



CALIFORNIA STATEWIDE GROUNDWATER ELEVATION MONITORING (CASGEM)

California Water Commission
February 20, 2013

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California Department of Water Resources





Outline

- ▣ California Groundwater
- ▣ CASGEM Overview
- ▣ CASGEM Implementation
- ▣ Benefits and Challenges
- ▣ Examples from CASGEM System
- ▣ Questions





2009 Comprehensive Water Package

SB X7 6

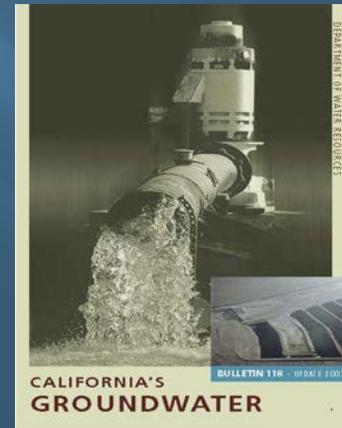
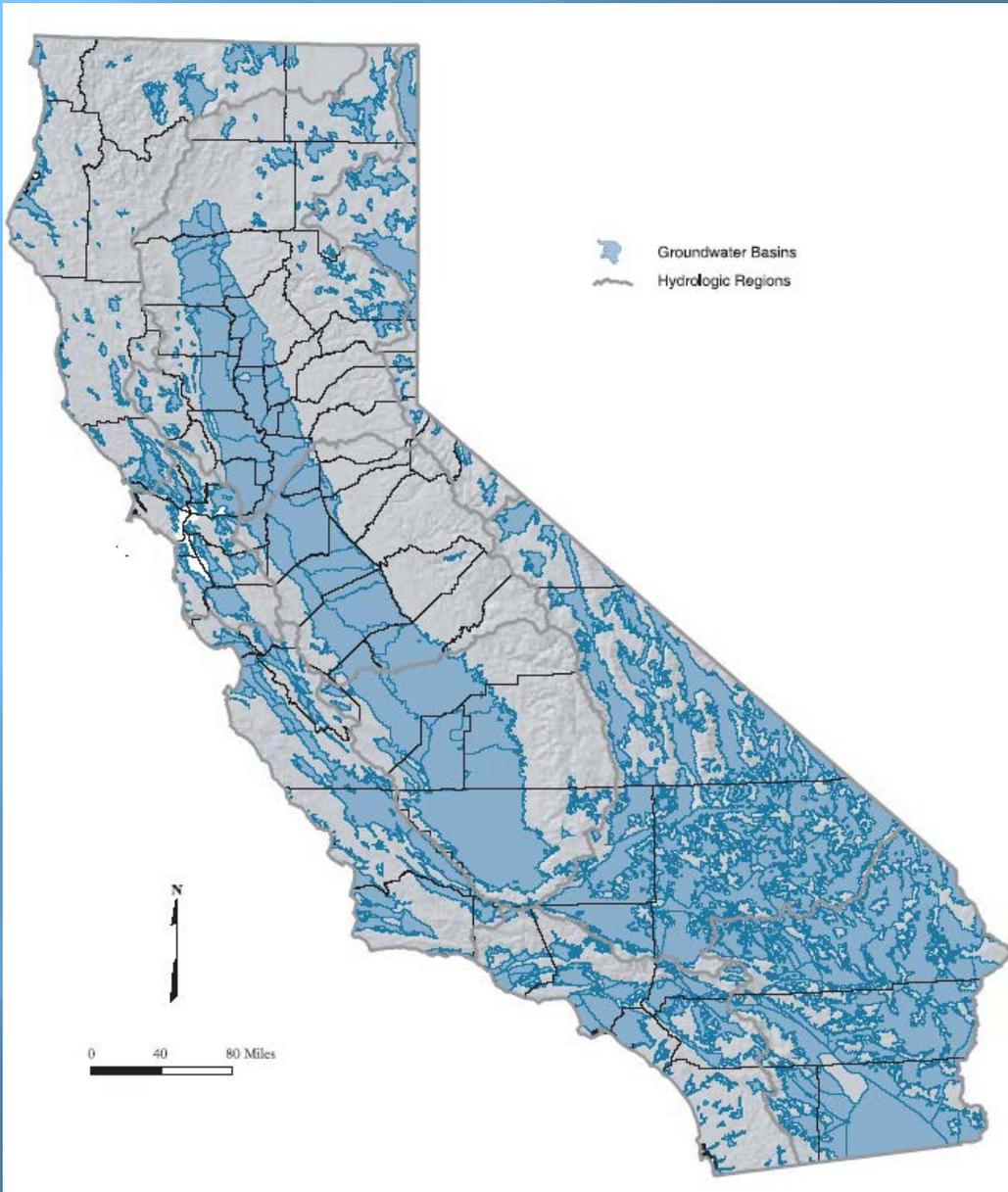
In November 2009, legislation established a voluntary Statewide groundwater monitoring program (enacted in California Water Code Sections 10750 et seq.)

- ▣ Local “Monitoring Entities” will *regularly and systematically* monitor and report groundwater elevations to demonstrate seasonal and long-term trends
- ▣ DWR is required to make groundwater data *readily and widely available* to the public

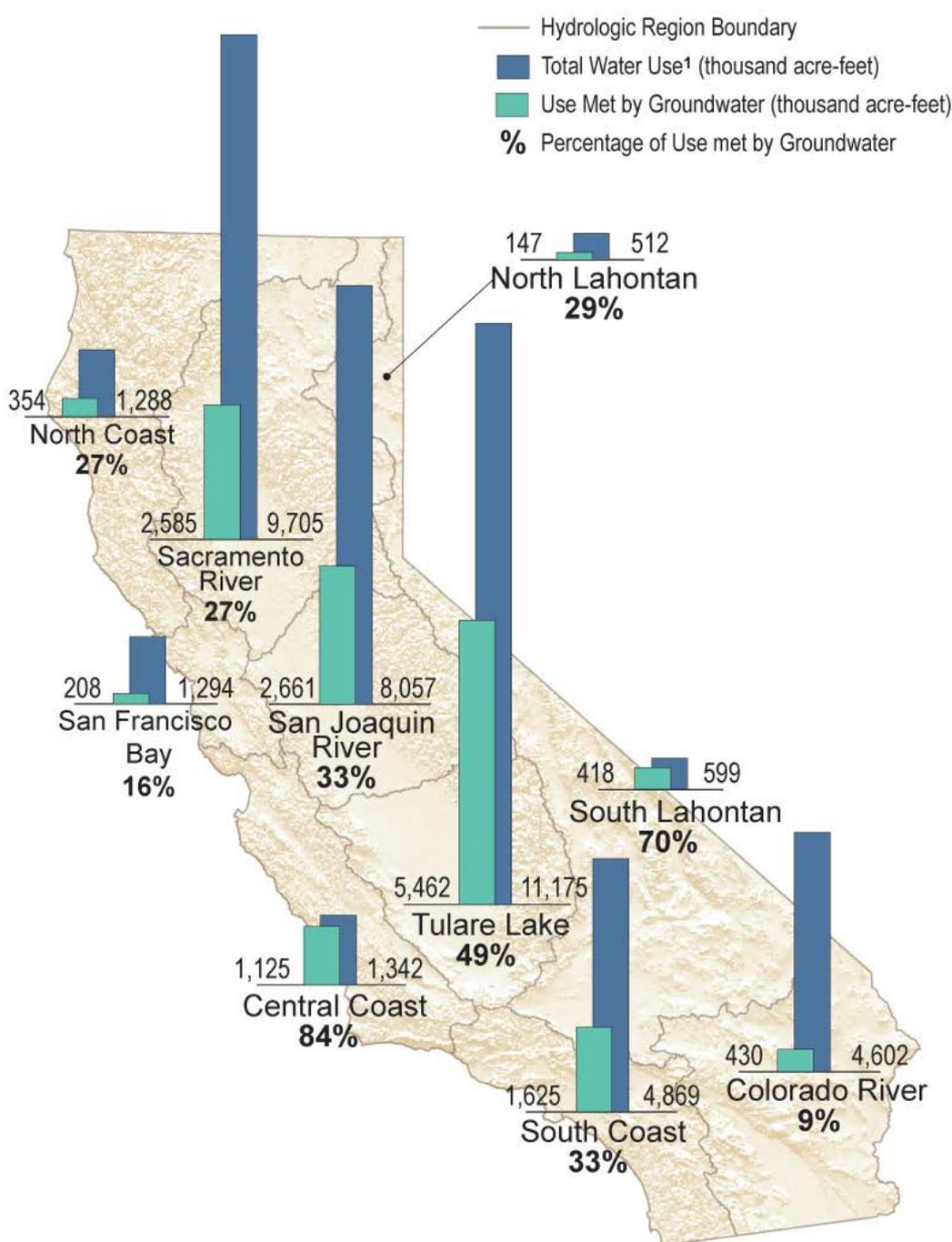


California's Groundwater Basins

- DWR Bulletin 118
- 515 alluvial basins and subbasins



California Groundwater Use by Hydrologic Region (1998-2005 average annual data)

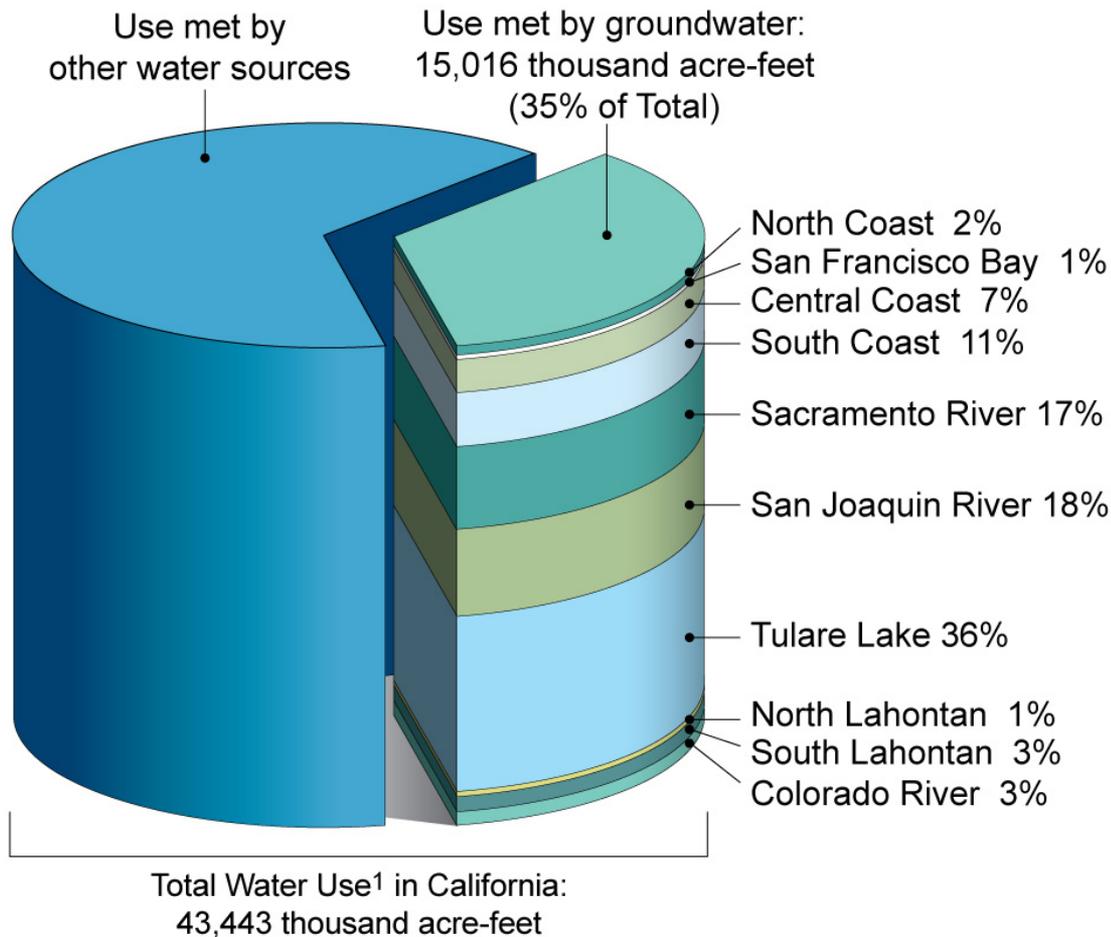


1. Total Water Use is defined as the sum of water uses for agricultural, urban, and managed wetlands.



Water Use Met by Groundwater in California: Statewide and by Hydrologic Region

(1998-2005 average annual data)



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Current Program Status

(as of February 1, 2013)

- ▣ 143 Designations for 115 Basins and Subbasins
- ▣ 63 Designated Monitoring Entities
- ▣ 7845 CASGEM wells statewide
- ▣ 438 Notifications in system ranging in status from Open to Designated for 339 basins and subbasins

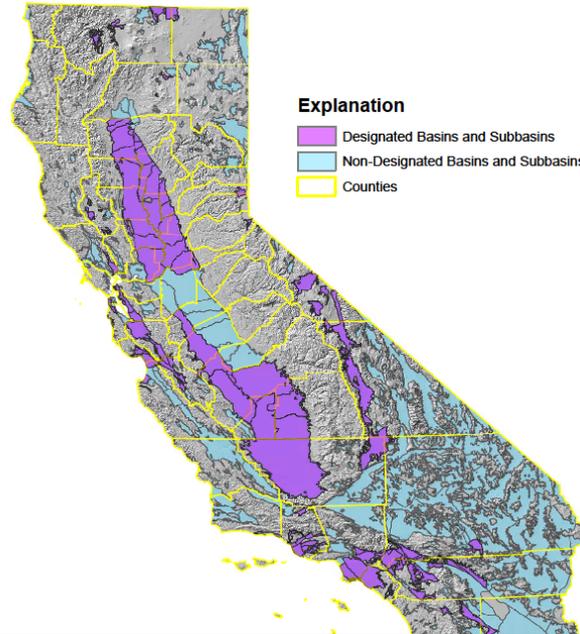




Designated Basins (as of Feb 1, 2013)

California Statewide Groundwater Elevation Monitoring Program Designated Groundwater Basins and Subbasins

115 Basins and Subbasins Fully or Partially Designated
as of February 2013



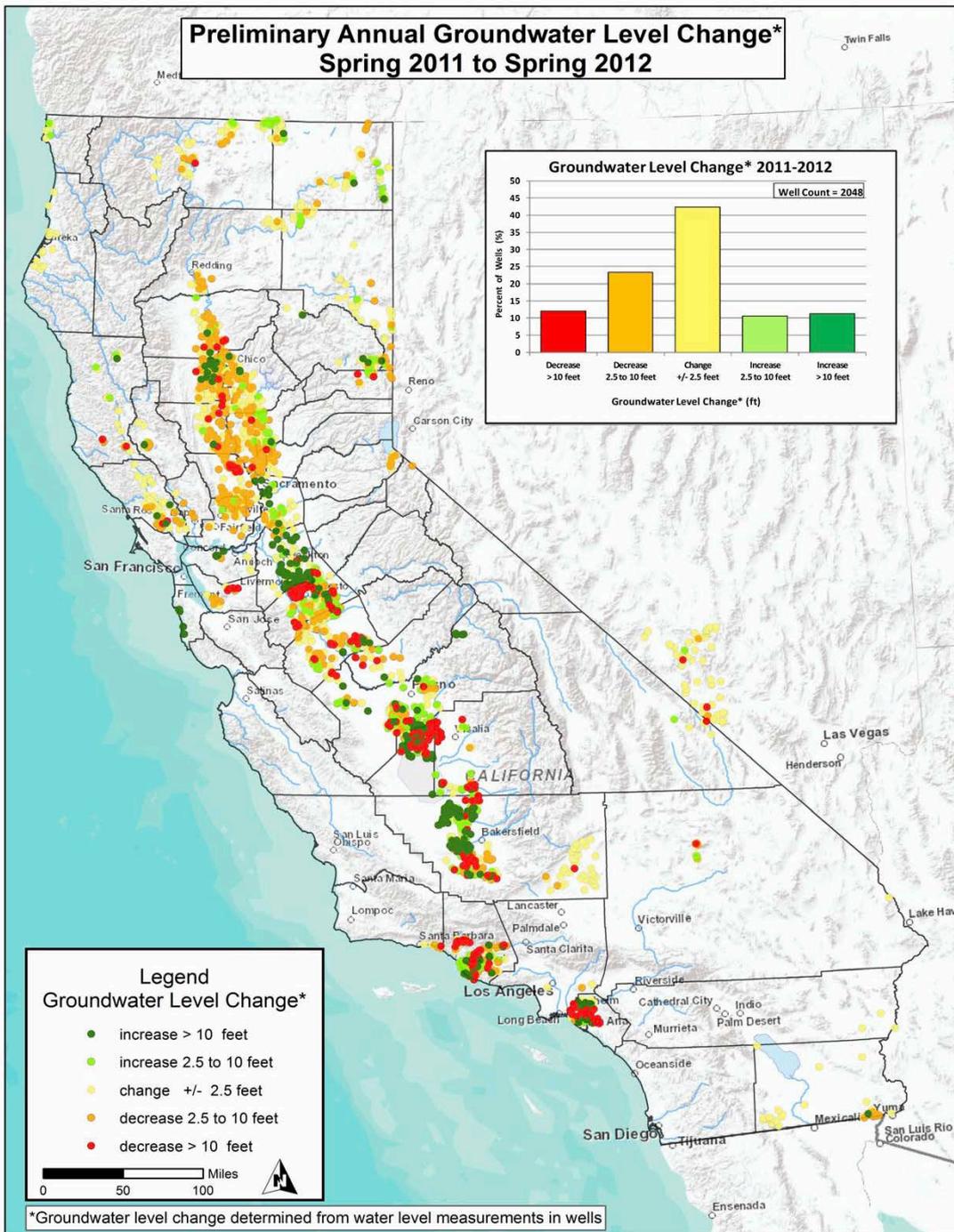
Explanation

- Designated Basins and Subbasins
- Non-Designated Basins and Subbasins
- Counties





Preliminary Annual Groundwater Level Change* Spring 2011 to Spring 2012



Legend
Groundwater Level Change*

- increase > 10 feet
- increase 2.5 to 10 feet
- change +/- 2.5 feet
- decrease 2.5 to 10 feet
- decrease > 10 feet

0 50 100 Miles

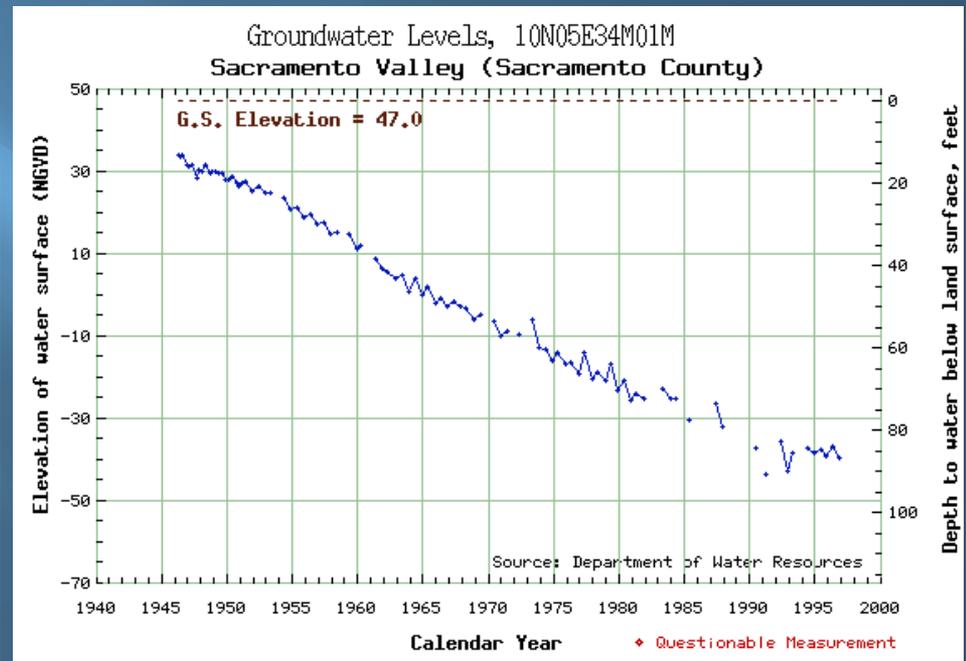
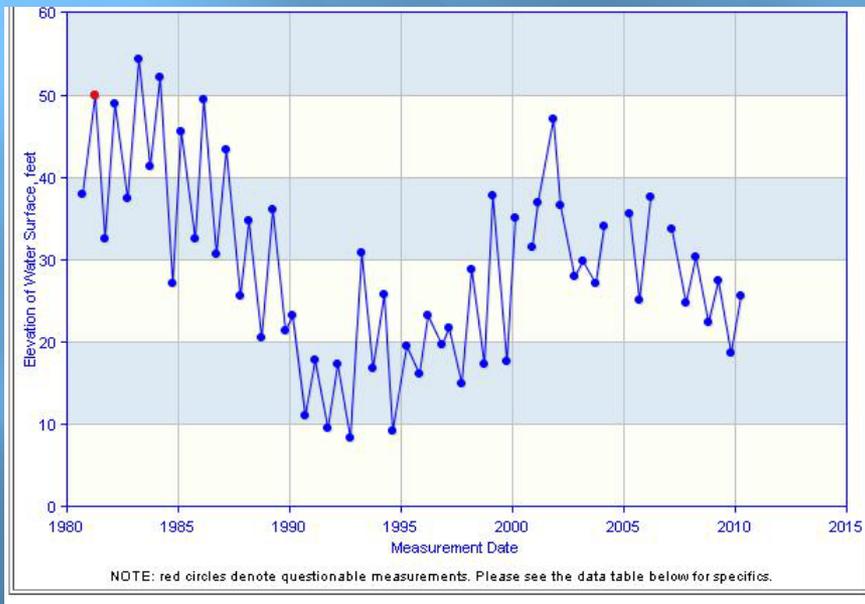
*Groundwater level change determined from water level measurements in wells





Hydrographs

Understanding seasonal and long-term groundwater trends are fundamental





Online System

<http://www.water.ca.gov/groundwater/casgem>

The screenshot shows the login interface for the CASGEM Online System. At the top, the logo for the California Department of Water Resources is displayed, including the text "CA.GOV DEPARTMENT OF WATER RESOURCES" and "CASGEM Online System". A small box on the right side of the header reads "California Department of Water Resources". The main content area is a white box with a blue border containing the following elements:

- A "Log In" heading.
- A "Username (Email) *" label followed by a text input field.
- A "Password *" label followed by a text input field.
- A dark blue "Login" button.
- A blue link for "Forgot password?".
- A blue link for "Self Register".

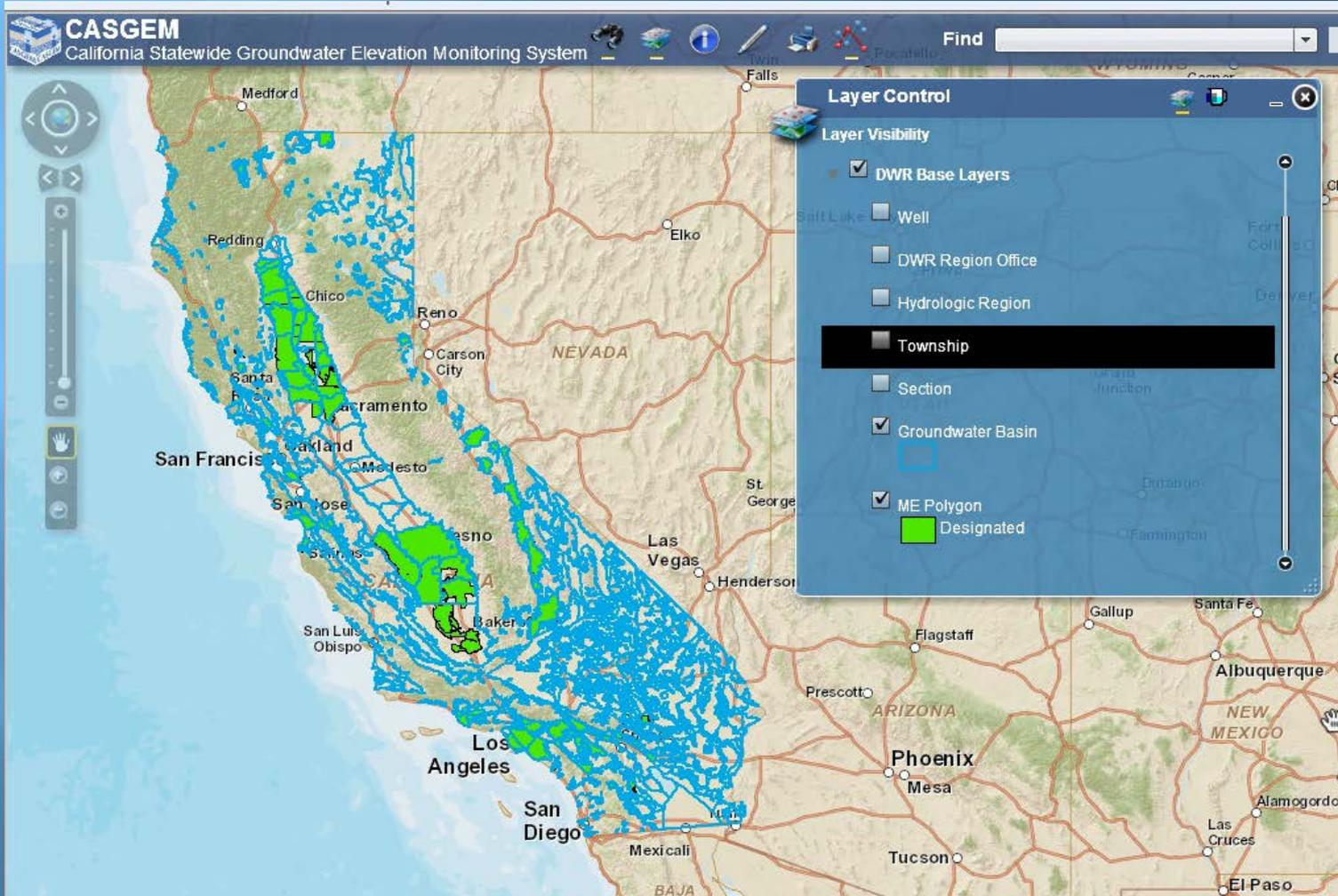
Below the login box, a dark blue footer bar contains the links "Back to Top", "Help", and "Comments or Suggestions". At the very bottom, the text "Conditions of Use | Privacy Policy" and "Copyright © 2010 State of California" is displayed, along with the date "11/17/2011".





Designated Basins Statewide

(screenshot example)





View Map: CASGEM Well Search

CASGEM-View Map

CASGEM California Statewide Groundwater Elevation Monitoring System

Find Search

CASGEM Search

Search for: Wells

Search Criteria

CASGEM Wells
 Voluntary Wells
 All Wells

CASGEM Wells
 Voluntary Wells

DWR Region Office:

Well ID/Number:

Hydrologic Region:

Basin/Sub Basin Name/Number: 3-2

Monitoring Entity Name:

Status:

Cooperating Agency Name:

Submit/Last Update Date:

County:

Submit Clear

Layer Control

Layer Visibility

- County Layer
- DWR Base Layers
 - Well
 - CASGEM Well
 - Voluntary Well
 - DWR Region Office
 - Hydrologic Region
 - Township
 - Section
 - Groundwater Basin

Well Search Results

Local Well Number	State Well Number	CASGEM Station ID	Monitoring Entity	Basin Name/Num	Well Use	CASGEM Well	Total Well Depth	Well Construction	Well Com
15-6-1H	15S06E01H0001	366618N1212615	San Benito Coun	San Benito River	Irrigation	Yes	Unknown	No	Not
14-6-36D	14S06E36D0001	366665N1212651	San Benito Coun	San Benito River	Irrigation	Yes	Unknown	No	Not
14-6-35B	14S06E35B0001	366785N1212761	San Benito Coun	San Benito River	Irrigation	Yes	Unknown	No	Not
14-6-12R	14S06E12R0001	367240N1212571	San Benito Coun	Tres Pinos Valle	Stockwatering	Yes	Unknown	No	Not





View Map: Well Identity

CASGEM-View Map

CASGEM
California Statewide Groundwater Elevation Monitoring System

Identify

Well
Local Well NBR: 782
SWN: Not Available
CASGEM Well ID: 46839
CASGEM Station ID: 369406N1217428W001
ME ID: 5057
ME NAME: Santa Cruz County Environmental Health Services
GW Basin Name: Pajaro Valley
GW Basin Code: 3-2
Hydrologic Region: Central Coast
DWR Region Office: South Central County: Santa Cruz
Well Use: Irrigation
Total Well Depth: 210
Has Well Const Data: Y
Completion RPT NBR: 0
Coop Agency: Pajaro Valley Water Management Agency
Status: Active
Submit Date: 11/02/2011
Latitude: 36.940556
Longitude: -121.742778

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Latitude: 36.940556
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10 km
10 mi
Latitude: 36.989966 Longitude: -121.637021





Questions?

<http://www.water.ca.gov/groundwater/casgem>

