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March 10, 2009

Water Rights: Issues and Perspectives

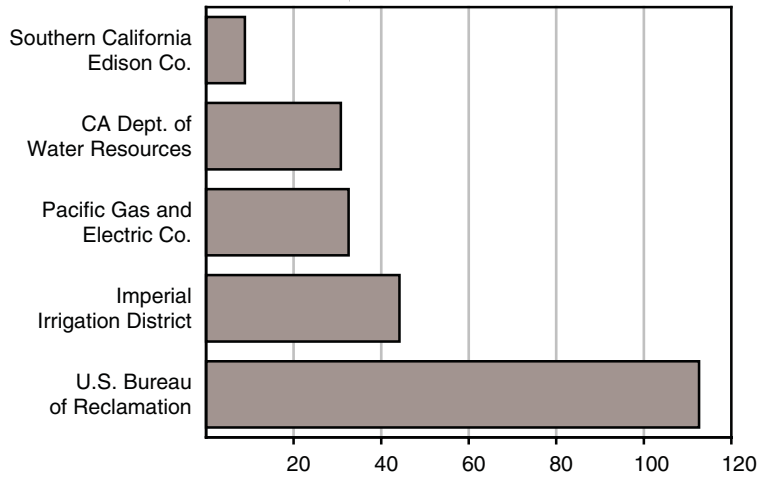
LEGISLATIVE ANALYST'S OFFICE

Presented to:
Senate Natural Resources and Water Committee
Hon. Fran Pavley, Chair

Who Are California's Top Water Rights Holders?

Federal Government Is the Top Water Rights Holder in California

(Permitted Water Rights[a], in Million Acre-Feet)



[a]Permitted and licensed water rights issued by the State Water Resources Control Board. Other water rights (such as pre-1914 claims) are not included in this list.

☑ ***A water right is legal permission*** to use a specified amount of water for a beneficial purpose such as drinking, fishing, irrigation, farming, or industry. The State Water Resources Control Board (SWRCB) regulates water rights for those taking water from lakes, rivers, streams, and creeks. It does not regulate the rights to use underground water supplies (groundwater), which are primarily regulated by a patchwork of local laws.

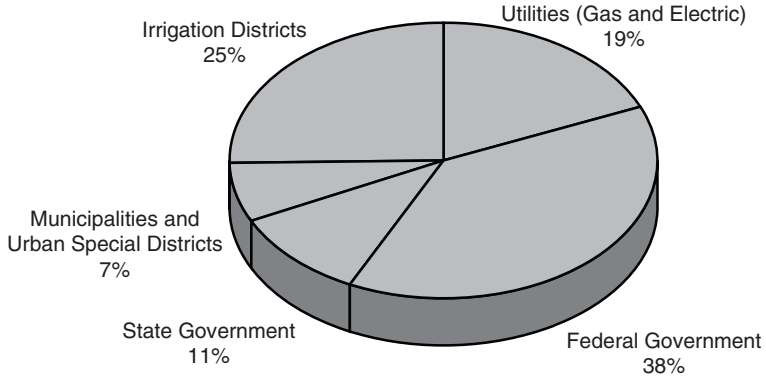
☑ ***The federal government,*** through the Bureau of Reclamation, holds the most (in volume) water rights in the state with over 112 million acre-feet (MAF) of water rights held, mainly for delivery through the federal Central Valley Project. Second to this are the water rights held by Imperial Irrigation District (44 MAF), serving mainly farms in the Colorado River region.

Who Are California's Top Water Rights Holders? *(Continued)*

☑ ***Water rights exceed actual total water volume availability*** on almost all river systems in the state. This in part reflects the fact that water may be reused as it runs off farms or may be returned to the river after use for a "non-consumptive" diversion purpose such as energy production. In some cases, however, water rights are "oversubscribed," meaning that they exceed actual water availability.

Most Water Rights Held by Federal Government, Irrigation Districts and Utilities[a]

(Percent of Water Rights Held)



[a] The top 25 water rights holders, in terms of volume of water, by category.

☑ Of the top 25 water rights holders (generally those with rights to use over about one MAF of water), the federal government holds much of the water rights, while irrigation districts and utilities make up much of the rest of the water rights holders. State and urban local agencies hold less than 20 percent of the water available to the top 25 water rights holders.

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Many Entities Are Involved in Administering Water Rights

Entity	Major Roles and Responsibilities for Water Rights
State Water Resources Control Board	• Permits and enforces most surface water rights, and can declare watercourses fully appropriated. Regulates surface and groundwater quality.
Department of Water Resources	• Administers Watermaster Program to ensure water is allocated according to established water rights for certain court-adjudicated areas. Holds water rights on behalf of the state for the State Water Project. Manages the Drought Water Bank which provides for transfers between water rights holders and those purchasing water.
Department of Fish and Game	• Recommends the amounts of water necessary for instream flows, wetlands, and fish and wildlife resources for water rights proceedings.
Court System	• Has primary jurisdiction over most groundwater rights determinations. Adjudications of groundwater basins (to determine the equivalent of a water right) have taken place in 16 water basins in the state.

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State Enforcement of Water Rights

State Water Resources Control Board:

Water Rights Program Expenditures

(Dollars in Thousands)

Fiscal Year	Expenditures			Enforcement as Percentage of Total Expenditures
	Enforcement[a]	Permitting/Other	Totals	
2003-04	$1,460	$7,606	$9,066	16%
2004-05	1,240	7,933	9,173	14
2005-06	2,231	8,443	10,674	21
2006-07	1,348	10,810	12,158	11
2007-08	1,922	9,685	11,607	17
2008-09 (estimated)	1,172	10,692	11,864	10

[a] Enforcement staff have been redirected a number of times to other program priorities, including updating water right permit records in 2004-05, and improving data quality in 2006 as a result of an audit report by the Bureau of State Audits.

☑ ***Water rights program expenses include*** those related to permitting, enforcement, and administration of the program.

☑ ***The SWRCB's water rights program was mainly funded*** by General Fund up until 2003-04, when the Legislature adopted a water rights fee to pay for permitting and enforcement expenditures in the program. However, in recent years, fees have been supplemented annually with General Fund in the amount of about $3.8 million.

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State Enforcement of Water Rights *(Continued)*

State Water Resources Control Board:

Water Rights Enforcement Actions and Penalty Payments

Fiscal Year	Complaints Received	Enforcement Actions Taken[a]	ACLs[b] Issued	ACLs Paid[c]
2003-04	41	16	5	$3,000
2004-05	30	11	2	8,070
2005-06	52	5	2	112,000
2006-07	61	10	2	12,600
2007-08	53	27	1	46,858
2008-09 (estimated through January 2009)	20	13	—	40,640[d]

a The board's enforcement tools include administrative penalties, Cease and Desist Orders, and Water Right Revocation Orders processed by the Enforcement Section.

b ACL = Administrative Civil Liabilities.

c Includes payment on ACLs issued in prior years.

d Includes some ACL payables not yet paid.

☑ ***State law allows SWRCB to enforce water rights broadly,*** both to pursue illegal diversions as well as to determine the reasonable and beneficial use of water. Enforcement by the board consists typically of two procedures: (1) responding to externally generated complaints and (2) conducting internally generated compliance inspections.

☑ ***The board's enforcement division*** is not equipped to seek out illegal diversions—a difficult and time-consuming process. The board relies primarily on external complaints to enforce compliance with water rights.

☑ ***The board has advised water rights holders in recent weeks*** that, due to the drought, there is a possibility of reducing certain water rights holders' allotments to reflect anticipated reductions in water supply due to lower precipitation and reservoir levels.

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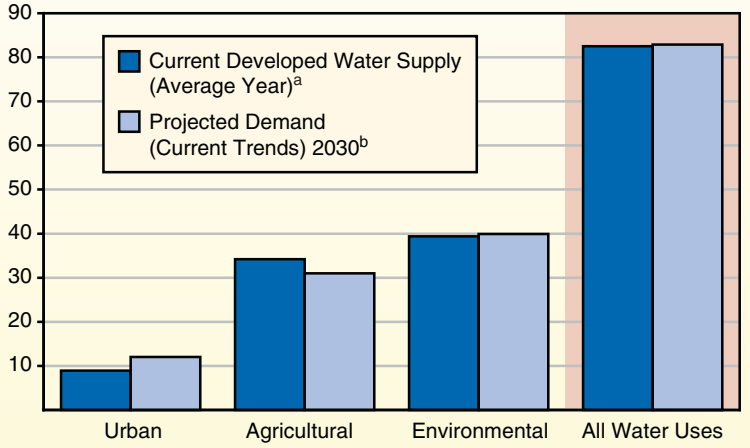
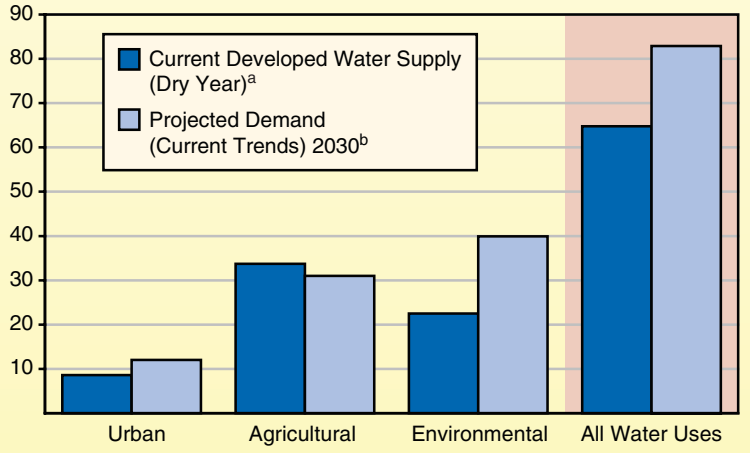
Future Water Supply Reliability A Growing Concern

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



[a]Developed water supply is the amount of precipitation, surface water, or groundwater made available for use, generally through construction of storage or delivery systems.
[b]Demand projections from Department of Water Resources, 2005 California Water Plan.

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Short-Term Options to Help Address Supply/Demand Imbalance

Water bank/water transfers	• Local water agencies or other water purveyors purchase water (from the state water bank or other sources) for transfer to other water users to partially compensate for loss of surface water deliveries.
Water delivery restrictions/rationing	• Restrictions (either by Executive Order, legislation, or by a state or local purveyor) to reduce water deliveries. May include restrictions on specific types of water use (such as washing cars and stopping new water hookups).
Water conservation	• Voluntary campaigns to reduce water use (may include public awareness campaigns and local incentives).
Water rights	• Restrictions on junior water rights holders to ensure senior water rights holders can fully use their rights.
Groundwater	• Both local water agencies and irrigators (farming) increase groundwater pumping when surface water supplies are restricted.

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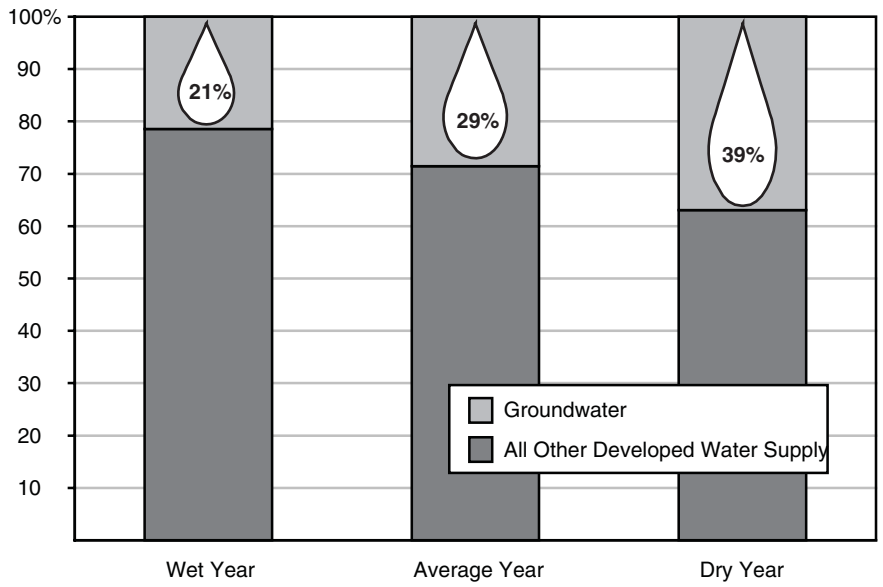
California Lacks a Comprehensive Groundwater Rights System

Groundwater Is a Major Contributor to State's Water Supply



☑ ***Groundwater is a major contributor to the state's water supply, and more so in dry years.*** Groundwater supplies 30 percent of California's overall dedicated water supplies in average precipitation years and up to 40 percent in dry years. Groundwater is both managed and regulated locally in most areas of the state.

☑ ***In some areas where surface supplies are not accessible*** or economically feasible, groundwater provides 100 percent of a community's public water. During years where surface water deliveries are not available, groundwater may also provide up to 100 percent of irrigation water for certain areas.

☑ ***About 43 percent of Californians*** obtain at least some of their drinking water from groundwater sources.

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California Lacks a Comprehensive Groundwater Rights System *(Continued)*

- ***State Has No Statewide Groundwater Use Permitting System.*** California is one of two Western states without a comprehensive state-managed groundwater use permitting (groundwater rights) system. In California, landowners are in general entitled to the reasonable use of groundwater on property overlying the groundwater basin. In contrast, the states' surface water is appropriated through a state-administered statewide water rights permitting system.

- ***Court Adjudications and Local Regulations.*** In addition to court-adjudicated groundwater rights in some parts of the state (mainly in urban Southern California), groundwater is regulated on an ad-hoc basis statewide 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 groundwater ordinances are largely designed to protect the local jurisdiction's water supply and, as such, can operate to limit groundwater transfers out of the local area.

- ***State Supports Local Groundwater Management, Including Water Quality Improvement.*** While the state does not directly regulate groundwater use, the Legislature has supported local groundwater management through financial incentives, mainly bond-funded local assistance programs. Many of these, including the Integrated Regional Water Management Program administered jointly by SWRCB and the Department of Water Resources, seek to increase water supply through the cleanup or removal of contaminated water in groundwater basins.

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LAO Recommendations: Fundamental Changes Needed in Water Rights System

- ***"Reasonable Use" Requirement Should Better Reflect Scarcity of Resources.*** Article X of the State Constitution, requiring water to be put to beneficial use and that waste of water or unreasonable use be prevented, appears to be founded on reasonable principles. However, implementation of Article X, along with a "use it or lose it" water rights policy, has had the potential to lead to inefficient uses of water.

- ***Water Rights Realignment Necessary.*** It is in the interest of the state to realign the water rights system to better reflect modern needs and circumstances. For example, realignment could be done by accounting for the potential for water conservation and water use efficiency in managing water rights, or changes in land use (for example, including the projected conversion of farmland to other uses), particularly as total water use in the state is projected to increase over time.

- ***Legislature Could Provide Start to Realignment.*** 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 would be a beneficial first step in the realignment process. The SWRCB would then be required to use this definition as a basis for water rights decisions in the future.

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LAO Recommendation: Reevaluate How Groundwater Is Regulated and Managed

- ***Groundwater Increasingly Important to Water Supply.*** The potential to use groundwater to increase water supply (both locally and statewide), 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 water supply needs.

- ***Establish Statewide Groundwater Rights Permitting System.*** We recommend the Legislature establish a state-administered water rights system for groundwater. In doing so, the Legislature would decrease the need for costly groundwater adjudications. This system could also address concerns about the rights of those who take actions to increase groundwater supply to then reuse that water.

- ***Permitting System Could Take Various Forms.*** There are a number of models for groundwater rights permitting systems throughout the Western United States. Many systems combine a "basin approach" (essentially local monitoring and management), with some form of reporting to a statewide entity (either by region or statewide), to establish a basis for the state permitting system. In almost all cases, designated "local management" areas—much like those in Southern California—are explicitly authorized and encouraged.