

**SACRAMENTO CENTRAL GROUNDWATER AUTHORITY
REGULAR MEETING OF THE BOARD OF DIRECTORS**

Wednesday, May 12, 2010; 9:00 am
10060 Goethe Road
Sacramento, CA 95827
(SASD South Conference Room No. 1212 – Sunset Maple)

The Board will discuss all items on this agenda, and may take action on any of those items, including information items and continued items. The Board may also discuss other items that do not appear on this agenda, but will not act on those items unless action is urgent, and a resolution is passed by a two-thirds (2/3) vote declaring that the need for action arose after posting of this agenda.

The public shall have the opportunity to directly address the Board on any item of interest before and during the Board's consideration of that item. Public comment on items within the jurisdiction of the Board is welcomed, subject to reasonable time limitations for each speaker.

- 1. CALL TO ORDER AND ROLL CALL – 9:00 a.m.**
- 2. PUBLIC COMMENT:** Members of the public who wish to address the Board may do so at this time. Please keep your comments to less than three minutes.
- 3. CONSENT CALENDAR**
 - Minutes of March 10, 2010 Board meeting.
Action: Approve Consent Calendar item
- 4. BUDGET COMMITTEE REPORT**
 - Review Budget Committee recommendation for Fiscal Year 2010/2011.
Action: Approve resolution adopting the Fiscal Year 2010/2011 budget recommendation for SCGA.
- 5. SERVICES CONTRACT**
 - Discussion on entering into a services contract with WRIME.
Action: Authorize the Executive Director to enter into a services contract with WRIME.
- 6. EXECUTIVE DIRECTOR'S REPORT**
 - Local Groundwater Assistance Grant
 - LAO Report – Improving Management of the State's Groundwater Resources
 - Well Protection Program Update
 - Legislation/Regulatory Update
 - SCGA Board Appointments
- 7. DIRECTORS' COMMENTS**

ADJOURNMENT

Upcoming meetings –

Next SCGA Board of Directors Meeting – Wednesday, July 14, 2010, 9 am; 10060 Goethe Road, South Conference Room No. 1212 (Sunset Maple).

Sacramento Central Groundwater Authority Board Meeting
May 12, 2010

AGENDA ITEM 3: CONSENT CALENDER

Minutes from the March 10, 2010 SCGA Board meeting follow.

Action: Approve Consent Calendar Items.

SACRAMENTO CENTRAL GROUNDWATER AUTHORITY (SCGA)

Governing Board Meeting

Draft Minutes

March 10, 2010

LOCATION: 10060 Goethe Road, Room 1212
Sacramento, CA 95827
9:00 a.m. to 11:00 a.m.

MINUTES:

1. CALL TO ORDER AND ROLL CALL

Chair Walt Sadler called the meeting to order at 9:00 a.m.

The following meeting participants were in attendance:

Board Members (Primary Rep):

Anthony van Steyn, Agricultural Interests
Stuart Helfand, Agricultural Residential
Scott Fort, Golden State Water Company
Ed Crouse, Rancho Murieta Community Services District
Rick Bettis, Conservation Land Owners
Ron Lowry, Omochumne-Hartnell Water District
Ruben Robles, Sacramento Regional County Sanitation District
Edwin Smith, Public Agencies Self-Supplied

Board Members (Alternate Rep):

Clarence Korhonen, City of Elk Grove
Walt Sadler, City of Folsom
Albert Stricker, City of Rancho Cordova
Jim Peifer, City of Sacramento
Herb Niederberger, County of Sacramento

Staff Members:

Darrell Eck, Sacramento Central Groundwater Authority
Ping Chen, Sacramento Central Groundwater Authority
Ramon Roybal, Sacramento Central Groundwater Authority
Heather Hawke, Clerk, Sacramento Central Groundwater Authority

Others in Attendance:

Rodney Fricke, Aerojet
Jim Blanke, WRIME Inc.
Jeanna Long, WRIME Inc.
Saquib Najmus, WRIME, Inc.
Rob Swartz, SGA
Ken Payne, City of Folsom
Cathy Lee, City of Roseville
Alex Vdovichenko, California Department of Water Resources
Mark Roberson, Sacramento Regional Water Forum
Frank Bradham, City of Lincoln
Martin Steinpress, Brown and Caldwell

Others in Attendance (cont):

Brent Cain, Brown and Caldwell

Member Agencies Absent

Commercial/Industrial Self-Supplied (vacant)

California – American Water Company

Elk Grove Water Service

2. PUBLIC COMMENT

None

3. CONSENT CALENDAR

The draft meeting minutes for the meeting held on January 13, 2009 were reviewed for final approval.

Motion/Second/Carried - Mr. Fort moved, seconded by Mr. Bettis, the motion carried unanimously to approve the minutes.

4. STATUS REPORT ON THE DATA MANAGEMENT SYSTEM UPDATE

In November 2008, the Sacramento Central Groundwater Authority (SCGA) entered into an agreement with the consulting firm, Water Resources and Information Management Engineering (WRIME) to complete an update of groundwater of the data management systems. A status report was given by WRIME staff members Jim Blanke and Jeanna Long to provide an update on progress for the completion of that project.

After the presentation, Mr. Sadler asked the Board if there were any questions. Mr. Bettis was curious if any agencies have water quality data other than the Department of Health (DPH), the Regional Board Water Quality Control Board (Regional Board), or the Sacramento County of Environmental Management Department (EMD). Mrs. Long indicated some water quality data had been received from some of these agencies. The issue with the DPH data is that it is difficult to match with the data that is already in the DMS; what WRIME needs is information from DPH to make this match. Mr. Blanke said that while DPH will give you all the water quality data on a CD they will not release well location information without a nondisclosure agreement. Mr. Niederberger also indicated that EMD isn't a source for comprehensive water quality data. Mr. Robles then asked if the Regional Board would have data on groundwater contamination and remediation sites and wanted to know if that would be brought into the DMS. Mr. Fricke responded that the Regional Board uses a Geo Tracker System to track their water quality data. Mr. Robles asked if data from the Geo Tracker System was included in the DMS. Mrs. Long indicated that she didn't think it was at this time but would check with WRIME's data collection person.

Mr. Niederberger asked how SCGA's DMS was going to talk to the Sacramento Groundwater Authority's (SGA) DMS. Mrs. Long responded that the question had been raised previously but that a decision had not yet been made. If the SCGA and SGA DMS' are maintained as two separate databases they will not be able to "talk" to each other but it won't prevent data from either database to be displayed in the Integrated Water Resources Information System (IWRIS). Mr. Sadler wondered if it would be a policy decision on the part of both Boards to put data from both basins in one common database. Mr. Robles asked what the benefits were of combining the two databases. Mrs. Long said the primary benefit would be the ability to conduct a higher level of technical analysis on the data. Mr. Sadler asked if a Board action was required to integrate the two databases. Mr. Niederberger thought it would be a good idea.

Mr. Niederberger asked what the contamination fate and transport model work that is currently under development by SGA would accomplish. Mr. Blanke said the purpose of the model was to organize and analyze data so that potential threats to existing water supplies could be identified in a way that would provide time to respond to said threat.

Mr. Eck stated that it was important to recognize that the DMS is going to be able to improve the Authority's ability to make comparisons of critical groundwater data. This need was demonstrated in the Authority's bi-annual report as staff was hampered to a certain extent in trying to make some of the comparisons since some of the tools that would be found in the DMS were not available to make those analyses.

5. OVERVIEW OF PROPOSED GRANT APPLICATION

Mr. Eck stated that at the last Board meeting there was a discussion regarding opportunities for another Local Groundwater Assistance (LGA) grant and that there were many questions on what the focus of an application from SCGA would be. Mr. Eck stated that from observation of the meeting minutes it was apparent that there needed to be additional discussion on the subject. Mr. Eck reiterated that the grant proposal was to be based on requirements weighed out in both the SCGA Groundwater Management Plan (GMP) and recommendations that were identified in the 2007/2008 SCGA Basin Management Report. Mr. Eck reminded the Board that the GMP charges the SCGA with five basin management objectives (BMO) which include, maintaining the long term sustainable yield of basin, maintaining specific groundwater elevations, subsidence, adverse impact of surface water and water quality. Mr. Eck continued by stating that the GMP recognized that in order to accomplish the BMO's a more detailed monitoring management plan would need to be developed and that the Authority had acted upon this through the update of the DMS. The proposed grant application would provide for identification of additional monitoring wells and other data gaps that may exist. Mr. Eck stated that as an example, the Nature Conservancy owns monitoring wells along the Consumnes River which along with Aerojet monitoring wells, and other as yet identified existing monitoring wells, could be incorporated into the DMS monitoring grid. In addition to monitoring wells, as stated by Mr. Eck, the aggregation of polygons contained in the

Central basin polygon grid, as described in Appendix B of the GMP, would represent significant additional work to aid in the development of a monitoring network. Mr. Eck further explained that according to Appendix B, the aggregation of the polygon grid was critical because from an analytical perspective, not every grid required a dedicated monitoring well in order to accurately characterize the basin and that furthermore, to attempt to place a monitoring well in each grid would be cost prohibitive. Mr. Eck then stated that another potential task to be included in an LGA grant proposal would be the prioritization of new monitoring wells to be constructed by SCGA. Mr. Eck finished by stating that the continued development of SCGA monitoring network was important in order to provide future recording and policy decision capabilities such as those that are recommended in the current bi-annual report.

6. REGIONAL CONTAMINATION MODEL

Mr. Eck reported that the Sacramento Groundwater Authority (SGA) had secured a Local Groundwater Assistance grant to develop a regional contamination model designed to identify potential threats from contaminant plumes to current production wells north of the American River. Mr. Eck reported that an opportunity existed to expand the scope of the model to include areas south of the American River within the Central Basin. Mr. Eck continued to describe specific tasks of the modeling work to include; simulation of the movement of contamination in the groundwater basin based on a flow system developed using the SacIGSM, simulation of the conditions at the planned 2030 level of development assuming that the basin maximizes current plans for operating conjunctive use; and a brief memorandum describing the results of the modeling scenarios.

Mr. Eck stated that support of the modeling effort for analysis within the Central Basin would be consistent with Section 3.2.3.5, Control of the Migration and Remediation of Contaminated Groundwater, of the Groundwater Management Plan. Mr. Eck reported that the Groundwater Authority currently has \$28,000 available in the budget for consultant expenses and that is was staff's recommendation that the Board authorize the Executive Director to expend up to \$15,000 to support the development of a regional contamination model in conjunction with the Sacramento Groundwater Authority .

Mr. Swartz clarified that it was a misnomer to call SGA's modeling effort a regional contamination model as contamination modeling was only one aspect of the overall project. Mr. Swartz stated that SGA is taking a comprehensive look at the various threats to the sustainability of the water quality in the North Basin. He continued by stating that there are a series of contamination plumes that SGA is aware of within the North Basin along with ongoing point source issues, and that SGA wanted to investigate and demonstrate the dynamics of point-source contamination and the factors contributing to the movement of the contamination plumes. Mr. Swartz explained that, as an example, the model would look at simple flow run over a simulation period of a hundred years and its resultant effect within the aquifer system to demonstrate the relationship say, of one party attempting to capture a contaminant plume, and the other party, say a public water supplier, drawing water for public supply. Part of this effort would be to locate the plumes. Mr. Swartz stated that the

model would be run under multiple scenarios to account for such factors as conjunctive use or non-conjunctive use in order to demonstrate the effects or potential benefits of varied management strategies. It was also proposed that the executive directors with SCGA and SGA meet on a regular basis.

Motion/Second/Carried - Mr. Helfand moved, seconded by Mr. Niederberger, the motion carried unanimously to authorize the Executive Director to expend up to \$15,000 to support the development of a regional contamination model in conjunction with the Sacramento Groundwater Authority.

7. GROUNDWATER MODEL EVALUATION PROPOSAL

Mr. Eck began by stating that although the Sacramento Integrated Groundwater Surface Water (SacIGSM) model had been integral to water supply planning in the region for over 20 years, the Sacramento Groundwater Authority (SGA) had identified in their 2008 Groundwater Management Plan the need to review long-term modeling needs in the region and recognized that conducting this type a review should be conducted through a coordinated approach. Mr. Eck then introduced Mr. Swartz from SGA for a discussion on a coordinated groundwater model evaluation. Mr. Swartz stated that the process would begin in the late spring or early summer to communicate with all of the regional interests to find out their modeling needs. He stated that when the idea was brought before the SGA Board, the recommendation was to first outreach to the SCGA to gauge its interest in collaborating on the project since both historically relied on the same modeling technology and to maintain continuity in the communication between each region's modeling efforts. Mr. Swartz suggested going through a process of identifying what SCGA's modeling needs and objectives are and then look at the state of the tools that are available and what the Authority's needs going forward may be. Mr. Swartz then related some of the factors SGA was considering such as the current state of water modeling technology and whether the different packages of say ModFlow seamlessly link or are there still manual processes involved. Mr. Sadler asked if there would be an outside consultant brought in with the experience to help make a determination. Mr. Robles asked Mr. Swartz to clarify the difference between the models previously discussed and the current model proposal. Mr. Swartz explained that the evaluation process was still in the initial phases and that the general approach was to gauge interest in a regional collaborative effort, then to determine needs and objectives, then identify the potential tools and discuss in detail the best options.

8. FISCAL YEAR 2010/2011 BUDGET

Mr. Eck stated that staff recommended the appointment of a budget committee to prepare recommendations to the 2010-2011 Fiscal Year. Mr. Sadler asked if there were any volunteers. Mr. Niederberger, Mr. Fort, Mr. Crouse and Mr. Sadler all volunteered.

9. EXECUTIVE DIRECTOR'S REPORT

Mr. Eck provided an update regarding the financial status of the Groundwater Authority reminding the Board that the approved budget for the current the fiscal year 2009-2010 was \$284,003 and that the expenditures to date were \$130,628, constituting 46% of the budget with 67% of the year gone by as of March 1st.

Mr. Eck then reported that the financial audit conducted by Vavrinek, Trine, Day and Company, was completed and will be released pending approval of an amendment to the County of Sacramento's contract with the firm and that results and recommendations should be available at the May 12, 2010 Board meeting.

Mr. Eck then addressed the status of the Well Protection Program (WPP) stating that there had been questions concerning the next steps required for moving the program forward. Mr. Eck reminded everyone that at the January 13, 2010 Board meeting it was decided that the representatives of the signatories to the Joint Powers Authority (JPA) would consult with their staff, management, and various governing bodies regarding the WPP and the Review and Authorization to Proceed (RAP) package and take the necessary steps to adopt a resolution that commits them moving forward with the well protection program process. Mr. Sadler commented that he thought it might be good to have SCGA track the number of building permits in the area and then notify the land-use agencies once they are over 800 annually (number identified in the Nexus Study for WPP). Mr. Eck thought it would be helpful if the agencies would provide that information. Mr. Sadler then said that for his agency (City of Folsom) the process to secure a resolution would involve two steps; first he would present a staff report to his City Council as a means to inform them of the process, the he would go out and finalize the details before going back to his City Council for final approval. Mr. Eck then reiterated that there needed to be a mutual understanding of how the process will work and reminded the Board that per previous discussion, it was recommended that the resolution process be completed by June 30th 2010. Mr. Eck stated that staff was available to provide assistance with the process.

Mr. Eck announced that the South Area Water Council has resumed meetings to develop their groundwater management plan with the first meeting held on February 22, 2010 that reoriented participants to the process after a year long hiatus. He stated that the next meeting was scheduled for March 15, 2010 and would be focused on development of the basin management objectives for the South Basin. Mr. Lowry then added that the South Area Water Council was set to meet on March 16, 2010 for a vote on a Notice of Intent to the State alerting them of their intent to develop a GMP.

10. DIRECTOR'S COMMENTS

Mr. Niederberger suggested arranging a tour to view the facility at the Freeport Regional Water Project intake structure as it was virtually completed.

Mr. Sadler asked to have the Board authorize Mr. Eck to attend the SGA meetings to improve coordination between the two agencies and to look for other opportunities that SCGA may benefit from.

ADJOURNMENT

Upcoming Meetings –

Next SCGA Board of Directors Meeting – Wednesday, May 12th, 2010. 10060 Goethe Road, Sacramento, CA; SASD South Conference Room 1212 (Sunset Maple).

By:

Chairperson

Date

Date

AGENDA ITEM 4: BUDGET COMMITTEE REPORT

BACKGROUND:

The proposed 2010-2011 fiscal year budget was developed based on the program requirements (GMP Related Expenses) described in the Central Basin GMP. The budget also provides for overhead expenses (Staff Expenses) including the Executive Director, Administration Support, Legal Counsel, and Financial support. The proposed budget also includes some funding for consultant services (Consultant Expenses). Funding has also been identified to provide limited staff support for activities related to the Well Protection Program.

The proposed budget's means of financing consists of a fund balance of \$93,047, contributions for other agencies of \$268,461, and interest income of \$15,000; for a total means of financing of \$376,508. Expected expenditures are \$308,300.

The proposed budget for SCGA and WPP was presented, discussed and approval recommended by the SCGA Budget Committee on April 12, 2010. Budget Committee members include Ed Crouse, Scott Fort, Herb Niederberger and Walt Sadler.

STAFF RECOMMENDATION:

ACTION: Approve resolution adopting the Fiscal Year 2010/2011 budget recommendation for SCGA.

**SACRAMENTO CENTRAL GROUNDWATER AUTHORITY
CALIFORNIA**

4

For the Agenda of:
May 12, 2010

To: Board of Directors
Sacramento Central Groundwater Authority

From: Staff

Subject: Adoption Of The Fiscal Year 2010-2011 Sacramento Central Groundwater Authority Budget, Fiscal Year 2010-2011 Well Protection Program Trust Fund Budget , And Authorization To Collect Annual Contributions

Contact: Darrell K. Eck, Executive Director, 874-5039

Overview

The Sacramento Central Groundwater Authority (Authority) was established to maintain the long-term sustainable yield of the Central Sacramento County Groundwater Basin (Central Basin). The Joint Powers Agreement (JPA) between the City of Elk Grove, the City of Folsom, the City of Rancho Cordova, the City of Sacramento and the County of Sacramento creating the Authority provides the funding mechanism necessary to implement Central Sacramento County Groundwater Management Plan (Central Basin GMP). Collection of the contributions described in the JPA and adoption of the Authority's 2010-2011 fiscal year budget provide the means for the Authority to implement the Central Basin GMPs administrative programs. The JPA also provides for the operation of any Well Protection Program (WPP) that may be prescribed by the Central Basin GMP. While current economic conditions have curtailed any activity on the WPP, adoption of a budget provides an administrative means to report on the status of the fund.

Recommendations

Adopt Resolution No. 2010-01 to fund the Authority's administrative budget for fiscal year 2010-2011 and provide for the collection of the annual contributions as described in the JPA; adopt the WPP Trust Fund budget for fiscal year 2010-2011.

Adoption Of The Fiscal Year 2010-2011 Sacramento Central Groundwater Authority Budget, Fiscal Year 2010-2011 Well Protection Program Trust Fund Budget , And Authorization To Collect Annual Contributions

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BACKGROUND:

On August 29, 2006 the Cities of Folsom, Elk Grove, Rancho Cordova and Sacramento and the County of Sacramento executed a joint powers agreement creating the Sacramento Central Groundwater Authority (Authority). The purpose of the Authority is to maintain the long-term sustainable yield of the Central Basin; ensure implementation of the Basin Management Objectives (BMOs) that are prescribed by the Central Basin GMP; oversee the operation of Well Protection Program prescribed by the Central Basin GMP; manage the use of groundwater in the Central Basin and facilitate implementation of an appropriate conjunctive use program by water purveyors; coordinate efforts among those entities represented on the governing body of the joint powers authority to devise and implement strategies to safeguard groundwater quality; and work collaboratively with other entities, including other groundwater management authorities that may be formed in the County of Sacramento and adjacent political jurisdictions, in order to promote coordination of policies and activities throughout the region.

On November 8, 2006 the Board adopted the Central Basin GMP. The Central Basin GMP reviews current and future water supply and demands and contains BMOs that address the rate of groundwater extraction, groundwater elevation, land surface subsidence, surface water flows and groundwater contamination. The Central Basin GMP also contains “trigger points” and remedies to ensure full implementation of the BMOs. It also provides for the protection of private groundwater wells and establishes cooperative relationships with Sacramento County’s Environmental Management Department and other regulatory agencies to address groundwater contamination.

DISCUSSION:

The proposed 2010-2011 fiscal year budget was developed based on the program requirements (GMP Related Expenses) described in the Central Basin GMP. The budget also provides for overhead expenses (Staff Expenses) including the Executive Director, Administration Support, Legal Counsel, and Financial support. The proposed budget also includes some funding for consultant services (Consultant Expenses). Funding has also been identified to provide limited staff support for activities related to the Well Protection Program.

During the 2008-2009 fiscal year the Authority established the WPP Trust Fund anticipating that program implementation would begin in early 2009. In March 2009, the Board acknowledged that development rates were so low that it would be impossible to establish a new fee program with the support of the building industry and placed the program on hiatus. However, in order to provide an administrative means to report on the status of the WPP Trust Fund the Authority’s financial staff has advised adoption of a budget even though it will not be funded.

The proposed budget for SCGA and WPP was presented, discussed and approval recommended by the SCGA Budget Committee on April 12, 2010. Budget Committee members include Ed Crouse, Scott Fort, Herb Niederberger and Walt Sadler.

Staff recommends adoption of Resolution No. 2010-01 to fund the Authority’s administrative budget for fiscal year 2010-2011 and provide for the collection of the annual contributions as

Adoption Of The Fiscal Year 2010-2011 Sacramento Central Groundwater Authority Budget,
Fiscal Year 2010-2011 Well Protection Program Trust Fund Budget , And Authorization To
Collect Annual Contributions

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described in the JPA. Staff further recommends adoption of the aforesaid resolution for the WPP
Trust Fund budget for fiscal year 2010-2011.

Attachments:

Resolution No. 2010-01

Attachment A – The Fiscal Year 2010-2011 Authority’s Budget

Attachment B – The Fiscal Year 2010-2011 Well Protection Program Trust Fund Budget

Attachment C – The Fiscal Year 2010-2011 Annual Contribution

Attachment D – The Fiscal Year 2010-2011 Authority’s Budget Detail

Attachment E – The Fiscal Year 2010-2011 Well Protection Program Trust Fund Budget Detail

ATTACHMENT A - Fiscal Year 2010-2011 Authority's Budget

FUND: Sacramento Central Groundwater Authority (096B)

ACTIVITY: Groundwater Supply Operations (0960001)

FISCAL YEAR: 2010-11.

	Actual 2007-08	Actual 2008-09	Adopted 2009-10	Estimate 2009-10	Requested 2010-11
MEANS OF FINANCING					
Reserves:					
Prior Year Fund Balance	190,514	146,529	(56,128)	(56,128)	93,047
Revenues:					
Contributions from other Agencies	270,471	263,336	267,146	267,146	268,461
Interfund Charges (Transfer In / Out) reimbursement from SCGA WPP fund	0	0	0	0	0
Reserve Release	0	0	58,282	58,282	0
Interest Income	0	29,685	15,000	5,000	15,000
AB303 Grant				130,927	
Total Means of Financing	460,985	439,550	284,300	405,227	376,508
FINANCING USES					
Provision for Reserves	88,485	86,145			
Interfund Charges (Transfer In / Out) reimbursement from SCGA WPP fund				0	
Salaries / Benefits	0	0	0	0	0
Services & Supplies	225,971	246,605	284,300	312,180	308,300
Other Charges	0	0	0	0	0
Encumbrance Roll to Next Fiscal Year		162,928		0	
Total Financing Uses	314,456	495,678	284,300	312,180	308,300
ENDING FUND BALANCE	146,529	(56,128)	0	93,047	68,208

See Attachment D for Budget Detail

need reserve of 20% of expenditures.

61,660

ATTACHMENT B - Fiscal Year 2010-2011 Well Protection Program Budget

FUND: SCGA - Well Protection Program Trust (096C)
 ACTIVITY: Well Protection Program Operations (0961000)
 FISCAL YEAR: 2010-11

	Actual 2007-08	Actual 2008-09	Adopted 2009-10	Estimate 2009-10	Requested 2010-11
MEANS OF FINANCING					
Prior Year Fund Balance	0	0	0	0	0
Revenues:					
Contributions from other Agencies	0	0	134,000	0	0
Interfund Charges (Transfer In / Out)	0	0	0	0	0
Interest Income	0	0	0	0	0
Total Means of Financing	0	0	134,000	0	0
FINANCING USES					
Salaries / Benefits	0	0	0	0	0
Services & Supplies	0	0	56,600	0	0
Other Charges	0	0	0	0	0
Interfund Charges (Transfer In / Out) reimbursement to SCGA fund	0	0	50,000	0	0
Total Financing Uses	0	0	106,600	0	0
ENDING FUND BALANCE	0	0	27,400	0	0

See Attachment E for Budget Detail

ATTACHMENT C

Sacramento Central Groundwater Authority Funding
(2010-2011)

	Annual Contribution Paragraph 8(d)(i)	Annual Contribution/Surface Water Paragraph 8(d)(ii)	Annual Contribution/Groundwater Paragraph 8(d)(iii)	Annual Contribution/Ag Paragraph 8(d)(iv)	Annual Contribution/Ag/Res Paragraph 8(d)(v)	Total Annual Contribution
Board Members						
City of Folsom	\$ 10,000.00					\$ 10,000.00
City of Rancho Cordova	\$ 10,000.00					\$ 10,000.00
City of Sacramento	\$ 10,000.00					\$ 10,000.00
City of Elk Grove	\$ 10,000.00					\$ 10,000.00
County of Sacramento	\$ 10,000.00					\$ 10,000.00
Agricultural Interests				\$ 88,493.00		\$ 88,493.00
Agriculture-Residential					\$ 3,881.00	\$ 3,881.00
Commercial/Industrial Self Supplied						\$ -
Conservation Landowners						\$ -
Public Agencies/Self Supplied						\$ -
Elk Grove Water Service			\$ 2,642.70			\$ 2,642.70
Omochumne-Hartnell Water District						\$ -
Rancho Murieta CSD		\$ 6,000.00				\$ 6,000.00
California-American Water Co.			\$ 39,182.34			\$ 39,182.34
Golden State Water Company		\$ 6,000.00	\$ 8,357.97			\$ 14,357.97
Sacramento County Water Agency		\$ 6,000.00	\$ 57,903.61			\$ 63,903.61
Sacramento Regional County Sanitation District						
Total	\$ 50,000.00	\$ 18,000.00	\$ 108,086.62	\$ 88,493.00	\$ 3,881.00	\$ 268,460.62
Annual Contribution/Groundwater is \$2.07/acre-foot of groundwater pumped from the basin averaged over previous three calendar years and excluding the first 5000 acre-foot						
Annual Contribution by Agriculture is 25-percent of the estimated annual pumping (as determined by SCWA) at the rate of \$2.07/acre-foot and paid out of SCWA Zone 13 funds						
Annual Contribution by Agriculture/Residential is 25-percent of the estimated annual pumping (as determined by SCWA) at the rate of \$2.07/acre-foot and paid out of SCWA Zone 13 funds						
Groundwater/Purveyors	Pumping Amount (acre-feet)	Exclusion (acre-feet)	Net Pumping (acre-feet)	Rate (\$/acre-foot)	Cost	
Commercial/Industrial Self Supplied	0	0	0	\$ 2.07	\$ -	
Public Agencies/Self Supplied	0	0	0	\$ 2.07	\$ -	
Elk Grove Water Service	6,277	5000	1277	\$ 2.07	\$ 2,642.70	
Omochumne-Hartnell Water District	0	0	0	\$ 2.07	\$ -	
Rancho Murieta CSD	0	0	0	\$ 2.07	\$ -	
California-American Water Co.	23,929	5000	18,929	\$ 2.07	\$ 39,182.34	
Golden State Water Company	9,038	5000	4,038	\$ 2.07	\$ 8,357.97	
Sacramento County Water Agency - Zone 41	32,973	5000	27,973	\$ 2.07	\$ 57,903.61	
Groundwater/Ag		25% of estimated pumping				
Agricultural Interests	171000	0.25	42750	\$ 2.07	\$ 88,493.00	
Conservation Landowners	0	0.25	0	\$ 2.07	\$ -	
Groundwater/Ag/Res						
Agriculture-Residential	7500	0.25	1875	\$ 2.07	\$ 3,881.00	

ATTACHMENT D - Fiscal Year 2010-2011 Authority's Budget Break-down

MEANS OF FINANCING

Prior Year Fund Balance	\$	93,047
Revenues:		
Contributions from Other Agencies		
Annual Contribution	\$	50,000
Surface Water Contribution	\$	18,000
Groundwater Contribution	\$	108,087
Agricultural Contribution	\$	88,493
Ag/Res Contribution	\$	3,881
Subtotal of Contributions	\$	268,461
Interest Income	\$	15,000

Total Means of Financing **\$ 376,508**

FINANCING USES

Salaries/Benefits	\$	-
Services & Supplies:		
Staff Expenses	\$	77,100
Consultant Expenses	\$	51,000
Office Expenses	\$	3,400
GMP Related Expenses	\$	106,800
Well Protection Program	\$	50,000
Reporting Expenses	\$	20,000
Other Charges	\$	-
Total Financing Uses	\$	308,300

ENDING FUND BALANCE **\$ 68,208**

ATTACHMENT E - Fiscal Year 2010-2011 Well Protection Program Budget Break-down

MEANS OF FINANCING

Prior Year Fund Balance	\$	-
Revenues:		
Well Protection Fee Collection	\$	-
Interfund Charges (Transfer In/Out)	\$	-
Interest Income	\$	-
Total Means of Financing	\$	-

FINANCING USES

Salaries/Benefits	\$	-
Services & Supplies		
Well Impact Claims	\$	-
Well Registration	\$	-
Subtotal of Services & Supplies	\$	-
Other Charges	\$	-
Interfund Charges (Transfer In/Out)	\$	-
Reimburse to SCGA Fund	\$	-
Total Financing Uses	\$	-
ENDING FUND BALANCE	\$	-

RESOLUTION NO. 2010-01

**SACRAMENTO CENTRAL GROUNDWATER AUTHORITY
RESOLUTION ADOPTING AND ASSIGNING COSTS TO FUND SCGA'S
ADMINISTRATIVE AND PROGRAM BUDGETS FOR FISCAL YEAR 2010-2011 AND
PROVIDE FOR THE COLLECTION OF ANNUAL CONTRIBUTIONS, AND
ADOPTING AND ASSIGNING COSTS FOR FISCAL YEAR 2010-2011 FOR THE
WELL PROTECTION PROGRAM**

WHEREAS, on August 29, 2006 the Joint Powers Agreement Between the City of Elk Grove, the City of Folsom, the City of Rancho Cordova, the City of Sacramento and the County of Sacramento Creating the Sacramento Central Groundwater Authority (“JPA”) established a separate public entity identified as the Sacramento Central Groundwater Authority (“AUTHORITY”) with its own Board of Directors (“BOARD”); and

WHEREAS, the AUTHORITY was created to maintain the long-term sustainable yield of the Central Basin in accordance with the Central Sacramento County Groundwater Management Plan; and

WHEREAS, the JPA provides for the collection of annual contributions to fund implementation of the Central Sacramento County Groundwater Management Plan;

WHEREAS, the JPA provides for the operation of any Well Protection Program that may be prescribed by the GMP; and

WHEREAS, the AUTHORITY’s administrative budget for fiscal year 2010-2011 is specified in Attachment A. The budget includes projections of revenues, staff expenses, consultant expenses, office expenses and Groundwater Management Plan related expenses. The administrative budget is required to finance the administrative activities necessary to manage the Central Groundwater Basin; and

WHEREAS, the Well Protection Program Trust Fund’s administrative and program budget for fiscal year 2010-2011 is specified in Attachment B. The budget includes projections of revenues, registration expenses, and well replacement cost expenses. The administrative and program budget is required to finance activities necessary to implement the Central Basin Well Protection Program

NOW, THEREFORE, be it resolved by the BOARD as follows:

1. The above recitals are correct and the BOARD so finds and determines.
2. The BOARD finds and determines that:
 - a. The SCGA administrative budget for fiscal year 2010-2011 as specified in Attachment A is hereby adopted; and
 - b. The Well Protection Program Trust Fund administrative and program budget for fiscal year 2010-2011 as specified in Attachment B is hereby adopted; and
 - c. The annual contribution for the SCGA administrative budget for fiscal year 2010-2011 budget will be collected from the contributors as directed in the JPA pursuant to Appendix C; and
 - d. Billing for the annual contribution shall be mailed not later than thirty (30) days following the adoption of this resolution with payment to be made within thirty (30) days of receipt of billing.

PASSED AND ADOPTED by the BOARD at their regular board meeting on May 12, 2010.

By: _____

Chair

AGENDA ITEM 5: SERVICES CONTRACT

BACKGROUND:

In order to fully implement programs outlined in the groundwater management plan, the Groundwater Authority has determined the need for water resource planning and information management services. WRIME has been selected by the Groundwater Authority to provide these services based on its qualifications, experience, and facilities for performing this work.

On January 13, 2010 the Board authorized the Executive Director to enter into a contract with WRIME to prepare of an application for a Local Groundwater Assistance Grant (AB 303). On March 10, 2010 the Board authorized the Executive Director to enter into a contract with WRIME to support development of the Regional Contamination Model into the Central Basin in conjunction with efforts underway by the Sacramento Groundwater Authority. It is expected that there will be a need for additional support services from WRIME in the future on other projects.

The scope of services to be provided under this contract, the schedule for performance, and compensation will be set forth in written task orders agreed to in writing by the Groundwater Authority and WRIME. WRIME will initiate task orders only with written authorization from the Groundwater Authority.

STAFF RECOMMENDATION:

ACTION: Authorize the Executive Director to enter into a services contract with WRIME.

MAY 12, 2010

TO: SACRAMENTO CENTRAL GROUNDWATER AUTHORITY BOARD

FROM: DARRELL ECK

RE: EXECUTIVE DIRECTOR'S REPORT

6a) **Local Groundwater Assistance Grant** – According to the State Department of Water Resources (DWR) the Proposal Solicitation Package (PSP) for AB 303 grants will not be released until the October/November 2010 timeframe.

6b) **LAO Report – Improving Management of the State's Groundwater Resources** - On March 24, 2010, the Legislative Analyst's Office released the aforementioned report. This report further defines recommendations outlined in the LAO Report – California's Water: An LAO Primer released in October 2008. The report includes recommendations to the Legislature for improving statewide management of groundwater resources, including phasing in a statewide permitting system for groundwater.

6c) **Well Protection Program Update** – Walt Sadler is currently coordinating with the BIA to set up a meeting to discuss the status of the program and to establish a contact within their office.

6d) **Legislation/Regulatory Update** – The state of California passed a package of water bills in 2009, one of which in SBX7 6. This bill requires the monitoring of groundwater levels in all basins and sub-basins throughout the state. Areas that do not comply with these monitoring requirements would be ineligible for water related grant funding. Entities that seek to undertake the required monitoring must notify DWR by January 1, 2011. DWR is currently developing guidelines for the program. Water level monitoring in the Central Basin is primarily conducted by SCWA and DWR. Staff will coordinate with DWR to determine if the present mode of monitoring will satisfy requirements established in the legislation or if some modification is required.

Regional Water Authority staff is tracking a number of bills in the current legislative session (see attached). Of note is AB 2304 which is related to groundwater; the bill adds a coordination component to groundwater management plans to develop and implement land use strategies that protect priority recharge areas with local planning agencies.

6e) **SCGA Board Appointments** – The term of office for those Board members appointed by the Cities of Elk Grove, Folsom, Rancho Cordova, and Sacramento will be expiring in August 2010 (see attached list). According to the SCGA JPA, the term of office for each member of the governing board of the authority shall be for a period of four (4) years. Please send a written

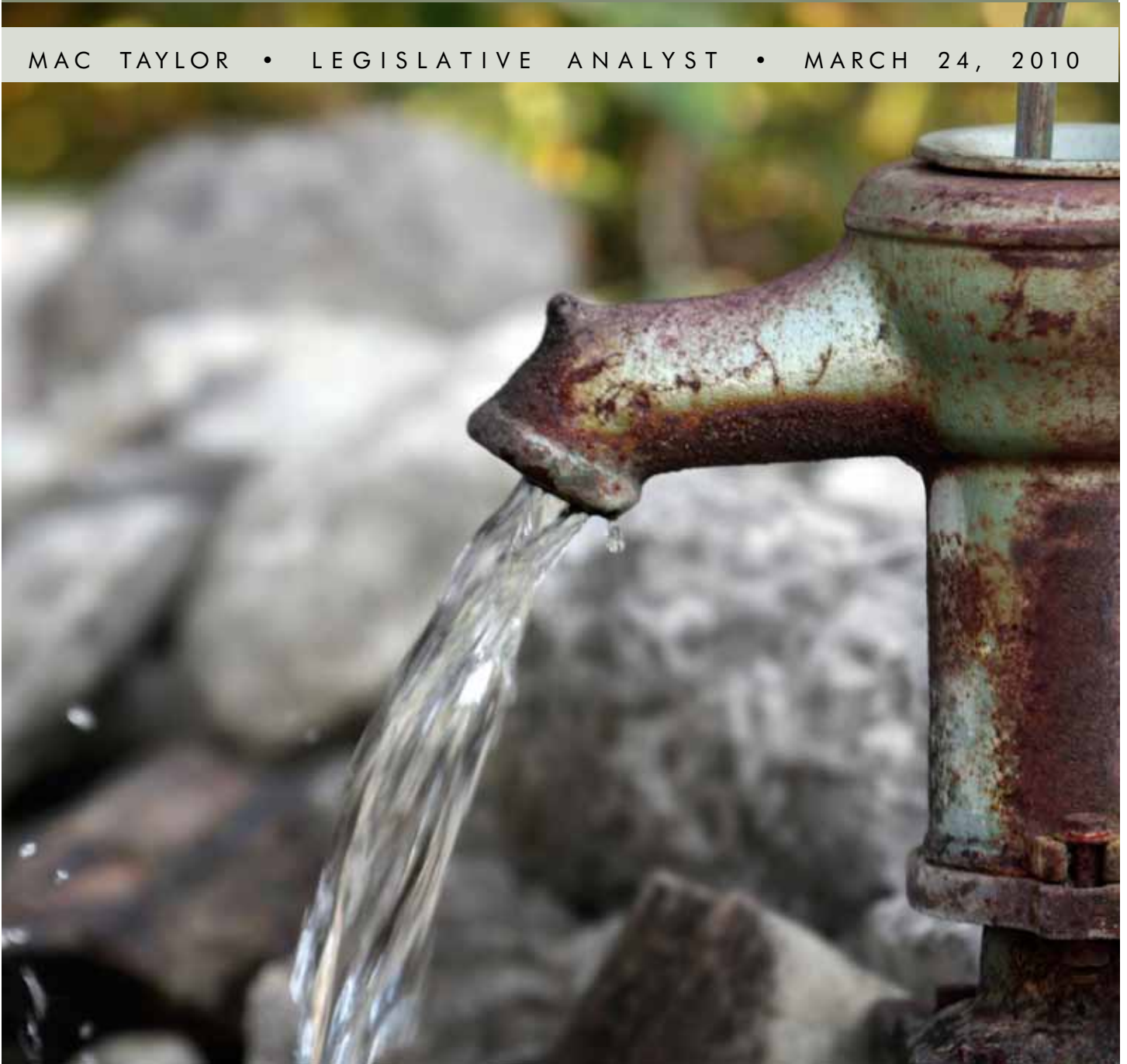
request on your agency's letterhead to the SCGA office as soon as possible so this item can be placed on the respective agency's agenda for action.



Liquid Assets:

Improving Management of the State's Groundwater Resources

MAC TAYLOR • LEGISLATIVE ANALYST • MARCH 24, 2010



AN LAO REPORT

EXECUTIVE SUMMARY

California's water system is facing a series of challenges affecting water availability, reliability, and delivery. Groundwater management is one of the state's most critical liquid assets—a key component of both local and statewide efforts to better manage water supply and water quality in the state. This report builds upon our previous 2008 publication, *California's Water: An LAO Primer*, in which we provided an overview of California's water system and related legislative policy considerations, including issues related to groundwater. Our focus and primary goal of this report is to outline ways that groundwater management could be improved from a statewide perspective in a way that builds on recent legislative efforts to address this subject area and, to the extent possible, maintains local control over day-to-day management of groundwater systems.

In our view, reevaluating how groundwater is managed is necessary if it is to achieve its full potential as a reliable source of water. In this report, we (1) provide more background on the state's current approach to groundwater management; (2) address current issues with groundwater management, including the impact of water quality on water supply; (3) address the disconnect between the law and science of groundwater; and (4) review other states' approaches to groundwater management.

We also present the Legislature with a series of actions that would be phased in over a period of time to address current and emerging groundwater management issues. In particular, we recommend that the Legislature:

- Phase in a more comprehensive groundwater monitoring system to allow the state to focus funding and technical assistance efforts in the areas of greatest need.
- Establish Active Management Areas (a defined geographic area where specific rules are established to govern the withdrawal and use of groundwater), in circumstances where groundwater overdraft potential or the extent of pollution problems are the highest.
- Bring science and law together to modernize groundwater law to accurately reflect the physical interconnection of surface water and groundwater.
- Consider phasing in statewide groundwater permitting over a multiyear period, based on data from expanded monitoring requirements, while maintaining local control over implementation of permitting to the extent possible.

AN LAO REPORT

BACKGROUND

Water System Facing Challenges— Groundwater Part of the Solution

California’s Water System Facing Challenges.

California’s water delivery system is facing a series of challenges due in part to a combination of increasingly variable weather conditions, legal requirements, and system operation and conveyance constraints. These challenges affect water availability, reliability, and delivery. Recent public and private efforts have sought ways to address these challenges. These measures include proposals for groundwater storage, surface storage, infrastructure changes, system operation improvements, and water recycling, among others.

Building on Prior LAO Groundwater Recommendations. This report builds on our 2008 publication, *California’s Water: An LAO Primer*, in which we provided an overview of California’s water governance, supply, demand, costs, and financing. In that primer, we introduced several issues for legislative consideration, including a recommendation to reevaluate how groundwater is regulated and managed in the state. In our view, such reevaluation is necessary if groundwater is to fully serve its potential as a reliable source of water supply. In this report, we further develop this policy approach and offer specific recommendations for legislative action. Our recommendations were informed by our review of groundwater management success stories in local areas of the state and in other western states.

Local Control Essential—With Accountability. In many areas of the state, local agencies are the first to notice and deal with groundwater problems—from water quality issues to supply challenges. As we will discuss, a number of local areas of the state provide models for groundwa-

ter management and monitoring. This report will lay out issues affecting both local and statewide water supply and suggest methods to strengthen local groundwater management. Our approach is consistent with the Legislature’s expressed desire to retain some level of local control over groundwater management, while allowing the state to intervene when problems go beyond the capabilities of local authorities, or when the impact of problems in the groundwater basin is regional in nature. We recommend that the retention of local control be combined with improved accountability for local management actions.

In reviewing groundwater management issues, we interviewed a broad range of interested parties, including the staff of state, local, and federal agencies that have a role in the regulation and/or management of water; private water developers and consultants; members of the public; and researchers with expertise in the subject, including the Water Education Foundation. We also reviewed relevant state law, local regulations, case studies, and federal agency activities.

What Is Groundwater and Why Is it Important?

Groundwater is the portion of water from precipitation that does not run into surface streams but rather infiltrates (either naturally or deliberately) under the surface of the ground. In a sense, all groundwater starts as some form of surface water, meaning that the two types of water are integrally connected. Much like a sponge, the ground, depending on soil type, soaks up the groundwater into basins available for use. This can happen over a period ranging from several years to over a millennium in some cases. Areas

where groundwater is present or saturated are called aquifers, which generally have boundaries defined as basins. As water is drawn out of these basins, via wells or seepage into surface streams, groundwater availability can be reduced.

Groundwater Is a Major Contributor to State’s Water Supply. Groundwater supplies about 30 percent of California’s overall dedicated water supplies in average precipitation years, as shown in Figure 1. In dry years, this increases statewide to about 40 percent. This is because when surface water supplies are restricted, both local water agencies and irrigators (farmers) increase groundwater pumping to meet water supply needs. At least 43 percent of Californians obtain at least a portion of their drinking water annually from groundwater sources.

During years where surface water deliveries are not available and rainfall is scarce, groundwater may provide up to 100 percent of irrigation water for certain areas. In some areas where surface supplies are not accessible or economically feasible, groundwater provides 100 percent of a community’s public water.

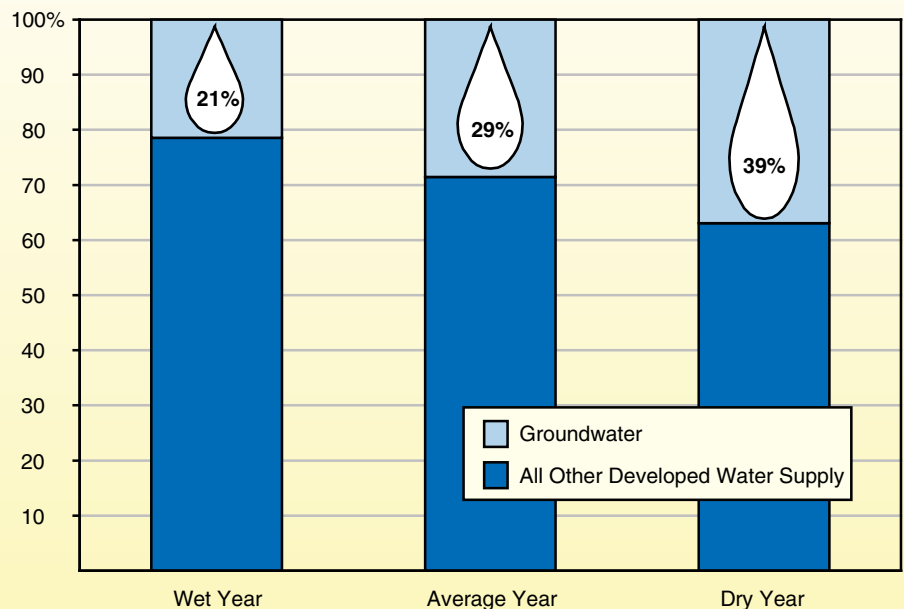
Future Water Supply Reliability Uncertain. The Department of Water Resources (DWR) projects that the state is likely to have an adequate water supply in the aggregate to meet its water demands in average precipitation years under current trends

as shown in Figure 2. However, in dry years, projected demand by category of use will exceed the available supply in 2030 in most cases. It is for these dry cycles that the state must plan to ensure a reliable water supply.

Groundwater Is an Important Contributor to Water Reliability Solutions. There are several options available to the state to ensure that, during the driest years, disruptions from water shortages are minimized on a statewide basis. The DWR has analyzed a number of short- and long-term options to strengthen water supply reliability throughout the state, as shown in Figure 3 (see page 8). The options presented in the figure generally involve reducing water demand or increasing water supplies. They also vary in their potential to produce additional water. Basic groundwater replenishment is considered a solution that generally can be developed in the short term, potentially

Figure 1

Groundwater Is Major Contributor to California’s Water Supply, More So in Dry Years



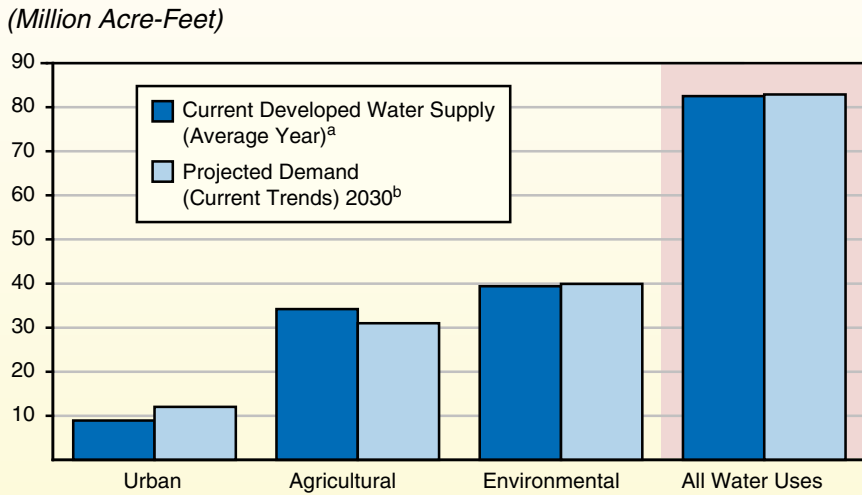
providing significant additional water supplies over time. The related options of brackish desalination (the desalting of either groundwater or reused water) as well as water recycling (re-use of water after treatment which may include reintroduction to the groundwater system) are also key water supply reliability solutions to which the management of groundwater contributes.

Key Groundwater Laws

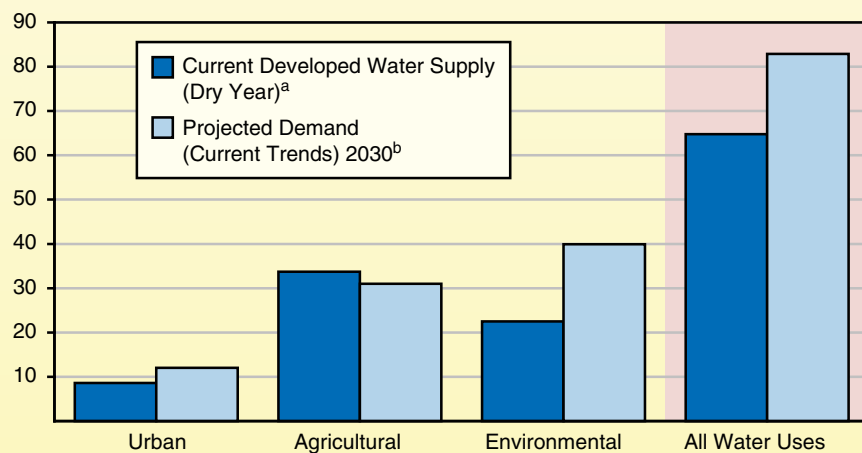
Key Laws Governing Groundwater Focus on Water Quality, Local Management. Groundwater is mainly managed at a local level, but several state laws govern how locals are to manage this resource. In general, groundwater law at the state level can be categorized in two ways:

- (1) laws that support and provide incentives for local management or
 - (2) laws designed to protect and monitor groundwater quality.
- Figure 4 (see page 9) lists selected key state laws governing groundwater. This list includes recent legislation, approved as part of a package of proposals to address the state’s water problems, to enhance groundwater monitoring and reporting. We discuss some of these key laws in further detail below.

Figure 2
Supply and Demand Projected to Be Nearly Equal Under Average-Year Conditions in 2030...



...But Dry-Year Demand Projected to Exceed Supply



^aDeveloped water supply is the amount of precipitation, surface water, or groundwater made available for use, generally through construction of storage or delivery systems.

^bDemand projections from Department of Water Resources, 2005 California Water Plan.

“AB 3030”—Voluntary Approach to Groundwater Management. Law enacted in 1992 (commonly referred to as AB 3030), allows local governments to create groundwater management districts and gives the districts the authority to raise fee revenues to pay for management of the groundwater. Of the

10,000 public water systems in the state (at least 15 service connections), less than 1,000 are water districts that are eligible to form groundwater districts. Under the initial version of this legislation, districts submit groundwater management plans to DWR. However, beyond using these plans for general water planning, the department’s role was extremely limited. Subsequent legislation required the department to report on which districts had completed AB 3030 plans. (Over 140 such plans have been submitted to DWR.)

SBX7 6—2009 Water and Groundwater Legislation Package. A series of legislative bills enacted in the 2009 session attempted a comprehensive reform of California’s water policy. While the focus of the package was on addressing problems in the Sacramento-San Joaquin River Delta system, one bill was wholly dedicated to groundwater. Chapter 1, Statutes of 2009 (SBX7 6, Steinberg),

requires monitoring and public reporting of groundwater elevations in all groundwater basins in California. Local agencies are required to conduct the monitoring, which will then be reported to DWR. The department is then required to report periodically on the status of groundwater across the state, including these reported elevations, in a public report. As an incentive to enforce compliance with this monitoring requirement, the legislation bars counties from

receiving state water grants and loans when certain local agencies do not conduct required monitoring. As part of the package, an \$11.1 billion bond measure was passed by the Legislature which includes \$1 billion specifically for groundwater supply and quality. There is potential additional funding for groundwater management in various other provisions of the bond measure. This measure has been placed on the November 2010 ballot.

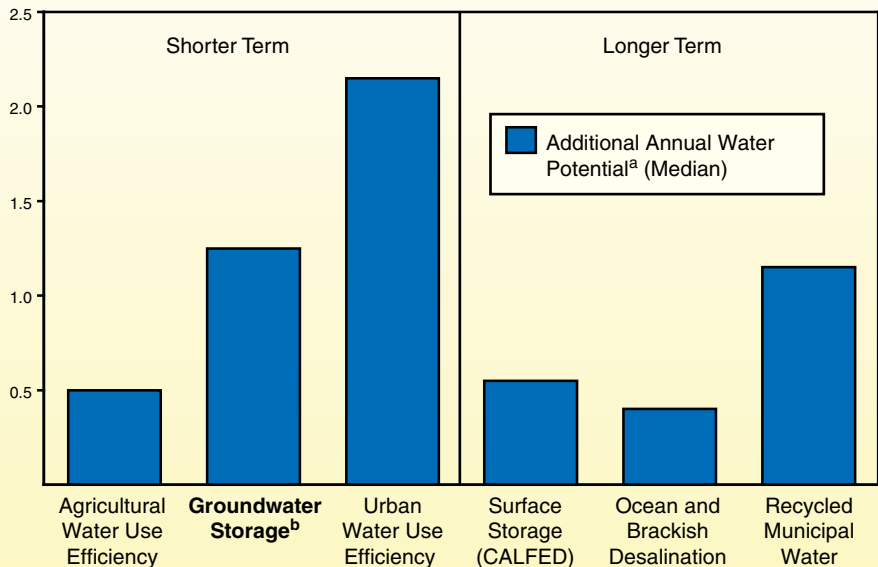
**Managing Groundwater—
State Law, Local Rules**

State Has No Statewide Groundwater Use Permitting System. As further discussed later in this report, California is one of two western states without a comprehensive state-managed groundwater use permitting system (also sometimes referred to as a groundwater rights system). In

Figure 3

Groundwater: A Key Option for Additional Water Supply

(Million Acre-Feet Per Year)



^aReflects the midrange of estimates of water supply development potential of particular solutions, Department of Water Resources, California Water Plan 2005.

^bIncludes integrated management of groundwater and surface water.

California, landowners are in general entitled to the reasonable use of groundwater on property overlying the groundwater basin. In contrast, the state’s surface water generally is not an entitlement—surface water rights generally are appropriated through a state-administered permitting system.

Court Adjudications and Local Regulations.

Groundwater rights in some parts of the state (mainly in urban Southern California) have been adjudicated in the courts. Elsewhere, groundwater use is regulated on an ad-hoc basis by a disparate group of local agencies. These agencies include local districts with statutory authority to manage groundwater (such as water conservation districts), local water agencies that have adopted groundwater management plans pursuant to statute, and cities and counties that have adopted local groundwater ordinances.

Local Rules to Protect Local Water.

Local groundwater ordinances are largely designed to protect the availability of water supplies to users within the local jurisdiction. In general, these

local ordinances operate to limit groundwater transfers out of the local area, for example, by pumping groundwater and moving it through canals or rivers to another area. Also, local rules may limit the ability to transfer surface water to another area because this in turn could increase the use of groundwater to the detriment of other groundwater users. Finally, local areas are beginning to limit certain types of water uses, including for bottled water, where the sole purpose is to export the water out of the local government area.

State Supports Local Groundwater Management, Including Water Quality Improvement.

As discussed in more detail below, while the state does not directly regulate groundwater use, it has taken some steps to encourage local groundwater management. This is done mainly through financial incentives, including bond-funded and federally funded local assistance programs for water-related purposes that could include groundwater-related projects. For example, the State Clean Water Revolving Loan Fund, a fund seeded with federal funds and most

Figure 4
Selected Key State Laws Governing Groundwater

Law Name or Purpose	Support/Incentives for Local Management	Protect or Monitor Groundwater Quality
Porter-Cologne Water Quality Act (1969)		X
The Pesticide Contamination Prevention Act of 1985		X
Local Groundwater Management Act of 1992 (AB 3030)	X	
Local Groundwater Management Assistance Act of 2000 (AB 303)	X	
Groundwater Quality Monitoring Act of 2001		X
Amendment to Land Use Laws—2001 (SB 221)	X	
Amendment to the Urban Water Management Act—2001 (SB 610)	X	
Groundwater Management Water Code Amendment—2002 (SB 1938)	X	
Groundwater Monitoring—2009 (SBX7 6)	X	X

recently augmented by funding from the federal American Recovery and Reinvestment Act of 2009, provides low-interest loans to water agencies to improve water treatment and wastewater facilities. A similar fund for public drinking water systems is operated by the Department of Public Health (DPH). Both of these funding sources can be used for groundwater management projects.

Many state financial incentive programs relevant to groundwater are jointly operated by multiple state agencies. For example, the Integrated Regional Water Management Program, which provides financial and technical assistance to local agencies to increase water supply in part through the cleanup and removal of contaminated water in groundwater basins, is jointly administered by the State Water Resources Control Board (SWRCB) and DWR.

The state regulates water quality through pollution discharge permits (issued by SWRCB) and various industry-specific programs. However, groundwater quality is not protected under state regulation and enforcement to the same extent as surface water quality. This is in part due to the nature of groundwater, as it is more difficult to

systematically monitor groundwater than surface water. However, this situation is also to the result of jurisdictional issues where the state is unable to conduct monitoring on private property without permission. The most comprehensive water quality monitoring required by the state is done by DPH through its drinking water monitoring programs.

State and Federal Agency Roles in Groundwater

Many State Agencies Involved in Groundwater. While the state has encouraged local management of groundwater, several state agencies have roles and responsibilities related to groundwater management. Figure 5 lists state agencies involved with groundwater management and their general roles. Although groundwater management is not the primary mission of any state agency, many have been assigned significant tasks in this area, including monitoring water supply, regulating water quality, developing science and monitoring, cleanup of groundwater contamination, and local financial and technical assistance. The DPH enforces drinking water standards,

Figure 5
Many State Agencies Are Involved in Groundwater

	Water Supply	Regulate to Protect Water Quality	Science and Monitoring	Cleanup	Local Financial Assistance
California Public Utilities Commission	X	X			
Department of Food and Agriculture			X		X
Department of Pesticide Regulation		X	X		
Department of Public Health		X	X		X
Department of Toxic Substances Control		X	X	X	X
Department of Water Resources	X		X		X
Integrated Waste Management Board		X			
Office of Environmental Health Hazard Assessment			X		
Pollution Control Financing Authority					X
State Water Resources Control Board		X	X	X	X

which apply to all drinking water sources, including groundwater. (For more information on DPH’s role in this area, see the box on page 14.)

Federal Government—A Limited Direct Regulatory Role. The federal government does not directly administer programs to regulate the quality of groundwater as it does with surface water under the U.S. Clean Water Act. In most cases, administration of federal water quality responsibilities has been delegated to the state, such as for implementing federal safe drinking water standards. Figure 6 provides more detailed information on the three key federal agencies involved with groundwater management in California and their role in groundwater regulation.

Federal Direct Spending and Programs Nonetheless Important. Federal legislation and federal agencies have, however, played an important role in supporting California groundwater management through technical and financial assistance and through direct groundwater cleanup programs. For example, in 2009, the

U.S. Geological Survey published a comprehensive report on groundwater overdraft (the withdrawal of water at a rate faster than the basin is able to recharge) in the Central San Joaquin Valley, providing key technical information for groundwater users and planners in the area. In addition, direct spending by federal agencies has included between \$3 million and \$5 million per year over the past five years for groundwater cleanups. This includes funding to clean up leaking underground storage tanks. In addition, the federal government has appropriated funding for federal defense site cleanups, groundwater elevation monitoring by the National Aeronautic and Space Administration, and for various technical groundwater studies conducted by the U.S. Geological Survey.

State Funding for Groundwater Programs

Separating Groundwater Expenditures Difficult. As discussed earlier, many agencies work

on groundwater (and related drinking water) issues. However, much of this work is done in conjunction with other programs. For example, a program addressing groundwater contamination might also address surface water and soil contamination. For this reason, groundwater expenditures in state agencies are difficult to separately identify and therefore quantify.

Figure 6
Key Federal Agencies and Roles

Agency	Role
U.S. Environmental Protection Agency	Works with California Department of Public Health to ensure that groundwater drinking water supply sources comply with mandated federal drinking water programs and standards. Administers grant and loan programs for water treatment and cleanup.
U.S. Geological Survey	Conducts studies and provides groundwater monitoring for the State Water Resources Control Board’s Groundwater Ambient Monitoring and Assessment Program. Monitors national water use and conducts scientific studies.
U.S. Bureau of Reclamation	Monitors the impact of the surface water on groundwater basins in areas of the Central Valley Project, a surface water distribution project similar to the State Water Project.

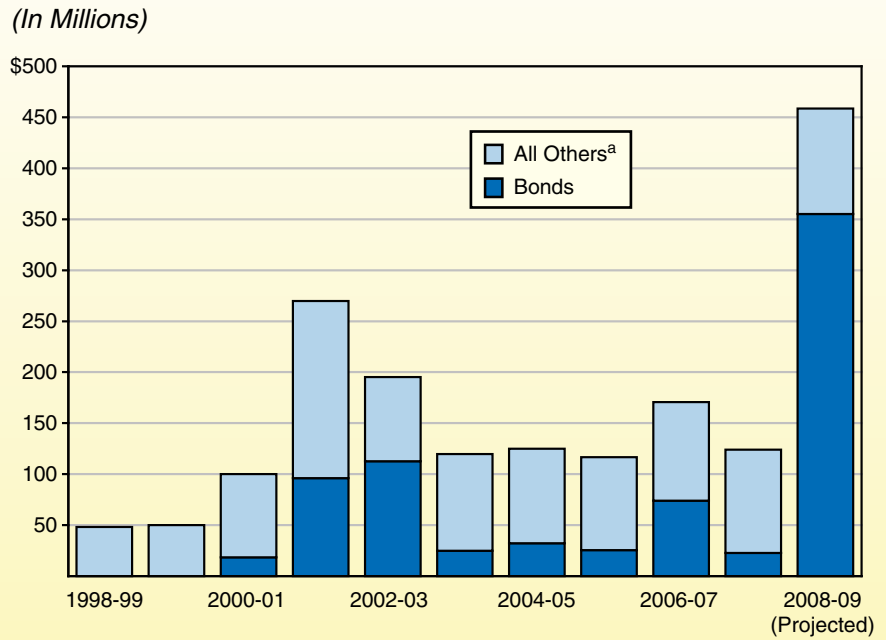
Groundwater Program Expenditures Vary Greatly Over Time.

As shown in Figure 7, funding for ongoing groundwater programs has varied greatly over time. Such funding has in many years come heavily from special funds (mainly fees), for such purposes as regulating water quality, reducing leaks from underground storage tanks, cleaning up groundwater sources, and managing groundwater resources. The

General Fund has been the main funding source for DPH’s drinking water regulatory program, although federal funds and bond funds have been in the main source of support for DPH’s financial assistance programs. These programs are designed to assist local and private water agencies in meeting safe drinking water standards.

Bond Funds Provide Large One-Time Influxes. As shown in Figure 7, bond funds have provided large one-time influxes of funding. These funds have been a source of support for many different programs, including drinking wa-

Figure 7
Groundwater Program Expenditures, by Fund Source



^a Excludes about \$250 million annual appropriation for Underground Storage Tank Cleanup Fund programs funded by fees.

ter and integrated regional water management. For example, the Groundwater Ambient Monitoring and Assessment (GAMA) program, relies on a \$50 million appropriation from Proposition 50 bond funds (in addition to a small amount of baseline special fund support) to conduct a comprehensive multiyear assessment of statewide groundwater quality. In recent years, federal direct spending has supported the GAMA program when bond funds were temporarily unavailable. These federal funds are limited, however, and the program will need to find other funding starting in 2011-12 in order to continue.

CURRENT ISSUES WITH GROUNDWATER MANAGEMENT

The Groundwater Challenge—When Contamination Reduces Water Supply

The potential to use groundwater to increase water supply, either by introducing water from another source into the ground as a storage basin or encouraging the natural refilling of groundwater basins, is a significant option to address water supply needs. However, there are potential barriers to this water reliability strategy. Communities are increasingly discovering that many primary groundwater basins are contaminated. Pollution from industrial activities (such as military facilities), commercial businesses (such as dry cleaners), leaking underground storage tanks (USTs), septic systems, and agricultural activities have reduced or eliminated the availability of usable groundwater in many parts of the state. In some cases, when a contaminant is discovered, it may take decades to remove pollution and bring the water back to usable condition.

Loss of Water Source Can Be Expensive to Locals. As discussed earlier, while 43 percent of Californians rely in part on groundwater for their drinking water needs, some communities rely on groundwater for 100 percent of their water needs. As part of routine testing of drinking water, the DPH has sometimes discovered that a source of water (such as groundwater) is contaminated to a level that violates state and/or federal safe drinking water standards. Discovery of contamination in a drinking water well often leads to closure of the well. Users of the well must then find replacement sources of water. In areas where other sources such as surface water or alternate groundwater resources are not avail-

able, relatively expensive bottled water may be the only available drinking water supply.

The DPH reported that nitrate (a groundwater contaminant) was detected in levels that exceed safe drinking water standards in 921 public drinking water sources, mostly in agricultural areas. In many of these areas, groundwater is the sole source of drinking water for the community.

Cleanup Is Costly. Cleaning up contaminated groundwater can be very expensive. For this reason, the state established an Underground Storage Tank Cleanup Fund in 1989 to provide financial assistance to the owners and operators of USTs containing petroleum. The fund, which is administered by SWRCB and supported by an annual assessment on tank owners, is used to remediate conditions caused by leaking USTs, including the contamination of groundwater supplies. Expenditures from the fund have varied between about \$180 million to \$280 million annually over the last ten years for hundreds of sites. For 2010-11, the Governor's budget proposes expenditures of \$400 million from this fund—the highest level ever.

Most Supply Projections Do Not Account For Groundwater Contamination

In many cases, contamination of a groundwater basin is known to local water managers, who are able to use this information to plan for water supply needs. However, state projections often disregard contamination, particularly where groundwater basins have had historical pollution problems that, when not addressed, remain within that groundwater basin. This situation

KEY STATE PLAYERS IN WATER QUALITY REGULATION

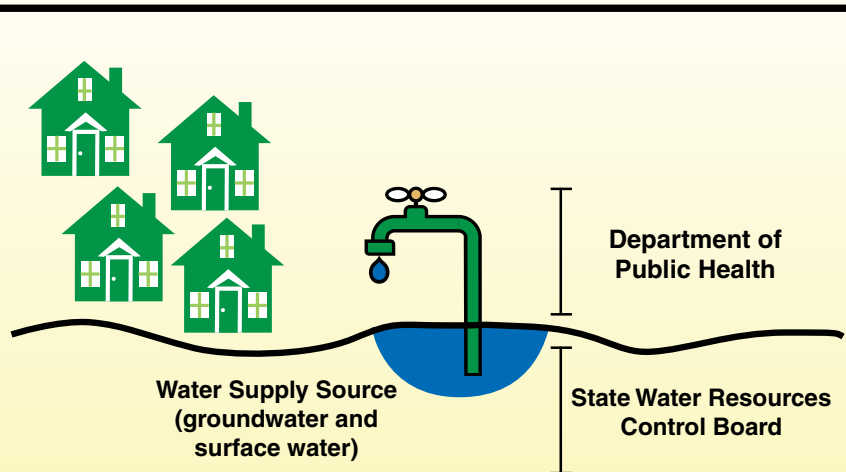
✓ Department of Public Health—Drinking Water Program

- Regulates public water systems with over 15 service connections for drinking water quality; oversees water-recycling projects, permits water treatment devices; and provides various technical assistance and financial assistance programs for water system operators—including bond and federally funded programs for infrastructure improvements in public water systems—to meet state and federal safe drinking water standards.
- Prior to approval of the Proposition 50 bond measure, the department had a limited role direct in groundwater issues through the Public Water Supervision System program funded mainly by fees on public water systems, federal grants, and the General Fund. Propositions 50 and 84 (bond measures) expanded the department's role to include local assistance grant programs for source water protection projects, many of which are groundwater projects.

✓ State Water Resources Control Board

- Primary state entity responsible for meeting state and federal water quality standards within the state.
- State and regional water boards assess groundwater quality, permit pollution discharges which may impact ground and surface waters, and investigate and direct the cleanup of contaminated groundwater resources. May require groundwater monitoring to assess the extent of contamination and impact of treatment technologies.
- Administers the Groundwater Ambient Monitoring and Assessment Program, a multiyear program designed to obtain information on groundwater quality in California.
- Works with Department of Water Resources to administer and set guidelines for the Integrated Regional Water Management Program and other programs where crossovers exist between water quality and water supply.

Two State Agencies Regulate Drinking Water Quality



poses challenges for estimating how much water is available for water supply and the cost to treat contaminated water. In some cases, this is because of a lack of adequate monitoring of water quality in groundwater basins, and in others it is because groundwater monitoring data that is gathered is not shared systematically or comprehensively with state agency officials.

Land Use Decisions May Also Be Affected.

Chapter 642, Statutes of 2001 (SB 221, Kuehl), requires land use developers to prove that water is available before proceeding with a development of over 500 units or other specific size requirements. However, the measure does not explicitly require that the developer prove that the groundwater supply that a project may be relying upon, for purposes of showing the availability of water, is actually usable. Most local land use development does not have to take into account likely trends for current and future groundwater contamination when determining the availability of water supplies to serve the new development. This can be the case where the inhabitants of a proposed development would have to rely on wells that have contaminants that cause public health concerns, either as the result of natural sources of contamination (such as from the leaching of arsenic into the water supply) or human causes (such as pollution by perchlorate). Land use decisions about such new development projects do not always take into account the potentially high cost on an ongoing basis of treating water supplies for the new residents.

The “Disconnect” Between Groundwater Law and Science

Groundwater and Surface Water Interconnected. In a 2003 publication, DWR describes groundwater and surface water as being physi-

cally connected. Groundwater aquifers are portrayed as a sort of sponge, with the water that fills the area between soil particles akin to an expansion of the sponge. If a stream or river moves through, in, and around that sponge, the two interact. If the groundwater sponge is dry, some water from the surface stream will be pulled into the groundwater area. If the groundwater basin is full (picture a fully expanded sponge) and the stream is dry, water will leach into the stream, providing it water. In this way, most groundwater (usually called “percolating groundwater”) can be understood to have a direct physical connection to surface water, rather than existing as a separate entity or underground river.

State Water Laws Do Not Reflect Accepted Science. Despite this scientific understanding of how groundwater works, under California law, water is characterized as either surface water, subterranean streams, or percolating groundwater. Water rights are required to use water taken from surface water and subterranean streams, but not for percolating groundwater.

This legal scheme for permitting of water rights, however, is inconsistent with hydrological science, because it does not taken into account the interactions discussed above between groundwater and surface water. According to a report on water rights commissioned by SWRCB, “the (legal) distinction between percolating groundwater and subterranean streams is meaningless, or nearly so.”

In some cases, the SWRCB has attempted to address this problem by administratively defining the groundwater surrounding a number of rivers (currently less than 15 statewide) as subterranean streams, which are within the purview of water rights permitting. However, these conflicts between state law and scientific reality make

regulating groundwater difficult and mean that litigation is often necessary to adjudicate groundwater rights issues.

Practical Implications of State's Gaps in Groundwater Management

Added Difficulties in State Water Planning.

Currently, the DWR is charged under state law with assessing California's urban, agricultural, and environmental water needs; evaluating potential water supplies; and reviewing whether any actions are needed to reduce demand to help address any shortages. As part of the assessments prepared for these purposes by DWR every five years (commonly referred to as the California Water Plan), the department estimates groundwater basin yields and attempts to take into account general water quality efforts (including those related specifically to groundwater). However, as discussed below, the state's water planning efforts are impeded by weaknesses in the statewide management of groundwater.

In its 2009 update to the California Water Plan, the department reports on a number of problems it faces with estimating groundwater supply, including a lack of data that would indicate what role groundwater can play in addressing statewide water needs. Our analysis of the available data similarly indicates that the lack of information about groundwater quality can lead to incorrect conclusions about the availability of groundwater supplies. For example, this disconnect between actual groundwater supply and reported supply might prompt the state to make inaccurate assumptions about overall water supply. In doing so, state funds appropriated for water management purposes may not be going to projects that reflect the least cost and highest

gain for water supply, either on a local or statewide basis.

As groundwater quality and supply challenges grow, the cost to the department to make accurate estimates, having to use disparate and conflicting information to create a statewide water supply picture, could increase. Integrating data from multiple sources, which are generally not standardized in their presentation, is a very difficult task. The cost to create new information technology programs to integrate these data can also be very expensive.

The potential for local groundwater plans to advise state water planning efforts is far from being met. With the passage of AB 3030 in 1992, groundwater management plans prepared locally were voluntarily submitted to DWR in attempt to support local management of groundwater while allowing the state some certainty that locals had a plan for future management of their groundwater. As we discussed, these plans (generally called AB 3030 plans) are required to be developed in a local public process and the law provides local fee and assessment powers to implement the plans. Over 140 plans have been submitted statewide.

The mandated AB 3030 groundwater management plans generally have not been used in statewide water planning because (1) the plans were voluntary, and a number of jurisdictions did not submit plans or did not submit complete and useful plans, and (2) there were no requirements that the plans that were submitted be implemented or improve the balance of the groundwater in the affected basin, the original plans have largely been of little practical use to the department.

Notably, the information contained in the plans reflects data from a single point in time

that is not presented in a standard format that would permit comparisons in the status among groundwater basins. This makes it difficult to publicize the data in a meaningful way or use the data to make policy decisions from a statewide perspective. The legislation did prompt some local governments that might not otherwise have done so to take an active role in managing their groundwater basin. However, lacking any plans for some areas of the state, DWR has not used the plans as a basis to prioritize state funding for groundwater management efforts.

The department neither was charged with determining an AB 3030 plan's accuracy nor were they given the authority or funding to review the validity of a plan. In some cases, AB 3030 plans are no more than a page long, though many are relatively comprehensive. The department still is not funded to review these plans, and while they may help the department paint the picture for water supply statewide, the plans have not become a solid tool for consolidating information about groundwater management statewide.

State and Federal Government Response—Well Drilling and Cleanup. Often when wells run dry, either in a series of dry years or even under normal pumping practices, locals turn to the state for assistance. Similarly, when wells become contaminated and are unable to be used, locals may turn to the state or federal government for assistance in providing clean water supplies.

For example, the Office of Emergency Services (now known as the California Emergency Management Agency, or CalEMA) spent \$5 million in 2000-01 to pay for a well in Klamath County to respond to a water shortage emergency that resulted when several wells went dry. In that same year, the Coastal Conservancy spent \$1 million to fix septic systems that were polluting groundwater that flowed out to the ocean. From 1997 to 2007, the Department of Toxic Substances Control spent over \$177 million to clean up groundwater contamination at the Stringfellow hazardous waste site in Riverside County, which posed a major public health risk to local water supplies. In 2009, the federal government authorized \$40 million in economic stimulus funds to drill wells in drought-stricken areas of the state.

OTHER STATES HAVE TAKEN STRONGER APPROACHES TO GROUNDWATER MANAGEMENT

As shown in Figure 8 (see next page), California differs from other western states in its relative lack of regulation and management of groundwater. For the most part, these other states go further than California in their approach to groundwater and offer specific policies the state may wish to consider to more effectively manage groundwater.

Permitting, Public Reporting, and Monitoring. Most other western states have some form of permitting system for extraction of, or the right to use, groundwater. Most of these states also require well data to be made public and these states either meter, measure, or otherwise actively monitor groundwater. For example, Texas allows local agencies to regulate groundwater

use, but requires well data to be submitted to the state in a standardized format, and makes this data public on the Internet. As will be described in more detail below, Texas (as well as other states) set up specific management areas for those groundwater basins that have the greatest potential for overdraft, or face significant risks of contamination.

Active Management Areas (AMAs). Groundwater flows by nature tend to overlap political boundaries, making it more difficult to manage these water resources. Local interests in one area, for example, may wish to withdraw water at a more rapid rate than their neighbors, setting up a potential conflict over management of a groundwater basin they share. In some cases, such conflicts have led either to the overdrafting of a basin or expensive court adjudication of water rights among the competing water users.

To deal with this problem, most western states have established AMAs that cross the boundary lines of local jurisdictions. In general, in an AMA, a water user may withdraw and use groundwater only in accordance with the specific rules governing the storage of water from surface water sources, withdrawal and use of water, and reporting of well logs and extraction. All users in the AMA are known, and their

water use tracked carefully, to ensure the area’s groundwater supply is moving toward a long-term equilibrium between the water coming into the aquifer and the water being pumped out for water supplies.

Often the state defines the boundaries of the AMA, and provides technical assistance to water users in the area in negotiating overall water use levels. Some states set rules and goals for management of AMAs, including provisions regulating the overdraft, replenishment, and recharge of groundwater aquifers.

“Show Me the Water”—Arizona’s Approach. Arizona generally requires its industries (including both those in urban areas and agriculture) to prove the availability of water for a project’s use over a lengthy period of time, according to a set of laws. Arizona’s unique approach to water management began in the 1970s when it became apparent that its water supplies would not satisfy its population growth under then-current practices. As Arizona negotiated a multistate compact for a share of Colorado River water, it initiated a sweeping change to its water laws, including those for groundwater. The state looked out decades into the future to determine how to grow with a limited water supply. Toward this end, the state:

Figure 8

California Lagging Other Western States in Groundwater Management

	California	Arizona	Texas	Colorado	New Mexico
Groundwater Management Components:					
Statewide groundwater use permitting	—	X	—	X	X
Active management areas	—	X	X	X	X
Statewide policy—well data made public	—	X	X	X	X
Statewide policy—metering, measurement, and reporting requirements	— ^a	X	—	X	X

^a SBX7 6 provides for statewide measurement (at the basin level), but not metering of water extraction.

- Strengthened the state's system for allocating water rights and established a water permitting system. Parties who had water rights that existed prior to 1980 were not subject to all of the new restrictions.
- Prohibited a net increase in agricultural land use in order to restrain overall water use, and strengthened existing statutes giving urban water use priority over agricultural water uses. Placed restrictions on future municipal use of groundwater.
- Enacted strict rules regulating wells, including permitting, monitoring, and standardized reporting of groundwater use.
- Began a major effort to store excess Colorado River water in groundwater basins, as opposed to surface storage, given the high amount of evaporation in hot areas.
- Mandated conservation measures for urban, industrial, and agricultural users. Required new development to assure a 100-year water supply either through surface water or groundwater.

The revamped Arizona laws have been generally accepted and are being met with compliance, though in individual cases the rules have proved controversial. Local control over water resources remains an issue, particularly since the state administers all water rights under the Arizona system. However, the state has made an

effort to work with local authorities to maintain a balance of power, with economic development and industrial growth encouraged where available water supply makes this possible.

Updating Groundwater Law. Many western state water laws were initially written in the 1800s and early 1900s, when the scientific knowledge of groundwater was extremely limited. Much like California, most states had statutory definitions of groundwater that had no basis in hydrology. Colorado and New Mexico are among the states that have taken steps to modernize their definitions of groundwater, linking surface water and groundwater in law. Arizona, through its major permitting law change, also allows for the interaction between surface water and groundwater to be reflected in the allocation of water rights.

Financing Groundwater Management Programs. Funding of state and local groundwater management programs is often a challenge. Most states we surveyed, such as Texas, use some amount of their General Fund monies to support state mapping and technical assistance programs. However, states that directly operate groundwater permitting programs generally use fees to at least partially support these activities, including the resources needed for planning and technical assistance to local agencies for groundwater programs. In all states we surveyed except Arizona, local districts or management areas have the authority to recover their groundwater program costs from the users of the water, whether through direct permitting fees or other types of fees for water use.

RECOMMENDED STEPS TO MORE EFFECTIVELY MANAGE CALIFORNIA’S GROUNDWATER

The Stakes Are High in Groundwater Management. As we have mentioned, the potential to use groundwater to increase water supply, either by introducing water from another source into the ground as a storage basin or by encouraging the natural refilling of groundwater basins is a significant option to address the state’s water supply needs. However, successful implementation of this solution into the state’s management of water is hampered by the state’s lack of regulation or monitoring of groundwater resources. Management of groundwater supplies—to the extent that it does occur—resides mainly at the local level and thus, by its very nature, does not address water needs from a statewide perspective. As a result, groundwater quality is not protected under state regulation and enforcement as comprehensively as surface water quality. As we have discussed, the consequences of insufficient action to protect these water resources are high. Once contaminated, groundwater loses some of its potential to serve as a water supply source. The situation has already led to costly emergency

efforts to clean up contaminated supplies and to provide substitute sources of water to communities dependent upon groundwater.

For the reasons stated above, and to build upon the work the Legislature has already done, we recommend that the Legislature adopt four fundamental changes to the way the state manages groundwater. These recommendations, which are summarized in Figure 9, represent the first steps that the state could take so that, in the long run, it is in a position to more strongly and effectively manage its groundwater resources. We recommend a shift to a more comprehensive groundwater management regime, similar to those being implemented successfully by other states, in order to avoid future water emergencies from the contamination of groundwater supplies and to make California’s statewide water supply system more reliable.

Strengthen Monitoring Requirements

The state needs, but now lacks, comprehensive data on groundwater extraction, ground-

Figure 9

LAO Recommendations for Improving Groundwater Management

Problem	Recommendation
Monitoring not comprehensive statewide	Phase in a comprehensive monitoring system to allow the state to focus funding and technical assistance efforts to the areas in greatest need.
Current management efforts not necessarily focused on most challenged groundwater areas	Establish Active Management Areas where groundwater overdraft potential and/or extent of pollution problems are the highest.
Groundwater law does not reflect scientific reality	Bring science and law together by modernizing groundwater law to accurately reflect the physical interconnection of surface water and groundwater.
Groundwater use and rights unclear, leading to distribution and management issues	Consider establishing statewide groundwater permitting over a multiyear period based on data from expanded monitoring requirements. Maintain local control over implementation of state permit granted at either district or basin level to the extent possible.

water levels, and groundwater quality. For this reason, we recommend that the state phase in a comprehensive groundwater monitoring program over a period of years modeled after the best such measures adopted by other western states. Our analysis of other states finds that while no other single state program is an obvious perfect fit as a model for California, there is much to be learned from the examples of other state programs. Building on recent legislation that strengthens monitoring requirements, the Legislature should further require local water districts to submit standardized extraction data from all groundwater wells, as in Texas and Arizona.

The DWR should be directed to assess and integrate this information into the California Water Plan, thereby helping the state to more effectively plan for future water supplies, especially during dry years. The state will then be in a position to target assistance to groundwater basins with supply or contamination problems, while allowing local authorities who do not need state fiscal or technical assistance in their management of groundwater supplies to continue working on their own.

Establish AMAs

In some areas of the state, local management will be sufficient to both plan for and manage groundwater basins. Indeed, many areas of the state are successful in their management of groundwater, as is demonstrated by the Orange County Water District's approach to water management (see box on next page). There, a long-term approach to groundwater management has led to relatively reliable water supply, with a significant portion derived from groundwater.

However, for those groundwater basins with the potential for established overdraft or with groundwater pollution, we recommend the state

establishment of an AMA, as is the policy in most western states. In these basins, the state would recognize that issues of statewide importance—ensuring the preservation of water quality and reliability of the state's water supply—must in some instances take precedence over a local desire for full control over management in the basin. However, as in Arizona, it is possible for there to be significant local input into the AMA process and for each AMA to have varying goals that reflect each locality's unique circumstances. For example, some AMAs may require restrictions on certain uses of water for a period of time (such as the imposition of certain conservation measures), while others may have more stringent or permanent rules aimed at restricting overdrafting of the basin as a whole.

Bring Law and Science Together

The erroneous distinction now reflected in California law between surface water and groundwater is an impediment to the establishment of surface water rights that accurately reflect the science of water. As DWR has stated, and as is acknowledged in other western states, groundwater can have a significant impact on the availability of surface water supplies. Indeed, all groundwater at some time starts as surface water. The lack of legal and regulatory acknowledgment of this interaction has led to time-consuming and expensive litigation involving both public and private entities. As a starting point for reform in this area, we recommend that the Legislature amend statute to remove the current legal distinction between percolating groundwater and subterranean streams. This is a necessary step to allowing the interaction of surface and groundwater to be integrated into the administration of water rights in the state.

Consider Groundwater Permitting, While Maintaining Some Local Control

Our prior three recommendations provide a good starting point for improving state groundwater policy, in that they (1) provide better information through monitoring on the status of groundwater supplies, (2) integrate science and law in this area, and (3) test AMAs as a tool to manage these water supplies primarily locally. However, the Legislature may ultimately determine that further steps are needed in the longer run to address the state's groundwater problems. Thus, we recommend that the Legislature con-

sider phasing in the establishment of a state-administered water rights system for groundwater as is the case in most other western states.

Additional information is expected from DWR in 2012 regarding the status of the state's major groundwater basins. Once it has reviewed this additional information, the Legislature should evaluate how a groundwater permitting system could complement the Legislature's policy as reflected in existing groundwater statutes, and in conjunction with any existing AMAs. The Legislature would then be in a position to direct both DWR and SWRCB to develop an appropri-

ORANGE COUNTY WATER DISTRICT: A LONG-TERM APPROACH TO GROUNDWATER MANAGEMENT

Following a precipitous drop in groundwater levels in some areas of the Orange County groundwater basin, the Orange County Water District was formed in 1933 by an act of the Legislature to "represent the water users and landowners of the Coastal Plain in all litigation involving outsiders." The basis for the creation of the district was to protect the water supply serving the over 160,000 acres of then-mainly agricultural land in the district.

The act did not restrict water use within the basin. Rather, it allowed the district to charge water users to both protect existing water supply as well as to purchase or develop water supplies from outside sources to satisfy the demand of water users in the district. In 1953, a replenishment assessment ("pump tax") and monitoring program was established by amending the original act. Those who pumped groundwater were required to report twice per year the amount of groundwater extracted (a district-run water quality monitoring program was later added), and to pay an assessment per acre-foot of water extracted.

Using mainly income from the pump tax, the district's activities have included (1) efforts to reduce sea water intrusion (a situation in which groundwater levels drop below sea level, allowing salt water to enter the groundwater); (2) the extensive purchase of surplus water from outside sources, including from the State Water Project and Colorado River supplies, to offset overdraft in the basin; and (3) the development of a project to de-mineralize and purify wastewater into pure drinking water, known as Water Factory 21. The efforts of the basin are largely considered a success as they have been able to hold back seawater intrusion into the groundwater basin and to maintain an adequate level of water supply for customers using their various groundwater management methods.

ate groundwater rights system that, as we discuss below, maintains local control to the extent possible and that is based off of standardized monitoring data and established science. We do not, however, recommend that the state mirror entirely the existing water rights system that now exists in California for surface water. To acknowledge the significant achievements of local groundwater management efforts, and to build on our recommendations for increased monitoring and establishment of AMAs, we recommend the Legislature consider establishing statewide groundwater use permitting while retaining some local control. To accomplish this, permits could be granted at either the basin or district level (rather than to individual water users), thereby allowing locals some discretion as to the use of water within their jurisdictional boundaries. We recommend that DWR have the authority to set levels of water use within a basin as a whole for each water user if more deliberate management is required due to overdraft problems or the contamination of groundwater supplies.

We recommend phasing in this new statewide permitting system over a ten-year period after other strategies have been put in place that are a prerequisite to establishing an effective permitting system. Specifically, the state at present does not have standardized groundwater use reporting, nor does it have a clear picture of the full extent to which groundwater supplies are being contaminated. By first implementing comprehensive groundwater monitoring and establishing AMAs, the SWRCB would be in a better position to work with locals to establish clear parameters for groundwater-related water rights based on standardized data and established science. It would also have the experience of managing groundwater within AMAs.

New Groundwater Strategies Likely to Result in Long-Term Savings

In the short term, implementation of the various recommendations we have proposed above would result in modest administrative costs for state and local water agencies. We recommend that these costs be offset by fees similar to the way the state pays for the regulation of surface water use and water quality. We believe a strong case can be made for having groundwater users and polluters of groundwater pay for the costs of state groundwater regulatory programs.

In the long term, we believe it is likely that the set of strategies we propose would result in savings to public and private entities across the state. This is because these efforts would eventually decrease the need for costly water rights adjudications and help to avoid the cost of clean up or treatment of degraded groundwater for use in water supply. There would also likely be reduced long-term future costs related to overdrafting of groundwater basins, including emergency response measures to aid communities for which valuable groundwater supplies have been depleted.

Fine-Tuning These Reform Concepts

This report addresses, in a high-level conceptual way, the basic set of changes we have concluded are needed to improve groundwater monitoring and management from the state's perspective. However, implementation of these concepts would involve resolving many important technical issues. If the Legislature wishes to pursue the approaches we have outlined, we recommend that it direct the three state agencies primarily responsible for groundwater management—the DPH, DWR, and SWRCB—to jointly report at hearings on the groundwater management models we have identified in other states

and their practical application for California. The hearings would engage the departments and other important stakeholders, such as local water jurisdictions, in a review of other state models relevant to the management and regulation of groundwater. California state agencies should weigh in on

the implications of changes on local control, state-wide planning, information gathering, and forecasting. The Legislature could then be apprised of current best practices in the field of groundwater management most suitable to protect the state's valuable liquid asset, its groundwater.

LAO Publications

This report was prepared by Catherine Freeman with assistance from Heather May, and reviewed by Mark Newton. The Legislative Analyst's Office (LAO) is a nonpartisan office which provides fiscal and policy information and advice to the Legislature.

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October 2008

California's Water: An LAO Primer



Legislative
Analyst's Office

Chapter 6

Issues for Legislative Consideration

Key Considerations for Water Policy Decisions

Throughout this primer, we have shown the many dimensions of water in California, from who uses it, to its cost, to legal provisions governing its management. A few themes arise from these pages, including the complexity of the water supply system; the challenges of conveying water to those who need it, particularly through the Delta region, and to those with limited access to regional water supply; and the importance of having a reliable and sufficiently high-quality water supply to meet average demand.

In this section, we address several key water policy issues that legislators will likely face in both the short term and long term and make recommendations for legislative action. Given competing demands for funding, it is important for the state to focus on cost-effective solutions and to ensure that its water supply and water quality programs are coordinated and administered efficiently and effectively. The overarching theme of our recommendations is to improve the management of water within the state—both in terms of how currently available water is allocated among uses and the level of flexibility of water delivery systems to meet demand as conditions (such as extended dry periods) change in the future.

Future Water Supply Reliability Requires Focus on Cost-Beneficial Solutions

Projections show that the state is likely to have adequate water supply in the *aggregate* to meet its water demands in *average* precipitation years under current trends as seen in Figure 1 (see next page). However, in dry years, projected demand by category of use will exceed supply in 2030 in most cases.

Options for Addressing Water Supply Reliability. There are several options available to the state to ensure that, during the driest years, disruptions from water shortages are minimized on a statewide basis. These options generally fall into two categories—short term and long term—depending on the length of time required to implement them. While short-term options may produce benefits sooner, they can also have long-term benefits if adopted and sustained.

As shown in Figure 2 (see page 67), the Department of Water Resources (DWR) has analyzed a number of short- and long-term options to strengthen water supply reliability throughout the state. (The surface storage-related option in Figure 2 reflects only specific CALFED Bay-Delta Program [CALFED]-proposed projects and does not include *locally* implemented projects.) The options presented in the figure generally involve reducing water demand or increasing water supplies. They also vary in their potential to produce additional water and in their per-unit cost to do so. For example, according to DWR estimates, urban water use efficiency (a shorter-term solution) costs about \$1,000 to achieve one acre-foot of water savings per year. The DWR also determined that annually about 2 million acre-feet of additional water could result from this water management strategy. According to DWR's estimates, this makes urban water use efficiency both the most cost-beneficial and the highest potential water producer of all of the solutions evaluated.

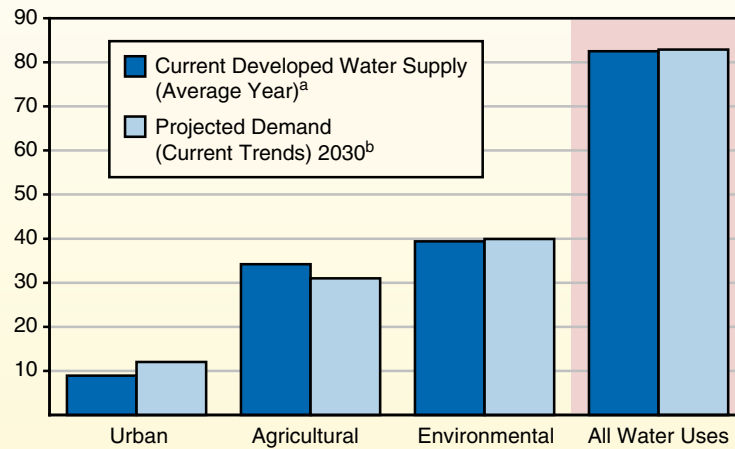
On the other hand, according to DWR estimates, CALFED surface storage (a longer-term solution) costs about \$10,000 to

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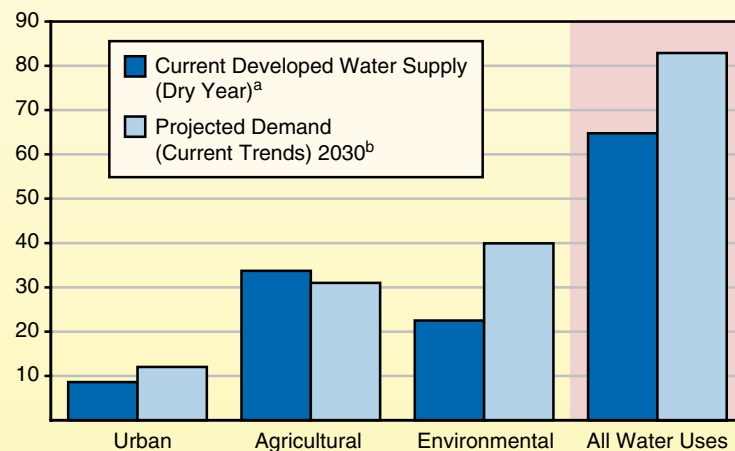
Figure 1

Supply and Demand Projected to Be Nearly Equal Under Average-Year Conditions in 2030...

(Million Acre-Feet)



...But Dry-Year Demand Projected to Exceed Supply



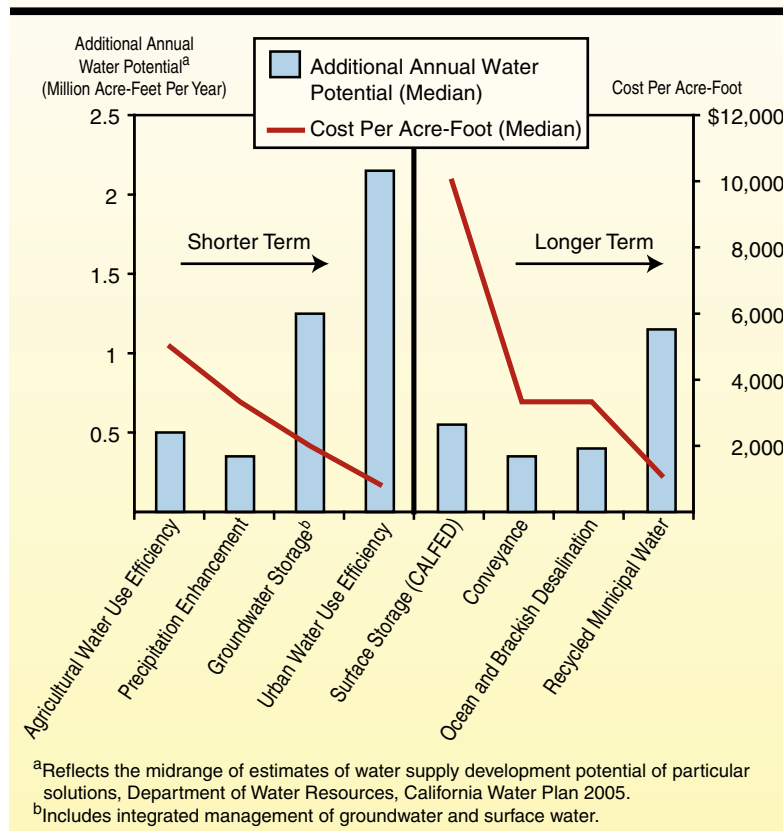
^aDeveloped water supply is the amount of precipitation, surface water, or groundwater made available for use, generally through construction of storage or delivery systems.

^bDemand projections from Department of Water Resources, 2005 California Water Plan.

achieve one acre-foot of water savings per year. This estimate is based on three specific CALFED-proposed projects: (1) Sites Reservoir, (2) Temperance Flat Reservoir, and (3) Los Vaqueros expansion. The DWR also determined that in the range of 500,000 acre-feet of additional water annually could result from this water management strategy.

In evaluating options for additional water supply, the Legislature should not only consider the cost-benefit of each but

Figure 2
Options for Additional Water Supply:
Benefits and Costs



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how they work together as a comprehensive package of tools. Each of the options presented in Figure 2 would contribute to needed flexibility in the management of the water system and therefore all may have a role to play.

Using the criterion of “least cost, highest gain,” short-term options (including those that would have a greater short-term impact and, if sustained, a long-term impact as well) should be directed first toward urban water use efficiency and groundwater storage, and second to agricultural water use efficiency and other options. For long-term options, investing in the long-term solution of recycled municipal water would be the first funding priority, with improvements to conveyance, desalination, and the proposed CALFED surface storage projects as secondary options.

Fundamental Changes Needed in Water Rights System

“Reasonable Use” Requirement Should Better Reflect Scarcity of Resources. The development of California’s water rights system is steeped in tradition, and has roots in the State Constitution, but its implementation is based on outdated policy that is in need of reform. Article X of the Constitution requires that water be put to beneficial use and that waste of water or unreasonable use be prevented. At first glance, such principles seem reasonable. However, their implementation has had counter-productive results in some instances. The reasonable use requirement for surface water has generally been implemented as a “use it or lose it” policy, which itself resulted from a policy of “first in time, first in right.” Under the latter policy, the first individual to claim a water right gains the water right so long as they can demonstrate the continued use of water. The combination of these longstanding policies can lead to inefficient uses of water.

Water Rights Realignment Necessary. It is in the interest of the state to undertake a concerted effort to realign the water rights system to better reflect modern needs and circum-

stances. For example, this could be done by accounting for the potential for water conservation and water use efficiency in managing water rights. Thus, where water is required for agricultural purposes, the water right should mirror only the amount of water needed to grow a crop using available water efficiency technology. Similarly, urban water rights should reflect the use of cost-effective water conservation and efficiency measures. By realigning water conservation and efficiency efforts with water rights, overuse of water simply to maintain a water right could be reduced and that water would be available for other purposes within the region or state. This modernization of the water rights system could start to be accomplished by the enactment of legislation to provide an updated, comprehensive definition of the “reasonable use” of water to be used in the water rights permitting process. This definition would encompass the potential for the water rights holders to avail themselves of water conservation and water use efficiency measures discussed above.

Reevaluate How Groundwater Is Regulated And Managed

Groundwater Important to Water Supply. The potential to use groundwater to increase water supply, by introducing water from another source into the ground as a storage basin, or encouraging the natural refilling of groundwater basins, is a significant option to address water supply needs. However, successful implementation of this solution is hampered because groundwater use is generally not regulated or monitored at the state level (in contrast to surface water). In addition, local groundwater management does not take into account statewide water needs. Finally, groundwater quality is not protected under state regulation as comprehensively as surface water quality. When contaminated, groundwater loses its potential to serve as a water supply source.

Recommend Statewide Groundwater Rights and Quality Permitting System. For the reasons stated above, we rec-

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ommend that the Legislature establish a state-administered water rights system for groundwater. In addition, we recommend that the water quality permitting processes of the state and regional water boards be restructured to protect groundwater to the same extent as surface water. While moving in these directions would increase state administrative costs to establish and implement new programs, in the long term there would be cost savings to public and private entities across the state. This is because these efforts would decrease the need for costly water rights adjudications, cleanup of degraded groundwater, and treatment of groundwater for use in water supply. As with the regulation of surface water use and quality, we believe a strong case can be made for groundwater beneficiaries and polluters of groundwater to pay for the bulk of the costs of state groundwater regulatory programs.

Addressing the Role of the Delta: Coming to Terms With Trade-Offs

Over \$5 billion has been spent through the CALFED effort to address issues related to water flows in and through the Sacramento-San Joaquin River Delta (the Delta). The issues primarily revolve around the problem of balancing environmental objectives with urban and agricultural water supply requirements.

The state's Delta-focused water system—the SWP—provides a portion of the water supply to two-thirds of Californians (mainly in Southern California, the Bay Area, and coastal cities) and irrigation water to over one-third of the state's cropland. After years of research and study, there is generally common agreement among policy experts that the current approach to managing the Delta must change to meet the state's water supply reliability and environmental objectives—in other words, the state needs to abandon the “business as usual” model. A culmination of this research is seen

in the soon to be released Delta Vision “strategic plan” as well as the recently released Public Policy Institute of California (PPIC) report evaluating various alternatives for managing the Delta. Both of these reports focus on specific proposals to change how water is conveyed through the Delta, and lay out trade-offs that will need to be made in meeting economic and environmental objectives under any of the alternatives.

At present, water exports are being reduced from the Delta to meet fish and wildlife needs, as required by federal court-order. It is unlikely that the state will be able to achieve all the water supply and environmental benefits that are currently being demanded of the Delta under current law and practice (see pages 25 and 26 for a discussion of the role of the Delta). Trade-offs will need to be made, and these will likely have negative impacts on certain segments of the state’s population, economy, and environment. The Legislature will need to evaluate the specific projects recommended in the Delta Vision and PPIC reports, as well as other reports, to determine the acceptable level of trade-offs of continued export of water from the Delta, and enact legislation that reflects the Legislature’s policy on the appropriate choice for future water conveyance and management in the Delta. Additionally, the Legislature should give particular consideration to the role that water rights and water transfers can play in strengthening water supply reliability for competing uses of water. The Legislature also needs to set clear policy for who will pay for the implementation of its Delta policy, and we recommend this be based on the application of the beneficiary pays funding principle.

Conveyance Through the Delta Must Be Addressed— and Soon. Recommendations to strengthen water supply reliability, facilitate water transfers, increase surface water storage outside of the Delta, and generally improve the efficiency and flexibility of California’s water system all hinge on addressing current problems with conveyance of water through the Delta. The Delta Vision task force as well as the PPIC have

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found that an alternative to the current system of conveyance is necessary if environmental and economic objectives for the Delta are to be met.

There are three basic alternatives to the current through-Delta conveyance system that have been evaluated—(1) an isolated peripheral facility such as a canal or pipeline isolated from the Delta, (2) combining through-Delta conveyance with an isolated peripheral facility (“dual-conveyance”), and (3) ending water exports from the Delta to the south. While the PPIC report recommends the Peripheral Canal as the long-term solution, the draft Delta Vision strategic plan recommends the dual-conveyance approach. To this end, we recommend that it be a *priority* for the state to select an alternative to the business-as-usual conveyance approach. This would be done after considering each alternative’s costs, inherent trade-offs (including environmental and land use impacts), and benefits.

Regional Water Authority - State Legislation Tracking - 2010
DRAFT 04-16-2010

Bill	Author	Topic	Brief Summary	Status
Assembly				
AB 25	Gilmore	Water discharges, penalties	Expands definition of POTW serving a small community to 20,000 persons. Allows for SWRCB or regional board to require POTW to spend toward compliance in lieu of minimum penalties.	Amended 1/13/2010
AB 300	Caballero	Subdivisions: water supply	Would require, until January 1, 2017, the public water system, or the local agency if there is no public water system, to review, verify for accuracy, and approve, as specified, the subdivider's water savings projections attributable to voluntary demand management measures. The public water system would be authorized to collect fees necessary to provide the additional analysis of the voluntary demand management measures.	Introduced 2009, amended 6/30/2009
AB 1594	Huber	Delta, PC	Prohibit construction of delta conveyance unless expressly authorized by the Legislature.	Introduced 2010
AB 1677	Caballero	Water Resources, special session	Amends deadline for UWMP for wholesale agencies to July 2011.	Introduced 2010, amended 04/08, passed WP&W
AB 1704	Jeffries	CEQA exemption, pipelines	CEQA exemption for a pipeline project to convey recycled water within a public right of way.	Introduced 2010, amended 4/8
AB 1727	Gilmore	Water quality: mandatory minimum civil penalties.	Technical, nonsubstantive changes	Introduced 2010
AB 1728	Gilmore	Mandatory minimum civil penalties: automatic composite sampler	Technical, nonsubstantive changes	Introduced 2010, amended 3/18
AB 1774	Saldana	Recycled Water, state agency irrigation	Authorize a local public agency to require a state agency to use recycled water for irrigation of landscaping.	Introduced 2010, amended 3/24, passed WP&W
AB 1780	Yamada	Delta Stewardship Council, consistency	Technical, nonsubstantive changes to certifications of consistency by the Delta Stewardship Council.	Introduced 2010
AB 1788	Yamada	Water development, state financial assistance	Authorize the state to pay up to 70% of non-federal costs of a flood protection project if the project serves an economically disadvantaged area.	Introduced 2010, passed WP&W
AB 1793	Saldana	Common interest developments, artificial turf	Provides that governing documents of a common interest development may not prohibit the use of artificial turf.	Introduced 2010
AB 1797	Berryhill	SWRDS, Delta Corridor Plan	Requires DWR to prepare and submit to the Legislature a feasibility study of a Delta Corridors Plan. Appropriates \$750,000 of Prop 84 funds for this purpose.	Introduced 2010, amended 4/14, passed WP&W
AB 1805	Calderon	CEQA	CEQA Litigation Protection Program of 2010. Provides for exemption from judicial review of projects approved by Business, Transportation and Housing Agency.	Introduced 2010
AB 1818	Blumenfeld	Los Angeles River Watershed Program	Creates Upper LA Watershed Program under Santa Monica Mountains Conservancy	Introduced 2010, amended 4/6
AB 1834	Solorio	Rainwater Capture Act of 2010	Authorizes homeowner to install rainwater capture system. Requires SWRCB to develop guidelines.	Introduced 2010, amended 3/25, passed WP&W

AB 1843	Gilmore	Water supply security, reports	Require California Office of Homeland Security to report to the Legislature on the security status of drinking water systems.	Introduced 2010
AB 1846	V. Perez	CEQA, expedited environmental review, climate change regulations	Authorizes use of a focused EIR for adoption of regulations pursuant to Global Warming Solutions Act of 2006 (AB 32).	Introduced 2010, amended 4/14, passed Nat Res.
AB 1884	Galgiani	Local water supply projects, inventory	Require DWR to conduct and report on a statewide inventory of local regional water supply projects.	Introduced 2010
AB 1886	Yamada	Delta watershed	Require DWR to report in the California Water Plan Update the actions it has taken to reduce its reliance on Delta water supplies.	Introduced 2010, amended 3/17, passed WP&W
AB 1898	Caballero	Bonds	Create a priority list of infrastructure projects to ensure adequate funding through bonds.	Introduced 2010
AB 1929	Hall	Invasive species, mussels	Operator of water delivery and storage facilities is not liable for introduction of dreissenid mussels when in compliance with a control and eradication plan.	Introduced 2010, passed WP&W, passed Approps.
AB 1975	Fong	Water charges and meters, MFR	Require every water purveyor to require submeters on every residential unit in a multiunit residential structure permitted after January 1, 2011.	Introduced 2010, amended 4/7, Passed WP&W
AB 2049	Arambula	SWRDS, water delivery	Prohibits the Director of Water resources from approving a transfer or assignment, for more than 10 years, of contracted water from an agricultural to a municipal user.	Introduced 2010
AB 2063	Huffman	Fish, Chinook salmon	Require DFG to focus and prioritize species conservation efforts.	Introduced 2010, amended 4/14, passed WP&W, passed Approps.
AB 2092	Huffman	Delta Stewardship Council, fees	Require the Council to adopt a fee on SWP and CVP contractors to fund a portion of the costs of its activities.	Introduced 2010, amended 4/6
AB 2107	Fuller	State Water Pollution Control Revolving Fund.	Technical, nonsubstantive changes	Introduced 2010
AB 2108	Fuller	Water Pollution SRF, small community grants	Technical, nonsubstantive changes to the State Water Pollution Revolving Fund Small Community Grant Fund	Introduced 2010
AB 2146	Berryhill	Water resources: Bond funds: Appropriations	Appropriates Prop 84 funds to various San Joaquin Valley projects	Introduced 2010, amended 4/5
AB 2182	Huffman	Contractual assessments, sewer lateral lines	Allows public agency and willing property owners to enter into contractual assessment to finance the construction of sewer lateral lines.	Introduced 2010, amended 4/5
AB 2202	V. Perez	2010 Bond bill; New River	Places requirements on 2010 Water Bond financing for New River Improvement Project	Introduced 2010
AB 2277	Fletcher	Water Conservation; urban retail water suppliers	Requires a retail urban water supplier that supplies water to a military installation to consider prior conservation of the installation in preparing a water conservation implementation plan.	Introduced 2010, passed WP&W, passed Approps.
AB 2304	Huffman	GWMP components	Adds to the list of authorized GWMP components the coordination with local planning agencies to protect priority recharge areas, and requires compliance when seeking state funds.	Introduced 2010, amended 4/6
AB 2336	Fuller	Delta Stewardship Council	Requires the Council to evaluate the adverse impacts of invasive species predation on native species.	Introduced 2010
AB 2376	Huffman	Fish and wildlife: strategic vision.	Require Natural Resources Agency to develop a strategic vision for DFG and F&G Commission.	Introduced 2010, amended 4/5, passed WP&W

AB 2405	Buchanan	Delta flood protection	Technical, nonsubstantive changes	Introduced 2010
AB 2407	Harkey	California regional water quality control boards: boundaries.	Changes to boundary between Santa Ana and San Diego Regions	Introduced 2010
AB 2409	Nestande	Urban water suppliers: water shortage contingency analysis.	Require a water supplier, as part of the water shortage contingency analysis, to define water features that are artificially supplied with water, such as pools, ponds, fountains.	Introduced 2010, amended 4/6, passed WP&W
AB 2421	Nielsen	Water development projects, Sacramento watershed	Technical, nonsubstantive changes to authorizations for flood control projects in Sacramento and Sutter Counties.	Introduced 2010
AB 2422	Berryhill	Model WE landscape ordinance, scientific panel	Requires DWR to convene a scientific panel to recommend updates to the Model Water Efficient Landscape Ordinance and regulations and guidelines relating to urban water demand management.	Introduced 2010
AB 2507	Strickland	Drinking water	Require local health agency to establish standards and oversee small water systems. Would allow specified properties to rely on hauled water when no other water is available. Would exempt hauled water from CEQA.	Introduced 2010, amended 4/6
AB 2565	Ammiano	CEQA: lead agency documents	Provides for lead agency to respond to interested parties by referring to documentation on its internet website, and provide documents in other digital forms.	Introduced 2010, amended 4/5, passed Natural resources
AB 2575	Chesbro	Resources, watersheds	Requires balanced representation of forest industry, agencies and public in restoration of riparian zones	Introduced 2010
AB 2583	Hall	Water quality; treatment chemicals	Require water agencies to mitigate the potential for catastrophic harm from hazardous substances by using raw materials derived from inherently safer technologies.	Introduced 2010, amended 4/7, Passed WP&W
AB 2595	Huffman	Irrigated agriculture: pesticide use: operator identification number: water quality: waste discharge requirements: waivers.	As a condition of issuing an operator identification number for pesticide use, the county ag commissioner must verify that the operator has been issued WDRs or a waiver.	Introduced 2010, amended 4/8, passed ES&TM
AB 2669	V. Perez	Prop 84 appropriation	Appropriates Prop 84 funds to DWR for the benefit of disadvantaged communities in Riverside County.	Introduced 2010, passed ES&TM
AB 2679	Eng	Public buildings: energy and water, consumption reductions	Require all public buildings, as defined, to conform to a 15-year compliance schedule to achieve reductions in energy and water consumption and to maintain specified water and energy reduction levels.	Introduced 2010, amended 4/8, passed BP&CP
AB 2776	Huffman, et al	Water	prior to the indoor use of recycled water in a condominium project, the agency delivering the recycled water will file a report with and receive written approval of the report from the State Department of Public Health.	Introduced 2010, amended 4/6
ABx8 37	Calderon	CEQA	CEQA Litigation Protection Program of 2010. Provides for exemption from judicial review of projects approved by Business, Transportation and Housing Agency.	Introduced 2010
ACA 12	Logue	Water: area of origin statutes.	Would require 2/3 vote of both houses to change any provisions of area-of-origin statutes	Introduced 2009
Senate				
SB 301	Florez	Salmon Fisheries	Requires DFG to conduct a 5-year study of the interaction of wild and naturally spawned salmon, and to develop hatchery and stream management practices to ensure the viability of fish populations.	Amended 12/17/2009 (see also SB 1218)

SB 565	Pavley/Steinberg	Water Rights	Authorizes the SWRCB to require any entity that diverts water to submit any technical or monitoring report related to the diversion of water by that entity. Raises the penalties for diversion of water other than as specified by provisions of law. Creates a presumption that no water use occurred if not included in required statement of diversion.	Amended 2/1/2010
SB 808	Wolk	Delta levee maintenance.	Changes state share of maintenance costs of Delta levees	Amended 1/25/2010
SB 918	Pavley	Water Recycling	Requires DPH to develop and adopt uniform water recycling criteria for indirect potable reuse through groundwater recharge and direct potable reuse through reservoir augmentation.	Introduced 2010, amended 4/12
SB 934	Cogdill	California Water Plan	Technical, nonsubstantive changes to the Water Code related to DWR's development of the California Water Plan.	Introduced 2010
SB 946	Cogdill	Department of Fish and Game: lake or streambed alteration agreements.	Technical, nonsubstantive changes	Introduced 2010
SB 991	Wolk	Flood control	Makes appropriations of \$30 million from Proposition 1E for flood protection projects in the Delta	Introduced 2010. amended 4/7, passed NR&W
SB 1006	Pavley	Climate Change; Strategic Growth Council	Require the council to take certain actions with regard to coordinating programs to address climate change impacts. The bill would require the council to provide guidelines and distribute data and information to local governments and regional agencies that will assist in developing and implementing climate change adaptation strategies, projects, or activities	Introduced 2010, amended 4/5
SB 1010	Correa	CEQA	CEQA Litigation Protection Program of 2010. Provides for exemption from judicial review of projects approved by Business, Transportation and Housing Agency.	Introduced 2010
SB 1013	Denham	Prop 204	Technical, nonsubstantive changes to Proposition 204 provisions related to state share of costs for CVPIA fish and wildlife restoration measures.	Introduced 2010
SB 1014	Denham	Prop 13	Technical, nonsubstantive changes to Proposition 13 provisions related to groundwater recharge.	Introduced 2010
SB 1107	Kehoe	water Quality: interceptor and trap grease	Requires SWRCB to adopt regulations for proper transport and disposal on interceptor and trap grease.	Introduced 2010, amended 4/6
SB 1173	Wolk	Recycled Water	Would declare that use of raw potable water for municipal or industrial uses is a waste or unreasonable use of water if recycled water is available as determined by the SWRCB and other requirements are met.	Introduced 2010, amended 3/24
SB 1218	Florez	Fisheries	Requires DFG to conduct a study of the interaction of wild and naturally spawned fish, and to develop hatchery and stream management practices to ensure the viability of fish populations.	Introduced 2010 (see also SB 301)
SB 1226	Dutton	CEQA exemption, pipelines	Makes technical, nonsubstantive changes to CEQA exemption for pipeline project within public right-of-way.	Introduced 2010
SB 1234	Kehoe	Unreasonable use	Requires SWRCB, by January 2012 to adopt regulations identifying unreasonable uses of water during various periods of water shortage.	Introduced 2010
SB 1284	Ducheny	Water quality: mandatory minimum civil penalties.	Under certain conditions, failure to file a monitoring report not subject to mandatory penalties.	Introduced 2010
SB 1293	Hollingsworth	Environment: guidelines: vegetation management projects	recommended proposed changes or amendments to the initial study for the inclusion of questions related to vegetation management projects to reduce fire hazards that are located in state responsibility areas and high fire hazard severity zones.	Introduced 2010, amended 4/13

SB 1339	Huff	Water, PUC	Technical, nonsubstantive changes to Public Utilities Act related to water delivery.	Introduced 2010
SB 1412	Calderon	Water Replenishment Districts	Requires water replenishment districts to establish assessments with respect to the groundwater in each basin within the district.	Introduced 2010
SB 1413	Leno	Water, schools	Requires schools to provide access to free, fresh drinking water in food service areas.	Introduced 2010
SB 1446	Correa	Endangered and threatened species; incidental take	require that an applicant that is a city, county, or other public agency be deemed to meet that requirement if the city, county, or other public agency complies with specified financial and accounting requirements and certifies that it will annually appropriate sufficient moneys to fund its minimization and mitigation obligations	Introduced 2010
SB 1450	Simitian	Water: Delta Stewardship Council: contracts.	provide that a contract made or entered into by the department is not binding on the council unless the contract is approved by the council.	Introduced 2010, amended 3/23
SB 1468	Padilla	Delta	Legislative findings related to the Bay Delta Conservation Plan and the activities of the Delta Vision Blue Ribbon Task Force and Delta Vision Committee.	Introduced 2010
SB 1469	Simitian	Sacramento-San Joaquin Delta: California Water Plan; water quality	Require the SWRCB to identify all parties that benefit from waters originating in the Sacramento-San Joaquin Delta watershed and whose activities impact the Delta watershed, and develop a process for determining the degree of responsibility attributable to each of the identified parties for physical and environmental impacts on the Delta. Require DWR to identify the infrastructure needs of the state over the next 30 years and estimate the expected costs of associated environmental mitigation and restoration projects, and propose a policy for assigning funding responsibilities to beneficiaries of water resources investments and a financing strategy for funding responsibilities proposed to be assigned to the state.	Introduced 2010, amended 4/14, passed NR&W, refer to Approps
SB 1478	Natural Resources and Water Committee	Urban water management	Provides for an extension of the deadline for UWMP for a wholesale supplier to July 1, 2011. Require an urban retail water supplier that supplies water to a military installation to consider the prior water conservation of that military installation.	introduced 2010, amended 4/5, passed NR&W
SBx8 42	Correa	CEQA	CEQA Litigation Protection Program of 2010. Provides for exemption from judicial review of projects approved by Business, Transportation and Housing Agency.	Introduced 2010
SBx8 45	Wolk	Water supply reliability, flood control, water resources management, and wildlife preservation.	Appropriations from Propositions 1E and 84	Introduced 2010
SBx8 56	Hollingsworth	CEQA ; exemption for critical infrastructure	Exempts from CEQA critical infrastructure projects as defined	Introduced 2010

2010 SCGA Board Members/Alternates

Organization	Representative	Appointment Date	Expiration Date	Appointing Authority
City of Elk Grove	Vacant - Primary	NA	08/09/10	Elk Grove City Council
	Clarence Korhonen - Alternate	08/09/06	08/09/10	
City of Folsom (Chair)	Jeff Starsky- Primary	08/22/06	08/22/10	Folsom City Council
	Walt Sadler - Alternate	06/26/07	08/22/10	
City of Rancho Cordova	Cyrus Abhar - Primary	08/07/06	08/07/10	Rancho Cordova City Council
	Albert Stricker - Alternate	08/07/06	08/07/10	
City of Sacramento	Marty Hannenman - Primary	08/29/06	08/29/10	Sacramento City Council
	Jim Peifer - Alternate	01/01/10	08/29/10	
County of Sacramento/Sacramento County Water Agency (Vice Chair)	Don Nottoli - Primary	07/16/08	07/16/12	Sacramento County Board of Supervisors
	Herb Niederberger - Alternate	07/16/08	07/16/12	
Elk Grove Water Service	Chuck Dawson - Primary	01/27/10	08/09/10	Elk Grove City Council
	Leo Havener, Jr. - Alternate	04/11/07	08/09/10	
Agricultural Interests Agricultural-Residential	Anthony van Steyn - Primary	09/30/08	09/30/12	Sacramento County Board of Supervisors
	Stuart Helfand	09/30/08	09/30/12	
Commercial/Industrial Self-Supplied	Vacant	NA	NA	
Conservation Landowners	Rick Bettis -Primary	09/30/08	09/30/12	
Public Agencies Self-Supplied	Edwin Smith - Primary	09/30/08	09/30/12	
Omochumne-Hartnell Water District	Ron Lowry - Primary	09/30/08	09/30/12	
Rancho Murieta Community Services District	Ed Crouse - Primary	09/30/08	09/30/12	
California-American Water Company	Andy Soulè - Primary	09/30/08	09/30/12	
	Vacant - Alternate	NA	09/30/12	
Sacramento Regional County Santaion District	Ruben Robles - Primary	09/30/08	09/30/12	
	Jose Ramirez - Alternate	09/30/08	09/30/12	
Golden State Water Company	Scott Fort - Primary	08/07/06	08/07/10	Rancho Cordova City Council
	Paul Schubert - Alternate	08/07/06	08/07/10	