COLORADO RIVER BOARD OF CALIFORNIA
770 FAIRMONT AVENUE, SUITE 100
GLENDALE, CA 91203-1068
(818) 500-1625
(818) 543-4685 FAX

January 31, 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 special meeting of the Board Members is to be held as follows:

Date:	Wednesday, February 12, 2104
Time:	1:30 p.m.
Place:	City of Blythe, City Hall Council Chambers 235 N. Broadway Blythe, CA 92225 760-922-6161

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.

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
February 12, 2014, Wednesday
1:30 p.m.

Blythe City Hall
City Council Chambers
235 N. Broadway
Blythe, CA 92225

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)

3. Administration
   a. Minutes of the Meeting held December 11, 2013, Consideration and Approval **(Action)**

4. Colorado River Water Reports
   a. Reports on current reservoir storage, reservoir releases, projected water use, and forecasted river flows
   b. State and Local Water Reports

5. Report from Jeanine Jones, California Department of Water Resources, regarding the 2014 Emergency Drought Declaration

6. Report from Chris Hayes, California Department of Fish and Wildlife

7. Staff Reports Regarding 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 meetings
   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

8. Review proposed changes to the Lower Colorado Water Supply Plan background description and Colorado River Board application procedures

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: March 12, 2014
Time and location details to be provided
The Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012-2944
213-217-6000

Minutes of Special Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, December 11, 2013

A Special Meeting of the Colorado River Board of California (Board) was held in the Pompeian I Room, of the Caesars Palace, 3570 Las Vegas Blvd., South, Las Vegas, Nevada, Wednesday, December 11, 2013.

Board Members and Alternates Present

Dana Bart Fisher, Jr., Chairman
Stephen Benson
Michael Hogan
Glen D. Peterson
John Powell, Jr.

Jeanine Jones, Designee
Department of Water Resources
Christopher G. Hayes, Designee
Department of Fish & Wildlife

Board Members and Alternates Absent

Franz De Klotz
John V. Foley
Terese M. Ghio
James Hanks
Henry Kuiper

James B. McDaniel
David Pettijohn
Bud Pocklington
David Vigil, Designee
Department of Fish & Wildlife

Others Present

Don Barnett
Tim Blair
John Penn Carter
Marion Champion
Robert Cheng
Harvey De LaTorre
Matt Dessert
Ismael Gomez
Jennifer Goodsell
Christopher S. Harris
Tom Havens
Andy Horne
Michael Hughes
Robert Hunter
Lori Jones
Jeffrey Kightlinger
Russell LeFevre
Jan Matusak
Jennifer McCloskey
Pedro Nava
Gusmar Nunez
Fernando Paludi

Roger Patterson
Jennifer Pierre
Autumn Plourd
Larry Purcell
Angela Rashid
Randy Record
Alex Rodriguez
Jack Safely
Norma Sierra Salindo
Jack Seiler
Tina Shields
Ed W. Smith
Joanna Smith
Maureen Stapleton
Rob Thomson
Tanya Trujillo
Deven Upadhyay
Joe Vanderhorst
Meena Westford
Michael Yu
Gerald R. Zimmerman

CALL TO ORDER

Chairman Fisher announced the presence of a quorum and called the meeting to order at 3:13 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

ADMINISTRATION

Approval of Minutes

Chairman Fisher asked if there was a motion to approve the November 13 minutes. Ms. Jones moved the minutes be approved. Seconded by Mr. Powell and unanimously carried, the November 13 meeting minutes were approved.

2014 Board Meeting Schedule

Chairman Fisher requested approval of the Board meeting schedule for Calendar Year 2014. Mr. Benson moved the Board meeting schedule for Calendar Year 2014 be approved. Mr. Powell seconded the motion. Unanimously carried, the Board approved the Board meeting schedule for Calendar Year 2014.

COLORADO RIVER OPERATIONS

Colorado River Water Report

Ms. Trujillo reported that Lake Powell is 44 percent of capacity and Lake Mead is 47 percent of capacity, so we're now officially below average. The total system storage is at 50 percent capacity, compared to 56 percent last year. The overall basin hydrology of the unregulated inflow into Lake Powell was 47 percent of average. For Water Year 2014 we are at 101 percent of average for precipitation and the snowpack levels are at 115 percent of average. The Colorado River Basin Forecast Center's snow conditions map indicates we are a little above 100 percent in the Upper Basin. The Bureau of Reclamation's "tea-cup" diagrams show the reservoir level at Lake Powell is at 44 percent of average in the Upper Basin but a couple of the other major reservoirs are doing a little better than that. The October 2013 precipitation map shows the rainfall and snow that was received in the Upper Basin but dry in the Lower Basin in contrast with the November 2013 report where we had the opposite conditions and the Upper Basin was

below average and the Lower Basin was above average in terms of precipitation. Ms. Trujillo reported that there has been some improvement within the Colorado River Basin in terms of the drought monitor map, but that the Central Valley and other parts of California are still in extreme drought, which will mean there will be significant challenges in that region in the coming year. The final graph reviewed at the meeting showed the variation in water levels at Lake Mead and Lake Powell and the confirmation that we are in the normal condition for the 2007 Guidelines.

State and Local Water Reports

Ms. Jeanine Jones, of the California Department of Water Resources, reported that we have had two consecutive dry years in California and that requests have been made to the Governor and the President to declare a drought emergency. The forecast that we have included in the Board folder is an experimental forecast that was commissioned from the research community and is calling for generally dry conditions. Looking at the past two years and the projected median hydrology for median conditions from December 1, 2013, going forward, the Sacramento River Four Index would be the 12th driest on record. The San Joaquin River Index/Four River Index would be the 8th driest on record in terms of runoff. It's important to remember that we are still quite early in the water year as December, January, and February are the big water producing months, but if you look at the weather forecast for the next ten days, December 2013 is not going to provide much precipitation. DWR will be looking closely at the hydrology in January and February.

Presentation by Mr. Terry Fulp, Regional Director of the Lower Colorado U.S. Bureau of Reclamation

Mr. Fulp reiterated his appreciation for the close working relationship that has developed between the Bureau of Reclamation and the agencies and staff within California. He reported that the ongoing drought is the worst on record but there is variability in the system. We utilized the August 24 Month Study and projected the January 1, 2014 elevations, which resulted in a reduced release out of Lake Powell. But, the elevation was brought back up due to recent monsoonal moisture. Mr. Fulp commended all the work the states are doing and particularly in the Lower Basin on the drought management and contingency planning programs. Mr. Fulp mentioned the importance of the Quantification Settlement Agreement (QSA) and the Colorado River Water Delivery Agreement and commended California for staying at 4.4 million acre feet, which is a testimony to the making of the agreement and living by it. The USBR continues to implement the overrun and payback program in a collaborative way. He stated that the program works because of continued communication and collaboration. Mr. Fulp also reported that the implementation of Minute 319 is continuing very well through the bi-national relationships and related work groups and he commended all the agencies for putting people in those work groups. Additionally, Mr. Fulp reported that Metropolitan Water District (MWD) and Imperial Irrigation District's (IID) recent

agreement to participate jointly in the pilot program is a very positive step forward for the Basin.

Presentation by Mr. Don Barnett, Executive Director of the Colorado River Salinity Control Forum

Mr. Barnett covered key topics such as the drought, triennial review efforts, program funding, the Paradox Valley Unit, and the Pah Tempe Springs. Concerning the drought, Mr. Barnett reported that currently the Salinity Control Forum (Forum) is not in a great position to model the drought's impact on salinity. The big issue is that the salt discharge from the agriculture producers is hard wired in the CRSS model. The Forum cannot determine the effect of lower irrigation uses in the Upper Basin and how that will change the salinity discharge, which was recognized in the Basin Study process. The USBR modelers would like to work on this issue in the next several years and then they will be in a better position to take a better look at salinity as far as changes and variability in climate in the future. In the short term, the salt's already in the river. Mr. Barnett reported that in the next 12 months, the salinity is going to go up about 40 milligrams per liter. In two years it may be at one-hundred milligrams per liter, depending on the hydrology. Since 2011, the salinity has increased in Lake Powell and the salt is working its way down river.

Regarding the triennial review efforts, Mr. Barnett reported that the Clean Water Act in 1972 mandated that the states adopt water quality standards, which was presented in 1975. The USBR has done the preliminary modeling needed for updating the standards every three years. Mr. Barnett reported that the Forum's job is to look at the numeric criteria and develop a plan of implementation that will stay within those numeric criteria. The states take the combined Seven States Report and each individually submits a report to the Environmental Protection Agency (EPA). After the EPA approves the report, it becomes the State Water Quality Standards for Salinity for three years.

Mr. Barnett reported that the program is short on funding from USBR and we should focus on that funding because the USBR is two or three times more cost effective than NRCS at salinity control. The Bureau of Land Management (BLM) contributes a nominal amount. The Basin States cost share is thirty percent of the total program. In 2014 it is anticipated that the states would need to come up with about twelve million dollars of the cost share. Fifteen percent comes from the Upper Basin Fund and the remaining eighty-five percent comes from the Lower Basin Fund. This includes a repayment of another one million. In 2014, eleven and a half million is needed from the Lower Basin Fund in order to meet commitments in the Salinity Control Program. The Upper Basin can provide the funds by simply changing the rates under the Salinity Control Act to charge power users to make the one-hundred nine million. Mr. Barnett reported that the Lower Basin is based on a no levy for power users in California and Nevada. That is a fixed amount of two and a half million. The funds are independent of the rate of expenditure. Mr. Barnett reported that there has been a surplus for a number of years, but it is almost gone. In 2014, the Lower Basin Fund will be about two and half

million short in revenue. The Basin States created a sub-committee to address the funding difference between the amounts of revenue coming in from the non-federal side to meet the cost share obligation.

Mr. Barnett reported that, at the Paradox Valley Unit, the USBR put in a series of collection wells and a deep injection well in the center of the valley, which has been capturing and disposing of about 110,000 tons of salt per year since 1996. Mr. Barnett reported that the USBR had convened a Contractor Review Board this spring. Several options were considered, including using the current well site and drilling directionally to put in a replacement well. More information is needed before a firm recommendation is given. Additionally, Mr. Barnett reported that an earthquake occurred on January 23, 2013 with a magnitude of 4.4. The USBR shut down the project due to its proximity to the community of Paradox. After several months the project came back on line at a reduced rate and at a different schedule, by shutting down every week instead of going continuously for six months. This resulted in a ten percent reduction in the salt disposal in the well. Prior to the earthquake, ten tons of salt per day was coming into the river. After the earthquake occurred, 150 tons per day was discharging into the river. Mr. Barnett reported that the discharge is going back down but that it takes some time. The Federal Advisory Council recommended that the USBR use up to one hundred twenty-five thousand dollars of the Basin States Program funds to convene a Contractor Review Board to look at evaporation ponds as one of the alternatives.

Regarding Pah Temp Springs, Mr. Barnett reported that one-hundred thousand tons of salt goes into the Virgin River, just below Zion National Park. The U.S. Geological Survey (USGS) conducted a major study two years ago and concluded that a very high percentage of the salt that discharges at Pah Tempe Springs makes its way down the Virgin River and into Lake Mead. Part of the issues was to figure out the relationship between the Virgin River Gorge and the waters disappearing underground. The USGS conducted a separate study and discovered at Littlefield Springs there is a significant amount of water that discharges from the regional carbonate aquifer and that the majority of the discharge is the Virgin River water that's charged up with the salt from Pah Tempe Springs. The next step would be to capture the groundwater, if possible. Mr. Barnett reported that the springs are all coming up just above La Verkin Fault. The USGS identified fault lines in this area and asked for funds from the Basin states for further study. Coupled with the Washington County Water Conservancy District (WCWCD), the USGS drilled some monitor wells. WCWCD had put a large sump in the area to try and redeem water as they were running a pipeline through the area.

Mr. Barnett reported that the Forum and the USGS decided to re-enact the work that was done fifteen to twenty years ago with a pump test. The USGS isolated the springs and installed a weir. The USGS also installed several thousand feet of fiber optic cable, surveyed all of the various discharge points within the Virgin River, and put in a number of temperature gauges. The USGS brought in a pump that could pump about 11 cfs. Because of issues with the sump, only four cfs were pumped. In November, a significant rainstorm forced the shutdown of the pumps and washed out the

instrumentation equipment. Another pump test was conducted in January 2014. The data collected is to determine if the springs and salt discharge can be captured without meaningfully capturing the fresh water coming down the Virgin River, and then what can be done with it. Mr. Barnett reported that the issue again is funding, both on the appropriations side, and the Basin states cost-share side for Paradox Valley and the Farm Bill. Regarding the Farm Bill, we got an extension on EQIP two years ago. We are good through September of 2014. We hope we get a Farm Bill in place soon because we're receiving about $18 million per year through the Farm Bill for the EQIP Program

Mr. Barnett also reported that the Forum is working with USBR on the economic damages model, which needs to be brought to current levels. Downstream damages are about 300 million dollars per year from the current salt levels, despite the fact that 1.3 million tons were removed from the river.

The Board again expressed thanks to Don and Jack Barnett for assisting with the tour held in the spring to educate our Board members and staff regarding the salinity control forum issues.

Status of the Colorado River Basin Water Supply & Demand Study

The Basin Study Coordination Committee met on November 14, 2013, and reviewed the progress of each of the three workgroups. Phase I draft reports are expected in April 2014. The workgroups are the Environmental and Recreational Flows workgroup, the Municipal Conservation Workgroup, and the Agricultural Conservation Workgroup. Additional meetings are planned in January 2014.

Status of the Colorado River Basin Salinity Control Program Work Group and Advisory Council

The work group met in November 2013 and our staff participated in the tour of the Pah Tempe Springs experiment. The next forum meeting is in Jackson, Wyoming in June 2014. The Advisory Council meeting met prior to the Colorado River Board's meeting here in Las Vegas, Nevada at the Caesars Palace. They will be reporting back to BOR and Bureau of Land Management (BLM) regarding recommendations for funding and continued operation of the programs.

OTHER BUSINESS

Ms. Trujillo reported that funding opportunity announcements from USBR for the WaterSMART Program are in the Board materials. There are grant applications both for the Title XVI Program and also the Water and Energy Efficiency Grant Projects. The deadline for the Title XVI grants is January 7, 2014 and the deadline for the Water and

Energy Efficiency grants is January 23, 2014.

Ms. Trujillo also reported that included in the Board packet are notices of the water banking and savings program that Southern Nevada and MWD have again agreed to do this year.

Colorado River Board 2013 Year in Review

The Board meeting included a presentation reviewing the minutes from prior Colorado River Board December meetings. Ms. Trujillo reported that fifty years ago the Colorado River Board minutes reflected a fairly urgent meeting with the Governor to assess the ramifications of the Arizona v. California ruling for California. Also, the minutes reflected that specific language be included in the Central Arizona Project, which was finalized in 1968, to protect California's senior rights on the Colorado River. Forty years ago, the CRB minutes reflected discussions of Minute 242, which was adopted relating to salinity control issues and the Salinity Control Forum was established. Legislation for the Salinity Control Program was passed in 1974. Thirty years ago, the CRB minutes reflected that the primary focus was on spilling reservoirs. Annual reports were done at that time that showed pictures of the spilling reservoirs. Twenty years ago, the CRB focused on the development of the Glen Canyon Dam EIS, which came shortly after the Grand Canyon Protection Act. Ten years ago, was the signing of the Quantification Settlement Agreement in California, which has been successfully implemented for the past 10 years.

To focus on the developments within 2013, Ms. Trujillo noted that the highlight in 2012 and 2013 has been the hydrology – having the two lowest years in the past one hundred years on record. Based on the Annual Operating Plan, the releases out of Lake Powell in 2014 will be 7.48 million acre feet. Ms. Trujillo reported that CRB will continue to collaborate with the other Basin States and with USBR on contingency planning for the hydrology in the future. We will continue our efforts on conservation and continue funding the successful partnering programs in place such as the Weather Modification Program that we worked in partnership with the Lower and Upper Basin States on.

Ms. Trujillo also reported that in 2013 CRB worked on implementing the Colorado River Basin Supply and Demand Study. It was rolled out last December, and projected a demand and supply imbalance for the future. We kicked off the implementation phase in San Diego in May 2013. The co-chair for the M&I Conservation Group is Metropolitan Water District. The Agricultural and Conservation Group is co-chaired by IID. We have representatives on the Environment Flows Group as well.

Ms. Trujillo commented that Minute 319 was also one of the significant areas of focus in 2013. The agreement was signed in 2012 and is a five-year pilot agreement. The states representatives in the various workgroups are working to implement the agreement. Ms. Trujillo congratulated MWD and IID for their recent agreement to share

their allocation of water associated with the international pilot project.

Ms. Trujillo reported that another key area of focus has been continued work on the Lower Colorado River Multi-Species Conservation Program. Ms. Trujillo commended Chris Harris of the Colorado River Board, who is the lead person on the program. Ms. Trujillo briefly recapped that 25,000 acres of habitat out of the 8,000 that are required, and a thousand acres in California, have been restored. Presently, the Laguna Habitat Conservation Area is one of the largest areas that is under development and is about 1,200 acres. Also, in 2013 the CRB had worked on invasive species challenges, such as the Quagga Mussels. We are also observing that the Salt Cedar beetle may be coming our way, if it's not here already.

Ms. Trujillo commented that the CRB has spent significant effort working on the Glen Canyon Dam Adaptive Management Program and the ongoing Long Term Experimental Management Plan EIS in cooperation with the other states and USBR, primarily through the Upper Basin region. A draft EIS should be available next spring. The second high flow experiment was done in November which was reported on in previous Board meetings. The CRB is now in the process of evaluating the progress and status of the second high flow release experiment.

Ms. Trujillo also reported that CRB has devoted significant resources on the Salinity Control Program. The Forum meetings in May occurred in Grand Junction and the October meetings were hosted by MWD in Los Angeles. The Paradox Valley EIS is a significant project and CRB is working on it as a cooperating agency with USBR. We are encouraging them to look at a lot of alternatives, even some that are outside of the box, technically and are hoping BOR will continue funding for that analysis to keep on things on track. The earthquake in January 2013 was an eye-opener regarding the sensitivity of the system and alternatives are being considered for that site. Mr. Trujillo also reported that there was an Upper Basin tour in October 2013 and expressed her appreciation to each agency's participation and contributions.

Ms. Trujillo acknowledged the deaths of Bill Rennie from USBR and Bill Swan and Steve Robbins from Coachella Valley Water District from our communities.

In conclusion of the Year-in-Review, Ms. Trujillo summarized that the Board adopted the new Board schedule which envisions traveling to the member agencies by doing an alternating schedule of meetings. CRB will be working with each member agency staff to set up the Board meetings and potentially do some side tours.

We look forward to the Basin Study Phase I reports. We look forward to progress on Minute 319; the pulse flow this spring; and continued progress on implementation of the international projects, and figuring out how U.S. money can be used to create water savings in Mexico that will be converted back into water savings on the U.S. side. In the Salinity Forum we will be working on the 2014 triennial review, and looking at options to address the funding deficiency. We are also looking forward to the draft Long Term Experimental and Management Plan EIS this spring.

Ms. Trujillo expressed appreciation to all of the help from the member agencies staff and is looking forward to continued progress.

Next Board Meeting

Chairman Fisher announced that the next meeting of the Colorado River Board will be held on Wednesday, January 14, 2014, at 10:00 a.m. at the Holiday Inn, Ontario Airport, 2155 East Convention Center Way, Ontario, 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. Powell, seconded by Mr. Peterson, and unanimously carried, the meeting was adjourned at 4:05 p.m. on December 11, 2013.

Feb 03, 2014

LOWER COLORADO WATER SUPPLY REPORT

River Operations

Bureau of Reclamation

Questions: BCOOWaterops@usbr.gov
(702)293-8373
http://www.usbr.gov/lc/region/g4000/weekly.pdf

CURRENT STORAGE	PERCENT FULL	Content 1000 ac-ft (kaf)	Elev. (Feet above mean sea level)	7-Day Release (CFS)
LAKE POWELL	40%	9,809	3578.47	12,700
* LAKE MEAD	48%	12,550	1108.96	11,500
LAKE MOHAVE	91%	1,645	641.01	10,500
LAKE HAVASU	88%	544	446.09	6,400
TOTAL SYSTEM CONTENTS **	49%	29,032		
As of 02/02/2014				
SYSTEM CONTENT LAST YEAR	55%	32,773		

* 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	56%	1,284		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam (1/31/14)	6%	60	1091.52	25

Estimated Actual Water Use for Calendar Year 2013 (as of 01/06/2014) (values in kaf)

NEVADA	222	
SOUTHERN NEVADA WATER SYSTEM		194
OTHERS		29
CALIFORNIA	4,467	
METROPOLITAN WATER DISTRICT OF CALIFORNIA		1,012
IRRIGATION DISTRICTS		3,367
OTHERS		88
ARIZONA	2,775	
CENTRAL ARIZONA PROJECT		1,649
OTHERS		1,126
TOTAL LOWER BASIN USE		7,464
DELIVERY TO MEXICO - 2013 (1.50 MAF Scheduled + Preliminary Yearly Excess)[1]		1,572

OTHER SIGNIFICANT INFORMATION

UNREGULATED INFLOW INTO LAKE POWELL - JANUARY MID-MONTH FORECAST DATED 01/16/2014

	MILLION ACRE-FEET	% of Normal
FORECASTED WATER YEAR 2014	10.073	93%
FORECASTED APRIL-JULY 2014	6.810	95%
DECEMBER OBSERVED INFLOW	0.294	81%
JANUARY INFLOW FORECAST	0.280	78%

	Upper Colorado Basin	Salt/Verde Basin
WATER YEAR 2014 PRECIP TO DATE	94% (11.1")	56% (6.0")
CURRENT BASIN SNOWPACK	100% (9.8")	38% (1.9")

[1] Delivery to Mexico forecasted yearly excess calculated using year-to-date observed and projected excess.

COLORADO BASIN RIVER FORECAST CENTER

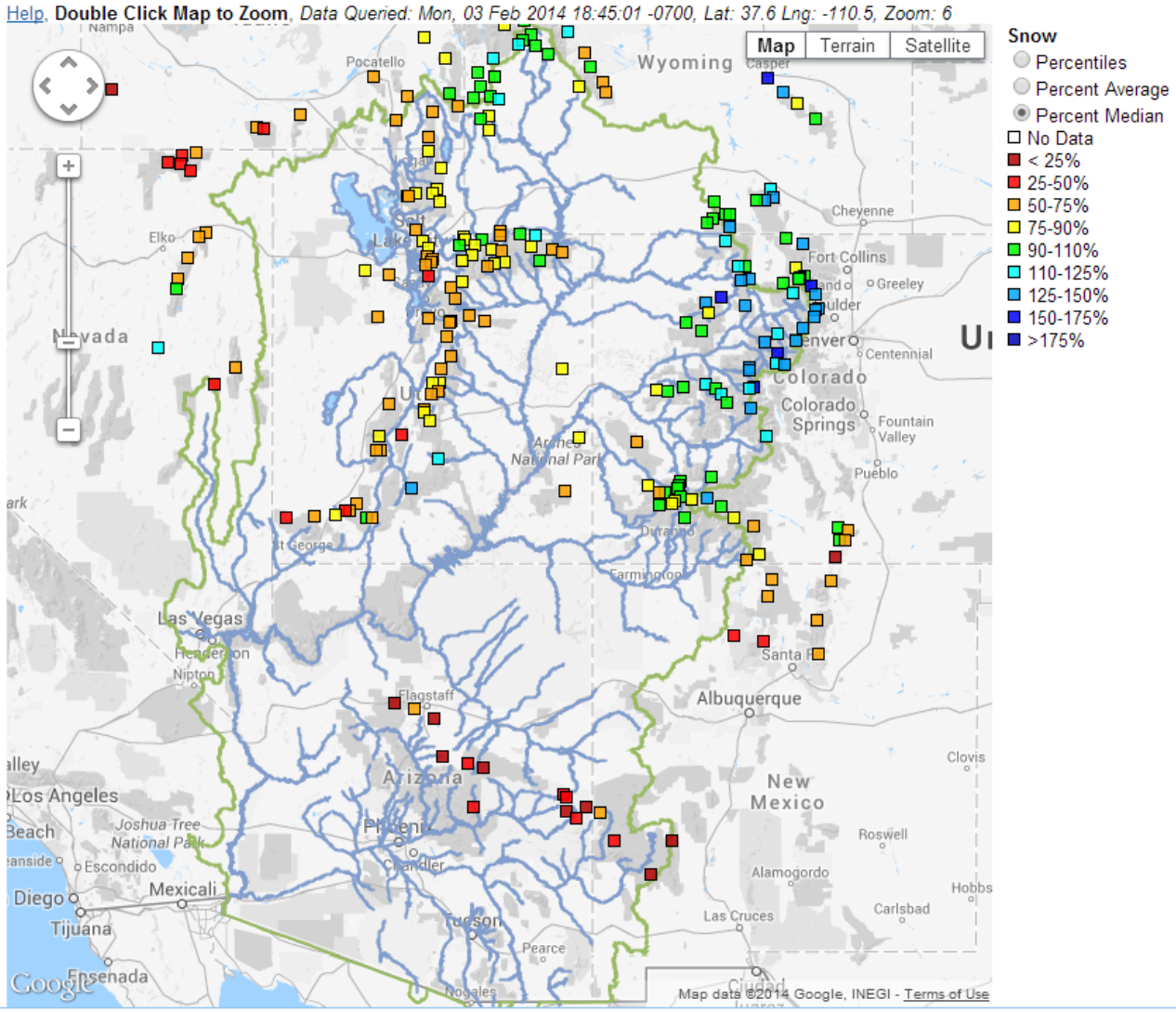
NATIONAL WEATHER SERVICE / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

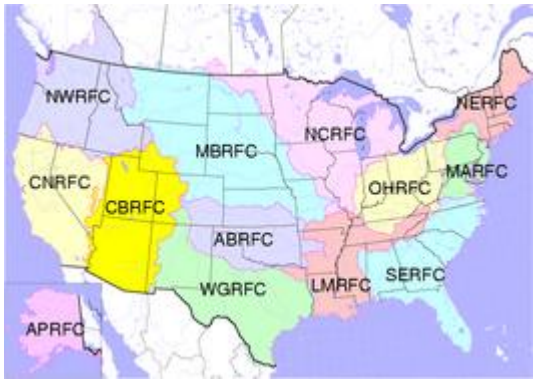
RIVERS SNOW WATER SUPPLY RESERVOIRS WEATHER HELP

Conditions Map Conditions List Snow Groups

Areas: CBRFC Upper Colorado Green San Juan Great Sevier Virgin Lower Colorado

Help, **Double Click Map to Zoom**, *Data Queried: Mon, 03 Feb 2014 18:45:01 -0700, Lat: 37.6 Lng: -110.5, Zoom: 6*



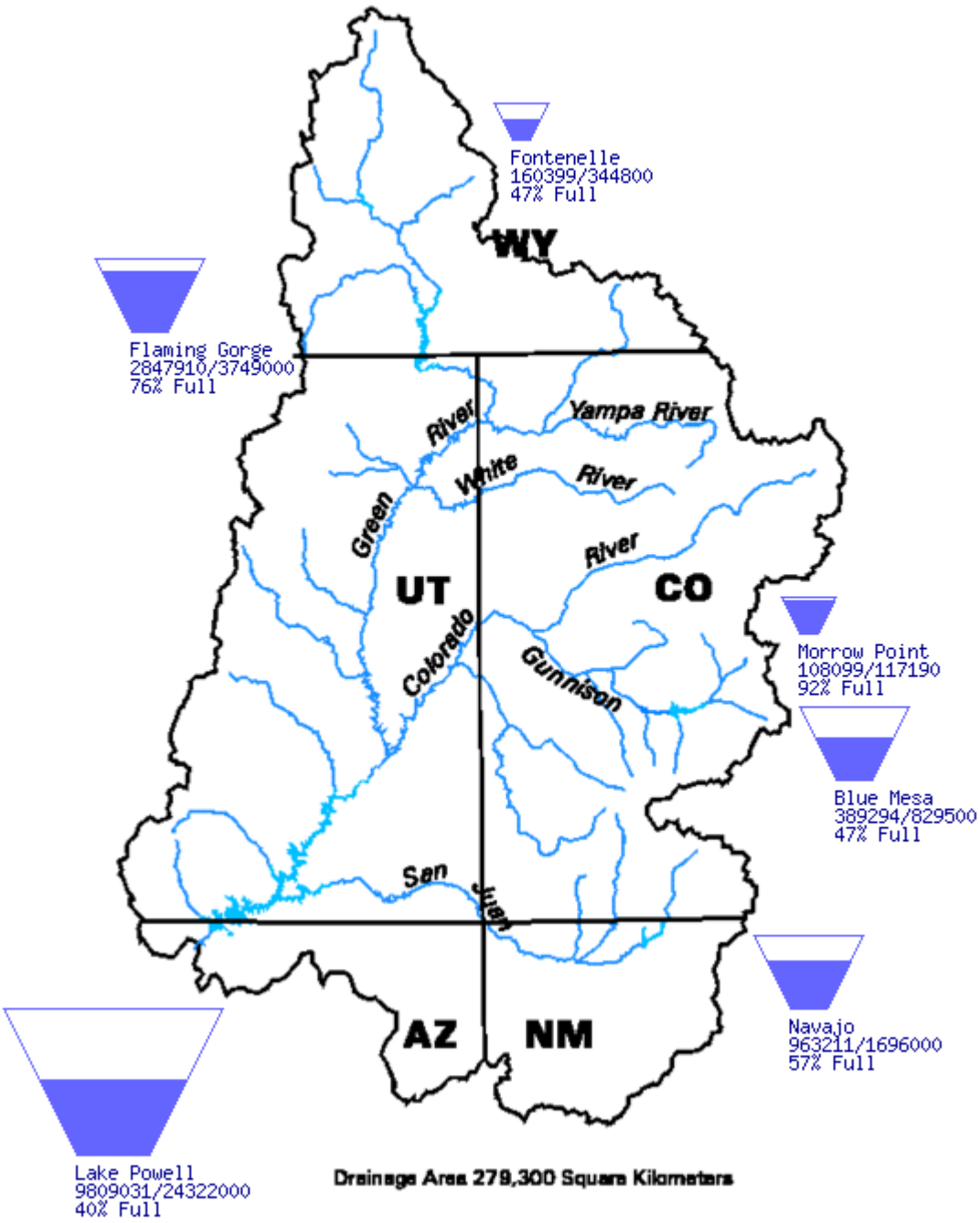


Upper Colorado Region Water Resources Group

River Basin Tea-Cup Diagrams

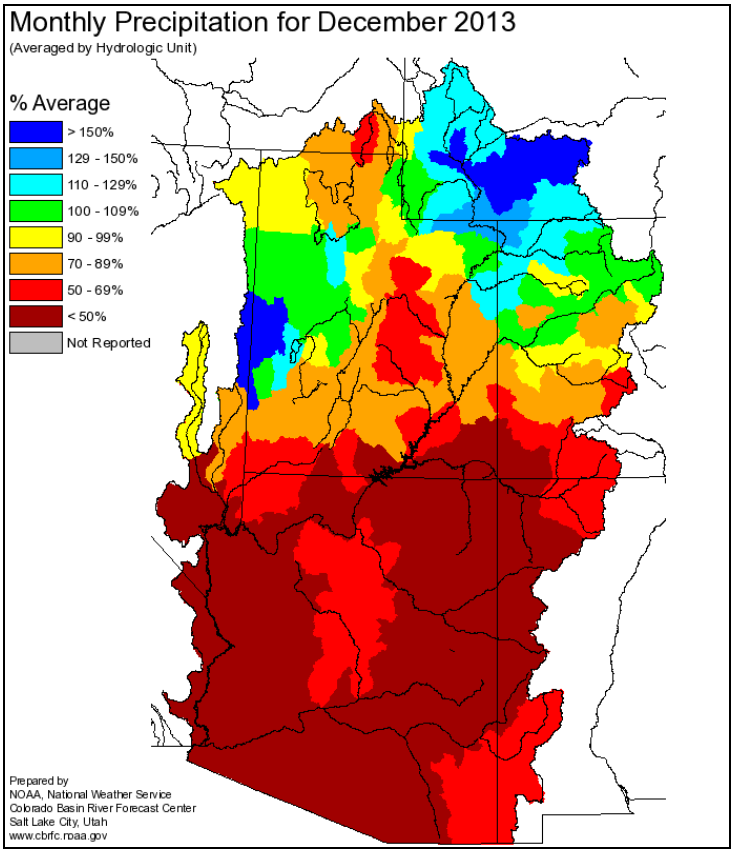
Data Current as of:
02/02/2014

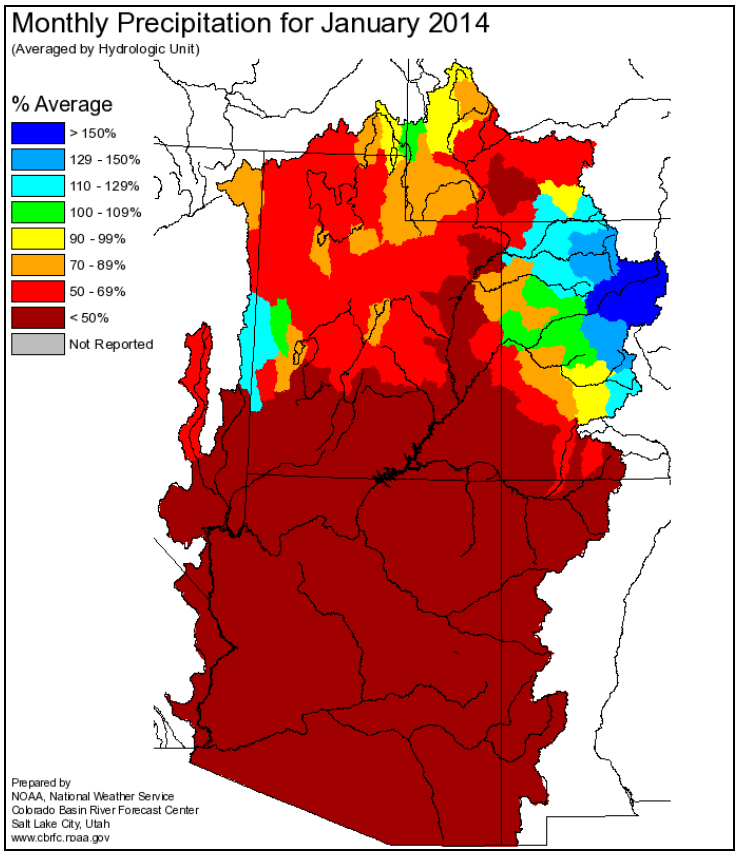
Upper Colorado River Drainage Basin



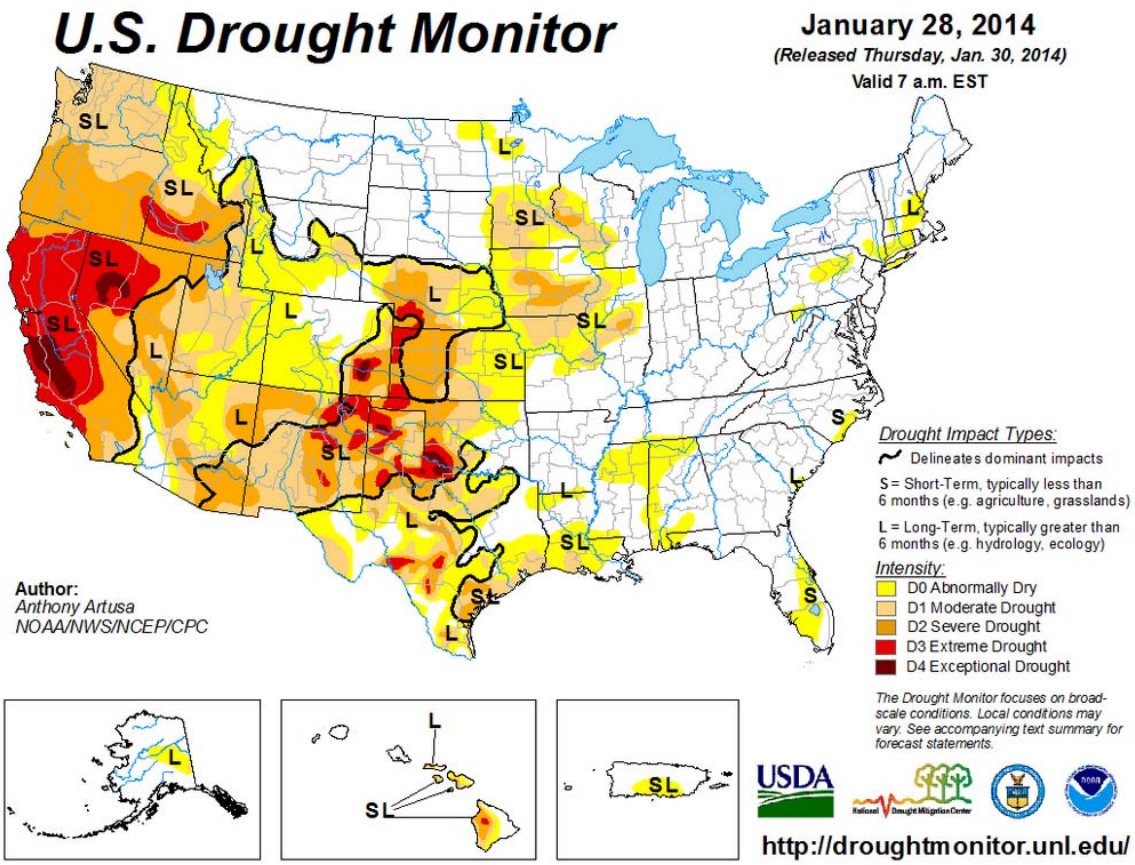
Drainage Area 279,300 Square Kilometers

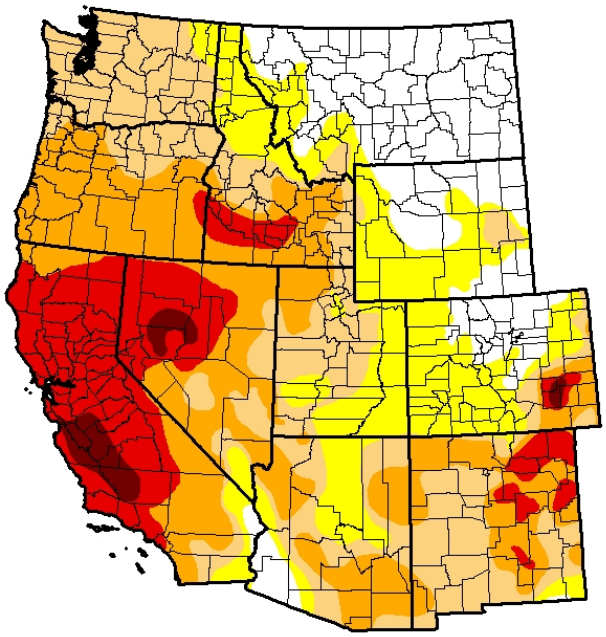
NOAA National Weather Service Monthly Precipitation Maps for December 2013 and January 2014





USDA United States Drought Monitor Map





U.S. Drought Monitor

West

January 28, 2014

(Released Thursday, Jan. 30, 2014)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	17.38	82.62	63.50	39.67	15.29	1.80
Last Week *1/21/2014*	18.74	81.26	60.81	36.99	13.78	0.63
3 Months Ago *10/29/2013*	27.90	72.10	53.62	32.25	5.34	0.63
Start of Calendar Year *12/31/2013*	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year *10/1/2013*	25.25	74.75	58.96	34.18	5.57	0.63
One Year Ago *1/29/2013*	23.58	76.42	66.52	44.01	16.39	2.15

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

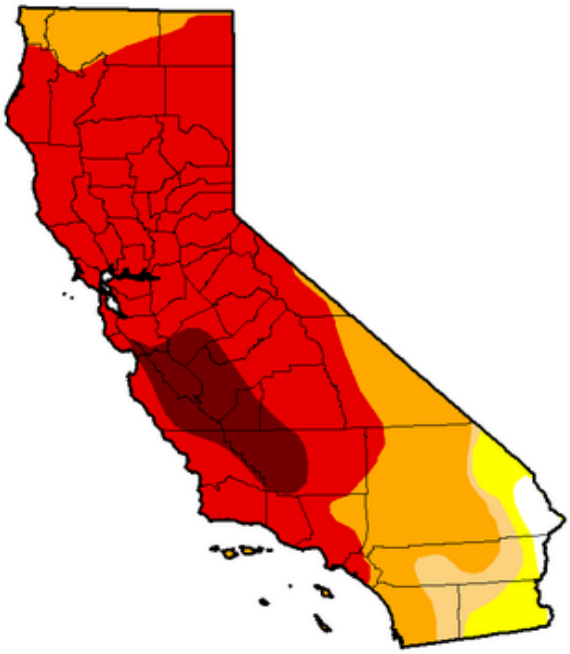
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Anthony Artusa
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/

U.S. Drought Monitor

California



January 28, 2014

(Released Thursday, Jan. 30, 2014)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	1.43	98.57	94.18	89.91	67.13	8.77
Last Week 1/21/2014	1.43	98.57	94.18	89.91	62.71	0.00
3 Months Ago 10/29/2013	2.66	97.34	95.98	84.12	11.36	0.00
Start of Calendar Year 12/31/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/1/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 1/29/2013	34.20	65.80	47.18	21.57	0.00	0.00

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.

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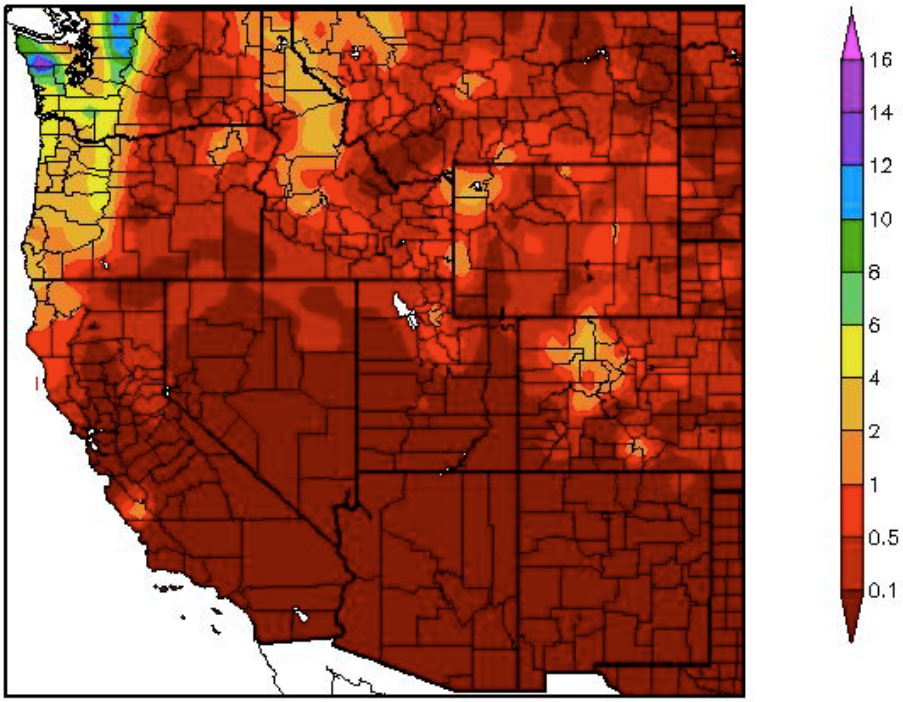
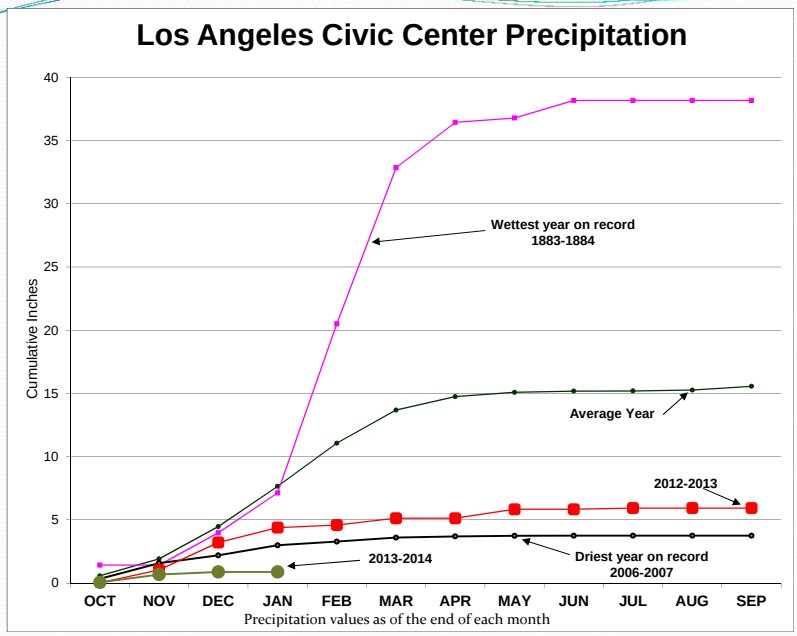
Precipitation (in)
1/1/2014 – 1/17/2014



acquired January 18, 2014 download large image (2 MB, JPEG, 5009x3600) NASA Earth Observatory

acquired January 18, 2013 download large image (3 MB, JPEG, 5009x3600) NASA Earth Observatory

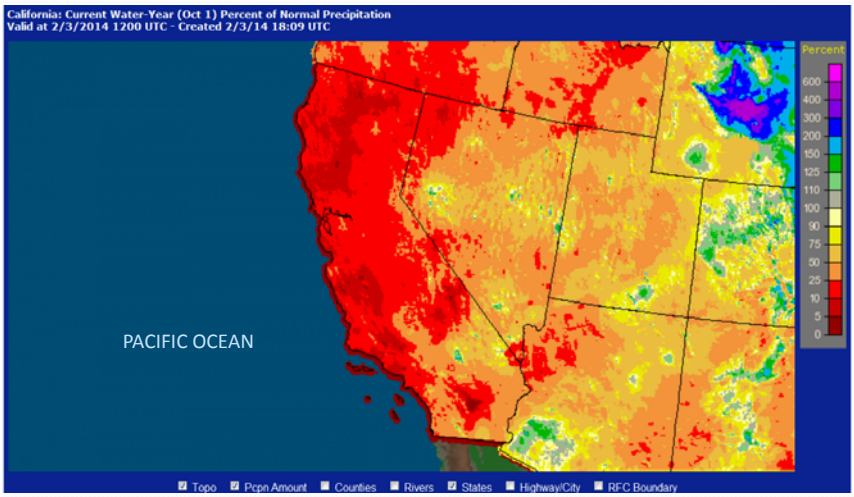


Precipitation at Six Major Stations in Southern California

From October 1, 2013 to February 1, 2014

Station	Precipitation in inches Jan	Oct 1 to Feb 1	Average to Date	Percent of Average
San Luis Obispo	0.01	0.64	12.04	5%
Santa Barbara	0.01	1.30	9.02	14%
Los Angeles	0.00	0.88	7.65	12%
San Diego	0.00	1.15	5.25	22%
Blythe	0.00	0.77	1.62	48%
Imperial	0.00	0.96	1.33	72%

CA Current Water Year - Percent of Normal Precipitation



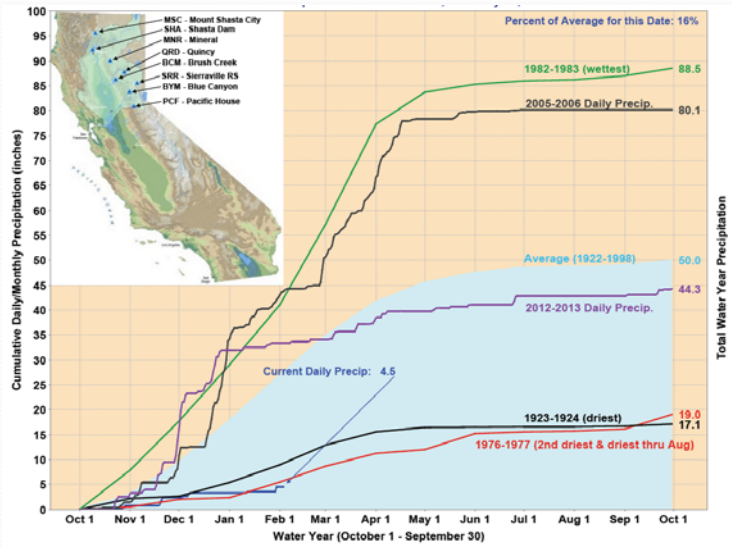
National Weather Service –Advance Hydrologic Prediction Center
http://water.weather.gov/precip/

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 January 1				
2012-13	135	150	105	4.8
2013-14	25	20	70	1.0

* 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.

Northern Sierra Precipitation-8 Station Index



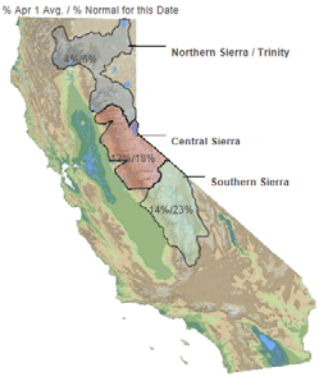
California Data Exchange Center
http://cdec.water.ca.gov/cgi-progs/products/PLOT_ESI.pdf

Snow Water Equivalents (inches)

Provided by the California Cooperative Snow Surveys

Data For: 03-Feb-2014

% Apr 1 Avg. / % Normal for this Date



Change Date : 03-Feb-2014 Refresh Data

NORTH

Data For: 03-Feb-2014

Number of Stations Reporting	29
Average snow water equivalent	1.2"
Percent of April 1 Average	4%
Percent of normal for this date	6%

CENTRAL

Data For: 03-Feb-2014

Number of Stations Reporting	44
Average snow water equivalent	3.7"
Percent of April 1 Average	12%
Percent of normal for this date	18%

SOUTH

Data For: 03-Feb-2014

Number of Stations Reporting	30
Average snow water equivalent	3.6"
Percent of April 1 Average	14%
Percent of normal for this date	23%

STATEWIDE SUMMARY

Data For: 03-Feb-2014

Number of Stations Reporting	103
Average snow water equivalent	2.9"
Percent of April 1 Average	10%
Percent of normal for this date	16%

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

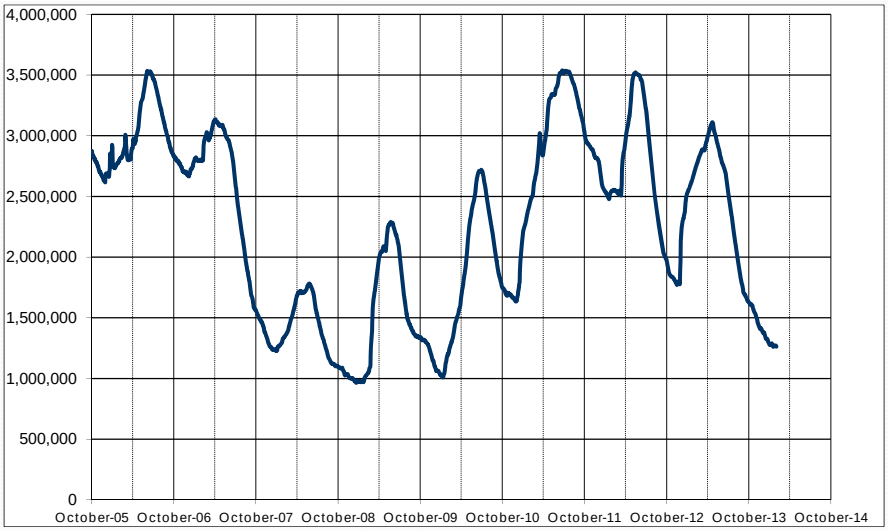
Comparison of SWP Water Storage

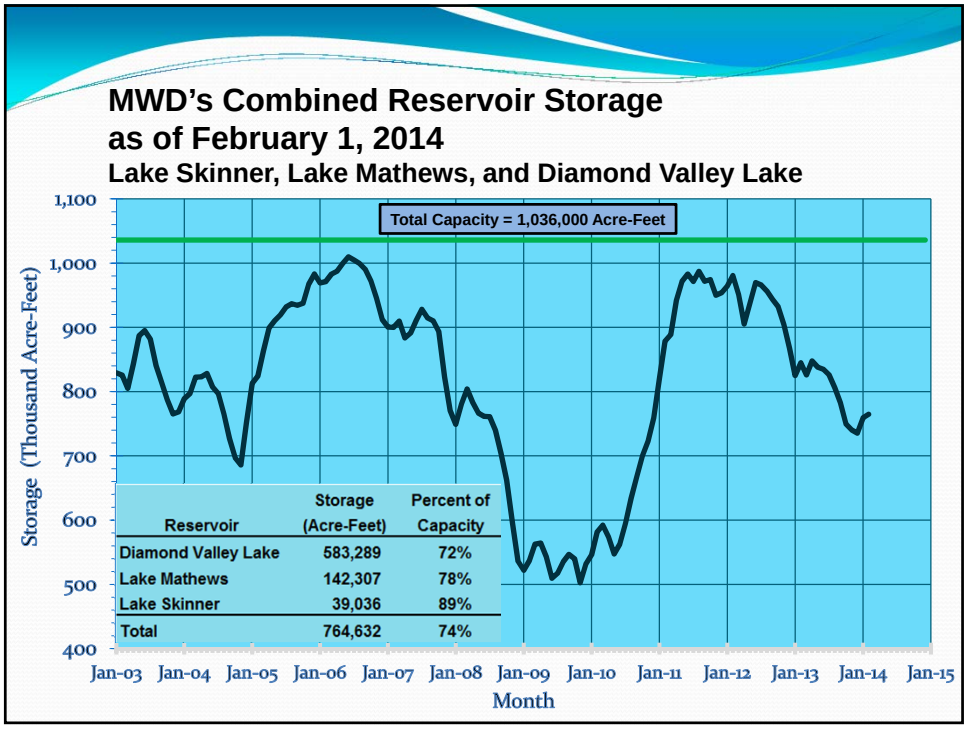
Reservoir	Capacity	2013 Storage (acre-feet) As of February-1	2013 Storage (acre-feet) % of Cap.	2014 Storage (acre-feet) As of February-1	2014 Storage (acre-feet) % of Cap.
Frenchman	55,475	35,262	64%	27,378	49%
Lake Davis	84,371	64,578	77%	54,063	64%
Antelope	22,564	22,937	102%	17,540	78%
Oroville	3,553,405	2,698,949	76%	1,262,435	36%
TOTAL North	3,715,815	2,821,726	76%	1,361,416	37%
Del Valle	39,914	35,934	90%	29,671	74%
San Luis (DWR)	1,062,180	485,533	46%	280,662	26%
Pyramid	169,901	166,388	98%	168,023	99%
Castaic	319,247	286,359	90%	277,233	87%
Silverwood	74,970	72,465	97%	71,425	95%
Perris	126,841	62,531	49%	72,217	57%
TOTAL South	1,793,053	1,109,210	62%	899,231	50%
TOTAL SWP	5,508,868	3,930,936	71%	2,260,647	41%

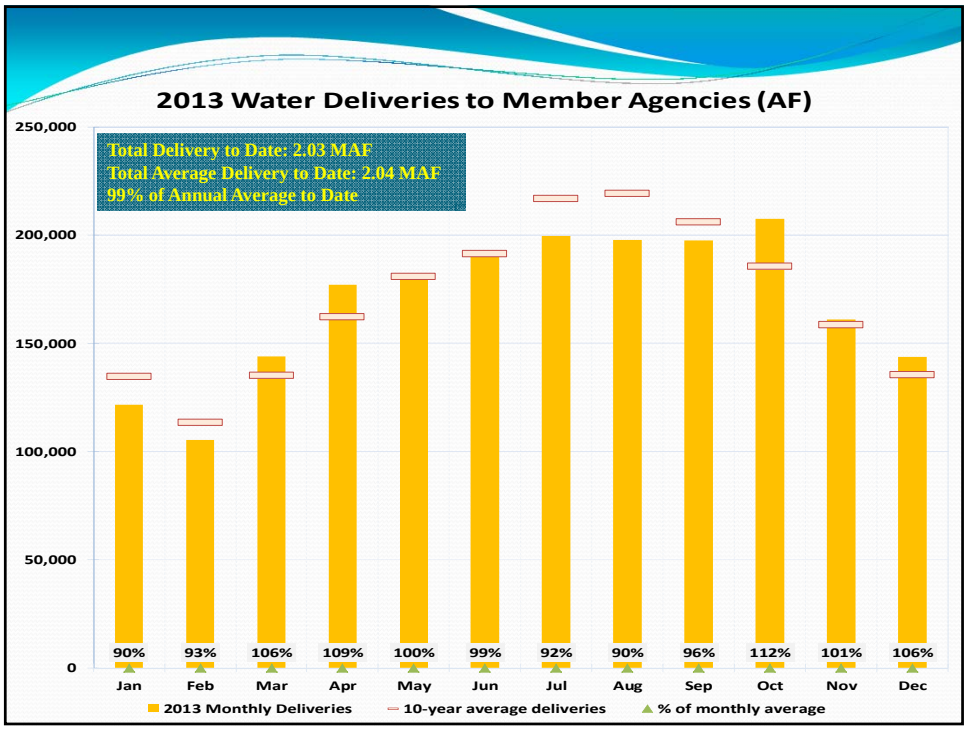
State Water Project Projected Deliveries:
As of January 31, 2014, the Table-A allocations for 2014 is 0%

Oroville Storage (acre-feet)

October 1, 2005 – February 1, 2014

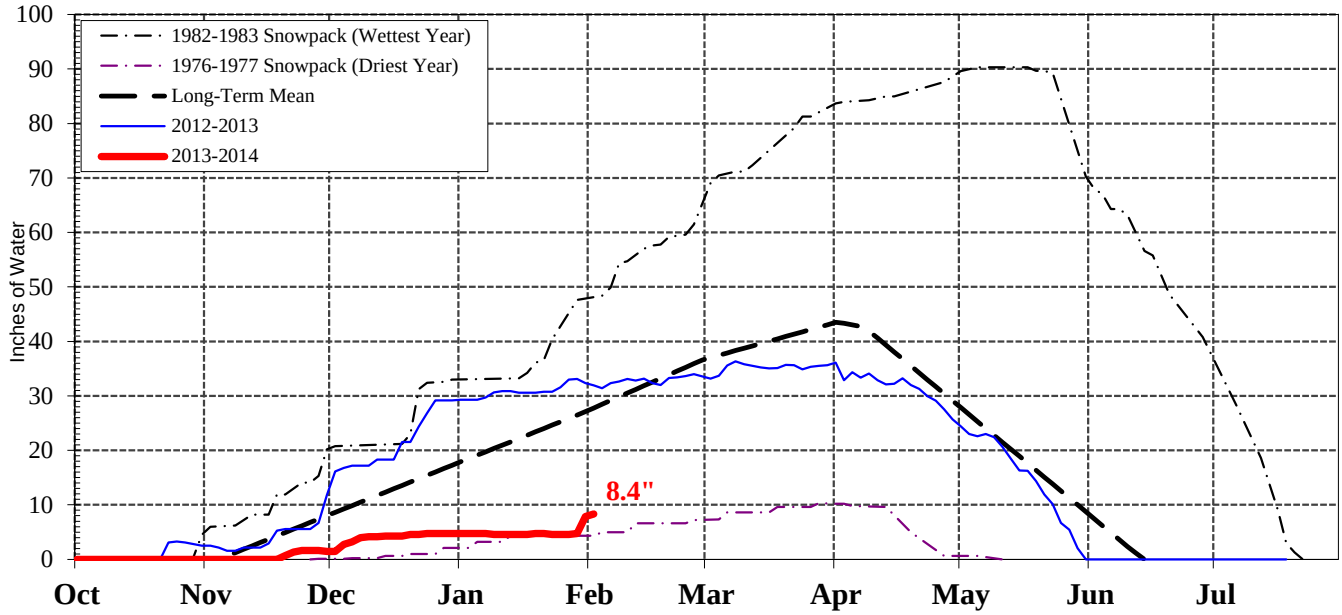



MWD's Combined Reservoir Storage
as of February 1, 2014
Lake Skinner, Lake Mathews, and Diamond Valley Lake
Total Capacity = 1,036,000 Acre-Feet
Storage (Thousand Acre-Feet)
1,100
1,000
900
800
700
600
500
400
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Month
Reservoir | Storage (Acre-Feet) | Percent of Capacity
Diamond Valley Lake | 583,289 | 72%
Lake Mathews | 142,307 | 78%
Lake Skinner | 39,036 | 89%
Total | 764,632 | 74%

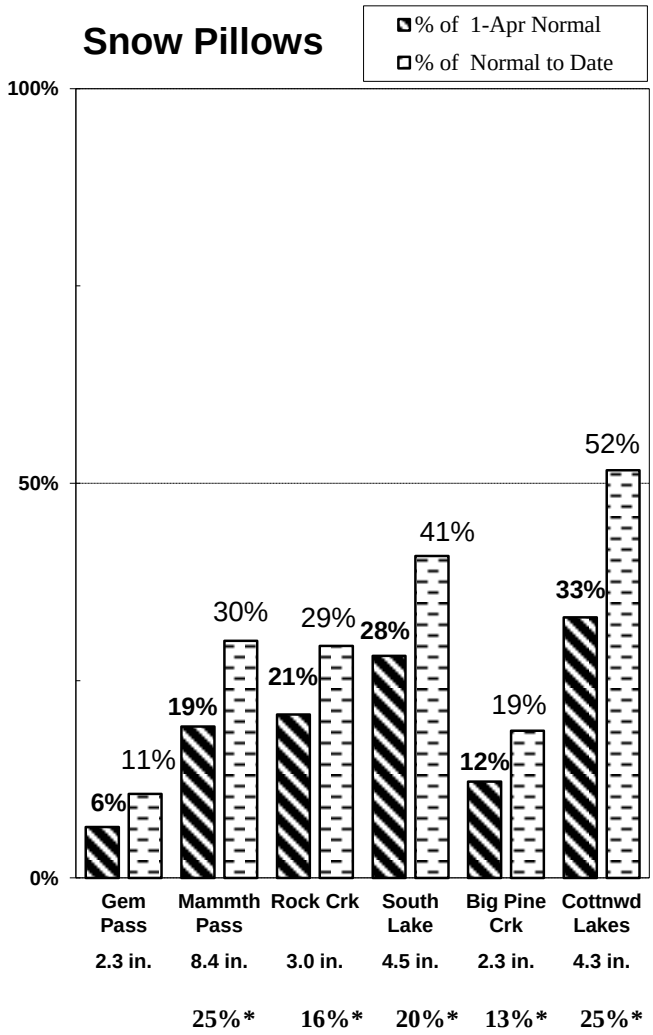

2013 Water Deliveries to Member Agencies (AF)
Total Delivery to Date: 2.03 MAF
Total Average Delivery to Date: 2.04 MAF
99% of Annual Average to Date
250,000
200,000
150,000
100,000
50,000
0
90%
93%
106%
109%
100%
99%
92%
90%
96%
112%
101%
106%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2013 Monthly Deliveries
10-year average deliveries
% of monthly average

EASTERN SIERRA
CURRENT PRECIPITATION CONDITIONS
February 3, 2014

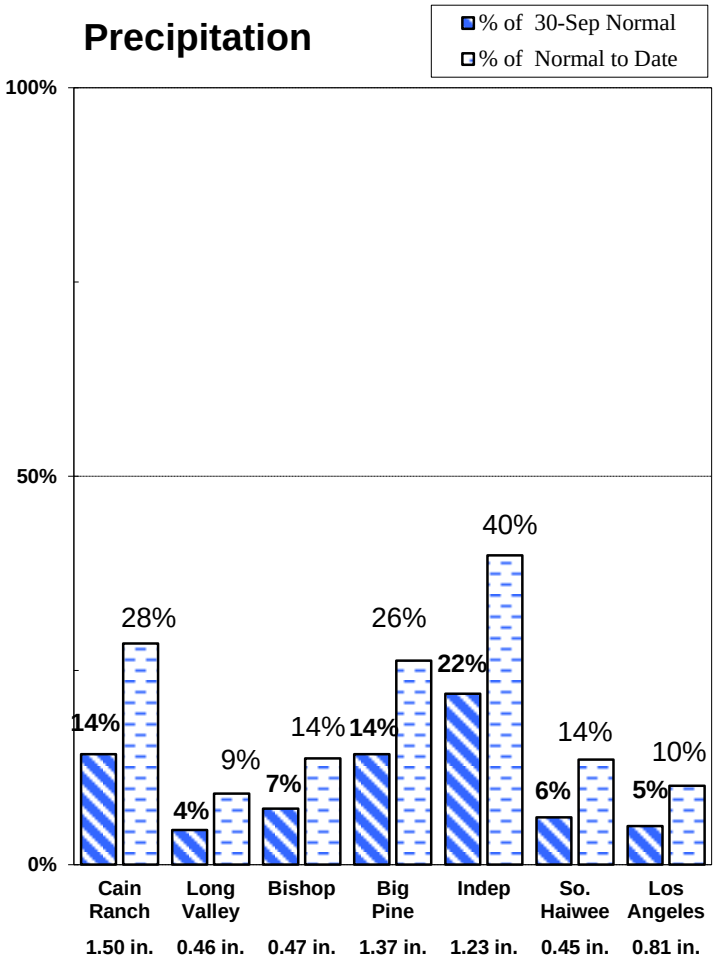
Mammoth Pass Snowpack



Snow Pillows



Precipitation

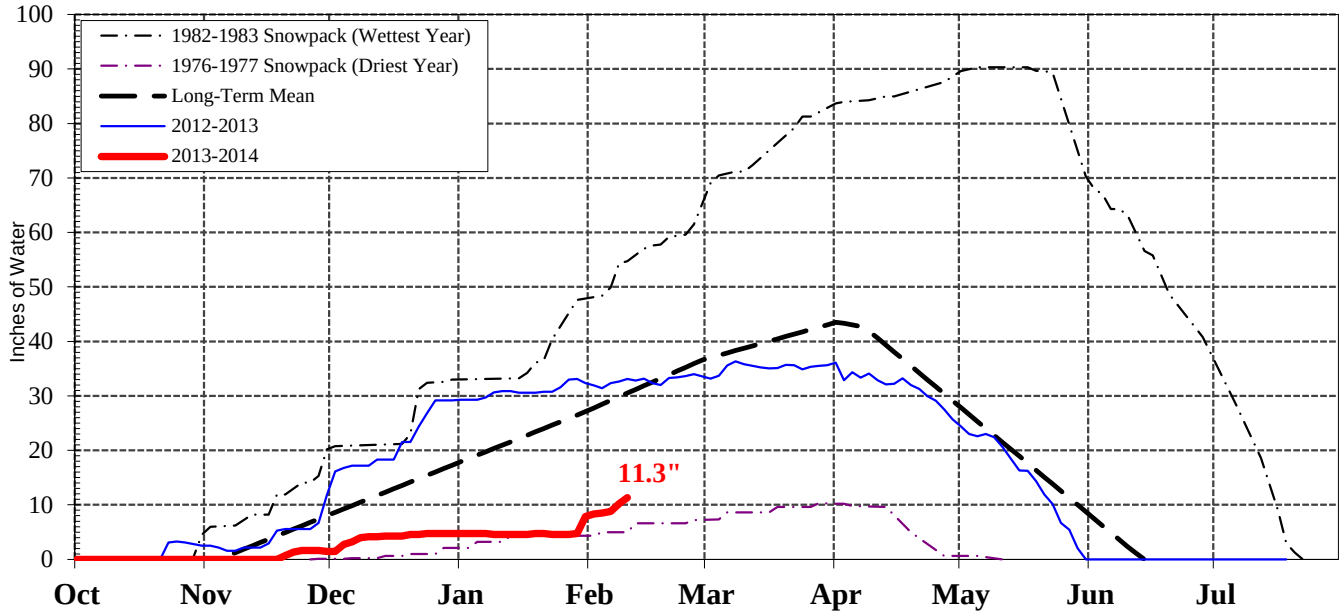


*** Individual snow pillow represents an area that contributes this percent of the total Owens River Basin runoff.**

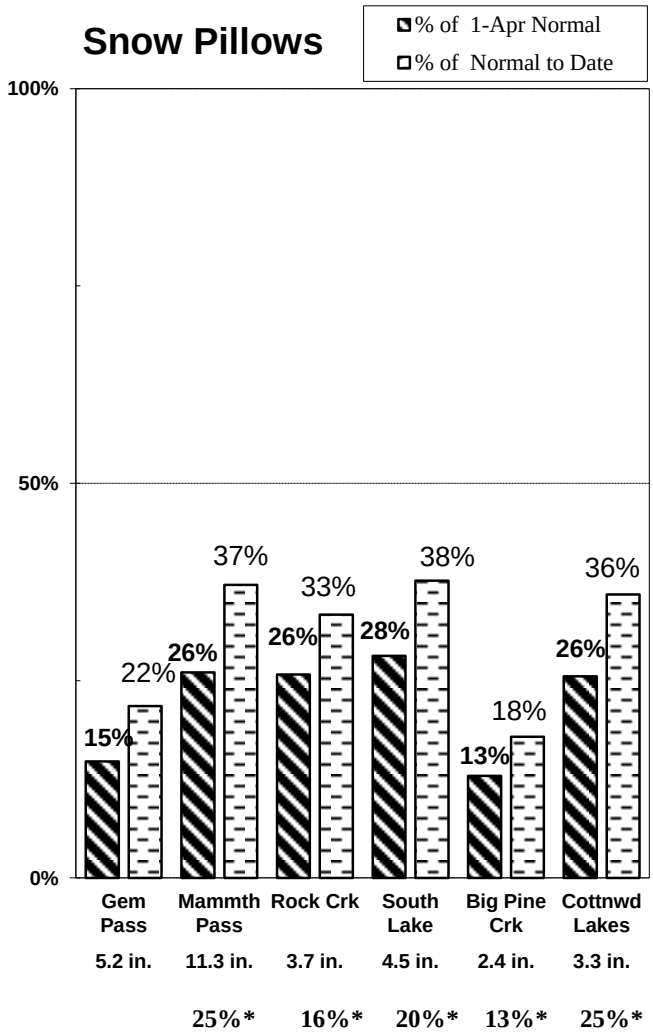
Measurement as Inches Water Content; Precipitation totals are cumulative for water year beginning Oct 1

EASTERN SIERRA
CURRENT PRECIPITATION CONDITIONS
February 10, 2014

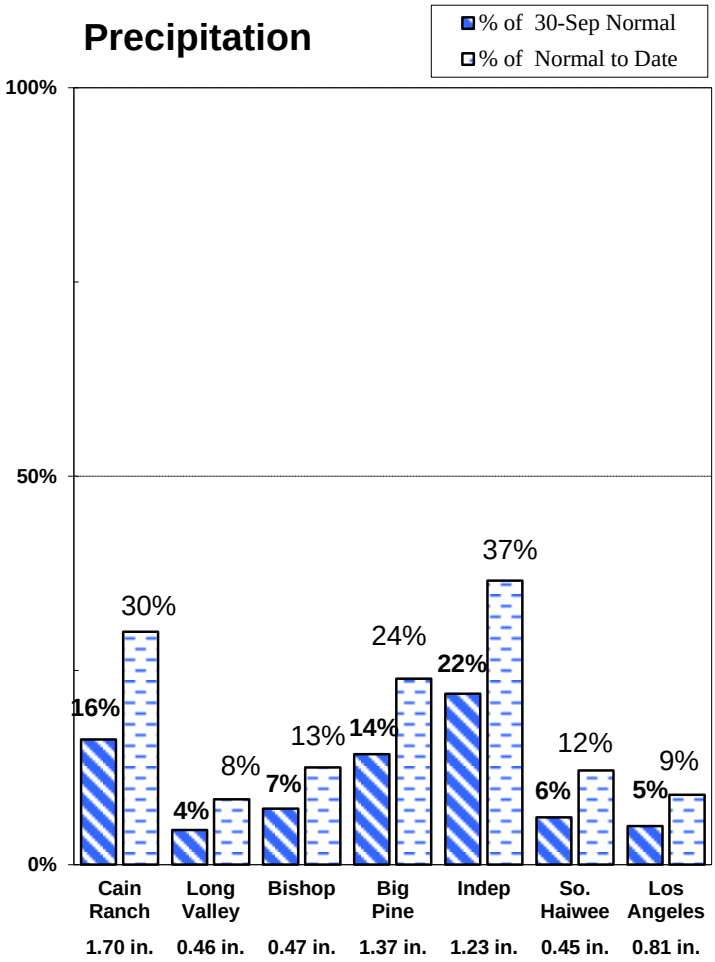
Mammoth Pass Snowpack



Snow Pillows



Precipitation

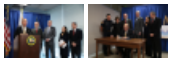


*** Individual snow pillow represents an area that contributes this percent of the total Owens River Basin runoff.**

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

GOVERNOR BROWN DECLARES DROUGHT STATE OF EMERGENCY

1-17-2014



SAN FRANCISCO – With California facing water shortfalls in the driest year in recorded state history, Governor Edmund G. Brown Jr. today proclaimed a State of Emergency and directed state officials to take all necessary actions to prepare for these drought conditions.

"We can't make it rain, but we can be much better prepared for the terrible consequences that California's drought now threatens, including dramatically less water for our farms and communities and increased fires in both urban and rural areas," said Governor Brown. "I've declared this emergency and I'm calling all Californians to conserve water in every way possible."

In the State of Emergency declaration, Governor Brown directed state officials to assist farmers and communities that are economically impacted by dry conditions and to ensure the state can respond if Californians face drinking water shortages. The Governor also directed state agencies to use less water and hire more firefighters and initiated a greatly expanded water conservation public awareness campaign (details at saveourh2o.org).

In addition, the proclamation gives state water officials more flexibility to manage supply throughout California under drought conditions.

State water officials say that California's river and reservoirs are below their record lows. Manual and electronic readings record the snowpack's statewide water content at about 20 percent of normal average for this time of year.

The Governor's drought State of Emergency follows a series of actions the administration has taken to ensure that California is prepared for record dry conditions. In May 2013, Governor Brown issued an Executive Order to direct state water officials to expedite the review and processing of voluntary transfers of water and water rights. In December, the Governor formed a Drought Task Force to review expected water allocations, California's preparedness for water scarcity and whether conditions merit a drought declaration. Earlier this week, the Governor toured the Central Valley and spoke with growers and others impacted by California's record dry conditions.

Photo captions and the full text of the emergency proclamation are below:

1.) Governor Brown announces Drought State of Emergency with Natural Resources Agency Secretary John Laird, Department of Water Resources Director Mark Cowin, Water Resources Control Board Chair Felicia Marcus and Governor's Office of Emergency Services Director Mark Ghilarducci (left to right). Photo Credit: Justin Short, Office of the Governor.

2.) Governor Brown signs proclamation declaring Drought State of Emergency. From left to right: CAL FIRE Director Chief Ken Pimlott, Department of Food and Agriculture Secretary Karen Ross, Secretary Laird, Director Cowin, Chair Marcus and Director Ghilarducci. Photo Credit: Justin Short, Office of the Governor.

For high resolution copies of these photos, please contact Danella Debel, Office of the Governor at Danella.Debel@gov.ca.gov.

A PROCLAMATION OF A STATE OF EMERGENCY

WHEREAS the State of California is experiencing record dry conditions, with 2014 projected to become the driest year on record; and

WHEREAS the state's water supplies have dipped to alarming levels, indicated by: snowpack in California's mountains is approximately 20 percent of the normal average for this date; California's largest water reservoirs have very low water levels for this time of year; California's major river systems, including the Sacramento and San Joaquin rivers, have significantly reduced surface water flows; and groundwater levels throughout the state have dropped significantly; and

WHEREAS dry conditions and lack of precipitation present urgent problems: drinking water supplies are at risk in many California communities; fewer crops can be cultivated and farmers' long-term investments are put at risk; low-income communities heavily dependent on agricultural employment will suffer heightened unemployment and economic hardship; animals and plants that rely on California's rivers, including many species in danger of extinction, will be threatened; and the risk of wildfires across the state is greatly

Latest News

Governor Brown Announces Appointments 02-06-2014

Governor Brown Issues Proclamation Declaring Ronald Reagan Day 02-06-2014

Governor Brown Announces Appointments 02-05-2014

Governor Brown to Join Obama Administration Officials, Mayor Garcetti and Others in LA for Climate Task Force Meeting 02-05-2014

Governor Brown Announces Appointments 02-04-2014

Governor Brown Issues Proclamation Declaring Black History Month 02-01-2014

Governor Brown Issues Statement on State Water Project Allocations 01-31-2014

Governor Brown Issues Proclamation Declaring Fred Korematsu Day 01-30-2014

Governor Brown to Discuss State's Severe Drought With Southland Water Leaders in LA Tomorrow 01-29-2014

Governor Brown to Discuss State's Severe Drought With Southland Water Leaders in LA Tomorrow 01-29-2014

increased; and

WHEREAS extremely dry conditions have persisted since 2012 and may continue beyond this year and more regularly into the future, based on scientific projections regarding the impact of climate change on California's snowpack; and

WHEREAS the magnitude of the severe drought conditions presents threats beyond the control of the services, personnel, equipment and facilities of any single local government and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the California Government Code, I find that conditions of extreme peril to the safety of persons and property exist in California due to water shortage and drought conditions with which local authority is unable to cope.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the state Constitution and statutes, including the California Emergency Services Act, and in particular, section 8625 of the California Government Code **HEREBY PROCLAIM A STATE OF EMERGENCY** to exist in the State of California due to current drought conditions.

IT IS HEREBY ORDERED THAT:

1.State agencies, led by the Department of Water Resources, will execute a statewide water conservation campaign to make all Californians aware of the drought and encourage personal actions to reduce water usage. This campaign will be built on the existing Save Our Water campaign (www.saveourh20.org) and will coordinate with local water agencies. This campaign will call on Californians to reduce their water usage by 20 percent.

2.Local urban water suppliers and municipalities are called upon to implement their local water shortage contingency plans immediately in order to avoid or forestall outright restrictions that could become necessary later in the drought season. Local water agencies should also update their legally required urban and agricultural water management plans, which help plan for extended drought conditions. The Department of Water Resources will make the status of these updates publicly available.

3.State agencies, led by the Department of General Services, will immediately implement water use reduction plans for all state facilities. These plans will include immediate water conservation actions, and a moratorium will be placed on new, non-essential landscaping projects at state facilities and on state highways and roads.

4.The Department of Water Resources and the State Water Resources Control Board (Water Board) will expedite the processing of water transfers, as called for in Executive Order B-21-13. Voluntary water transfers from one water right holder to another enables water to flow where it is needed most.

5.The Water Board will immediately consider petitions requesting consolidation of the places of use of the State Water Project and Federal Central Valley Project, which would streamline water transfers and exchanges between water users within the areas of these two major water projects.

6.The Department of Water Resources and the Water Board will accelerate funding for water supply enhancement projects that can break ground this year and will explore if any existing unspent funds can be repurposed to enable near-term water conservation projects.

7.The Water Board will put water right holders throughout the state on notice that they may be directed to cease or reduce water diversions based on water shortages.

8.The Water Board will consider modifying requirements for reservoir releases or diversion limitations, where existing requirements were established to implement a water quality control plan. These changes would enable water to be conserved upstream later in the year to protect cold water pools for salmon and steelhead, maintain water supply, and improve water quality.

9.The Department of Water Resources and the Water Board will take actions necessary to make water immediately available, and, for purposes of carrying out directives 5 and 8, Water Code section 13247 and Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division are suspended on the basis that strict compliance with them will prevent, hinder, or delay the mitigation of the effects of the emergency. Department of Water Resources and the Water Board shall maintain on their websites a list of the activities or approvals for which these provisions are suspended.

10. The state's Drinking Water Program will work with local agencies to identify communities that may run out of drinking water, and will provide technical and financial assistance to help these communities address drinking water shortages. It will also identify emergency interconnections that exist among the state's public water systems that can help these threatened communities.

11.The Department of Water Resources will evaluate changing groundwater levels, land subsidence, and agricultural land fallowing as the drought persists and will provide a public update by April 30 that identifies groundwater basins with water shortages and details gaps in groundwater monitoring.

12.The Department of Water Resources will work with counties to help ensure that well drillers submit required groundwater well logs for newly constructed and deepened wells in a timely manner and the Office of Emergency Services will work with local authorities to enable early notice of areas experiencing problems with residential groundwater sources.

13.The California Department of Food and Agriculture will launch a one-stop website (www.cdfa.ca.gov/drought) that provides timely updates on the drought and connects farmers to state and federal programs that they can access during the drought.

14.The Department of Fish and Wildlife will evaluate and manage the changing impacts of drought on threatened and endangered species and species of special concern, and develop contingency plans for state Wildlife Areas and Ecological Reserves to manage reduced water resources in the public interest.

15. The Department of Fish and Wildlife will work with the Fish and Game Commission, using the best available science, to determine whether restricting fishing in certain areas will become necessary and prudent as drought conditions persist.

16.The Department of Water Resources will take necessary actions to protect water quality and water supply in the Delta, including installation of temporary barriers or temporary water supply connections as needed, and will coordinate with the Department of Fish and Wildlife to minimize impacts to affected aquatic species.

17.The Department of Water Resources will refine its seasonal climate forecasting and drought prediction by advancing new methodologies piloted in 2013.

18.The California Department of Forestry and Fire Protection will hire additional seasonal firefighters to suppress wildfires and take other needed actions to protect public safety during this time of elevated fire risk.

19.The state's Drought Task Force will immediately develop a plan that can be executed as needed to provide emergency food supplies, financial assistance, and unemployment services in communities that suffer high levels of unemployment from the drought.

20.The Drought Task Force will monitor drought impacts on a daily basis and will advise me of subsequent actions that should be taken if drought conditions worsen.

I FURTHER DIRECT that as soon as hereafter possible, this Proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 17th day of January, 2014.

_____
EDMUND G. BROWN JR.,
Governor of California

ATTEST:

_____
DEBRA BOWEN,
Secretary of State

###

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Final State Water Action Plan Released: Outlines California's Near- and Long-Term Water Priorities

Plan Includes 2014-15 Budget Proposals, Implementation Efforts, Updates from Public and Stakeholder Comments

SACRAMENTO, Calif. – As California experiences one of the driest winters on record, the California Natural Resources Agency, the California Environmental Protection Agency, and the California Department of Food and Agriculture released the final California Water Action Plan, laying out goals and vision for the next five years. The plan will guide state efforts to enhance water supply reliability, restore damaged and destroyed ecosystems, and improve the resilience of our infrastructure.

At the direction of Gov. Edmund G. Brown Jr., a collaborative effort of state agencies, and nearly 100 substantive public and stakeholder comments formed a plan to set direction for a host of near- and long-term actions on water issues for the state.

"It is a tall order. But it is what we must do to get through this drought and prepare for the next," said Gov. Brown in his 2014 State of the State address.

The Governor's proposed 2014-15 budget lays a solid fiscal foundation for implementing near-term actions for the plan, recommending $618.7 million in funding for water efficiency projects, wetland and watershed restoration, groundwater programs, conservation, flood control, and integrated water management.

"As we work on emergency actions to manage through one of the driest winters on record, we are also taking proactive, long-term steps to prepare California for future droughts and flood," said Secretary for Natural Resources John Laird. "Each decade brings improvements, but also significantly highlights what we can do better. The California Water Action Plan gives us clear focus and vision for the next five years."

Final revisions to the draft plan, released in October, include an expanded section on drought response and a new effort focused on better management of Sierra Nevada headwaters that helps water storage and quality, and ecosystems. Public comment on the draft plan made it clear that California must better understand the economic and ecological harm of sustained dry weather. The Governor's proposed budget would provide $472.5 million in Proposition 84 funds to the Department of Water Resources (DWR) for integrated regional water management. The bond funds would leverage local and federal investment in projects that reduce demand, build supply, and offer additional benefits such as wildlife habitat and flood management. The budget also placed immediate emphasis on water and energy use efficiency and wetlands and coastal watershed restoration to further support the resiliency of water supply and ecosystems during this dry weather period.

The governor's budget also would allow DWR to better monitor the groundwater resources that provide more than one-third of California's supplies in dry years, and supports the development of a state backstop for sustainable groundwater management practices by the State Water Resources Control Board, should local efforts to do so not materialize.

“Together, the Governor’s proposed budget and this finalized plan provide the State with practical solutions to the state’s most critical problems; the proposals on groundwater are a good example,” said Cal/EPA Secretary Matt Rodriquez. “Data collection and monitoring are crucial to sustainable management of our unseen but incredibly important aquifers.”

All of the near-and long-term actions in the plan center on sustaining supplies of water for people, the environment, industry and agriculture. This year’s severe dry conditions highlight the stakes. Drought threatens to force the fallowing of hundreds of thousands of acres of farmland, throw thousands of people out of work, and potentially raise supermarket food prices.

“Our severe dry conditions are alarming for California’s agricultural industry,” said California Department of Food and Agriculture Secretary Karen Ross. “In the near term, we must do all we can to keep our fields productive. In the long term, we have a once-in-a-generation opportunity to make the investments that will allow us to stay productive in the face of a changing climate.”

Key actions identified in the Plan include:

- Make conservation a California way of life.
- Increase regional self-reliance and integrated water management across all levels of government.
- Achieve the co-equal goals for the Delta.
- Protect and restore important ecosystems.
- Manage and prepare for dry periods.
- Expand water storage capacity and improve groundwater management.
- Provide safe water for all communities.
- Increase flood protection.
- Increase operational and regulatory efficiency.
- Identify sustainable and integrated financing opportunities.

The report is available here.

# # #

Weekly Drought Brief
February 3, 2014

CURRENT CONDITIONS

Recent Precipitation: California received a small amount of rain and snow in the last week. Precipitation amounts (in inches) between January 27 and February 2 are as follows:

- Folsom Dam: .40
- Fresno: .63
- Hetch Hetchy Reservoir: 2.42
- Lake Aloha: 4.27
- Modesto: .50
- Oroville: .56
- Redding: .34
- Sacramento: .22
- Shasta Dam: .27

Near-term Outlook for Precipitation: A change in weather pattern may develop over the Pacific Ocean in the coming days that would allow wetter Pacific storms back into California starting Sunday, February 9 and proceeding on-and-off for several days. Forecast confidence remains on the low side, considering that these potential storms are still several days away and could dissipate or shift north into Oregon and Washington.

** Heavy rain and snow would have to fall throughout California every other day from now until May to reach average annual rain and snowfall. Even with such precipitation, California would remain in drought conditions.**

Snow survey: The most recent snowpack survey, conducted on January 30, shows California snow pack at 12% of normal.

Snow water content: Current update shows 15% of normal.

Reservoir Levels (% capacity): Reservoir Levels as of February 2 are very low, including: Don Pedro 51%; Exchequer 21%; Folsom Lake 17%; Lake Oroville 36%; Millerton Lake 38%; New Melones 43%; Pine Flat 18%; San Luis 30%; Shasta 36%; and Trinity Lake 48%.

Vulnerable Water Systems: The Department of Public Health has identified several communities with potential drinking water shortages in the coming months. As of January 31, 17 systems have been identified at various stages of risk. The Department of Public Health is working closely with those communities to ensure continued drinking water availability and refining its list to focus on those water agencies with the most acute needs. Information can be found at the CDPH Drinking Water Program website.

KEY ACTION ITEMS FOR THE WEEK

Federal Government

- **USDA Emergency Designations:** The U.S. Department of Agriculture has issued Emergency Declarations in 53 California counties, with contiguous designations for a total of 57 counties. Imperial County is the only county not declared by the USDA. A

USDA Emergency Declaration initiates the availability of low-interest emergency loans to eligible producers in all primary and contiguous counties.

- **USSBA Emergency Designations:** Emergency declarations have been established by the U.S. Small Business Administration that cover 57 counties. Imperial County is the only county not declared by U.S.SBA.
- **Federal Agency Support:** Cal OES met with federal agencies on January 30 to discuss potential drought emergency assistance to California state agencies. A matrix is currently being developed to identify all of the federal programs that can provide assistance to California. It was noted that a significant amount of federal assistance is dependent upon the passage of the Farm Bill.

State Government

- **Conservation Campaign:** State government continues to amplify the Governor's call for 20% water use reduction through its Save our Water campaign. Radio advertising, social media outreach and other forms of public awareness building are underway.
- **Conserving Water in Reservoirs:** The State Water Resources Control Board approved on Friday, January 31 a petition from the California Department of Water Resources and Bureau of Reclamation to adjust flows into the Sacramento-San Joaquin Delta from state and federal reservoirs. This action allows for the California State Water Project and the federal Central Valley Project to conserve water supplies upstream in reservoirs.
- **State Water Project**: Based on lack of water availability, the Department of Water Resources dropped its projected allocation amount to customers of the California State Water Project from 5% to 0% to conserve current water supply.
- **Water Curtailments:** The Water Resources Control Board announced that notices would be issued to certain junior water right holders to curtail their diversions of water from the Sacramento and San Joaquin River systems.
- **Fire Staffing:** CAL FIRE is maintaining fire season staffing in Southern California and immediately re-staffing seasonal fire fighters in areas of Northern California.
- **Fishing Closures**: The California Department of Fish and Wildlife announced on January 29 the closure of some waters to fishing in order to protect native salmon and steelhead from low water flows in California streams and rivers that have been significantly impacted by drought. The Department also recommended to the California Fish and Game Commission the immediate adoption of emergency regulations on other rivers at its next meeting, February 5..
- **Cost Data**: Cal OES is working with state agencies and local governments to gather drought-related costs, which is reported weekly to the Drought Task Force.
- **Water Transfers:** The Department of Water Resources has posted Water Transfer Status fact sheets to their website, developed action plans to expedite the processing of water transfer proposals, and is completing updates to the California Data Exchange Center to identify statewide storage conditions.
- The California Department of Food and Agriculture created a one-stop website that provides timely updates on the drought and connects farmers to state and federal programs that they can access during the drought.
- The Governor's Drought Task Force continues to meet daily to take actions that conserve water and coordinate state response to the drought.

Local Government

- **Water Agency Conservation Efforts**: Many local water agencies are implementing conservation programs, which include voluntary calls for reduced water use and conservation.
- **Local Emergency Proclamations** (County, City, Tribal): A total of 11 local emergency Proclamations have been received to date from city, county or tribal governments, including:
    - **Counties:** Glenn County, Inyo County, Kern County, Madera County, Mendocino County, Santa Barbara County, San Joaquin County
    - **Cities:** Brookside Township-Mendocino County, City of Willits in Mendocino County (2)
    - **Tribes:** Hoopa Valley Tribe in Humboldt County

  Pending local proclamations include: Tulare County (February 4), Tuolumne County (February 4) and Placer County Water Agency (February 6).

DROUGHT RELATED WEBSITES FOR MORE INFORMATION

Governor's Proclamation of Drought Emergency
State's Water Conservation Campaign, Save our Water
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

The Metropolitan Water District of Southern California

NEWS RELEASE

P. O. Box 54153, Los Angeles, California 90054-0153 • (213) 217-6485 • www.mwdh2o.com

Contact: Bob Muir, (213) 217-6930; (213) 324-5213 mobile

Jan. 30, 2014

METROPOLITAN GENERAL MANAGER ISSUES STATEMENT REGARDING GOVERNOR BROWN'S MEETING WITH SOUTHERN CALIFORNIA WATER LEADERS

Jeffrey Kightlinger, general manager of the Metropolitan Water District of Southern California, issued the following statement regarding today's meeting with Gov. Edmund G. Brown Jr.to provide an overview of statewide drought conditions and water management actions:

"The dry conditions facing California are unprecedented, and this region stands united with the governor in supporting his call for a statewide approach to a statewide problem. His message shows that California must be serious about addressing its short- and long-term water problems.

"We recognize the importance of approaching this challenge as one state with a common purpose. Metropolitan plans to respond in the coming weeks with the following proposed water management actions in consultation with the leadership of our Board of Directors;

- Declaring a formal water supply alert that embraces the governor's call on all Californians to voluntarily reduce water use by 20 percent.
- Doubling Metropolitan's conservation budget from $20 million to $40 million to provide more incentives for reducing water use.
- Exploring all achievable means to utilize Metropolitan's water and other resources to help address water supply challenges elsewhere in the state.

"Southern California water agencies have aimed to make conservation a local way of life. The city of Los Angeles, as a shining example, has maintained mandatory conservation measures since 2009. But what the state is facing right now is truly unprecedented. Southern California must continue to lead by example and partner with the rest of the state by all means feasible."

###

The Metropolitan Water District of Southern California is a cooperative of 26 cities and water agencies serving nearly 19 million people in six counties. The district imports water from the Colorado River and Northern California to supplement local supplies, and helps its members to develop increased water conservation, recycling, storage and other resource-management programs.

Governor's Representatives on Colorado River Operations
States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming

To: Commissioner Edward Drusina
U.S. Section - International Boundary and Water Commission

Cc: Commissioner Michael L. Connor
U.S. Bureau of Reclamation

Re: Consultative Council Submission of the Colorado River Pulse Flow Delivery Plan Pursuant to Resolution 1 of Minute 317, Sec. III.6.e(ii) of Minute 319, and the Memorandum of Agreement on the Implementation of Minute No. 319 (Nov. 20, 2012)

Da: 01/14/2014

This transmittal contains the submission by the members of the Consultative Council ("the Council") and signatories of the Memorandum of Agreement on the Implementation of Minute No. 319 (Nov. 20, 2012) ("MOA") of a Delivery Plan (attached) for the Colorado River Pulse Flow ("Delivery Plan"), as contemplated in Section III.6(e)(ii) of Minute 319, signed November 20, 2012 ("Minute 319"). Consistent with Minute 319, the Council is submitting this Delivery Plan for review and approval by the two sections of the International Boundary and Water Commission.

The role of the Council was first established in Minute 317 (reflected in Resolution 1) signed June 17, 2010. Moreover, the importance of coordinating actions to implement Minute 319 between the U.S. Federal Government, the seven Colorado River Basin States, and various public entities that rely on and utilize Colorado River water was formally memorialized in the MOA, which the members of the Council and MOA signatories view as an essential element to securing participation and reaching agreement on the suite of elements and actions ultimately contained in Minute 319 (including the pulse flow that is the subject of this submission).

After significant effort by numerous federal, state, local, and non-governmental entities on both sides of the U.S.-Mexico border, and after working directly with federal officials, academic experts, and non-governmental organizations, we are able to unanimously recommend for implementation the attached Delivery Plan and associated hydrograph described therein. (Attachment 1). Consistent with the provisions of Minute 319, the Delivery Plan includes "a schedule of monthly flows, delivery points and volumes in an amount of approximately 105,392 acre-feet."

As noted in the Delivery Plan, the pulse flow is a "one-time delivery event." Specifically, the Delivery Plan specifies the timing, location, and volume of deliveries to

be undertaken by the program and the associated objectives of those deliveries, and provides information on water sources, delivery infrastructure, and water accounting. The Delivery Plan also identifies relevant considerations to ensure that the planning and implementation of pulse and base flow deliveries pursuant to Minute 319 are implemented in a manner consistent with, and subject to, Minute 319 and the associated implementing agreements, as well as the 1944 U.S.-Mexican Water Treaty.[1]

In providing this recommended approach to the pulse flow pursuant to Minute 319, we recognize that work is underway to ensure that an appropriate Pulse Flow Monitoring Plan is developed between the two nations and that the Monitoring Plan is designed to monitor and assess implementation of the hydrograph contained in the attached Delivery Plan.

Given the importance of this element of Minute 319 and the anticipated effort to develop and "complete[] a comprehensive Minute that extends or replaces the substantive provisions of … Minute [319] through no later than December 31, 2026," Minute 319 at Sec. III, it is essential that the Commission recognize that our submission of this Delivery Plan is founded on a number of previously established considerations and agreements.

As you know, significant progress has been achieved over the past few years on U.S.-Mexico cooperation on the Colorado River. We appreciate the efforts and agreements that the federal and state partners have reached to facilitate innovative approaches to improve management of Colorado River water during a period of historic drought in the Colorado River basin. Following the completion of the 2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, the seven Colorado River Basin states committed to work with the federal government to attempt to secure agreements with the Republic of Mexico that would include appropriate cooperative measures that could facilitate water conservation, water management, and opportunities for environmental enhancement.

In 2010, through Minute 317, the two sections of the IBWC recognized the interest "of the states in the Colorado River Basin in the United States and in Mexico to participate in a binational dialogue about Colorado River cooperative actions. The Commissioners recognized the benefit … in formalizing an inclusive process that would explore initiatives and the development of cooperative actions and mechanisms that could benefit Colorado River water users in the United States and Mexico." Min. 317 at 2. "In this context, the Commissioners agreed to establish a binational Consultative Council, composed of representatives of the Commission, the respective federal governments, and the basin states, to facilitate consideration of the legal, administrative and policy matters associated with these issues." Min. 317 at 2-3.

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[1] As required by Min. 319, the Delivery Plan also includes provisions relating to the base flow, but we note that such activities will be undertaken within Mexico. Deliveries of such "base flow" amounts for 2014-17 will be scheduled each year and incorporated into Mexico's annual requested schedule for delivery of Colorado River water.

Ultimately, and with the involvement of the seven Colorado River Basin States, both countries were able to reach agreement on a pilot program through 2017 as contained in Minute 319. The pilot program embodied in Minute 319 was crafted so as to provide operational experience as both countries worked together to forge longer term agreements for cooperation on the Colorado River. Our recommendation of this Delivery Plan is submitted with the express recognition and on the condition that it does not create a precedent for future agreements or actions. See Min. 319 at Resolution 13. This recommendation also manifests the close working relationship between the Basin States and the U.S. federal agencies that was essential to finalize Minute 319. Our submission of this Delivery Plan is predicated on the understandings and fully consistent with the MOA adopted in November of 2012, particularly paragraphs 11 and 12.

Significant effort has been invested to be in a position to submit this Delivery Plan for implementation during calendar year 2014. We recognize that Minute 319 anticipates - but does not require - that the pulse flow take place in 2014. Given the ongoing conditions in the basin, and the desirability to implement the pulse flow early in the term of Minute 319 to be able to assess its implementation, the Council supports prompt implementation of the pulse flow in March/April of 2014. From an operational standpoint, the Council has reviewed all relevant considerations. While we recognize that Mexico has not yet submitted a Sec. III(1)/ICMA creation projection for 2014, it is our understanding that volumes of ICMA/III.1 creation could be as high as in years past, subject to funding and rate of infrastructure repairs. We also considered the most appropriate time to implement the pulse flow in the spring of 2014. Ultimately, the design for the Delivery Plan contemplates that the flow recession will begin on Sunday, March 30, one week before the start of the April 7-14 Yuma Centennial Days celebration in Yuma, Arizona. In light of this event, careful consideration of the timing of the pulse flow was closely coordinated with members of the Consultative Council, in particular the State of Arizona, to ensure that there would be a full assessment of the operational impacts of the pulse flow, with a particular focus on Yuma and nearby areas. As an overall matter, water operations officials in both countries will closely monitor operations, taking into consideration operational, hydrologic (e.g., rainfall) and other relevant matters, and use best efforts to ensure that all aspects of the Delivery Plan related to the pulse flow are appropriately implemented.

We appreciate and value the extraordinary working relationship that we have with our federal partners, and are also pleased that the interstate framework of cooperation now extends to our partnerships with Mexico. We look forward to the Commission's prompt approval of the attached Delivery Plan and successful implementation of this important component of Minute 319.

Sincerely,

[Signatures on next page]

Sandra A. Fabritz-Whitney
Director
Arizona Department of Water Resources

Dana B. Fisher, Jr.
Chairman
Colorado River Board of California

John H. McClow
Colorado Commissioner
Upper Colorado River Commission

Patricia Mulroy
General Manager
Southern Nevada Water Authority

Jayne Harkins
Executive Director
Colorado River Commission of Nevada

Estevan R. López
Director
New Mexico Interstate Stream Commission

Eric L. Millis
Director
Utah Division of Water Resources
Utah Interstate Stream Commissioner

Patrick T. Tyrrell
State Engineer
State of Wyoming

Don A. Ostler
Executive Director and Secretary
Upper Colorado River Commission

David V. Modeer
General Manager
Central Arizona Water Conservation District

Attachment

PROPOSED DELIVERY PLAN FOR
ENVIRONMENTAL FLOWS TO THE COLORADO RIVER RIPARIAN CORRIDOR
PURSUANT TO MINUTE NO. 319

January 9, 2014

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1. Purpose and Background

On November 20, 2012, the Commissioners of the U.S. and Mexican sections of the International Boundary and Water Commission ("Commission") executed Minute No. 319, Interim International Cooperative Measures in the Colorado River Basin Through 2017 and Extension of Minute 318 Cooperative Measures to Address the Continued Effects of the April 2010 Earthquake in the Mexicali Valley, Baja California ("Minute No. 319"). The Minute identifies a series of agreements, operational measures, and cooperative projects that will be undertaken by the United States and Mexico during a 5-year period (the "Pilot Period") through December 31, 2017.

The Minute authorizes a series of activities to be undertaken during the Pilot Period, including the delivery of water to the riparian corridor of the Rio Colorado downstream from Morelos Dam. Minute No. 319 provides:

> To provide for the delivery of the base flow and pulse flow for environmental purposes within Mexico under this Minute, the Commissioners will direct the Consultative Council and the Environmental Work Group to prepare a Delivery Plan, which will include a schedule of monthly flows, delivery points and volumes in an amount of approximately 105,392 acre-feet (130 mcm) for pulse flow and 52,696 acre-feet (65 mcm) for base flow. The Delivery Plan will be submitted to the two Sections of the Commission for review and approval by January 31, 2014. Once approved by the Commission, the Delivery Plan will be implemented, consistent with the 1944 Water Treaty and the provisions of this Minute.

Minute No. 319 at Art. III.6.e.ii.

This Delivery Plan specifies the timing, location, and volume of deliveries to be undertaken by the program, and provides information on water sources, delivery infrastructure, and water measurement. The Delivery Plan also identifies relevant considerations to ensure that the planning and implementation of pulse and base flow deliveries pursuant to Minute No. 319 is implemented in a manner consistent with, and subject to, Minute No. 319 and the associated implementing agreements, as well as the 1944 U.S.-Mexican Water Treaty.

This document was developed by the binational Environmental Flows Small Team for the benefit of the Minute 317 Environmental Work Group and Consultative Council. This Delivery Plan is subject to review and approval by the Commission.

2. Delivery Plan Guidelines

As noted above, pursuant to the terms of Minute No. 319, approximately 195 million cubic meters (mcm) (158,088 acre-feet (af)) of water is to be scheduled for delivery to the Colorado River riparian corridor. Of this volume, approximately 130 mcm (105,392 af) is to be delivered in the form of a "pulse flow" (i.e., a shorter-duration, one-time delivery event) tentatively during 2014 but no later than 2016, and is to be derived from the Intentionally Created Mexico Allocation (ICMA) created pursuant to Section III.4 or from the water deferred under Section III.1 of Minute No. 319. The remaining 65 mcm (52,696 af) is to be provided within Mexico in the form of a "base flow" (i.e., deliveries through the term of Minute 319).[1]

Pursuant to this Delivery Plan, water will be delivered to the riparian corridor of the Colorado River and associated restoration areas via a combination of releases at Morelos Dam and existing canal infrastructure in Mexico. For water delivery planning purposes, seven distinct sections, or "reaches," have generally been distinguished in the Colorado River floodplain during its progression from Morelos Dam to the sea, as depicted in **Figure 1**, below.

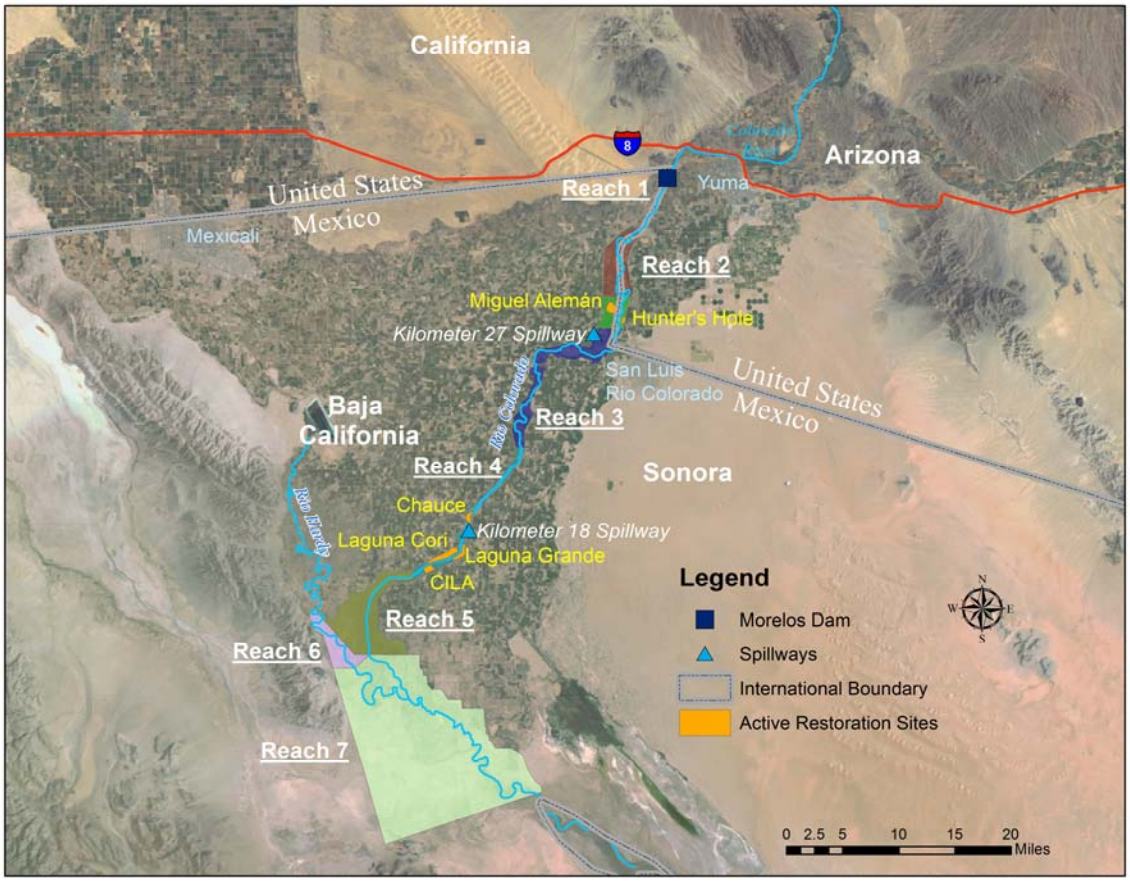

Figure 1: Reach Delineation and Water Delivery Infrastructure for the Colorado River Delta from Morelos Dam to the Sea of Cortez

[1] Pursuant to a commitment letter dated November 19, 2012, delivered to IBWC and CILA in connection with the execution of the Minute, a binational coalition of non-profit organizations has committed to cause the delivery of water for the base flow via operation of the Colorado River Delta Water Trust.

Each reach exhibits important differences in vegetation structure, hydrology, and restoration potential that have informed the development of the Delivery Plan as outlined below:

Reach 1: From north to south, the first section of the corridor – Reach 1, referred to as the Upper Limitrophe, extends for 12.5 river miles from Morelos Dam to Gadsden Bend along the U.S.-Mexico border. Water is present in the main channel of the Rio Colorado for most of this segment, together with significant existing stands of native riparian vegetation.

Reach 2**:** Reach 2, referred to as the Lower Limitrophe, extends 6.8 river miles from Gadsden Bend down to Hunter's Hole. The riverbed is generally dry most of the year in this section, although there are areas with seasonal surface water and zones with shallow groundwater. The Miguel Aleman restoration site is located in the middle portion of this reach.

Reach 3**:** Reach 3, referred to as the San Luis Reach, is a dry reach of the river extending approximately 21 miles from Hunter's Hole to Pescaderos, below San Luis Río Colorado. Groundwater levels in this area are significantly lower than in the upstream areas, and the riparian corridor has relatively little vegetation biomass and few native trees. One active restoration site has been contemplated in this area in connection with Minute No. 319.

Reach 4**:** Reach 4, referred to as the Central Delta, extends approximately 15 miles from Pescaderos to a point near Vado Carranza, not far downstream from a railroad bridge crossing over the Rio Colorado. Water is present in various short sections along the Rio Colorado riparian corridor, and there are significant patches of cottonwood, willow and mesquite present, although the dominant vegetation is saltcedar. There are several active restoration sites located in this reach that are planned to be undertaken or expanded pursuant to Minute No. 319, including several sites located in the Laguna Grande Restoration Area and the El Chauce site.

Reach 5: Reach 5, referred to as the Braided Reach, extends a further 10 miles downstream from Reach 4, starting from a point just upstream of Vado Carranza and extending to the confluence of the Hardy River. This section has limited surface water, and soil and water salinities are higher than in the upstream sections, but groundwater levels are shallow. This reach exhibits a high vegetation biomass dominated by saltcedar.

Reach 6: Reach 6, referred to as the Upper Rio Hardy, originates at the effluent-fed Las Arenitas wetland and continues to the Rio Hardy confluence with the Rio Colorado. This reach is characterized by substantial surface water flows with relatively high salinity, and supports a large amount of emergent vegetation as well as mesquite bosques and water-based recreation.

Reach 7: Reach 7, referred to as the Lower Rio Colorado and Upper Estuary, comprises the lower end of the Rio Colorado, extending from the confluence with the Rio Hardy downstream to the area of tidal influence in the Rio Colorado. Due to flows out of the Rio Hardy, a modest flow of surface water is generally present in the channel throughout Reach 7. Vegetation patterns are similar to Reach 6 at the upper end of Reach 7, while the lower end of Reach 7 is an emergent estuarine habitat with some saltgrass marshes and open water channels, but with no other significant vegetation.

3. Water Delivery Infrastructure and Measurement

The Delivery Plan involves the delivery of base flow and pulse flow water to the riparian corridor from a combination of structures, including Morelos Dam and from the canal infrastructure in Mexico. A map depicting the location of these structures along the Colorado River riparian corridor appears in **Figure 1**. All pulse flow deliveries will be delivered by the U.S. Bureau of Reclamation (after coordination with the IBWC) at the Northerly International Boundary (NIB). From that point the delivery and measurement of the pulse flow will be managed and coordinated by CONAGUA and CILA. Base flow water will be delivered within Mexico (that is, routed for various uses) via operation of the Colorado River Delta Water Trust, will be derived from water deliveries from the United States to Mexico, and will be managed and coordinated by CONAGUA and CILA.

Water operations officials in both countries will closely monitor operations, taking into consideration operational, hydrologic (e.g., rainfall) and other relevant matters, and use best efforts to ensure that all aspects of the Delivery Plan related to the pulse flow are appropriately implemented. Pending approval of this Delivery Plan by both Commissioners, both countries will work to carefully identify and adopt appropriate operational procedures to enable system operators to implement this plan. Furthermore, a detailed monitoring plan is being developed to evaluate the hydrological and biological response of the pulse and base flows.

a. Morelos Dam

A substantial portion of the environmental water deliveries pursuant to Minute No. 319 will be delivered to the Colorado River riparian corridor via releases from the Colorado River mainstream at Morelos Dam. A portion of base flow deliveries to Reaches 1 and 2, and a substantial majority of the pulse flow deliveries are planned for release from this structure.

USIBWC will measure the flow at the Northerly International Boundary (NIB) gage. Deliveries at Morelos Dam will be controlled and measured by the Mexican section of the IBWC (CILA).

b. Miguel Aleman Diversion

Infrastructure to allow direct delivery of water from Canal Reforma to the Miguel Aleman site was completed in 2012, including an intake from Canal Reforma and a 2-mile pipeline. Base flow deliveries in support of active restoration at the Miguel Aleman site will be made via this structure.

The turnout of Canal Reforma for the Miguel Aleman site was constructed to handle a capacity of 100 liters per second (lps, 3.5 cubic feet per second [cfs]), for a maximum delivery of 3.15 mcm per year (2,500 af). Water from Canal Reforma will be sent into the pipe with a pump, where a gauging station will be installed to precisely measure the volume delivered to the site. Water measurements and documentation will be coordinated with the Irrigation Module No. 7 as well as with the Office of the Irrigation District of CONAGUA and CILA.

c. Km. 27 Spillway

The spillway located at Km. 27 of Canal Reforma is used to divert flows from the Canal Reforma to the river floodplain. The spillway is operated by CONAGUA, and discharges into a wasteway that extends for 3 miles along Reach 3. The Office of the Irrigation District of CONAGUA operates a gauging station at the spillway, where they conduct flow measurements during releases.

The wasteway has a maximum capacity for an instantaneous flow of approximately 35 cubic meters per second (cms) (1,236 cfs), although there is no available capacity for pulse flow delivery prior to April 21, 20 cms (706 cfs) from April 21-30, and 30 cms (1060 cfs) after May 1.

A portion of base flow deliveries scheduled for Reach 3, as well as a small portion of pulse flow are planned for delivery through this structure.

d. Reach 3 Restoration Site Diversion

A small new diversion structure from a secondary irrigation canal operated by the Irrigation Module 7 is proposed near the Km. 27 wasteway. A small portion of base flow deliveries scheduled for a proposed restoration site in Reach 3 would be delivered through this structure. This restoration site is planned to be implemented in 2015.

The diversion structure will likely be designed with a capacity between a 100 and 120 lps (3.5 to 4.2 cfs), and accounting will be conducted following the protocols of the Irrigation District for deliveries to their water users, which are based on flow measurements at the gate twice daily.

e. El Chauce Diversion

A small irrigation gate is planned for installation at the El Chauce site in 2014, diverting from a secondary irrigation canal operated by Irrigation Module 8. Base flow deliveries scheduled for the El Chauce site will be delivered through this structure.

The diversion structure will likely be designed with a capacity between a 100 and 120 lps (3.5 to 4.2 cfs), and accounting will be conducted following the protocols of the Irrigation District for deliveries to their water users, which are based on flow measurements at the gate twice daily.

f. Canal Barrote Km 18 Spillway

The spillway located at Km. 18 of Canal Barrote is used to divert flows from the Canal Barrote to the river floodplain. The spillway is operated by the Irrigation District Water Users Association, and discharges into a wasteway in Reach 4.

The wasteway has a maximum capacity for an instantaneous flow of approximately 20 cms (70 cfs), although there is no available capacity for pulse flow delivery through April 30 and 13 cms (459 cfs) after May 1.

A small volume of pulse flow deliveries are planned for delivery through this structure. The staff of Irrigation District Water Users Association operates a gauging station at the spillway, where they conduct flow measurements during releases.

g. Laguna Grande Diversions

Three irrigation gates located at the restoration sites will be used to deliver small flows into the backwater and oxbow areas within the Laguna Grande Restoration Area. These gates divert water from Canal Barrote, operated by the Irrigation Module 22. Base flow deliveries scheduled at the Laguna Grande site will be delivered through these structures.

Three gates have been installed, each with a maximum capacity of 120 lps (4.2 cfs). Accounting is conducted following the protocols of the Irrigation District for deliveries to their water users, which are based on flow measurements at the gate twice daily.

4. Water Deliveries Under Minute No. 319

a. Pulse Flow Deliveries

The total volume of pulse flow delivered during the Pilot Period will be 130 mcm (105,392 af), to be derived from water deferred pursuant to Section III.1 of Minute No. 319 or from ICMA created by Mexico pursuant to Section III.4 of Minute No. 319. Minute No. 319 allows for the pulse flow to take place in 2014. This is the recommended approach so as to allow for evaluation of the ecosystem response to water deliveries to the riparian corridor (i.e. hydrological and biological results) which will provide information that can be considered by both nations in the context of potential future cooperative actions as provided in Minute No. 319.

i. Timing and Location of Pulse Flow Deliveries

As illustrated in **Figure 2**, the pulse flow hydrograph begins releasing water from Morelos Dam on March 23 and rapidly ramps up to a peak flow of 120 cms (4,238 cfs) from March 27 through March 29. The 120 cms (4,238 cfs) flow peak magnitude is likely to inundate the passive and active restoration sites in all reaches. Moreover, it is well-timed to germinate cottonwood seeds, which disperse primarily in March and April, and to avoid germinating saltcedar seeds, which disperse well into May. Therefore, this peak flow rate has a high probability of achieving desired hydrologic and biological outcomes.

Flow recession begins on Sunday, March 30, one week before the start of the April 7-14 Yuma Centennial Days celebration in Yuma, Arizona. In light of this event, consideration of the timing of the pulse flow was closely coordinated with members of the Consultative Council, in particular the State of Arizona, to ensure that there would be full consideration of the operational

impacts of the pulse flow, with a particular focus on Yuma and nearby areas. The flow recession rate is relatively rapid, in order to favor cottonwood over saltcedar seedling establishment. The pulse flow concludes on May 18, 2014, and occurs over a total of 57 days (including 4 days without scheduled flow deliveries).

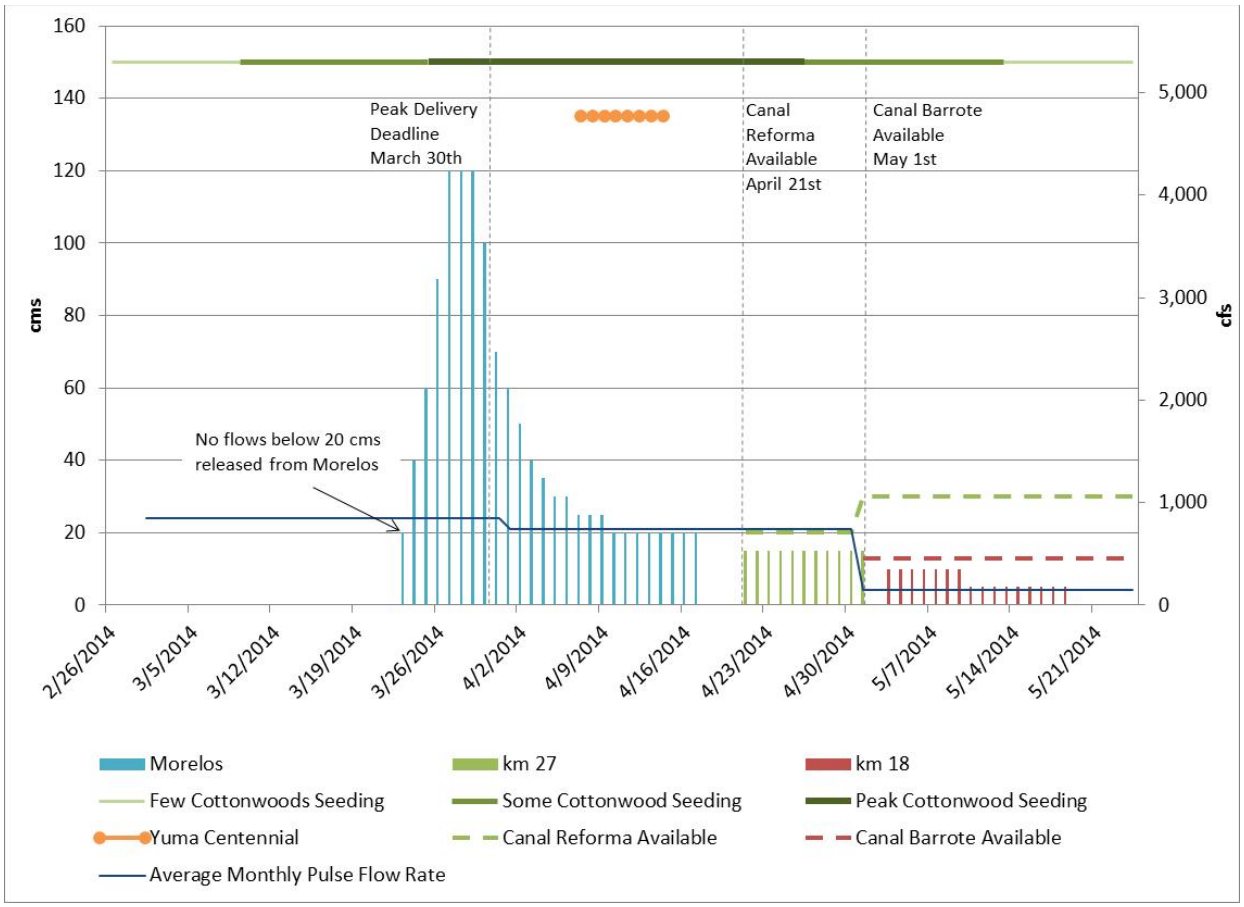

Figure 2: Pulse Flow Hydrograph for Minute No. 319

This hydrograph takes advantage of the ability of Canal Reforma Km 27 and Canal Barrote Km 18 spillways to divert deliveries around all (Km 18) or part (Km 27) of the 41-km dry river reach in lower Reach 2 and in Reach 3 (see **Figure 1**). Due to a deep groundwater table, infiltration losses from this dry reach are expected to be significant. Diverting deliveries around it maximizes the amount of water available for Reach 4, where most of the targeted restoration area is located. These spillways are available only after April 21 (Km 27) and May 1 (Km 18).

The peak flow recession from Morelos Dam delivery is designed to complement deliveries from the spillways. However, the timing and magnitude of peak flows when they arrive at Reach 4 are not well understood, due to considerable uncertainty in infiltration rate, lag time, retention, and attenuation. Delivering part of the pulse flow through the canal spillways affords some degree of flexibility to adapt to actual conditions in real time (although uncertainties also exist regarding how flows delivered via canal spillways will interact with the river mainstem).

b. Base Flow Deliveries

The total volume of base flow delivered during the Pilot Period will be 65 mcm (52,696 af), to be delivered within Mexico via operation of the Colorado River Delta Water Trust, which owns water rights in the Mexicali Valley. Delivery targets for base flows will be established for each Reach based on the following priorities: (1) provide sufficient flows to active restoration sites to establish and maintain riparian vegetation and open water areas (note that most active restoration requires irrigation only for a few years until roots reach groundwater and that volumes below vary according to these needs); (2) maintain surface water and favorable groundwater conditions in areas with identified potential for "passive restoration" following the completion of pulse flow deliveries; (3) support passive restoration experiments by increasing available flow and/or surface water area in targeted restoration sites.

i. Base Flow Deliveries to Support Active Restoration Sites

There are a series of existing and planned "active restoration" (e.g. site preparation and tree planting) sites in the Rio Colorado riparian corridor (located in Reaches 2, 3, and 4) that will receive deliveries of base flows during the Minute No. 319 Pilot Period shown in **Figure 3**.

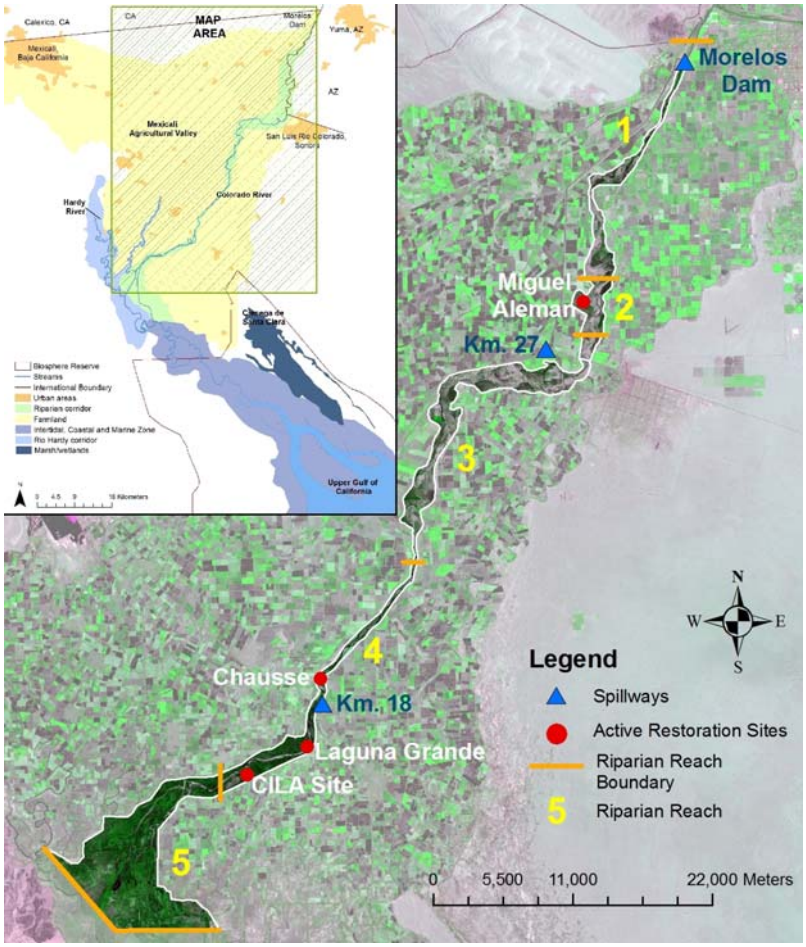

Figure 3: Km 18 and Km 27 spillway locations and Colorado River Delta restoration sites (existing and planned)

The base flows associated with these restoration activities will be delivered to these sites primarily via existing primary and secondary canal infrastructure. Water deliveries in 2013, as well as water deliveries planned for 2014 that are associated with existing and planned/proposed active restoration sites are summarized by reach and by proposed point of delivery, and appear in Table 1. Deliveries for 2015-17 will be scheduled each year and incorporated into Mexico's annual requested schedule for delivery of Colorado River Water.

Table 1. Annual Base Flow Delivery Targets for Active Restoration Use

	water year					
	2013		2014		2015-17	
	m3	af	m3	af	m3	af
reach 2						
Miguel Aleman Diversion	160,353	130	1,010,880	820		
reach 3						
Km 27 Wasteway	0	0	0	0		
Reach 3 Restoration Site Diversion	0	0	0	0	To Be Determined	
reach 4						
El Chauce Restoration Diversion	0	0	0	0		
Laguna Grande Main Diversion	682,115	553	2,938,894	2383		
TOTAL BASEFLOW DELIVERY	842,468	683	3,949,774	3203		

ii. Base Flow Deliveries to Support Passive Restoration

Other base flow deliveries will be utilized to support "passive restoration" at sites throughout Reaches 1-5 that have identified potential for "passive restoration" (e,g. recruitment of native vegetation through limited site preparation and delivery of water). Annual proposed deliveries of base flow in support of passive restoration activities will be determined in the fall of each year and incorporated into Mexico's annual requested schedule for delivery of Colorado River water.

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

OFFICE OF THE COMMISSIONER
UNITED STATES SECTION

January 23, 2014

Mr. John Entsminger
Las Vegas Valley Water District
1001 S. Valley View Blvd.
Las Vegas, Nevada 89153

Dear Governor's Representatives on Colorado River Operations (U.S. Consultative Council)

Thank you for your submission of the "Proposed Delivery Plan for Environmental Flows to the Colorado River Riparian Corridor pursuant to Minute No. 319" for review and approval by the International Boundary and Water Commission. I note that the Consultative Council unanimously recommends implementation of the Delivery Plan and supports prompt implementation of the pulse flow in March/April 2014.

I have provided the documents to the Mexican Commissioner Roberto Salmon and I expect him to join me in approving the Delivery Plan in the next few days but certainly before the end of the month.

I also point out that consistent with your memo transmitting the Delivery Plan, the United States does not consider approval and implementation of the Delivery Plan under the Minute 319 Pilot Program to set a precedent for future agreements or actions.

I greatly appreciate the Consultative Council's thoughtful consideration of the Delivery Plan and your commitment to act in the spirit of cooperation that has characterized the Minute 319 process. It is precisely that spirit of cooperation that will help us implement Minute 319 successfully to set the stage for additional joint cooperative efforts well into the future.

Sincerely,

Edward Drusina, P.E.
Commissioner

The Commons, Building C, Suite 100 • 4171 N. Mesa Street • El Paso, Texas 79902-1441
(915) 832-4100 • Fax: (915) 832-4190 • http://www.ibwc.gov

cc: Sandra A. Fabritz-Whitney, Director
Arizona Department of Water Resources

Dana B. Fisher, Jr., Chairman
Colorado River Board of California

John H. McClow, Colorado Commissioner
Upper Colorado River Commission

Patricia Mulroy, General Manager
Southern Nevada Water Authority

Jayne Harkins, Executive Director
Colorado River Commission of Nevada

Estevan R. Lopez, Director
New Mexico Interstate Stream Commission

Eric L. Millis, Director
Utah Division of Water Resources, Utah Interstate Stream Commissioner

Patrick T. Tyrrell, State Engineer
State of Wyoming

Don A. Ostler, Executive Director and Secretary
Upper Colorado River Commission

David V. Modeer, General Manager
Central Arizona Water Conservation District

Michael Connor, Commissioner
U.S. Bureau of Reclamation

THE LOWER COLORADO WATER SUPPLY ACT
P.L. 99-655; P.L. 109-103

Background

Use of Colorado River water within California is subject to rules and regulations, laws, decrees of the U.S. Supreme Court, contracts, agreements and an international treaty collectively known as the "Law of the River". Consumptive use of Colorado River water is defined in the Supreme Court's Arizona v. California decree, (547 U.S. 150 (2006)), as: "diversions from the mainstream less such return flow thereto as is available for consumptive use in the United States or in satisfaction of the Mexican treaty obligation." Section 5 of the Boulder Canyon Project Act of 1928 (45 Stat. 1057) provides that water from the Colorado River downstream of Lee Ferry, Arizona, including reservoirs on the Colorado River, shall be released or delivered to water users, including but not limited to public and municipal corporations and other public agencies in Arizona, California, and Nevada only pursuant to valid water contracts from the Secretary of the Interior. This requirement applies to all diversions of water from the Colorado River, whether it is diverted directly from the River or through groundwater wells that are withdrawing Colorado River water.

In 1986, Congress enacted the Lower Colorado Water Supply Act of 1986 (LCWSA) (Public Law 99-655) as a mechanism to enable water users within California without contracts or with contracts for an insufficient amount of water to collectively obtain by exchange up to 10,000 acre-feet of water per year from the Colorado River for existing and future uses within California. The LCWSA authorized the U.S. Bureau of Reclamation (Reclamation) to construct the Lower Colorado Water Supply Project (Project). The Project consists of well-field facilities in the Sand Hills area along the All-American Canal in Imperial County. The purpose of the Project is to "supply water for domestic, municipal, industrial, and recreational purposes only." Supplying water for agricultural use is not an authorized purpose of the Project. The LCWSA limits the eligible Project beneficiaries "to persons or Federal or non-Federal governmental agencies whose lands or interests in lands are located adjacent to the Colorado River in the State of California, who do not hold rights to Colorado River water or whose rights are insufficient to meet their present or anticipated future needs as determined by the Secretary."

In 2005, the LCWSA was amended to authorize the Secretary of the Interior to enter into an agreement with the City of Needles for the design and construction of Stage 2 of the Project that will add 5,000 acre-feet of capacity to bring the Project to its full, authorized capacity. The amendment further authorized the Secretary to contract with additional entities who hold Section 5 contracts for municipal and industrial uses within the State of California for the use of any unused Project water (Public Law 109-103, Sec. 203).

The City of Needles has a contract with the Department of the Interior to utilize Colorado River water in excess of its present perfected right through an exchange agreement between

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Reclamation, the Imperial Irrigation District (IID) and the Coachella Valley Water District (CVWD). Through the exchange agreement, IID has agreed to reduce its diversions from the Colorado River in the amount necessary to offset the amount of water needed to fulfill Project contracts, up to a maximum of 10,000 acre-feet per year. In exchange, IID receives an equivalent amount of groundwater pumped from the Project well field located in Imperial County, California. Water is pumped from the well field and discharged into the All-American Canal for delivery to IID and CVWD.

In addition to supplying water for its own municipal and industrial needs, the City of Needles acts as a Project Administrator for the Project to enable other eligible water users to subcontract for the use of Colorado River water subject to Project availability. Available Project capacity is determined by the City of Needles and Reclamation. Reclamation must approve all subcontracts between the City of Needles and additional water users. In exchange for obtaining the contract right to utilize water, subcontractors provide funding to repay the cost of constructing the Project facilities, plus interest, and the costs associated with Project administration, operation, maintenance and replacement.

The availability of Project water is contingent upon the ability of the Project well field to pump water into the All-American Canal in sufficient quantity and of acceptable quality in accordance with the LCWSA and the *Contract Among the United States, Imperial Irrigation District, and Coachella Valley Water District for Exchange of Water From The Lower Colorado Water Supply Project Well Field for Colorado River Water* dated May 22, 1992, as amended ("All-American Canal Exchange Contract"). None of the parties to the All-American Canal Exchange Contract assumes responsibility with respect to the quantity or quality of the water pumped from Project wells for discharge into the All-American Canal and none are under any obligation to construct or furnish facilities except those expressly authorized under the LCWSA.

<u>Procedures to Obtain a Subcontract from the City of Needles to receive water through the Lower Colorado Water Supply Project</u>

The Colorado River Board of California (CRB) reviews applications for use of Colorado River water by exchange for Project water and makes a recommendation to Reclamation as to whether a subcontract should be approved. Persons interested in obtaining a subcontract for Project water should submit an application to the CRB. The CRB will review the following information in evaluating applications for a subcontract:

(1) <u>Place of Use</u>: The CRB will verify that the place of consumptive use for the proposed use of Project water is within California.

(2) <u>Point of Diversion of Colorado River Water</u>: The CRB will determine whether the applicant is diverting directly from the Colorado River, or in the case of a request to

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divert groundwater, whether the applicant's well or wells are potentially withdrawing water that is replaced by water from the Colorado River.

Water withdrawn from wells located within the flood plain of the Colorado River will be deemed to be diverting water from the Colorado River. Wells located outside of the flood plain of the Colorado River, but within the "accounting surface area" that have a static water-level elevation near (within ± 0.84 feet at the 95-percent confidence interval), equal to, or below the accounting surface are presumed to yield water that will be replaced by water from the River. Wells that have a static water-level elevation above the accounting surface are presumed to yield water that will be replaced by water from precipitation and inflow from tributary valleys. The accounting surface area represents the extent of the unconfined static water table in the aquifer adjacent to and outside the Colorado River flood plain. Wells located outside of the flood plain of the Colorado River and outside the accounting surface area will be deemed not to be diverting water from the Colorado River and no subcontract for the use of Colorado River water will be required or recommended. The "accounting surface area" has been defined by the U.S. Geological Survey in its Scientific Investigations Report 2008-5113, which may be found at http://pubs.usgs.gov/sir/2008/5113/.

(3) Purpose of Use: The CRB will consider whether the applicant is consumptively using, or proposing to consumptively use, Colorado River water for a domestic, municipal, industrial or recreational purpose, which are the only uses of Project water permitted under the Act.

(4) Quantity of Water Requested: The CRB will review the quantity of water requested for current and/or future use and determine whether sufficient capacity is available from the Project.

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COLORADO RIVER BOARD OF CALIFORNIA

APPLICATION FOR LOWER COLORADO WATER SUPPLY PROJECT WATER

Applicant Information:

Name: _____
First Middle Last

Mailing Address: _____
Number Street City State Zip Code

Telephone Number: (_____) _____ - _____ Fax Number: (_____) _____ - _____,

e-mail Address: _____

1. **Place of Use:**

Property County Assessor Parcel Number (APN): _____, County: _____

Parcel Legal Description: _____

Address, if available: _____

Property Owner: _____

2. **Location of Proposed Point of Diversion: (Surface or well location)(A map, illustration, and/or drawing may be included)**

_____

_____

3. **Purpose of Use:**

Domestic (❑ Residential ❑ Commercial), ❑ Municipal, ❑ Industrial, ❑ Recreational,

Please describe: _____

4. **Quantity of Water Requested:**

(a) current use (within the next calendar year): _____ acre-feet annually

(b) future use: _____ acre-feet annually

Submitted by (all the individuals on title):

Print Name: _____

Signature: _____, Date: _____

Print Name: _____

Signature: _____, Date: _____

Mail to: ***Colorado River Board of California, 770 Fairmont Avenue, Suite 100, Glendale, CA 91203-1068***

.....

FOR COLORADO RIVER BOARD USE ONLY

Date Received: _____ Approved: ❑ Yes ❑ No

RESOLUTION
OF THE
COLORADO RIVER BOARD OF CALIFORNIA

HONORING

PATRICIA MULROY OF NEVADA

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

WHEREAS, the optimum use of the resources of the Colorado River System by the seven Colorado River Basin states, consistent with the "Law of the River", depends upon interstate cooperation in addressing all Colorado River matters and issues; and

WHEREAS, Patricia Mulroy served as general manager of the Southern Nevada Water Authority from 1993 until retiring in February 2014; and

WHEREAS, Pat served as a tenacious and tireless representative of the State of Nevada's Colorado River interests during her entire career; and

WHEREAS, Pat exhibited significant leadership as she worked closely with her colleagues in the Colorado River Basin to craft lasting agreements including the 2005 Lower Colorado River Multi-Species Conservation Program, the 2007 Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead and the historic Minute 319 to the 1944 Water Treaty with Mexico that have forged new ways of thinking and resolving disputes within the Colorado River Basin; and

WHEREAS, these agreements and programs have formed a solid foundation for continued collaborative discussions among the Colorado River Basin states to ensure that the critical water supply needs of each state will be met in the future; and

WHEREAS, the Board appreciates Pat's message that collaboration and compromise within the Colorado River Basin will help ensure the longevity of water uses and the continued protection of natural and cultural resources within the Colorado River System;

NOW THEREFORE BE IT RESOLVED that the Colorado River Board of California commends Patricia Mulroy for her professional achievements, genuine contributions in resolving interstate Colorado River issues, and for her leadership and cooperation during her years of outstanding public service with the Southern Nevada Water Authority;

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

Unanimously adopted on the 12th day of February, 2014.

_____
Dana B. Fisher, Jr., Chairman

RESOLUTION
OF THE
COLORADO RIVER BOARD OF CALIFORNIA

HONORING

SANDRA FABRITZ-WHITNEY OF ARIZONA

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

WHEREAS, the optimum use of the resources of the Colorado River System by the seven Colorado River Basin states, consistent with the "Law of the River", depends upon interstate cooperation in addressing all Colorado River matters and issues; and

WHEREAS, Sandra Fabritz-Whitney served as the Director of the Arizona Department of Water Resources since 2011, concluding a twenty-one year career with the department ; and

WHEREAS, during her career with the Arizona Department of Water Resources, Sandy served as the Technical Administrator of the Arizona Water Banking Authority, and as the Assistant Area Director for the Phoenix Active Management Area, and oversaw several statewide water management programs; and

WHEREAS, Sandy worked closely with her colleagues in the Colorado River Basin to craft lasting agreements that have forged new ways of thinking and resolving disputes within the Colorado River Basin; and

WHEREAS, Sandy vigorously represented the State of Arizona in negotiations with the other Colorado River Basin States to achieve agreements that will help ensure the longevity of water uses and continued protection of the natural and cultural resources of the Colorado River System;

NOW THEREFORE BE IT RESOLVED that the Colorado River Board of California commends Sandy for her professional achievements, genuine contributions in resolving interstate Colorado River issues, and for her leadership and cooperation during her years of outstanding public service with the Arizona Department of Water Resources;

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

Unanimously adopted on the 12th day of February, 2014.

_____
Dana B. Fisher, Jr., Chairman