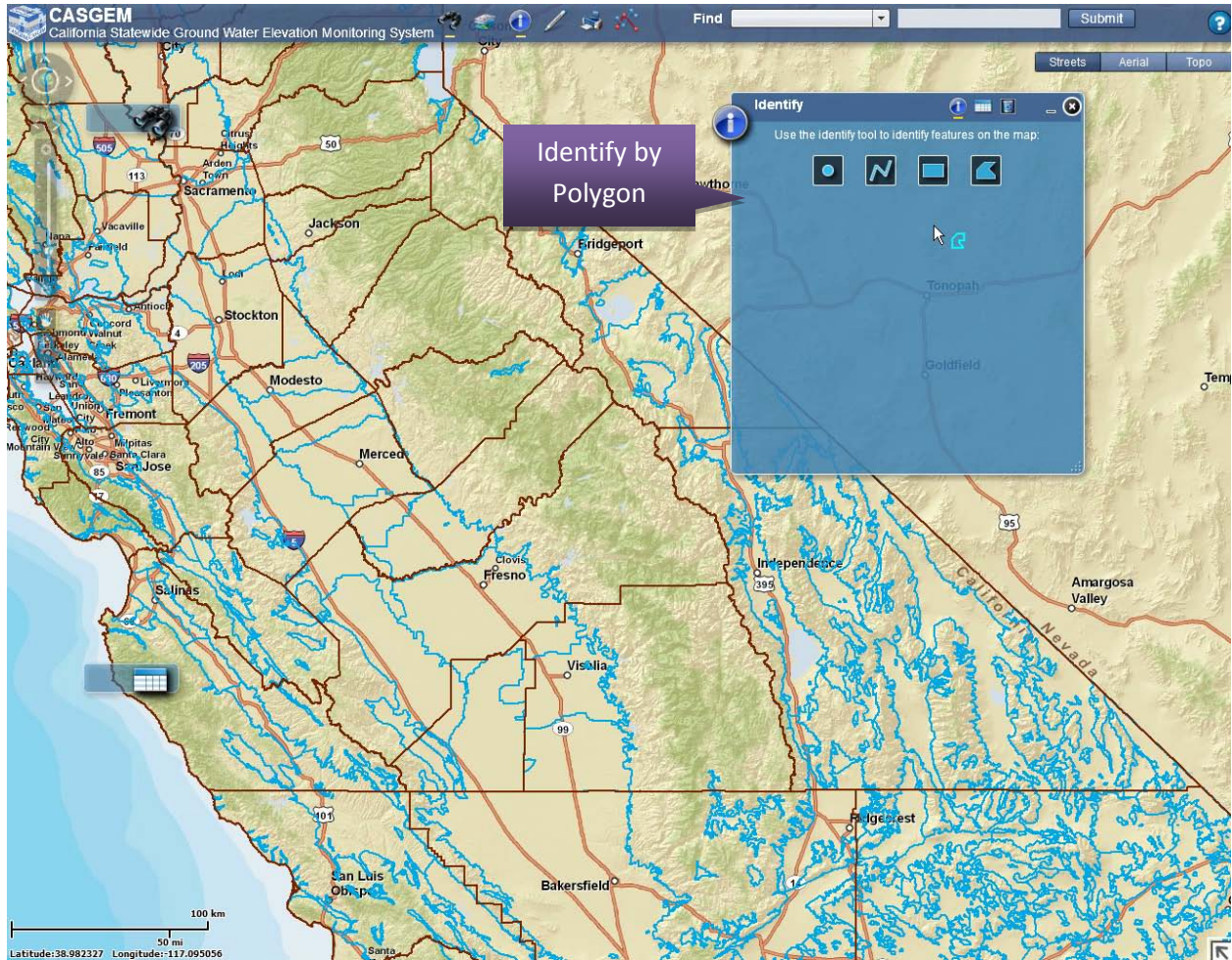


- Click on the map and drag to draw a rectangle encompassing the features of interest. A rectangle is displayed where the user has clicked and all displayed features present within the rectangle will be identified in a results table in the Identify menu.
- Select a feature in the results table to highlight the identified feature on the map along with a pop-up display of the attributes associated with the feature.

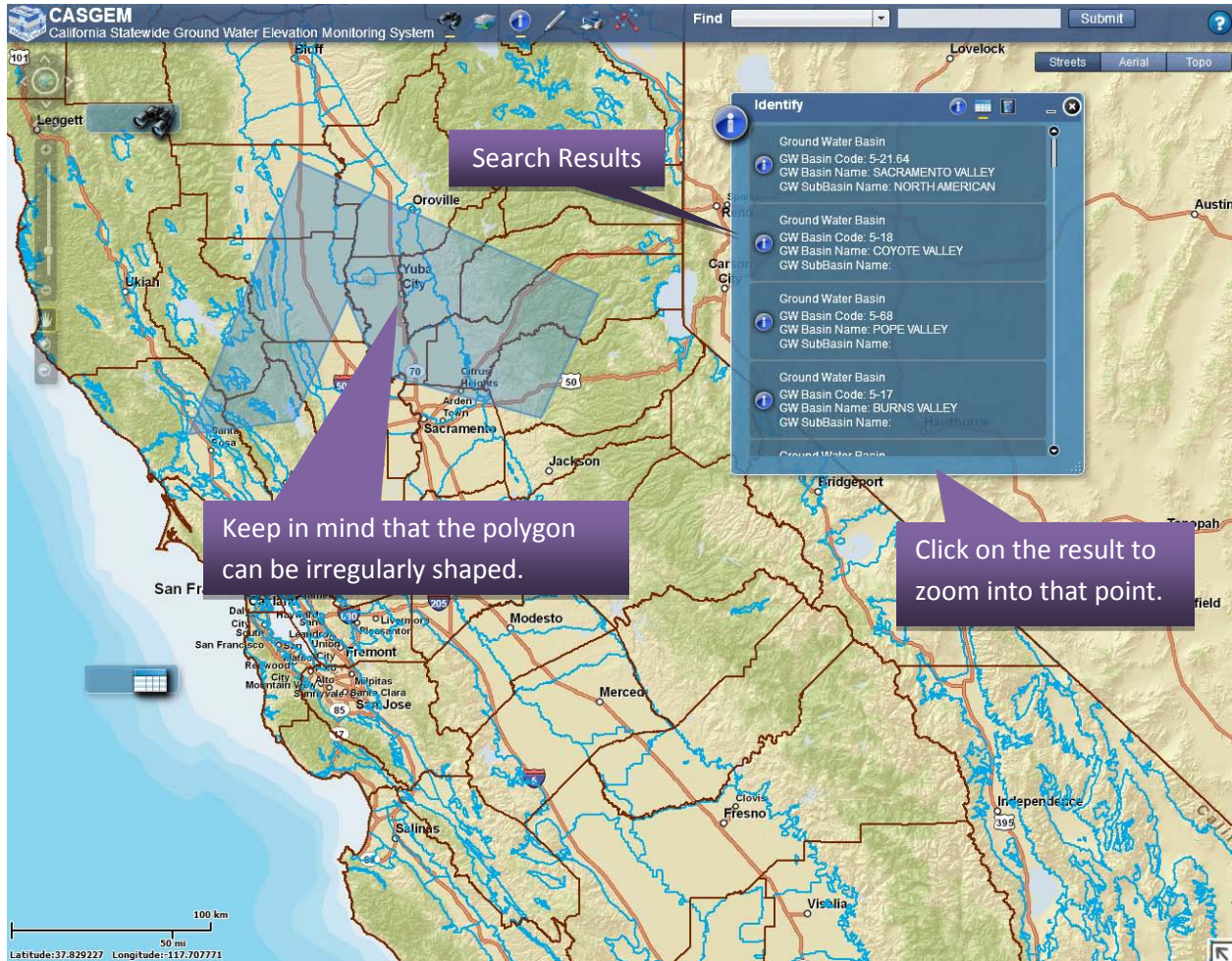


2.7.7.5 Identifying Features by Polygon Selection

- Select the “Identify by Polygon” icon in the Identify Menu to identify the features on the map.



- Click on the map and draw a polygon encompassing the features of interest by clicking once for each node of the polygon, and double-clicking to complete the polygon. The polygon is displayed where the user has clicked and all displayed features present within the polygon will be identified in a results table in the Identify Menu.
- Select a feature in the results table to highlight the identified feature on the map along with a pop-up display of the attributes associated with the feature.

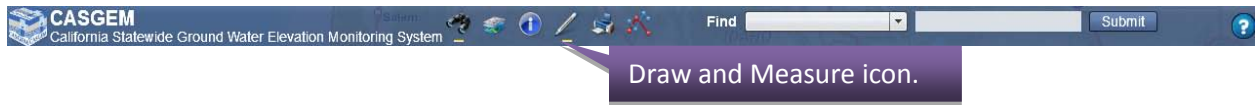


2.7.8 Draw and Measure

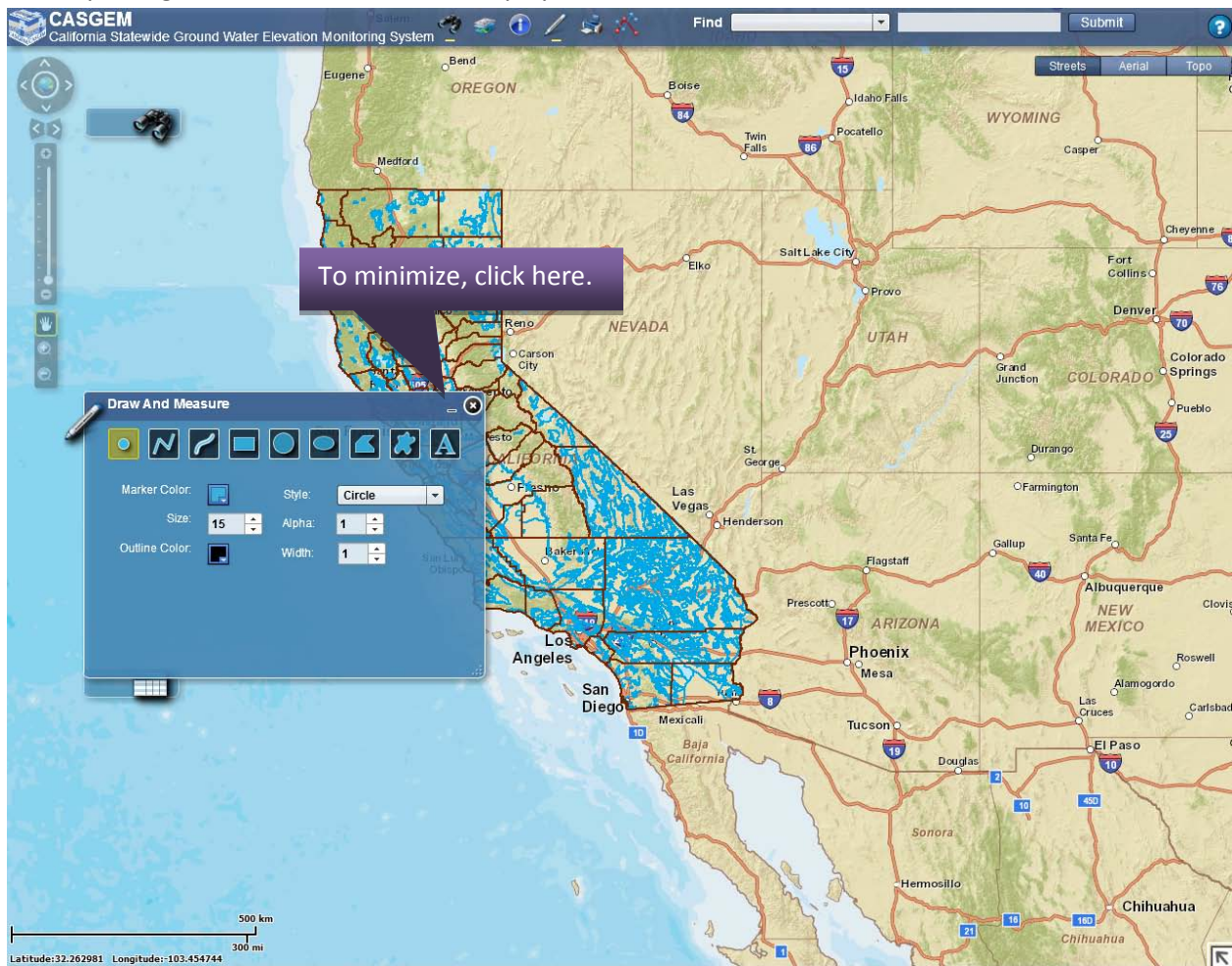
Topics covered in this subsection Include:

- 2.7.8.1 [Measuring the Distance Between Two Wells](#)
- 2.7.8.2 [Using the Text Tool](#)

The Draw and Measure feature can be accessed from the Top Bar within the GIS application.



This feature allows users to draw lines, polygons and other shapes on the map connecting/encompassing wells of their choice and displays the area covered or the distance between wells.



Area Units and Distance Units have options for both US & Metric measurements. The units available for selection are:

Area Units

- Square Meters - Default
- Square Kilometers
- Square Feet
- Square Miles
- Acres

Distance Units

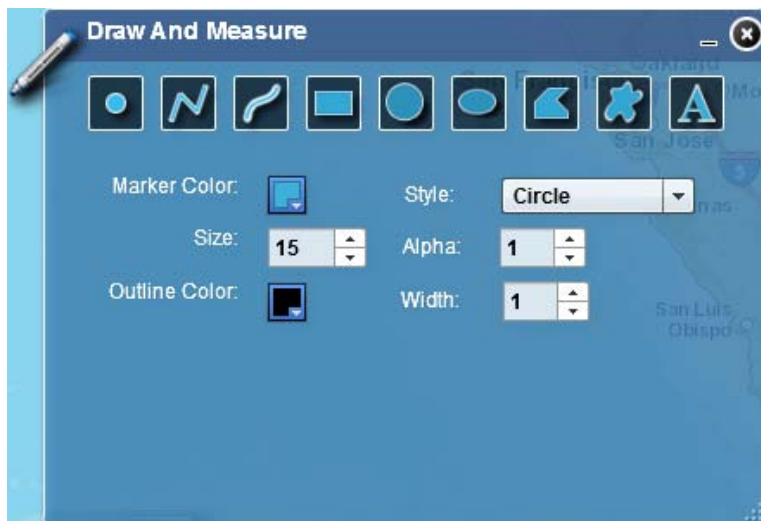
- Meters- Default
- Kilometers
- Feet
- Miles
- Hectares

The tools available within the Draw and Measure functionality are:

- Point
- Line
- Freehand Line
- Rectangle
- Circle
- Ellipse
- Polygon
- Freehand Polygon
- Text Addition

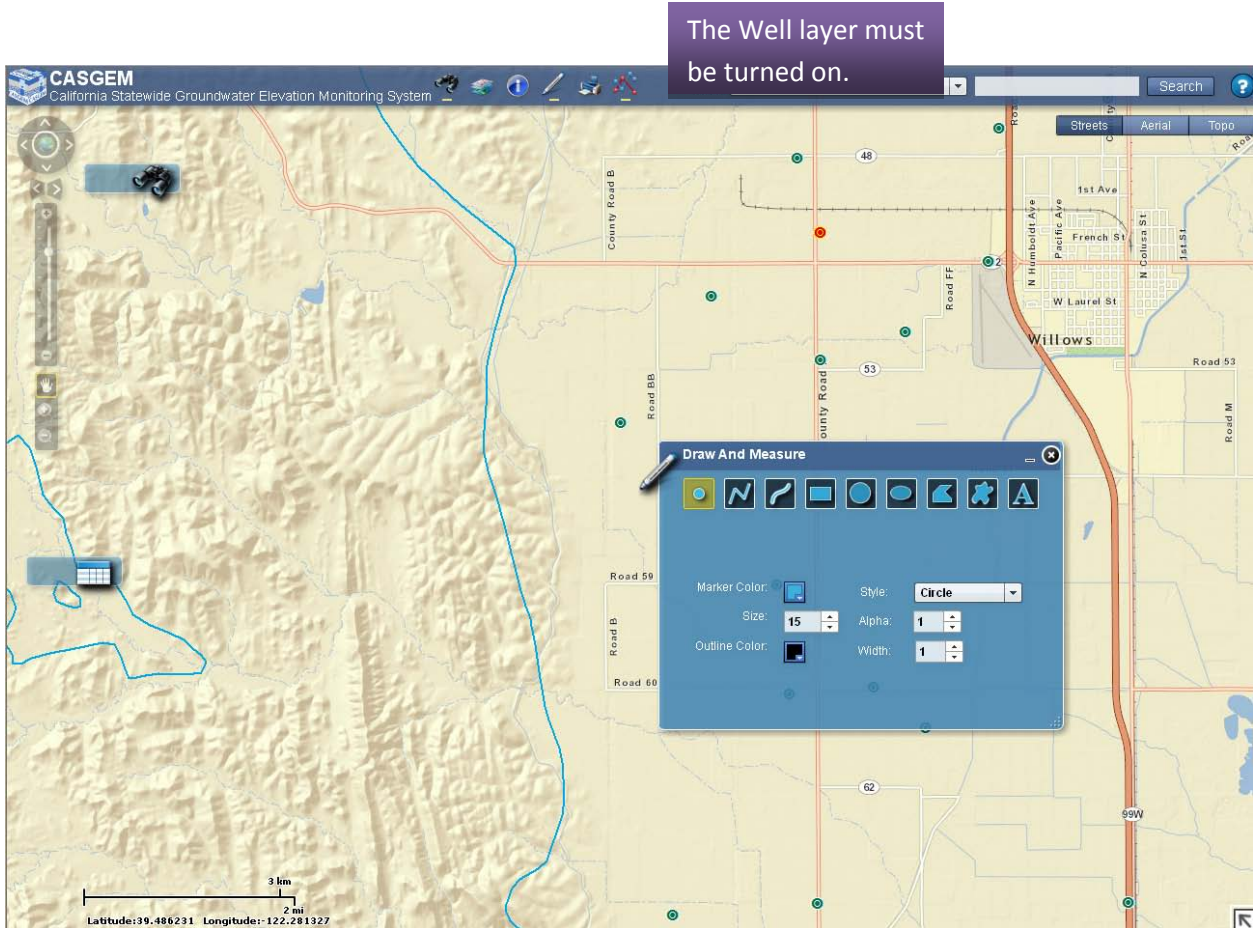
Users can manipulate the following options (as seen below):

- Marker Color
- Marker Size
- Outline Color
- Style
- Alpha (Transparency; 0 to 1)
- Width

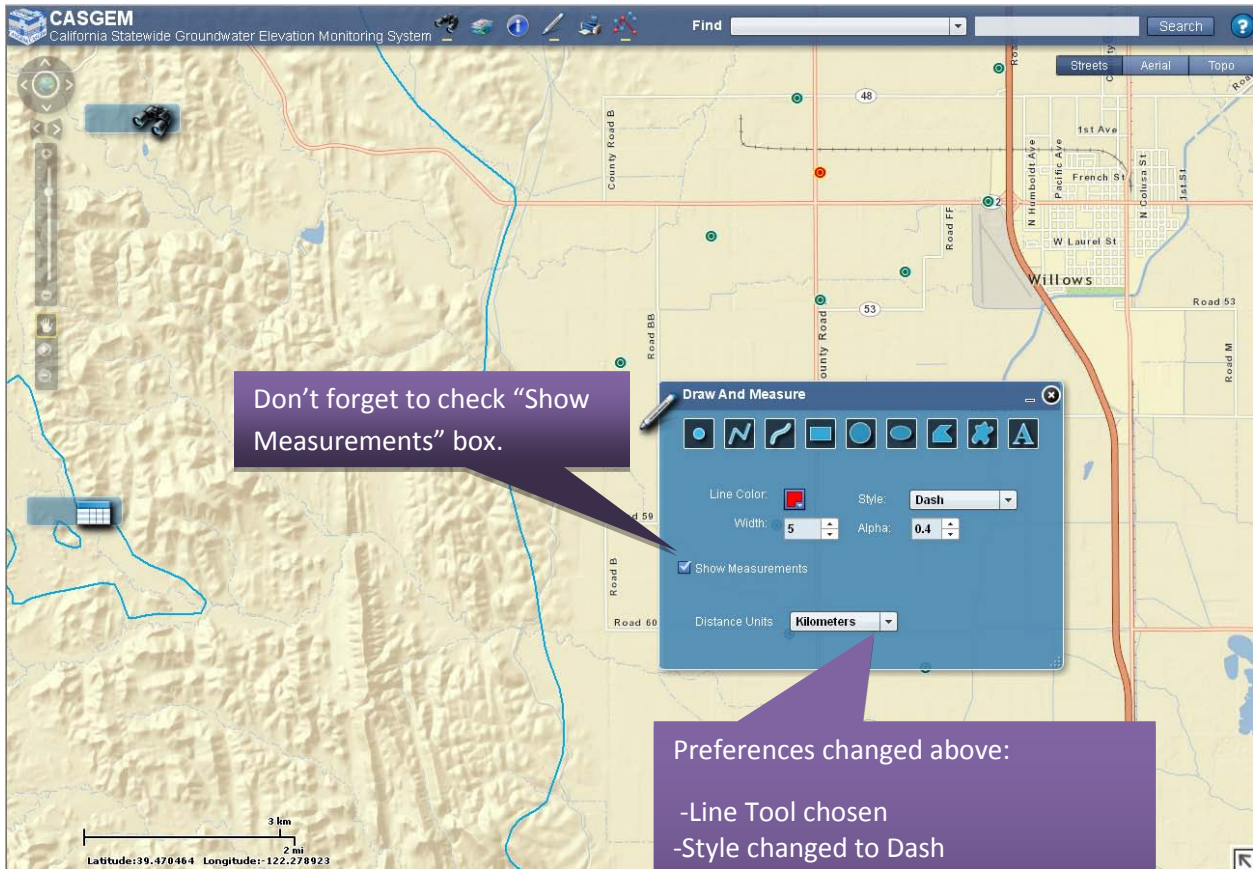


2.7.8.1 Measuring the Distance between Two Wells

One of the uses of the Draw and Measure function can be measuring the distance between two Wells. To do that, first select an appropriate measuring tool (this example will display the use of the Line tool). Zoom in to the point where both wells can be seen.

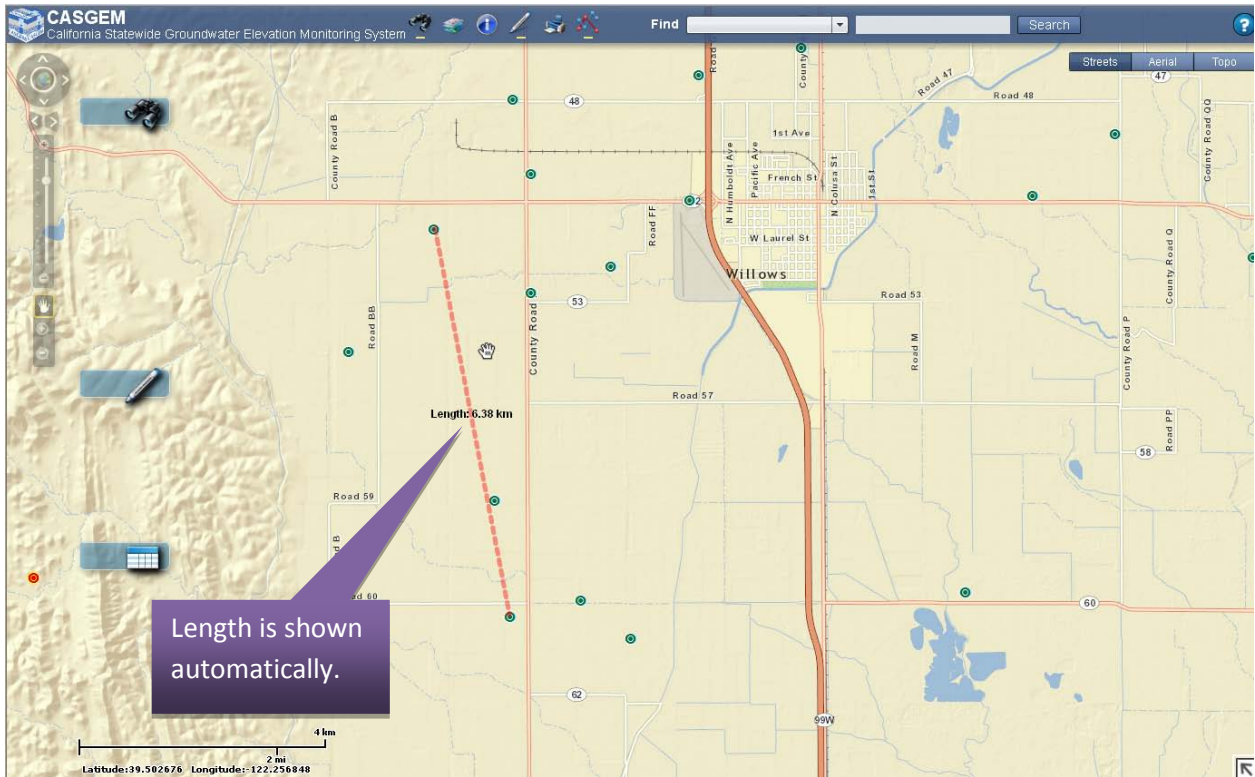


- Change the options within the Draw and Measure table in line with your preferences.



- Preferences changed above:
- Line Tool chosen
 - Style changed to Dash
 - Line Color changed to Red
 - Alpha (Transparency) changed to .4
 - Show Measurements box checked
 - Distance Units changed to Kilometers

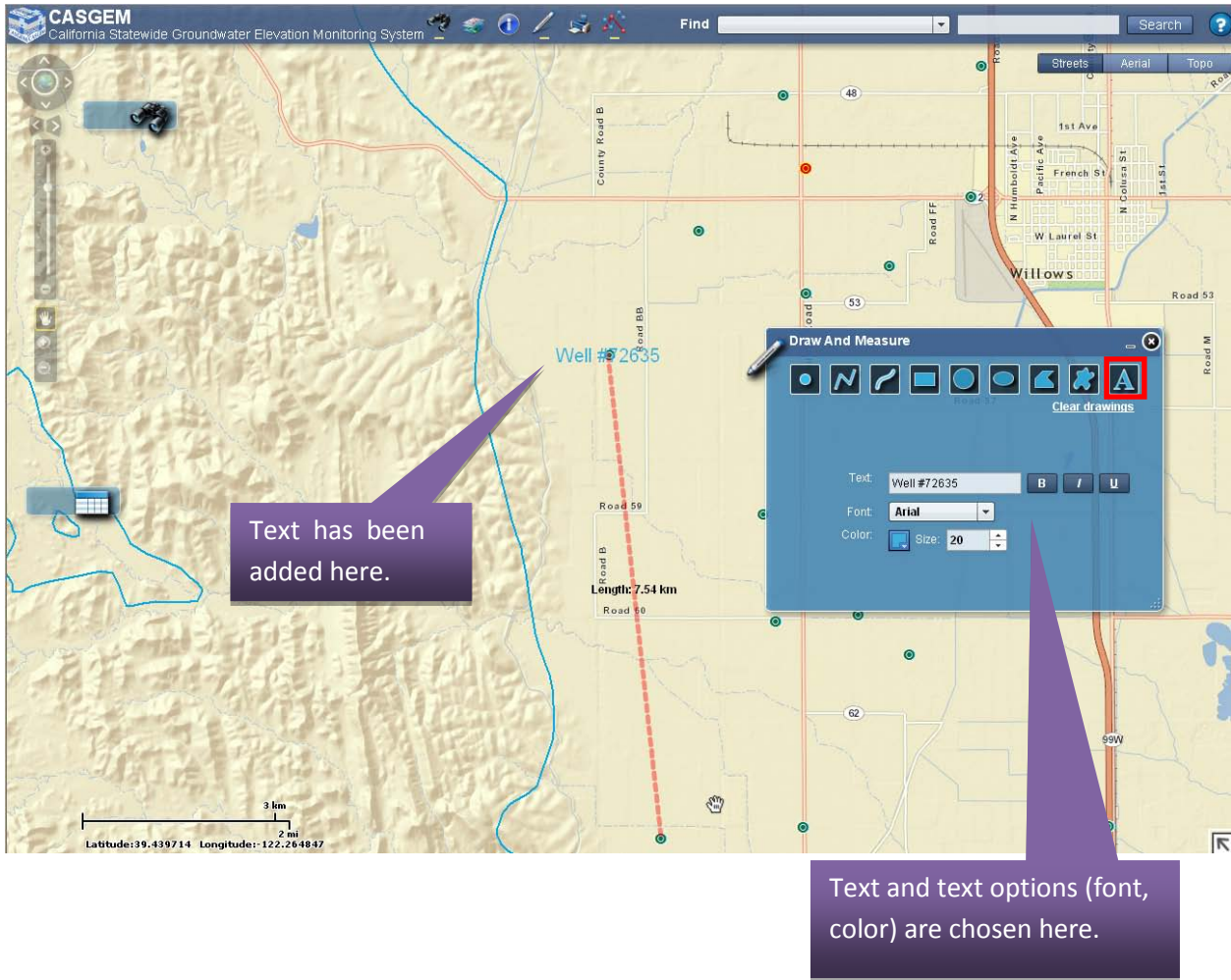
- Draw the Line from the first Well to the second. Click to start drawing and double-click to stop.



2.7.8.2 Using the Text Tool

The Text Tool within the Draw and Measure function can be used to add text to a page or a name to a well before saving the page to a PDF.

- Select the Text tool and Enter Text.
- Click the point where the text should be placed (see below)

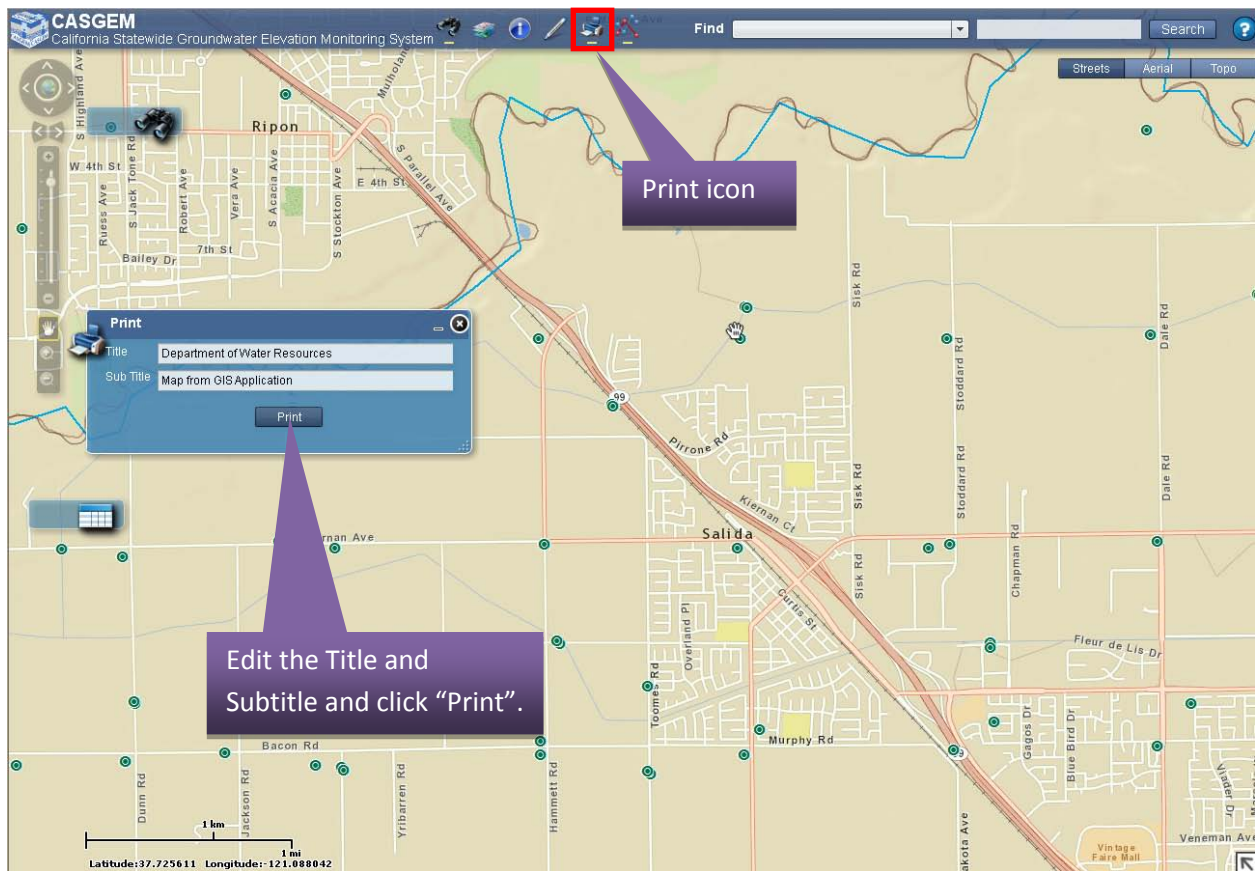


2.7.9 Print

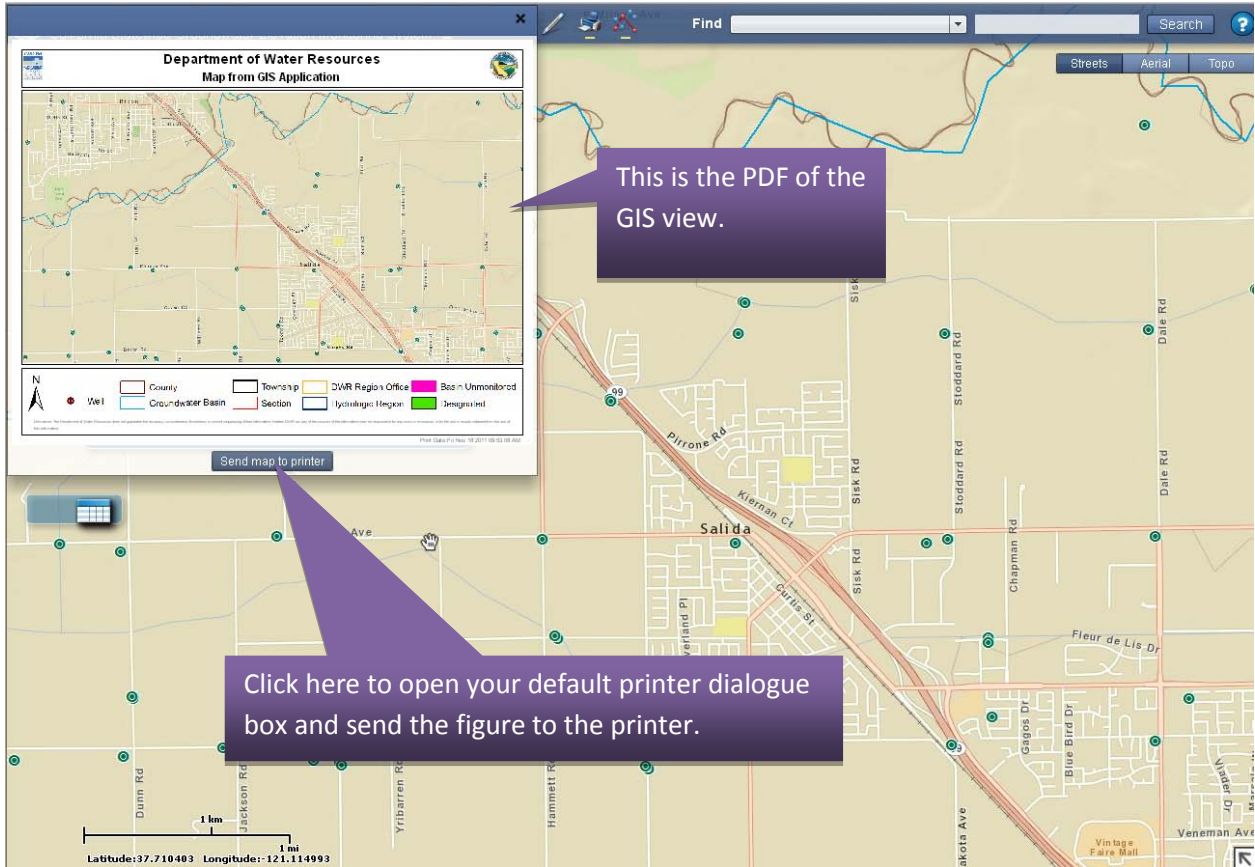
The Print functionality can be found on the Top Bar. It allows you to save (and subsequently print) the current map view.

To print, follow the instructions below:

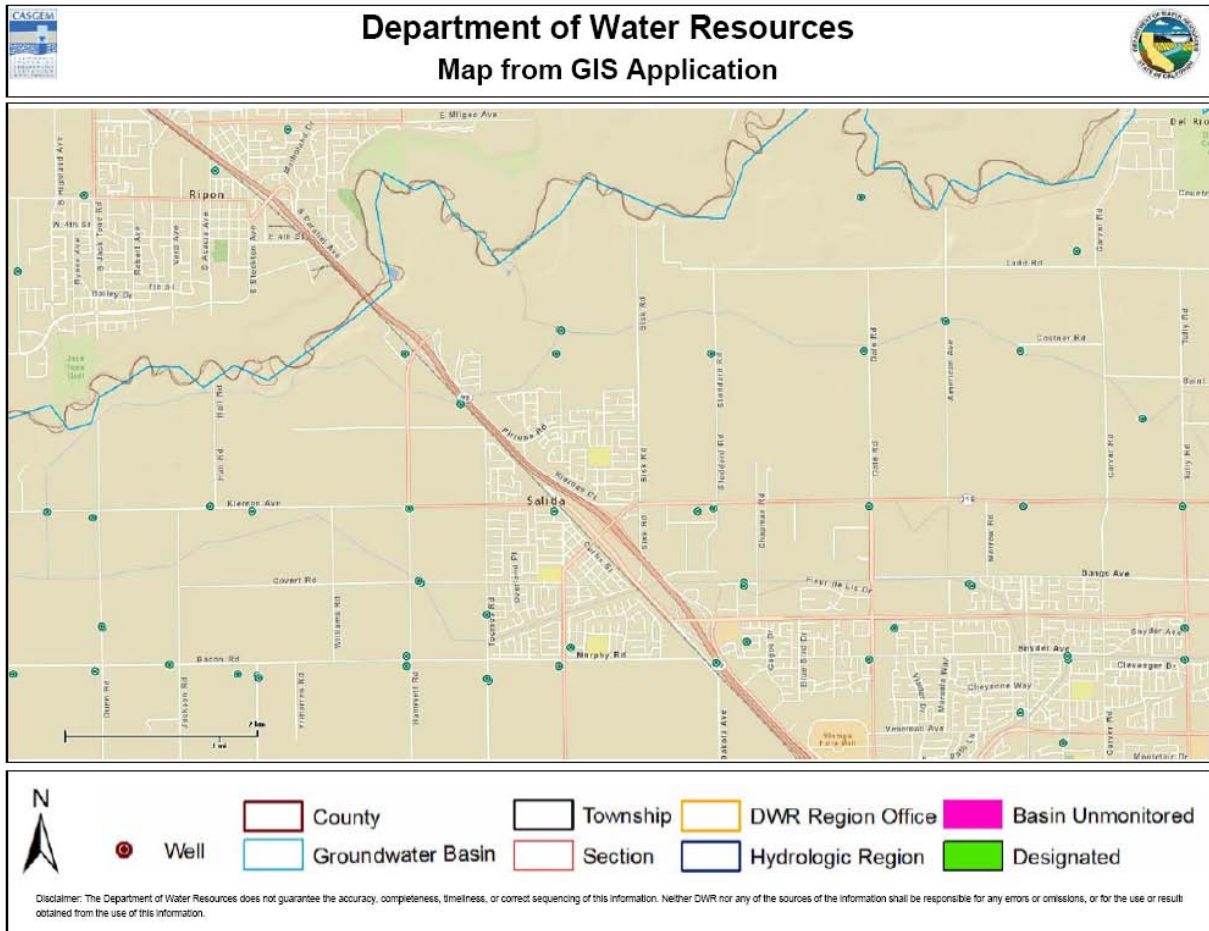
- To print, select the Print icon on the Top Bar.
- A widget will pop up that prompts the user to give the page a Title/Sub Title.
- Choose a Title and Sub Title and then click "Print". (Keep in mind that the limit for either the Title or Sub Title is 40 characters.)



- You can print this PDF by clicking on the “Send Map to Printer” opening the document, clicking on File and then click on Print (see below). In order to capture the entire map, select landscape as the page orientation on the printer’s settings.



The printed version of the map will adhere to a CASGEM template which includes the CASGEM logo, scale of map, a North position marker, and a legend.



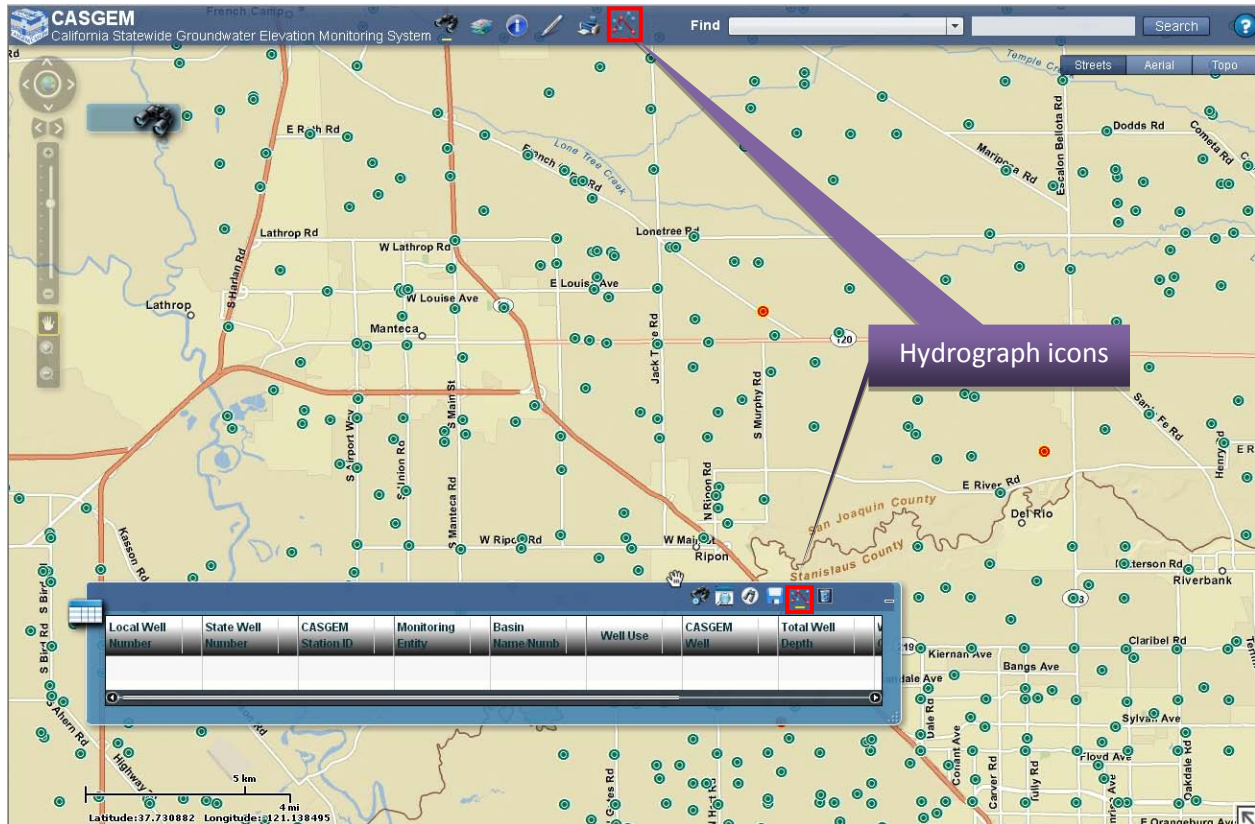
2.7.10 Elevation Data Hydrograph

Topics covered in this subsection include:

2.7.10.1 [Single Well Hydrograph](#)

2.7.10.2 [Multiple Wells Hydrograph](#)

The hydrograph functionality is accessible by selecting the Hydrograph icon from either the Top Bar or the Well Search Results table.



The user can click on a well to view a hydrograph which depicts variations in elevation data across a time span. Ground surface elevation will not be shown in the GIS view and no data grid will be shown in the map view. The user can save a hydrograph, along with a screen print of the area selected, as a PDF file.

2.7.10.1 Single Well Hydrograph

Single well hydrographs can be created by using the hydrograph icon on the Top Bar or Well Search Results table.

Method 1 to Create a Single Well Hydrograph

To view hydrographs using the Top Bar icon, the Well layer must be turned on. Navigate to the location of the well of interest until you can see the well's symbol. With the Top Bar icon selected (as indicated by the yellow underscore), click on the well symbol. A window showing the hydrograph will pop up as shown below. You can click "Save to PDF" to save the hydrograph to a PDF file. If there is no groundwater elevation data associated with the well, an error message will be obtained.

The screenshot shows the CASGEM web application interface. At the top, the 'Hydrograph' icon in the top bar is highlighted with a red box and a callout: "Hydrograph icon selected." A well symbol on the map is highlighted with a purple callout: "This well symbol was selected." A "Hydrograph" window is open, displaying a line graph of "Groundwater Elevation, MVDOS (ft)" vs "Year" for 2011 and 2012. The graph shows a blue line with data points. A callout points to the graph: "Hydrographs for selected well will appear." Below the graph is a "Save to PDF" button, with a callout: "Click here to save the hydrograph to a file." At the bottom, a table lists well information:

Local Well Number	State Well Number	CASGEM Station ID	Monitoring Entity	Basin Name Number	Well Use	CASGEM Well	Total Well Depth

Method 2 to Create a Single Well Hydrograph

The second method available to create a single well hydrograph is use the Well Search Results table. First, click on the row of the desired well (not the hyperlink). Then select the hydrograph icon at the top of the Well Search Results table. A window showing the hydrograph will pop up as shown below. You can click “Save to PDF” to save the hydrograph to a PDF file. If there is no groundwater elevation data associated with the well, an error message will be obtained.

The screenshot displays the CASGEM web application interface. At the top left, the CASGEM logo and "California Statewide Groundwater Elevation Monitoring System" are visible. The main area is divided into several sections:

- CASGEM Search:** A search form with fields for "Wells", "DWR Region Office", "Hydrologic Region", "Monitoring Entity Name" (set to "Department of Water Resources"), "Cooperating Agency Name", "County", "Well ID Number" (377), "Basin/Sub Basin Name/Number" (Eastern San Joaquin), and "Status".
- Well Search Results:** A table with columns: Local Well Number, State Well Number, CASGEM Station ID, Monitoring Entity, Basin Name/Number, Well Use, CASGEM Well, Total Well, and Well Construction. The first row is highlighted in blue.
- CASGEM Well Information Summary:** A window showing a line graph of "Groundwater Elevation (NAVD88 (ft))" vs "Year" (2011-2012). The graph shows a blue line with data points for 2011 and 2012. A legend indicates "Ground Surface Elevation" (red dot), "Questionable Measurement" (red dot), and "377E29N1212170W01" (blue circle). A "Save to PDF" button is at the bottom.

Annotations with purple callouts provide instructions:

- Top right: "Hydrograph for selected well appears upon selecting the hydrograph icon on the Well Search Results table."
- Bottom left: "Upon selecting a well, click the hydrograph icon on the Well Search Results table."
- Bottom right: "The row of the desired well is selected."

2.7.10.2 Multiple Wells Hydrograph

A maximum of five wells can be selected for inclusion on the hydrograph. For these types of multiple well hydrographs, follow the instructions below:

1. Select the group of wells (maximum of 5 wells) from the Well Search Results widget to plot.
2. You can hold the “Ctrl” key down while selecting wells from random locations in the list versus using the “Shift” key to select wells sequentially listed.
3. Click the hydrograph icon on the Well Search Results table to generate the hydrograph plots (as shown below).

Hydrographs for 5 selected wells.

The screenshot displays the CASGEM web application interface. On the left, the 'CASGEM Search' panel is visible with search criteria set to 'Wells'. The 'Well Search Results' table is shown below, listing various wells. A callout points to the hydrograph icon in the table's action column. On the right, a 'Hydrograph' window displays a line chart of groundwater elevation (meters) from 2011 to 2012 for five selected wells. The chart shows three distinct data series, each represented by a different colored line with markers.

You can select and create hydrographs for up to 5 wells from the Well Search Results at a time.

Upon selecting wells, click the hydrograph icon on the Well Search Results table.

Local Well Number	State Well Number	CASGEM Station ID	Monitoring Entity	Basin Name Number	Well Use	CASGEM Well	Total Well Depth	We
03S07E05J001N	03S07E05J001N	37209012117	Department of W	Eastern San Joa	Irrigation	No	Confidential	No
02S07E34R001N	02S07E34R001N	37209012117	Department of W	Eastern San Joa	Unknown	No	Confidential	No
02S07E33E001N	02S07E33E001N	372207N121214	Department of W	Eastern San Joa	Unknown	No	Confidential	No
02S07E34A002N	02S07E34A002N	37209012117	Department of W	Eastern San Joa	Unknown	No	Confidential	No
02S07E35C001N	02S07E35C001N	37209012117	Department of W	Eastern San Joa	Unknown	No	Confidential	No
02S07E27N001N	02S07E27N001N	37209012117	Department of W	Eastern San Joa	Unknown	No	Confidential	No

Wells without groundwater elevation data will not be plotted on the hydrograph. Due to system constraints, you will not be able to save multiple well hydrographs to a PDF file

2.7.11 Quick Find for Wells and Basins

Topics covered in this subsection include:

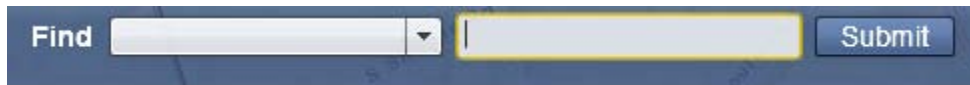
- 2.7.11.1 [Searching for Wells Using Quick Find](#)
- 2.7.11.2 [Searching for Basins](#)

The Quick find feature enables the user to search for a well (Local, CASGEM or SWN) or basin/sub-basin. This feature is available from the Top Bar. **Note: Your search criteria must be match exactly what is in the database in order for the Quick find feature to return results. If you do not know the exact format of the well or basin you are searching for you should use the Advanced Search widget (e.g., the binoculars icon).**



The search criteria, available in the drop-down, are Well Number, Basin/Sub-Basin Number and Basin/Sub-Basin Name.

- Select your search criteria and press Submit, or the Enter key, to search.



2.7.11.1 Searching for Wells Using Quick Find

Select Well Number from the Quick Find drop-down and enter a Well # (Local, CASGEM or SWN). The entire ID must be entered. For searching for wells using a portion of the well ID, use the Search Widget.

Single Well Result

If the result of the Quick Find is a unique well (that is, only one well is associated to the searched well number), the GIS application will zoom in to that well.

The screenshot displays the CASGEM (California Statewide Ground Water Elevation Monitoring System) interface. At the top, a search bar is highlighted with a red box, containing the text 'Find Well Number' and the value '07N08E02L001M', with a 'Submit' button to its right. Below the search bar is a topographic map of a region. A purple callout box labeled 'Searched well' points to a specific green dot on the map. Another purple callout box labeled 'Search results details' points to a table titled 'Well Search Results' overlaid on the map. The table contains the following data:

Local Well Number	State Well Number	CASGEM Station ID	Basin Name/Num	Well Use	Total Well Depth	Well Construction	Well Completion	Latitude
1111	07N08E02L001M	384853W121070	Cosumnes-5-22	Stockwatering	71	N	Not Available	38.4853

At the bottom left of the map, there is a scale bar showing 3 km and 2 mi, and coordinates: Latitude:38.468434 Longitude:-120.966273. The map also shows various roads like Stone House Rd, Lugo Dr, Peano Dr, and Maxwell Rd.

Multiple Wells Result

If the Quick Find function encounters multiple results for the same well number, the GIS application will not zoom in. The resultant wells are highlighted within the initial California map and a Search Results table is opened, displaying detailed information about the wells. You can zoom into the location of a well by clicking on any well row in the table. Click on the hyperlink in the well row to view a hydrograph or the groundwater elevation data.

The screenshot shows the CASGEM (California Statewide Groundwater Elevation Monitoring System) interface. At the top, a search bar is set to 'Well Number' with the value '111'. Below the search bar, a map of California is displayed with several locations highlighted in pink. A callout box labeled 'Search results plotted' points to these highlighted locations. In the bottom left, a callout box labeled 'Search results details' points to a table titled 'Well Search Results'.

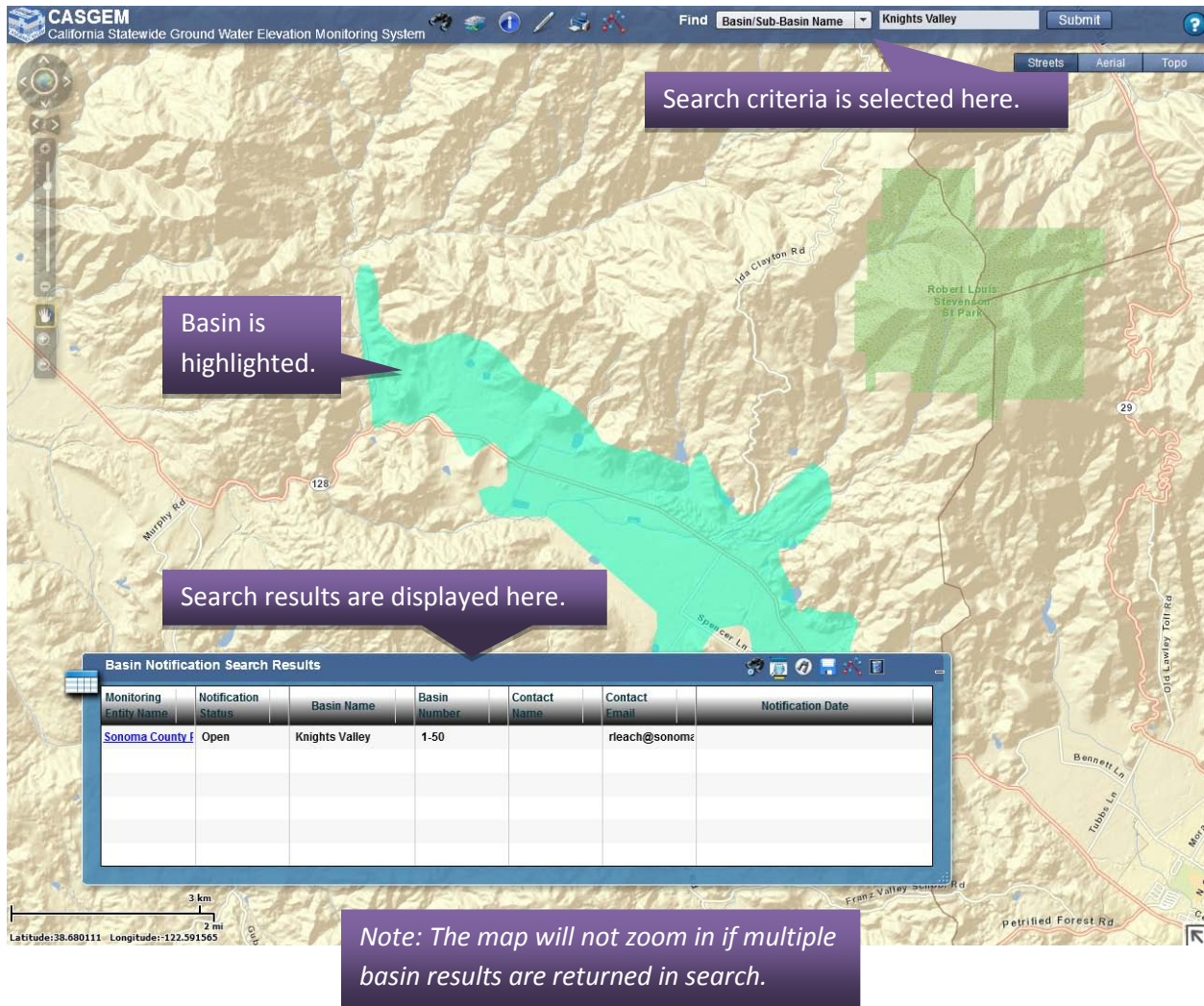
Local Well Number	State Well Number	CASGEM Station ID	Monitoring Entry	Basin Name/Num	Well Use	CASGEM Well	Total Well Depth	W
111	03S11E19C001A	376668N120804	Department of V	Modesto-5-22.0	Unknown	No	Unknown	N
111	04S08E27H001A	375607N121067	Department of V	Turlock-5-22.03	Unknown	No	Unknown	N
111	10S13E31D001A	370235N120599		Delta-Mendota-5	Unknown	No	Unknown	N

2.7.11.2 Searching for Basins

The Quick Find function allows the user to search for Basins or Sub-Basins using the Basin/Sub-Basin Number or Name. This function works for “designated” basins only. If an undesignated basin is entered in the search parameters, it will return an error box stating, “No results found.”

To find a basin, follow the instructions below:

- Select “Basin/Sub-Basin Name” or “Basin/Sub-Basin Number” from the Quick Find drop-down.
- Enter the Name or Number of the Basin being searched for.
- Upon clicking Submit, the system will zoom into the Basin/Sub-Basin and display a Search Results table showing details about the result (as seen below). The system will not zoom into the Basin/Sub-Basin if there is more than one result.



Search criteria is selected here.

Basin is highlighted.

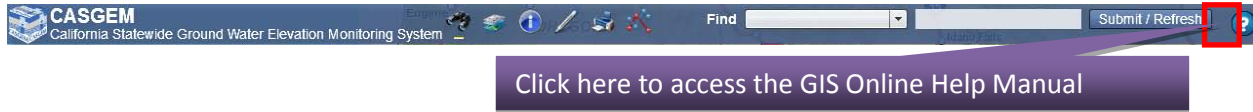
Search results are displayed here.

Monitoring Entity Name	Notification Status	Basin Name	Basin Number	Contact Name	Contact Email	Notification Date
Sonoma County	Open	Knights Valley	1-50		rleach@sonoma.com	

Note: The map will not zoom in if multiple basin results are returned in search.

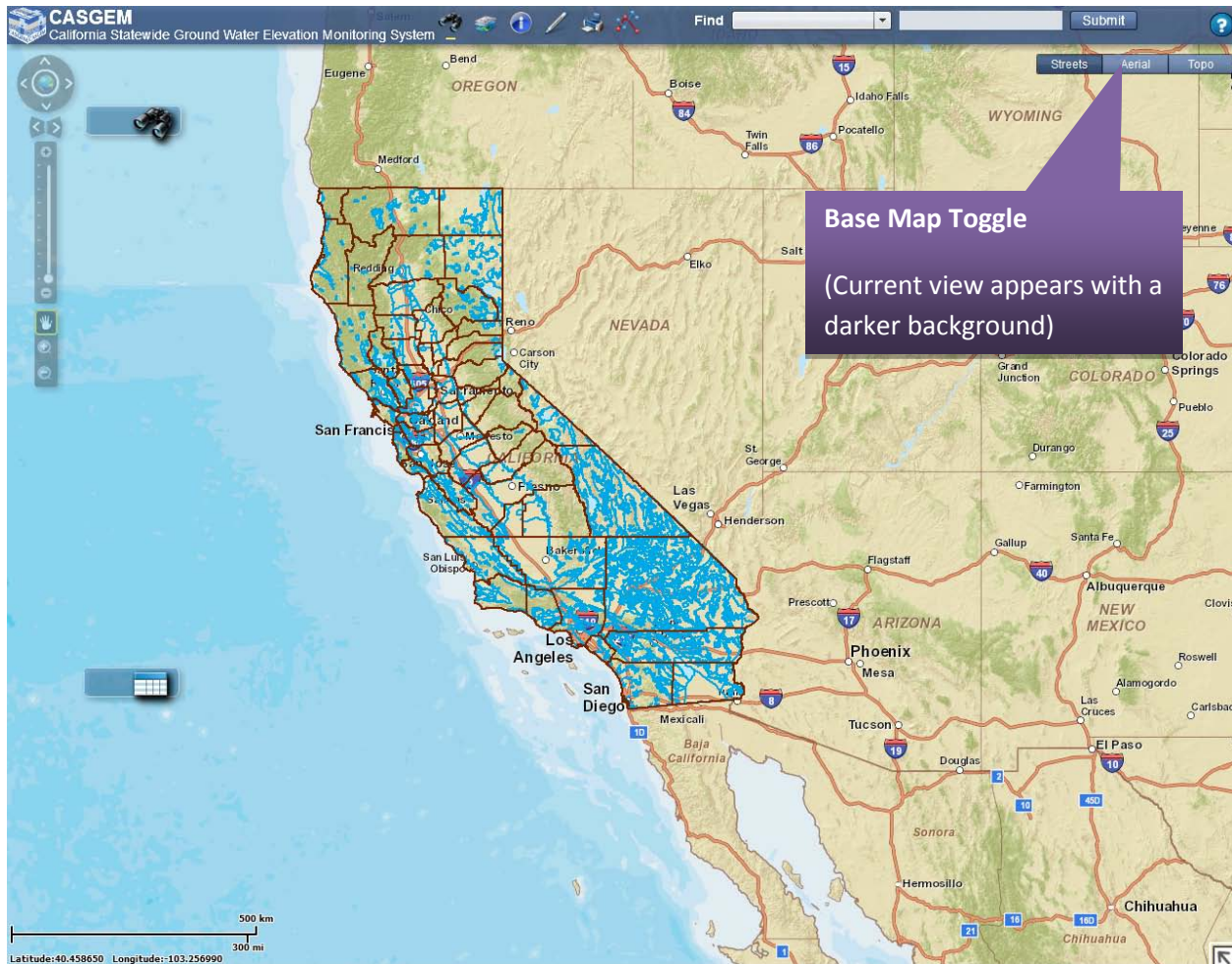
2.7.12 Help Icon

Most questions about the GIS function can be answered by looking through the Online Help Manual. To access the Online Help Manual, click on the question mark icon in the upper right hand corner of the GIS function.



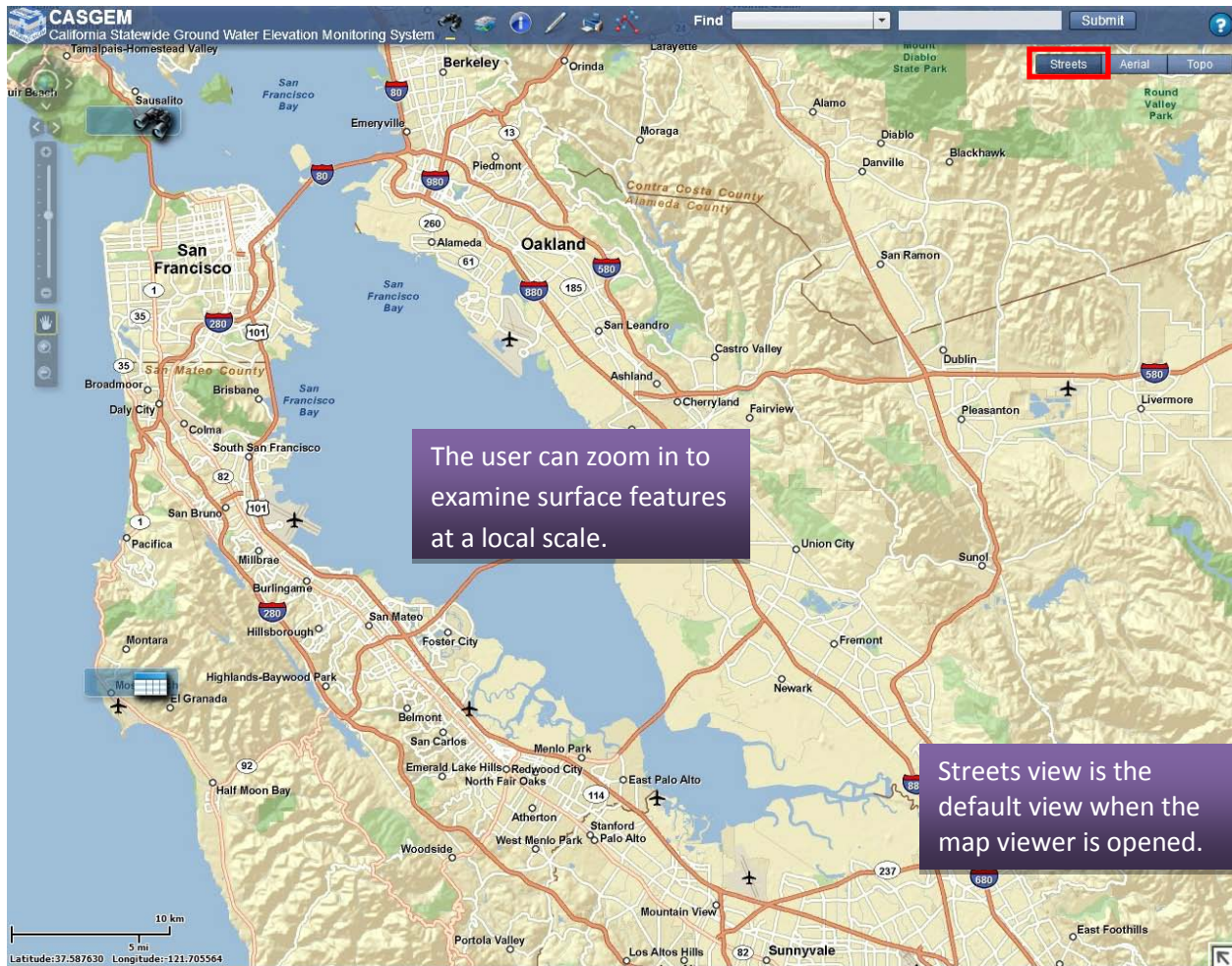
2.7.13 Base Map Toggle

The Base Map Toggle Menu enables GIS application users to easily switch between base maps. Three base maps are available in the GIS viewer: street information, satellite imagery, and topographic data. All other layers in the GIS viewer are projected on top of the base layer that is selected at the time (only one base map is available at a time). In the default Map view, the Base Map Toggle Menu is located in the upper right hand corner of the Map. Clicking one of the Base Map Toggle's three buttons will change the base map displayed in the Viewer.

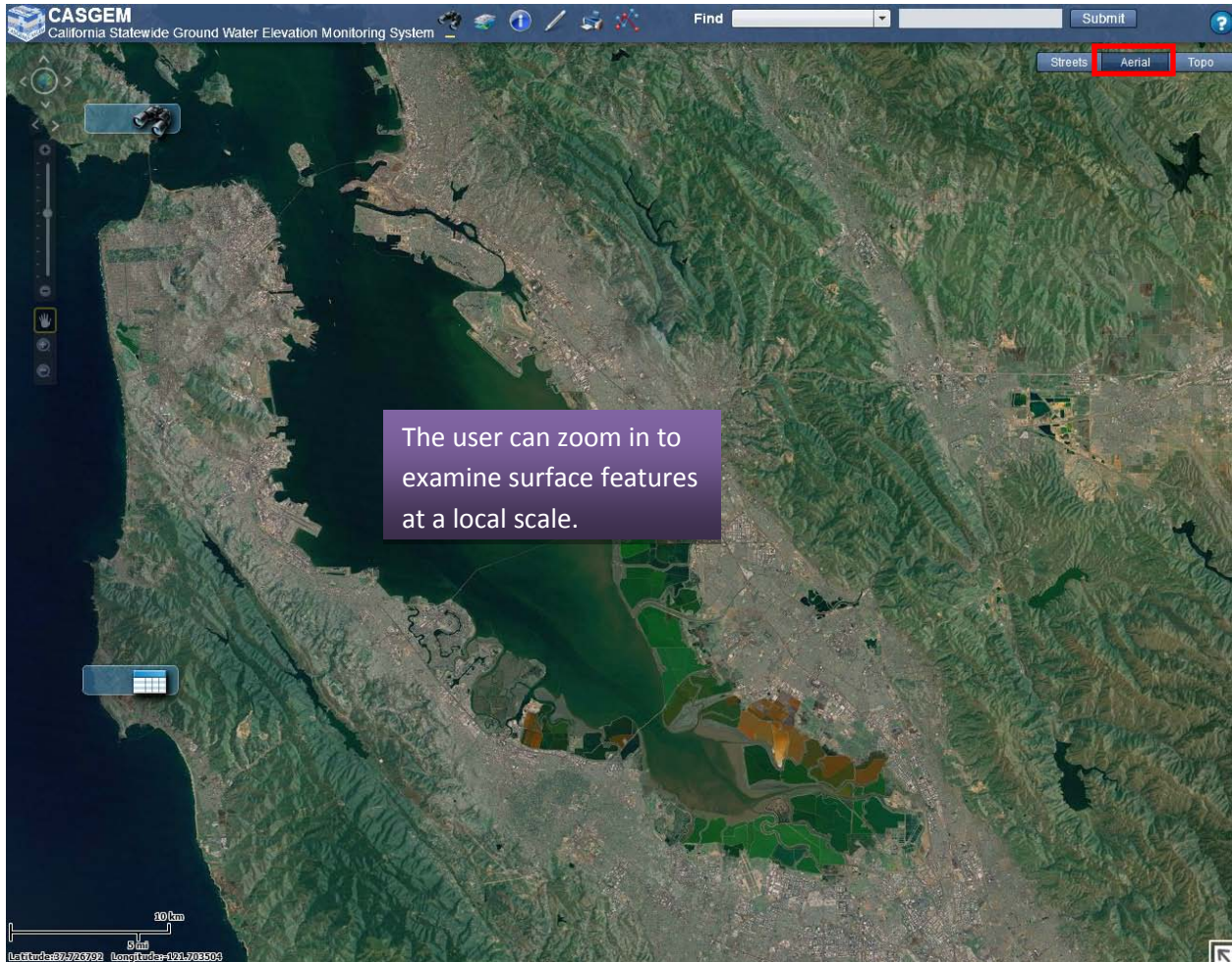


Using Base Map Toggle to Change Base Maps

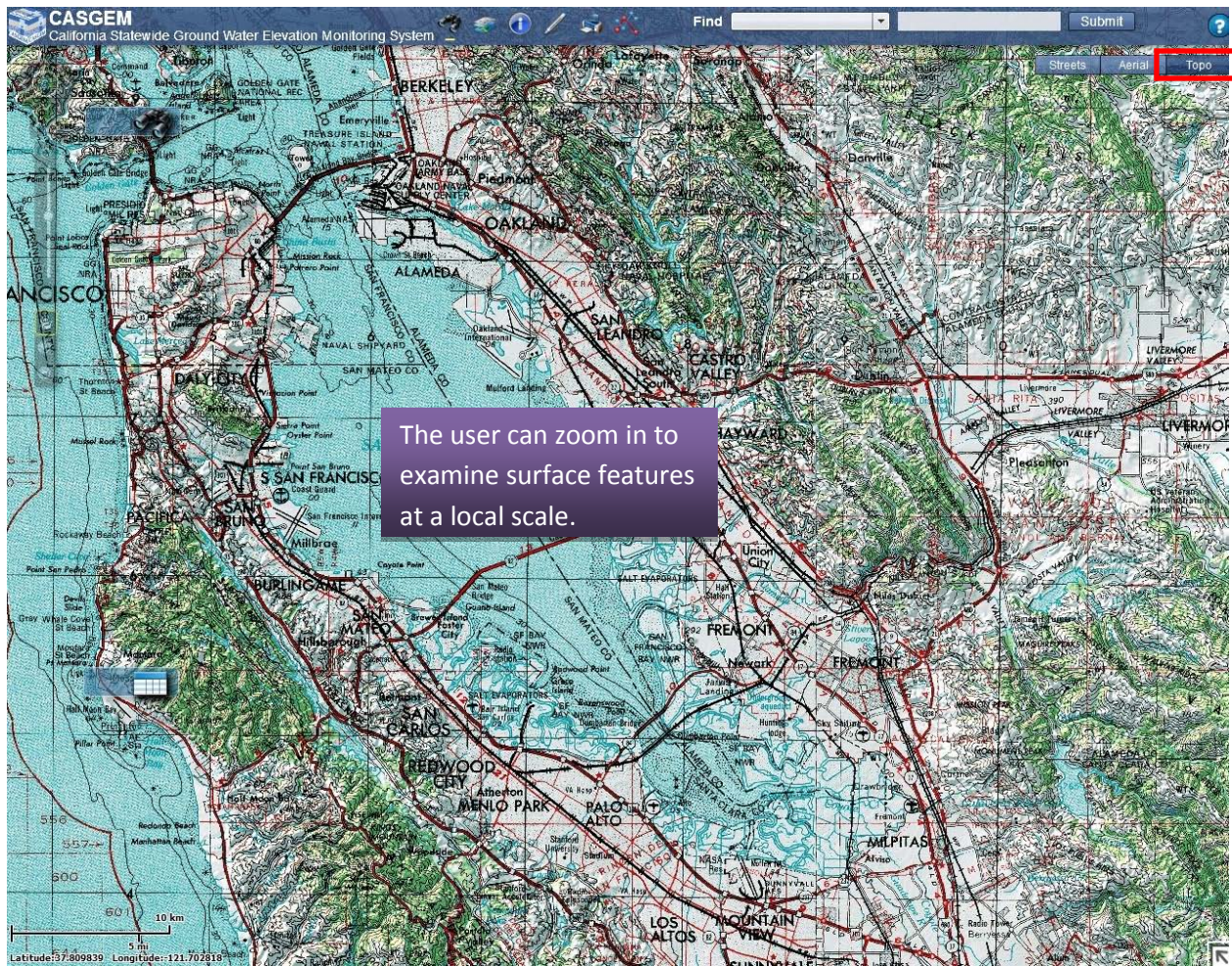
- Click on the Streets tab to view the major roads, streets, and State boundary within the map viewer.



- Click on the Aerial tab to view satellite imagery of the surface of the State within the map viewer.

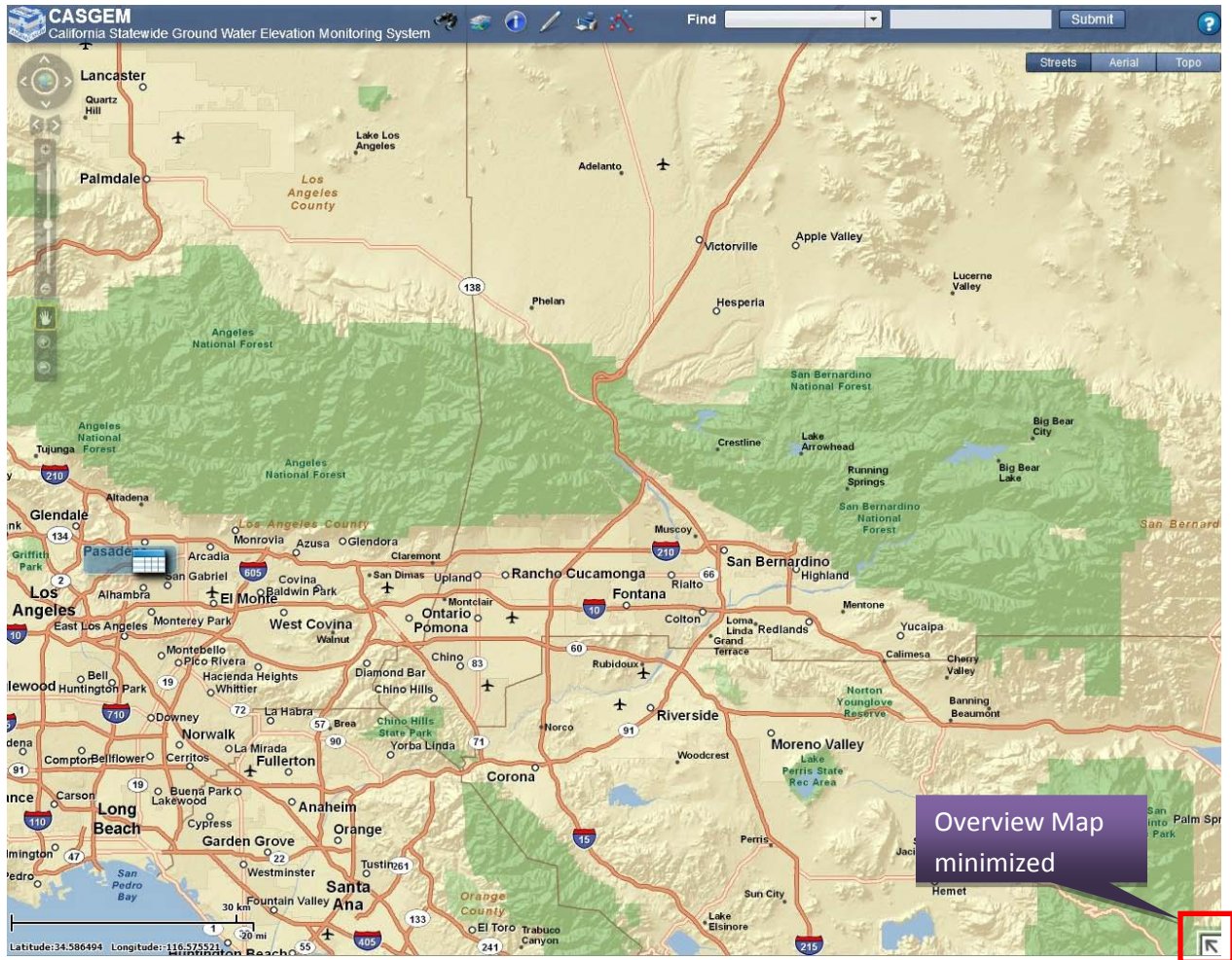


- Click on the Topo tab to view a topographic map base within the map viewer.

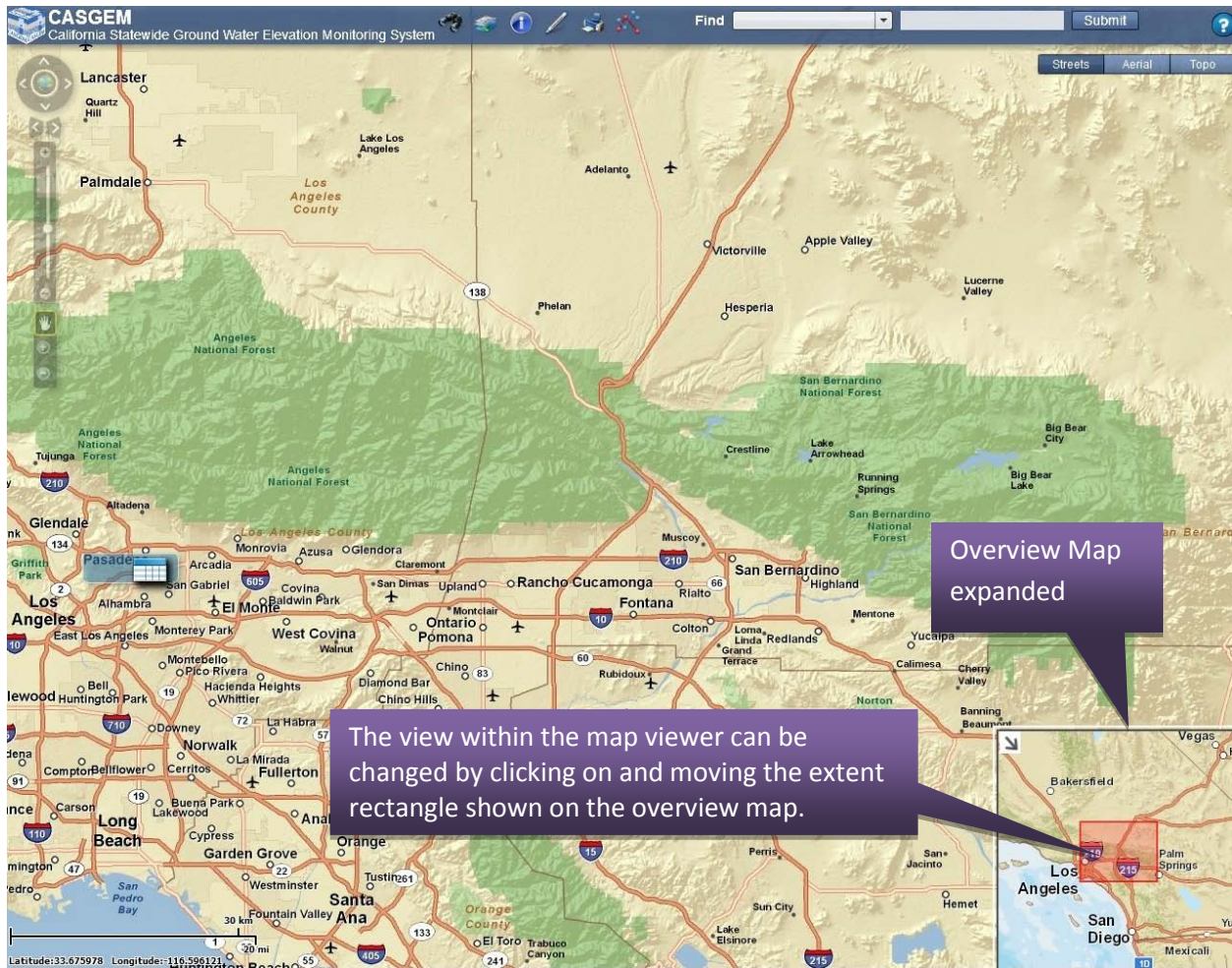


2.7.14 Overview Map

The Overview Map shows the current spatial extent of the map display as a red rectangle (i.e., extent rectangle) relative to the entire spatial extent of the base map service. This menu is located in the lower right corner of the map viewer and is minimized (appears hidden) by default.

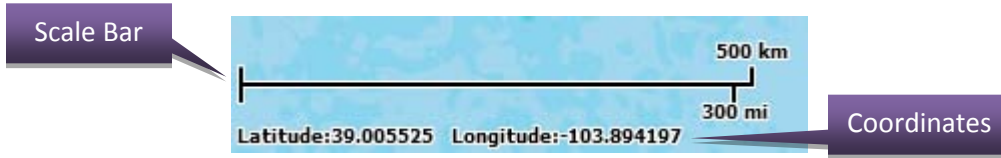


- To open the Overview Map, click on the Map Overview expand arrow on the right hand corner of the map. A small window will open up to show the overview map with a bounding box of the area zoomed in.

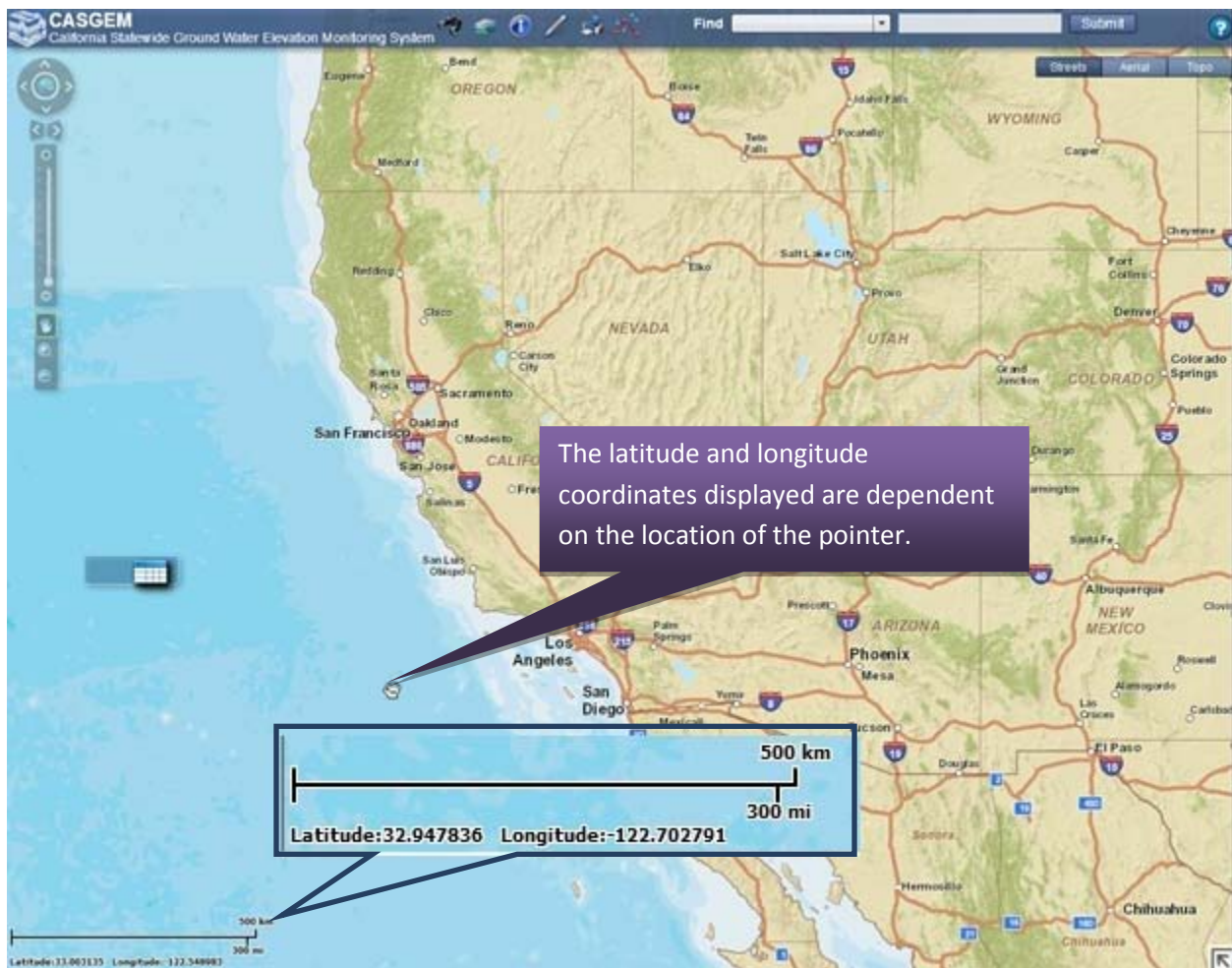


2.7.15 Scale Bar and Coordinates

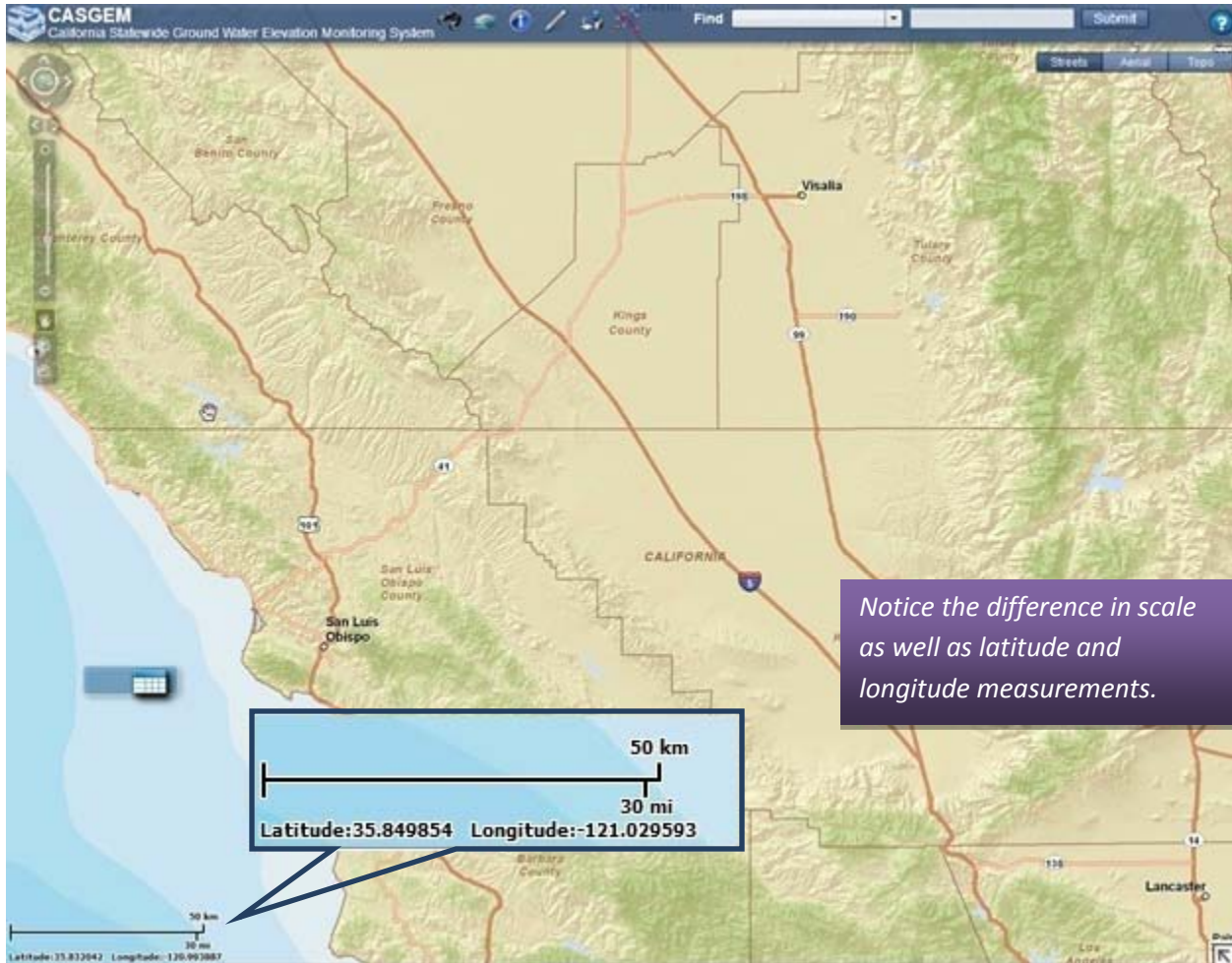
The Scale Bar and Coordinates can be found in the lower left hand corner of the GIS Application.



- The Scale bar enables GIS viewer users to know the reference scale of the map they are viewing. The scale dynamically changes when users perform zoom in and zoom out operations.
- The Coordinates Menu enables x,y (Longitude, Latitude) coordinate values to appear in the GIS viewer as the cursor moves to different locations in the map display.
- The coordinate values change dynamically as the cursor moves and are displayed underneath the Map Scale bar.
- The coordinate values are displayed in Degree Decimal units.

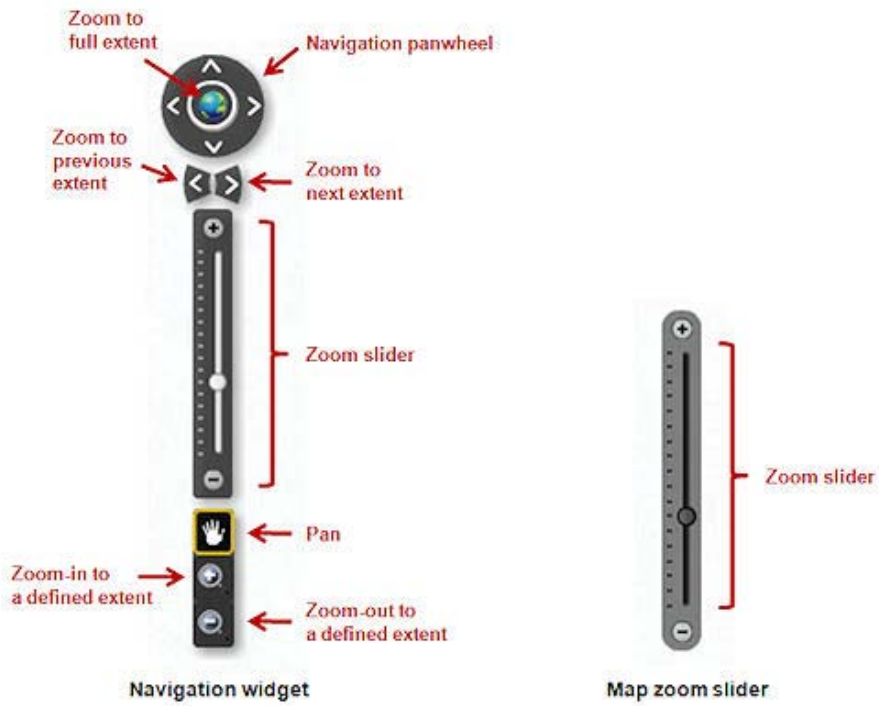
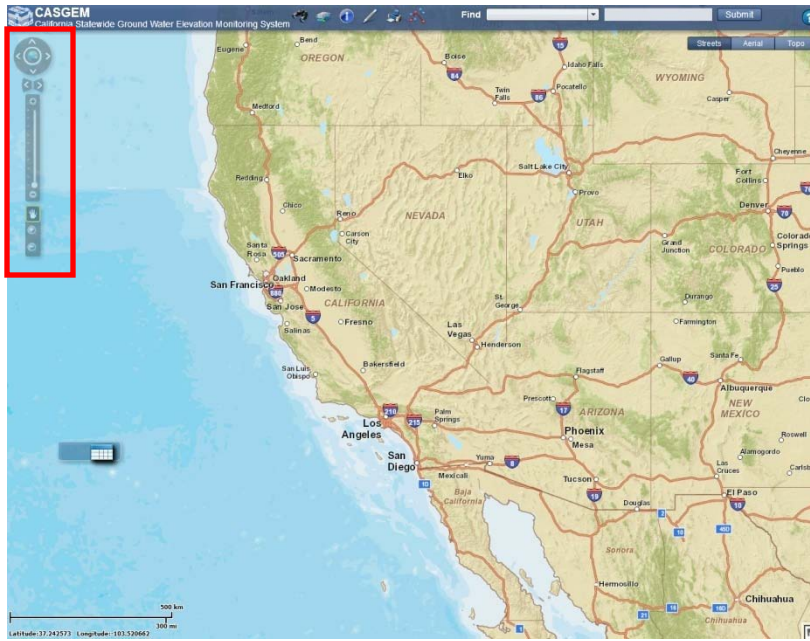


The scale dynamically changes when users perform zoom in and zoom out operations. This can be seen by comparing the screenshot from above to the one below, as they are at different levels of zoom.



2.7.16 Navigation

The Navigation Menu provides a comprehensive set of map navigation controls in the GIS Viewer application. It is located on the left side of the GIS viewer and appears on top of the map display. It becomes transparent when the cursor is not hovering over a navigation control.



2.8 My Profile

The My Profile tab allows you to view and edit user profiles and change passwords.

CASGEM Online System

Welcome: UAT Public User 1

Home | Notifications | Well Information | View Map | Reports | **My Profile** | Sign Out

Public: Home

User Profile
Change Password

Welcome to the California Statewide Groundwater Elevation Monitoring (CASGEM) Online System - Public Portal

CASGEM provides public access to statewide groundwater elevation and monitoring well data. The online system allows you to:

- View lists of local agencies, counties and associations who have volunteered to serve as CASGEM Monitoring Entities providing groundwater data statewide
- View CASGEM Monitoring Plans and Groundwater Management Plans (via hyperlink)
- Search and view groundwater elevation data
- View a hydrograph that shows groundwater elevations for a well
- Search and view groundwater monitoring well information
- View mapped locations of CASGEM wells, monitoring area boundaries, and other geographic information
- Measure distances between wells and size of monitoring areas and basins
- Download well information, groundwater data, hydrographs and maps
- Download summary reports on wells, groundwater elevations, Monitoring Entities and basin information

Please click on one of the above tabs to begin. Please look at this [help](#) file for answers to common questions.

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California
10/31/2011

Details about each of these functionalities can be found in the sections that follow.

2.8.1 User Profile

The User Profile link under the My Profile tab allows users to enter or edit their personal details, such as address and contact information. To edit, click on any field and edit the information within it.

- To edit Challenge Information (Security Question and Answer); select the Challenge Information link to expand.
- To add a new phone number, simply click on the plus icon next to “Add New Phone”. The system will display a Phone Details window with empty fields where you can add a phone number. Click “Apply Changes” to save.
- To edit a phone number, click on Edit within the Add New Phone table. Edit the Phone Details in the pop-up window and click on “Apply Changes” to save.
- To delete a phone number, click on the “Delete” option within the Phone Details table.
- To add a new address, simply click on the plus icon next to “Add New Address”. The system will display an Address Details window with empty fields where you can add address information. Click “Apply Changes” to save.
- To edit an address, click on Edit within the Add New Address table. Edit the Address Details in the pop-up window and click on “Apply Changes” to save.
- To delete an address, click on the “Delete” option within the Address Details table.

Upon making any changes within the Edit User Profile page, you must click “Save” to save all of this information to the CASGEM system.



Welcome: UAT Public User 1

- Home
- Notifications
- Well Information
- View Map
- Reports
- My Profile
- Sign Out

Edit User Profile

User Information

Username (Email) *	<input type="text" value="uatp1@ttgtest.com"/>	Title	<input type="text" value="Enter Title"/>
First Name *	<input type="text" value="UAT Public"/>	Last Name *	<input type="text" value="User 1"/>

Challenge Information

Phone Details *at least one phone is required

+ Add New Phone			
Edit	Delete	Type	Phone Number
Edit	Delete	Office Phone	(818) 500-1645

Address Details *at least one address is required

+ Add New Address			
Edit	Delete	Type	Address
Edit	Delete	Office	901 P Street, Sacramento, California - 234634643

- Save
- Discard Changes
- Back To Home

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)

[Conditions of Use](#) | [Privacy Policy](#)
 Copyright © 2010 State of California
 10/31/2011

2.8.2 Change Password

The Change Password link under the My Profile tab allows you to change their password. In order to change your password, enter your old password and then enter your new password twice to verify. After making your changes, click “Change” to update your password.

The screenshot shows the CASGEM Online System interface. At the top left is the CASGEM logo. To the right, it says "Welcome: UAT Public User 1". Below this is a navigation menu with tabs: Home, Notifications, Well Information, View Map, Reports, My Profile, and Sign Out. Under the "My Profile" tab, there are two sub-menus: "User Profile" and "Change Password". The "Change Password" sub-menu is highlighted in orange. The main content area is titled "Change Password" and contains the following form fields:

- Username(Email): uatp1@ttgtest.com
- Old Password *
- New Password *
- Verify Password *

Below the form fields is a link for "Password Guidelines". At the bottom of the form are two buttons: "Change" (highlighted with a red box) and "Cancel".

At the bottom of the page, there is a footer with the following text:

[Back to Top](#) | [Help](#) | [Comments or Suggestions](#)
[Conditions of Use](#) | [Privacy Policy](#)
Copyright © 2010 State of California
10/31/2011



3.0 Additional Information

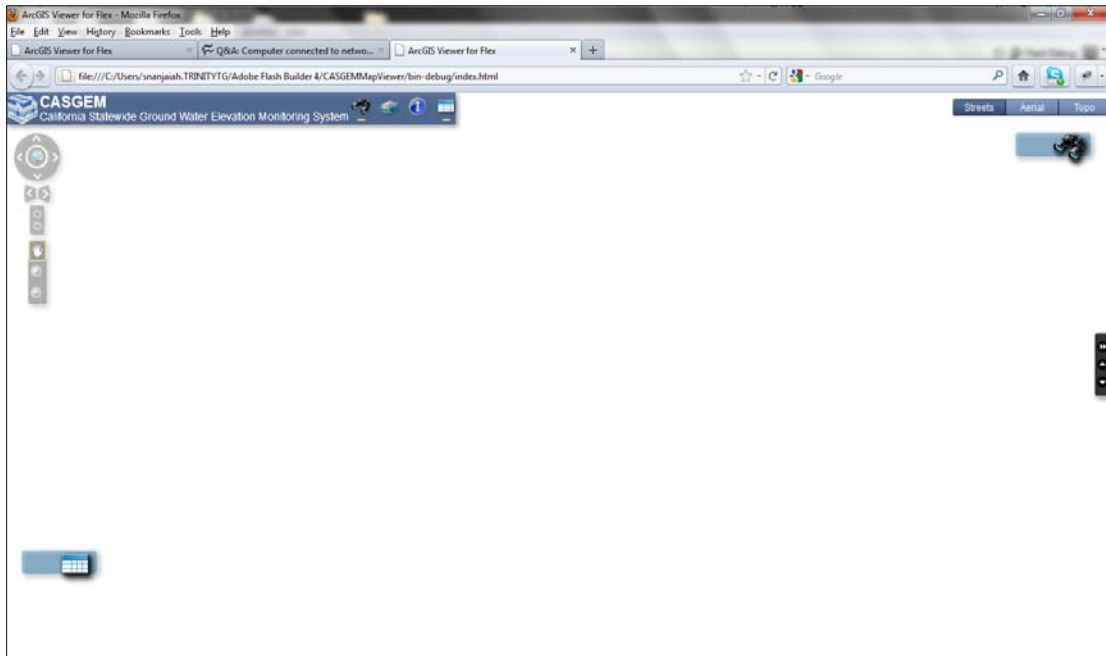
Section Topics

3.1 [Known Errors](#)

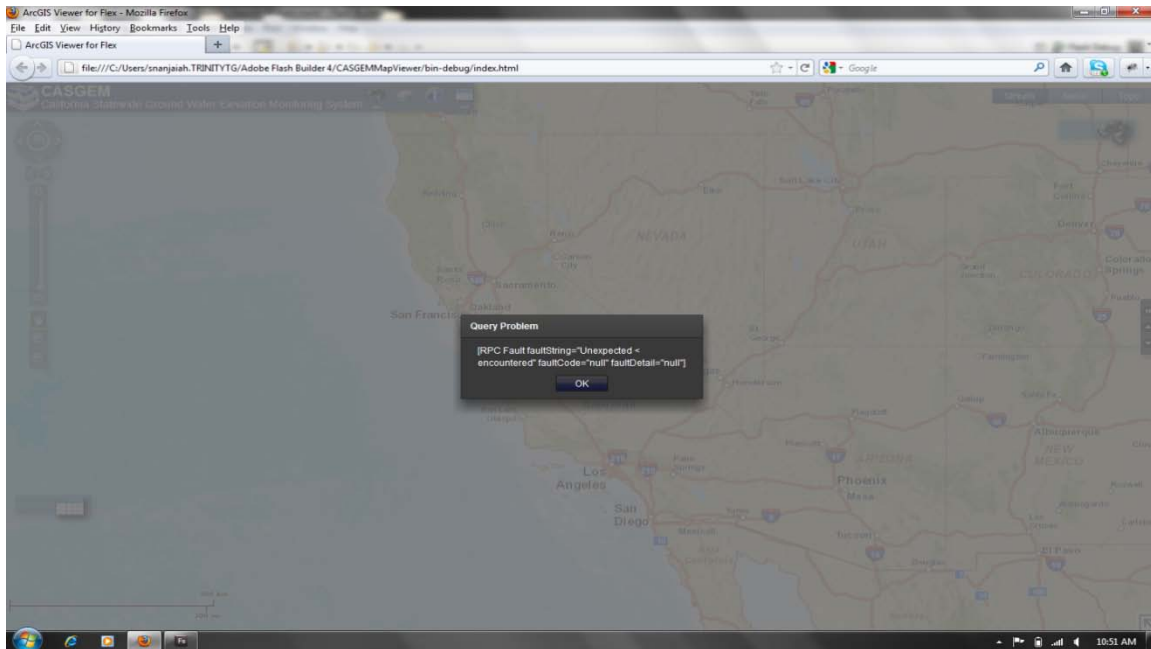
3.2 [Further Help](#)

3.1 Known Errors

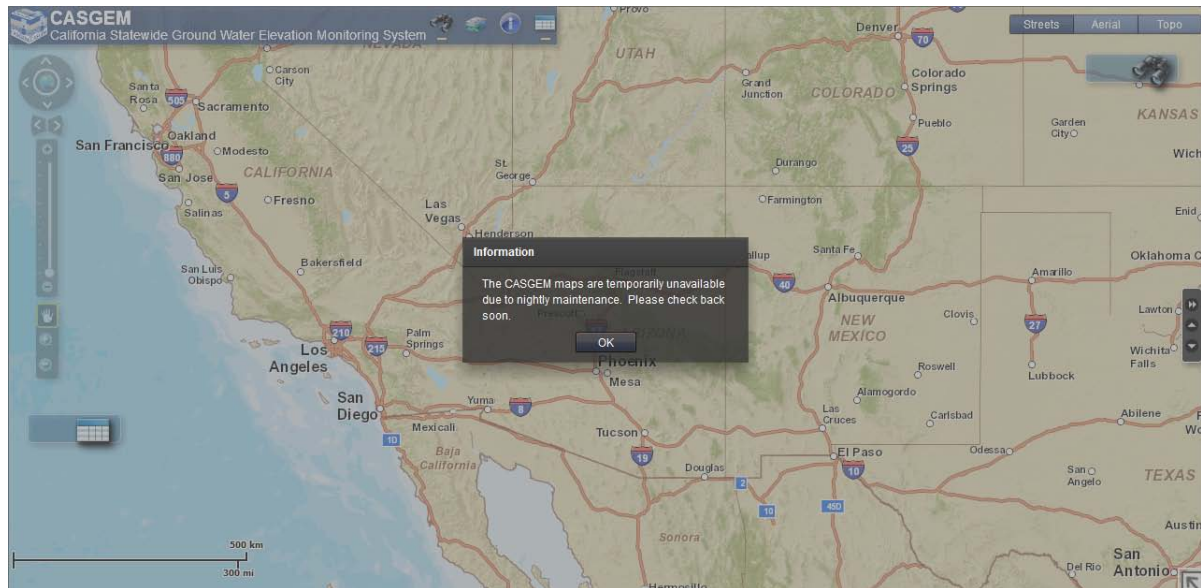
1. There is a possibility that the ESRI ArcGIS online service is not available. We have no control over the availability of the base maps if this happens. During this error, you will be able to access the GIS application, but none of the map layers will be loaded. Typically you would see a white screen as shown below.



2. There is a possibility that the operation layers hosted on DWR's GIS servers are not available. This might happen if there are any internal network problems at the DWR headquarters. If any problems are encountered, please contact the system administrator. The error you will see if this problem is encountered is shown below, and the user will be asked to close the GIS browser window.



3. There is a possibility that the operation layers hosted on DWR's GIS servers are not available. This will happen daily between 2:00AM and 3:00AM due to server maintenance at the DWR headquarters. If any problems are encountered, please contact the system administrator. The error you will see if this problem is encountered is shown below, and the user will be asked to close the GIS browser window.



3.2 Further Help

If you need additional help, please contact the following individuals in the appropriate DWR Regional office:

Northern Region Office, Bill Ehorn, behorn@water.ca.gov , (530) 528-7403

North Central Region Office, Chris Bonds, cbonds@water.ca.gov , (916) 376-9657

South Central Region Office, Dane Mathis, dmathis@water.ca.gov , (559) 230-3354

Southern Region Office, Tim Ross, tross@water.ca.gov , (818) 500-1645 x278

Headquarters, Mary Scruggs, mscruggs@water.ca.gov, (916) 654-1324

