

**COLORADO RIVER BOARD OF CALIFORNIA**

770 FAIRMONT AVENUE, SUITE 100  
GLENDALE, CA 91203-1068  
(818) 500-1625  
(818) 543-4685 FAX



March 26, 2014

**NOTICE OF REGULAR MEETING OF THE  
COLORADO RIVER BOARD**

**NOTICE IS HEREBY GIVEN** pursuant to the call of the Chairperson, Dana B. Fisher, Jr., by the undersigned Executive Director of the Colorado River Board of California that a regular meeting of the Board Members is to be held as follows:

Date: Wednesday, April 9, 2014
Time: 1:30 p.m.
Place: Imperial Irrigation District William Condit Auditorium 1285 Broadway Street El Centro, California 92243 (760) 339-9319

The Colorado River Board of California welcomes any comments from members of the public pertaining to items included on this agenda and related topics. Oral comments can be provided at the beginning of each Board meeting; while written comments may be sent to Mr. Dana B. Fisher, Jr., Chairperson, Colorado River Board of California, 770 Fairmont Avenue, Suite 100, Glendale, California, 91203-1068.

An Executive Session may be held in accordance with provisions of Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code and in accordance with Sections 12516 and 12519 of the Water Code to discuss matters concerning interstate claims to the use of Colorado River System waters in judicial proceedings, administrative proceedings, and/or negotiations with representatives from other states or the federal government.

Requests for additional information may be directed to: Ms. Tanya M. Trujillo, Executive Director, Colorado River Board of California, 770 Fairmont Avenue, Suite 100, Glendale, CA 91203-1068, or 818-500-1625. A copy of this Notice and Agenda may be found on the Colorado River Board's web page at [www.crb.ca.gov](http://www.crb.ca.gov).

A copy of the meeting agenda, showing the matters to be considered and transacted, is attached.

Tanya M. Trujillo  
Executive Director

attachment: Agenda

Regular Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
April 9, 2014, Wednesday  
1:30 p.m.

Imperial Irrigation District  
William Condit Auditorium  
1285 Broadway Street  
El Centro, California 92243

**AGENDA**

At the discretion of the Board, all items appearing on this agenda, whether or not expressly listed for action, may be deliberated upon and may be subject to action by the Board. Items may not necessarily be taken up in the order shown.

1. Call to Order
2. Opportunity for the Public to Address the Board (Limited to 5 minutes)  
As required by Government Code, Section 54954.3(a)
4. Administration
  - a. Consideration and Approval of the Minutes of the Meeting held March 12, 2014  
**(Action)**
  - b. Resolution honoring the service of Rita Schmidt Sudman with the Water Education Foundation **(Action)**
  - c. Resolution honoring John V. "Jack" Foley, Chairman of the Metropolitan Water District of Southern California **(Action)**
5. Colorado River Basin Water Reports
  - a. Reports on current reservoir storage, reservoir releases, projected water use, and forecasted river flows
  - b. State and Local Water Reports
6. Update regarding the 2014 California Drought
7. Presentation regarding the Salton Sea Restoration and Renewable Energy Initiative
8. Staff Reports regarding Colorado River Basin Programs
  - a. Review status of the Colorado River Basin Water Supply and Demand Study
  - b. Review status of the implementation of Minute 319
  - c. Review status of the Salinity Control Forum Workgroup and Advisory Council
  - d. Review status of the Glen Canyon Dam Adaptive Management Work Group and Long Term Experimental Management Plan EIS
  - e. Review status of the Lower Colorado River Basin Multi-Species Conservation Plan
9. Announcements/Notices

10. Executive Session

An Executive Session may be held by the Board pursuant to provisions of Article (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code and Sections 12516 and 12519 of the Water Code to discuss matters concerning interstate claims to the use of Colorado River system waters in judicial proceedings, administrative proceedings, and/or negotiations with representatives from other states or the federal government.

11. Other Business

a. Next Board Meeting: Regular Meeting

May 14, 2014, Wednesday, starting 10:00 a.m.

Holiday Inn Ontario Airport

2155 East Convention Center Way

Ontario, CA 91764-4452

TEL: (909) 212-8000, FAX: (909) 418-6703



Minutes of Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
Wednesday, March 12, 2014

A Meeting of the Colorado River Board of California was held at the Metropolitan Water District of Southern California, MWD Headquarters Building, Board Room, 700 N. Alameda, Los Angeles, CA 92225, Wednesday, March 12, 2014.

Board Members and Alternates Present

Dana Bart Fisher, Jr., Chairman  
Stephen Benson  
Henry Kuiper  
Glen D. Peterson  
David Pettijohn

John Powell, Jr.  
Doug Wilson  
Jeanine Jones, Designee  
Department of Water Resources

Board Members and Alternates Absent

Franz De Klotz  
John V. Foley  
Terese M. Ghio  
James Hanks  
James B. McDaniel

Bud Pocklington  
Christopher G. Hayes, Designee  
Department of Fish & Wildlife

Others Present

Steve Abbott  
Tim Blair  
Brenda Burman  
John Carter  
J.C. Jay Chen  
Robert Cheng  
Dan Denham  
Matt Dessert  
Bill Hasencamp  
Mark Horne  
Michael Hughes  
Lisa Johansen  
Lori Jones  
Laura Landon  
Tom Levy

Kara Mathews  
Karen Murphy  
Autumn Plourd  
Angela Rashid  
Harry Ruzgerian  
Tom Ryan  
John Scott  
Jack Seiler  
Tina Shields  
Peter Silva  
Ed Smith  
Joanna Smith  
Mark Stuart  
Tanya Trujillo  
Jerry Zimmerman

## **CALL TO ORDER**

Chairman Fisher announced the presence of a quorum and called the meeting to order at 1:37 p.m.

## **OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD**

Chairman Fisher asked if there was anyone in the audience who wished to address the Board on items on the agenda or matters related to the Board. Hearing none, Chairman Fisher moved to the next agenda item.

Board Member Glen Peterson welcomed the Board to the Metropolitan Water District of Southern California.

## **ADMINISTRATION**

### Approval of Minutes of the February 12, 2014 Colorado River Board Meeting

Chairman Fisher asked if there was a motion to approve the February 12, 2014 minutes. Mr. Kuiper moved that the minutes be approved, seconded by Mr. Benson, and unanimously carried, the February 12, 2014, meeting minutes were approved.

### Announcements

Executive Director Ms. Trujillo reported that on February 27, 2014, the U.S. Senate confirmed Mr. Mike Connor as Deputy Secretary for the Department of the Interior (Interior).

Ms. Trujillo reported that on March 6, 2014, the President nominated Mr. Estevan Lopez, the Director of New Mexico's Interstate Stream Commission, to be the new Commissioner of Reclamation. A hearing will be held before the Senate Energy and Natural Resources Committee and the Senate confirmation process could take several months. The Board will likely present a letter of support on behalf of Mr. Lopez at the appropriate time. Ms. Trujillo reported that, in the interim, Mr. Lowell Pimley will serve as the acting Commissioner of Reclamation.

Ms. Trujillo reported that on March 3, 2014, Assistant Secretary for Water and Science, Ms. Anne Castle visited Los Angeles and met with representatives of the Colorado River Board regarding drought conditions. Ms. Trujillo also reported that Secretary Jewell visited Los Angeles and was in the Central Valley on March 11, 2014 visiting the pumping facilities associated with the water projects and discussing the drought situation.

Ms. Trujillo also reported that on March 4, 2014, the President released the

federal Budget for Fiscal-Year 2015. The President is requesting approximately \$1 billion for water related issues in the Western United States. The Budget includes a new element called, “The Drought Response Program”, and includes \$1.5 million to implement this program. Ms. Trujillo reported that the Lower Colorado River operations portion of the budget was about \$28 million and the Salinity Control Project was \$23 million. The 2014 Budget was not approved until January, and it is not clear how quickly this Budget will move forward.

## **COLORADO RIVER BASIN WATER REPORT AND CALIFORNIA DROUGHT UPDATE**

### Colorado River Basin Water Report

Ms. Trujillo presented the March Water Report for the Colorado River Basin. She reported that Lake Powell was at thirty-nine percent of capacity, and that Lake Mead was currently at forty-eight percent of capacity. The total storage in the System reservoir facilities is at forty-eight percent of capacity. Ms. Trujillo reported that the Colorado Basin River Forecast Center snowpack conditions throughout much of the Upper Basin are currently about 115 percent of average. She reported that Reclamation is currently projecting that the unregulated inflow into Lake Powell will be approximately 10.9 million acre-feet, or just about 101 percent of average. Ms. Trujillo also reported that much of the western United States, and particularly in the southwestern region, is still experiencing drought conditions, with the epicenter of the drought still being in California.

### State and Local Agency Reports

Mr. Mark Stuart, of the Department of Water Resources Southern District, reported that even with the recent rains in the southern California region, the area remains well below normal in annual precipitation and ranges from 14 percent of average to just below 50 percent of average. Mr. Stuart also reported that the snowpack in much of the Sierra Nevada is still only about 50 percent of normal. He also reported that system storage in the State Water Project was currently at 40 percent of capacity, and even with the recent precipitation across much of California, the water supply situation remains dire.

Jeanine Jones, of the Department of Water Resources, reported that California Governor Jerry Brown recently signed legislation accelerating appropriations for several important conservation and drought mitigation programs associated with water supply and water resources management and wildland firefighting.

Board member, Mr. Glen Peterson, of The Metropolitan Water District of Southern California, provided a quick overview of the status of the MWD system, with just 800,000 acre-feet in storage. Mr. Peterson also reported that MWD deliveries, to date, are about 115 percent of the annual average. Mr. Peterson noted that the MWD

Board approved a \$20 million increase for conservation this year and approved a \$5 million outreach campaign.

Board member, Mr. David Pettijohn, of the Los Angeles Department of Water and Power, reported that recent snowpack conditions in the Mammoth Pass region have improved somewhat and are currently at 44 percent of normal. He reported that LADWP expects to receive approximately 70,000-80,000 acre-feet from the Los Angeles Aqueduct system this year.

Board member Ms. Jones also added some information about the combined and coordinated federal and state operations associated with the Bay-Delta, particularly in light of the on-going drought and the continuing efforts to develop a long-term environmental management plan for the Delta fisheries. She reported that the State Water Resources Control Board has adopted revised water quality standards for the Delta that more accurately reflect a hydrology which is much drier than originally envisioned when the standards were first developed. In order to maintain water quality standards, it has necessitated releases from upstream reservoirs, and has significantly curtailed deliveries to contract holders. Ms. Jones also reported that DWR has been working on the development of long-term streamflow reconstructions for the Sacramento/San Joaquin River systems to develop a better understanding of the long-term natural variables in the system.

## **COLORADO RIVER BASIN PROGRAM REPORTS**

### **Status of the Colorado River Basin Water Supply & Demand Study**

Ms. Trujillo reported that the data collection process for the Basin Study Work Groups is nearly complete. The Environmental Flows Work Group selected three focus reaches for further analysis and study, which include the main stem of the Colorado in the Grand Junction area of Colorado, the White River in Utah, and the Bill Williams River in the Lower Colorado River Basin in Arizona. The M&I Work Group completed its data collection effort and has begun developing case studies of effective conservation and re-use programs in both the Upper and Lower Basin. The Agricultural Conservation Work Group has developed sub-teams to investigate Consumptive Use Reductions, On-Farm Efficiencies, and Conveyance System Efficiency Improvements and Transfers activities in the Basin. It is anticipated that the first draft of the Phase 1 reports will be completed in April.

### **Report on Minute 319 Implementation**

Ms. Trujillo reported that the Environmental Flows component of Minute 319 which consists of the Pulse Flow will start on March 23, 2014 and will go through the first week in April to simulate what might be a natural spring peak runoff. A ceremony hosted by the Mexican government/CILA is planned for March 27, 2014 at Morelos Dam

located at the confluence or at the border of Mexico. The next step will be development of a monitoring plan to analyze the Pulse Flow and its effect on the ecosystem and the riparian areas. Ms. Trujillo reported that the Delivery Plan describes a specific plan and progress will be tracked on some of the existing habitat. Ms. Trujillo reported that the Pulse Flow is approximately 105,000 acre-feet of Mexico's water to be used in Mexico that is currently stored by Mexico in Lake Mead. One of the provisions in an earlier Minute allowed Mexico to defer delivery of water that it couldn't use on an annual basis. Ms. Trujillo reported that through Minute 319, the U.S. and local agencies will be funding conservation projects in Mexico that will go towards projects that will create water savings, which Mexico may decide to use toward Environmental Flow components. A significant amount of media coverage is anticipated for the Pulse Flow event.

Additionally, Ms. Trujillo reported that this is a high priority for non-governmental organizations (NGO), both in the U.S. and in Mexico. The NGOs are campaigning and fund-raising in connection with the event because they have an obligation under the agreement to raise money to acquire water rights that will create the Base Flow component of the experiment. After the Pulse Flow this spring, water will be released under Mexico's apportionment to support the habitat that is created after this event.

In response to Mr. Fisher's question about what the expectations are for the Pulse Flow, Ms. Trujillo stated that it is an experiment and that the water from the Pulse Flow may sink into the ground and may not flow all the way to through the Delta. It is not anticipated that the flow will make its way to the sea. However, additional significant rain events between now and then would make a difference in soil saturation, which in turn would convey more water south. Additionally, Ms. Trujillo commented that this is a Mexican initiated project and that the U.S. will not be involved in directing Mexico on how to utilize their water in terms of agricultural, municipal, and environmental needs.

#### Colorado River Basin Salinity Control Program

Ms. Trujillo reported that the Salinity Control Program's Work Group met on February 26-28, 2014. They focused on the Triennial Review Report, which is the process to determine whether they're going to change any of the salinity standards that have been set every three years. It is anticipated that those standards will not change, and that the report will maintain the current levels.

Additionally, Ms. Trujillo reported that the U.S. Geological Survey (USGS) re-ran its experiment at the Pah Tempe Springs that was previously canceled as a result of heavy rains that had washed out their gauges on their first attempt. After the data is collected, the USGS will determine if it would be feasible to implement a project to control salinity discharges at the site. Ms. Trujillo also reported that the Paradox EIS has continued to be under development. Alternatives are being considered to the current disposal well, which has been in existence beyond its predicted useful life and it would be

problematic if it were to fail in the next few years. Reclamation is the lead agency on the EIS, and we are one of the cooperating agencies working with them.

Ms. Trujillo reported that the funding sub-committee is working on funding shortfall issues associated with the Lower Basin's contributions to the non-federal cost share of the program. The non-federal entities support a 30 percent cost share for the program. The Lower Basin supports 85 percent of the non-federal cost share, which is funded entirely from the Lower Basin Fund (comprised of power revenues) managed by Reclamation. The statute that authorizes the program locks in those cost shares and percentages. Ms. Trujillo also reported that because of decreased water levels and decreased income into the Basin Fund, the states have not been able to match the level of appropriations that have been coming in from Reclamation with our non-federal cost shares. Ms. Trujillo reported that this is an inadvertent situation because of the statutory language. The next funding sub-committee meeting is scheduled for March 25, 2014.

Finally, Ms. Trujillo reported that in 2014, for the salinity program, Reclamation anticipates receiving approximately \$10 million, Bureau of Land Management anticipates receiving \$750,000, and the Department of Agriculture anticipates receiving \$12 million through the EQIP Program. The next Salinity Control Forum meeting is scheduled for June 12-13, 2014 in Wyoming.

#### Glen Canyon Dam—Long-Term Experimental Management Plan EIS Process

Ms. Trujillo reported that the Adaptive Management Work Group, the federal advisory committee associated with operation of Glen Canyon Dam and the Grand Canyon, met in Phoenix, Arizona on February 19-20, 2014. Reclamation is projecting a release of 9.0 million acre-feet from Lake Powell in 2015 to the Lower Basin. In contrast, the release in 2014 is 7.48 million acre-feet, which is the lowest release since the reservoirs have been in place. Ms. Trujillo reported that typically a release is 8.23 million acre-feet.

Ms. Trujillo reported that the Adaptive Management Work Group included a panel discussion on the effects of the drought on Colorado River operations. Additionally, the Grand Canyon Research Center presented their initial results from the High Flow experiment conducted in November 2013 to redistribute sediment from the Upper Reaches of the river to farther downstream.

Finally, Ms. Trujillo reported that Interior and the other Basin States continue to work on development of the Long-Term Experimental Management Plan (LTEMP) EIS program. The modeling of the LTEMP EIS alternatives has been very extensive and Reclamation anticipates initial modeling results to be presented during the week of March 17, 2014. Ms. Trujillo reported that a "Structured Decision Analysis" workshop is scheduled for March 31 and April 1, 2014.

### Lower Colorado River Multi-Species Conservation Program

Ms. Trujillo reported that the Technical Work Group meeting was held on March 12, 2014 in Yuma, Arizona and a tour of the Laguna Habitat Conservation Area was held on March 13, 2014. The next Lower Colorado River Multi-Species Conservation Program (LCR MSCP) Steering Committee meeting is scheduled for April 23, 2014.

### Next Board Meeting

Chairman Fisher announced that there is no executive session today and that the next meeting of the Colorado River Board will be held on Wednesday, April 9, 2014, at Imperial Irrigation District in El Centro, California.

There being no further items to be brought before the Board, Chairman Fisher asked for a motion to adjourn the meeting. Upon the motion of Mr. Peterson, seconded by Mr. Wilson, and unanimously carried, the meeting was adjourned at 2:28 p.m. on March 12, 2014.

**RESOLUTION  
OF THE  
COLORADO RIVER BOARD OF CALIFORNIA**

**HONORING**

**JOHN V. “JACK” FOLEY  
CHAIRMAN  
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**

WHEREAS, the water and power resources of the Colorado River are vital to the State of California and its citizens; and

WHEREAS, the Colorado River Board of California represents and protects California’s water and power interests within the Colorado River System, consistent with the “Law of the River”, through negotiations and dialogues with the other Colorado River Basin States and the federal government; and

WHEREAS, Jack Foley served as the Chairman of the Metropolitan Water District of Southern California from 1993 through 1998 and was elected Chairman again in 2010; and

WHEREAS, Mr. Foley represented the Municipal Water District of Orange County as a member of the Metropolitan Board of Directors since 1989; and

WHEREAS, Mr. Foley served with distinction as a member and chairman of the San Diego Regional Water Quality Board, and as a member of the Bay Delta Oversight Council and Bay Delta Advisory Council; and

WHEREAS, Mr. Foley served as a member of the Colorado River Board of California on behalf of Metropolitan for sixteen years and was a helpful and essential member of the Board; and

WHEREAS, Mr. Foley was engineer with a distinguished career, including his twenty-five years of service as an officer in the United States Army, and was continually recognized as an outstanding leader on water issues in Southern California; and

WHEREAS, Mr. Foley was known as a consummate gentleman and outstanding person to those who had the honor to work with him; and

NOW THEREFORE BE IT RESOLVED that the Colorado River Board of California acknowledges the exceptional leadership and public service Jack Foley provided over several decades to Southern California; and

BE IT FURTHER RESOLVED that the Colorado River Board of California and its staff extend their solemn condolences to his family on the occasion of his passing on March 21, 2014.

Unanimously adopted on the 9<sup>th</sup> day of April, 2014.

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Dana B. Fisher, Jr., Chairman

**RESOLUTION OF THE  
COLORADO RIVER BOARD OF CALIFORNIA**

**HONORING**

**RITA SCHMIDT SUDMAN**

WHEREAS, the water and power resources of the Colorado River are vital to the State of California and its citizens; and

WHEREAS, the Colorado River Board of California represents and protects California's water and power interests within the Colorado River System, consistent with the "Law of the River", through negotiations and dialogues with the other Colorado River Basin states and the federal government; and

WHEREAS, Rita Schmidt Sudman has served as the Executive Director of the Water Education Foundation for 34 years; and

WHEREAS, the Water Education Foundation has been a very helpful resource in raising awareness of water issues in California and the Southwest; and

WHEREAS, under the direction of Ms. Sudman, the Water Education Foundation has provided the public and water managers with information through the Western Water magazine, which has often highlighted issues within the Colorado River Basin and has provided tours to thousands of participants of areas within California and the Colorado River Basin to help explain and demonstrate the complicated network of infrastructure and the balancing of interests that exists in our region; and

WHEREAS, under the direction of Ms. Sudman, the Water Education Foundation organized and hosted the biennial Colorado River Symposium which always served as a valuable forum for the Basin States and other Colorado River Basin stakeholders to exchange information and new ideas for more effectively managing the water resources of the Colorado River; and

WHEREAS, under the direction of Ms. Sudman, the Water Education Foundation has produced the Layperson's Guide to the Colorado River, and maps of the Colorado River System which have helped educate and inform countless numbers of individuals on the details of the Colorado River System; and

NOW THEREFORE BE IT RESOLVED that the Colorado River Board of California commends Rita Schmidt Sudman for her leadership and enthusiasm as the Executive Director of the Water Education Foundation and for her many years of service to the State of California and its water users;

BE IT FURTHER RESOLVED that the Colorado River Board of California and its staff extend their very best wishes to Rita and her family as she embarks on her future endeavors in the years to come.

Unanimously adopted on the 9<sup>th</sup> day of April, 2014.

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Dana B. Fisher, Jr., Chairman



Mar 31, 2014

## LOWER COLORADO WATER SUPPLY REPORT

River Operations  
Bureau of Reclamation

Questions: [BCOOWaterops@usbr.gov](mailto:BCOOWaterops@usbr.gov)

(702) 293-8373

<http://www.usbr.gov/lc/region/g4000/weekly.pdf>

	PERCENT	Content 1000 ac-ft (kaf)	Elev. (Feet above mean sea level)	7-Day Release (CFS)
CURRENT STORAGE	FULL			
LAKE POWELL	39%	9,496	3574.75	8,200
* LAKE MEAD	46%	11,914	1101.99	20,500
LAKE MOHAVE	92%	1,663	641.69	20,000
LAKE HAVASU	91%	562	447.05	17,100
TOTAL SYSTEM CONTENTS **	47%	28,195		
As of 03/30/2014				
SYSTEM CONTENT LAST YEAR	53%	31,886		
* Percent based on capacity of 26,120 kaf or elevation 1219.6 feet.				
** TOTAL SYSTEM CONTENTS includes Upper & Lower Colorado River Reservoirs, less Lake Mead exclusive flood control space.				
Salt/Verde System	57%	1,319		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam	6%	61	1092.21	25
Forecasted Water Use for Calendar Year 2014 (as of 03/31/2014) (values in kaf)				
NEVADA			284	
SOUTHERN NEVADA WATER SYSTEM				252
OTHERS				32
CALIFORNIA			4,115	
METROPOLITAN WATER DISTRICT OF CALIFORNIA				617
IRRIGATION DISTRICTS				3,390
OTHERS				107
ARIZONA			2,753	
CENTRAL ARIZONA PROJECT				1,509
OTHERS				1,244
TOTAL LOWER BASIN USE				7,152
DELIVERY TO MEXICO - 2014 (1.50 MAF Scheduled + Preliminary Yearly Excess) <sup>1</sup>				1,528
OTHER SIGNIFICANT INFORMATION				
UNREGULATED INFLOW INTO LAKE POWELL - MARCH MID-MONTH FORECAST DATED 03/17/2014				
		MILLION ACRE-FEET	% of Normal	
FORECASTED WATER YEAR 2014		11.403	105%	
FORECASTED APRIL-JULY 2014		8.000	112%	
FEBRUARY OBSERVED INFLOW		0.330	84%	
MARCH INFLOW FORECAST		0.600	90%	
		Upper Colorado Basin	Salt/Verde Basin	
WATER YEAR 2014 PRECIP TO DATE		101% (17.9")	52% (8.6")	
CURRENT BASIN SNOWPACK		112% (17.3")	NA (NA)	

<sup>1</sup> Delivery to Mexico forecasted yearly excess calculated using year-to-date observed and projected excess.



# COLORADO BASIN RIVER FORECAST CENTER

NATIONAL WEATHER SERVICE / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

RIVERS SNOW WATER SUPPLY RESERVOIRS WEATHER HELP

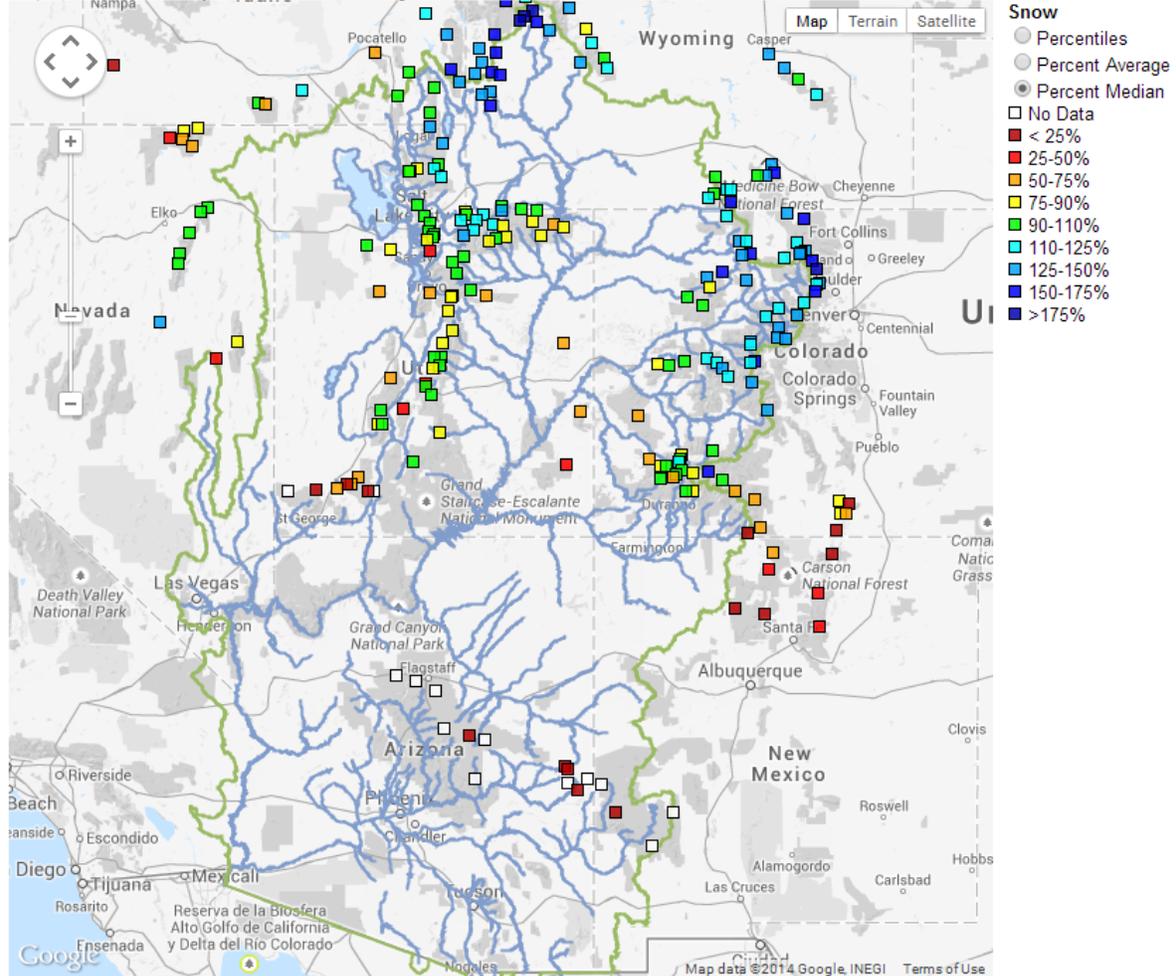
[Conditions Map](#) [Conditions List](#) [Snow Groups](#)

Areas: [CBRFC](#) [Upper Colorado](#) [Green](#) [San Juan](#) [Great](#) [Sevier](#) [Virgin](#) [Lower Colorado](#)

## Snow Conditions

Data Queried: Wed, 02 Apr 2014 11:35:01 -0600

[Help](#) [Double Click Map to Zoom](#). Lat: 37.6 Lng: -110.5, Zoom: 6

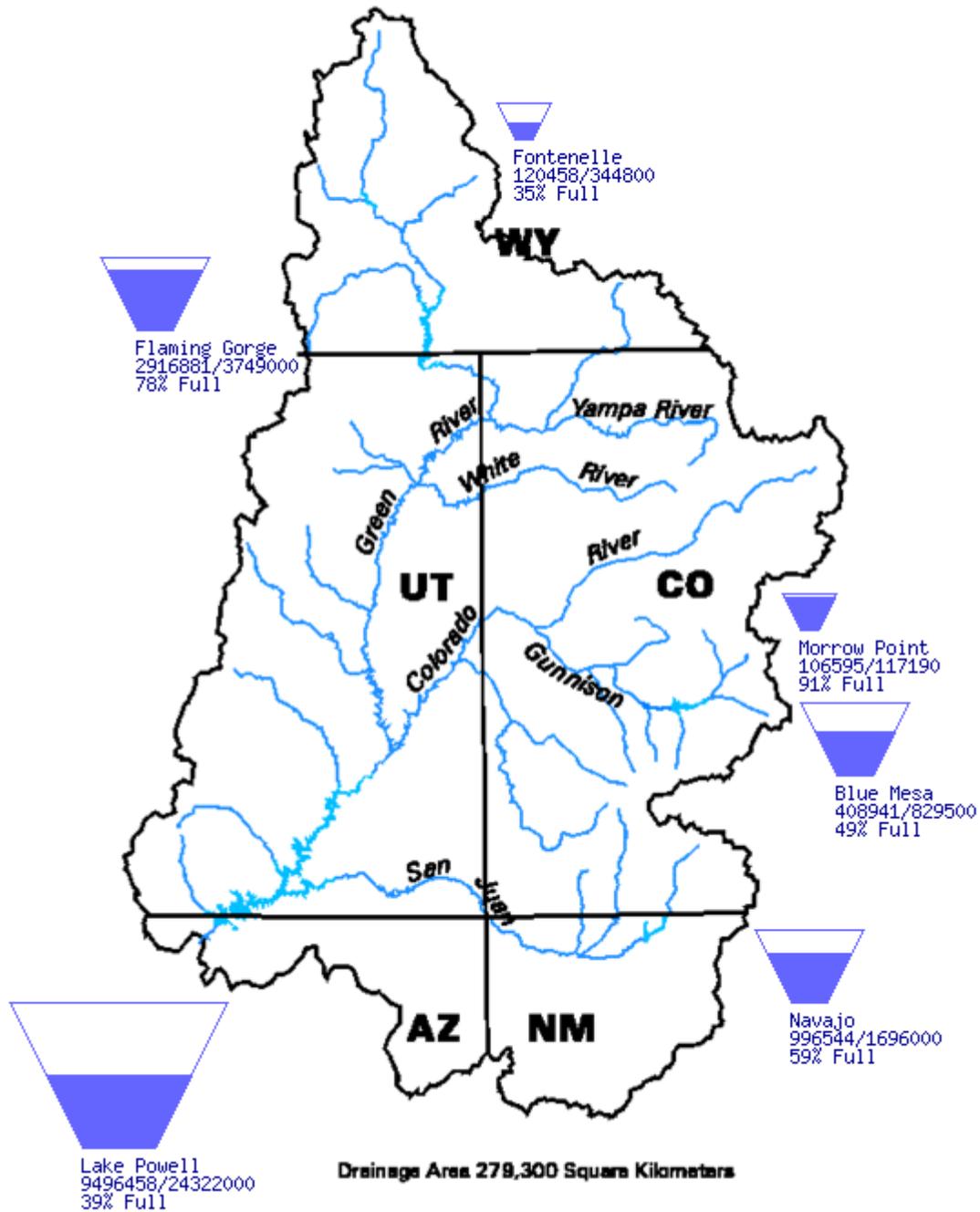


# Upper Colorado Region Water Resources Group

## River Basin Tea-Cup Diagrams

Data Current as of:  
04/01/2014

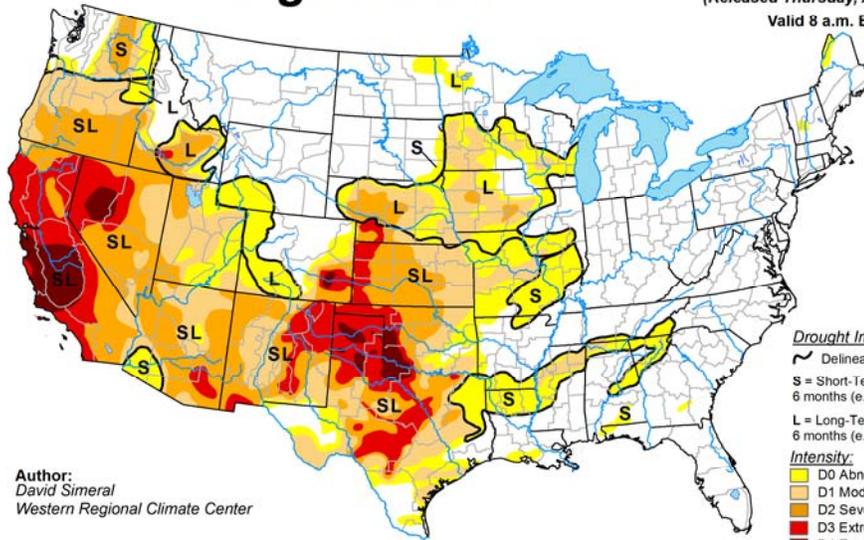
### Upper Colorado River Drainage Basin



USDA United States Drought Monitor Map

# U.S. Drought Monitor

**April 1, 2014**  
 (Released Thursday, Apr. 3, 2014)  
 Valid 8 a.m. EDT

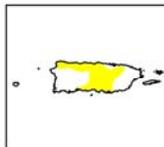
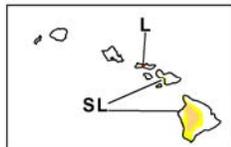


Author:  
 David Simeral  
 Western Regional Climate Center

**Drought Impact Types:**  
 ~ Delineates dominant impacts  
 S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)  
 L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

**Intensity:**  
 D0 Abnormally Dry  
 D1 Moderate Drought  
 D2 Severe Drought  
 D3 Extreme Drought  
 D4 Exceptional Drought

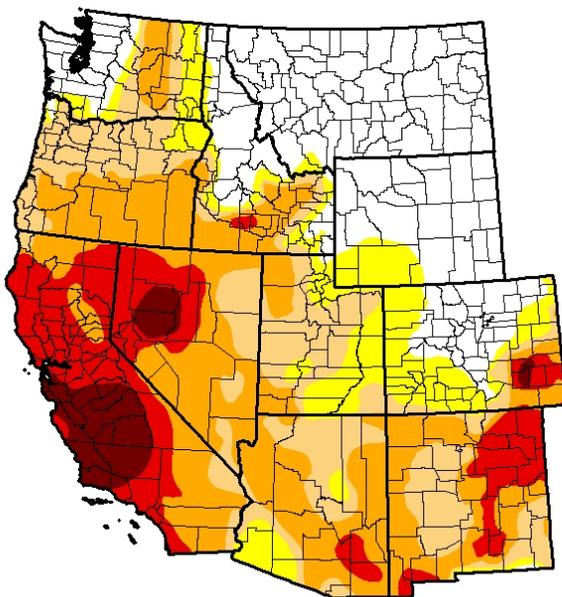
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>

## U.S. Drought Monitor West

**April 1, 2014**  
 (Released Thursday, Apr. 3, 2014)  
 Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	28.11	71.89	60.21	41.95	16.03	4.03
Last Week 3/25/2014	28.12	71.88	60.33	41.95	16.31	4.02
3 Months Ago 12/21/2013	22.20	77.80	51.44	31.11	7.75	0.63
Start of Calendar Year 12/01/2013	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year 10/01/2013	25.25	74.75	58.96	34.18	5.57	0.63
One Year Ago 4/2/2013	17.18	82.82	63.46	41.28	15.58	2.49

**Intensity:**  
 D0 Abnormally Dry  
 D1 Moderate Drought  
 D2 Severe Drought  
 D3 Extreme Drought  
 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:  
 David Simeral  
 Western Regional Climate Center

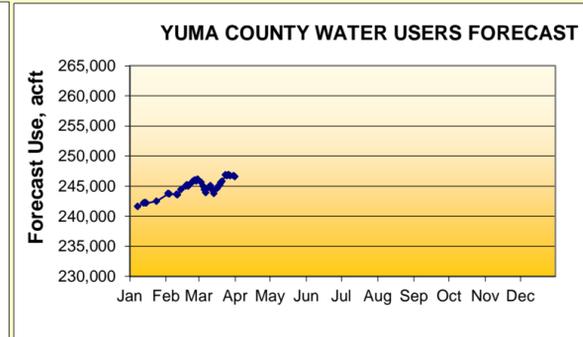
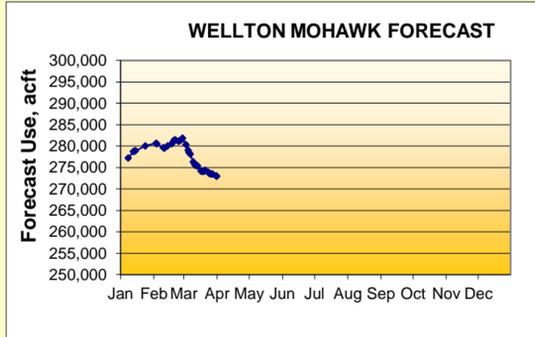
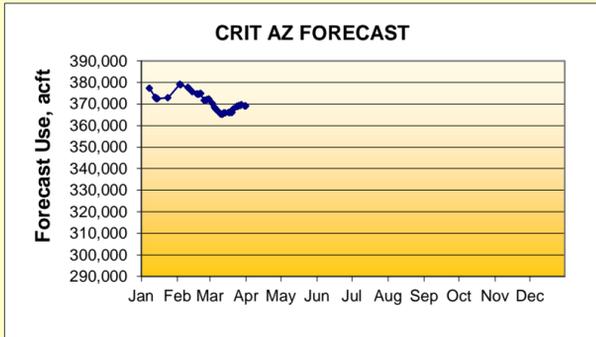
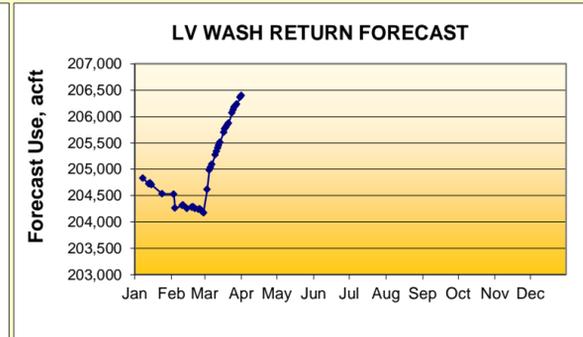
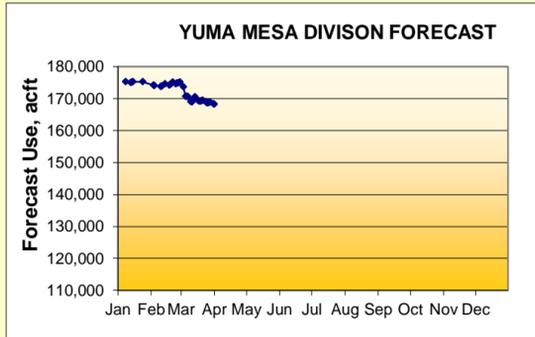
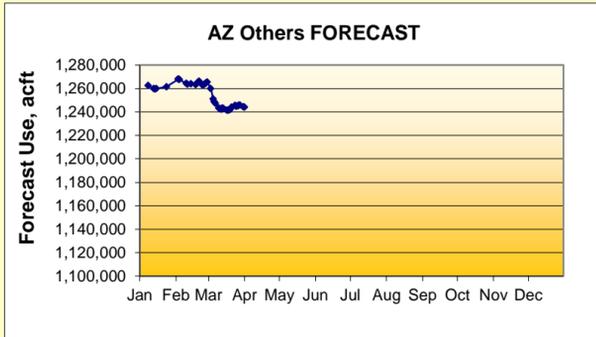
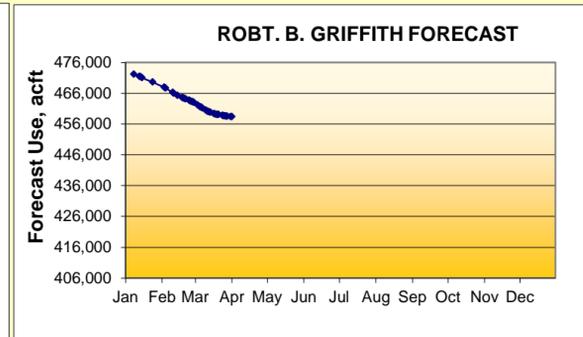
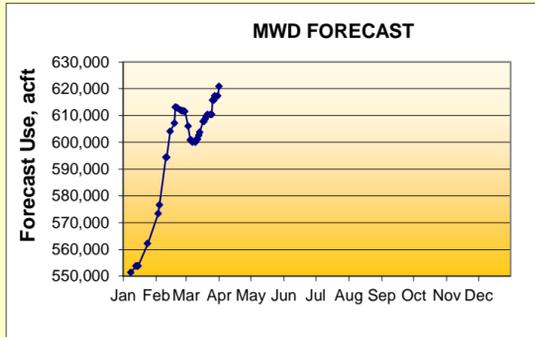
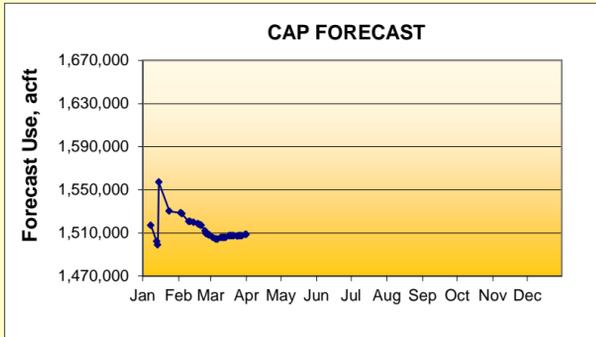
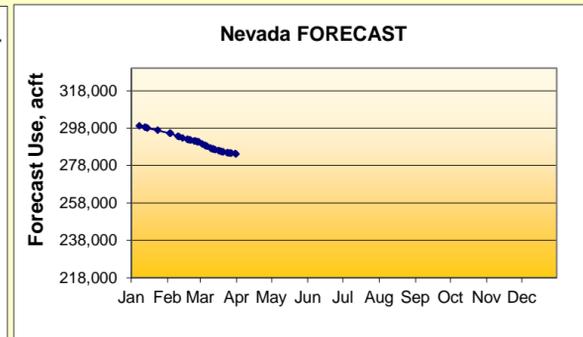
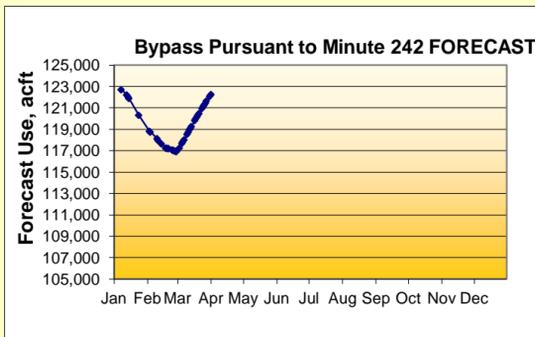
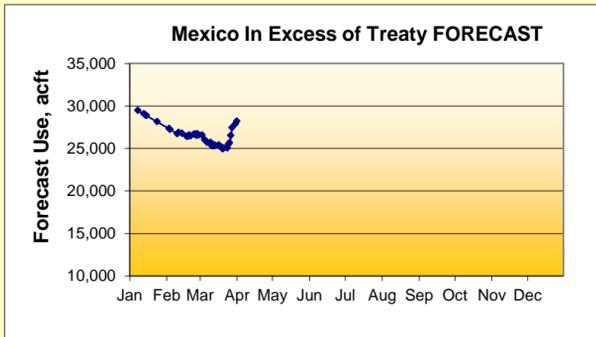
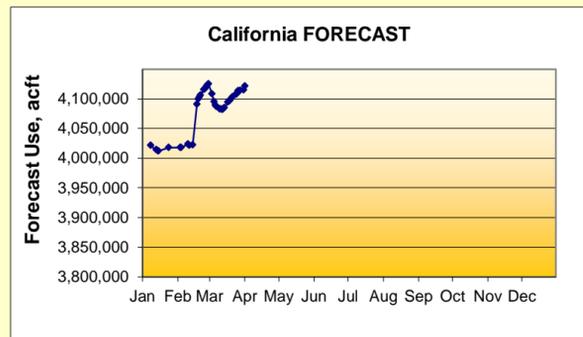
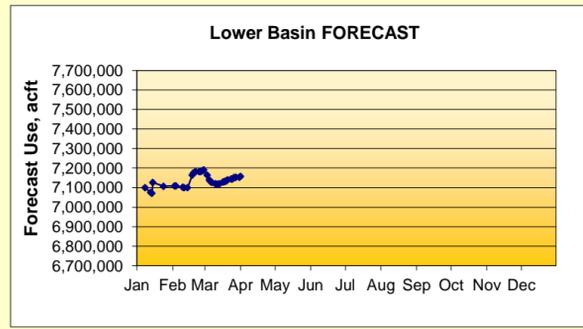


<http://droughtmonitor.unl.edu/>

ARIZONA, CALIFORNIA, NEVADA, MEXICO  
FORECAST OF END OF YEAR CONSUMPTIVE USE  
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS /1  
(ACRE-FEET)

WATER USE SUMMARY	Use To Date CY2014	Forecast Use CY2014	Approved Use /2 CY2014	Excess to Approval CY2014
ARIZONA	609,622	2,752,597	2,799,672	-47,075
CALIFORNIA	932,456	4,121,257	4,020,262	100,995
NEVADA	29,561	284,044	300,000	-15,956
STATES TOTAL /3	1,571,639	7,157,898	7,119,934	37,964
MEXICO IN SATISFACTION OF TREATY (Including downward t TO MEXICO AS SCHEDULED	555,302	1,528,185	1,500,000	28,185
MEXICO IN EXCESS OF TREATY	5,685	28,185		
BYPASS PURSUANT TO MINUTE 242	25,777	122,261		
TOTAL LOWER BASIN & MEXICO	2,152,718	8,808,344		

1/ Incorporates Jan-Jan USGS monthly data and 77 daily reporting stations which may be revised after provisional data reports are distributed by the USGS. Use to date estimated for users reporting monthly and annually.  
2/ These values reflect adjusted apportionments. See Adjusted Apportionment calculation on each state page.  
3/ Includes unmeasured returns based on estimated consumptive use/diversion ratios by user from studies provided by Arizona Dept. of Water Resources, Colorado River Board of California, and Reclamation.



Graph notes: Jan 1 forecast use is scheduled use in accordance with the Annual Operating Plan's state entitlements, available unused entitlements, and over-run paybacks. A downward sloping line indicates use at a lower rate than scheduled, upward sloping is above schedule, and a flat line indicates a use rate equal to schedule. Lower priority users such as CAP, MWD, and Robt.B.Griffith may adjust use rates to meet state entitlements as higher priority use deviates from schedule. Abrupt changes in the forecast use line may be due to a diversion schedule change or monthly updating of provisional realtime diversions.

NOTE:

- Diversions and uses that are pending approval are noted in *red italics*.
- Water users with a consumptive use entitlement - **Excess to Estimated Use** column indicates overrun/underrun of entitlement. Dash in this column indicates water user has a diversion entitlement.
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CALIFORNIA WATER USERS  
FORECAST OF END OF YEAR CONSUMPTIVE USE  
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS

[California Schedules and Approvals](#)  
[Historic Use Records \(Water Accounting Reports\)](#)

WATER USER	Use To Date CY2014	Forecast Use CY2014	Estimated Use CY2014	Excess to Estimated Use CY2014	Diversion To Date CY2014	Forecast Diversion CY2014	Approved Diversion CY2014	Excess To Approved Diversion CY2014
CALIFORNIA PUMPERS	433	1,936	1,936	---	782	3,500	3,500	0
FORT MOJAVE INDIAN RESERVATION, CA	1,778	8,515	8,996	---	3,307	15,827	16,720	-893
CITY OF NEEDLES (includes LCWSP use)	432	1,931	1,931	0	608	2,720	2,720	0
METROPOLITAN WATER DISTRICT	238,432	620,785	546,660	---	239,182	624,519	549,763	---
COLORADO RIVER INDIAN RESERVATION, CA	769	3,444	3,444	---	1,320	5,909	5,909	0
PALO VERDE IRRIGATION DISTRICT	62,468	446,856	454,108	---	182,372	996,872	994,500	<b>2,372</b>
YUMA PROJECT RESERVATION DIVISION	12,152	49,319	47,886	---	20,986	99,886	102,700	-2,814
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	10,119	47,841	49,100	-1,259
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	10,867	52,046	53,600	-1,554
YUMA ISLAND PUMPERS	1,111	4,974	4,974	---	2,011	9,001	9,001	0
FORT YUMA INDIAN RESERVATION - RANCH 5	134	598	675	---	0	875	1,221	-346
IMPERIAL IRRIGATION DISTRICT	522,102	2,539,962	2,506,803	<b>33,159</b>	528,011	2,630,357	2,607,017	---
SALTON SEA SALINITY MANAGEMENT	21,367	90,000	90,000	0	22,321	93,585	93,451	---
COACHELLA VALLEY WATER DISTRICT	71,089	352,089	352,000	<b>89</b>	73,570	366,646	366,370	---
OTHER LCWSP CONTRACTORS	145	650	650	---	227	1,016	1,016	0
CITY OF WINTERHAVEN	15	69	69	---	23	104	104	0
CHEMEHUEVI INDIAN RESERVATION	29	128	6,101	---	2,534	11,340	11,340	0
<b>TOTAL CALIFORNIA</b>	<b>932,456</b>	<b>4,121,257</b>			<b>1,077,254</b>	<b>4,862,156</b>	<b>4,765,332</b>	
FORT YUMA INDIAN RESERVATION /1	---	---	---	---	10,893	52,216	53,821	-1,605

**CALIFORNIA ADJUSTED APPORTIONMENT CALCULATION**

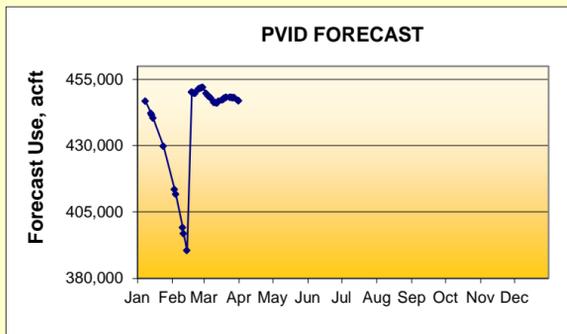
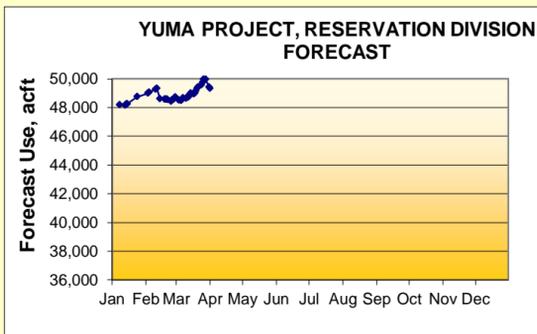
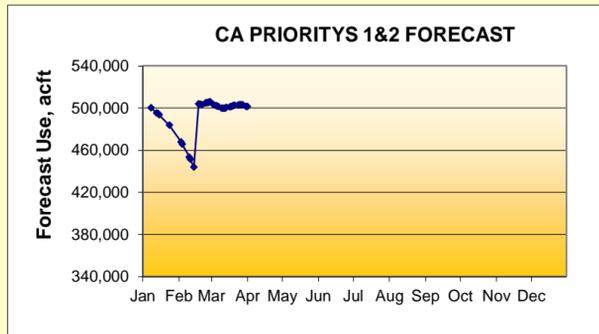
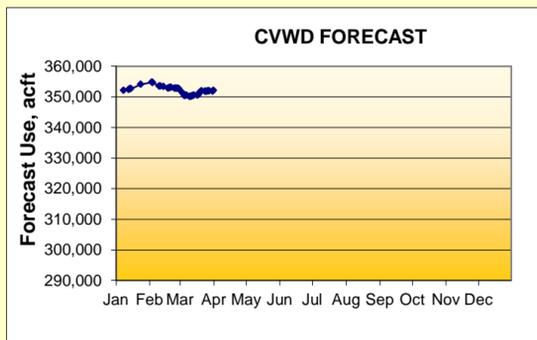
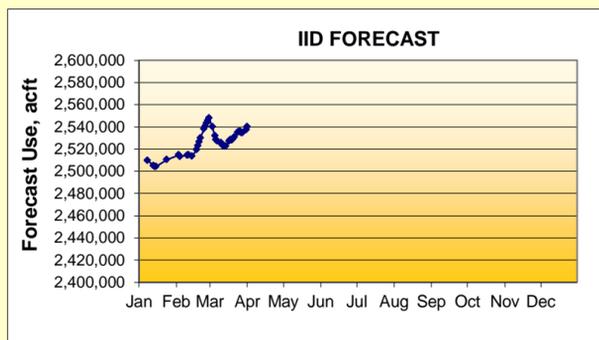
California Basic Apportionment	4,400,000
Payback of IOPP Overrun (IID)	-154,738
Intentionally Created Surplus Water (IID)	-25,000
Creation of Extraordinary Conservation ICS (MWD)	-200,000
<b>Total State Adjusted Apportionment</b>	<b>4,020,262</b>
Excess to Total State Adjusted Apportionment	100,995

**ISG ANNUAL TARGET COMPARISON CALCULATION**

Priorities 1, 2, 3b Use (PVID+YPRD+Island+PVID Mesa)	501,149
MWD Adjustment	-81,149
Total California Agricultural Use (PVID+YPRD+Island+IID+CVWD)	3,393,200
California Agricultural Paybacks	-154,738
Misc. PPRs Covered by IID and CVWD	14,500
California ICS Creation (IID ICS)	25,000
<b>Total Use for Target Comparison<sup>2</sup></b>	<b>3,196,813</b>
ISG Annual Target (Exhibit B)	3,462,000
Amount over/(under) ISG Annual Target	(265,187)

NOTES:

- Ranch 5  
Yuma Island assumed to be included in Priority 2.  
Click on California Schedules and Approvals above for incoming diversion schedules and approvals.  
1/ Fort Yuma Indian Reservation includes Yuma Project Reservation Division Indian Unit, Ranch 5, an estimate of domestic use and pumpers.  
2/ Includes MWD Adjustment, California Agricultural Use and Paybacks, IID-CVWD covered PPRs, and taking out the MWD-CVWD Exchange



U.S. BUREAU OF RECLAMATION  
LOWER COLORADO REGION  
PROVISIONAL CY2014

## NOTE:

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ARIZONA WATER USERS  
FORECAST OF END OF YEAR CONSUMPTIVE USE  
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS

[Arizona Schedules and Approvals](#)

[Historic Use Records \(Water Accounting Reports\)](#)

WATER USER	Use To Date CY2014	Forecast Use CY2014	Estimated Use CY2014	Excess to Estimated Use CY2014	Diversion To Date CY2014	Forecast Diversion CY2014	Approved Diversion CY2014	Excess to Approved Diversion CY2014
ARIZONA PUMPERS	3,986	17,842	17,842	---	6,168	27,607	27,607	0
LAKE MEAD NATIONAL RECREATION AREA, AZ	200	455	299	---	51	306	299	7
DAVIS DAM PROJECT	0	2	2	---	12	54	54	0
BULLHEAD CITY	1,152	7,946	8,522	---	2,239	12,379	12,720	-341
MOHAVE WATER CONSERVATION	110	494	494	---	165	738	738	0
BROOKE WATER LLC	47	212	212	---	71	317	317	0
MOHAVE VALLEY IDD	3,432	21,167	22,617	---	6,875	39,717	41,883	-2,166
FORT MOJAVE INDIAN RESERVATION, AZ	7,893	42,609	42,120	---	14,617	78,905	78,000	905
GOLDEN SHORES WATER CONSERVATION DISTRICT	53	239	239	---	80	357	357	0
HAVASU NATIONAL WILDLIFE REFUGE	1,307	4,206	3,563	643	8,700	42,750	41,820	930
LAKE HAVASU CITY	1,240	8,494	9,083	---	2,813	14,513	14,650	-137
CENTRAL ARIZONA PROJECT	390,989	1,508,597	---	---	390,989	1,508,597	---	---
TOWN OF PARKER	89	376	357	19	181	935	935	0
COLORADO RIVER INDIAN RESERVATION, AZ	51,422	368,907	368,907	---	118,601	667,539	662,402	5,137
EHRENBURG IMPROVEMENT ASSOCIATION	55	245	245	---	77	343	343	0
CIBOLA VALLEY IRRIGATION DISTRICT	3,787	16,951	16,951	---	5,297	23,707	23,707	0
CIBOLA NATIONAL WILDLIFE REFUGE	2,847	12,741	12,741	0	4,591	20,550	20,550	0
IMPERIAL NATIONAL WILDLIFE REFUGE	585	2,619	2,619	0	944	4,224	4,224	0
YUMA PROVING GROUND	0	442	504	---	41	483	504	-21
GILA MONSTER FARMS	1,236	5,440	5,244	---	2,071	9,323	9,156	167
WELLTON MOHAWK IDD	49,768	272,901	278,000	-5,099	78,647	417,221	424,997	---
CITY OF YUMA	2,231	14,694	16,451	-1,757	4,572	24,321	26,358	-2,037
MARINE CORPS AIR STATION YUMA	140	1,545	1,718	---	140	1,545	1,718	-173
UNION PACIFIC RAILROAD	5	27	29	---	8	44	48	-4
YUMA MESA FRUIT GROWERS ASSOCIATION	0	0	0	---	0	0	0	0
UNIVERSITY OF ARIZONA	74	494	536	---	98	518	536	-18
YUMA UNION HIGH SCHOOL DISTRICT	16	146	150	---	36	210	200	10
YUMA MESA FRUIT COMPANY	0	0	0	---	0	0	0	0
DESERT LAWN MEMORIAL	4	46	46	---	6	65	66	-1
NORTH GILA VALLEY IDD	1,666	11,129	12,383	---	9,593	51,254	51,963	-709
YUMA IRRIGATION DISTRICT	9,029	41,966	42,991	---	15,452	75,153	76,600	-1,447
YUMA MESA IDD	15,089	115,124	119,077	---	34,965	213,085	217,488	-4,403
UNIT "B" IRRIGATION DISTRICT	2,541	19,905	20,409	---	5,013	32,513	33,450	-937
FORT YUMA INDIAN RESERVATION	294	1,315	1,397	---	480	2,150	2,150	0
YUMA COUNTY WATER USERS' ASSOCIATION	57,348	246,521	241,117	---	86,596	384,596	383,000	1,596
COCOPA INDIAN RESERVATION	931	6,553	6,598	---	1,419	9,989	10,055	-66
RECLAMATION-YUMA AREA OFFICE	55	247	247	---	55	247	247	0
RETURN FROM SOUTH GILA WELLS	0	0	0	---	---	---	---	---
<b>TOTAL ARIZONA</b>	<b>609,622</b>	<b>2,752,597</b>	<b>2,791,618</b>		<b>801,663</b>	<b>3,666,256</b>	<b>3,707,049</b>	
CAP	390,989	1,508,597				1,508,597		
ALL OTHERS	218,633	1,244,000	1,253,711			2,157,659	2,169,142	
YUMA MESA DIVISION, GILA PROJECT	25,784	168,219	250,000	-81,781		339,492		

## ARIZONA ADJUSTED APPORTIONMENT CALCULATION

Arizona Basic Apportionment	2,800,000
Payback of IOPP overruns (Cocopah, Beattie Farms)	-328
System Conservation Created in Arizona (YMIDD)	
Intentionally Created Unused Apportionment for MWD	
Total State Adjusted Apportionment	2,799,672
Excess to Total State Adjusted Apportionment	-47,075

Estimated Allowable Use for CAP 1,562,578

## NOTES:

Click on Arizona Schedules and Approvals above for incoming diversion schedules and approvals.

## NOTE:

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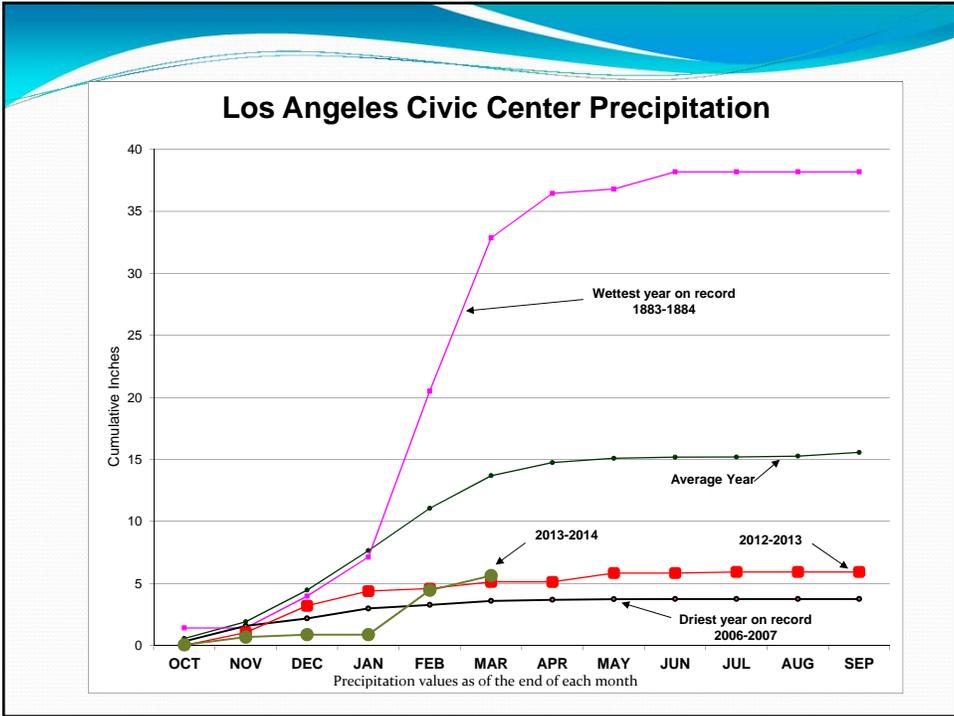
NEVADA WATER USERS  
FORECAST OF END OF YEAR CONSUMPTIVE USE  
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS  
[Nevada Schedules and Approvals](#)  
[Historic Use Records \(Water Accounting Reports\)](#)

WATER USER	Use To Date CY2014	Forecast Use CY2014	Estimated Use CY2014	Excess to Estimated Use CY2014	Diversion To Date CY2014	Forecast Diversion CY2014	Approved Diversion CY2014	Excess To Approved Diversion CY2014
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	79,960	458,342	473,360	-15,018	79,960	458,342	473,360	-15,018
LAKE MEAD NATIONAL RECREATION AREA, NV.	166	772	792	---	166	772	792	-20
BASIC MANAGEMENT INC.	2,001	8,069	8,208	---	2,001	8,069	8,208	-139
CITY OF HENDERSON (BMI DELIVERY)	2,752	16,348	15,878	---	2,752	16,348	15,878	470
CITY OF BOULDER CITY AT HOOVER DAM	0	0	0	---	0	0	0	0
NEVADA STATE DEPT. OF FISH & GAME	3	12	12	0	54	307	300	---
PACIFIC COAST BUILDING PRODUCTS INC.	235	949	928	---	235	949	928	21
BOULDER CANYON PROJECT	9	40	40	---	16	72	72	0
SOUTHERN CALIFORNIA EDISON	0	0	0	0	0	0	0	0
BIG BEND WATER DISTRICT	750	2,433	2,061	---	883	4,933	4,961	-28
BIG BEND CONSERVATION AREA	0	0	0	---	0	0	0	---
FORT MOJAVE INDIAN TRIBE	394	3,476	3,685	---	588	5,500	5,500	0
LAS VEGAS WASH RETURN FLOWS	-56,709	-206,397	-204,964	---				
<b>TOTAL NEVADA</b>	<b>29,561</b>	<b>284,044</b>	<b>300,000</b>	<b>-15,956</b>	<b>86,655</b>	<b>495,292</b>	<b>509,999</b>	<b>-14,714</b>
SOUTHERN NEVADA WATER SYSTEM (SNWS)	23,251	251,945				458,342		
ALL OTHERS	6,310	32,099				36,950		
NEVADA USES ABOVE HOOVER	28,417	278,135				484,859		
NEVADA USES BELOW HOOVER	1,144	5,909				10,433		
<b>Tributary Conservation &amp; Imported Intentionally Created Surplus</b>								
Total Requested Tributary Conservation Intentionally Created Surplus		37,000						
Total Requested Imported Conservation Intentionally Created Su		9,000						
5% System Cut for Creation of Intentionally Created Surplus		-2,300						
Total Intentionally Created Surplus Left in Lake Mead		43,700						
<b>NEVADA ADJUSTED APPORTIONMENT CALCULATION</b>								
Nevada Basic Apportionment		300,000						
Excess to Total State Adjusted Apportionment		-15,956						

## NOTES:

Click on Nevada Schedules and Approvals above for incoming diversion schedules and approvals.



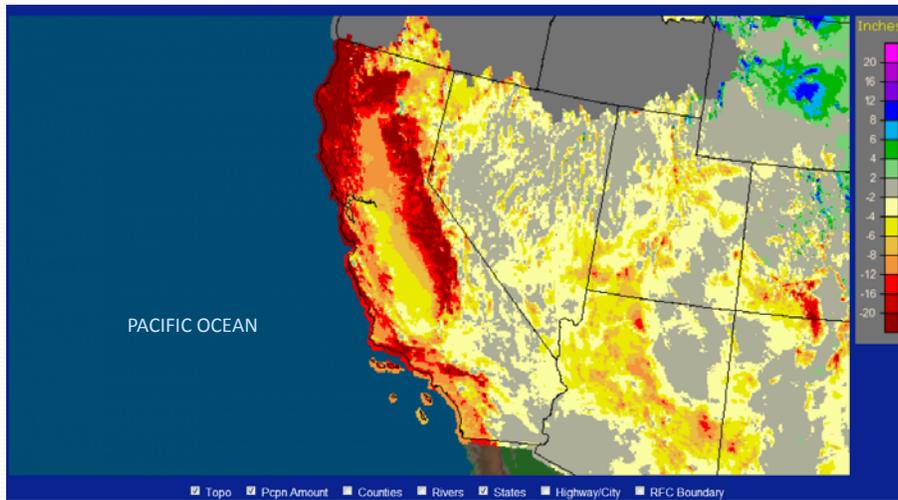


### Precipitation at Six Major Stations in Southern California

From October 1, 2013 to March 31, 2014

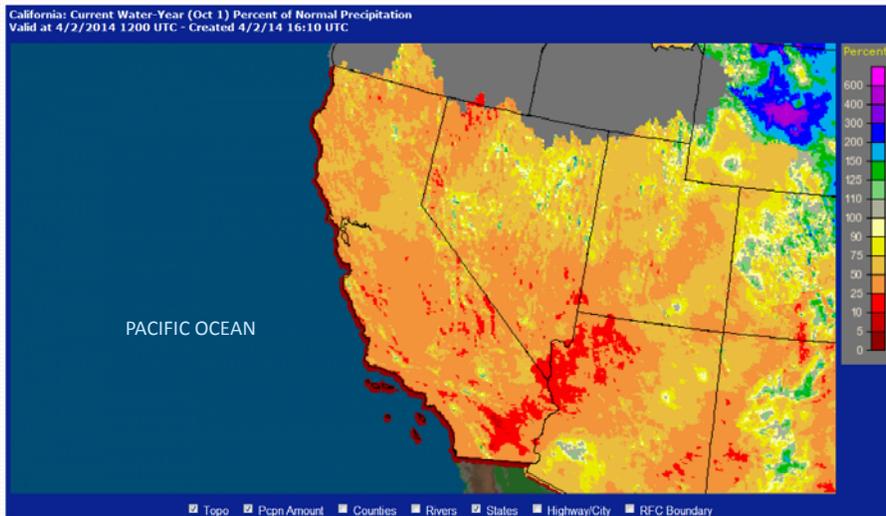
Station	Precipitation in inches		Average to Date	Percent of Average
	Mar	Oct 1 to Mar 31		
San Luis Obispo	2.42	4.70	20.07	23%
Santa Barbara	1.09	6.22	15.88	39%
Los Angeles	1.18	5.64	13.69	41%
San Diego	0.84	2.64	8.87	30%
Blythe	0.04	0.88	2.42	36%
Imperial	0.01	0.97	2.06	47%

## CA's Water Year-to-Date: Departure From Normal



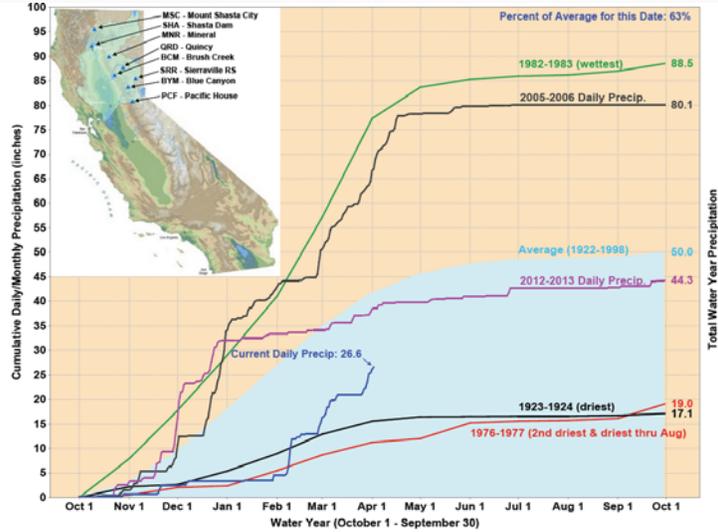
National Weather Service –Advance Hydrologic Prediction Center  
<http://water.weather.gov/precip/>

## CA Current Water Year - Percent of Normal Precipitation



National Weather Service –Advance Hydrologic Prediction Center  
<http://water.weather.gov/precip/>

## Northern Sierra Precipitation-8 Station Index



California Data Exchange Center  
[http://cdec.water.ca.gov/cgi-progs/products/PLOT\\_ESI.pdf](http://cdec.water.ca.gov/cgi-progs/products/PLOT_ESI.pdf)

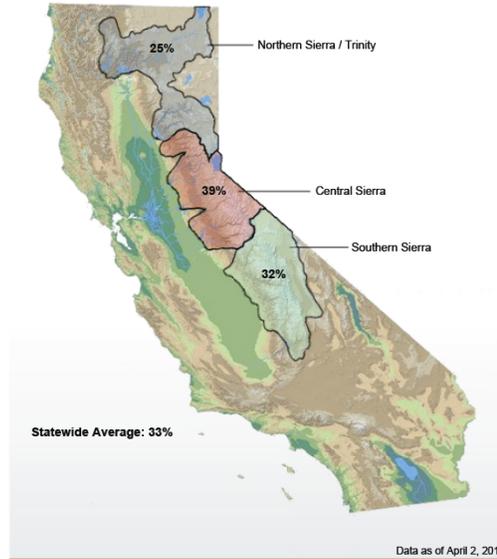
## Statewide Summary of Water-Year Data

Water Year	Precipitation (233 Stations) % of avg.	Runoff (31 Rivers) % of avg.	Res. Storage (155 Reservoirs) % of avg.	Sacto. Riv. Run-off * (MAF)
2009-10	110	90	105	15.9
2010-11	135	145	130	15.1
2011-12	75	60	95	11.8
2012-13	80	60	80	11.9
Comparison of Water Year Data as of March 1				
2012-13	80	80	100	6.8
2013-14	40	25	65	2.5

\* The Sacramento River Run-off is the sum of the unimpaired water year flow from the Sacramento River above Bend Bridge near Red Bluff, Feather River inflow to Oroville, Yuba River at Smartville, and American River inflow to Folsom. The average annual run-off is 18.4 MAF.

## Snow Water Content

Current Regional Snowpack from Automated Snow Sensors - % of April 1 Average



<http://cdec.water.ca.gov/cdecapp/snowapp/sweq.action>

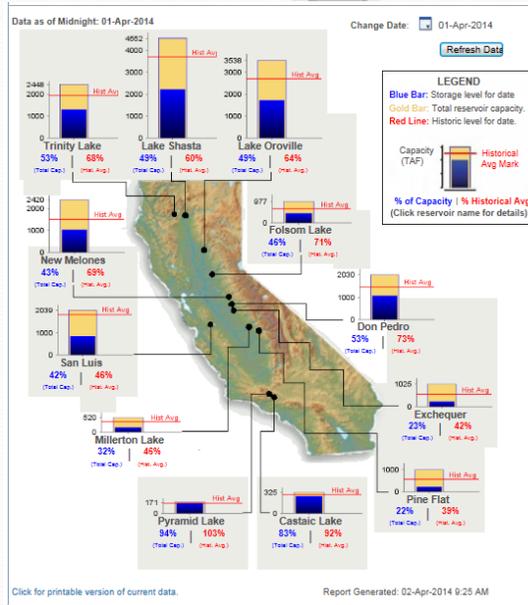
Updated 04/02/2014 11:15 AM

## Comparison of SWP Water Storage

Reservoir	Capacity	2013 Storage (acre-feet)		2014 Storage (acre-feet)	
		As of April 1	% of Cap.	As of April 1	% of Cap.
Frenchman	55,475	37,961	68%	28,094	51%
Lake Davis	84,371	68,548	81%	56,776	67%
Antelope	22,564	23,182	103%	21,206	94%
Oroville	3,553,405	2,988,939	84%	1,730,944	49%
<b>TOTAL North</b>	<b>3,715,815</b>	<b>3,118,630</b>	<b>84%</b>	<b>1,837,020</b>	<b>49%</b>
Del Valle	39,914	36,100	90%	39,302	98%
San Luis (DWR)	1,062,180	520,839	49%	387,843	37%
Pyramid	169,901	167,281	98%	168,935	99%
Castaic	319,247	283,704	89%	269,364	84%
Silverwood	74,970	71,292	95%	69,603	93%
Perris	126,841	73,129	58%	69,381	55%
<b>TOTAL South</b>	<b>1,793,053</b>	<b>1,152,345</b>	<b>64%</b>	<b>1,004,428</b>	<b>56%</b>
<b>TOTAL SWP</b>	<b>5,508,868</b>	<b>4,270,975</b>	<b>78%</b>	<b>2,841,448</b>	<b>52%</b>

State Water Project Projected Deliveries:  
As of January 31, 2014, the Table-A allocations for 2014 is 0%.

## Current Reservoir Conditions



<http://cdec.water.ca.gov/cdecapp/resapp/getResGraphsMain.action>

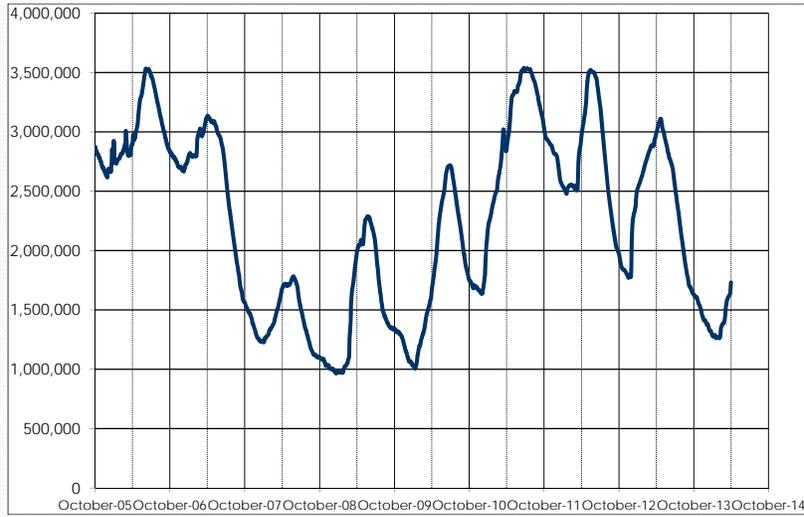
## Lake Shasta Storage Levels



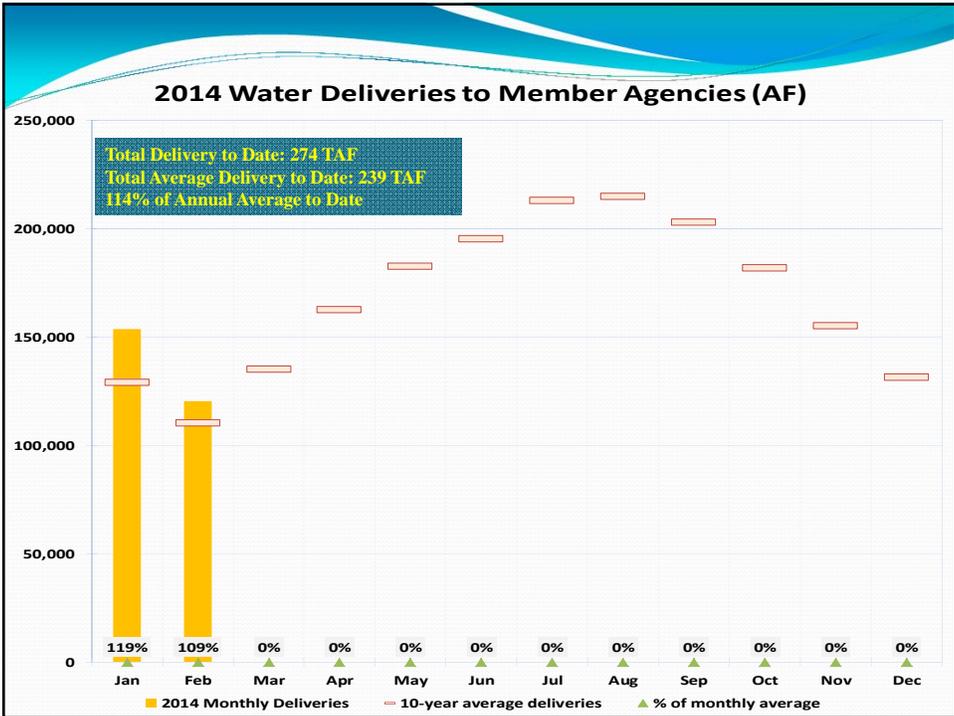
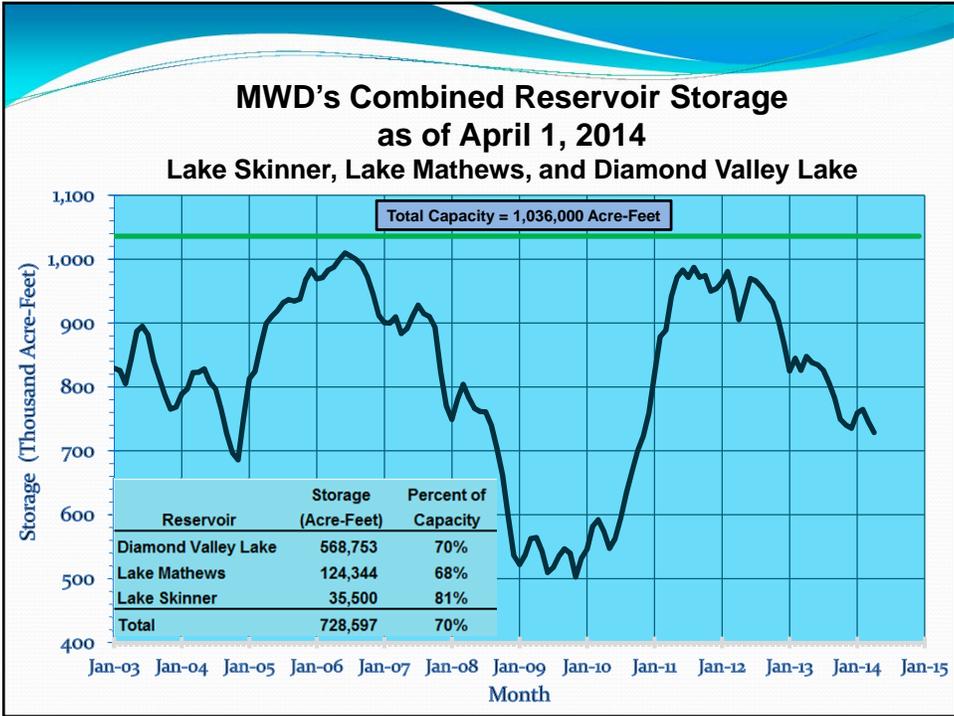
[http://cdec.water.ca.gov/reservoir\\_map.html](http://cdec.water.ca.gov/reservoir_map.html)

## Oroville Storage (acre-feet)

October 1, 2005 – April 1, 2014

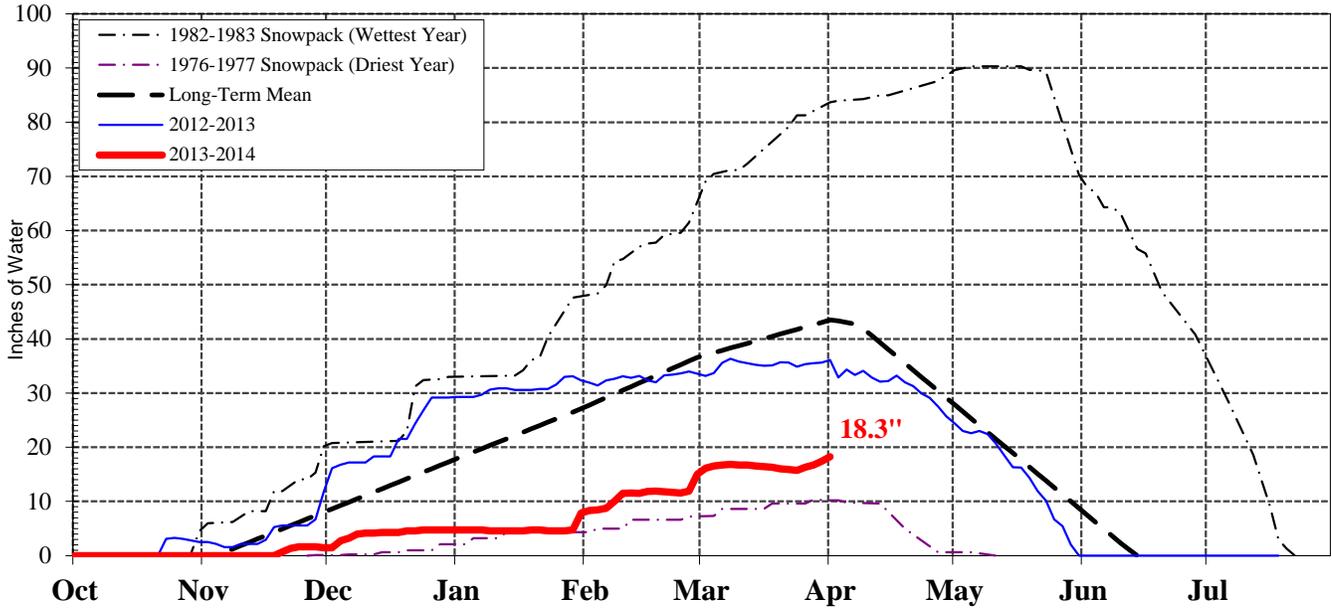




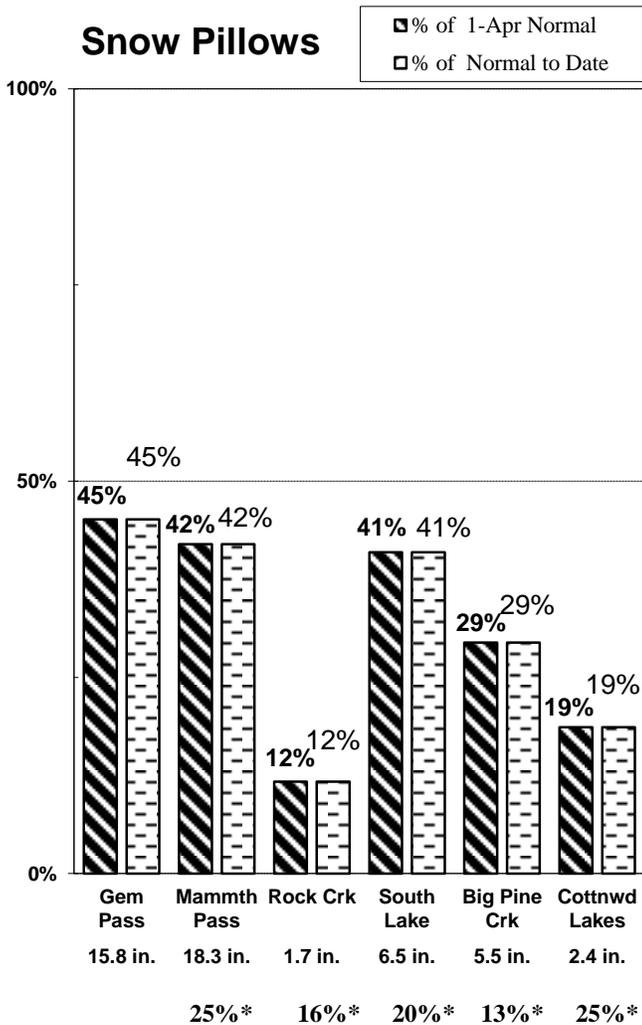


# EASTERN SIERRA CURRENT PRECIPITATION CONDITIONS April 1, 2014

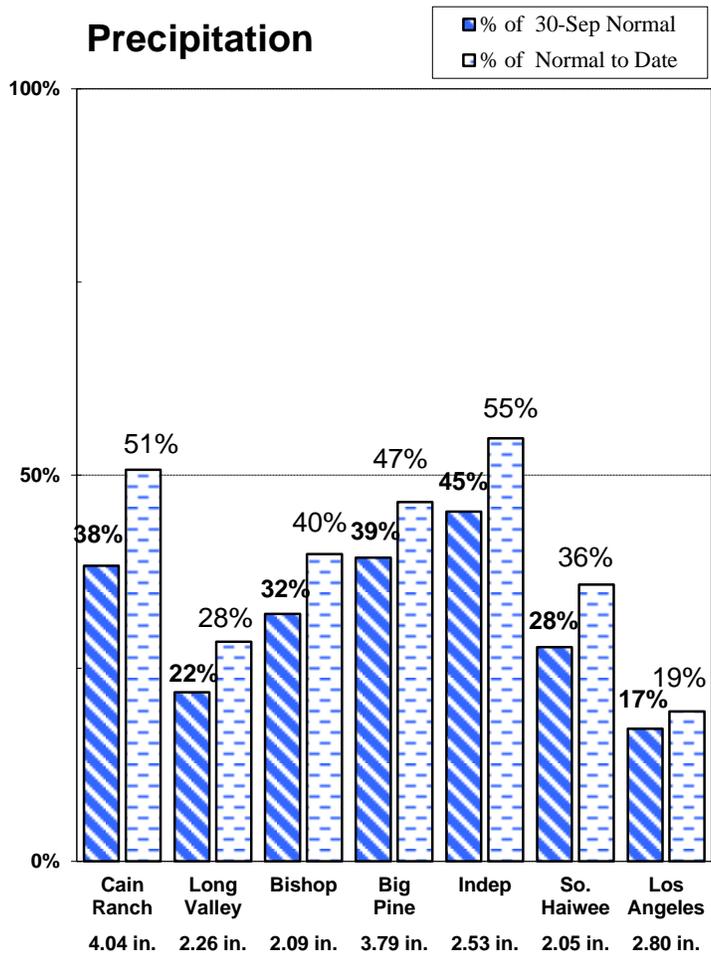
## Mammoth Pass Snowpack



## Snow Pillows



## Precipitation



\* Individual snow pillow represents an area that contributes this percent of the total Owens River Basin runoff.

Measurement as Inches Water Content; Precipitation totals are cumulative for water year beginning Oct 1





CALIFORNIA DEPARTMENT OF WATER RESOURCES

## NEWS FOR IMMEDIATE RELEASE

**April 1, 2014**

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### **Despite Storms, Snowpack Still Far Below Normal**

*Drought Retains Grip as Summer Approaches*

**SACRAMENTO** – Department of Water Resources snow surveyors today found the Sierra snowpack boosted by late-season storms, but still far below normal as the spring melt fast approaches.

Coupled with this winter's scant rainfall, the meager snowpack -- containing only 32 percent of average water content for the date -- promises a gloomy summer for California farms and many communities.

"We're already seeing farmland fallowed and cities scrambling for water supplies," said DWR Director Mark Cowin. "We can hope that conditions improve, but time is running out and conservation is the only tool we have against nature's whim."

(Visit [Drought.Ca.Gov](http://Drought.Ca.Gov) for an update on how the state is dealing with the drought.)

After a bone dry December and January, February and March storms brought some promise to the state, but have not broken the drought's three-year grip as reservoirs, rainfall totals and the snowpack remain critically low.

Today's manual and electronic readings – at the time of year the snowpack normally is at its peak before melting into streams and reservoirs – record the snowpack's statewide water content at just 32 percent of average.

Electronic readings indicate that snowpack water content in the state's northern mountains is 23 percent of normal. The electronic readings for the central and southern Sierra are 38 and 31 percent of normal, respectively.

This is dismal news for farms and cities that normally depend on the snowpack – often called California's largest reservoir – for a third of their water. And reservoirs are not making up the difference.

Lake Oroville in Butte County, the State Water Project's (SWP) principal reservoir, is at only 49 percent of its 3.5 million acre-foot capacity (64 percent of its historical average for the date). Shasta Lake north of Redding, California's and the federal Central Valley Project's (CVP) largest reservoir, is at 48 percent of its 4.5 million acre-foot capacity (60 percent of its historical average). San Luis Reservoir, a critical south-of-Delta reservoir for both the SWP and CVP, is a mere 42 percent of its 2 million acre-foot capacity (46 percent of average for this time of year)

due both to dry weather and Delta pumping restrictions to protect salmon and Delta smelt.

Snow surveyors from DWR and cooperating agencies manually measure snowpack water content on or about the first of the month from January through May to supplement and check the accuracy of real-time electronic readings. This year's final manual survey is scheduled for May 1.

Results of today's manual readings by DWR off Highway 50 near Echo Summit are as follows:

Location	Elevation	Snow Depth	Water Content	% of Long Term Average
Alpha	7,600 feet	inches	inches	Missing
Phillips Station	6,800 feet	33.7 inches	8.1 inches	29
Lyons Creek	6,700 feet	inches	inches	Missing
Tamarack Flat	6,500 feet	inches	inches	Missing

On January 31, with no relief in sight after the winter's first snow survey on January 3 found more bare ground than snow, DWR set its allocation of State Water Project water at zero. The allocation has not been increased.

The only previous zero allocation (water delivery estimate) was for agriculture in the drought year of 1991, but cities that year received 30 percent of requested amounts.

Despite the "zero" allocation, DWR has continued to deliver water essential for health and safety and nearly all people and areas served by the State Water Project also have other sources of water.

Deliveries could still be boosted by improving hydrology.

The final State Water Project allocation for calendar year 2013 was 35 percent of the slightly more than 4 million acre-feet requested by the 29 public agencies that collectively supply more than 25 million people and nearly a million acres of irrigated farmland. In 2012, the final allocation was 65 percent of the requested 4 million acre-feet. It was 80 percent in 2011, up dramatically from an initial allocation of 25 percent. The final allocation was 50 percent in 2010, 40 percent in 2009, 35 percent in 2008, and 60 percent in 2007. The last 100 percent allocation – difficult to achieve even in wet years because of Delta pumping restrictions to protect threatened and endangered fish – was in 2006.

Although 2013 was the driest calendar year on record for much of California, last-minute November and December storms in 2012 – the first year of the current drought – replenished major reservoirs to somewhat mitigate dry conditions. That comfortable reservoir cushion is now gone.

This year is on track to perhaps be California's fifth or sixth driest year, with its final ranking to be determined.



**NOTE:** For video footage of today's snow survey call or email DWR videographer Albert Madrid at (916) 717-9833, [Albert.Madrid@water.ca.gov](mailto:Albert.Madrid@water.ca.gov).

**Electronic snowpack readings are available on the Internet at:**

<http://cdec.water.ca.gov/cdecapp/snowapp/sweq.action>

**Electronic reservoir readings may be found at:**

<http://cdec.water.ca.gov/cdecapp/resapp/getResGraphsMain.action>

For a broader snapshot of current and historical weather conditions, see DWR's "Water Conditions" and "Drought" pages:

**Water Conditions Page**

<http://www.water.ca.gov/waterconditions/>

**Drought Page**

<http://www.water.ca.gov/waterconditions/drought/>

For simple, every day water conservation tips, click on "Save Our Water" here:





**Cal OES**  
GOVERNOR'S OFFICE  
OF EMERGENCY SERVICES



## Weekly Drought Brief Monday March 31, 2014

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### CURRENT CONDITIONS

**Recent Precipitation:** Significant rain and snow fell over the past week in California thanks to late season storms. Precipitation totals (in inches) from Monday, March 24 through Sunday night, March 30:

- **Folsom:** 1.89" in the last week. 14.06" since July 1, 70% of normal by this date.
- **Fresno:** 0.42" in the last week. 3.82" since July 1, 39% of normal by this date.
- **Hetch Hetchy:** 1.75" in the last week. 16.26" since July 1, 52% of normal by this date.
- **Los Angeles:** 0.01" in the last week. 5.47" since July 1, 42% of normal by this date.
- **Modesto:** 0.98" in the last week. 5.99" since July 1, 53% of normal by this date.
- **Oroville:** 2.40" in the last week. 18.28" since July 1, 65% of normal this date.
- **Pollock Pines:** 3.68" in the last week. 22.96" since July 1, 50% of normal by this date.
- **Redding:** 3.00" in the last week. 20.32" since July 1, 69% of normal by this date.
- **Sacramento:** 0.96" in the last week. 8.11" since July 1, 43% of normal by this date.
- **Shasta:** 5.36" in the last week. 31.96" since July 1, 57% of normal by this date.
- **Willits:** 5.84" in the last week. 31.74" since July 1, 71% of normal by this date.

**Near-term Outlook for Precipitation:** Another storm will move across Northern California tonight (Monday) and tomorrow (Tuesday), with low-pressure conditions creating additional storms through Wednesday. Storms will move east beyond California between Wednesday and Friday as a high pressure, dry system builds over the region.

\*\*As our state's rainy season nears its end, much of California has received only about half of normal precipitation for this rainy season. Heavy rain and snow would have to fall throughout California most days in April to reach average annual rain and snowfall levels, which is highly unlikely. Even with such precipitation, California would remain in drought conditions, due to low water supplies in reservoirs from the two previous dry years.\*\*

**Snow survey:** The most recent [snowpack survey](#), conducted on February 27, recorded California snowpack at 24% of normal. A more [recent update](#) using automated devices shows snowpack at 29% of normal as of March 30. The next manual snowpack survey will be conducted tomorrow (Tuesday) on April 1.

**Reservoir Levels (% capacity):** [Reservoir Levels](#) as of March 30 are still low, including: Don Pedro 53%; Exchequer 23%; Folsom Lake 44%; Lake Oroville 48%; Millerton Lake 32%; New Melones 43%; Pine Flat 23%; San Luis 42%; Shasta 48%; and Trinity Lake 53%. An update of water levels at [other smaller reservoirs](#) is also available.

**Vulnerable Water Systems:** The California Department of Public Health is providing technical and funding assistance to help several communities facing near-term drinking water shortages and is monitoring water systems across the state to determine where else it can provide support. Updated information can be found at the [CDPH Drinking Water Program](#) website.

**Fire Danger:** 874 fires have been reported across the state since January 1, burning 2,353 acres. This year's fire activity is well above the year-to-date average of 307 fires, burning 1,043 acres. 54 new fires were reported over the past week, most of which were kept small thanks to additional firefighters, fire engines and firefighting aircraft added during this dry winter.

## **KEY ACTION ITEMS FROM LAST WEEK**

### **State Government**

- **State and Federal agencies work together to utilize recent precipitation:** As California's rainy season nears its end, recent rain and snow provide precious additional water for beneficial use. The Department of Water Resources and Bureau of Reclamation are working closely with the state and federal fish and wildlife agencies to consider actions that balance use of additional water for human, environmental and agricultural purposes. These agencies are conferring with stakeholders and may take action early this week to make use of this additional precipitation. These actions will be detailed on the [Water Management Actions](#) subpage of the state's drought information clearinghouse, [www.drought.ca.gov](http://www.drought.ca.gov).

The Department of Water Resources and the Bureau of Reclamation are also expected to outline their longer-term water operations for the coming dry months to the State Water Board in the coming days, as they seek approvals from the Water Board that help to enable the state and federal water projects' short and longer-term water operations.

- **Water Board approves expedited water transfers in major area of the state:** Water transfers between water users in the state and federal water projects became easier last week when the State Water Board approved a "consolidated places of use" petition from the Bureau of Reclamation and the Department of Water Resources. The decision allows water transfers to happen quickly between water users who utilize the state and federal projects. The petition was filed in late February and underwent a month-long mandatory public notice period before it could be approved.
- **State and Federal Fish and Wildlife Agencies take action to preserve fish:** The Department of Fish and Wildlife and the U.S. Fish and Wildlife Service [began an operation to move fish by truck](#) last week from the Coleman National Fish Hatchery in Redding to the Rio Vista area of the Delta. This operation aims to save nearly 30 million hatchlings and will take two to three weeks to complete. It is one of several such actions to preserve endangered fish species during the drought.
- **State's Drought Taskforce leaders travel to Santa Cruz:** This Friday, April 4, leaders of the Governor's Drought Task Force will conduct their third regional meeting with local officials in Santa Cruz. This meeting will include officials from Monterey, San Benito and Santa Cruz counties and provide the Taskforce real-time information on drought challenges that local communities face.
- **State holds meeting with community groups on drought impacts:** [California Volunteers](#)—state government's volunteer and philanthropic outreach arm—and the California Endowment held an information gathering session last week in Salinas to better understand how foundation or corporate support for drought response can be directed. The next meeting of this effort will be held in Fresno in April.
- **Public meetings on grants for agricultural water efficiency:** The California Department of Food and Agriculture [announced that it will hold two public meetings](#) on April 11 and April 18 to help develop its \$10 million grant program for farm-based water efficiency projects. This program is funded by cap and trade proceeds and expedited under the State's recent emergency drought legislation.

- **Cost Data:** Cal OES continues to gather drought-related costs from state agencies and local governments, which is reported weekly to the Drought Taskforce.
- **Governor's Drought Task Force:** The Taskforce continues to meet daily to take actions that conserve water and coordinate state response to the drought.

### Local Government

- **Local Emergency Proclamations:** A total of 37 local Emergency Proclamations have been received to date from city, county, tribal governments, and special districts:
  - **Counties:** Glenn, Inyo, Kern, Kings, Lake, Madera, Mendocino, Merced, Modoc, Santa Barbara, San Luis Obispo, San Joaquin, Siskiyou, Sonoma, Sutter, Tulare, Tuolumne, Yuba
  - **Cities:** Brooktrails Township-Mendocino County, City of Willits-Mendocino County, City of St. Helena-Napa County, City of Calistoga-Napa County, City of American Canyon-Napa County, City of Santa Barbara-Santa Barbara County
  - **Tribes:** Hoopa Valley Tribe in Humboldt County, Yurok Tribe in Del Norte County, Tule River Indian Tribe in Tulare County, Karuk Tribe in Siskiyou/Humboldt Counties, Sherwood Valley Pomo Indian Tribe
  - **Special Districts:** Lake Don Pedro Community Services District, Placer County Water Agency (PCWA), Twain Harte Community Services District, Carpinteria Valley Water District, Sonoma County Water Agency, Meiners Oaks Water District, Mariposa Public Utility District, and Goleta Water District.
- **Water Agency Conservation Efforts:** The Association of California Water Agencies [has identified](#) several hundred local water agencies that have implemented water conservation actions. These water agencies [are responding to the drought](#) by implementing conservation programs, which include voluntary calls for reduced water usage and mandatory restrictions where water shortages are worst.
- **County Drought Taskforces:** A total of 24 counties have established drought task forces to coordinate local drought response. These counties include: Butte, Kern, Madera, Mendocino, Merced, Modoc, Monterey, Nevada, Orange, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Siskiyou, Solano, Stanislaus, Sutter, Tehama, Tulare, and Tuolumne.

### **DROUGHT RELATED WEBSITES FOR MORE INFORMATION**

**[Drought.CA.Gov](#): California's Drought Information Clearinghouse**

Governor's [Proclamation of Drought Emergency](#)  
 State's Water Conservation Campaign, [Save our Water](#)  
 Local Government [Clearinghouse and Toolkit](#)  
 California Department of Food and Agriculture, [Drought information](#)  
 California Department of Water Resources [Current Water Conditions](#)  
 California Data Exchange Center, [Snow Pack/Water Levels](#)  
 California State Water Resources Control Board, Water Rights, [Drought Info and Actions](#)  
 California Natural Resources Agency, [Drought Info and Actions](#)  
 California Department of Public Health, Drinking Water [CDPH Drinking Water Program](#)  
 California State Water Project, [Information](#)  
 USDA Drought Designations by County [CA County Designations](#)  
 USDA Disaster and Drought Assistance Information [USDA Programs](#)  
 Small Business Administration Disaster Support: [www.sba.gov/disaster](http://www.sba.gov/disaster)





www.doi.gov

# News Release

## United States and Mexico Celebrate Partnership for Historic Release of Colorado River Water to Delta, Benefitting Both Nations

**03/27/2014**

Contact us

**BAJA CALIFORNIA, MEXICO AND YUMA, AZ** – Deputy Secretary of the Interior Michael L. Connor and Assistant Secretary of the Interior for Water and Science Anne Castle today joined other senior officials of the United States and Mexico to celebrate a historic first-time intentional release of water—called a “pulse flow”—from Morelos Dam near the U.S.-Mexico border. The water release—which began on March 23, reaches its peak today and will continue until mid-May— is part of a broad package of joint cooperative treaty actions to ensure the Colorado River system is able to continue to meet the needs of both nations.

“The spirit of cooperation and commitment to protect and preserve the Colorado River is exemplary, and these partnerships will inspire future generations to take on and solve complex challenges involving finite resources,” said Deputy Secretary Connor, emphasizing the importance of this experimental flow. “This is the first time in history that water has flowed below Morelos Dam to aid in the long-term restoration of the river, and I want to thank the Mexican and U.S. Sections of the International Boundary and Water Commission, Interior’s Bureau of Reclamation, the Colorado River basin states, and all the U.S. and Mexican organizations involved in making today’s event happen. ”

The United States and Mexico agreed to the water release as a result of joint efforts and investments in water conservation projects in accordance with “Minute 319,” a 2012 bi-national agreement adopted under the 1944 U.S.-Mexico Treaty framework for sharing the Colorado River water. All Lower Colorado River Basin users in the United States. and Mexico will continue to receive their full allocations of Colorado River water in 2014.

The pulse flow, which began on Sunday with the lifting of one gate at Morelos Dam, will run for eight weeks. More control gates will open as the dam releases water at varying amounts and speeds toward the delta, its estuary and the Sea of Cortez. A volume of 105,392 acre-feet of water will flow down the river’s channel to help regenerate native cottonwood and willow habitat. The experimental flow also is providing the scientific community the opportunity to gather valuable data from collaborative monitoring activities; these data will inform both countries in developing future management actions regarding water flows in the delta. Scientists from Interior’s U.S. Geological Survey are playing a key role measuring the hydrologic and ecosystem response to the pulse flow.

Representatives of federal, state and conservation organizations from the United States and Mexico have worked cooperatively since Minute 319 was signed in 2012 to establish a delivery plan for the timing and amounts of water releases from Hoover Dam for the pulse flow.

“The pulse flow now underway is the first major step in a series of anticipated actions and cooperative measures outlined between our two countries,” said Assistant Secretary Castle. “Today’s event celebrates our shared vision to work together as partners to address the resources of the Colorado River and its parched Delta.”

Connor and Castle celebrated with other dignitaries including: Director General for North America from the Mexican Ministry of Foreign Affairs Ana Luisa Fajer; Director General of Mexico’s National Commission for Water, David Korenfeld; U.S. Commissioner Edward Drusina and Mexico Commissioner Roberto F. Salmon from the International Boundary and Water Commission; Baja California Governor Francisco Vega; as well as

representatives from seven U.S. and two Mexican states that use Colorado River water to sustain their agriculture, economies, communities and environment.

“A lot of hard work by various teams from Mexico, the United States, state governments, water districts, and private organizations has gone into making this pilot project a reality, and those partnerships are as historic as this pulse flow,” added Castle. “The results of the eight-week run of pulse flow will yield ground-breaking new science for both countries and help improve our understanding of the river, its delta, and potential restoration opportunities.”

Minute 319 is a five-year agreement approved by both governments for a series of cooperative actions. Key elements include:

- Joint investment in water conservation and infrastructure projects that will generate water for the Colorado River Delta and a pilot water exchange program;
- Establishing proactive basin operations by applying water delivery reductions or increases to Mexico depending upon Lake Mead reservoir conditions;
- Extending humanitarian measures from a 2010 agreement, Minute 318, allowing Mexico to defer delivery of a portion of its Colorado River allotment while it continues to make repairs to earthquake-damaged infrastructure; and
- Establishing a program of Intentionally Created Mexican Allocation whereby Mexico could temporarily reduce its order of Colorado River water, allowing that water to be delivered to Mexico in the future.

The Bureau of Reclamation’s Lower Colorado Region will implement many of the projects and programs outlined in the Minute 319 agreement. The Lower Colorado Region serves as the "water master" for the for the most downstream 688 miles of the Colorado River within the United States on behalf of the Secretary of the Interior.

###

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Commission Approves \$61 Million  
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North American Wetlands

**Next >>**

Statement by Secretary Jewell on  
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Reduce Methane Emissions

Remarks of Bart Fisher, Chairman of the Colorado River Board of California  
Minute 319 Environmental Pulse Flow Ceremony  
Morelos Dam, Algodones, Mexico  
March 27, 2014

Thank you for your kind introduction, Sally, and many thanks to all the distinguished speakers and dignitaries who have gathered on this podium. And thanks to all of you invited guests in attendance to witness this historic day for the Colorado River.

I am honored to speak here today on behalf of the Colorado River Basin States- Wyoming, Colorado, Utah, New Mexico, Nevada, Arizona, and California- and the water and power interests within the United States that are connected to the river.

We are here to celebrate with our neighbors and partners in Mexico on the successful initiation of the environmental pulse flow. The pulse flow is an important component of Minute 319 and many of us here worked long and hard to put all of the pieces together that helped to make this day happen.

I am a farmer from Blythe, California, about 90 miles up the river. My family has been farming in the Palo Verde Valley for 4 generations, and for almost 100 years. Like many others here today, we rely on the river for our livelihood and we understand the importance of the river to our continued way of life.

Significant progress along the Colorado River has almost always been accomplished through collaboration that itself has created important partnerships. The partnerships that have brought us here today will help ensure our continued connection to the river for generations to come. The Basin States have an essential partnership with each other and we have worked together for over 90 years to craft agreements to help us better manage the resources of the river. Since an important Accord in 2007, the Basin States have together recognized benefits that can accrue to managing the river as one basin, rather than considering the boundaries that have traditionally separated us in the United States. So, it is a natural extension of that thinking to seek similar benefits to the resources of the River, here at the southern end of the basin we all share together, in Mexico.

We also rely on the essential partnership we have with the Department of the Interior and the Bureau of Reclamation and we appreciate the acknowledgment that we are allied in seeking solutions for the difficult challenges as well as the important opportunities that lie ahead.

This pulse flow also exemplifies the important and evolving partnership we have developed with the environmental community. State and federal teams worked closely with scientists and environmental advocates to develop a plan for the flow of the river

that we see here today. Within the U.S., we have successfully implemented restoration projects within the Colorado River Basin and we look forward to the continued success of our existing programs.

But today, it is most important to acknowledge and to celebrate the important partnership we have developed with our neighbors and friends in Mexico. We share many similarities along this common border, and Minute 319, along with preceding Minutes, has given us an opportunity to find flexibilities that benefit both sides of the border, while protecting the importance of our respective laws and our treaties. Over several years, we have come to know each other and to trust each other, and the States are hopeful and committed to seeking long-term agreements, yet to be developed, that build off the success we have had through Minute 319.

By working together we can develop mutually beneficial agreements that we can all be proud of. The Colorado River is a shared resource. The Basin States hope that we will work together, and with our neighbors here in Mexico, to protect it for all of the reasons we rely on it, for many more generations to come.



## **International Boundary and Water Commission United States and Mexico**

For immediate release  
March 27, 2014

### **COMMISSION MARKS HISTORIC ENVIRONMENTAL FLOW IN THE COLORADO RIVER**

The International Boundary and Water Commission, United States and Mexico, on March 27, 2014 marked the successful implementation of an international agreement to provide environmental water for the Colorado River Delta. This water, known as the pulse flow, is a component of Minute 319, a Commission agreement signed in November 2012 to help ensure that the Colorado River system is able to continue to meet the needs of both nations. The pulse flow marks the first time the two countries have delivered water to the Colorado River Delta to promote ecosystem restoration.

Delivery of the pulse flow began March 23 and will continue through May 18. United States Commissioner Edward Drusina and Mexican Commissioner Roberto Salmon joined with Deputy U.S. Secretary of the Interior Michael Connor, Assistant U.S. Secretary of the Interior for Water and Science Anne Castle, Director General for North America Ana Luisa Fajer of Mexico's Ministry of Foreign Relations, Director General David Korenfeld of Mexico's National Water Commission (Conagua), Baja California Governor Francisco Vega, and other officials from the United States and Mexico to celebrate the pulse flow during an event at Morelos Dam, in Los Algodones, Baja California. A portion of the water arriving at the dam is being released downstream into the Colorado River channel to benefit the environment.

"This historic water release is a significant achievement to benefit the Colorado River ecosystem. It is the culmination of years of hard work by U.S. and Mexican engineers, scientists, diplomats, and water managers," said Commissioner Drusina.

Mexican Commissioner Roberto Salmon highlighted the importance of this undertaking and emphasized the efforts of both countries to seek to preserve the environment in a framework of cooperation while also addressing the needs of other users both in Mexico and the United States.

The pulse flow is just one aspect of Minute 319, which is a broad package of cooperative measures for Colorado River water management by the United States and Mexico that protects both countries' interests in this essential natural resource. This package includes joint efforts and investment in conservation projects that allow for the generation of water for the environment while protecting the interests of water users. Mexico and other Lower Basin users will receive their full allotments of Colorado River water in 2014.

The International Boundary and Water Commission, United States and Mexico, is responsible for applying the boundary and water treaties between the two countries. In accordance with the 1944 Water Treaty, Mexico receives an annual allotment of 1.5 million acre-feet (1850 million cubic meters) of Colorado River water.

For more information: [Sally Spener](#) | 915-832-4175