

February 1, 2019

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


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

Date: Wednesday, February 13, 2019
Time: 10:00 a.m.
Place: Joshua Room Sheraton Ontario Airport Hotel 429 North Vineyard Avenue Ontario, CA 91764 Tel: 909-937-8000

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. Peter Nelson, Chairperson, Colorado River Board of California, 770 Fairmont Avenue, Suite 100, Glendale, California, 91203-1068.

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

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

  
Christopher S. Harris  
Executive Director



Minutes of Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
Wednesday, January 9, 2019

A meeting of the Colorado River Board (Board) of California was held on Wednesday, January 9, 2018.

Committee Members and Alternates Present

Evelyn Cortez-Davis (LADWP Alternate)  
David De Jesus (MWD Alternate)  
James Hanks (IID)  
Jeanine Jones (DWR Designee)  
Hank Kuiper (Public Member)

Peter Nelson, Chairman (CVWD)  
Glen D. Peterson (MWD)  
David R. Pettijohn (LADWP)  
Mark Watton (SDCWA Alternate)

Committee Members and Alternates Absent

Dana B. Fisher, Jr. (PVID)  
Christopher Hayes (DFW Designee)  
Nicole Neeman-Brady (Public Member)  
John Powell, Jr. (CVWD Alternate)

Jack Seiler (PVID Alternate)  
Norma Sierra Galindo (IID Alternate)  
David Vigil (DFW Alternate)  
Doug Wilson (SDCWA)

Others Present

Steve Abbott  
Melissa Baum-Haley  
Robert Cheng  
Elsa Contreras  
Christopher Harris  
Bill Hasencamp  
Joanna Hoff  
Michael Hughes  
Ned Hyduke  
Laura Lamdin  
Tom Levy  
Henry Martinez

Henry Martinez  
Kara Mathews  
Cris Morris  
Jessica Neuwerth  
Ivory Reyburn  
Shanti Rosset  
Tom Ryan  
Tina Shields  
Alina Tishchenko  
Jerry Zimmerman

## **CALL TO ORDER**

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:09 a.m.

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

Chairman Nelson invited members of the audience to address the Board on items on the agenda or matters related to the Board.

Ms. Tina Shields introduced Mr. Henry Martinez as the new General Manager for the Imperial Irrigation District.

## **ADMINISTRATION**

Chairman Nelson asked for a motion to approve the December 12, 2018 meeting minutes. Mr. Hanks moved that the minutes be approved, seconded by Mr. Pettijohn. By roll-call vote the minutes were unanimously approved.

Mr. Harris indicated that per new Rules and Regulations of the Colorado River Board of California, Election of Officers will occur during the February 13<sup>th</sup> Board meeting.

## **COLORADO RIVER BASIN WATER REPORTS**

### **Colorado River Basin Report**

Mr. Harris reported that as of January 7<sup>th</sup>, the water level at Lake Powell was 3,580.33 feet, just under 10 million-acre feet (MAF) of storage, or 41% of capacity. The water level at Lake Mead was 1,082.21 feet with 10.20 MAF of storage, or 39% of capacity. The total system storage was 26.99 MAF, or 45% of capacity, which is about 5 MAF less than the system storage at this time last year.

Mr. Harris reported that as of January 7<sup>th</sup>, the forecasted Lake Powell inflow for Water Year 2019 is 6.98 MAF (64% of normal). The forecasted April to July 2019 runoff into Lake Powell is 4.55 MAF (63% of normal). The December 2018 observed inflow and January 2019 inflow forecast into Lake Powell are 0.23 MAF (63% of normal) and 0.24 MAF (65% of normal). The WY-2019 precipitation to date is 95% of normal and current Basin snowpack is 87% of normal.

Mr. Harris reported that in December, precipitation conditions were average throughout

the Basin. A couple of storms moved through in early December but the rest of the month was dry. The Snow Water Equivalent data showed that the Upper Green, Yampa, Duchesne, and the Upper Colorado were doing well, while the southern portion of the Upper Basin was drier. Mr. Harris reported that, besides the large mainstem reservoirs, the rest of the reservoirs in both Upper and Lower Colorado River Basins remained in average condition for this time of the year.

Mr. Harris reported that as of January 3<sup>rd</sup>, Brock and Senator Wash Reservoirs had captured 1,635 AF and 1,823 AF, respectively. The provisional storage values for last calendar year for Brock and Senator Wash Reservoirs are 159,835 AF and 76,066, respectively. He also reported that excess deliveries to Mexico through January 7<sup>th</sup> were 304 AF, and only 7,035 AF of excess flows to Mexico were delivered last calendar year. Mr. Harris reported that the bypass flows to the Cienega typically average around 120,000 AF and last year was 102,089 AF. He commended Reclamation's Yuma Area Office for the reduction of the bypass and excess flows.

### **State and Local Report**

Mr. Harris reported that exceptional drought conditions continue to persist in the Four Corners Region. Mr. Harris also reported that the Secretary of Interior has not yet approved the 2019 Annual Operating Plan (AOP). The final draft is still posted on Reclamation's website. He added that he does not anticipate any changes to the existing proposed 2019 AOP. In response to Board members' questions, Mr. Harris reported that the delay is probably due in part to the federal government shutdown, as well as the recent departure of Secretary Zinke.

Ms. Jones, representing the California Department of Water Resources (DWR), reported that at this time it is too early to say what the water year is going to be like. The statewide snowpack is at 85% of average. With an active weather pattern for the next five to seven days, precipitation amounts are starting to catch up but remain below average. Ms. Jones reported that the State's reservoir system is tracking a little bit below average because of the dry winter. She reported that on January 7<sup>th</sup>, despite the shutdown, Congress reauthorized the National Integrated Drought Information System (NIDIS) Act and the Weather Research Act of 2017, which directs the weather service to direct resources to much needed research on subseasonal forecasting. She added that Mr. Frank Gehrke has retired and Mr. John King has been doing the public snow surveys in his place.

Mr. Peterson, representing the Metropolitan Water District of Southern California (MWD), reported that MWD reservoir storage is at 85% of capacity. He also reported that operating on a six-pump flow will allow MWD to take 200,000 AF out of ICS this year in case there is no DCP.

Mr. Pettijohn, representing the Los Angeles Department of Water and Power, reported that the last couple of storms have improved the Eastern Sierra snowpack, but it is still too early to tell how much runoff would be available for the Los Angeles Aqueduct.

## **STATUS OF COLORADO RIVER BASIN PROGRAMS**

### **Lower Basin Drought Contingency Plan**

Mr. Harris reported that the agencies in Arizona, California, and Nevada all continue to work to finalize the Lower Basin Drought Contingency Plan (DCP). Mr. Harris noted that the agreements necessary to implement the DCP include a Basin States/United States Companion Agreement, Lower Basin Drought Contingency Plan agreement and operational exhibit, and intrastate and interagency agreements, such as the ICS-Sharing Agreement and California ICS Agreement. Also under consideration are a number of proposed new ICS exhibits to the 2007 Forbearance Agreement.

Mr. Harris reported that Bureau of Reclamation Commissioner Burman had set the Basin States a January 31<sup>st</sup> deadline for completion of the DCP. Commissioner Burman also noted that on February 1<sup>st</sup>, without a completed DCP, a federal register notice would be published, inviting recommendations on how the federal government should manage the reservoir system. Mr. Harris reported that stakeholders in Arizona were working diligently to meet the January 31<sup>st</sup> deadline and were continuing to develop agreements to implement the DCP within the state. Mr. Harris noted that a number of Arizona's proposed draft agreements and ICS exhibits were made available online for public review.

Mr. Harris reported that Bureau of Reclamation (Reclamation) staff would be working with the agencies proposing ICS exhibits to ensure their consistency with the 2007 Guidelines. Within California, new ICS exhibits are proposed by the Coachella Valley Water District, Imperial Irrigation District, and Metropolitan Water District. The only proposed ICS exhibit for Nevada comes from the Southern Nevada Water Authority and has been publicly available for several months. Mr. Harris noted that Reclamation intended to work individually with agencies regarding new ICS exhibits and encouraged parties within each state to reach consensus on a state package of ICS exhibits.

Mr. Harris noted that in order to activate Section IV of Minute 323, which initiates Mexican drought contingency planning, by the August 2019 determination, the DCP must be completed and approved by no later than mid-April.

Mr. Harris reported that some minor modifications are expected to the Lower Basin DCP agreement as a result of negotiations to resolve issues with the Central Arizona Water Conservation District (CAWCD) and Arizona Department of Water Resources (ADWR). Changes to those agreements would be circulated as soon as possible. Ms. Shanti Rosset, with the Metropolitan Water District, noted that the small drafting group of Basin States representatives would be involved in that process. She also reiterated that, although Reclamation was an important

partner in developing and finalizing the proposed new ICS agreements, the process of creating and approving these exhibits is state-driven.

### **Minute No. 323 Implementation**

Mr. Harris reported that the Environmental Work Group for Minute 323 would be meeting January 23-24 in Tijuana, Baja California, Mexico, to finalize their 2019 plans for restoration, monitoring, and water delivery.

### **Status of the Salinity Control Forum**

Mr. Harris reported that Reclamation informed the states that the finalization of the Paradox Valley Unit EIS is pushed out three to six months because BLM has requested Reclamation to include in the EIS additional information related to visual, cultural, and air quality resources. The Record of Decision for the EIS is still scheduled for release in the summer or fall of 2020. The Work Group will be meeting on February 20<sup>th</sup> through 22<sup>nd</sup> in Phoenix, Arizona, and the Forum and Advisory Council will be in Denver in the spring for its 100th meeting.

### **Glen Canyon Dam Adaptive Management Program**

Mr. Harris reported that the Glen Canyon Dam Adaptive Management Program's Technical Work Group (TWG) would meet in mid-February, in conjunction with the group's Annual Reporting Meeting. At this meeting, the group would review the past year's accomplishments, research, and monitoring, including results from any recent experimental activities such as the November 2018 High Flow Experiment (HFE). Mr. Harris noted that the full Adaptive Management Work Group (AMWG) is scheduled to meet in early March.

### **Lower Colorado River Multi-Species Conservation Program**

Mr. Harris reported that the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) had scheduled its annual Colorado River Terrestrial and Riparian meeting for January 29-31. The LCR MSCP will also conduct a financial work group call on February 21<sup>st</sup>.

## **ANNOUNCEMENTS**

Mr. Harris reported that with the adjournment of the 115<sup>th</sup> Congress and the commencement of the 116<sup>th</sup> Congress on Thursday, January 3rd, the federal government remains in a partial shutdown. The House has proposed two separate bills - one to reopen eight departments including the EPA and the Department of the Interior through September 2019, another to reopen the Department of Homeland Security through February 8<sup>th</sup>. The Administration has not signaled support for either proposal without border wall funding.

Mr. Harris reported that California Congresswoman Nancy Pelosi was elected to be Speaker of the House of Representatives; California Congressman Kevin McCarthy will assume his new role as House Minority Leader and Senator Mitch McConnell will continue his tenure as Majority Leader in the Senate, as will Senator Chuck Schumer as minority leader. Furthermore, energy, infrastructure and climate issues are expected to be a focus in the House this Congress.

Mr. Harris reported that Secretary of the Interior Ryan Zinke resigned at the end of the year, and Deputy Secretary of the Interior David Bernhardt is the Acting Secretary of the Interior. Replacements could include Acting Secretary Bernhardt, former Nevada Senator Dean Heller, former California Congressman Jeff Denham or others.

Ms. Jones noted that the Board Packet includes the flyer for an event associated with the Groundwater Resources Association on forecasting groundwater recharge. The event will examine how recent changes, such as the implementation of the Sustainable Groundwater Management Act (SGMA), may facilitate more groundwater recharge projects that were previously considered infeasible.

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be February 13<sup>th</sup>.

## **ADJOURNMENT**

With no further items to be brought before the Board, Chairman Nelson adjourned the meeting at 10:44 a.m.





2/4/2019

## LOWER COLORADO WATER SUPPLY REPORT

River Operations  
Bureau of Reclamation

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

(702) 293-8373

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

	PERCENT	Content 1000 ac-ft (kaf)	Elev. (Feet above mean sea level)	7-Day Release (CFS)
CURRENT STORAGE	FULL			
LAKE POWELL	39%	9,579	3,575.74	13,000
* LAKE MEAD	40%	10,498	1,085.81	10,000
LAKE MOHAVE	93%	1,677	642.20	8,700
LAKE HAVASU	92%	568	447.34	4,400
TOTAL SYSTEM CONTENTS **	45%	26,904		
As of 2/3/2019				
SYSTEM CONTENT LAST YEAR	53%	31,847		
* Percent based on capacity of 26,120 kaf or elevation 1,219.6 feet.				
** TOTAL SYSTEM CONTENTS includes Upper & Lower Colorado River Reservoirs, less Lake Mead exclusive flood control space.				
Salt/Verde System	49%	1,120		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam	8%	78	1,099.23	16
Forecasted Water Use for Calendar Year 2019 (as of 2/4/2019) (values in kaf)				
NEVADA			296	
SOUTHERN NEVADA WATER SYSTEM				260
OTHERS				36
CALIFORNIA			4,318	
METROPOLITAN WATER DISTRICT OF CALIFORNIA				800
IRRIGATION DISTRICTS				3,502
OTHERS				16
ARIZONA			2,760	
CENTRAL ARIZONA PROJECT				1,539
OTHERS				1,221
TOTAL LOWER BASIN USE				7,374
DELIVERY TO MEXICO - 2019 (Mexico Scheduled Delivery + Preliminary Yearly Excess <sup>1</sup> )				1,526
OTHER SIGNIFICANT INFORMATION				
UNREGULATED INFLOW INTO LAKE POWELL - FEBRUARY FINAL FORECAST DATED 2/4/2019				
		MILLION ACRE-FEET	% of Normal	
FORECASTED WATER YEAR 2019		7.700	71%	
FORECASTED APRIL-JULY 2019		5.300	74%	
JANUARY OBSERVED INFLOW		0.210	58%	
FEBRUARY INFLOW FORECAST		0.250	64%	
		Upper Colorado Basin	Salt/Verde Basin	
WATER YEAR 2019 PRECIP TO DATE		104% (12.5")	101% (10.9")	
CURRENT BASIN SNOWPACK		104% (10.4")	69% (3.4")	

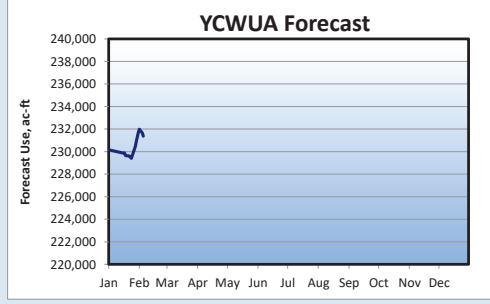
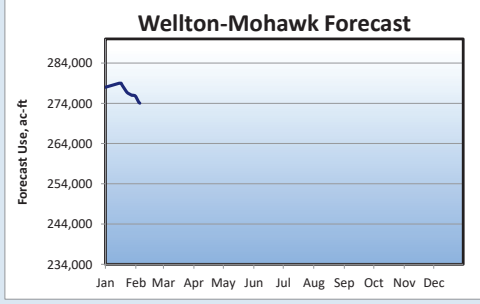
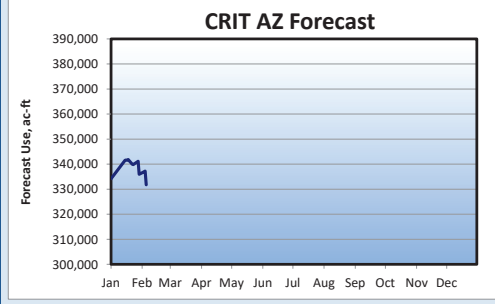
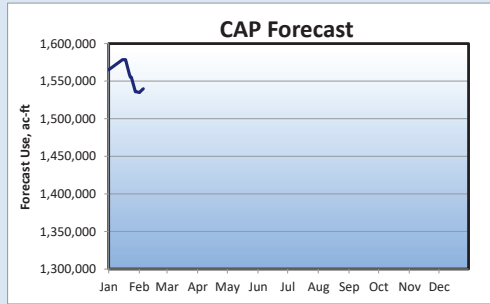
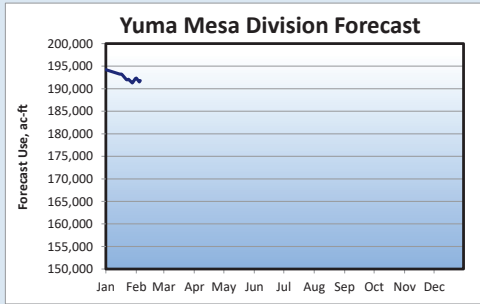
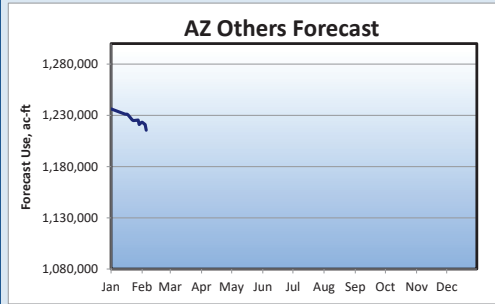
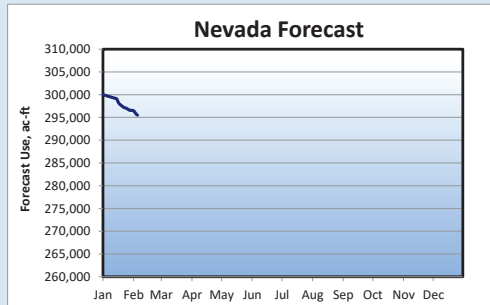
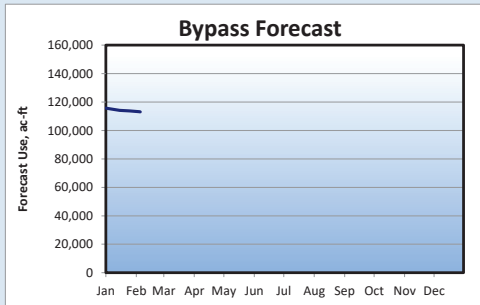
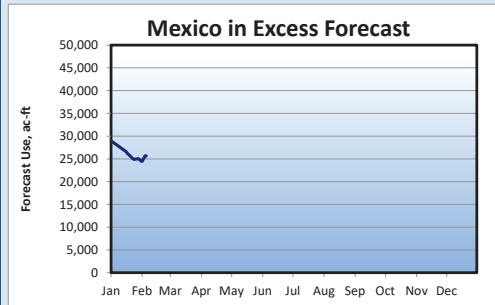
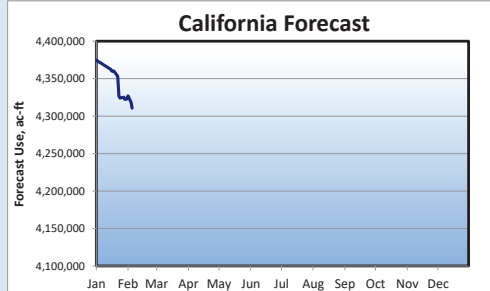
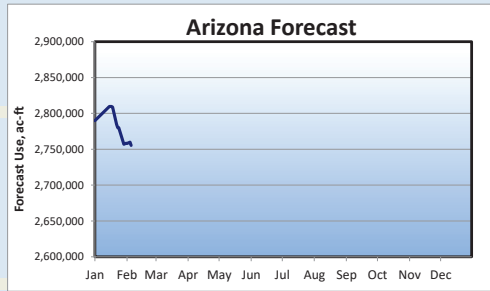
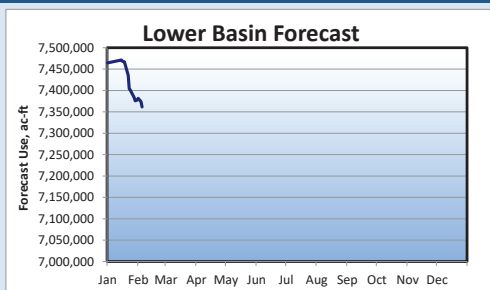
<sup>1</sup> Delivery to Mexico forecasted yearly excess calculated using year-to-date observed and projected excess.

**U.S. BUREAU OF RECLAMATION  
LOWER COLORADO REGION  
CY 2019**

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

<b>WATER USE SUMMARY</b>	<b>Use To Date CY2019</b>	<b>Forecast Use CY2019</b>	<b>Approved Use<sup>2</sup> CY2019</b>	<b>Excess to Approval CY2019</b>
ARIZONA	144,314	2,755,387	2,789,843	-34,456
CALIFORNIA	229,428	4,310,650	4,374,692	-64,042
NEVADA	8,419	295,503	300,000	-4,497
<b>STATES TOTAL<sup>3</sup></b>	<b>382,161</b>	<b>7,361,540</b>	<b>7,464,535</b>	<b>-102,995</b>
MEXICO IN SATISFACTION OF TREATY (Including downward delivery) TO MEXICO AS SCHEDULED	134,518	1,525,637	1,500,000	<b>25,637</b>
MEXICO IN EXCESS OF TREATY <sup>4</sup>	1,572	25,637		
BYPASS PURSUANT TO MINUTE 242 <sup>5</sup>	8,754	113,073		
<b>TOTAL LOWER BASIN &amp; MEXICO</b>	<b>525,433</b>	<b>9,000,250</b>		

1/ Incorporates 80 daily reporting stations which may be revised after provisional data reports are distributed by the USGS. Use to date estimated for users reporting monthly and annually.  
 2/ These values reflect adjusted apportionments. See Adjusted Apportionment calculation on each state page.  
 3/ Includes unmeasured returns based on estimated consumptive use/diversion ratios by user from studies provided by Arizona Department of Water Resources, Colorado River Board of California, and Reclamation.  
 4/ Mexico excess forecast is based on the 5-year average for the period 2013-2017.  
 5/ Bypass forecast is based on the average for the period 1990-2017.



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

**U.S. BUREAU OF RECLAMATION  
LOWER COLORADO REGION  
CY 2019**

**NOTE:**  
 • Diversions and uses that are pending approval are noted in *red italics*.  
 • Water users with a consumptive use entitlement - **Excess to Estimated Use** column indicates overrun/underrun of entitlement. Dash in this column indicates water user has a diversion entitlement.  
 • Water user with a diversion entitlement - **Excess to Approved Diversion** column indicates overrun/underrun of entitlement. Dash in this column indicates water user has a consumptive use entitlement.

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

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

WATER USER	Use	Forecast	Estimated	Excess to	Diversion	Forecast	Approved	Excess to
	To Date CY2019	Use CY2019	Use CY2019	Estimated Use CY2019	To Date CY2019	Diversion CY2019	Diversion CY2019	Approved Diversion CY2019
ARIZONA PUMPERS	908	14,444	14,444	---	1,399	22,255	22,255	0
LAKE MEAD NRA, AZ - Diversions from Lake Mead	7	111	111	---	7	111	111	0
LAKE MEAD NRA, AZ - Diversions from Lake Mohave	11	185	185	---	11	185	185	0
DAVIS DAM PROJECT	0	2	2	---	1	20	20	0
BULLHEAD CITY	571	7,683	7,683	---	971	12,720	12,720	0
MOHAVE WATER CONSERVATION DISTRICT	40	632	632	---	59	944	944	0
BROOKE WATER LLC	20	315	315	---	30	475	475	0
MOHAVE VALLEY IDD	1,392	21,464	21,464	---	2,579	39,746	39,746	0
FORT MOJAVE INDIAN RESERVATION, AZ	1,219	44,033	44,550	---	2,257	81,543	82,500	-957
GOLDEN SHORES WATER CONSERVATION DISTRICT	17	268	268	---	25	402	402	0
HAVASU NATIONAL WILDLIFE REFUGE	21	3,492	3,563	---	176	40,925	41,820	-895
LAKE HAVASU CITY	665	8,928	8,928	---	1,073	14,400	14,400	0
CENTRAL ARIZONA PROJECT	112,844	1,539,905		---	112,844	1,539,905		
TOWN OF PARKER	23	430	430	---	62	933	933	0
COLORADO RIVER INDIAN RESERVATION, AZ	-1,163	331,767	334,133	---	10,842	635,072	645,121	-10,049
EHRENBURG IMPROVEMENT ASSOCIATION	15	234	234	---	21	328	328	0
CIBOLA VALLEY <sup>1</sup>	984	15,661	15,661	---	1,376	21,891	21,891	0
CIBOLA NATIONAL WILDLIFE REFUGE	270	14,016	14,016	0	435	22,605	22,605	0
IMPERIAL NATIONAL WILDLIFE REFUGE	352	3,799	3,799	0	568	6,128	6,128	0
BLM PERMITEES (PARKER DAM to IMPERIAL DAM)	69	1,093	1,093	---	106	1,680	1,680	0
CHA CHA, LLC	67	1,365	1,365	---	102	2,100	2,100	0
BEATTIE FARMS	35	724	724	---	53	1,110	1,110	0
YUMA PROVING GROUND	17	479	479	---	17	479	479	0
GILA MONSTER FARMS	246	5,174	5,254	---	453	9,015	9,156	-141
WELLTON-MOHAWK IDD	7,571	274,033	278,000	-3,967	16,559	404,758	412,965	-8,207
BLM PERMITEES (BELOW IMPERIAL DAM)	6	97	97	0	9	148	148	0
CITY OF YUMA	515	15,177	15,962	-785	1,334	25,639	26,700	-1,061
MARINE CORPS AIR STATION YUMA	82	1,330	1,359	---	82	1,330	1,359	-29
UNION PACIFIC RAILROAD	2	24	24	---	5	48	48	0
UNIVERSITY OF ARIZONA	35	888	888	---	35	888	888	0
YUMA UNION HIGH SCHOOL DISTRICT	6	151	151	---	7	200	200	0
DESERT LAWN MEMORIAL	1	17	17	---	1	23	23	0
NORTH GILA VALLEY IRRIGATION DISTRICT	189	12,192	12,141	---	2,002	43,602	44,200	-598
YUMA IRRIGATION DISTRICT	1,904	38,905	39,007	---	2,943	70,700	71,900	-1,200
YUMA MESA IDD	4,761	140,687	143,060	---	9,850	234,290	239,724	-5,434
UNIT "B" IRRIGATION DISTRICT	464	21,230	21,483	---	1,084	29,148	29,400	-252
FORT YUMA INDIAN RESERVATION	79	1,258	1,258	---	122	1,937	1,937	0
YUMA COUNTY WATER USERS' ASSOCIATION	9,920	231,378	230,166	---	18,317	357,988	360,400	-2,412
COCOPA INDIAN RESERVATION	143	1,725	1,691	---	144	2,555	2,580	-25
RECLAMATION-YUMA AREA OFFICE	6	91	91	---	6	91	91	0
RETURN FROM SOUTH GILA WELLS								
<b>TOTAL ARIZONA</b>	<b>144,314</b>	<b>2,755,387</b>	<b>2,789,843</b>		<b>187,967</b>	<b>3,628,317</b>	<b>3,684,787</b>	
CAP	112,844	1,539,905				1,539,905		
ALL OTHERS	31,470	1,215,482	1,224,728			2,088,412	2,119,672	
YUMA MESA DIVISION, GILA PROJECT	6,854	191,784	171,610	20,174		348,592		

**ARIZONA ADJUSTED APPORTIONMENT CALCULATION**

Arizona Basic Apportionment	2,800,000
System Conservation Water - Pilot System Conservation Program <sup>2</sup>	-10,157
Total State Adjusted Apportionment	2,789,843
Excess to Total State Adjusted Apportionment	-34,456
<b>Estimated Allowable Use for CAP</b>	<b>1,575,587</b>

<sup>1</sup> Includes the following water users within the Cibola Valley: Cibola Valley IDD, Arizona Game and Fish Commission, GSC Farms, Red River Land Co., Western Water, and the Hopi Tribe.

<sup>2</sup> System Conservation Water to be conserved by Bullhead City and the Colorado River Indian Tribes pursuant to System Conservation Implementation Agreements executed under the Pilot System Conservation Program. This water will remain in Lake Mead to benefit system storage.

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

**U.S. BUREAU OF RECLAMATION  
LOWER COLORADO REGION  
CY 2019**

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 • Water user with a diversion entitlement - **Excess to Approved Diversion** column indicates overrun/underrun of entitlement. Dash in this column indicates water user has a consumptive use entitlement.

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

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

WATER USER	Use	Forecast	Estimated	Excess to	Diversion	Forecast	Approved	Excess to
	To Date	Use	Use	Estimated	To Date	Diversion	Diversion	Approved
	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019
CALIFORNIA PUMPERS	115	1,824	1,824	---	207	3,300	3,300	0
FORT MOJAVE INDIAN RESERVATION, CA	53	8,557	8,996	---	99	15,905	16,720	-815
CITY OF NEEDLES (includes LCWSP use)	104	1,605	1,605	0	147	2,261	2,261	0
METROPOLITAN WATER DISTRICT	103,474	800,044	840,734	---	103,760	802,803	843,474	---
COLORADO RIVER INDIAN RESERVATION, CA	160	2,548	2,548	---	265	4,220	4,220	0
PALO VERDE IRRIGATION DISTRICT	1,119	414,273	422,468	---	35,136	848,279	856,000	-7,721
YUMA PROJECT RESERVATION DIVISION	926	50,038	50,616	---	4,181	98,251	98,928	-677
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	1,999	45,840	46,128	-288
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	2,182	52,411	52,800	-389
YUMA ISLAND PUMPERS	168	2,673	2,673	---	304	4,833	4,833	0
FORT YUMA INDIAN RESERVATION - RANCH 5	33	523	523	---	59	945	945	0
IMPERIAL IRRIGATION DISTRICT	103,732	2,639,754	2,652,800	-13,046	108,231	2,739,413	2,755,109	---
SALTON SEA SALINITY MANAGEMENT	0	0	0	0	0	0	0	---
COACHELLA VALLEY WATER DISTRICT	19,477	387,743	388,837	-1,094	20,333	403,326	404,914	---
OTHER LCWSP CONTRACTORS	52	829	829	---	81	1,296	1,296	0
CITY OF WINTERHAVEN	4	67	67	---	6	99	99	0
CHEMEHUEVI INDIAN RESERVATION	11	172	172	---	713	11,340	11,340	0
<b>TOTAL CALIFORNIA</b>	<b>229,428</b>	<b>4,310,650</b>			<b>273,522</b>	<b>4,936,271</b>	<b>5,003,439</b>	

**CALIFORNIA ADJUSTED APPORTIONMENT CALCULATION**

California Basic Apportionment	4,400,000
System Conservation Water - Pilot System Conservation Program <sup>1</sup>	-308
Creation of Additional Conserved Water (IID) <sup>2</sup>	-25,000
Creation of Extraordinary Conservation ICS (MWD) <sup>3</sup>	-
<b>Total State Adjusted Apportionment</b>	<b>4,374,692</b>
Excess to Total State Adjusted Apportionment	-64,042

**Estimated Allowable Use for MWD**

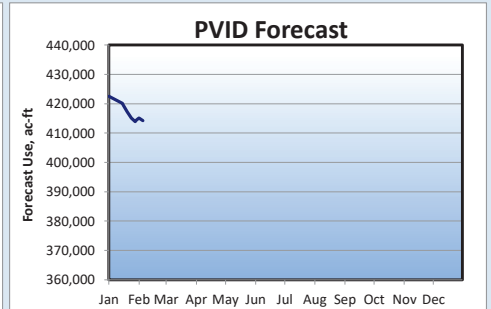
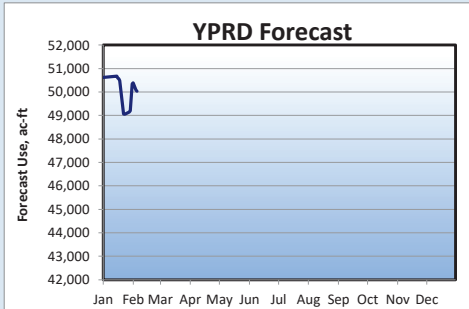
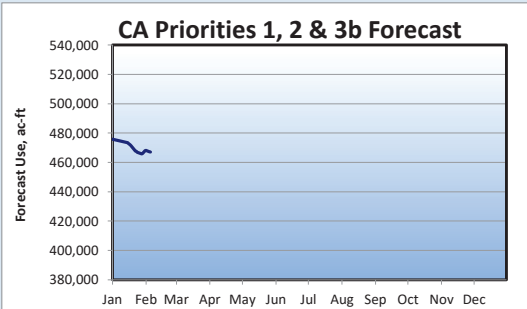
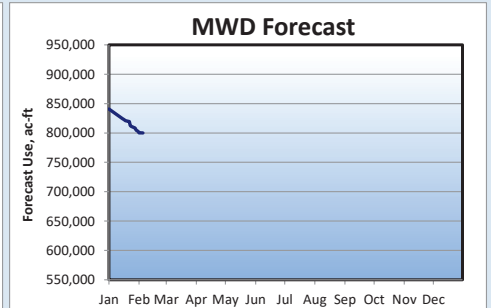
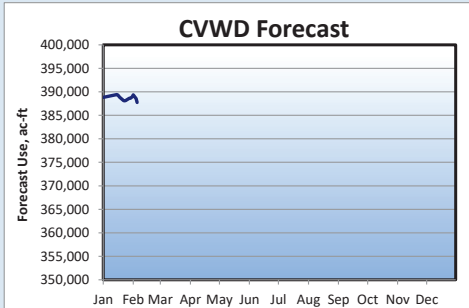
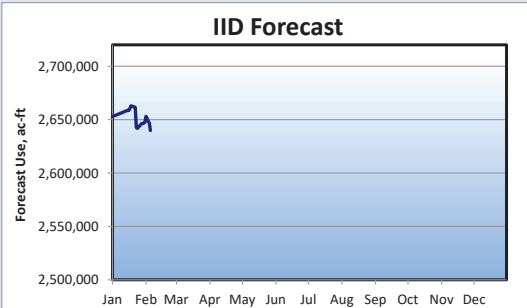
**864,086**

NOTES: Click on California Schedules and Approvals above for incoming diversion schedules and approvals.

<sup>1</sup> System Conservation Water to be conserved by the City of Needles and the Coachella Valley Water District pursuant to System Conservation Implementation Agreements executed under the Pilot System Conservation Program. This water will remain in Lake Mead to benefit system storage.

<sup>2</sup> IID's CY 2019 water order incorporates an "Estimate of Additional Conserved Water" for purposes including, but not limited to, storage in The Metropolitan Water District of Southern California's system (with the written consent of MWD) or in Lake Mead as Intentionally Created Surplus (ICS). As of the date of this forecast, approval of IID's CY 2019 ICS Plan of Creation (Plan) is pending. Use by IID of Additional Conserved Water to create ICS for storage in Lake Mead is conditional upon Reclamation's approval of IID's CY 2019 Plan.

<sup>3</sup> MWD's CY 2019 water order incorporates the creation of up to 299,300 AF of Extraordinary Conservation Intentionally Created Surplus (ICS). As of the date of this forecast, approval of MWD's CY 2019 ICS Plan of Creation (Plan) is pending; therefore the estimate of the amount of water available to MWD does not incorporate ICS creation by MWD. Upon approval of MWD's CY 2019 ICS Plan, Reclamation will revise MWD's water order approval accordingly.



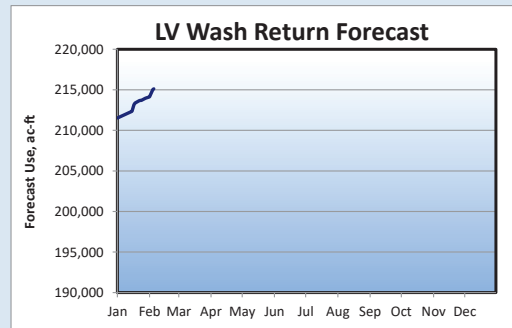
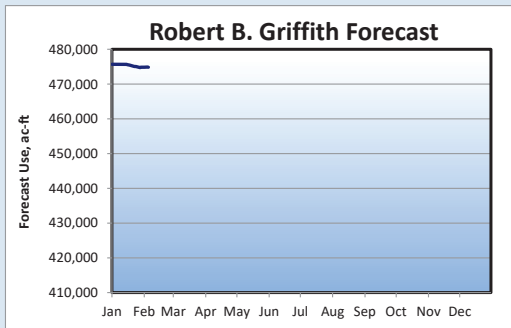
**U.S. BUREAU OF RECLAMATION  
LOWER COLORADO REGION  
CY 2019**

**NOTE:**  
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 • Water user with a diversion entitlement - **Excess to Approved Diversion** column indicates overrun/underrun of entitlement. Dash in this column indicates water user has a consumptive use entitlement.

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

WATER USER	Use	Forecast	Estimated	Excess to	Diversion	Forecast	Approved	Excess to
	To Date	Use	Use	Estimated	To Date	Diversion	Diversion	Approved
	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	30,715	474,837	475,686	-849	30,715	474,837	475,686	-849
LAKE MEAD NRA, NV - Diversions from Lake Mead	91	1,500	1,500	---	91	1,500	1,500	0
LAKE MEAD NRA, NV - Diversions from Lake Mohave	37	500	500	---	37	500	500	0
BASIC MANAGEMENT INC.	602	8,208	8,208	---	602	8,208	8,208	0
CITY OF HENDERSON (BMI DELIVERY)	1,222	15,878	15,878	---	1,222	15,878	15,878	0
NEVADA DEPARTMENT OF WILDLIFE	1	12	12	0	119	1,000	1,000	---
PACIFIC COAST BUILDING PRODUCTS INC.	88	928	928	---	88	928	928	0
BOULDER CANYON PROJECT	11	173	173	---	19	300	300	0
BIG BEND WATER DISTRICT	252	4,619	4,619	---	712	10,000	10,000	0
FORT MOJAVE INDIAN TRIBE	123	3,971	4,020	---	183	5,926	6,000	-74
LAS VEGAS WASH RETURN FLOWS	-24,723	-215,123	-211,524	---				
<b>TOTAL NEVADA</b>	<b>8,419</b>	<b>295,503</b>	<b>300,000</b>	<b>-849</b>	<b>33,788</b>	<b>519,077</b>	<b>520,000</b>	<b>-923</b>
SOUTHERN NEVADA WATER SYSTEM (SNWS)	5,992	259,714				474,837		
ALL OTHERS	2,427	35,789				44,240		
NEVADA USES ABOVE HOOVER	8,044	286,913				503,151		
NEVADA USES BELOW HOOVER	375	8,590				15,926		

Tributary Conservation & Imported Intentionally Created Surplus	
Total Requested Tributary Conservation Intentionally Created Surplus	42,000
Total Requested Imported Conservation Intentionally Created Surplus	0
5% System Assessment for Creation of Intentionally Created Surplus	-2,100
Total Intentionally Created Surplus Left in Lake Mead	39,900
<b>NEVADA ADJUSTED APPORTIONMENT CALCULATION</b>	
Nevada Basic Apportionment	300,000
Excess to Total State Adjusted Apportionment	-4,497



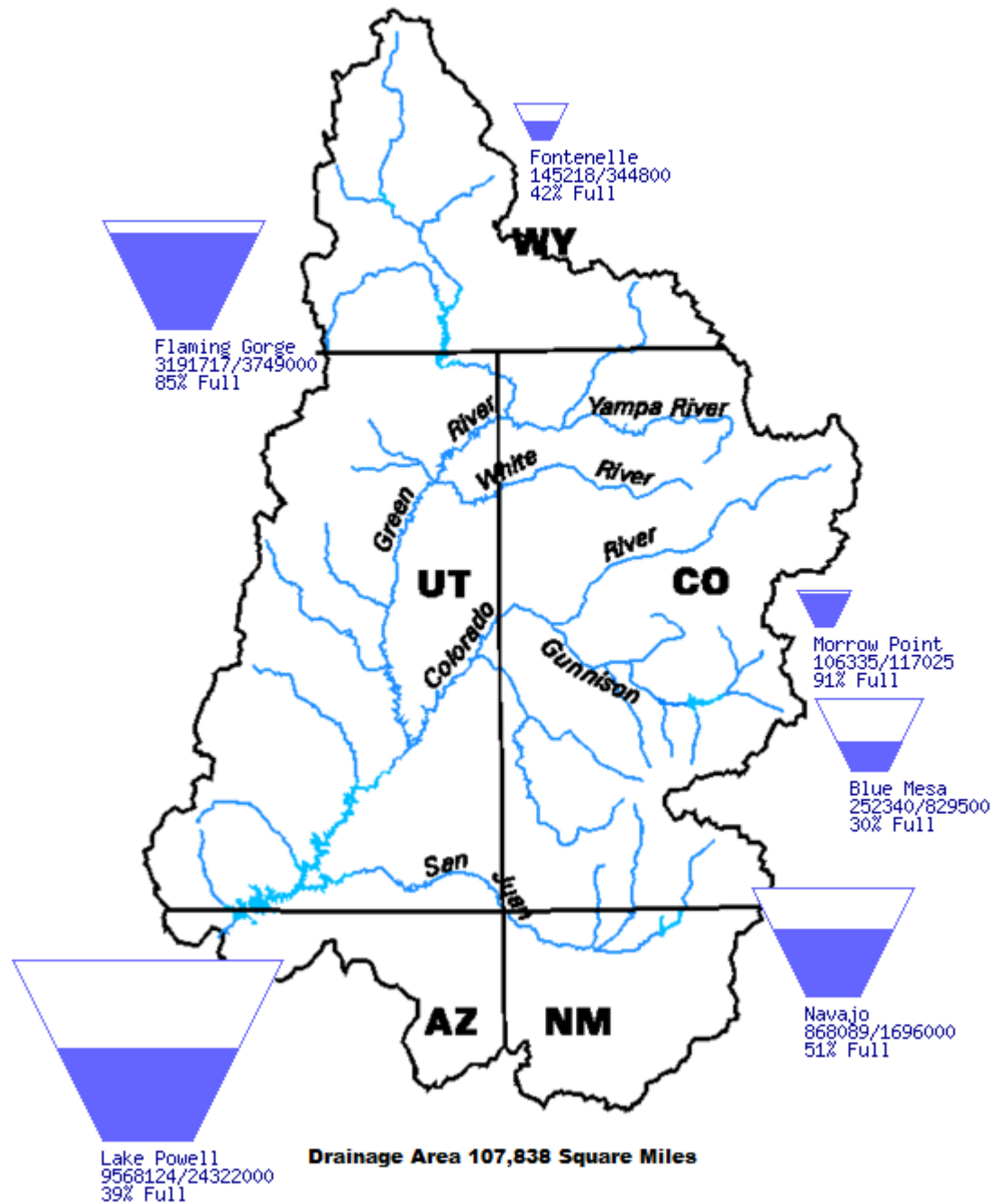
NOTES: Click on Nevada Schedules and Approvals above for incoming diversion schedules and approvals.

# Upper Colorado Region Water Resources Group

## River Basin Tea-Cup Diagrams

Data Current as of:  
02/04/2019

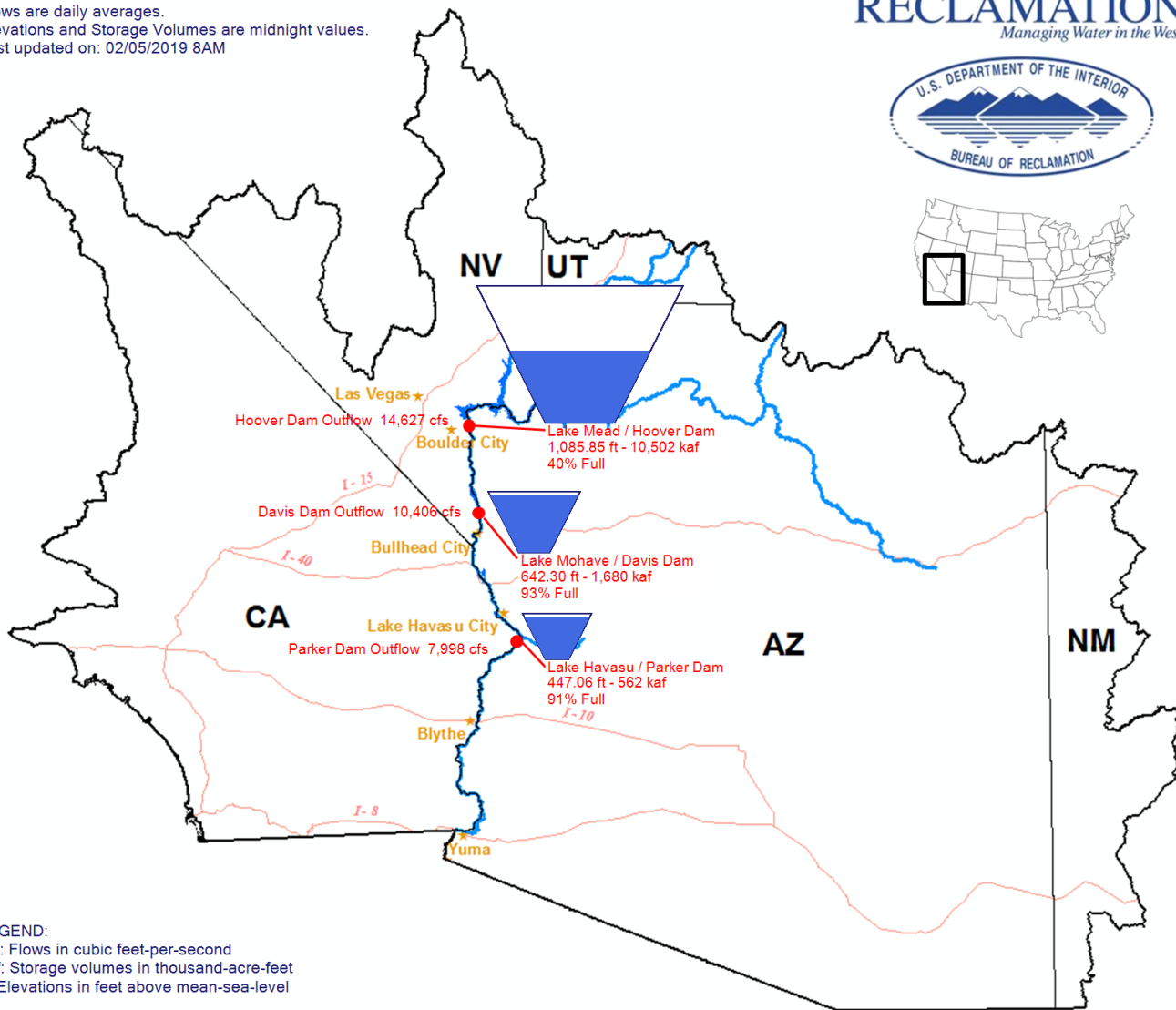
### Upper Colorado River Drainage Basin



# Lower Colorado River Teacup Diagram

Data for: 02/04/2019  
 Flows are daily averages.  
 Elevations and Storage Volumes are midnight values.  
 Last updated on: 02/05/2019 8AM

**RECLAMATION**  
*Managing Water in the West*



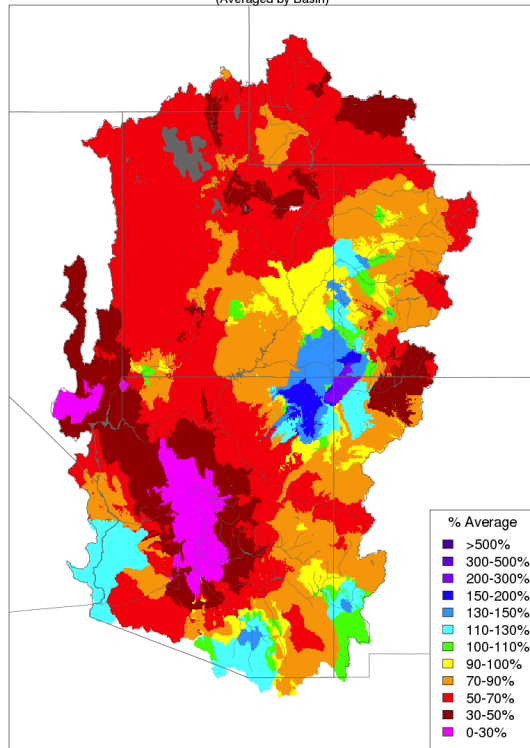
**LEGEND:**  
 cfs: Flows in cubic feet-per-second  
 kaf: Storage volumes in thousand-acre-feet  
 ft: Elevations in feet above mean-sea-level



# NOAA National Weather Service Monthly Precipitation Map December 2018 and January 2019

## Monthly Precipitation - December 2018

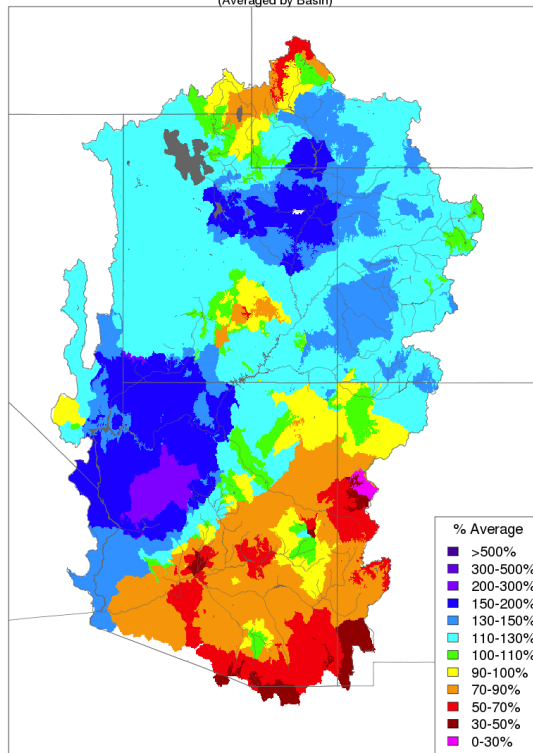
(Averaged by Basin)



Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

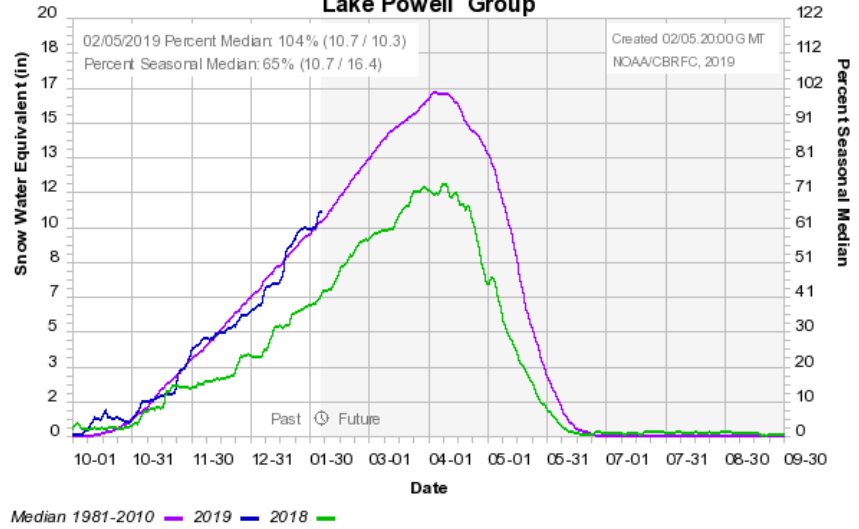
## Monthly Precipitation - January 2019

(Averaged by Basin)

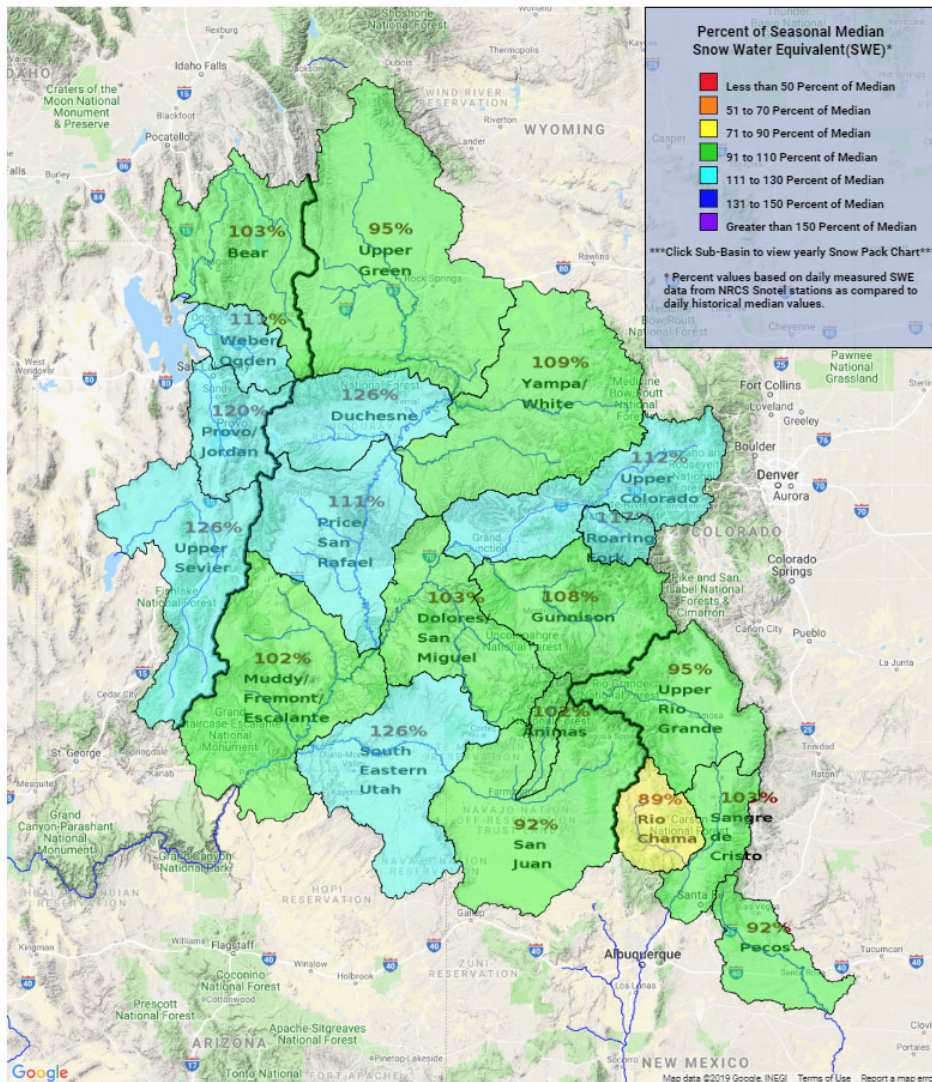


Prepared by NOAA, Colorado Basin River Forecast Center  
Salt Lake City, Utah, [www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

### Colorado Basin River Forecast Center Lake Powell Group

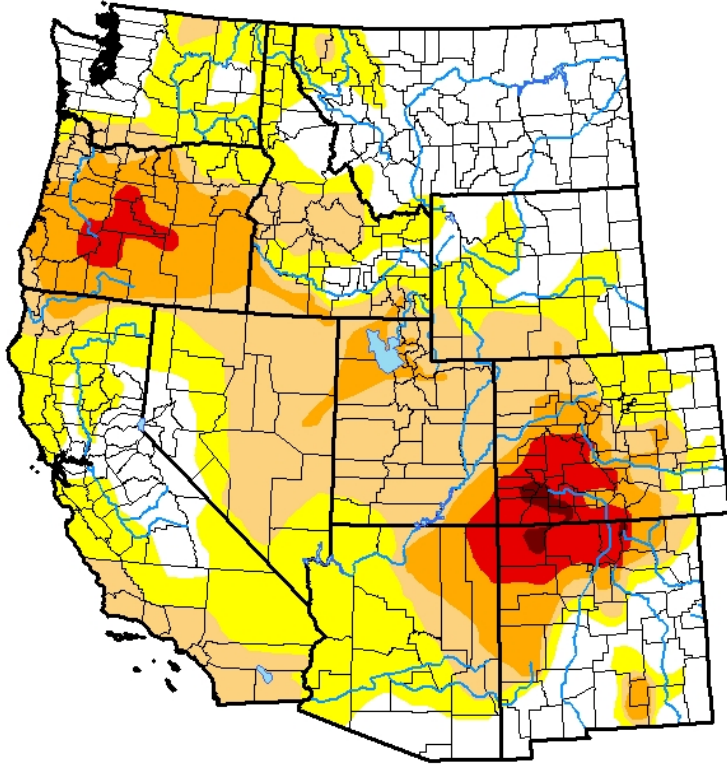


### Snow Pack Conditions Map Upper Colorado Region



**U.S. Drought Monitor  
West**

**January 29, 2019**  
(Released Thursday, Jan. 31, 2019)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	30.36	69.64	41.22	17.12	4.86	0.39
<b>Last Week</b> <i>01-22-2019</i>	27.25	72.75	48.43	20.28	5.01	0.39
<b>3 Months Ago</b> <i>10-30-2018</i>	21.83	78.17	52.75	31.31	11.80	3.42
<b>Start of Calendar Year</b> <i>01-01-2019</i>	28.03	71.97	53.25	27.22	8.35	2.88
<b>Start of Water Year</b> <i>09-25-2018</i>	13.91	86.09	59.57	39.68	18.15	4.36
<b>One Year Ago</b> <i>01-30-2018</i>	26.92	73.08	44.29	21.57	0.88	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.*

Author:

Brian Fuchs  
National Drought Mitigation Center

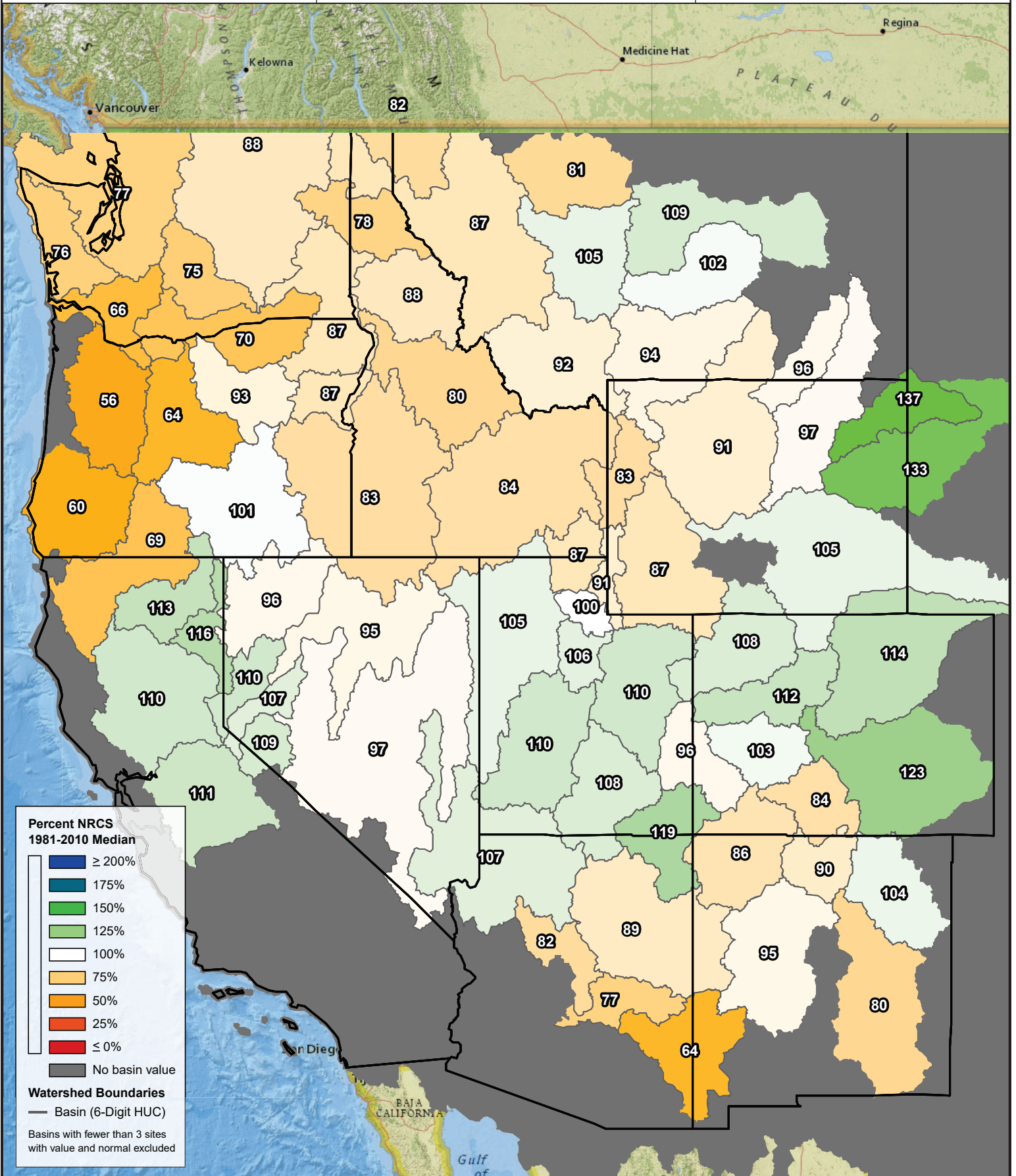


<http://droughtmonitor.unl.edu/>

Snow Water Equivalent

Percent NRCS 1981-2010 Median

February 1st, 2019



**Percent NRCS 1981-2010 Median**

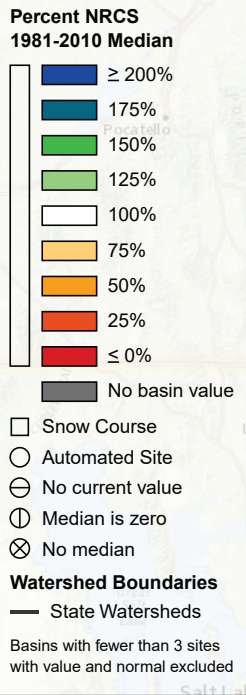
- ≥ 200%
- 175%
- 150%
- 125%
- 100%
- 75%
- 50%
- 25%
- ≤ 0%
- No basin value

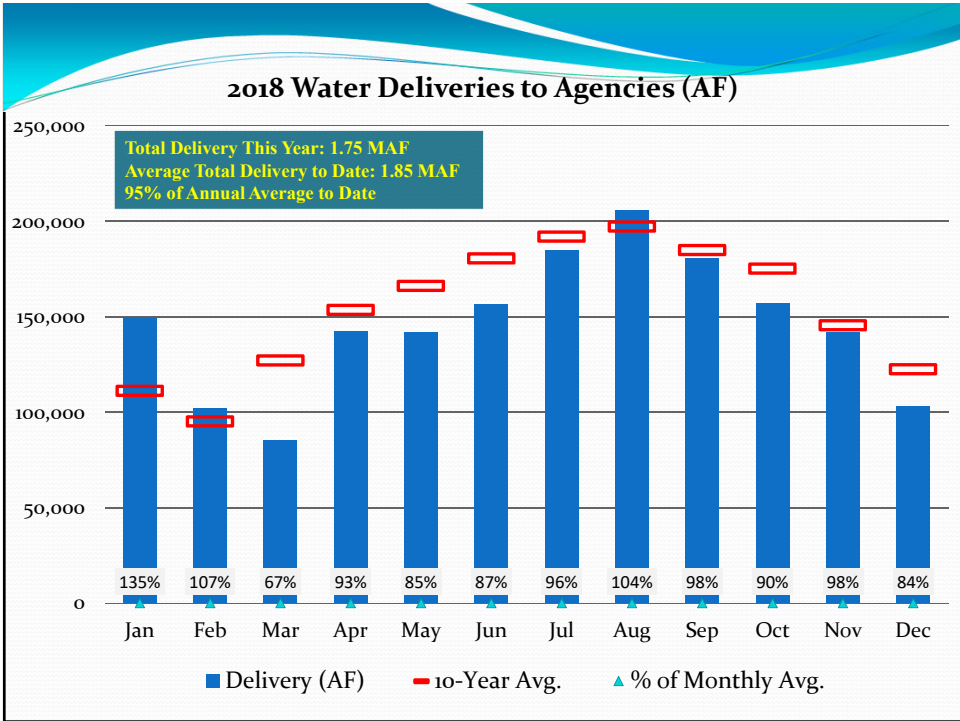
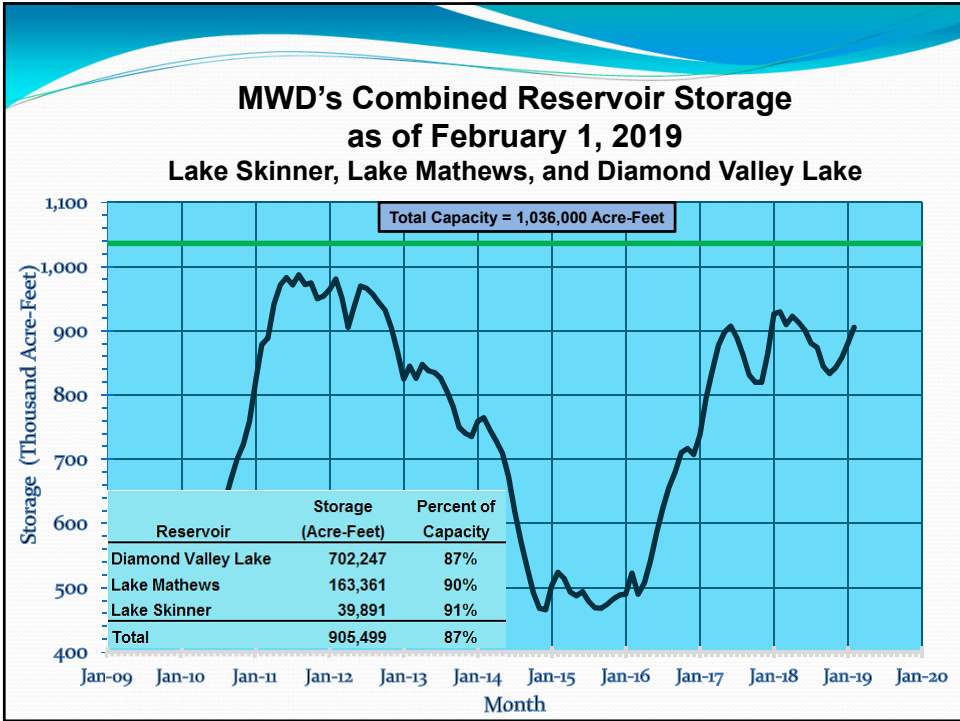
**Watershed Boundaries**

- Basin (6-Digit HUC)

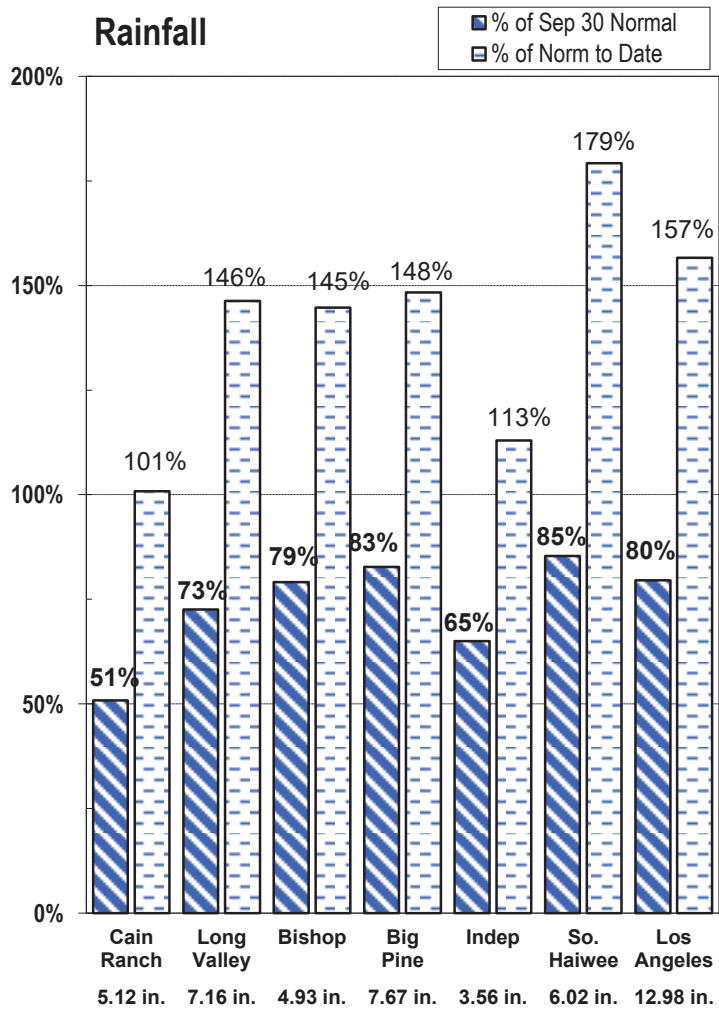
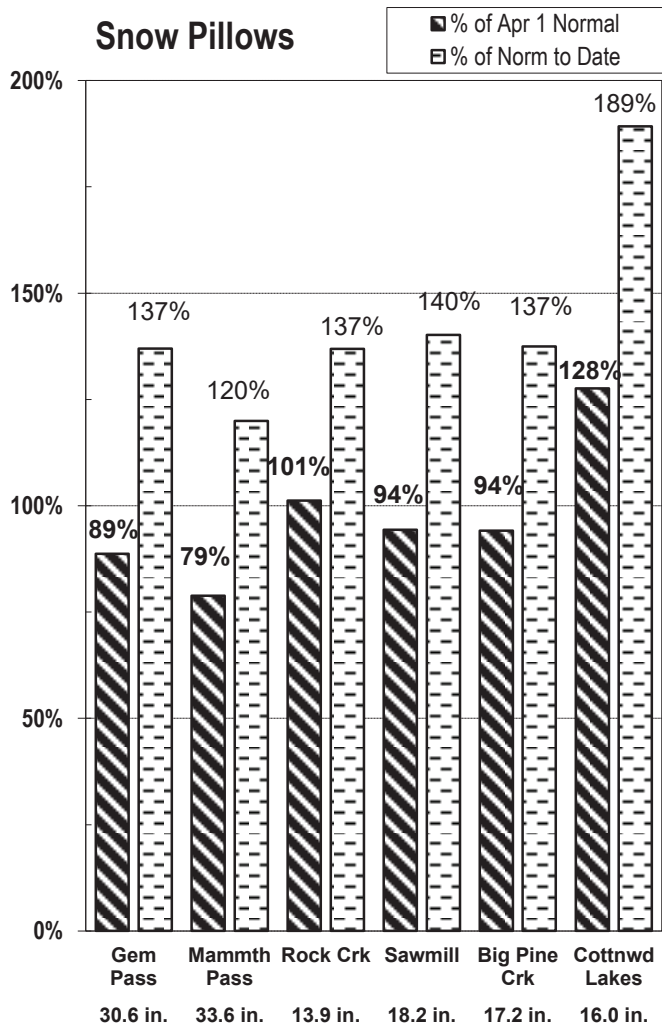
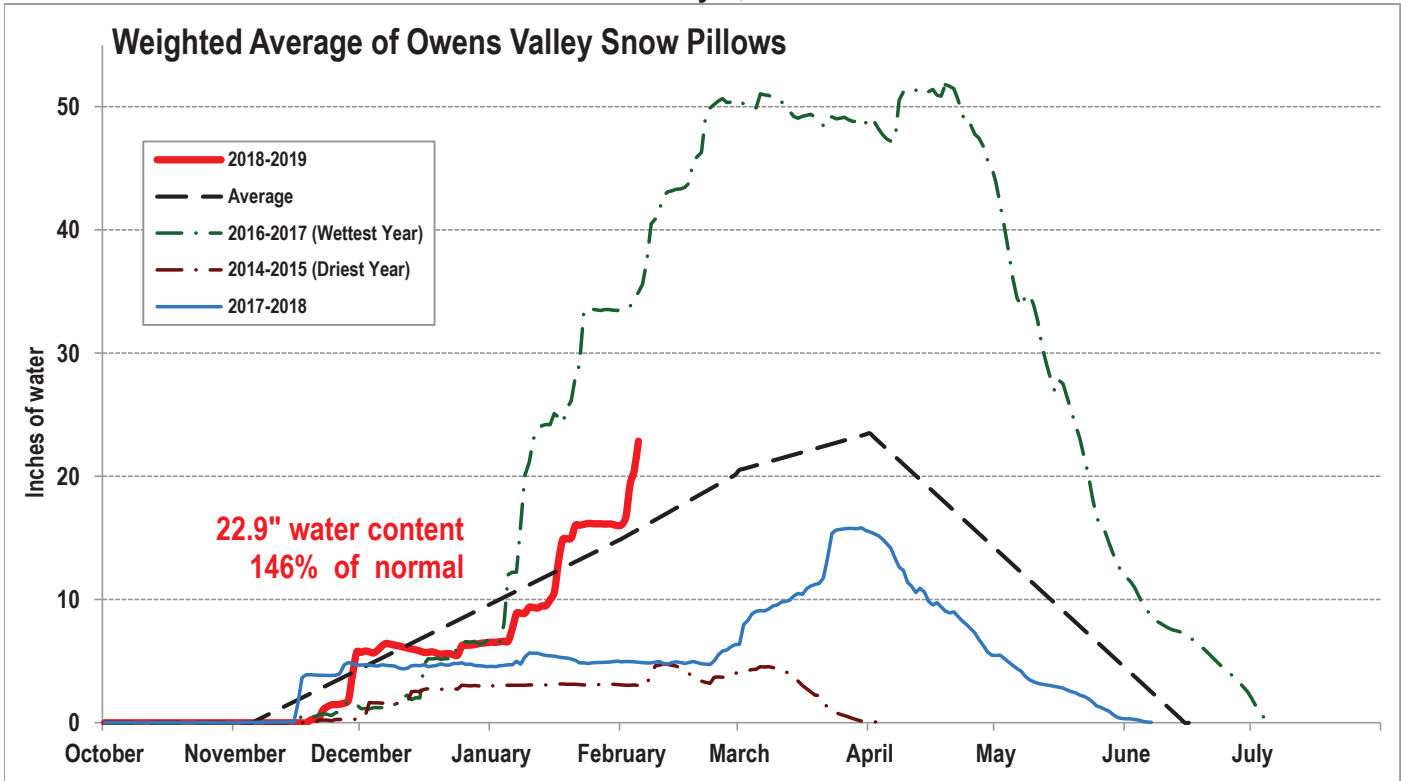
Basins with fewer than 3 sites with value and normal excluded





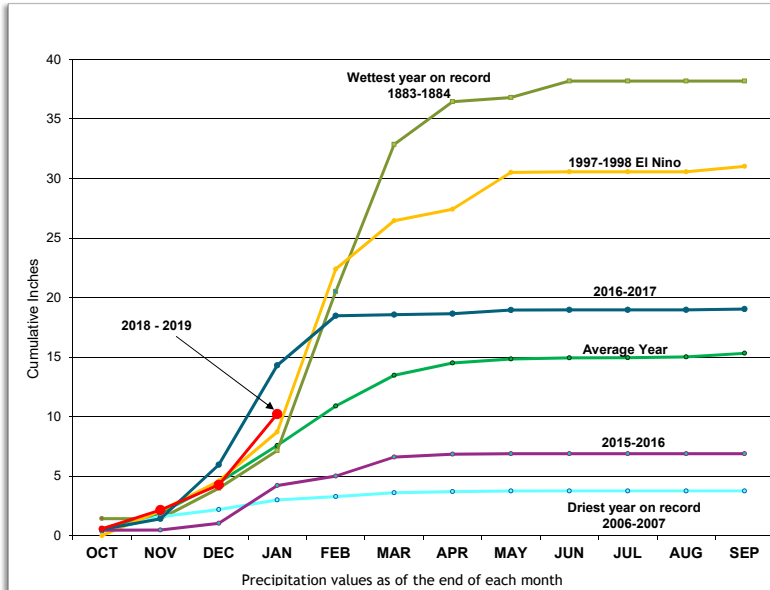


# EASTERN SIERRA CURRENT PRECIPITATION CONDITIONS February 5, 2019



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

### Los Angeles Civic Center Precipitation



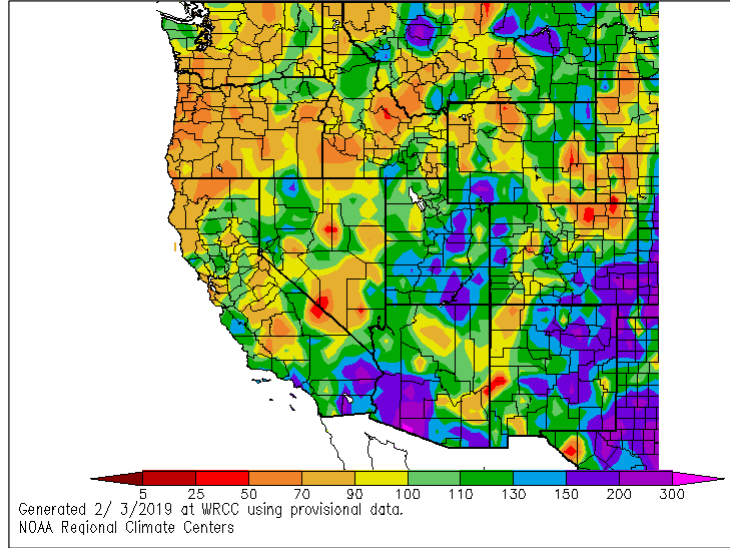
### Precipitation at Six Major Stations in Southern California

From October 1, 2018 to January 31, 2019

Station	Precipitation in inches		Average to Date	Percent of Average
	Jan	Oct 1 to Jan 31		
San Luis Obispo	4.60	8.38	12.04	70%
Santa Barbara	7.37	9.30	9.02	103%
Los Angeles	5.95	10.21	7.56	135%
San Diego	2.50	4.59	5.25	87%
Blythe	0.64	1.49	1.62	92%
Imperial	0.38	1.44	1.33	108%

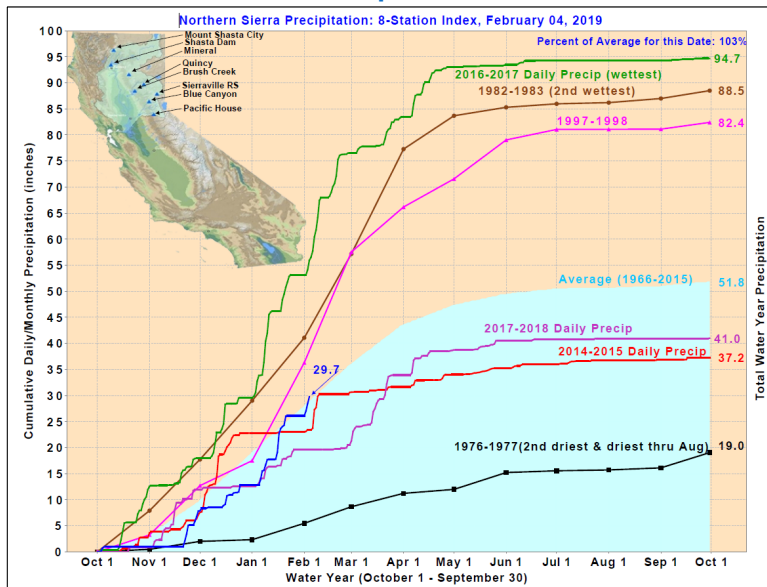


### Percent of Average Precipitation (%) 10/01/2018 - 02/03/2019



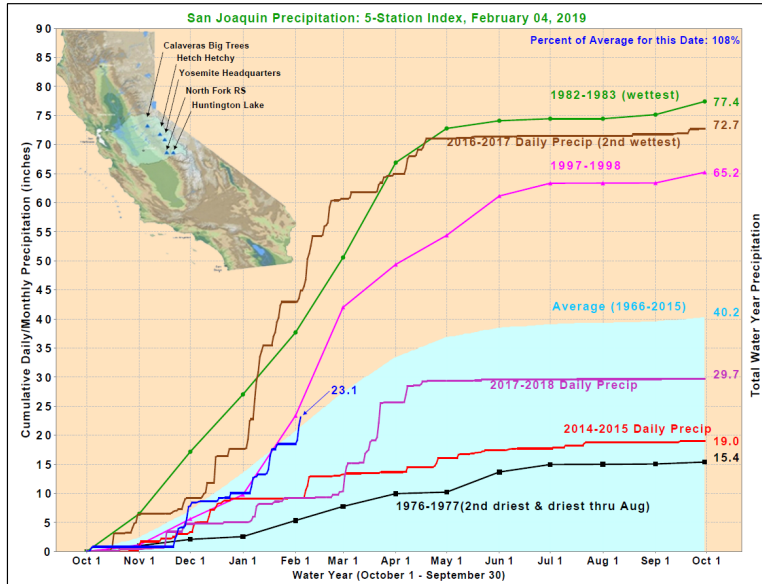
Western Regional Climate Center  
<http://www.wrcc.dri.edu/cgi-bin/anomimage.pl?wrcOctPpct.gif>

### Northern Sierra Precipitation: 8 Station Index



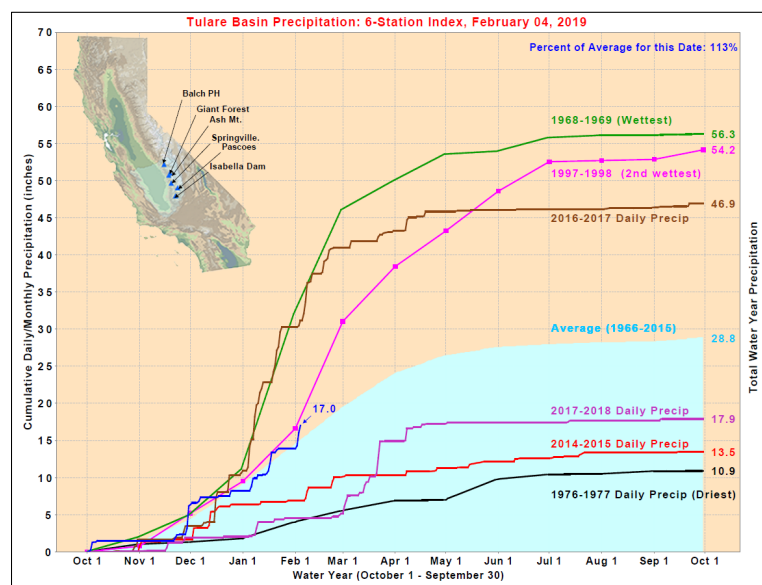
California Data Exchange Center  
[http://cdec.water.ca.gov/cgi-progs/products/PLOT\\_ESI.pdf](http://cdec.water.ca.gov/cgi-progs/products/PLOT_ESI.pdf)

### San Joaquin Precipitation: 5 Station Index



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

### Tulare Basin Precipitation: 6 Station Index



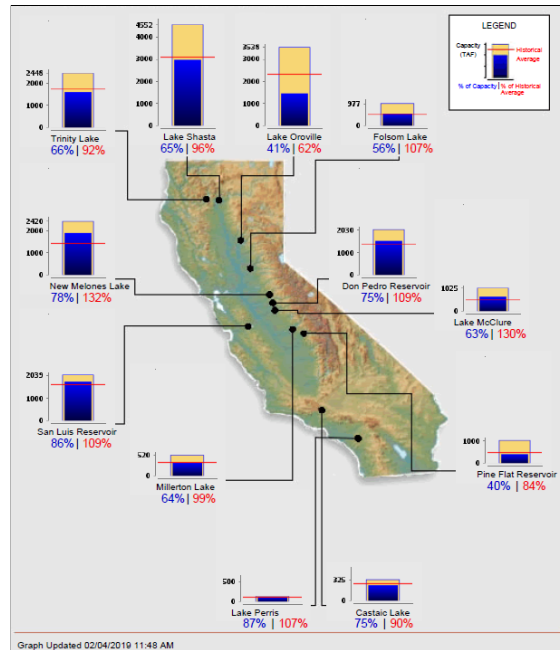
California Data Exchange Center  
[http://cdec.water.ca.gov/cgi-progs/products/PLOT\\_TSI.pdf](http://cdec.water.ca.gov/cgi-progs/products/PLOT_TSI.pdf)

### Comparison of SWP Water Storage

Reservoir	Capacity	2018 Storage (acre-feet)		2019 Storage (acre-feet)	
		As of Feb 1	% of Cap.	As of Feb 1	% of Cap.
Frenchman	55,475	44,071	79%	42,135	76%
Lake Davis	84,371	70,033	83%	63,572	75%
Antelope	22,564	17,468	77%	14,302	63%
Oroville	3,553,405	1,412,530	40%	1,413,192	40%
<b>TOTAL North</b>	<b>3,715,815</b>	<b>1,544,102</b>	<b>42%</b>	<b>1,533,201</b>	<b>41%</b>
Del Valle	39,914	25,850	65%	30,143	76%
San Luis	2,027,835	1,732,887	85%	1,749,761	86%
Pyramid	169,901	164,270	97%	155,512	92%
Castaic	319,247	256,357	80%	243,397	76%
Silverwood	74,970	67,567	90%	66,073	88%
Perris	126,841	59,049	47%	114,916	91%
<b>TOTAL South</b>	<b>2,758,708</b>	<b>2,305,980</b>	<b>84%</b>	<b>2,359,802</b>	<b>86%</b>
<b>TOTAL SWP</b>	<b>6,474,523</b>	<b>3,850,082</b>	<b>59%</b>	<b>3,893,003</b>	<b>60%</b>

As of January 25, 2019, the Table A allocations for SWP contractors is 15%.

### Reservoir Current Conditions



California Data Exchange Center  
<https://cdec.water.ca.gov/reportapp/javareports?name=rescond.pdf>

