

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY
BOARD POLICY COMMITTEE MEETING**

June 10, 2015

Correspondence and media coverage of interest between May 22, 2015 and June 4, 2015

Media Coverage

Drought:

Date: June 4, 2015
Source: Media Advisory
Article: Governor Brown to Meet with South Bay Water Leaders on Drought Tomorrow in San Jose

Date: June 3, 2015
Source: Capitol Weekly
Article: Historic drought trumps economy

Date: June 3, 2015
Source: Daily Journal
Article: Water cut mandates begin: April shows weak conservation, water officials hope summer brings opportunities to combat drought

Date: June 1, 2015
Source: Associated Press
Article: Mandatory water restriction in effect across California amid drought

Date: June 1, 2015
Source: Imperial Valley News
Article: New water efficiency rules approved for California K-12 and community college construction

Water Conservation:

Date: June 3, 2015
Source: Mercury News
Editorial: Water conservation improves, but don't stop now

Date: June 3, 2015
Source: LA Times
Article: Steamed: Californians critical of neighbors' response to drought, poll finds

Date: June 2, 2015
Source: SF Gate
Article: State water use falls 13.5% in April, short of governor's demand

Date: June 2, 2015
Source: Associated Press
Article: The Latest: State to use satellites to eye unplanted fields

Date: June 2, 2015
Source: Reno Guzzette Journal
Article: Four ways to reduce landscaping water usage

Date: June 2, 2015
Source: Associated Press
Article: California Farmers Plan to Avoid Water-Sucking Crops

Date: May 29, 2015
Source: KQED
Story: Not attached. Go to link for story: A Brief History of the California Lawn
<http://ww2.kqed.org/news/2015/05/29/a-brief-history-of-the-california-lawn>

Date: May 28, 2015
Source: Associated Press
Article: California panel mandates low-water lawns on new buildings

Date: May 28, 2015
Source: SJ Mercury News
Article: California farmers' "senior" water rights under siege

Water Supply:

Date: June 4, 2015
Source: Green Biz
Article: Water in the bank: A possible solution to California's water crisis

Date: June 2, 2015
Source: SF Gate
Article: Boxer to push for desalination plants to offset water shortages

Date: June 2, 2015
Source: McClatchy Washington Bureau
Article: California drought defies easy solutions at Senate hearing

Date: June 1, 2015
Source: CNBC
Article: New water rules for California cities aren't enough: Scientists

Date: May 22, 2015
Source: KRON
Article: Vandals destroy dam, release 49 million gallons of water into Bay

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MEDIA ADVISORY

Thursday, June 4, 2015

Contact: Governor's Press Office

(916) 445-4571

Governor Brown to Meet with South Bay Water Leaders on Drought Tomorrow in San Jose

SACRAMENTO – As the state's drought persists and the start of summer nears, Governor Edmund G. Brown Jr. will meet with water leaders from across the South Bay tomorrow in San Jose to discuss local conservation efforts.

When: Tomorrow, Friday, June 5, 2015. The final few minutes of the meeting will be open to coverage by credentialed media at approx. 12:15 p.m. Reporters who have RSVP'd must check in at 12:00 p.m. in the lobby of the Mayor's Office.

Where: San Jose City Hall, Office of the Mayor, 200 East Santa Clara Street, 18th Floor, San Jose, CA 95113

****NOTE:** Reporters interested in attending must RSVP to Michelle Young at 408-642-9117 or michelle.young@sanjoseca.gov by 9:00 a.m. tomorrow, Friday, June 5, 2015.

In recent weeks, Governor Brown has convened [mayors](#), [business leaders](#) and top agricultural, environmental and urban water agency [officials](#) from across California to discuss the state's drought and conservation efforts.

For more than two years, the state's experts have been managing water resources to deal with the effects of the drought and prepare for the next one. In April, Governor Brown announced the first ever 25 percent statewide mandatory water reductions and a series of [actions](#) to help save water, increase enforcement to prevent wasteful water use, streamline the state's drought response and invest in new technologies that will make California more drought resilient.

To learn more about the state's drought response, visit: Drought.CA.Gov.

Every Californian should take steps to conserve water. Find out how at SaveOurWater.com.

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Governor Edmund G. Brown Jr.
State Capitol Building
Sacramento, CA 95814

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Historic drought trumps economy

Capitol Weekly | June 3, 2015 | John Howard

Water and the lack of it is the No. 1 issue confronting California, and most people across the state believe their neighbors aren't doing enough to deal with the drought, a survey reported.

The nonprofit Public Policy Institute of California reported that nearly four in 10 of those surveyed said water and drought was the most important issue, about double those – 20 percent – who saw jobs and the economy as the key concern.

Nearly half of those surveyed supported Gov. Brown's order to cut water usage in towns and cities by 25 percent, while over a third, 36 percent, said the governor's order didn't go far enough.

PPIC said the response marked the first time in its surveys that the drought was cited as the state's top issue. The full survey can be seen [here](#).

“Water and drought is the most frequently named issue in all regions, but Central Valley residents are the most likely to mention it (53%) (42% San Francisco Bay Area, 37% Orange/San Diego, 36% Inland Empire, 31% Los Angeles). In addition, 69 percent of Californians say the supply of water in their part of the state is a big problem—a record high since the survey began asking this question in 2009,” PPIC said in a statement accompanying the survey.

“Just 28 percent of Californians say that people in their part of the state are doing the right amount to respond to the drought, while 60 percent say that their neighbors are not doing enough (7% too much),” PPIC noted.

Nearly half of those surveyed supported Gov. Brown's order to cut water usage in towns and cities by 25 percent, while over a third, 36 percent, said the governor's order didn't go far enough.

“Public concern about the drought is at a record-high level today,” said Mark Baldassare, PPIC president and CEO. “Most Californians are satisfied with the governor's actions, but a sizable number say the mandatory water reductions have not gone far enough.”

Some 47 percent of those surveyed approved of the governor's handling of the drought, while 38 percent disapproved and 15 percent said they didn't know.

The PPIC survey was conducted after Brown released his revised state budget for the 2015-16 fiscal year.

“After hearing a brief summary of the plan, 73 percent of adults and 70 percent of likely voters say they favor it, while about a quarter (23% adults, 25% likely voters) are opposed,” the PPIC said. “Majorities across parties favor the proposal, but support is much higher among Democrats (80%) and independents (73%) than among Republicans (55%).”

The survey shows that the public's concerns about the state budget situation have steadily eased over time.

Today, 47 percent of adults say the budget situation is a big problem — close to the record low on this question reached in May 2007 (44%).

Californians' opinions about the direction of the state and their own economic futures are about the same as in May 2014. Today, 45 percent of adults and 40 percent of likely voters say things are generally going in the right direction. About half (48%) of adults and 44 percent of likely voters expect good times financially in the next year. Residents in the San Francisco Bay Area are more upbeat than those in other regions about the direction of things in California (53% right direction), and more likely to expect good economic times (57%).

On other issues, among likely California voters, 56 percent favor legalization and 41 percent are opposed. A majority of whites (60%) favor legalization, while a similar proportion of Latinos (60%) oppose it. Across age groups, Californians age 18 to 34 (62%) are more likely to favor legalization than are older residents (51% age 35 to 54, 49% age 55 and older).

Asked the same series of questions about state government, 61 percent of adults and 62 percent of likely voters say they can trust the government in Sacramento to do what is right only some of the time. Solid majorities (62% adults, 65% likely voters) say state government is run by a few big interests looking out for themselves. A slim majority of adults (52%) and 57 percent of likely voters say people in state government waste a lot of tax money.

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Water cut mandates begin: April shows weak conservation, water officials hope summer brings opportunities to combat drought

Daily Journal | June 03, 2015 | Samantha Weigel

With California's first ever mandatory conservation orders going into effect this week, water officials released data indicating most San Mateo County consumers are slowly doing their part to achieve a statewide 25 percent reduction.

The State Water Resources Control Board released statistics comparing April 2015 use to the same time period in 2013 and was reservedly pleased to announce residents increased conservation from 3.9 percent in March to 13.5 percent.

Yet contrasting monthly conservation rates may give some a false sense of accomplishment as the summer months approach and many are expected to turn to watering their landscape.

“Comparing just on a one-month basis, those numbers can go up and down a lot,” said Dave Dickson, manager of the Coastside County Water District that boasts a 22 percent reduction for April, well above its 8 percent target. “Our overall residential conservation is probably more in the 10 to 15 percent range. So as we go into the warmer weather and people tend to use their outdoor irrigation systems more, it'll be challenging for us to maintain the level of conservation that we need to.”

The new mandates that offer tiered conservation targets ranging from 8 percent to 36 percent went into effect Monday as Gov. Jerry Brown aims to save 1.3 million acre-feet of water to combat the fourth year of drought.

Water officials said California residents reduced overall water use by 13.5 percent in April compared to the same month in the benchmark year of 2013, according to the Associated Press.

That's the second-best conservation achievement since state officials started closely tracking water use more than a year ago, but it fell short of the 25 percent cut that Gov. Jerry Brown made mandatory for cities and towns as of June 1, according to the Associated Press.

As the water board labored over how to quickly implement such a lofty goal, some argue seasonal swings in consumption require a longer-term look at achieving targets.

“As part of this process, when they talk about compliance, they need to recognize that applying the same level cutback every month is not the best indicator of how communities are responding,” said Nicole Sandkulla, CEO of the Bay Area Water Supply and Conservation Agency.

BAWSCA represents local agencies that purchase wholesale water from the San Francisco Public Utilities Commission and, based on reports, nearly 80 percent of the savings achieved in

2014 occurred between June and October — the majority between July and September, Sandkulla said.

As April is typically a low-use month, Sandkulla said it's hard for some cities to achieve significant savings outside of summer.

Millbrae and Foster City residents had the most lackluster savings in April and will need to kick up efforts in the coming months.

Millbrae didn't reduce April consumption and Foster City residents actually increased their use by 2 percent, according to the water board.

While April proved uneventful, Millbrae's Assistant City Manager Chip Taylor said he's noted a 20 percent savings the following month.

"It's sometimes difficult to look at one month to one month, it becomes more of a cumulative effort. Because it can be more challenging during the winter months versus when you're in summer and dealing with outdoor irrigation," Taylor said, noting the city itself reduced use by 28 percent.

The fear that some may be punished for early conservation rings true for Foster City as Public Works Director Jeff Moneda said residents cut back more than 20 percent over the last five years.

"We ramped up our conservation efforts back in 2010, so we've made those arguments to the state, that we feel we're being penalized for early conservation. Back in 2010, we instituted tiered water rates and that helped us in achieving conservation early on. But unfortunately, that's a negative impact to us based on the current regulations," Moneda said.

As a community with many landscaped single-family homes, it can also be misleading to compare Foster City to other locales like San Francisco where lawns are scarce, Moneda said.

For San Mateo County's largest water consumers, residents in Hillsborough and the California Water Service Company's Bear Gulch District, large landscaped properties bumped consumers into the highest 36 percent conservation tier.

Hillsborough residents reduced their April use by 34 percent, above the average 25 percent they saved between June 2014 and February 2015.

Bear Gulch customers — those in Atherton, Woodside, Portola Valley as well as unincorporated parts of Menlo Park and Redwood City — conserved 23 percent in April.

"We are off to a great start," said Bear Gulch District Manager Dawn Smithson. "This just underlines my confidence that the Bear Gulch District's customers will rise to the challenge. I'm very proud of our customers and I know we can all work together to meet this goal."

As a diverse area, San Mateo County residents have reduced at varying rates with cities like San Bruno cutting back 32 percent in April, well above its 8 percent target; and others like San Mateo and San Carlos residents in Cal Water's Mid Peninsula District reducing 5 percent in April, short of their 16 percent goal.

Burlingame's April numbers were misreported to the water board and residents achieved a 6 percent reduction, shy of its 16 percent target, said Assistant Public Works Director Art Morimoto.

With summer approaching, Sandkulla said she expects the statistics to change and hopes residents will forgo water use outdoors as it's much easier than curtailing use inside the home.

"We have continued to see water use for the entire region go down week after week and to me, that indicates that customers are responding," Sandkulla said. "But when you've got communities that already use very low amounts of water, it's difficult for them to conserve in April. So what I'm expecting is as we move into the summer months, we'll see differences in these numbers, absolutely."

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Residents served by various San Mateo County water suppliers have conserved at different rates as compared to the same time period in 2013.

City/utility April 2015, June 2014-February 2015, Conservation Target

San Francisco Public Utilities Commission, 12 percent, 8 percent, 8 percent

Cal Water South City, 13 percent, 8 percent, 8 percent

San Bruno, 32 percent, 9 percent, 8 percent

Coastside County Water District, 22 percent, 7 percent, 8 percent

Redwood City, 30 percent, 14 percent, 8 percent

Foster City, - 2 percent, 5 percent, 12 percent

Cal Water Mid Peninsula, 5 percent, 11 percent, 16 percent

Menlo Park, 9 percent, 27 percent, 16 percent

Burlingame, 6 percent, 17 percent, 16 percent

Mid-Peninsula Water District, 24 percent, 13 percent, 20 percent

Cal Water Bear Gulch, 23 percent, 11 percent, 36 percent

Hillsborough, 34 percent, 25 percent, 36 percent

*Data provided by the State Water Resources Control Board, city of Burlingame.

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Mandatory water restrictions in effect across California amid drought

Associated Press | June 01, 2015

ARCADIA, Calif. (KABC) -- New mandatory water restrictions went into effect across California on Monday. The goal is to beat the state's historic drought.

Gov. Jerry Brown's executive order requires statewide savings to average 25 percent.

Some local water agencies are being required to cut back anywhere from 8 to 36 percent. Arcadia is one of several cities at the highest end of the spectrum.

"We've got problems. We've had drought for four years," said Linda Semain, an Arcadia resident. "I think our lawns are going to be a slightly different color."

A sign on a lawn on Santa Anita Avenue read, "It's green to go brown. This lawn is brown because the city is complying with state water regulations. We are happy to do our part to reduce water use by 36%. Will you?"

Landscaper Wesley Stanton said he's been very busy converting properties to have drought tolerant plants.

"It's either start converting now, or you're going to wind up with dead plants or high fines," Stanton said.

The new water restrictions come as California prepares for a possible fifth year of drought.

Arcadia Councilman Tom Beck is leading by example. He had crews tear out the grass from his backyard. He said his front yard is next.

"With my landscaping, I just decided that we were using just too much water," Beck said.

He said each home in Arcadia is given a water budget based on the size of the home and size of the lot.

"Some people, it takes to have a fine to get them to change their thinking," Beck said.

Those fines can be hefty. Local water agencies in Southern California can fine property owners up to \$500 a day if they don't abide by the new restrictions.

The State Water Resources Control Board in Sacramento is expecting to see some immediate savings as they encourage residents to let their lawns die.

Some local water departments have called the mandatory reductions unrealistic and unfair, arguing that the steep cuts could cause higher water bills for customers and declining property values when homeowners' lawns turn brown.

In addition to Arcadia, Norco, Yorba Linda and Beverly Hills also fall under the 36-percent water reduction requirement.

You can see a full list of regions and corresponding conservation requirements in the attached.

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Westborough Water District	257,568,499	213,776,790	43,791,709	17%	40.6	2	8%
Arcata City of	499,104,000	495,047,000	4,057,000	1%	43.5	2	8%
San Francisco Public Utilities Commission	20,365,410,000	18,717,900,000	1,647,510,000	8%	45.4	2	8%
Santa Cruz City of	2,527,700,000	1,933,400,000	594,300,000	24%	47.3	2	8%
California Water Service Company South San Francisco	2,075,673,590	1,907,534,254	168,139,336	8%	48.8	2	8%
California-American Water Company Monterey District	2,903,844,543	2,590,336,368	313,508,175	11%	51.3	2	8%
California Water Service Company East Los Angeles	3,998,522,861	3,819,956,279	178,566,582	4%	51.4	2	8%
California-American Water Company San Diego District	2,795,094,888	2,578,195,144	216,899,744	8%	51.9	2	8%
Cambria Community Services District	166,216,813	95,513,570	70,703,243	43%	54.3	2	8%
East Palo Alto, City of	409,886,088	454,911,335	-45,025,247	-11%	55.6	2	8%
Park Water Company	2,833,164,110	2,598,821,539	234,342,571	8%	55.6	2	8%
San Bruno City of	929,865,974	849,620,197	80,245,777	9%	55.7	2	8%
Daly City City of	1,888,066,301	1,622,632,784	265,433,517	14%	58.8	2	8%
North Coast County Water District	809,332,364	713,333,361	95,999,003	12%	59.5	2	8%
Golden State Water Company Florence Graham	1,246,577,219	1,227,482,326	19,094,894	2%	59.7	2	8%
Golden State Water Company Bell-Bell Gardens	1,279,423,043	1,208,354,847	71,068,196	6%	60.8	2	8%
Coastside County Water District	565,550,000	524,430,000	41,120,000	7%	61.9	2	8%
Hayward City of	4,474,967,937	3,957,222,483	517,745,455	12%	62.1	2	8%
Grover Beach City of	352,828,667	208,202,769	144,625,897	41%	62.3	2	8%
Redwood City City of	2,525,846,774	2,179,170,327	346,676,447	14%	63.4	2	8%
Compton City of	1,858,895,919	1,837,323,747	21,572,172	1%	63.6	2	8%
Soquel Creek Water District	1,046,626,000	826,889,000	219,737,000	21%	64.2	2	8%
Seal Beach City of	905,215,264	856,337,550	48,877,714	5%	64.7	2	8%
Inglewood City of	2,457,964,645	2,284,776,001	173,188,643	7%	65.1	3	12%
Goleta Water District	3,523,431,480	3,053,227,871	470,203,609	13%	65.5	3	12%
Oxnard City of	5,742,131,037	5,086,123,686	656,007,351	11%	66.6	3	12%
Paramount City of	1,628,999,712	1,623,382,034	5,617,679	0%	67.0	3	12%
California Water Service Company King City	428,820,478	403,729,918	25,090,560	6%	67.7	3	12%
Golden State Water Company Southwest	7,303,405,789	6,894,299,322	409,106,467	6%	68.2	3	12%
Golden State Water Company Bay Point	512,238,443	452,672,802	59,565,641	12%	69.2	3	12%
San Luis Obispo City of	1,387,716,506	1,278,706,170	109,010,336	8%	69.9	3	12%
Morro Bay City of	316,836,255	281,236,756	35,599,499	11%	70.0	3	12%
South Gate City of	2,066,696,383	2,017,629,675	49,066,708	2%	70.1	3	12%
Vernon City of	1,907,061,769	1,788,380,162	118,681,607	6%	70.6	3	12%
Huntington Park City of	1,171,761,731	1,128,423,492	43,338,240	4%	71.3	3	12%
Golden State Water Company Norwalk	1,214,317,928	1,131,519,080	82,798,848	7%	72.2	3	12%
Milpitas City of	2,719,687,979	2,424,775,231	294,912,748	11%	72.3	3	12%
Estero Municipal Improvement District	1,137,677,797	1,077,438,670	60,239,127	5%	72.8	3	12%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Golden State Water Company S San Gabriel	664,867,252	637,528,317	27,338,935	4%	73.6	3	12%
Sweetwater Authority	5,185,495,337	4,886,767,783	298,727,554	6%	75.0	3	12%
City of Big Bear Lake, Dept of Water & Power	610,520,000	590,469,860	20,050,140	3%	75.8	3	12%
La Palma City of	545,401,972	497,342,471	48,059,501	9%	75.9	3	12%
Marina Coast Water District	1,063,425,908	946,396,368	117,029,540	11%	76.0	3	12%
Lompoc City of	1,253,200,000	1,106,800,000	146,400,000	12%	76.6	3	12%
San Lorenzo Valley Water District	416,952,583	335,050,267	81,902,316	20%	77.9	3	12%
Santa Ana City of	9,729,076,397	9,323,684,636	405,391,760	4%	78.3	3	12%
Port Hueneme City of	500,546,894	456,100,759	44,446,135	9%	78.9	3	12%
Santa Fe Springs City of	1,526,056,730	1,408,567,739	117,488,991	8%	80.1	4	16%
Crestline Village Water District	185,010,871	167,499,027	17,511,844	9%	80.3	4	16%
McKinleyville Community Service District	344,448,000	300,869,000	43,579,000	13%	80.5	4	16%
Montebello Land and Water Company	859,407,071	791,398,619	68,008,451	8%	80.5	4	16%
Sweetwater Springs Water District	208,544,913	177,491,272	31,053,641	15%	80.8	4	16%
Santa Barbara City of	3,348,530,727	2,632,951,217	715,579,509	21%	80.9	4	16%
Rohnert Park City of	1,267,000,000	1,124,000,000	143,000,000	11%	81.0	4	16%
Lake Arrowhead Community Services District	440,648,885	386,238,213	54,410,671	12%	81.5	4	16%
Valley County Water District	2,033,127,821	1,853,913,772	179,214,049	9%	81.6	4	16%
San Diego City of	47,355,303,598	46,452,597,390	902,706,208	2%	82.0	4	16%
Mountain View City of	2,967,854,797	2,531,213,885	436,640,912	15%	82.5	4	16%
Golden State Water Company Artesia	1,402,138,690	1,348,796,812	53,341,879	4%	83.4	4	16%
California Water Service Company Dominguez	8,444,765,582	8,077,205,172	367,560,410	4%	83.7	4	16%
Greenfield, City of	573,049,890	501,684,126	71,365,764	12%	83.8	4	16%
Long Beach City of	14,658,100,592	13,842,168,619	815,931,973	6%	83.8	4	16%
Dublin San Ramon Services District	2,779,417,000	1,959,505,000	819,912,000	29%	84.7	4	16%
Golden State Water Company Culver City	1,415,824,450	1,344,756,254	71,068,196	5%	84.8	4	16%
Sunnyvale City of	4,612,426,949	3,920,970,221	691,456,728	15%	85.2	4	16%
California Water Service Company Salinas District	4,612,101,098	4,065,974,106	546,126,992	12%	86.0	4	16%
Lynwood City of	1,264,349,156	1,237,371,916	26,977,240	2%	86.3	4	16%
Santa Rosa City of	5,454,466,874	4,447,473,373	1,006,993,501	18%	86.7	4	16%
Hawthorne City of	1,070,747,789	1,135,592,223	-64,844,434	-6%	86.7	4	16%
California Water Service Company Mid Peninsula	3,986,792,209	3,551,780,554	435,011,655	11%	87.4	4	16%
San Gabriel Valley Water Company	9,747,519,587	9,124,165,807	623,353,780	6%	88.3	4	16%
Alameda County Water District	10,539,100,000	8,458,900,000	2,080,200,000	20%	88.3	4	16%
Santa Clara City of	5,338,900,000	4,749,500,000	589,400,000	11%	88.3	4	16%
Menlo Park City of	1,058,240,665	769,095,397	289,145,268	27%	88.6	4	16%
Millbrae City of	668,885,610	603,267,242	65,618,369	10%	89.2	4	16%
Petaluma City of	2,407,770,000	2,071,485,000	336,285,000	14%	89.6	4	16%

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	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Hi-Desert Water District	744,117,577	733,074,472	11,043,105	1%	90.2	4	16%
Burlingame City of	1,288,363,748	1,075,113,151	213,250,598	17%	90.4	4	16%
Los Angeles Department of Water and Power	139,452,680,105	130,343,503,463	9,109,176,642	7%	90.9	4	16%
Vallejo City of	4,410,308,000	4,020,375,000	389,933,000	9%	91.3	4	16%
San Buenaventura City of	4,446,346,994	3,813,888,925	632,458,069	14%	91.3	4	16%
Pico Rivera City of	1,267,056,981	1,099,162,034	167,894,948	13%	91.6	4	16%
Scotts Valley Water District	311,979,632	253,857,835	58,121,797	19%	91.6	4	16%
Irvine Ranch Water District	15,406,744,246	15,015,266,341	391,477,904	3%	91.7	4	16%
Santa Maria City of	3,370,607,161	3,257,210,864	113,396,297	3%	93.0	4	16%
Windsor, Town of	963,136,985	817,896,531	145,240,453	15%	93.0	4	16%
California Water Service Company Redwood Valley	108,182,674	82,440,411	25,742,263	24%	93.3	4	16%
American Canyon, City of	915,968,361	777,155,653	138,812,708	15%	93.5	4	16%
Golden State Water Company West Orange	4,000,477,969	3,830,090,258	170,387,711	4%	94.2	4	16%
East Bay Municipal Utilities District	52,390,500,000	46,127,500,000	6,263,000,000	12%	94.2	4	16%
Crescent City City of	583,110,000	710,650,000	-127,540,000	-22%	94.5	4	16%
Martinez City of	1,027,679,751	871,695,210	155,984,540	15%	95.5	5	20%
Pomona City of	5,817,361,333	5,468,536,077	348,825,256	6%	95.9	5	20%
San Jose City of	5,294,000,000	4,707,000,000	587,000,000	11%	96.0	5	20%
Bellflower-Somerset Mutual Water Company	1,350,031,789	1,268,477,694	81,554,095	6%	96.2	5	20%
California Water Service Company Hermosa/Redondo	2,984,799,071	2,983,495,666	1,303,406	0%	96.4	5	20%
Azusa City of	5,165,530,597	4,670,763,054	494,767,543	10%	97.3	5	20%
California Water Service Company Stockton	6,808,665,567	6,318,910,872	489,754,695	7%	97.6	5	20%
El Segundo City of	1,692,179,532	1,788,496,457	-96,316,925	-6%	97.9	5	20%
Westminster City of	3,064,371,990	2,956,971,359	107,400,630	4%	98.0	5	20%
Carpinteria Valley Water District	1,160,826,158	1,028,941,051	131,885,107	11%	98.2	5	20%
Lomita City of	591,013,026	547,632,425	43,380,600	7%	98.2	5	20%
Norwalk City of	559,456,000	511,830,000	47,626,000	9%	98.6	5	20%
Mesa Water District	4,434,609,825	4,283,056,327	151,553,499	3%	99.0	5	20%
Moulton Niguel Water District	7,135,207,799	6,864,125,480	271,082,319	4%	99.2	5	20%
Santa Monica City of	3,462,200,000	3,321,100,000	141,100,000	4%	99.2	5	20%
Rowland Water District	2,857,000,142	2,756,214,295	100,785,846	4%	99.2	5	20%
Livermore City of Division of Water Resources	1,642,615,000	1,199,514,000	443,101,000	27%	100.1	5	20%
Fountain Valley City of	2,438,968,604	2,305,516,153	133,452,452	5%	100.2	5	20%
Watsonville City of	2,045,660,752	1,803,744,576	241,916,176	12%	100.3	5	20%
Lathrop, City of	1,149,290,000	990,960,000	158,330,000	14%	100.3	5	20%
Pittsburg City of	2,481,549,000	2,226,323,000	255,226,000	10%	100.4	5	20%
El Monte City of	328,279,000	312,936,000	15,343,000	5%	100.6	5	20%
Tahoe City Public Utilities District	372,523,331	326,265,848	46,257,483	12%	100.9	5	20%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Mid-Peninsula Water District	823,925,361	712,822,442	111,102,919	13%	101.4	5	20%
Mammoth Community Water District	499,483,000	447,407,000	52,076,000	10%	102.9	5	20%
San Gabriel County Water District	1,612,133,643	1,485,957,453	126,176,190	8%	102.9	5	20%
Helix Water District	8,454,736,636	8,067,103,778	387,632,858	5%	103.6	5	20%
Whittier City of	2,041,957,743	2,084,064,264	-42,106,521	-2%	104.2	5	20%
Great Oaks Water Company Incorporated	2,641,791,567	2,210,783,322	431,008,244	16%	104.2	5	20%
Hollister City of	832,612,930	742,476,980	90,135,950	11%	104.4	5	20%
Calexico City of	1,524,360,000	1,440,570,000	83,790,000	5%	104.6	5	20%
Lakewood City of	2,086,631,973	1,856,580,866	230,051,107	11%	105.0	5	20%
Oceanside City of	6,988,111,948	6,765,555,423	222,556,525	3%	105.1	5	20%
San Jose Water Company	36,046,000,000	31,608,300,000	4,437,700,000	12%	105.7	5	20%
Valley of the Moon Water District	800,300,880	646,691,259	153,609,621	19%	106.5	5	20%
Escondido City of	4,625,134,351	4,059,907,513	565,226,838	12%	106.7	5	20%
Fairfield City of	5,435,000,000	4,853,000,000	582,000,000	11%	106.7	5	20%
Downey City of	4,090,256,554	3,834,059,128	256,197,426	6%	106.9	5	20%
Glendale City of	6,839,188,070	6,346,086,881	493,101,189	7%	107.1	5	20%
Otay Water District	8,209,272,756	7,888,634,952	320,637,804	4%	107.1	5	20%
Marin Municipal Water District	7,006,662,670	5,966,662,221	1,040,000,448	15%	107.4	5	20%
Camarillo City of	2,747,943,839	2,399,416,293	348,527,546	13%	107.5	5	20%
California-American Water Company Sacramento District	8,801,191,649	7,285,565,423	1,515,626,225	17%	107.8	5	20%
Adelanto city of	1,091,834,544	993,603,394	98,231,150	9%	108.5	5	20%
Anaheim City of	16,337,538,847	15,992,788,037	344,750,810	2%	108.6	5	20%
Ukiah City of	678,601,000	551,722,000	126,879,000	19%	108.6	5	20%
Huntington Beach City of	7,506,541,568	7,116,888,432	389,653,136	5%	109.0	5	20%
Napa City of	3,605,871,891	3,247,435,321	358,436,570	10%	109.2	5	20%
Lakeside Water District	1,064,566,388	977,942,044	86,624,343	8%	109.3	5	20%
Padre Dam Municipal Water District	2,952,148,758	2,752,858,026	199,290,733	7%	109.4	5	20%
Crescenta Valley Water District	1,200,433,997	1,043,760,838	156,673,159	13%	109.4	5	20%
Torrance City of	3,906,665,343	3,703,464,394	203,200,950	5%	111.0	6	24%
Big Bear City Community Services District	266,135,894	256,898,007	9,237,888	3%	111.0	6	24%
Vista Irrigation District	4,896,569,394	4,632,303,886	264,265,507	5%	111.1	6	24%
Perris, City of	437,809,090	430,597,020	7,212,070	2%	111.9	6	24%
Pismo Beach City of	434,216,578	359,495,587	74,720,991	17%	113.1	6	24%
Vallecitos Water District	4,390,033,350	4,037,168,840	352,864,510	8%	116.1	6	24%
Soledad, City of	581,571,300	531,785,500	49,785,800	9%	116.7	6	24%
Manhattan Beach City of	1,219,661,891	1,153,188,200	66,473,691	5%	116.7	6	24%
Palo Alto City of	3,180,440,852	2,685,999,460	494,441,392	16%	116.8	6	24%
Gilroy City of	2,328,666,000	1,995,678,000	332,988,000	14%	117.5	6	24%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Humboldt Community Service District	610,120,000	573,669,000	36,451,000	6%	117.9	6	24%
Alhambra City of	2,575,148,433	2,329,573,763	245,574,669	10%	118.3	6	24%
Golden State Water Company S Arcadia	908,701,874	851,189,098	57,512,777	6%	118.5	6	24%
Orchard Dale Water District	589,289,272	550,757,340	38,531,931	7%	118.6	6	24%
Buena Park City of	3,777,921,445	3,441,805,698	336,115,747	9%	118.9	6	24%
Golden State Water Company Placentia	1,868,334,327	1,778,757,770	89,576,557	5%	118.9	6	24%
Pico Water District	1,029,001,320	960,057,631	68,943,690	7%	119.1	6	24%
Delano City of	2,386,120,000	2,229,650,000	156,470,000	7%	119.4	6	24%
El Centro City of	1,978,323,000	1,910,544,000	67,779,000	3%	119.5	6	24%
Pleasanton City of	4,439,552,000	3,099,891,000	1,339,661,000	30%	119.8	6	24%
Woodland City of	2,938,159,020	2,454,292,204	483,866,816	16%	119.8	6	24%
El Toro Water District	2,331,141,109	2,239,576,858	91,564,251	4%	119.9	6	24%
San Fernando City of	839,719,127	786,931,196	52,787,931	6%	120.3	6	24%
Suburban Water Systems San Jose Hills	7,160,122,399	6,833,016,444	327,105,955	5%	120.3	6	24%
Sunny Slope Water Company	1,052,785,122	950,022,234	102,762,888	10%	120.5	6	24%
California Water Service Company Livermore	2,781,467,781	1,909,163,511	872,304,270	31%	120.5	6	24%
Laguna Beach County Water District	872,082,691	867,064,579	5,018,112	1%	121.0	6	24%
Fortuna City of	303,008,000	276,986,000	26,022,000	9%	121.2	6	24%
Amador Water Agency	899,761,000	773,623,400	126,137,600	14%	121.5	6	24%
South Coast Water District	1,639,847,306	1,549,814,557	90,032,749	5%	121.7	6	24%
Alco Water Service	1,156,954,000	1,028,617,000	128,337,000	11%	124.2	6	24%
Monte Vista Water District	2,603,464,922	2,359,464,115	244,000,807	9%	125.0	6	24%
Golden State Water Company Barstow	1,595,531,512	1,445,509,515	150,021,997	9%	125.4	6	24%
California Water Service Company Marysville	575,127,769	496,597,575	78,530,194	14%	125.5	6	24%
Coachella City of	1,395,900,000	1,294,010,000	101,890,000	7%	125.5	6	24%
Brea City of	2,826,761,129	2,727,376,444	99,384,685	4%	125.9	6	24%
Colton, City of	2,519,711,330	2,487,549,794	32,161,536	1%	126.3	6	24%
Chino City of	3,332,449,959	3,123,999,542	208,450,416	6%	126.7	6	24%
Santa Margarita Water District	7,105,190,366	6,932,489,109	172,701,256	2%	126.8	6	24%
Reedley City of	1,302,000,000	1,109,000,000	193,000,000	15%	126.9	6	24%
Ontario City of	8,782,999,363	8,499,508,622	283,490,741	3%	126.9	6	24%
Valencia Water Company	7,817,224,611	6,780,899,767	1,036,324,844	13%	127.0	6	24%
Groveland Community Services District	127,297,632	96,625,396	30,672,236	24%	127.5	6	24%
Eureka City of	860,874,000	799,778,000	61,096,000	7%	128.1	6	24%
North Marin Water District	2,457,000,000	1,986,810,000	470,190,000	19%	129.1	6	24%
City of Newman Water Department	559,946,000	448,854,000	111,092,000	20%	129.2	6	24%
Tuolumne Utilities District	1,441,240,862	992,152,425	449,088,437	31%	129.3	6	24%
Golden State Water Company Simi Valley	1,830,698,487	1,657,215,187	173,483,300	9%	129.9	6	24%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Twentynine Palms Water District	666,765,336	641,552,256	25,213,080	4%	130.5	7	28%
Eastern Municipal Water District	22,059,815,756	21,154,600,492	905,215,264	4%	130.7	7	28%
South Pasadena City of	1,045,005,526	935,193,595	109,811,931	11%	131.0	7	28%
California Water Service Company Oroville	830,595,287	682,007,037	148,588,251	18%	131.6	7	28%
Healdsburg City of	540,150,000	446,810,000	93,340,000	17%	131.9	7	28%
Burbank City of	4,712,137,486	4,362,205,638	349,931,847	7%	132.2	7	28%
Arroyo Grande City of	776,210,684	654,635,517	121,575,167	16%	132.4	7	28%
San Juan Capistrano City of	2,040,416,466	1,962,283,810	78,132,655	4%	133.3	7	28%
Garden Grove City of	6,584,316,860	6,185,605,054	398,711,806	6%	133.6	7	28%
Del Oro Water Company	369,631,917	306,051,990	63,579,927	17%	134.3	7	28%
Humboldt Bay Municipal Water District	146,056,000	148,820,000	-2,764,000	-2%	134.5	7	28%
Tracy City of	4,529,625,694	3,497,663,768	1,031,961,925	23%	134.6	7	28%
Riverside City of	17,427,511,870	15,956,944,380	1,470,567,490	8%	135.3	7	28%
West Kern Water District	4,045,106,581	3,679,048,346	366,058,235	9%	135.4	7	28%
Fullerton City of	7,215,373,767	6,969,105,034	246,268,733	3%	136.8	7	28%
Lincoln Avenue Water Company	613,030,807	557,668,649	55,362,157	9%	137.2	7	28%
La Habra City of Public Works	2,397,728,848	2,535,032,864	-137,304,016	-6%	137.5	7	28%
Newport Beach City of	4,220,349,478	3,924,557,845	295,791,633	7%	137.8	7	28%
Carlsbad Municipal Water District	4,342,002,850	4,259,269,173	82,733,677	2%	138.6	7	28%
Pasadena City of	8,349,297,631	7,614,975,148	734,322,483	9%	139.0	7	28%
Truckee-Donner Public Utilities District	1,264,764,466	1,144,274,188	120,490,278	10%	139.4	7	28%
Contra Costa Water District	8,855,338,380	7,547,370,752	1,307,967,628	15%	139.9	7	28%
Shasta Lake City of	309,004,338	258,461,000	50,543,338	16%	140.2	7	28%
Suburban Water Systems Whittier/La Mirada	5,584,910,982	5,234,793,399	350,117,583	6%	141.1	7	28%
Antioch City of	4,642,068,000	4,042,923,000	599,145,000	13%	141.9	7	28%
South Tahoe Public Utilities District	1,641,227,000	1,550,474,000	90,753,000	6%	141.9	7	28%
Sonoma City of	583,798,675	494,362,234	89,436,441	15%	142.7	7	28%
San Gabriel Valley Fontana Water Company	10,907,224,816	10,188,722,419	718,502,397	7%	142.9	7	28%
West Sacramento City of	3,567,747,274	2,941,460,832	626,286,443	18%	143.0	7	28%
Tehachapi, City of	582,624,632	536,291,818	46,332,814	8%	143.7	7	28%
Davis City of	3,023,400,000	2,527,400,000	496,000,000	16%	143.9	7	28%
Benicia City of	1,543,102,018	1,217,315,761	325,786,257	21%	143.9	7	28%
California Water Service Company Dixon, City of	382,549,575	346,705,918	35,843,657	9%	144.3	7	28%
Sunnyslope County Water District	694,319,032	596,249,460	98,069,572	14%	144.6	7	28%
Roseville City of	8,448,024,096	6,930,859,852	1,517,164,244	18%	145.1	7	28%
Elk Grove Water Service	1,982,552,982	1,615,618,816	366,934,166	19%	145.3	7	28%
Paso Robles City of	1,705,474,000	1,511,094,000	194,380,000	11%	146.1	7	28%
Elsinore Valley Municipal Water District	6,567,437,756	6,285,445,931	281,991,825	4%	146.3	7	28%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

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	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Sacramento City of	28,979,000,000	23,440,000,000	5,539,000,000	19%	146.4	7	28%
Walnut Valley Water District	5,119,451,770	4,877,344,159	242,107,610	5%	146.4	7	28%
Rialto City of	2,544,482,555	2,596,683,954	-52,201,399	-2%	146.8	7	28%
Diablo Water District	1,487,225,000	1,338,770,000	148,455,000	10%	147.7	7	28%
Patterson City of	1,040,156,104	948,595,320	91,560,784	9%	148.3	7	28%
San Dieguito Water District	1,583,703,106	1,621,176,020	-37,472,914	-2%	148.4	7	28%
Orange City of	7,732,617,288	7,437,395,896	295,221,393	4%	148.7	7	28%
California Water Service Company Kern River Valley	222,882,376	201,376,182	21,506,194	10%	148.9	7	28%
San Bernardino City of	11,535,034,614	10,722,937,586	812,097,028	7%	149.1	7	28%
Suisun-Solano Water Authority	1,038,300,000	918,300,000	120,000,000	12%	150.0	7	28%
Cerritos City of	2,219,233,953	1,991,297,621	227,936,332	10%	153.6	7	28%
Sanger City of	1,552,776,000	1,422,246,000	130,530,000	8%	153.7	7	28%
Fresno City of	36,603,191,424	30,513,707,650	6,089,483,774	17%	154.2	7	28%
Monrovia City of	1,885,000,000	1,673,000,000	212,000,000	11%	154.6	7	28%
Covina City of	1,500,350,310	1,393,914,200	106,436,110	7%	154.7	7	28%
Lake Hemet Municipal Water District	2,880,852,466	2,579,961,258	300,891,208	10%	154.9	7	28%
Stockton City of	8,304,530,000	7,263,300,000	1,041,230,000	13%	155.0	7	28%
Jurupa Community Service District	6,546,170,411	6,107,698,865	438,471,545	7%	155.5	7	28%
Ventura County Waterworks District No. 8	5,424,122,854	4,896,895,245	527,227,609	10%	156.1	7	28%
Tustin City of	2,984,049,613	2,895,189,929	88,859,684	3%	156.5	7	28%
California-American Water Company Los Angeles District	5,579,752,754	5,179,473,602	400,279,151	7%	156.8	7	28%
San Clemente City of	2,270,663,084	2,331,434,375	-60,771,291	-3%	157.7	7	28%
Chino Hills City of	3,952,965,804	3,587,674,904	365,290,900	9%	157.8	7	28%
Rubidoux Community Service District	1,400,190,000	1,335,510,000	64,680,000	5%	157.9	7	28%
Arvin Community Services District	740,072,884	667,768,501	72,304,383	10%	157.9	7	28%
Rosamond Community Service District	719,200,000	712,000,000	7,200,000	1%	158.1	7	28%
Golden State Water Company San Dimas	3,063,589,946	2,950,649,842	112,940,105	4%	159.0	7	28%
Apple Valley Ranchos Water Company	4,101,713,205	3,942,264,436	159,448,769	4%	159.8	7	28%
Hanford City of	3,229,776,700	2,793,029,816	436,746,884	14%	160.0	7	28%
Santa Paula City of	1,218,270,506	1,081,725,724	136,544,782	11%	160.2	7	28%
Morgan Hill City of	2,262,311,000	1,786,089,000	476,222,000	21%	161.3	7	28%
North Tahoe Public Utility District	350,120,000	332,141,000	17,979,000	5%	161.7	7	28%
Atascadero Mutual Water Company	1,291,000,000	1,056,900,000	234,100,000	18%	163.0	7	28%
Thousand Oaks City of	3,106,634,920	2,792,709,655	313,925,265	10%	163.7	7	28%
Victorville Water District	4,985,852,685	4,486,322,447	499,530,238	10%	164.4	7	28%
Fillmore City of	482,079,202	446,216,000	35,863,202	7%	165.6	7	28%
Nipomo Community Services District	665,258,273	527,032,098	138,226,175	21%	165.6	7	28%
Ramona Municipal Water District	1,087,105,531	1,049,746,665	37,358,866	3%	165.9	7	28%

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	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Ceres City of	1,985,969,000	1,848,968,000	137,001,000	7%	166.1	7	28%
El Dorado Irrigation District	10,044,044,386	7,600,810,386	2,443,234,000	24%	166.2	7	28%
Newhall County Water District	2,611,216,927	2,326,139,289	285,077,638	11%	166.5	7	28%
California Water Service Company Willows	364,301,895	318,682,696	45,619,200	13%	168.6	7	28%
East Valley Water District	5,405,695,956	4,782,879,831	622,816,125	12%	169.4	7	28%
Joshua Basin Water District	409,078,118	382,604,644	26,473,473	6%	169.5	7	28%
Imperial, City of	687,420,000	671,127,000	16,293,000	2%	171.6	8	32%
Manteca City of	3,844,580,000	3,212,645,000	631,935,000	16%	172.0	8	32%
Ventura County Waterworks District No 1	2,688,665,294	2,241,890,403	446,774,892	17%	172.0	8	32%
Dinuba City of	1,126,830,000	977,550,000	149,280,000	13%	172.3	8	32%
Madera City of	2,268,235,000	2,115,715,000	152,520,000	7%	173.5	8	32%
California Water Service Company Los Altos/Suburban	3,714,706,268	3,136,645,836	578,060,431	16%	173.8	8	32%
Hesperia Water District City of	3,676,581,651	3,538,094,794	138,486,856	4%	174.6	8	32%
Castaic Lake Water Agency Santa Clarita Water Division	7,358,051,073	6,493,567,237	864,483,836	12%	174.8	8	32%
Brentwood City of	3,038,220,000	2,663,210,000	375,010,000	12%	174.9	8	32%
San Jacinto City of	756,372,530	651,046,816	105,325,714	14%	176.1	8	32%
La Verne City of	2,094,159,141	1,955,656,970	138,502,171	7%	176.5	8	32%
Rincon Del Diablo Municipal Water District	1,766,766,437	1,514,883,284	251,883,153	14%	179.2	8	32%
Mission Springs Water District	2,072,832,166	1,979,439,888	93,392,277	5%	179.4	8	32%
Banning City of	2,219,758,574	2,058,002,667	161,755,907	7%	179.4	8	32%
Brawley City of	1,842,390,000	1,088,690,000	753,700,000	41%	179.5	8	32%
Cucamonga Valley Water District	12,916,078,335	12,778,430,872	137,647,463	1%	180.0	8	32%
Calaveras County Water District	1,468,843,000	1,200,100,000	268,743,000	18%	180.1	8	32%
Phelan Pinon Hills Community Services District	635,139,826	675,206,517	-40,066,691	-6%	181.6	8	32%
Porterville City of	3,123,277,400	2,849,237,200	274,040,200	9%	182.0	8	32%
Sacramento County Water Agency	9,991,675,171	8,451,666,395	1,540,008,776	15%	184.3	8	32%
California-American Water Ventura District	4,397,006,571	3,988,454,052	408,552,519	9%	184.6	8	32%
Blythe City of	806,370,000	811,680,000	-5,310,000	-1%	186.1	8	32%
Yreka, City of	593,290,000	519,800,000	73,490,000	12%	186.4	8	32%
Palmdale Water District	5,291,175,472	5,010,063,446	281,112,026	5%	187.2	8	32%
Yuba City City of	4,215,490,000	3,629,080,000	586,410,000	14%	188.2	8	32%
California Water Service Company Selma	1,492,399,536	1,239,212,977	253,186,559	17%	189.2	8	32%
Western Municipal Water District of Riverside	5,887,379,311	5,683,989,367	203,389,944	3%	189.2	8	32%
Riverbank City of	860,786,846	737,503,990	123,282,856	14%	191.2	8	32%
California Water Service Company Visalia	8,033,215,230	7,144,292,537	888,922,693	11%	191.7	8	32%
Hemet City of	1,116,063,947	1,045,970,047	70,093,900	6%	192.8	8	32%
Turlock City of	5,571,505,100	4,909,059,441	662,445,659	12%	193.9	8	32%
Corona City of	8,699,410,000	8,297,070,000	402,340,000	5%	194.3	8	32%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Trabuco Canyon Water District	764,121,596	767,705,962	-3,584,366	0%	194.9	8	32%
Triunfo Sanitation District / Oak Park Water Service	687,285,830	597,937,369	89,348,461	13%	195.6	8	32%
Lamont Public Utility District	993,121,000	914,688,000	78,433,000	8%	197.4	8	32%
California Water Service Company Bakersfield	18,863,864,960	16,841,305,153	2,022,559,807	11%	197.6	8	32%
Lemoore City of	1,967,044,000	1,783,354,000	183,690,000	9%	198.9	8	32%
Golden State Water Company Orcutt	1,941,781,239	1,705,636,709	236,144,529	12%	199.8	8	32%
Vacaville City of	4,536,829,418	3,868,833,993	667,995,425	15%	199.9	8	32%
Citrus Heights Water District	3,723,178,405	3,023,575,391	699,603,014	19%	201.4	8	32%
Poway City of	2,984,245,124	2,893,299,991	90,945,133	3%	201.7	8	32%
Livingston City of	1,870,481,000	1,810,513,000	59,968,000	3%	204.2	8	32%
Los Angeles County Public Works Waterworks District 40	12,870,711,018	11,980,791,220	889,919,798	7%	205.5	8	32%
Galt City of	1,302,667,000	1,052,546,000	250,121,000	19%	207.1	8	32%
Placer County Water Agency	7,686,123,771	6,395,079,193	1,291,044,578	17%	207.2	8	32%
Lee Lake Water District	760,491,304	738,717,756	21,773,548	3%	208.1	8	32%
San Bernardino County Service Area 70	457,322,702	431,251,330	26,071,373	6%	209.6	8	32%
California Water Service Company Chico District	6,759,462,002	5,680,893,778	1,078,568,223	16%	210.4	8	32%
Linda County Water District	971,706,000	880,037,000	91,669,000	9%	211.0	8	32%
West Valley Water District	5,029,549,361	4,747,557,536	281,991,825	6%	212.3	8	32%
Golden State Water Company Claremont	2,873,781,490	2,604,204,605	269,576,886	9%	213.2	8	32%
Folsom City of	5,476,678,514	4,592,545,306	884,133,208	16%	213.7	8	32%
Sierra Madre City of	616,142,059	546,575,118	69,566,941	11%	214.5	8	32%
Tulare, City of	4,805,328,900	4,324,313,800	481,015,100	10%	214.8	8	32%
Indio City of	5,340,000,000	5,006,100,000	333,900,000	6%	215.7	9	36%
Oakdale City of	1,417,000,000	1,139,000,000	278,000,000	20%	215.9	9	36%
Fallbrook Public Utility District	3,340,661,415	3,012,268,347	328,393,068	10%	217.3	9	36%
Kerman, City of	880,465,000	769,624,000	110,841,000	13%	217.9	9	36%
Exeter City of	600,332,681	535,287,408	65,045,273	11%	218.8	9	36%
Georgetown Divide Public Utilities District	512,901,000	410,416,000	102,485,000	20%	219.7	9	36%
Yorba Linda Water District	5,380,523,933	5,128,021,662	252,502,271	5%	220.2	9	36%
Rubio Canyon Land and Water Association	561,116,157	508,002,375	53,113,783	9%	220.8	9	36%
Sacramento Suburban Water District	9,630,759,000	8,318,514,000	1,312,245,000	14%	222.5	9	36%
Corcoran City of	1,162,447,000	950,206,000	212,241,000	18%	223.7	9	36%
Norco City of	2,009,949,357	1,856,691,656	153,257,702	8%	224.2	9	36%
Golden State Water Company Cordova	4,051,962,495	3,483,514,680	568,447,814	14%	224.5	9	36%
Monterey Park City of	649,960,000	594,880,000	55,080,000	8%	224.9	9	36%
Winton Water & Sanitary District	432,243,000	400,904,000	31,339,000	7%	228.3	9	36%
Montecito Water District	1,577,349,003	836,688,709	740,660,294	47%	228.9	9	36%
Camrosa Water District	2,469,015,365	2,141,221,863	327,793,502	13%	229.3	9	36%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Wasco City of	1,096,680,000	952,170,000	144,510,000	13%	231.1	9	36%
Olivenhain Municipal Water District	5,326,497,766	5,149,755,952	176,741,814	3%	232.4	9	36%
Upland City of	5,523,683,657	5,024,215,355	499,468,301	9%	234.9	9	36%
Clovis City of	6,737,008,000	6,080,852,000	656,156,000	10%	235.2	9	36%
Beverly Hills City of	2,984,049,613	2,900,957,499	83,092,114	3%	235.9	9	36%
Lodi City of Public Works Department	3,904,230,000	3,932,720,000	-28,490,000	-1%	235.9	9	36%
Los Angeles County Public Works Waterworks District 29	2,383,427,229	2,356,081,777	27,345,452	1%	236.0	9	36%
Loma Linda City of *	1,379,990,569	1,323,839,525	56,151,044	4%	236.0	9	36%
Shafter City of	1,350,000,000	1,154,000,000	196,000,000	15%	236.5	9	36%
Fruitridge Vista Water Company	1,000,084,300	823,053,400	177,030,900	18%	238.3	9	36%
Paradise Irrigation District	1,721,400,000	1,355,900,000	365,500,000	21%	240.8	9	36%
Glendora City of	3,108,798,089	3,089,127,284	19,670,805	1%	242.0	9	36%
Carmichael Water District	2,598,570,000	2,107,250,000	491,320,000	19%	242.5	9	36%
Rainbow Municipal Water District	3,976,593,060	3,760,749,074	215,843,985	5%	243.0	9	36%
Modesto, City of	15,589,770,183	13,698,086,925	1,891,683,258	12%	245.9	9	36%
Pinedale County Water District	267,792,348	224,289,932	43,502,416	16%	247.1	9	36%
Lincoln City of	2,592,190,000	2,158,050,000	434,140,000	17%	251.0	9	36%
California Water Service Company Bear Gulch	3,623,142,017	3,228,861,790	394,280,227	11%	252.5	9	36%
Los Banos, City of	2,053,870,000	1,905,101,000	148,769,000	7%	253.0	9	36%
Redding City of	7,109,010,000	5,934,100,000	1,174,910,000	17%	253.8	9	36%
Riverside Highland Water Company	971,591,200	889,248,544	82,342,656	8%	253.8	9	36%
California Water Service Company Palos Verdes	5,184,622,055	4,979,661,507	204,960,548	4%	255.4	9	36%
Olivehurst Public Utility District	1,161,641,529	959,245,393	202,396,137	17%	256.0	9	36%
San Bernardino County Service Area 64	758,722,238	679,807,540	78,914,699	10%	257.8	9	36%
Anderson, City of	572,342,000	498,676,000	73,666,000	13%	260.0	9	36%
Rio Vista, city of	641,312,000	606,333,000	34,979,000	5%	260.9	9	36%
Golden State Water Company Ojai	564,830,864	487,636,661	77,194,203	14%	261.0	9	36%
Indian Wells Valley Water District	1,861,884,000	1,789,365,000	72,519,000	4%	263.5	9	36%
Yucaipa Valley Water District	2,981,840,000	2,837,629,000	144,211,000	5%	265.1	9	36%
Casitas Municipal Water District	777,155,653	678,096,820	99,058,834	13%	265.7	9	36%
Nevada Irrigation District	2,750,729,000	2,339,997,000	410,732,000	15%	267.8	9	36%
Beaumont-Cherry Valley Water District	3,172,199,486	3,139,252,648	32,946,838	1%	269.7	9	36%
East Niles Community Service District	2,504,168,216	2,213,508,744	290,659,473	12%	271.8	9	36%
Fair Oaks Water District	3,068,959,978	2,450,034,519	618,925,459	20%	274.1	9	36%
Discovery Bay Community Services District	986,000,000	808,000,000	178,000,000	18%	276.3	9	36%
Rio Linda - Elverta Community Water District	770,017,391	629,595,315	140,422,076	18%	278.1	9	36%
East Orange County Water District	247,060,552	225,554,358	21,506,194	9%	278.2	9	36%
Bakersfield City of	11,705,594,680	10,744,390,565	961,204,114	8%	279.9	9	36%

Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013)	Jul-Sep 2014 R- GPCD	Tier	Conservation Standard
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Valley Center Municipal Water District	6,829,813,325	6,798,466,417	31,346,907	0%	291.2	9	36%
Red Bluff City of	904,393,249	764,891,212	139,502,037	15%	294.3	9	36%
California Water Service Company Antelope Valley	186,061,165	216,691,199	-30,630,034	-16%	296.7	9	36%
Merced City of	6,872,130,000	6,271,910,000	600,220,000	9%	298.8	9	36%
Bakman Water Company	1,032,655,497	893,235,946	139,419,551	14%	302.2	9	36%
Las Virgenes Municipal Water District	5,714,163,209	5,470,784,778	243,378,431	4%	304.8	9	36%
Oildale Mutual Water Company	2,485,920,537	2,317,129,497	168,791,039	7%	306.4	9	36%
California City City of	1,192,746,563	1,264,824,899	-72,078,336	-6%	307.0	9	36%
Atwater City of	2,358,960,000	1,821,770,000	537,190,000	23%	308.1	9	36%
Redlands City of	7,033,861,488	6,969,114,810	64,746,679	1%	313.2	9	36%
Ripon City of	1,431,002,833	1,223,409,134	207,593,699	15%	316.1	9	36%
Arcadia City of	4,352,404,027	4,033,916,843	318,487,185	7%	318.5	9	36%
Hillsborough Town of	877,331,034	658,647,771	218,683,262	25%	324.5	9	36%
Quartz Hill Water District	1,430,054,382	1,276,190,597	153,863,785	11%	326.9	9	36%
Madera County	891,468,716	660,496,910	230,971,806	26%	328.1	9	36%
Orange Vale Water Company	1,274,470,101	1,008,190,832	266,279,269	21%	332.3	9	36%
Kingsburg, City of	1,009,319,000	825,793,000	183,526,000	18%	332.5	9	36%
California Water Service Company Westlake	2,085,449,133	1,928,388,745	157,060,388	8%	336.7	9	36%
Rancho California Water District	16,377,618,572	16,074,902,597	302,715,976	2%	349.1	9	36%
Susanville City of	560,250,000	602,070,000	-41,820,000	-7%	382.7	9	36%
Bella Vista Water District	3,596,422,200	1,864,847,717	1,731,574,483	48%	386.3	9	36%
Valley Water Company	999,093,060	898,861,161	100,231,899	10%	401.2	9	36%
Golden State Water Company Cowan Heights	703,676,157	691,163,462	12,512,695	2%	401.6	9	36%
Desert Water Agency	8,823,730,792	8,310,188,943	513,541,849	6%	416.0	9	36%
South Feather Water and Power Agency	1,435,400,000	1,292,100,000	143,300,000	10%	466.1	9	36%
Coachella Valley Water District	28,323,853,249	27,188,261,025	1,135,592,223	4%	475.1	9	36%
San Juan Water District	3,594,268,324	2,773,624,539	820,643,785	23%	476.8	9	36%
Vaughn Water Company	3,206,837,858	2,989,389,519	217,448,339	7%	507.0	9	36%
Serrano Water District	829,682,903	749,230,186	80,452,717	10%	539.2	9	36%
Santa Fe Irrigation District	2,820,156,121	2,869,480,251	-49,324,131	-2%	604.7	9	36%
Myoma Dunes Mutual Water Company	757,700,108	707,153,944	50,546,164	7%	613.7	9	36%

New water efficiency rules approved for California K-12 and community college construction

Imperial Valley News | June 1, 2015

Sacramento, California - In response to the current drought state of emergency declared by Governor Brown, the California Building Standards Commission (CBSC) has approved new water efficiency requirements for public school construction.

“In the face of California’s unprecedented drought, we must update our building codes to use water as efficiently as possible,” said DGS Acting Director Esteban Almanza. “California is serious about water conservation and is committed to promoting cost-effective policies that promote healthier places to live and work.”

The emergency changes to the 2013 California Green Building Standards Code (CALGreen) for construction enhance elements of the existing Department of Water Resources Model Water Efficiency Landscape Ordinance (MWELo). The emergency measures are intended to improve water efficiency in new exterior landscaped areas. Other existing methods of conserving potable water include the use of captured rainwater, recycled water or graywater in landscape areas.

The requirements apply to K-12 public school and community colleges new construction and modernization projects submitted to the Division of the State Architect later this summer.

CBSC, a commission within the Department of General Services, is responsible for reviewing and approving building standards proposed and adopted by state agencies, and the codification and publication of approved building standards into the California Building Standards Code (California Code of Regulations, Title 24). CBSC administers California’s building code adoption processes including emergency rulemaking.

To learn more about the state’s drought response, visit Drought.CA.Gov Every Californian should take steps to conserve water.

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Mercury News editorial: Water conservation improves, but don't stop now

Mercury News Editorial | June 3, 2015

Give yourself a pat on the back, San Jose, Mountain View and Morgan Hill. Take a bow, Palo Alto, Pleasanton and Sunnyvale. Each of those cities cut its water use by 25 percent or more in April compared with April 2013.

Hayward, Hollister and Millbrae, on the other hand -- get with the program. They have reduced their water usage by less than 10 percent over the same period.

Overall, Bay Area residents cut their water use 19.9 percent in April, which is a respectable step toward meeting Gov. Jerry Brown's drought mandate that Californians reduce water usage by 25 percent in 2015.

By contrast, the urban areas to the south, Los Angeles and San Diego, have done next to nothing year to year. A 10 per cent reduction in L.A. and a pathetic 4 percent in San Diego -- what a coincidence: These regions are largely served by the Metropolitan Water District, one of the major backers of the governor's \$18 billion Delta twin-tunnel project -- the biggest water grab in state history designed to send more Delta water to Southern California where it can be squandered.

Oh, and by the way, Bay Area ratepayers are likely to be stuck with a hefty share of the cost.

Bay Area residents need to fight this plan, but what they must not do is use Southern California's profligacy as a reason not to conserve here. Protecting our own groundwater and preventing land subsidence is critical. Water reduction targets including the San Jose Water Company's ambitious 30 percent goal, endorsed by the San Jose City Council, are essential to our long term welfare.

Sacrifice is never easy, and it's harder when some communities -- and some individual neighbors -- clearly are missing the mark. But the only way California will emerge from the drought and preserve its economic future is for individuals to do their part in meeting the state's water reduction goals.

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Steamed: Californians critical of neighbors' response to drought, poll finds

LA Times | June 3, 2015

Most Californians don't believe others in their region of the state are doing enough to respond to the four-year drought, with the harshest criticism being dished out in Los Angeles, Orange and San Diego counties, according to a new poll by the Public Policy Institute of California.

Statewide, residents consider the drought to be the most critical issue facing California, exceeding their concerns about jobs and the economy. They also support the governor's order for a 25% cut in water use statewide, the survey found.

"At this point, it gives the sense of crisis people have," said Mark Baldassare, president of the Public Policy Institute.

This was the first time that drought and the state's water crisis topped Californians' list of the most important issues facing the state since the PPIC began conducting its polls in 1998.

Still, Baldassare said, the water restrictions remain "hypothetical" for many residents. The public's reaction may change when local water districts begin implementing the cutbacks, or if residential water bills jump as local utilities increase charges to discourage over-watering.

Statewide, 46% of Californians believed the 25% cut in water use mandated by Gov. Jerry Brown, through the state Water Resources Control Board, is the "right amount." More than a third of those polled thought it wasn't strict enough, while 12% considered it too harsh.

Among those polled in Los Angeles, 64% thought their fellow Angelenos weren't doing enough to respond to the drought. In Orange County, 65% felt the same way about residents in their slice of Southern California. In the Central Valley, 49% thought the same about their neighbors, the poll found.

Water officials across the state are scrambling to implement the mandated restrictions ahead of the hot, dry summer months.

The state water board's plan, approved last month, assigns conservation targets to each of the state's water suppliers and requires cuts in consumption ranging from 8% to 36% compared with 2013 levels.

Statewide, 39% of Californians considered water and drought to be the most critical issue facing the state, compared with 20% who picked jobs and the economy; 5% for crime, gangs and drugs; 5% for the environment, pollution and global warming; and 4% for immigration, the poll found.

Drought was the top issue in every region of the state.

On behalf of the PPIC, the polling company Abt SRBI Inc. canvassed 1,706 California residents by telephone from May 17 through May 25. The margin of error overall is plus or minus 3.6%, higher for subgroups.

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State water use falls 13.5% in April, short of governor's demand

SF Gate | June 2, 2015 | Kurtis Alexander

Californians once again failed to save as much water as the governor demanded — but new conservation figures suggest people are improving as the drought intensifies, with some going well beyond the call.

Numbers released Tuesday, a day after the state enacted unprecedented mandatory water cuts, show freewheeling California used 13.5 percent less water in April, compared with the same month in 2013, well short of the 25 percent reduction ordered by Gov. Jerry Brown.

At the same time, the data from state water officials show that strict crackdowns in some places, leading even to a climate of shame around water waste, are spurring many to rethink routine activities like showering and watering the lawn. April's water savings, though insufficient, is the biggest this year, and it's a whole lot bigger than the 3.9 percent cut recorded in March.

Some Bay Area cities, including Pleasanton, Livermore and Benicia, reduced their April water use by a third or more, even as other places, such as Millbrae, appeared to ignore the cry for conservation.

The state water board, at its meeting this week, praised the new numbers as progress. Officials said it is a sure sign that communities can live up to the reduction targets rolled out June 1, which call for cuts of 4 to 36 percent from 2013 consumption. Under the plan, larger water users are slapped with larger cut orders in an attempt to achieve a cumulative drop in urban water use of 25 percent.

Until this week, all efforts to slash usage were voluntary.

"I'm sort of feeling like the local communities are stepping up in a way that they weren't," said Felicia Marcus, chairwoman of the State Water Resources Control Board.

"The real challenge is: we really have to step it up for the summer months," she added.

Even though the governor's conservation goal is yet to be met, it's become clear that in many places shorter showers, fewer toilet flushes and dead lawns have finally become the norm as California settles into a fourth year of drought.

"The yards are really going to start turning brown now that it's warming up and people continue to conserve," said Daniel Smith, director of operations services in Pleasanton, where residents and businesses cut water use an astonishing 38 percent in April.

'We really understand'

Smith said hitting his city's reduction target of 24 percent this month wouldn't be hard because the water department has been pushing conservation measures since last year, including mandatory water cuts, and residents are already well versed in how to save.

"The general feeling here is that we really understand what's going on in California with the water situation," he said.

Not every place is positioned as well for the new cuts.

In the Bay Area, Millbrae failed to conserve any water in April from the same month in 2013 — meaning a zero percent reduction, according to the state figures. The city faces a 16 percent target this month.

Hollister, which will have to cut 20 percent this month, reduced just 4 percent in April, while Burlingame, with a 16 percent target, cut back only 6 percent.

Lisa Goldman, Burlingame's city manager, dismissed April's numbers as an aberration from the city's normally strong conservation record.

"You're going to get seasonal variations, but when you look at the full reporting period, we're doing very well," she said, noting that since June, when the state began reporting water savings, Burlingame has cut back close to 18 percent, above its assigned reduction of 16 percent. "We're going to maintain our commitment to conservation and staying above the target."

Communities that don't hit their target face fines of up to \$10,000 a day. Failure to meet the benchmarks will also subject cities and water agencies to orders from the state to take specific conservation actions, such as limiting outdoor watering to just one day a week. Currently, local leaders are charged with coming up with their own plans for cutting back.

The bulk of the laggards in April were in Southern California. The coastal stretch that includes Los Angeles and San Diego cumulatively reduced its water use just 8.7 percent from the same period in 2013, according to the state data.

The Bay Area, meanwhile, recorded a 19.9 percent region-wide cut while the Sacramento area saw a 23.7 percent cut.

Governor's mandate

The conservation gains in April were largely because of the attention given to the drought that month.

Standing dramatically in a dry mountain meadow to illustrate the historically low snowpack on April 1, Gov. Jerry Brown ordered the mandatory cutbacks, which the state water board spent the rest of the month divvying up among communities.

April was also slightly wetter, meaning less water was needed for irrigation.

Since last June, statewide conservation has averaged just 9 percent.

"We haven't come as far as we need to go," said Max Gomberg, senior environmental scientist for the state water board. "We need to step it up."

###

The Latest: State to use satellites to eye unplanted fields

Associated Press | June 2, 2015

2:30 p.m. (PDT)

State water officials say they will use satellite surveillance from high above farms in the Sacramento-San Joaquin River Delta as one way of confirming that fields have been left fallow under voluntary conservation agreements with farmers.

Growers with some of the strongest water rights in the delta east of San Francisco offered to reduce their water consumption this summer by 25 percent through several means that include leaving some land unplanted.

In exchange, the state agreed to spare the farmers deeper mandatory cuts later in the year.

Michael George, the delta water master, said Tuesday that officials will review satellite imagery taken every 16 days in addition to making site inspections of farms and requesting copies of irrigation schedules.

However, he says it's not an attempt to weed out cheaters.

"We want to monitor and figure out what all this effort means in terms of relief to the water system," George said.

More than 200 farmers had agreed to the program by a Monday deadline. It was unclear what percentage of delta farmers that figure represents.

Among other things, farmers intend to reduce crops such as alfalfa and plant crops that grow faster such as silage corn for livestock feed rather than corn eaten by people. Farmers say they will irrigate some crops once a month rather than twice.

"There's a great deal of creativity and management sophistication that's going into these plans," George said.

###

11:25 (PDT)

A new forecast says the economic impact of California's drought will grow by \$500 million in 2015, to \$2.7 billion.

The study released Tuesday by the University of California at Davis includes a one-third increase in the number of acres that farmers are fallowing for lack of water. The total is now 564,000 acres.

The study says the drought, now in its fourth year, will be worse for state farmers this year in terms of reduced water availability and economic impact to agriculture.

California is the country's leading state in terms of agricultural production.

Researchers say that even with increased groundwater pumping, state farmers in 2015 will run 2.5 million acre-feet short of the water they normally use.

However, the study says overall increases in crop prices are expected to remain modest in 2015, at less than 2 percent.

An acre-foot of water is enough to supply one to two households for a year.

###

11:15 a.m. (PDT)

A U.S. senator says a push by federal lawmakers to address California's water shortage will likely become an effort to help several Western states.

The move could complicate what has already proven a difficult task but also provide motivation for more senators to make drought relief a priority.

Alaska Sen. Lisa Murkowski, the Republican chairman of the Senate Energy and Natural Resources Committee, wrapped up a Tuesday hearing about the drought by saying it highlighted the need to take up a broader bill than Congress has considered in past sessions.

She said the situation is dire in California but the focus moving forward needs to be Western-wide.

Congress has struggled over the past three sessions to pass a drought relief bill. The House passed legislation that stripped away environmental protections to divert more water to farmers. But the Senate has refused to go that route.

Cannon Michael, a farmer from Los Banos, California, told lawmakers that he has left 2,500 acres unplanted because of the lack of water and may be forced to idle thousands of acres more pending regulatory decisions designed to provide more cold water for fish.

"There's no relief coming anytime soon," Michael said after the hearing.

###

Four ways to reduce landscaping water usage

Reno Gazette Journal | June 2, 2015 | Scott Owen

"Brown is the New Green" is a lauded conservation measure taking place in California, urging some residents to cut landscape watering during our fourth year of drought. Fifty to 70 percent of both California and Nevada's water consumption is spent on landscaping, explaining why some California counties are focused on decreasing use there. The largest landscape water culprits are lawns, and while turning sprinklers off would conserve water, this solution is not necessarily practical. Dying lawns would impact property values, as well as have additional costs associated with installing new lawn once the water restrictions are lifted. Fortunately, there are less extreme methods to conserve water while sustaining your landscape.

Included in California's new regulations is attempting a two-day-per-week watering schedule. Previous attempts to go from three-day to two-day watering schedules have shown that homeowners actually use more water, not less. In order to maximize water times while conserving water on a two-day schedule, TMWA.com advises watering in the morning during lower temperatures and less wind; however, there are a few additional ways you can conserve water.

Our clay soil in northern Nevada proves to be an obstacle with lawns and some plants that need more absorption time. I see often that people water longer to account for this, and fortunately there are more efficient solutions.

First, changing sprinkler heads from older irrigation systems is the most effective, along with a proper sprinkler system layout. Outdated irrigation systems can easily use 100 to 300 percent more water than an upgraded system. Matched precipitation rate sprinklers use a multi-trajectory rotating stream delivery system that allows water to gently soak into the soil with an even distribution, reducing run-off and using 30 percent less water than traditional heads.

Second, use biodegradable polymers, which act as a nutrient moisture holder to prolong the time plants and lawns have to absorb. This can save up to 50 percent in water usage.

And third, ET (evapotranspiration) clocks use sensors and weather information to manage water times and frequency, which can result in 15 to 30 percent less water usage.

A fourth option to reduce water usage is xeriscaping. Grass is removed or reduced; irrigation is capped and converted to drip. Xeriscaping involves the installation of drought-tolerant plant material and ground covers such as DG (decomposed granite), rock or mulch. Xeriscaping typically uses 50 to 75 percent less water than a traditional landscape. If you need grass in the backyard for kids, dogs or aesthetics, we recommend considering removing the front yard lawn.

In the future, it would be great to see conservation rewarded even more, perhaps with optional water audits that result in a percentage savings on a water bill. Currently though, there are small, yet significant steps we can take individually to impact our community. It is for the collective good that we water responsibly.

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California Farmers Plan to Avoid Water-Sucking Crops

Associated Press | June 2, 2015 | By Fenit Nirappil and Scott Smith

Dozens of California farmers aiming to meet voluntary water conservation targets submitted plans to the state saying they intend to plant less thirsty crops and leave some fields unplanted amid the relentless drought.

Farmers in the Sacramento-San Joaquin River Delta devised the plans filed Monday as part of a deal last month that would spare them deeper mandatory cuts in the future.

Under the agreement, they must turn in plans for using 25 percent less water, fallowing 25 percent of their land or other strategies to achieve the necessary water savings. Officials hope the deal can become a model for other farmers around the state.

California cities and businesses also have been ordered to reduce water use by 25 percent. The state Water Resources Control Board on Tuesday is expected to release its report for how communities met the goal in April. That was the month Gov. Jerry Brown ordered sweeping conservation measures, including mandatory urban water reductions, following the worst snowpack measurement in recent years in the Sierra Nevada.

California depends on that snow to melt its way into rivers and reservoirs and meet nearly a third of the state's water demand.

Regulations stemming from Brown's order require communities to cut water use by as much as 36 percent compared with 2013, the year before the governor declared a drought emergency. The rules took effect this week.

The shift to mandatory conservation followed lackluster voluntary savings, with water use slipping just 3 percent in February and 4 percent in March. Overall savings have been only about 9 percent since last summer, falling well short of Brown's 20 percent goal.

At least 120 farmers in the delta east of San Francisco have filed plans, said Michael George, delta water master for the water resources board.

"These are serious, well-conceived plans that will result in some significant conservation," said George, who is tasked with calculating how much water the changes will save.

California grows nearly half of the fruits, nuts and vegetables consumed in the U.S. However, agriculture experts say the drought has not had a significant impact on food prices because other regions are making up the difference.

Delta farmers who proposed the voluntary cutbacks have never had their water use restricted.

This year, state officials already have ordered cuts for thousands of farmers and other water users with lesser rights but have not yet forced restrictions on farmers with rights predating 1914 or who own land along rivers or streams.

John Herrick, an attorney and manager of the South Delta Water Agency, said he was busy Monday answering last-minute questions from farmers trying to meet the midnight deadline. He had no hard figures but believed as many as 90 percent of the farmers eligible for the program would apply.

The delta accounts for less than 10 percent of the 6.9 million acres of irrigated farmland in California, but it is the hub of the state's water system. About 25 percent of California river water runs through the delta, supplying communities and farms throughout the state.

John Kisst, who farms 900 acres in the delta, said he will irrigate some of his alfalfa once a month rather than twice and will leave some fields unplanted. Some farmers may turn to growing safflower, which needs to be watered just once or to some types of corn and beans that grow in three months rather than four, reducing the need for irrigation.

"This is not a science," Kisst said. "But we're expected to make our best effort."

#

California panel mandates low-water lawns on new buildings

Associated Press | May 28, 2015 | Fenit Nirappil

SACRAMENTO, Calif. (AP) — Driven by a historic drought, California regulators on Friday mandated that lawns and other landscaping on new and renovated homes and buildings across the parched state guzzle less water.

The state Building Standards Commission voted to change development rules to reduce the demand for water. Developers can meet the rules by planting shrubs and bushes instead of grass or installing slow-trickling valves instead of traditional sprinklers.

"You can still see grass, you are just going to see a lot less of it," said Bob Raymer of the California Building Industry Association, which supported the changes.

The new standards are part of California's continued targeting of ornamental lawns as water wasters during the worst drought on record. Outdoor irrigation accounts for roughly half of residential water use.

The new standards will take effect Monday for proposed office buildings, schools and hospitals, and on June 15 for housing developments. Officials expect lawns to use about 20 percent less water if developers comply.

Lawns that don't meet these anti-guzzling rules are prohibited under separate regulations approved earlier this year by the State Water Resources Control Board.

The Building Standards Commission expedited the new rules in response to Gov. Jerry Brown's executive order for immediate and permanent conservation because of the drought.

Brown had called for a ban on traditional sprinklers for new buildings, but his administration dropped that proposal after industry officials pointed out it may unintentionally ban irrigation systems that reuse water flowing down shower drains and toilets.

The standards approved Friday set a maximum amount of water to maintain new lawns based on a formula. It's up to developers to figure out how to meet those limits, and to local governments to enforce them.

Brown has ordered communities to cut water use by as much as 36 percent compared to 2013 levels. The state has told those communities to limit how often residents can water their lawns. Some smaller cities have called for an outright ban on new lawns.

Some water districts are offering popular cash rebates to residents who tear out grass and plant drought-tolerant bushes and shrubs.

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California farmers' 'senior' water rights under siege

SJ Mercury News | May 28, 2015 | Lisa M. Krieger

STOCKTON -- A 143-year-old piece of paper proves that Rudy Mussi has a legal right to water from the gently meandering Middle River that nourishes his family farm.

But the same piece of paper -- a "certificate of purchase," signed in florid 19th-century handwriting and faded to near illegibility -- also is proof to a growing number of critics that California has outgrown its water rights system.

The venerable "senior rights" enjoyed by Mussi and about 4,000 other farmers, companies and public agencies -- some dating back to the Gold Rush -- could soon become the latest casualties of the historic drought.

A portrait of Rudy Mussi, a Stockton farmer and "senior" water right holder under California's byzantine water rights law, at one of his

A portrait of Rudy Mussi, a Stockton farmer and "senior" water right holder under California's byzantine water rights law, at one of his water pumps at Middle River that he uses for irrigation, on May 19, 2015, in Stockton Calif. (Dai Sugano/Bay Area News Group) (Dai Sugano)

More than a century ago, the state essentially guaranteed unlimited water from California's rivers and streams to pioneers who struggled to turn wilderness into fertile fields that supported a young and hungry California. The rights then were passed down to the pioneers' heirs or to the land's new owners -- who now use more water annually than Los Angeles, San Jose, San Francisco and Sacramento combined.

Once thought inviolable, these water rights holders now face their first real challenge in California history -- and they are the focus of the latest installment in this newspaper's series "A State of Drought."

"If we were designing the California water system today, it would look very different from what we had," said Peter Gleick, co-founder of the Pacific Institute, an Oakland-based think tank that focus on water issues.

"The system of senior water rights might have made sense 100 years ago," he said. "But given our new realities, it is not going to work in the long run."

The current approach "neither protects the environment nor ensures efficient use of our limited water," he added. "It just clarifies who was there first."

Gov. Jerry Brown has said that if the dry conditions continue, the state's entire water rights system could be up for examination. And this month, the state for the first time ordered property owners to provide proof of these rights, triggering anger and a flood of historic and hastily retrieved documents from hundreds of farms, cities and irrigation districts.

Under the threat of a complete cutoff by the State Water Resources Control Board, Mussi and other "riparian" Delta growers -- those who live adjacent to a river -- agreed last week to use 25

percent less water than they did in 2013. And other senior rights holders in other parts of the state soon may be forced to completely turn off their pumps.

Farmers are firing back, hiring attorneys to assert that the state is defying statutes that honor their seniority. The water board's order exceeds the scope of the state's authority, the lawyers contend.

"Water always existed here -- before statehood, before the state water board," said Mussi, 62, driving his pickup along the miles of high earthen levees that protect his tomatoes, alfalfa, grapes and other crops from being drowned by the Middle River.

Unlike most others in the Central Valley, Mussi said, the Delta farmers can't just drill wells to make up for fewer water allocations. That's because their groundwater is so salty that it's lethal to crops.

Rudy Mussi, a Stockton farmer and "senior" water rights holder under California's water rights law, holds an 1872 certificate of purchase

Rudy Mussi, a Stockton farmer and "senior" water rights holder under California's water rights law, holds an 1872 certificate of purchase from the state, granting him water rights under its Swamp and Overflowed Land Act. (Dai Sugano/Bay Area News group) (Dai Sugano)

As the state stretches into its fourth year of drought, the pain of cutbacks is being felt across California. Cities and towns are being required to cut water use from 8 percent to 36 percent beginning in June, or face steep fines. And about 9,000 holders of "junior" rights -- the newer farms -- already have been curtailed for the second consecutive year.

State officials contend that it's only fair to require senior rights holders to cut back. "It allows growers to share in the sacrifice that people throughout the state are facing because of the severe drought," said Felicia Marcus, chairwoman of the water board.

But Mussi called the state's "take it or leave" approach "extortion," noting that he's already tilled the soil, signed contracts with canneries and planted crops -- an investment worth hundreds of thousands of dollars -- trusting the time-honored system of water rights.

"It's like me pointing a gun at your head and saying, 'You don't have to give me your wallet,'" he said.

Here in the Sacramento-San Joaquin River Delta -- home to generations-old family farms amid a network of man-made islands and channels in the nation's largest freshwater estuary -- water is considered a private property right. Rivers drain onto the farmers' fields, then back out again.

Water is almost a birthright in the Delta, where settlers dammed, diked and drained wetlands described as "nothing better than rotting turf and waving rushes ... worthless in their natural condition" by a 19th century New York Times correspondent.

While most Eastern states recognize riparian rights, California and Oklahoma are the only states west of the Mississippi River that continue to recognize them -- and they are governed by few laws and frequently litigated.

A second type of senior right -- called a "pre-1914" right because that's the year California established an official permit process for its chaotic and litigious water rights landscape -- is equally historic. And, until now, it also has been subject to minimal state oversight.

Plumas County alfalfa farmer Robert Forbes contends that the state lacks the authority to take away his water. His family's right to a ditch on a small Quincy reservoir dates back to 1870. It also supplies water to 11 neighbors.

While he's voluntarily made big cutbacks, Forbes said, "My water rights are written into the deed, then passed on."

The junior rights holders, who planted in the arid grasslands and deserts in the southern and western parts of the San Joaquin Valley after 1914, are even far down the pecking order and have already had their water cut.

A UC Davis analysis shows that California's water is heavily oversubscribed, with five times more water committed to these rights holders than flows through all the state's rivers and streams combined.

Because the state promised more water than it can deliver, farmers such as Mussi -- who shares the farm with his brother, son, nephews and their families -- are angry that their generations-old rights are being eroded.

"To entice people to come here, the state issued a patent, and the water rights came with it," he said. "Now, it's like me coming to you and saying 'Hey, you have a house. One of those bedrooms, I'm going to use it.'"

Who, where and what rights will be curtailed in coming weeks remains to be determined, water officials say. Cutoffs will be based on flows in the watershed -- and how long rights have been held.

To defend their place in line, senior rights holders have rushed their ancient documents to analysts in the Division of Water Rights in Sacramento.

Oroville's Richvale Irrigation District asserted rights dating back to the 1870s for construction of flumes and pipes for long-gone Cherokee Mines. Yolo County's water district rights dates back to the diversion of Cache Creek in 1856.

In the Sierra Nevada foothills, the Kelsey Cattle Ranch's rights were secured by an 1859 ditch dug by Erastus Kelsey. Granite Bay's San Juan Water District traces its rights to an 1853 gold mine on the North Fork of the American River.

The vast irrigation districts in and around Turlock and Modesto also hold senior rights. So does the city of San Francisco, whose mayor hiked into the Sierra in 1902 to nail a claim to an oak tree along the Tuolumne River.

The struggle for California is how to monitor, balance and enforce 19th and 20th century rights that are more abundant than 21st century water.

"The rights system is manifestly archaic and absurd in 21st century California, when the lowest-value uses have at the same time the highest legal priorities," said Wade Graham, an adjunct professor at the Pepperdine University School of Public Policy.

When Australia was faced with a 12-year drought beginning about the turn of the 21st century, Graham said, its governments agreed to manage their water in the national interest rather than on local rights. Graham said he thinks California could create new legal and economic incentives to improve its existing allocation system, rather than a "seizure" of rights, "which is politically and perhaps legally untenable."

The state has a constitutional obligation to "the reasonable use of water and the public trust -- this is above water rights seniority," said Jay Lund, director of UC Davis' Center for Watershed Science.

Lund thinks the fundamental system still works. What needs fixing, he said, is its administration. There's no timely system of reporting usage, and there's too little funding to enforce penalties for overuse, he said.

All the political struggles and financial uncertainties are a far cry from Mussi's childhood, when water was abundant and assured.

"We jumped in ditches to catch catfish. We helped with irrigation, starting the small siphon pipes. We worried about flooding and kept an eye on the levees," he said. "We got inner tubes and jumped in the canal, floating from one end to the other.

"Here in the Delta, we always knew we would have water," he said. "It's always been here."

Always, that is, until now.

###

Water in the bank: A possible solution to California's water crisis

Green Biz | June 4, 2015 | Erica Gies

Saguaros and palo verde trees flourish in the Sonoran Desert northwest of Phoenix along the road to Hieroglyphic Mountains Recharge, one of the Central Arizona Project's groundwater banking sites. The shallow ponds, fed at one end by a burbling fountain, may look static, but the water is percolating down through the soil at a rate of about 3 feet a day, replenishing underground aquifers.

The 38-acre Hieroglyphic site is part of a statewide water-banking effort in Arizona that has stored around 9 million acre-feet of water underground as a hedge against population growth and possible cutbacks due to low Colorado River flows.

It's an impressive stash, the result of initiatives that are looking increasingly appealing to neighboring California, now suffering from a severe drought that idled more than 400,000 acres of farm fields last year and has led to the imposition of statewide water restrictions.

Groundwater — a key water source in California, supplying about 40 percent (PDF) of human-used water in wet years and 60 percent (PDF) in dry years — is disappearing rapidly in major California agricultural regions, such as the San Joaquin Valley, as farmers steadily drain underground aquifers. This is threatening the state's huge agricultural sector and is causing the land to sink in some areas, harming critical infrastructure such as irrigation canals, roads and bridges.

In the face of this grim reality, policy advocates and California officials are increasingly calling for initiatives such as large-scale groundwater banking, similar to Arizona's, as a critical element of California's water future. Last November, Californians approved a \$7.54 billion water bond initiative, known as Proposition 1, that earmarks \$2.7 billion for water storage projects (PDF), including improved groundwater storage and recharge.

But widespread groundwater banking in California still faces many legal, economic and psychological obstacles. The barriers revolve around one core concern: Farmers and municipalities need reassurances that if they conserve water and store some of their allocation, they will be able to reclaim it later, either for their own use or for sale. Arizona has been able to overcome these obstacles with careful accounting that tallies how much water is stored underground and how much is withdrawn.

Around 22 basins in California — mostly urban — are already storing and banking groundwater. But dramatically expanding the practice to the other nearly 500 basins would help the state weather both long droughts and the climate change-induced melting of the state's snowpack in the Sierra Nevada, according to Lester Snow, executive director of the California Water Foundation, a non-profit seeking to address the state's long-term water problems.

California's snow problem

Sierra Nevada snowpack has provided one-third to one-half of the state's water storage. Yet this year's snowpack was just 5 percent (PDF) of the historic average, according to the state Department of Water Resources.

Losing the snowpack is a frightening shift for California. However, most climate models forecast that the state is likely to receive the same quantity of precipitation that it has historically; it will just arrive more erratically via bigger floods, accompanied by more frequent and more severe droughts. The climate shift requires water managers to change strategies and embrace techniques such as groundwater banking, experts say.

“The goal is to capture higher flood flows when they occur and get them into groundwater basins so we have them for droughts,” said Snow.

Many people assume that water storage means more reservoirs. But in fact, most rivers in California are already dammed, said State Water Resources Control Board Chair Felicia Marcus. Yet underground aquifers contain at least three times the storage capacity of the state’s 1,400 existing reservoirs, according to Ellen Hanak, a water economist and director of the Public Policy Institute of California's Water Policy Center.

And underground storage is superior to surface storage because the water doesn’t evaporate, doesn’t have to be released preemptively to make room for floods, and is out-of-sight, out-of-mind, reducing pressure to allocate it.

It’s also cheaper, typically less than half the cost of reservoir expansion.

To convey water underground, some infrastructure is needed, such as Arizona’s percolation ponds. They can be built near existing reservoirs or alongside rivers in gravel beds originally constructed for stormwater flood control. Farmed floodplains also can be used after the growing season to sock away groundwater by removing constrictive riverside levees and replacing them with setback levees, which allow rivers to move into the floodplain when water is high.

An experiment in the Sacramento Valley near Lodi enabled floodwaters to percolate in fallow farm fields and was deemed a success when a brief storm added 100 to 300 acre-feet of water to groundwater stores.

Irrigation runoff also can recharge groundwater, and some groundwater banking projects inject water underground, which is faster but more energy intensive.

The urban basins, such as Orange and Santa Clara counties, that already are banking water are maintaining relatively stable water levels. Cities tend to bank treated wastewater and stormwater runoff rather than excess fresh water from rivers.

The success of water banking in some urban or suburban areas is typically the result of earlier water conflicts that led to courts deciding percentages of water rights for various parties and appointing “water masters” to oversee allocations and resolve future disputes.

In these so-called “adjudicated basins,” groundwater rights are no longer based on property rights — which allow you to pump what you need from your land — but rather are limited to your percentage of the “safe yield,” the annual amount of water that naturally would percolate into the ground. These basins revisit the safe yield figure regularly and adjust it based on existing conditions.

Groundwater banking in the San Joaquin Valley

One rural area, Kern County in the southern San Joaquin Valley, has several groundwater banks, in part because the sandy soil is perfect for conveying water underground through percolation ponds. Ted Page, a farmer and president of the Kern County Water Agency, said that he started saving water in his local water banks because he understood that stanching groundwater overdraft was necessary to continue farming in the area.

“Without it, a lot of us would be gone already,” he said.

In 2010, a good rain year, people in Kern County collectively deposited more than 1 million acre-feet of water over just a few months into Kern County groundwater banks. During the drought years since 2011, people have reclaimed that water, pumping out 250,000 to 274,000 acre-feet a year, he said. They still have water, though: County banks retain natural groundwater and deposits from earlier years.

However, water rights in the Kern County water basin have not been settled in court. As a result, people — particularly those with no surface water rights — continue to pump groundwater from their property, and that pumping isn’t regulated or even measured. Yet the water comes from the same aquifer that holds banked water.

That practice runs counter to the Public Policy Institute of California’s vision for effective groundwater banking, which requires careful monitoring of deposits and withdrawals. Otherwise, “it amounts to depositing money in a bank to which everyone has the key,” according to a 2012 report.

But Kern County soon will have to change its ways, along with other agricultural regions that don’t manage their groundwater at all. That’s because last fall California passed the Groundwater Management Act of 2014, becoming the last Western state to regulate groundwater. Arizona passed an equivalent law in 1980, laying the foundation for its groundwater-banking program.

Legal lags

California’s new law has come under criticism for its slow activation period, in which basins can delay full compliance for 25 years, but it ultimately will require communities that share groundwater basins to monitor their use and manage their shared resource sustainably.

The measurement and management of both surface water and groundwater required by last year’s law should help to reassure individuals that if they conserve and store water, they can reclaim it later. But further reform is still needed in the water market, the law and people’s attitudes, experts say.

Having a functional water market, in which people with excess water can sell it to those who need it, is an important incentive for getting people to store water because they can profit from their conservation. From the state’s perspective, the market is an important tool to reallocate water to those who most need it now without harming anyone’s long-term water rights.

But the current market is bureaucratic and opaque, meaning only large entities with the staff to manage the paperwork can participate. No online database tracks the buying and selling of water, a lack Snow deemed “crazy,” particularly in the state that spawned Silicon Valley’s tech and information industry.

Another deterrent to encouraging people to conserve water has roots in California’s “use it or lose it” provision, which says that if you don’t use your full water right, the state can reallocate it to someone else.

By law, water rights holders must put their water to “beneficial use” — activities such as agriculture and urban use. In recent years, California has expanded the definition to include conservation and water transfers.

That means water saved cannot be construed as wasted or unnecessary and therefore cannot lead to loss of water rights, said Brian Gray, professor emeritus of water law at the University of California-Hastings.

Yet despite these protections, many people remain reluctant to sell water. “It’s a challenge of ego-system management,” said Marcus, “because people are more loss-averse than opportunity-motivated.”

On a practical level, there is another huge barrier to widespread groundwater recharge in California. Currently, people can petition the board to allow them to store water, but it’s an arduous process. A bill now pending in the state assembly seeks to clarify approvals for underground storage.

The current drought is finally pushing Californians to get real about water reform, an opportunity that state policymakers have seized, exemplified by passage of last fall’s Groundwater Management Act. Ultimately, the new policies could lead to more responsible — even sustainable — surface water and groundwater management.

“We’ve set up a framework that, when fully played out, will be revolutionary in its effectiveness,” said Marcus. “But the devil is in the details, and there’s a long way to go.”

###

Boxer to push for desalination plants to offset water shortages

SF Gate | June 2, 2015 | Carolyn Lochhead

Sen. Barbara Boxer said Tuesday that she will push desalination as a response to California's drought, citing Israel's strategy of converting salt water to freshwater to solve its chronic water shortages.

In a separate Senate hearing on the drought, Republicans indicated that drought legislation being crafted by Sen. Dianne Feinstein, D-Calif., and House Republicans from the Central Valley directed at California would be considered only as part of broader legislation covering the entire West.

During a briefing Tuesday morning, Boxer said she would introduce legislation to authorize millions of dollars in federal research into desalination. Boxer said she had secured a commitment from Oklahoma Republican James Inhofe to hold a hearing on desalination and other technologies to recycle and store water.

"I've known for years (desalination) was a solution," said Boxer, who moved several years ago from the Bay Area to Rancho Mirage, a desert resort town in Riverside County, and is retiring at the end of her term in 2016.

Environmentalists have been skeptical of desalination because the plants are costly to build, require large amounts of energy to operate, and have poorly understood effects on marine life. A \$1 billion desalination plant is nearing completion in Carlsbad that will supply 7 percent of San Diego County's water.

White House science adviser John Holdren said recently that it would take 60 desalination plants to meet half the urban water needs in California, and those would need 2,000 megawatts of new generating capacity, the equivalent of Hoover Dam's electricity generation.

Bigger than California

On another front, Sen. Lisa Murkowski, the Alaska Republican who chairs the Senate Energy and Natural Resources Committee, emphasized at a hearing she convened Tuesday on drought in the West that any legislation that clears the Senate this year would go well beyond efforts by Feinstein and Central Valley Republicans to craft a bill dealing only with California.

"This is bigger than just California," Murkowski said, noting that much of the West, including the Colorado River Basin, has been in various degrees of drought for the past 15 years. She was sympathetic to complaints by California farmers that protecting fish has depleted their supplies, promising to fix "bureaucratic roadblocks — whether it's increasing water storage or dealing with excessive environmental requirements" to deliver more water to people, including farms.

Feinstein praised Murkowski for holding the hearing, saying in an e-mailed statement that it's important for the Senate to become more informed about drought in the West.

Feinstein said she is working on a California drought bill that will include “increased flexibility to move water where it’s most needed within the bounds of existing environmental protections, improvements for wildlife and endangered species habitat, additional conservation measures and a greater focus on long-term solutions like water recycling, desalination and storage.”

Such legislation could be folded into a larger Western drought bill.

Seeking alternatives

Interior Department Deputy Secretary Michael Connor told the committee that while the administration does not rule out new dams in California, which many Republicans are pressing for, there are cheaper and faster alternatives.

Connor said past proposals such as the controversial Auburn dam on the North Fork of the American River would have cost as much as \$46,000 an acre-foot of water, while some conservation projects cost as little as \$500 an acre foot.

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California drought defies easy solutions at Senate hearing

McClatchy Washington Bureau | June 2, 2015 | Michael Doyle

WASHINGTON — Expanding California’s San Luis Reservoir may present a “great opportunity for increasing water supplies,” a key Obama administration official said Tuesday.

But building a bunch of big new dams is not a viable solution to the state’s present drought emergency, Deputy Interior Secretary Michael Connor warned lawmakers.

“There are fundamental questions about the economic viability of some of these larger projects,” Connor told the Senate Energy and Natural Resources Committee, adding that “at times, we get bogged down on the larger projects.”

Joined by Los Banos, Calif.-area farmer Cannon Michael and other witnesses, Connor spent two hours Tuesday morning illuminating the drought that has afflicted Western states while it has stymied members of Congress. There are few easy federal solutions, all agreed.

Even Connor’s nod to a possible San Luis Reservoir expansion, which by some estimates could add 130,000 acre-feet to the reservoir’s current capacity of 2.04 million acre-feet, has its shortcomings, thirsty farmers fear.

“If you can’t move the water, what’s the point?” asked Michael, president of Bowles Farming Co.

Michael is a sixth-generation California farmer, and representative of the Family Farm Alliance, an Oregon-based advocacy group for western growers. On Tuesday, he articulated the human cost of the drought. He noted that he has already fallowed one-quarter of his farm acres on the west side of the San Joaquin Valley because of water shortages, and he said more may be necessary.

“If I leave an acre fallow, my workers have less work and I use my tractors less,” Michael testified. “If I use my tractor less, I buy less fuel, lubricants and parts and tires, which means the local businesses that supply these things sell less and their companies suffer.”

The Senate hearing was the first congressional examination of the California drought this year, and the standing room-only session amounted to an ad hoc Western water convention. Two former congressmen-turned-lobbyists, Dennis Cardoza of California and Dennis Rehberg of Montana, monitored the action from the audience.

Rehberg represents the Westlands Water District, whose general manager Tom Birmingham was also taking in the action from the back of the third-floor room in the Dirksen Senate Office Building. Lobbyists for farmers served by Friant Dam, on the San Joaquin Valley’s east side, sat several rows ahead of long-time environmental advocates.

The big question, for all, is whether Congress will legislate. Last year, the Republican-controlled House passed a bill that was opposed by Northern California lawmakers and the Brown administration in Sacramento. The measure died in the Senate.

This year, the chairwoman of the Senate Energy and Natural Resources Committee said Tuesday, the approach will be different.

“It’s important that we have something that passes,” said Sen. Lisa Murkowski, R-Alaska. “This is bigger than just California, (so) we’re going to try to build a broader Western water package.”

She already has some motivated Western colleagues.

Drought conditions classified as “extreme” now extend to much of Oregon and pockets of Utah and Idaho, Congressional Research Service natural resources specialist Betsy A. Cody told the panel, while almost 47 percent of the land area in California is experiencing the most serious category of “exceptional” drought. Moderate to severe drought conditions prevail in Arizona and Washington.

“The Department of the Interior views this as an all-hands effort,” Connor said.

Underscoring the heightened attention, Murkowski noted Tuesday that she visited a Fresno, Calif.-area orchard several months ago and saw “whole fields of beautiful citrus trees that were literally bulldozed over because there was no water.” Another committee member, independent Sen. Angus King of Maine, said he was in California in April and was “shocked to see” how low reservoirs had fallen.

Neither of California’s two Democratic senators, Dianne Feinstein and Barbara Boxer, serve on the Resources panel and did attend the hearing. Feinstein had been quietly trying to craft a bill earlier this year, with some hoping it could be ready for discussion Tuesday. For now, it appears stalled.

“If anybody comes up with an idea that goes back to the same old arguments of decades and decades of water wars, they ought to learn that it’s a new time,” Boxer told reporters Tuesday. “It’s a new paradigm and we have to work together.”

In the House, Democrats led by Rep. Jared Huffman, D-Calif., have cobbled together an 118-page draft water bill currently being circulated for discussion. Covering areas like recycling, conservation and planning, it emphasizes different priorities than the approach typically favored by Republicans.

The timing of the House GOP’s drought bill, and its precise contours, remain under wraps. On Tuesday, Murkowski pointedly said she had expected to see it by now.

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New water rules for California cities aren't enough: Scientists

CNBC | June 1, 2015 | Robert Ferris

New urban water restrictions went into effect for cities across California on Monday, but the state will have to do more to prepare for a possible "new normal" of increased demand and dry periods that are longer, more frequent and more intense, a group of scientists said.

California's approach to water management is severely outdated and ill-suited to the state's mostly dry climate, according to Monday comments from members of the Union of Concerned Scientists. The state has to overhaul its water rights system, give its water managers the authority to supervise water use and restrict it when necessary.

But it also needs to begin employing technological solutions: California should focus less on building storage capacity for water, and more on retaining the water from storms and snow, and recycling the water it does use, the group said.

California has historically responded to droughts by "slamming on the brakes" once droughts occur and then returning to business as usual when conditions temporarily improve, said Michael Hanemann, a professor at the University of California, Berkeley.

Previous droughts have typically ended after two successive dry winters, Hanemann said. The current drought has lasted three dry winters so far and is continuing, which explains the current panic.

Meanwhile, longstanding problems remain unsolved, he said. For instance, the state's water rights system is in part based on English laws that have no application in California's dry climate and have been in place for more than a century.

The ongoing political conversation in California marks the second time in the state's history that top leaders are talking about making changes to the system, the first time was during Jerry Brown's first stint as governor in the 1970s, Hanemann said.

A better water-rights system would allow for some kind of market to allow water rights holders to trade or lend their rights to others and would give state agencies the power to gather data on usage, and restrict use where needed, he said.

But reforming the water-rights system is not the only needed change. The state also needs to think less about building more storage and more about developing strategies for retaining water when it does fall during storms, Joseph McIntyre, president of Ag Innovations, a nonprofit group that works on a range of agricultural issues.

"It is not about building bigger storage, it is about catching and retaining water wherever we can," McIntyre said.

"Studies are showing that a combination of water recycling and stormwater capture really can make a dent" in meeting water use needs, said Kirsten James, the senior manager of California Policy and Partnerships at non-profit Ceres. She spoke on behalf of the "Connect the Drops" program, a coalition of businesses promoting water recycling and capturing water from sources such as storms.

The group also wants to ensure that legislation regulating the use of groundwater stays "on track," and that wise use is made of a \$7.5 billion water bond announced in April.

Juliet Christian-Smith, a climate scientist with the Union of Concerned Scientists, said the state currently lets one million acre-feet of treated wastewater drain into the Pacific Ocean every year, so there is much more that could be done to make use of available water.

California will very likely have to make use of such solutions to prepare for a future where less snow falls in the state, and the new norm includes long droughts interspersed with intense periods of heavy rain and flooding, she said.

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Vandals destroy dam, release 49 million gallons of water into Bay

KRON | May 22, 2015 | Mario Sevilla

Fremont (KRON) — Fremont police say vandals attacked an inflatable dam on Alameda Creek that resulted in the loss of nearly 50 million gallons of water.

Police believe that those responsible entered a restricted area sometime on Thursday morning and intentionally damaged the dam.

“The dam, which is instrumental to the Alameda County Water District’s water supply operations, suffered irreversible damage,” police said.

According to police, more than 150 acre-feet of water – or 49 million gallons – washed past the destroyed dam and into the San Francisco Bay.

With California enduring a crippling four-year drought and no signs of immediate relief, the water in the Alameda Creek was to have been percolated into the Niles Cone Groundwater Basin for use by residents and businesses in Fremont, Newark, and Union City as a critical water supply.

“This amount of water is enough to supply the needs of approximately 500 homes for one year,” police said.

District staff was able to quickly open upstream diversions, allowing water which would have been impounded behind the dam to flow into nearby groundwater recharge facilities, thus eliminating further water loss.

“This is a very significant loss of water under any circumstances, and more so in the drought conditions we are experiencing,” said ACWD General Manager Robert Shaver. “It is an utterly senseless, destructive, and wasteful thing to do.”

The District does not believe it will have a long-term impact on its water supply operations.

The vandalized dam is one of a pair ACWD maintains on Alameda Creek. The dams are large, heavy-duty devices, which can be inflated to impound needed water or deflated to allow water to flow through the creek in storm conditions.

Anyone with information about this crime is encouraged to contact Detective A. Cenicerros at Aceniceros@fremont.gov or (510) 790-6900.

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