

March 29, 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, April 10, 2019
Time: 10:00 a.m.
Place: Orchid 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

**Regular Meeting**  
**COLORADO RIVER BOARD OF CALIFORNIA**  
**Wednesday, April 10, 2019**  
**10:00 a.m.**

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)**

In accordance with California Government Code, Section 54954.3(a)

**3. Administration**

- a. Consideration and approval of the Minutes of the meeting held March 13, 2019 (Action)
- b. Consideration and approval of the Minutes of the Special Board meeting held March 18, 2019 (Action)

**4. Water Supply and Operations Reports**

- a. Colorado River Basin Report
- b. State and Local Reports

**5. Staff reports regarding Colorado River Basin Programs**

- a. Status of Colorado River Basin Drought Contingency Plan
- b. Information regarding LCR MSCP Dennis Underwood Conservation Area Groundbreaking Ceremony
- c. General announcements

**6. Los Angeles Department of Water and Power Presentation: Boulder Canyon Pumped Storage Project**

**7. Executive Session**

An Executive Session may be held by the Board pursuant to 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 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.

**8. Other Business**

**9. Future Agenda Items**

**Next Board Meeting:** May 15, 2019  
10:00 a.m.  
Orchid Room - Sheraton Ontario Airport Hotel  
429 North Vineyard Avenue  
Ontario, CA 91764  
909-937-8000

Minutes of Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
Wednesday, March 13, 2019

A meeting of the Colorado River Board (Board) of California was held on Wednesday, March 13, 2019.

Board Members and Alternates Present

Evelyn Cortez-Davis (LADWP Alternate)  
Dana B. Fisher, Jr. (PVID)  
James Hanks (IID)  
Jeanine Jones (DWR Designee)  
Hank Kuiper (Public Member)  
Nicole Neeman-Brady (Public Member)

Peter Nelson, Chairman (CVWD)  
Glen D. Peterson (MWD)  
Jack Seiler (PVID Alternate)  
David Vigil (DFW Alternate)  
Mark Watton (SDCWA Alternate)  
Doug Wilson (SDCWA)

Board Members and Alternates Absent

David De Jesus (MWD Alternate)  
Christopher Hayes (DFW Designee)  
David R. Pettijohn (LADWP)

John Powell, Jr. (CVWD Alternate)  
Norma Sierra Galindo (IID Alternate)

Others Present

Steve Abbott  
Brian Alvarez  
Melissa Baum-Haley  
Robert Cheng  
Elsa Contreras  
Christopher Harris  
Bill Hasencamp  
Tom Havens  
Michael Hughes  
Ned Hyduke  
Lisa Johansen  
Eric Katz  
Laura Lamdin

Lindia Liu  
Henry Martinez  
Kara Mathews  
Doug McPherson  
Jessica Neuwerth  
Ivory Reyburn  
Kelly Rodgers  
Shanti Rosset  
Angela Rashid  
Tom Ryan  
Tina Shields  
Alina Tishchenko  
Cherie Watte

## **CALL TO ORDER**

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:27 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. Mr. Tom Havens from American Water Resources and an Imperial Irrigation District resident brought up several concerns. His concerns included IID involvement in the DCP, the Salton Sea, and the composition of the small working group.

## **ADMINISTRATION**

Chairman Nelson asked for a motion to approve the February 13, 2019 meeting minutes. Mr. Hanks moved that the minutes be approved, seconded by Mr. Kuiper. By roll-call vote the minutes were unanimously approved.

## **COLORADO RIVER BASIN WATER REPORTS**

### **Colorado River Basin Report**

Ms. Rashid reported that as February 4<sup>th</sup>, the water level at Lake Powell was 3,571.54 feet with 9.23 million-acre feet (MAF) of storage, or 38% of capacity. The water level at Lake Mead was 1,088.20 feet 10.70 million-acre feet (MAF) of storage, or 41% of capacity. As of February 4<sup>th</sup>, total system storage was 26.72 MAF, or 45% of capacity, which is about 4.82 MAF less than system storage at this same time last year.

Ms. Rashid reported the forecasted Water Year-2019 inflow into Lake Powell is 9.75 MAF, or 90% of normal. The Forecasted April – July 2019 inflow into Lake Powell is 7.30 MAF, or 102% of normal. She noted that both forecasts have increased by nearly 2 MAF due to the recent storm activity. For Water Year-2019, the February observed inflow and March forecasted inflow into Lake Powell is 0.26 MAF (65% of normal) and 0.46 MAF (69% of normal), respectively. To date, the WY-2019 precipitation is 117% of normal and the current basin snowpack is 123% of normal.

Ms. Rashid reported on the precipitation conditions in January were above average for most of the Basin, with exception to dry conditions in areas of southern Arizona. In February, precipitation conditions throughout the Basin were above average, with many areas receiving over 300% of average precipitation.

Ms. Rashid reported that as of March 4<sup>th</sup>, the Upper Colorado River basin reservoirs, excluding Lake Powell, ranged from 34% of capacity at Fontenelle Reservoir in Wyoming; 84%

of capacity at Flaming Gorge Reservoir in Wyoming and Utah; 92% of capacity at Morrow Point and 30% of capacity at Blue Mesa Reservoirs in Colorado; and 51% of capacity at Navajo Reservoir in New Mexico.

Ms. Rashid reported that as of February 28<sup>th</sup>, Brock and Senator Wash Reservoirs captured 23,004 AF and 22,852 AF, respectively. She also reported that the excess deliveries to Mexico through March 3<sup>rd</sup> were 866 AF. As of March 2<sup>nd</sup>, the total bypassed to the Cienega de Santa Clara in Mexico was 14,527 AF.

### **State and Local Report**

Ms. Rashid reported that while drought conditions in California have been alleviated, severe and exceptional drought conditions continue to plague the Four Corners region. Ms. Jones, representing the California Department of Water Resources, reported that February was one of the wettest Februarys on record and precipitation conditions in early March were also wet. She stated that precipitation throughout the State is above average, with only a small area of the central coast still experiencing dry conditions. She noted that this area has only recently begun to recover from the State's multi-year drought. Ms. Jones reported that DWR activated its flood operations center to manage recent flooding in northern California, particularly in the areas surrounding the Russian River. Governor Newsom issued an emergency declaration for counties impacted by flooding.

Mr. Peterson, representing The Metropolitan Water District of Southern California (MWD) stated that as of March 1<sup>st</sup> the combined reservoir storage for MWD was 89% of capacity.

Ms. Cortez-Davis, representing the Los Angeles Department of Water and Power (LADWP) reported that the current snowpack condition for the Eastern Sierra was 188%, which is significantly higher than the trend had been earlier in the year.

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

### **Status of the Lower Basin Drought Contingency Plan**

Mr. Harris reported that the Lower Basin principals met in Las Vegas, Nevada on February 25<sup>th</sup> to discuss the completion of the Lower Basin Drought Contingency Plan (DCP) and new proposed extraordinary conservation intentionally created surplus (ICS) exhibits. Mr. Harris also noted that the Coachella Valley Water District raised several outstanding issues it had with the legislative language and proposed ICS exhibits. The Basin States principals were also notified that DCP hearings before the House and Senate had been tentatively scheduled for the last week of March.

Mr. Harris reported that Commissioner Burman has expressed her desire to finalize the DCP package, sign the Seven Basin States letter, and send the package to Congress on March 15<sup>th</sup>. Pursuant to the February 6<sup>th</sup> *Federal Register* notice soliciting Basin States input on Secretarial action to prevent reservoir decline, the public comment period would close on March 19<sup>th</sup>. The Commissioner hoped to finalize the DCP submittal before this deadline, allowing the notice to be rescinded. Mr. Harris reported that a March 8<sup>th</sup> conference call for the Basin States and Reclamation was held to discuss final DCP approvals and readiness to sign the Seven States letter.

Mr. Harris noted that work was done over the weekend to resolve several issues raised by the Coachella Valley Water District, resulting in a set of minor modifications to the proposed federal legislation, the MWD/CVWD intra-state agreement, and the Lower Basin Operations document. These minor modifications were vetted and approved by the Basin States and Reclamation on March 11<sup>th</sup>, allowing for the CVWD board to take affirmative action on the DCP on March 12<sup>th</sup>. MWD's board also took action on March 12<sup>th</sup> to allow Metropolitan to assume responsibility for any IID DCP contributions if needed. Finally, Mr. Harris reported that a call with Reclamation and the Basin States would be held after the Colorado River Board meeting to provide an update on California's readiness to sign a Seven Basin States letter sending the DCP package and proposed legislative language to Congress.

Board Member Hanks reported that the IID board had directed its attorneys to pursue some changes to the proposed federal legislative language. Mr. Hanks expressed concern that clauses of the currently proposed legislative language mirrored clauses in the federal language authorizing the lining of the All-American Canal, which was later found exempt from federal environmental review. Mr. Hanks maintained that these clauses must be removed from the proposed federal legislation. Mr. Harris noted that the All-American Canal lining project was subject to environmental review before being mandated by Congress and reiterated that the current legislative language has been narrowly tailored to the implementation of the current DCP.

Board Member Fisher advocated for delaying Board action to allow for more time to discuss potential modifications to the legislative language that would address IID's concerns while preserving the legislative waivers needed to implement the DCP. He expressed discomfort with moving forward with Board action without a consensus.

Chairman Nelson described the changes to the legislative language that had been made for CVWD and agreed with Mr. Fisher that extra time could help bring all parties to agreement.

Board Member Peterson noted that the Board has taken Board action without unanimity before and expressed concern that the Board might not be able to reconvene before March 19<sup>th</sup>.

Mr. Katz reported that the Board can hold a special meeting to discuss legislation with 48 hours' notice, and the Board discussed the requirements of holding a special meeting.

Mr. Peterson expressed concern that legislative language specifically addressing the Salton Sea would not be acceptable to the other Basin States, and moved that the Board authorize the Chairman to sign the Seven Basin States letter. The Board discussed the likelihood of reaching unanimous approval by the special meeting and whether the Board could authorize the Chairman to sign a letter with legislative language in substantial conformance with what was currently before the Board. The Board discussed potential changes to the legislative language, including whether it needs to specifically address the Salton Sea or Salton Sea funding. With the lack of a second, Mr. Peterson's motion did not move forward.

Chairman Nelson proposed scheduling a special Board meeting on Monday, March 18<sup>th</sup> to discuss whether to authorize the Chairman to sign the Seven Basin States letter to Congress, recommending passage of federal legislation authorizing the implementation of the DCP. Chairman Nelson reported that he would inform Reclamation and the Basin States of the Board's decision on the call scheduled after the meeting.

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

Mr. Harris reported that the Work Group met on February 20-22 and initiated work on the next triennial review. The review usually takes about a year to prepare. Mr. Harris reported that USGS continues to work on a study to understand the flattening trend of salinity in the Colorado River Basin despite the implementation of significant additional salinity control measures. USGS is also working on a detailed geohydrologic evaluation of the Pah Tempe Springs on the Virgin River in Utah as a potential point-source salinity control project that would control about 100,000 tons of salt per year.

On March 4<sup>th</sup>, a magnitude 4.1 earthquake occurred close to the Paradox Valley Unit. Mr. Harris reported that the injection well was shut down at the time and will remain shut down while Reclamation evaluate impacts to future operations. Reclamation expects to have the Paradox Valley Unit EIS wrapped up by fall or winter of this year.

Mr. Harris reported that the work group will meet in Salt Lake City, Utah on April 17-18 with the Forum meeting in Denver in June of this year.

### **Status of the Glen Canyon Dam Adaptive Management Program**

Mr. Harris reported that the Glen Canyon Dam Adaptive Management Work Group (AMWG) met March 6-7 in Phoenix, Arizona. The group discussed recent changes in funding, which have shifted the program to reliance on federal appropriations, instead of power revenues. Mr. Harris noted that the group heard the preliminary results of the November 2018 High Flow Experiment (HFE) release and the summer 2018 "bug flow" releases from Glen Canyon Dam; both experiments seem to have met their objectives. The AMWG also discussed the proposed

downlisting of the razorback sucker and humpback chub from endangered to threatened; downlisting proposals are expected by the end of the year and will include specific details on the protections to be afforded to the species after their change in status. Finally, Mr. Harris noted that the Technical Work Group (TWG) was meeting March 12-14 in Phoenix to discuss the past year's monitoring and research.

### **Status of the Lower Colorado River Multi-Species Conservation Program**

Mr. Harris reported that the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) financial work group had met via teleconference on February 21<sup>st</sup>. The group discussed the FY18, FY19, and FY20 budgets. Although expenditures in FY18 were significantly less than budgeted due to delays in construction, the FY19 budget and work plan would absorb the unspent funds and carry out the delayed projects. Finally, Mr. Harris reported that the LCR MSCP Steering Committee would meet in Las Vegas on April 24<sup>th</sup>.

### **ANNOUNCEMENTS**

Mr. Harris reported that Mr. Andrew Wheeler has been confirmed as EPA Administrator. Mr. David Bernhardt, the current Acting Secretary of the Interior, was nominated to serve as Secretary of the Interior. His confirmation hearing has not been scheduled yet.

The President's FY-2020 budget was released on Monday, March 11<sup>th</sup>, and a more detailed budget is expected soon. Last week, the House Natural Resources Subcommittee on Water, Oceans, and Wildlife held a hearing about the state of the nation's water supply and reliability.

Mr. Harris reported that the Senate Energy & Natural Resources Committee is expected to hold a DCP hearing on March 27<sup>th</sup>. This will be a smaller hearing and witnesses may include Commissioner Burman and UB and LB representatives. The House Natural Resources Committee will schedule a DCP hearing on March 28<sup>th</sup>. This will likely be a larger hearing with representatives from each of the seven Basin States, Commissioner Burman, and possibly tribal and NGO representatives.

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be April 10<sup>th</sup>.

### **ADJOURNMENT**

With no further items to be brought before the Board, Chairman Nelson adjourned the meeting at 12:05 p.m.





4/1/2019

## 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	37%	9,049	3,569.28	13,100
* LAKE MEAD	42%	10,878	1,090.24	11,600
LAKE MOHAVE	93%	1,687	642.57	14,400
LAKE HAVASU	93%	577	447.86	11,500
TOTAL SYSTEM CONTENTS **	45%	26,800		
As of 3/31/2019				
SYSTEM CONTENT LAST YEAR	52%	31,098		
* 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	79%	1,801		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam	15%	148	1,121.63	25
Forecasted Water Use for Calendar Year 2019 (as of 4/1/2019) (values in kaf)				
NEVADA			286	
SOUTHERN NEVADA WATER SYSTEM				251
OTHERS				35
CALIFORNIA			4,154	
METROPOLITAN WATER DISTRICT OF CALIFORNIA				704
IRRIGATION DISTRICTS				3,435
OTHERS				15
ARIZONA			2,628	
CENTRAL ARIZONA PROJECT				1,458
OTHERS				1,169
TOTAL LOWER BASIN USE				7,067
DELIVERY TO MEXICO - 2019 (Mexico Scheduled Delivery + Preliminary Yearly Excess <sup>1</sup> )				1,524
OTHER SIGNIFICANT INFORMATION				
UNREGULATED INFLOW INTO LAKE POWELL - MARCH MID-MONTH FORECAST DATED 3/19/2019				
		MILLION ACRE-FEET	% of Normal	
FORECASTED WATER YEAR 2019		12.310	114%	
FORECASTED APRIL-JULY 2019		9.500	133%	
FEBRUARY OBSERVED INFLOW		0.255	65%	
MARCH INFLOW FORECAST		0.640	96%	
		Upper Colorado Basin	Salt/Verde Basin	
WATER YEAR 2019 PRECIP TO DATE		122% (21.2")	130% (21.4")	
CURRENT BASIN SNOWPACK		133% (20.9")	142% (2.1")	

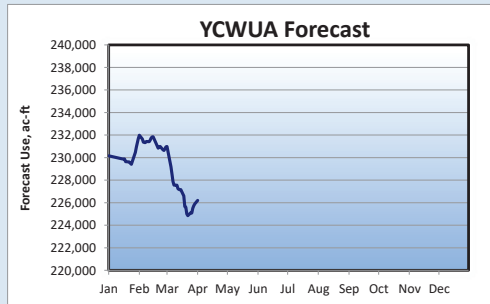
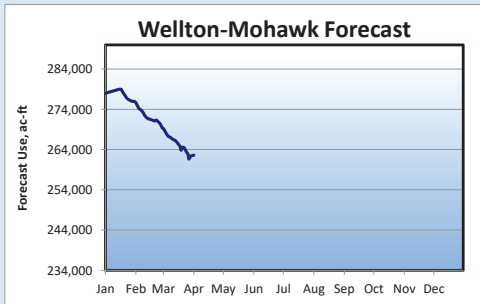
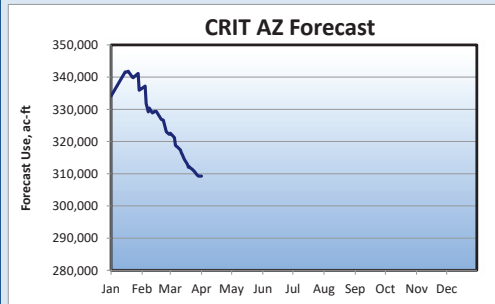
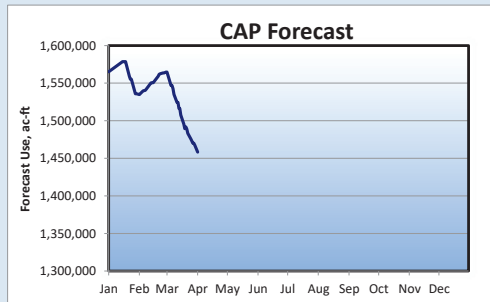
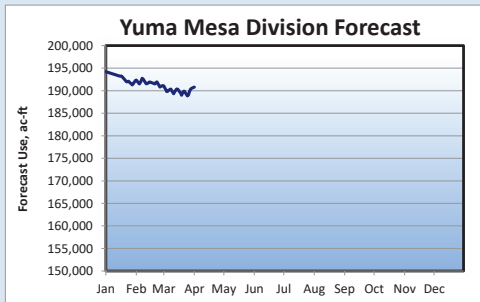
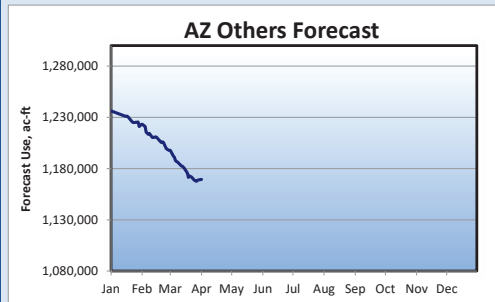
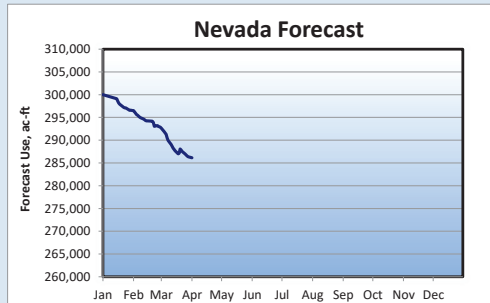
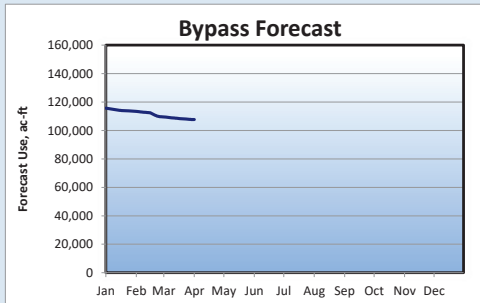
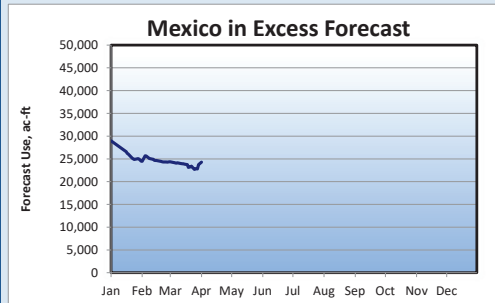
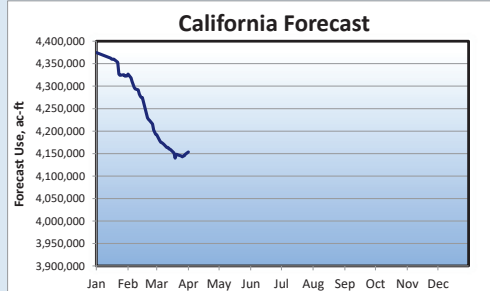
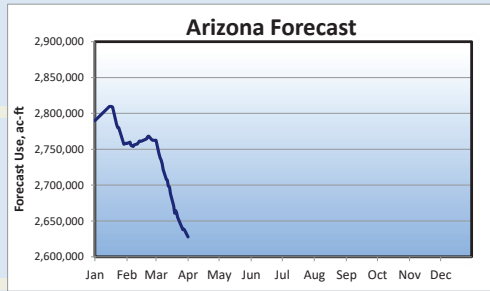
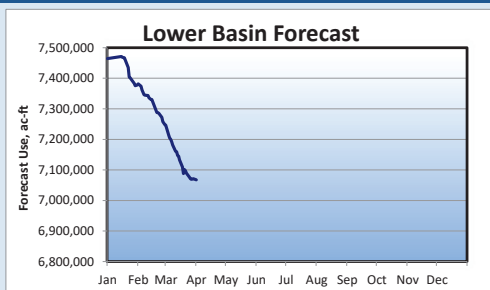
<sup>1</sup> Delivery to Mexico forecasted yearly excess calculated using year-to-date observed and projected excess.

**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	484,266	2,627,726	2,789,843	-162,117
CALIFORNIA	707,985	4,153,623	4,374,692	-221,069
NEVADA	29,101	286,142	300,000	-13,858
<b>STATES TOTAL<sup>3</sup></b>	<b>1,221,352</b>	<b>7,067,491</b>	<b>7,464,535</b>	<b>-397,044</b>
MEXICO IN SATISFACTION OF TREATY (Including downward delivery) TO MEXICO AS SCHEDULED	430,189	1,524,275	1,500,000	<b>24,275</b>
MEXICO IN EXCESS OF TREATY <sup>4</sup>	1,790	24,275		
BYPASS PURSUANT TO MINUTE 242 <sup>5</sup>	21,988	107,679		
<b>TOTAL LOWER BASIN &amp; MEXICO</b>	<b>1,673,529</b>	<b>8,699,445</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	3,227	14,444	14,444	---	4,972	22,255	22,255	0
LAKE MEAD NRA, AZ - Diversions from Lake Mead	15	107	107	---	15	107	107	0
LAKE MEAD NRA, AZ - Diversions from Lake Mohave	33	185	185	---	33	185	185	0
DAVIS DAM PROJECT	0	2	2	---	4	20	20	0
BULLHEAD CITY	1,428	7,593	7,683	---	2,395	12,535	12,720	-185
MOHAVE WATER CONSERVATION DISTRICT	141	632	632	---	211	944	944	0
BROOKE WATER LLC	70	315	315	---	106	475	475	0
MOHAVE VALLEY IDD	3,795	20,905	21,464	---	7,028	38,710	39,746	-1,036
FORT MOJAVE INDIAN RESERVATION, AZ	4,566	41,286	44,550	---	8,456	76,456	82,500	-6,044
GOLDEN SHORES WATER CONSERVATION DISTRICT	60	268	268	---	90	402	402	0
HAVASU NATIONAL WILDLIFE REFUGE	270	3,171	3,563	---	2,253	36,303	41,820	-5,517
LAKE HAVASU CITY	1,745	8,844	8,928	---	2,814	14,264	14,400	-136
CENTRAL ARIZONA PROJECT	323,817	1,458,264			323,817	1,458,264		
TOWN OF PARKER	59	425	430	---	162	924	933	-9
COLORADO RIVER INDIAN RESERVATION, AZ	21,293	309,281	334,133	---	78,249	613,013	645,121	-32,108
EHRENBURG IMPROVEMENT ASSOCIATION	52	234	234	---	73	328	328	0
CIBOLA VALLEY <sup>1</sup>	3,499	15,661	15,661	---	4,891	21,891	21,891	0
CIBOLA NATIONAL WILDLIFE REFUGE	1,262	14,016	14,016	0	2,035	22,605	22,605	0
IMPERIAL NATIONAL WILDLIFE REFUGE	936	3,799	3,799	0	1,509	6,128	6,128	0
BLM PERMITEES (PARKER DAM to IMPERIAL DAM)	244	1,093	1,093		375	1,680	1,680	
CHA CHA, LLC	230	1,364	1,365	---	355	2,100	2,100	0
BEATTIE FARMS	132	734	724	---	203	1,126	1,110	16
YUMA PROVING GROUND	53	479	479	---	53	479	479	0
GILA MONSTER FARMS	1,028	4,925	5,254	---	1,649	8,394	9,156	-762
WELLTON-MOHAWK IDD	39,656	262,611	278,000	-15,389	63,093	385,495	412,965	-27,470
BLM PERMITEES (BELOW IMPERIAL DAM)	22	97	97	0	33	148	148	0
CITY OF YUMA	2,012	14,377	15,962	-1,585	4,258	24,670	26,700	-2,030
MARINE CORPS AIR STATION YUMA	209	1,280	1,359	---	209	1,280	1,359	-79
UNION PACIFIC RAILROAD	6	24	24	---	12	48	48	0
UNIVERSITY OF ARIZONA	147	904	888	---	147	904	888	16
YUMA UNION HIGH SCHOOL DISTRICT	20	150	151	---	27	200	200	0
DESERT LAWN MEMORIAL	4	17	17	---	5	23	23	0
NORTH GILA VALLEY IRRIGATION DISTRICT	1,635	11,770	12,141	---	7,421	42,421	44,200	-1,779
YUMA IRRIGATION DISTRICT	11,396	42,157	39,007	---	17,773	73,973	71,900	2,073
YUMA MESA IDD	15,600	136,887	143,060	---	32,415	230,016	239,724	-9,708
UNIT "B" IRRIGATION DISTRICT	1,462	20,255	21,483	---	3,514	28,564	29,400	-836
FORT YUMA INDIAN RESERVATION	281	1,258	1,258	---	433	1,937	1,937	0
YUMA COUNTY WATER USERS' ASSOCIATION	43,569	226,202	230,166	---	69,049	351,249	360,400	-9,151
COCOPA INDIAN RESERVATION	272	1,619	1,691	---	352	2,402	2,580	-178
RECLAMATION-YUMA AREA OFFICE	20	91	91	---	20	91	91	0
RETURN FROM SOUTH GILA WELLS								
<b>TOTAL ARIZONA</b>	<b>484,266</b>	<b>2,627,726</b>	<b>2,789,839</b>		<b>640,509</b>	<b>3,483,009</b>	<b>3,684,783</b>	
CAP	323,817	1,458,264				1,458,264		
ALL OTHERS	160,449	1,169,462	1,224,724			2,024,745	2,119,668	
YUMA MESA DIVISION, GILA PROJECT	28,631	190,814	171,610	19,204		346,410		

**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	-162,117
<b>Estimated Allowable Use for CAP</b>	<b>1,623,165</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**

**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.

**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	408	1,824	1,824	---	737	3,300	3,300	0
FORT MOJAVE INDIAN RESERVATION, CA	709	7,445	8,996	---	1,318	13,838	16,720	-2,882
CITY OF NEEDLES (includes LCWSP use)	270	1,563	1,605	-42	412	2,233	2,261	-28
METROPOLITAN WATER DISTRICT	127,829	703,925	840,734	---	128,579	706,733	843,474	---
COLORADO RIVER INDIAN RESERVATION, CA	569	2,548	2,548	---	943	4,220	4,220	0
PALO VERDE IRRIGATION DISTRICT	52,282	413,438	422,468	---	144,178	846,178	856,000	-9,822
YUMA PROJECT RESERVATION DIVISION	6,014	45,334	50,616	---	14,562	91,749	98,928	-7,179
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	7,100	42,887	46,128	-3,241
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	7,462	48,862	52,800	-3,938
YUMA ISLAND PUMPERS	597	2,673	2,673	---	1,080	4,833	4,833	0
FORT YUMA INDIAN RESERVATION - RANCH 5	117	523	523	---	211	945	945	0
IMPERIAL IRRIGATION DISTRICT	458,609	2,598,102	2,652,800	-54,698	458,828	2,679,501	2,755,109	---
SALTON SEA SALINITY MANAGEMENT	0	0	0	0	0	0	0	---
COACHELLA VALLEY WATER DISTRICT	60,343	375,180	388,837	-13,657	62,183	389,822	404,914	---
OTHER LCWSP CONTRACTORS	185	829	829	---	290	1,296	1,296	0
CITY OF WINTERHAVEN	15	67	67	---	22	99	99	0
CHEMEHUEVI INDIAN RESERVATION	38	172	172	---	2,534	11,340	11,340	0
<b>TOTAL CALIFORNIA</b>	<b>707,985</b>	<b>4,153,623</b>			<b>815,877</b>	<b>4,756,087</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	-221,069

**Estimated Allowable Use for MWD**

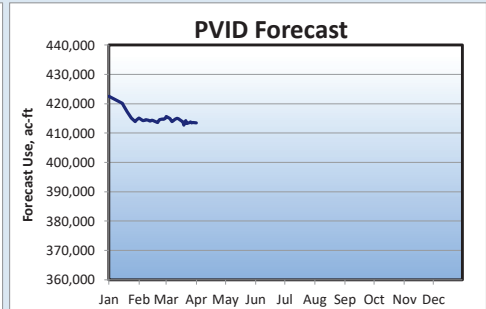
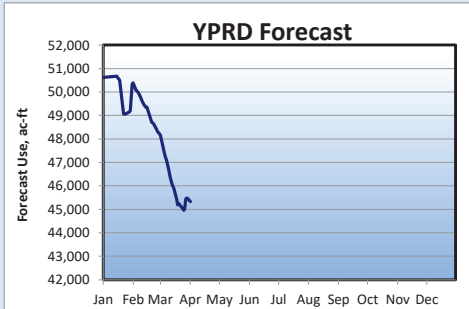
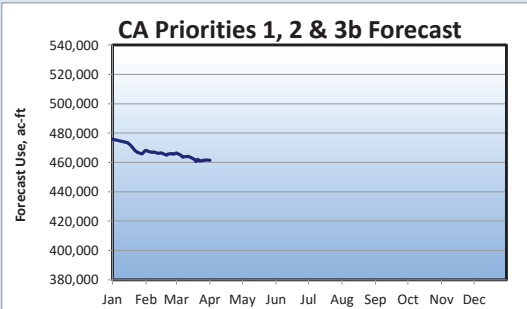
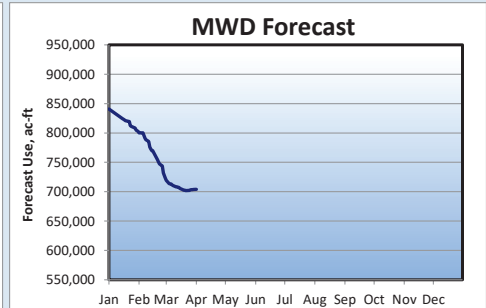
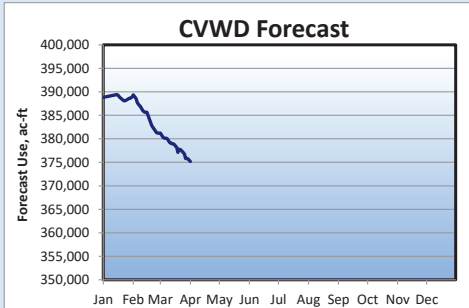
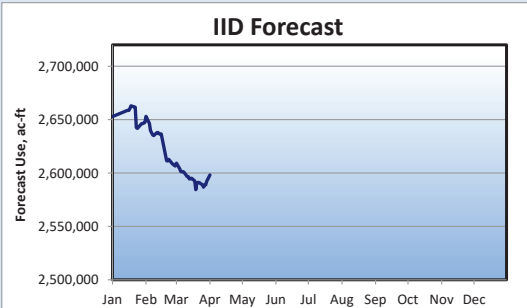
**924,994**

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:**  
 • 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.

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 \(Water Accounting Reports\)](#)

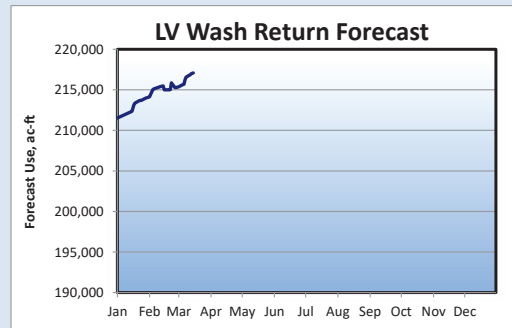
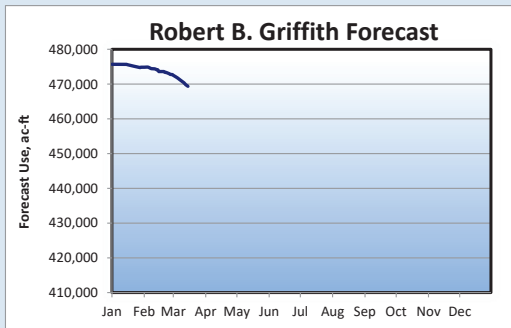
WATER USER	Use	Forecast	Estimated	Excess to	Diversion	Forecast	Approved	Excess to
	To Date	Use	Use	Estimated	To Date	Diversion	Diversion	Approved
	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019	CY2019
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	81,452	467,440	475,686	-8,246	81,452	467,440	475,686	-8,246
LAKE MEAD NRA, NV - Diversions from Lake Mead	221	1,434	1,500	---	221	1,434	1,500	-66
LAKE MEAD NRA, NV - Diversions from Lake Mohave	77	478	500	---	77	478	500	-22
BASIC MANAGEMENT INC.	1,451	8,007	8,208	---	1,451	8,007	8,208	-201
CITY OF HENDERSON (BMI DELIVERY)	3,879	16,233	15,878	---	3,879	16,233	15,878	355
NEVADA DEPARTMENT OF WILDLIFE	3	12	12	0	221	930	1,000	---
PACIFIC COAST BUILDING PRODUCTS INC.	228	930	928	---	228	930	928	2
BOULDER CANYON PROJECT	39	173	173	---	67	300	300	0
BIG BEND WATER DISTRICT	591	4,480	4,619	---	1,589	9,605	10,000	-395
FORT MOJAVE INDIAN TRIBE	172	3,455	4,020	---	257	5,157	6,000	-843
LAS VEGAS WASH RETURN FLOWS	-59,012	-216,500	-211,524	---				
<b>TOTAL NEVADA</b>	<b>29,101</b>	<b>286,142</b>	<b>300,000</b>	<b>-8,246</b>	<b>89,442</b>	<b>510,514</b>	<b>520,000</b>	<b>-9,416</b>
SOUTHERN NEVADA WATER SYSTEM (SNWS)	22,440	250,940				467,440		
ALL OTHERS	6,661	35,202				43,074		
NEVADA USES ABOVE HOOVER	28,338	278,207				495,752		
NEVADA USES BELOW HOOVER	763	7,935				14,762		

**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

**NEVADA ADJUSTED APPORTIONMENT CALCULATION**

Nevada Basic Apportionment	300,000
Excess to Total State Adjusted Apportionment	-13,858



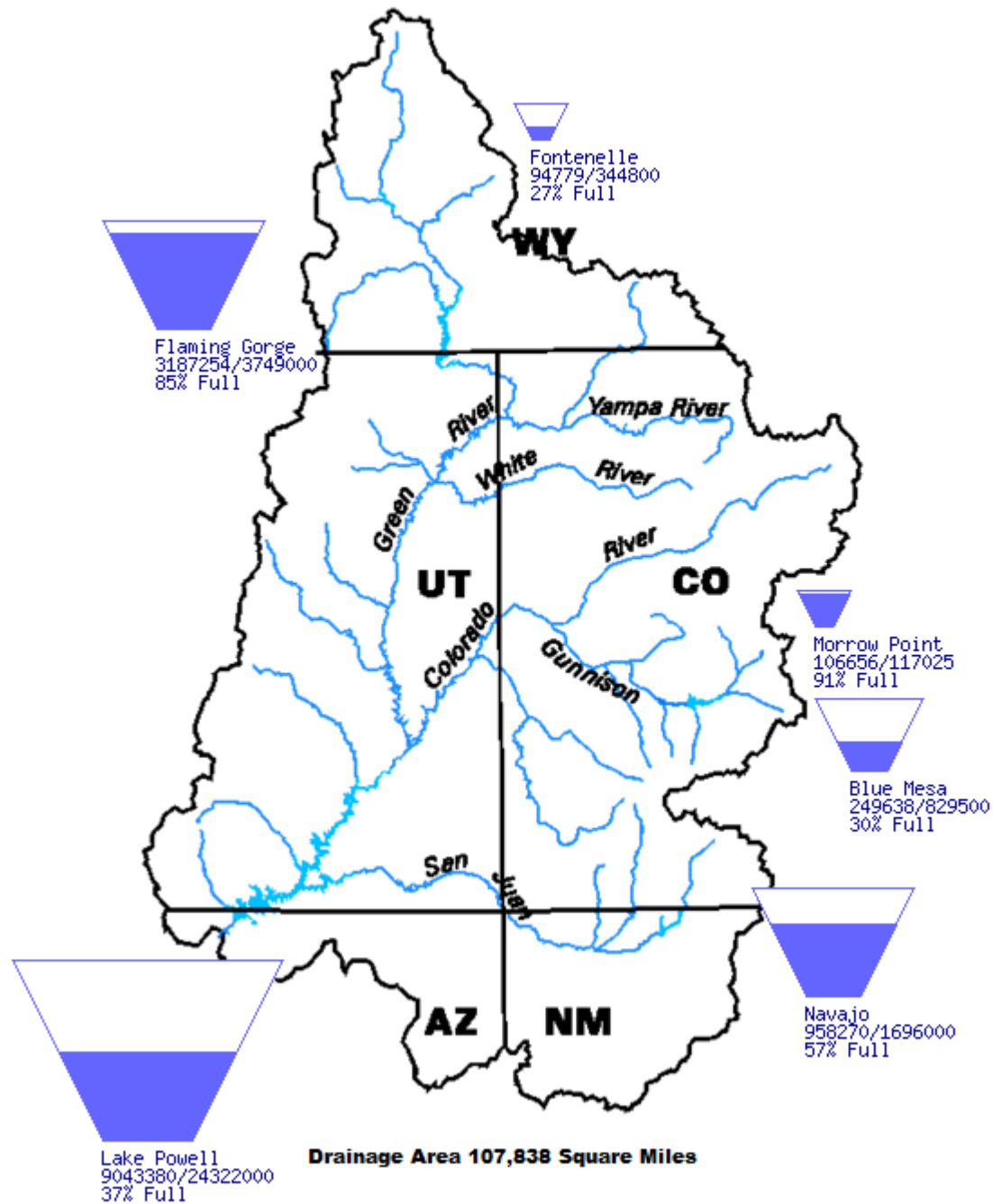
NOTES: Click on Nevada Schedules and Approvals above for incoming diversion schedules and approvals.

# Upper Colorado Region Water Resources Group

## River Basin Tea-Cup Diagrams

Data Current as of:  
04/01/2019

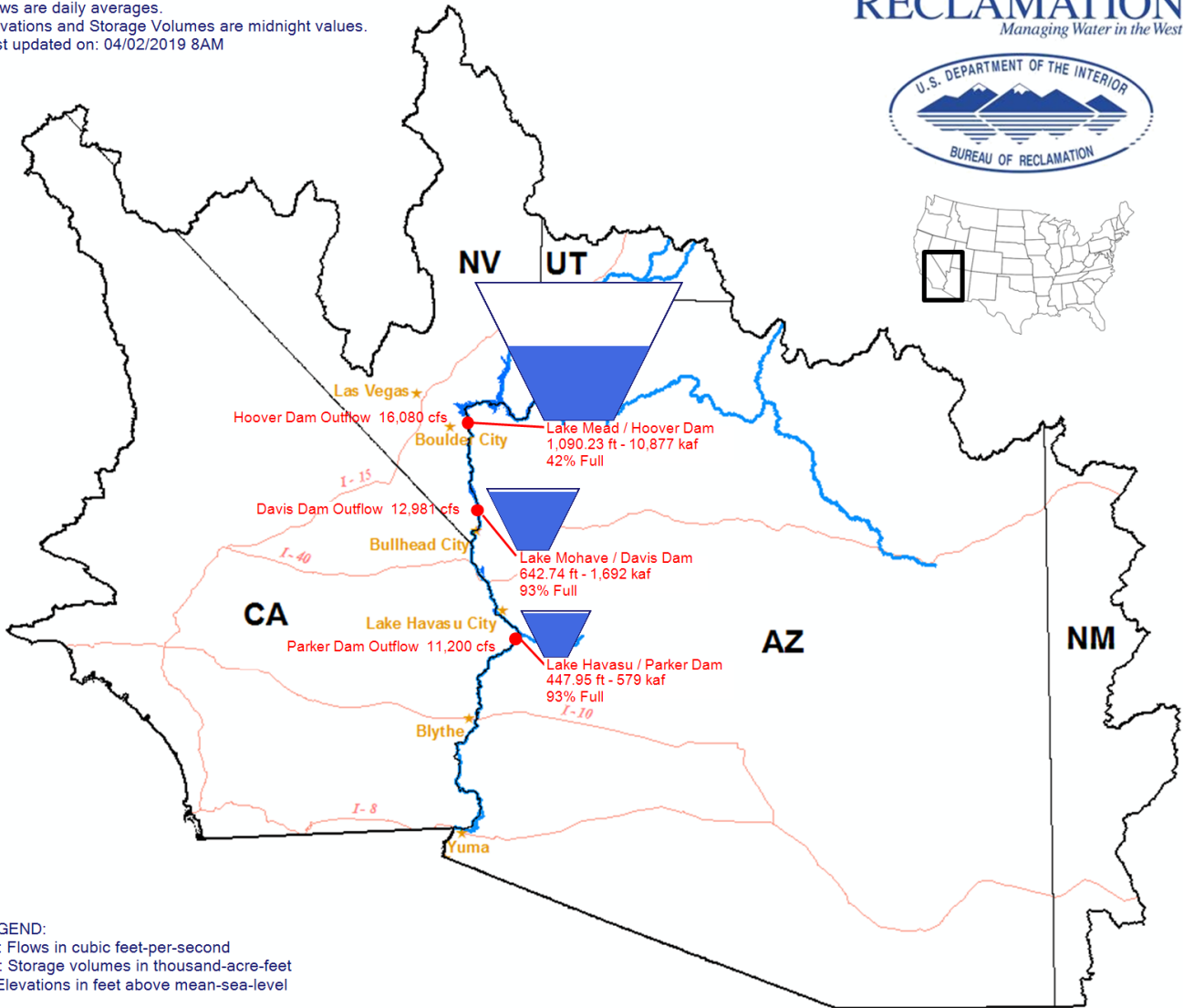
### Upper Colorado River Drainage Basin



# Lower Colorado River Teacup Diagram

Data for: 04/01/2019  
 Flows are daily averages.  
 Elevations and Storage Volumes are midnight values.  
 Last updated on: 04/02/2019 8AM

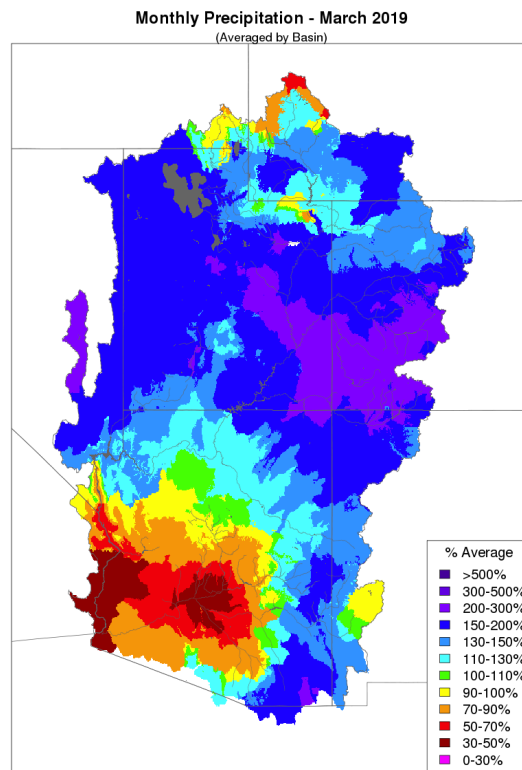
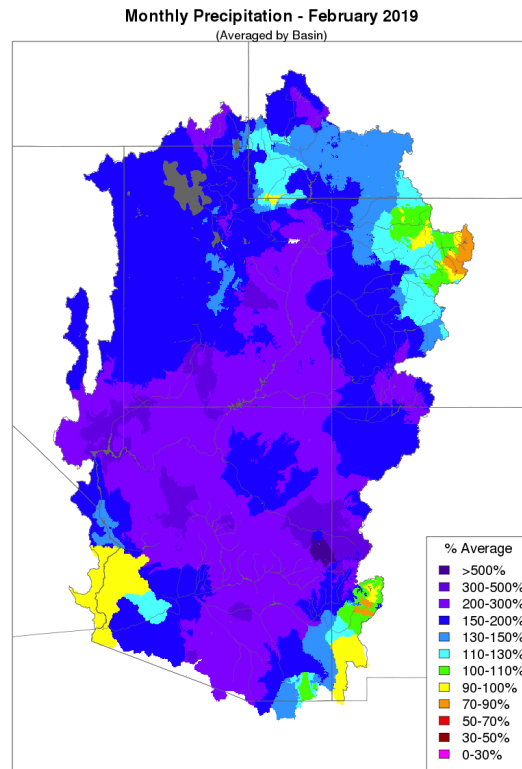
**RECLAMATION**  
*Managing Water in the West*



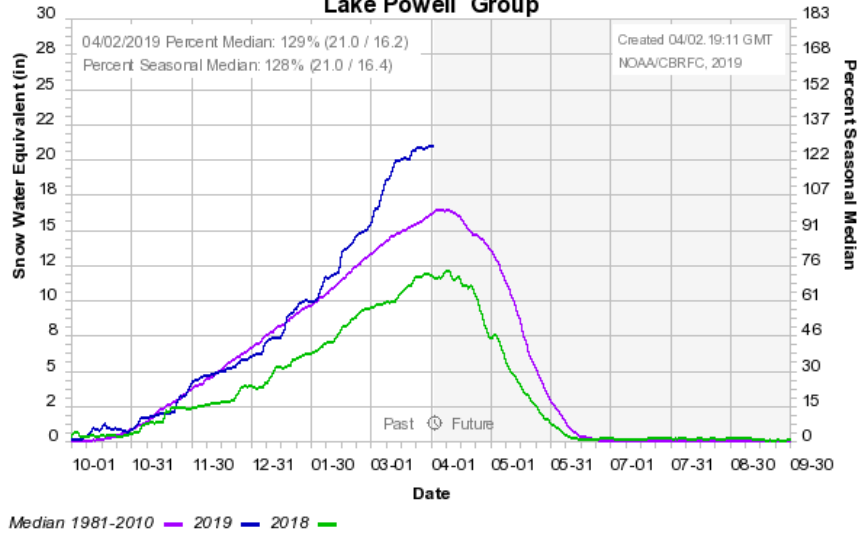
**LEGEND:**  
 cfs: Flows in cubic feet-per-second  
 kaf: Storage volumes in thousand-acre-feet  
 ft: Elevations in feet above mean-sea-level



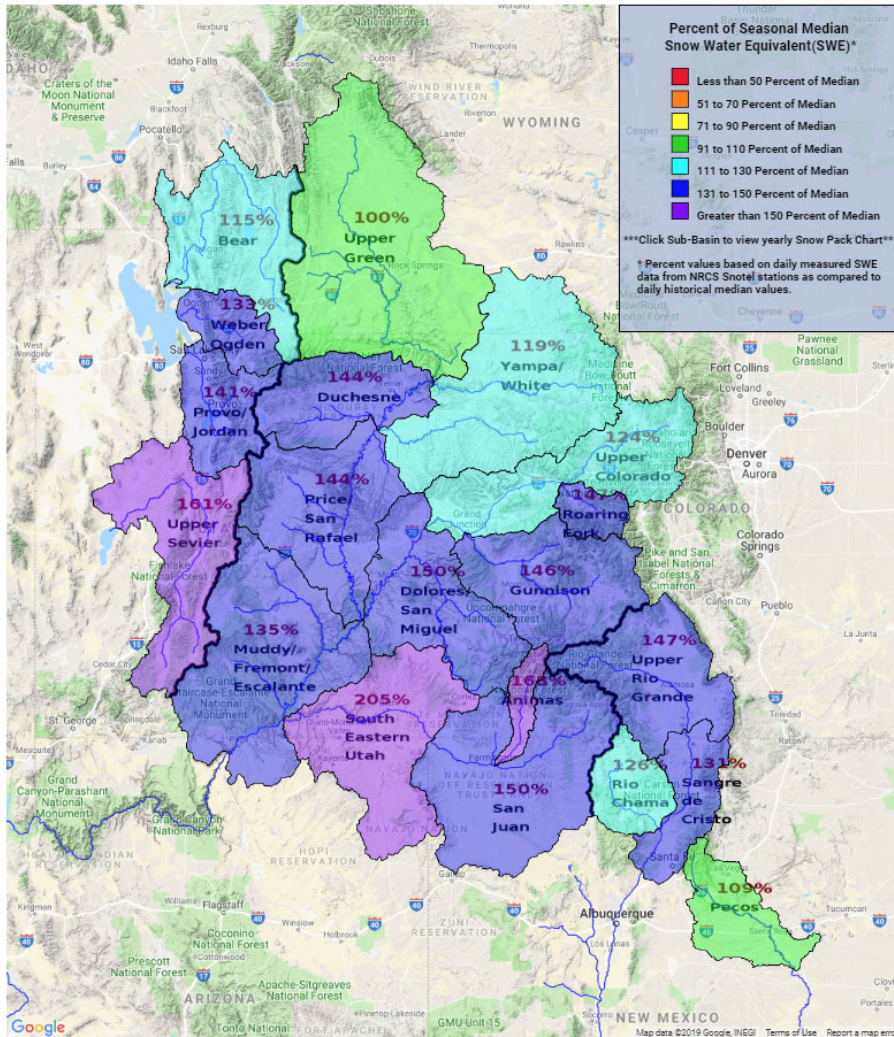
NOAA National Weather Service Monthly Precipitation Map February and March 2019



### Colorado Basin River Forecast Center Lake Powell Group



### Snow Pack Conditions Map Upper Colorado Region



**U.S. Drought Monitor  
West**

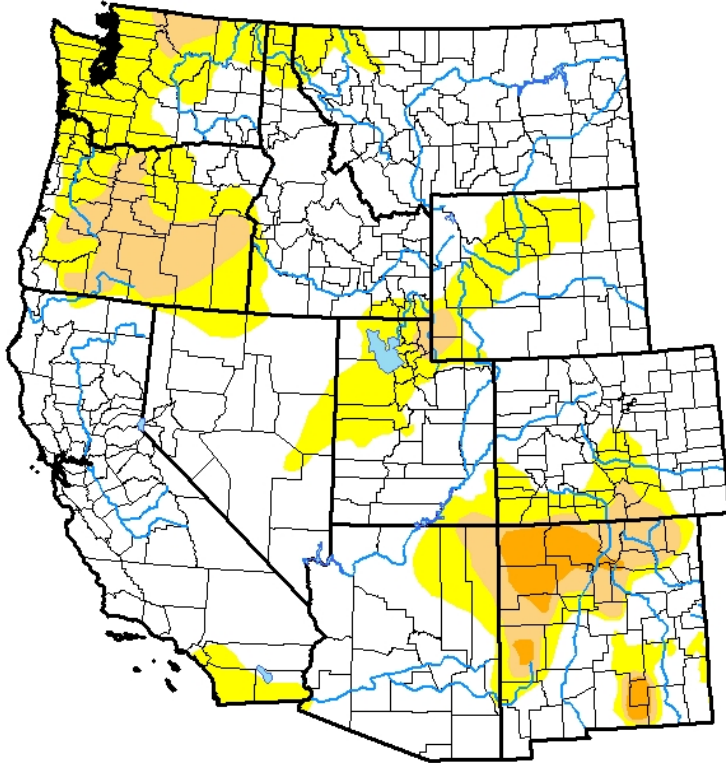
**March 26, 2019**

*(Released Thursday, Mar. 28, 2019)*

**Valid 8 a.m. EDT**

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	70.71	29.29	9.03	1.65	0.00	0.00
<b>Last Week</b> <i>03-19-2019</i>	62.87	37.13	9.83	2.77	0.83	0.00
<b>3 Months Ago</b> <i>12-25-2018</i>	25.32	74.68	54.37	27.84	8.48	2.92
<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>03-27-2018</i>	34.17	65.83	43.34	27.02	11.53	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:

Eric Luebehusen  
U.S. Department of Agriculture

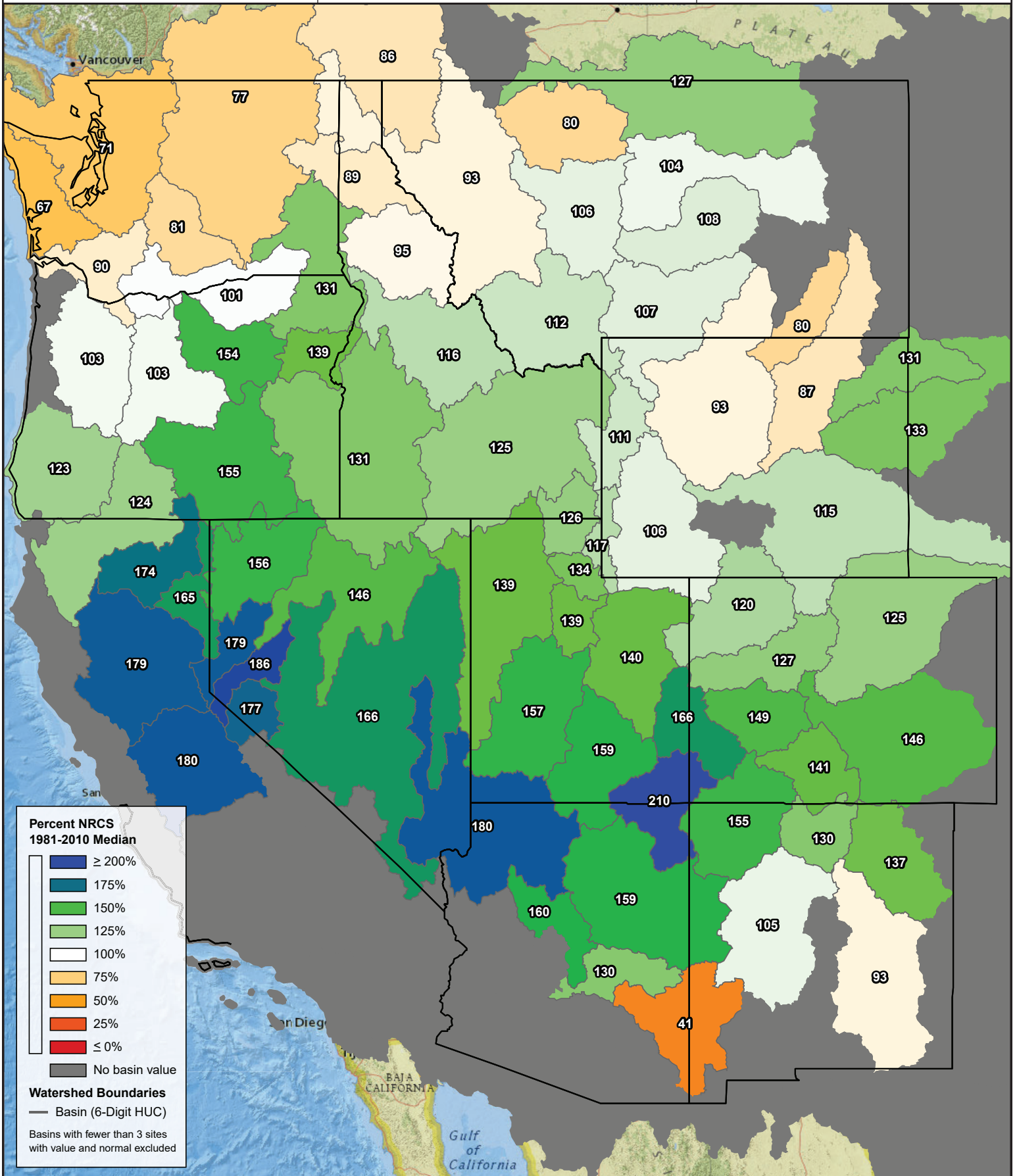


<http://droughtmonitor.unl.edu/>

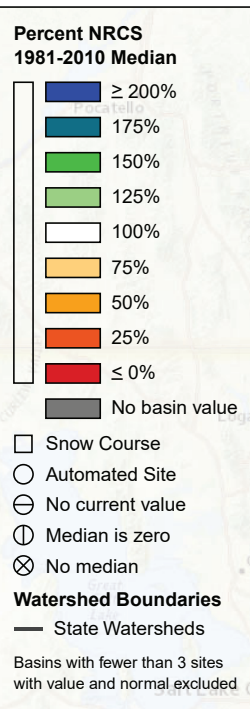
Snow Water Equivalent

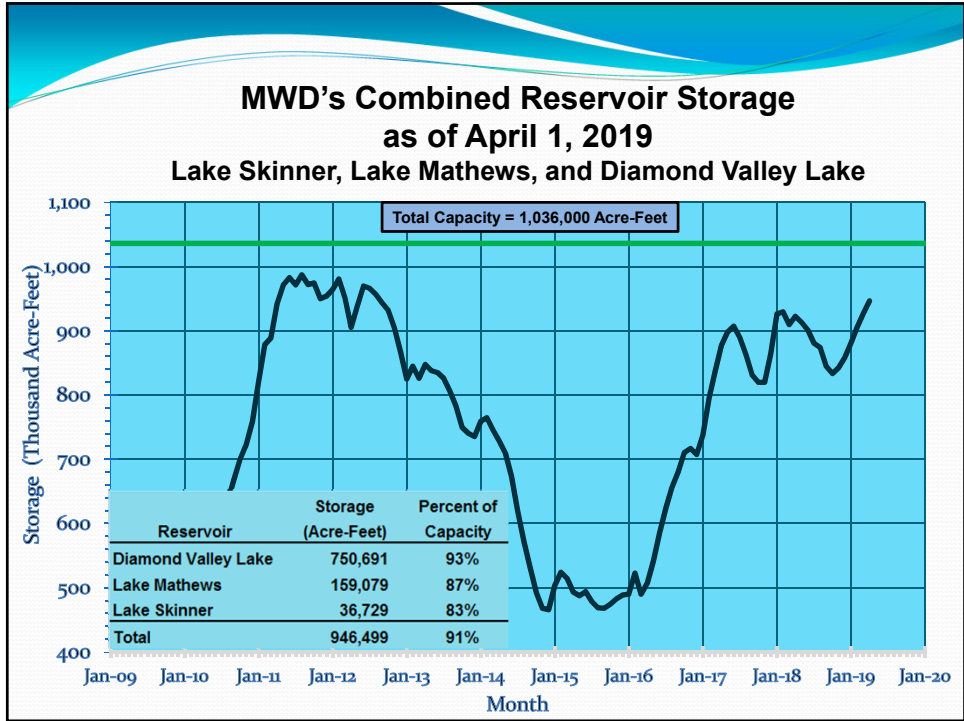
Percent NRCS 1981-2010 Median

April 1st, 2019

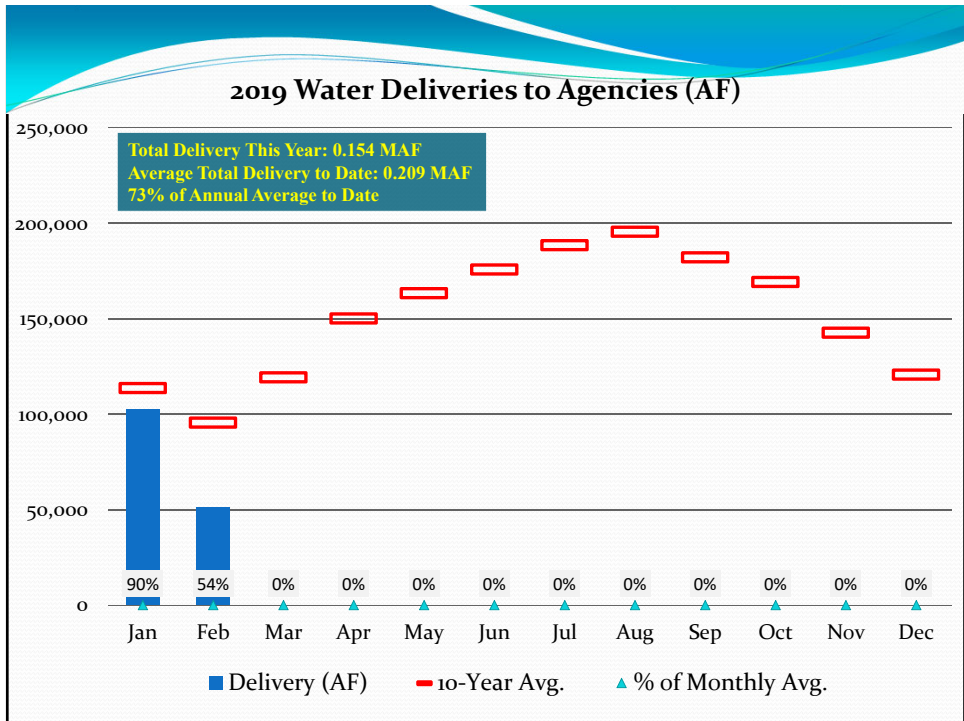




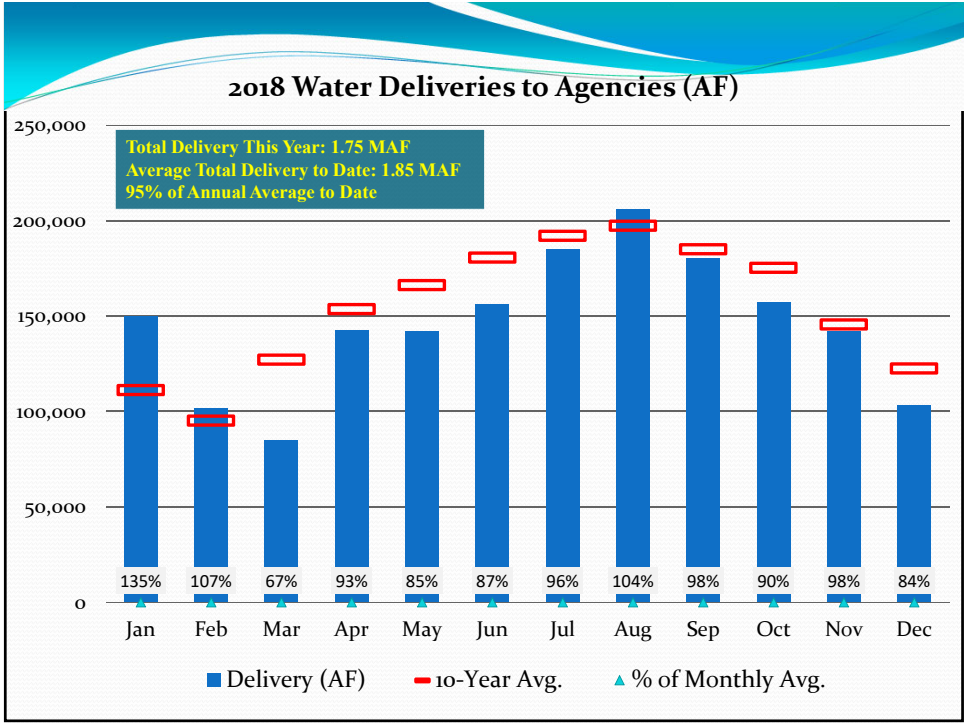




1



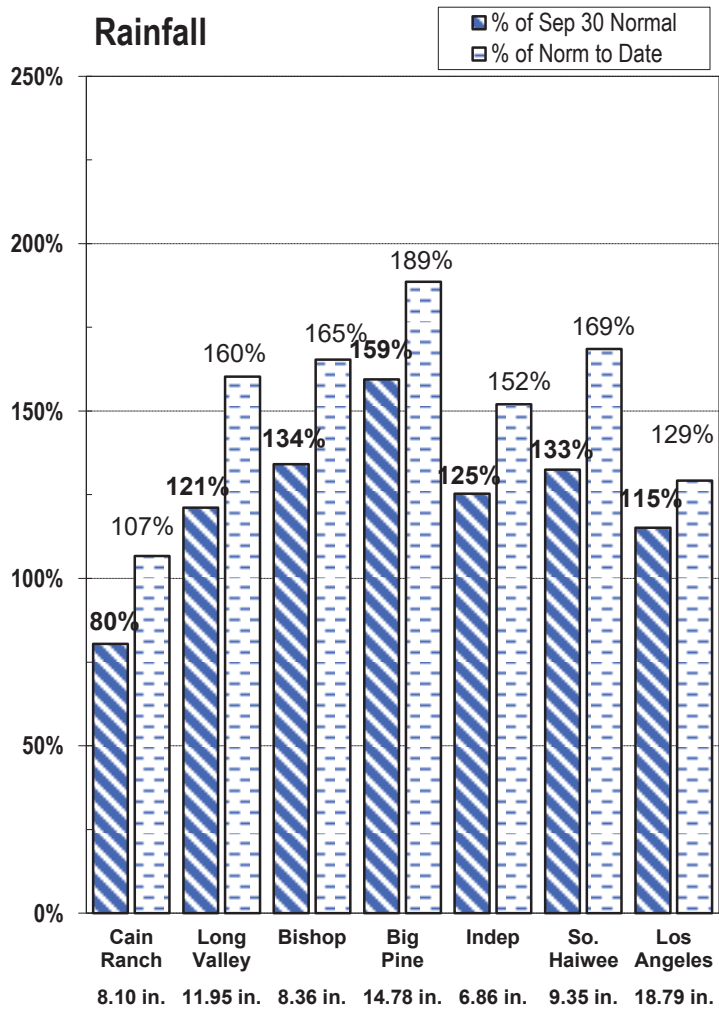
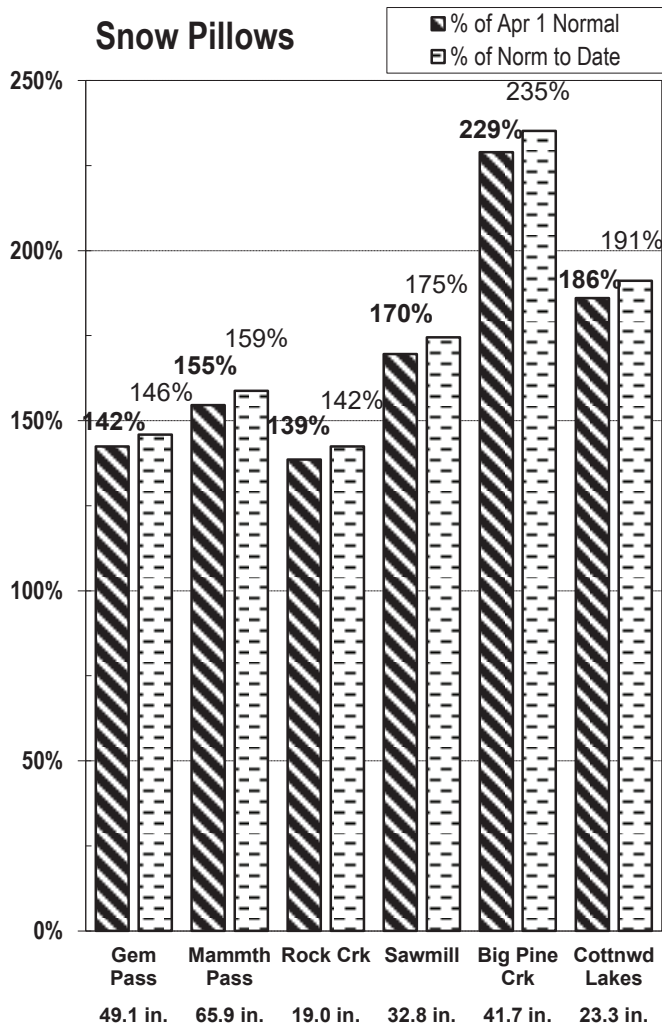
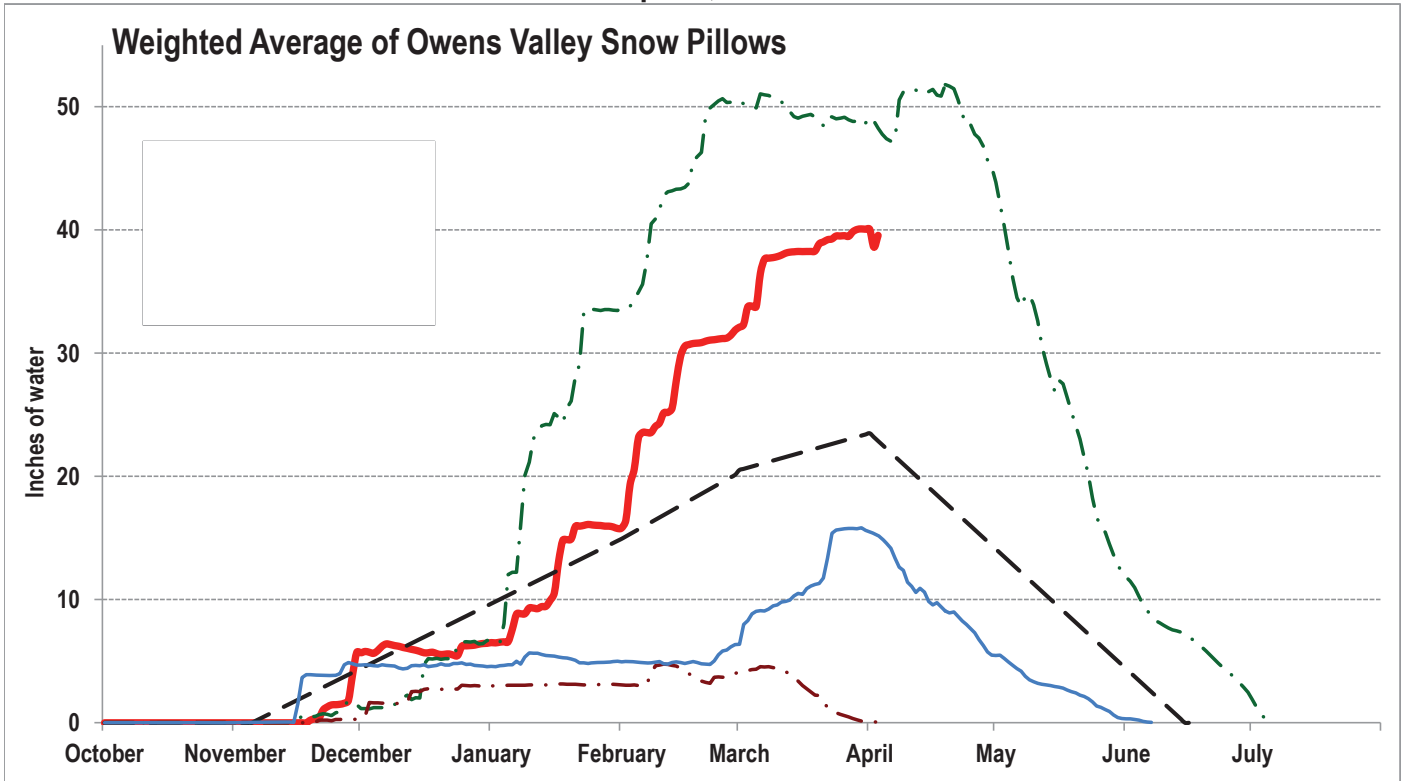
2



3

# EASTERN SIERRA CURRENT PRECIPITATION CONDITIONS

April 3, 2019



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