

February 25, 2021

**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, March 10, 2021  
Time: 10:00 a.m.  
Place: Pursuant to Governor Newsom's Executive Order N-29-20 issued on March 17, 2020, this meeting will be held virtually via Zoom Webinar. Board members will receive instructions separately. The public are welcome to attend. Attendees may access this meeting using the following:  
Webinar Link: <https://us02web.zoom.us/j/87893486948>  
Telephone: US: +1 669 900 9128, enter Meeting ID: 878 9348 6948, followed by #; then press # again to connect.

The Colorado River Board of California welcomes any comments from members of the public pertaining to items included on this agenda and related topics. If members of the public wish to make a comment regarding items on the agenda, there are three options for consideration: (1) Public comments may be submitted by electronic mail, and **should be addressed to the Board's Chairman, Mr. Peter Nelson, at [crb@crb.ca.gov](mailto:crb@crb.ca.gov) and will be accepted up until 10:00 a.m. on the day of the meeting;** (2) During the meeting, members of the public may submit comments by participating in the Zoom Webinar and utilizing the "Q&A" feature in the control panel; **or** (3) By calling into the Zoom Webinar using the telephone number above and pressing \*9 to "Raise Hand." Please note, **written submissions will be read aloud at the public comment period** to the extent they fit within the five-minute time limit.

If accommodations from individuals with disabilities are required, such persons should provide a request at least 24 hours in advance of the meeting by electronic mail to the Board's staff member, Mr. Brian Alvarez at [balvarez@crb.ca.gov](mailto:balvarez@crb.ca.gov).

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, March 10, 2021**  
**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.

COVID-19 Notice

The Board is following guidance provided by Governor Newsom, pursuant to Executive Order N-29-20 issued on March 17, 2020, for adhering to the Bagley-Keene Act's open meeting requirements.

**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 February 10, 2021 (**Action**)
- b. Consideration and approval of Board Resolution Posthumously Honoring Mr. Kevin Kelley, former General Manager of the Imperial Irrigation District (**Action**)

**4. Water Supply and Operations Reports**

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

**5. Staff Reports Regarding Colorado River Basin Programs**

- a. Minute No. 323 Implementation
- b. Colorado River Basin Salinity Control Program
- c. Glen Canyon Dam Adaptive Management Program
- d. Lower Colorado River Multi-Species Conservation Program
- e. General Announcements

**6. 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.

**7. Other Business**

**8. Future Agenda Items/Announcements**

**Next Scheduled Board Meeting:** April 14, 2021  
10:00 a.m.  
Webinar



Minutes of Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
Wednesday, February 10, 2021

A meeting of the Colorado River Board of California (Board) was held virtually on Wednesday, February 10, 2021, using the Zoom Webinar meeting platform.

Board Members and Alternates Present:

David DeJesus (MWD Alternate)  
Dana B. Fisher, Jr. (PVID)  
James Hanks (IID)  
Jeanine Jones (DWR Designee)  
Henry Kuiper (Public Member)  
Jim Madaffer (SDCWA)

Peter Nelson, Chairman (CVWD)  
Glen D. Peterson (MWD)  
David R. Pettijohn (LADWP)  
Jack Seiler (PVID Alternate)  
David Vigil (DFW Alternate)

Board Members and Alternates Absent:

Evelyn Cortez-Davis (LADWP Alternate)  
Norma Sierra Galindo (IID Alternate)  
Christopher Hayes (DFW Designee)

John Powell, Jr. (CVWD Alternate)  
Mark Watton (SDCWA Alternate)

Others Present:

Steven Abbott  
Brian Alvarez  
Jim Barrett  
Bert Bell  
Robert Cheng  
Gary Croucher  
Dan Denham  
JR Echard  
Castulo Estrada  
Emily Halvorsen  
JB Hamby  
Christopher Harris  
Bill Hasencamp  
Joanna Smith-Hoff  
Michael Hughes  
Ned Hyduke  
Sarai Jimenez  
Lori Jones

Rich Juricich  
Eric Katz  
Delon Kwan  
Larry Lai  
Laura Lamdin  
Tom Levy  
Lindia Liu  
Emmanuel Martinez  
Henry Martinez  
Kara Mathews  
Aaron Mead  
Dylan Mohamed  
Jessica Neuwerth  
Jessica Rangel  
Angela Rashid  
Ivory Reyburn  
Kelly Rodgers  
Alex Rodriguez

Shanti Rosset  
Tom Ryan  
Tina Shields  
Andrew Slangen  
Margaret Vick

Cherie Watte  
Jay Weiner  
Meena Westford  
Jerry Zimmerman

## **CALL TO ORDER**

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:03 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. Hearing none, Chairman Nelson moved to the next item on the agenda.

## **ADMINISTRATION**

Chairman Nelson asked for a motion to approve the December 9, 2020, meeting minutes. Mr. Peterson moved that the minutes be approved, seconded by Mr. Pettijohn. By roll-call vote, the minutes were unanimously approved.

Chairman Nelson asked for a motion to approve the January 13, 2021, meeting minutes. Mr. Peterson moved that the minutes be approved, seconded by Mr. Pettijohn. By roll-call vote, the minutes were unanimously approved.

## **COLORADO RIVER BASIN WATER REPORTS**

### **Colorado River Basin Report**

Mr. Juricich reported that as of February 1<sup>st</sup>, the water level at Lake Powell was 3,576.45 feet with 9.64 million-acre feet (MAF) of storage, or 40% of capacity. The water level at Lake Mead was 1,085.95 with 10.51 MAF of storage, or 40% of capacity. The total system storage was 27.31 MAF, or 46% of capacity, which is 3.87 MAF less than system storage at this time last year.

Mr. Juricich reported that as of January 19<sup>th</sup>, the unregulated inflow into Lake Powell for Water Year-2021 is 5.36 MAF, or 49% of normal and the WY-2021 forecasted April to July inflow to Lake Powell is 3.45 MAF, or 48% of normal. For WY-2021, the observed December inflow to Lake Powell was 0.17 MAF, or 47% of normal. The January inflow forecast to Lake Powell is 0.20 MAF, or 55% of normal. To date, the WY-2021 precipitation in the Upper Colorado River Basin is 66% of normal and the current Basin snowpack is 75%.

Mr. Juricich reported that the precipitation conditions across the Basin were below average in December but improved slightly in January. He reported that storms in January brought much needed precipitation to the Lower Basin. Board member Peterson, representing The Metropolitan Water District of Southern California (MWD), inquired whether the snow water equivalent (SWE) measurement considered the declining snowpack that Basin has experienced over the past few years. Mr. Juricich reported that the Colorado Basis River Forecast Center (CBRFC) will be updating its SWE calculations using the median value of the period from 1991 to 2020, noting that the shift in period will reflect the warming trend that has occurred over the last several years.

Mr. Juricich reported that as of January 29<sup>th</sup>, the Brock and Senator Wash regulating reservoirs captured 9,721 AF and 6,528 AF, respectively. He also reported that the excess deliveries to Mexico through January 31<sup>st</sup>, were 6,269 AF, adding this value is larger than this time last year due to storm activity in late January.

Mr. Juricich reported on the historical consumptive use of the Lower Division states, noting that for the past several years, consumptive use has declined. He added that the most recent 24-Month Study results from the Bureau of Reclamation (Reclamation) also show a decline in consumptive use for the Lower Division States.

Mr. Juricich reported that Lake Powell's most probable operating tier based on the January 24-Month Study is the Mid Elevation Release Tier, with the most probable release of 8.23 MAF for 2021. In 2022 and 2023, Lake Powell's end of December elevation is projected to decline, and the most probable release is 7.48 MAF for both years. He reported that Lake Mead's most probable end of December elevation for 2021 will be at 1,075 ft or below, triggering a Tier 1 shortage condition beginning in CY 2022. Mr. Juricich noted that the January 24-Month results are based on average hydrology, so the projections could improve with better hydrological conditions in the future.

Mr. Juricich reported that severe drought conditions in the Western U.S. continue to persist, noting that the Basin is expecting another storm front within the next week.

### **State and Local Report**

Ms. Jones, representing the California Department of Water Resources (DWR), reported that the State's overall precipitation conditions are below average despite the series of storms that occurred in late January. She reported that at the end of January, the statewide average reservoir storage condition was close to 70% of capacity, with the State's largest reservoirs, Shasta and Oroville, continuing to lag. She added that the lag is reflective of the very dry water year that Northern California experienced in 2020.

Ms. Jones reported on DWR's forecasting efforts to analyze the full natural flow of selected California rivers. She noted that this effort will compare dry conditions in WY-2021 to those of past severe drought years, particularly 2014 and 2015. She added that full natural flow conditions for WY-2021 are tracking with low natural flow conditions from 2014. She stated that the State Water Resources Control Board may consider this data as it administers water rights this summer. Ms. Jones reported that the series of late January storms did very little to increase the runoff values for WY-2021 because most of the precipitation fell as snow rather than rain, adding that the snow may help during the spring snowmelt. She noted that the current SWE is 66% of average and the SWE is better than it was in 2014 and 2015.

Ms. Jones provided an update on an experimental forecasting product she discussed at the January CRB meeting. She noted that the experimental forecast model was developed by the University of Arizona and was initialized with data through December 2020 that also includes snowpack data. She stated that the model results project warm temperatures in spring through early summer with dry precipitation conditions. The model also projects close to normal snowpack conditions in Northern California and below average conditions in the Colorado River Basin. She noted that the model uses National Oceanic and Atmospheric Administration's (NOAA) thirty-year climatology record.

Mr. Peterson reported the MWD has been filling its reservoirs and Diamond Valley Lake is 87% of capacity. He noted that water use has increased due to in lieu water deliveries, adding that MWD delivered 125,000 AF to Coachella last year.

Mr. Peterson also reported that the Colorado River Aqueduct will be shut down for a month for repairs and rehabilitation. He added MWD will rehabilitate a pumping plant in the Las Virgenes area to bring in water from the Colorado River Aqueduct to Ventura County and Las Virgenes. He stated that the pumping plant system was built in the 1960's because State Water Project supplies were not available at that time.

Vice Chairman Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), stated that precipitation conditions in the Eastern Sierra were tracking with the driest year on record but improved slightly from the late January storms. He stated that as of February 8th, precipitation conditions are 57% of normal.

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

### **Status of the Salinity Control Program**

Mr. Juricich provided a brief update on the status of the Paradox Valley Unit (PVU) project. The Final EIS identified No Action as the preferred alternative, although the Basin States

advocated for the evaporation pond as the preferred alternative. The existing brine injection well has been shut down for nearly two years due to the seismic activity in March of 2019. Reclamation is currently reviewing options on the existing operation. In response to letters sent by the Board and member agencies, Reclamation has stated that they will not issue a Record of Decision based on the Final EIS. This allows the Basin States and stakeholders to continue discussion with Reclamation on potential next steps. Mr. Juricich reported that a Work Group meeting is scheduled near end of February and invited the technical staff from the Board member agencies to participate.

### **Colorado River Basin States Webinar Regarding Federal DCP Implementation**

Mr. Harris provided a summary of the Basin States webinar on February 4, which provided updates on several items, including: (1) proposed federal legislative initiative(s) for appropriations for Reclamation's implementation of System conservation measures during the interim period; (2) status of DCP implementation; (3) status of the proposed Colorado River Indian Tribes legislation; and (4) status of preparatory review and assessment of technical modeling needs and updates. Mr. Harris reported that the Central Arizona Water Conservation District (CAWCD) initiated an effort during the fall of 2020 to develop some proposed federal legislation that would provide appropriations for Reclamation's implementation of System water conservation activities that would result in the creation of up to 100,000 acre-feet annually during the remaining interim period of the DCPs and 2007 Guidelines. The states discussed the various legislative options and timing, which ranged from the stand-alone legislation proposed by CAWCD, to an add-on to either a larger reauthorization of the Water Infrastructure Improvements for the Nation (WIIN) Act or other large Biden administration infrastructure bill. The states will continue to coordinate with delegation staff members and Washington D.C. representatives to help determine the most effective path forward, with the hope that this could be accomplished over the next few months.

Mr. Harris reported the states also very briefly reported out the status of implementation of the basinwide DCPs. In the upper basin, it was reported that the recent 24-Month Study report minimum probable study indicates that Lake Powell could reach elevation 3,525 feet by March 2022. This has triggered the initiation of additional coordination and communication among the Upper Basin states and Reclamation associated with the Upper Basin Drought Operations Agreement that was executed in 2019. In the lower basin, Arizona reported that it has initiated a shortage implementation discussion among its stakeholders in anticipation of Lake Mead reaching or falling below elevation 1,075 feet in the next few years. California reported that due to the additionally flexibility provided by the 2019 Lower Basin DCP Agreement, that it had created and stored an additional 0.340 MAF of extraordinary conservation intentionally created surplus in Lake Mead in calendar-year 2020.

Mr. Harris also reported that the Lower Basin states initiated the formation of a small sub-principal's level group of technical representatives to work with Reclamation evaluating the modeling tools that are currently being used in basinwide water supply assessments, primarily the

Colorado River Simulation System (CRSS) model. The purpose of the working group is to develop a sensitivity analysis and identify drivers and a deeper understanding of the implications that these drivers have for hydrologies, water use demands, and the various release regimes modeled in CRSS. Chairman Nelson reported that he was impressed with the organization of the technical modeling needs and how far they've come along.

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

Board staff Ms. Neuwerth reported that the Glen Canyon Dam Adaptive Management Program held its Annual Reporting meeting in conjunction with a Technical Work Group meeting on January 20-22. Ms. Neuwerth shared several updates from scientists on the status of the endangered humpback chub. The species was proposed for downlisting from endangered to threatened in 2020, but the group received an update from U.S. Fish and Wildlife Service (USFWS) staff that the proposal would take additional time to be finalized. Ms. Neuwerth reported that the main population of humpback chub, located at the confluence of the Little Colorado River, was maintaining a stable adult population. However, Ms. Neuwerth reported that the number of sub-adult fish was low enough to meet the first level trigger under the Long-Term Experimental and Management Plan (LTEMP) Biological Opinion, meant to provide an early warning if the population seems poised to decrease.

Ms. Neuwerth reported that, in contrast, researchers provided encouraging news about the status of the humpback chub population in the Western Grand Canyon. Ms. Neuwerth noted that this population has increased dramatically since 2014 and researchers now estimate the population to be as much as 15,000 to 30,000 fish. As a relatively new population, researchers are still trying to understand the population's stability. Ms. Neuwerth reported that researchers have been examining whether Pearce Ferry Rapid, a rapid within the full pool elevation of Lake Mead that has emerged as the lake level has declined, is acting as a barrier to nonnative fish and may be helping upstream native fish populations flourish. Surveys from the area detected mostly native fish above the barrier, and mostly nonnative fish below it. Ms. Neuwerth noted that additional research is needed to know how Pearce Ferry rapid interacts with changing Lake Mead levels and other variables.

Ms. Neuwerth noted that the number of nonnative brown trout below Glen Canyon Dam continues to increase, and the fish now make up approximately 16% of the fish population in the area. Ms. Neuwerth reported that fall High Flow Experiments (HFEs) might have prompted the fish to establish in the area, but a lot is still unknown about the drivers of the population. In response to a question from Mr. Harris, Ms. Neuwerth noted that despite no HFEs being conducted in fall 2019 and fall 2020, the brown trout population in the area continues to increase.

Ms. Neuwerth also reported on potential experimental releases that could be conducted at Glen Canyon Dam in 2021. Ms. Neuwerth noted that "bug flows" intended to increase invertebrate

production had been conducted at the dam during summer 2018, 2019, and 2020. The results so far are equivocal, with the flows appearing to increase the abundance of some insect taxa but not others. Ms. Neuwerth noted that a technical team will be meeting to consider whether to implement a fourth year of bug flows, with a decision expected by April.

Finally, Ms. Neuwerth reported that the Department of the Interior had approved implementation of a spring disturbance flow at Glen Canyon Dam in March. The flow will be conducted March 15-26 and consist of five days of 4,000 cfs flows (half of the normal minimum release) followed by approximately 84 hours at approximately 20,000 cfs, the maximum release within powerplant capacity.

## **ANNOUNCEMENTS**

### **Washington, D.C. Updates**

Mr. Harris reported that President Biden rescinded various Executive Orders enacted by President Trump. Mr. Harris noted that President Biden introduced an Executive Order that focuses on tackling climate change.

Mr. Harris reported that the DOI submitted a report to Congress on water supply challenges in the western United States and efforts to respond to them.

Mr. Harris reported that Representatives Ruiz and Vargas reintroduced a bill that is aimed at cleaning up the New River, a highly polluted waterway originating near Mexicali. Mr. Harris noted that the bill is known as the California New River Restoration Act.

Mr. Harris reported on acting agency leaders for the DOI. Mr. Harris noted that Scott de la Vega is the Acting Secretary; Radhika Fox has been nominated as the Principal Deputy Assistant Administrator for the EPA Office of Water; and Tanya Trujillo has been nominated as the Principal Deputy Assistant Secretary for Water and Science.

### **Next Scheduled Board Meeting**

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be held on March 10, 2021 and would also be held virtually using the Zoom Webinar meeting platform.

## **ADJOURNMENT**

With no further items to be brought before the Board, Chairman Nelson adjourned the meeting at 11:09 a.m.



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

**POSTHUMOUSLY HONORING**

**KEVIN KELLEY**

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

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

WHEREAS, the Imperial Irrigation District, one of the member agencies of the Board, has relied on the water and power resources of the Colorado River to serve its residents for more than a century, including supplying water to more than 424,000 acres of farmland; and

WHEREAS, Mr. Kevin Kelley, a lifelong resident of the Imperial Valley, served as General Manager of the Imperial Irrigation District from 2011 to 2019, bringing dedication, intelligence, and wit to bear on the challenges facing the Colorado River Basin, the State of California, and the District; and

WHEREAS, Mr. Kelley played a critical role with the District as it navigated difficult and important issues, including litigation over the water rights held in trust by IID, continued implementation of the Quantification Settlement Agreement, participation in joint binational conservation efforts, and the transition from land fallowing practices to implementation of a suite of water efficiency management policies;

WHEREAS, Mr. Kelley recognized the crucial importance of Salton Sea management to the residents of the Imperial Valley and the Colorado River Basin, and was instrumental in the execution of a Memorandum of Understanding with Imperial County prioritizing Salton Sea restoration efforts, the filing of a petition urging the State Water Resources Control Board to honor the State's commitment to restore the Salton Sea, and the resulting implementation of the Salton Sea Management Program; and

WHEREAS, Mr. Kelley displayed much-appreciated resourcefulness, directness, and humor during difficult discussions with colleagues across the Colorado River Basin and the State of California as the parties worked to develop complex binational and interstate agreements, tirelessly advocating for the interests of the Imperial Valley while maintaining the commitment to collaboration that has persisted in the Colorado River Basin despite major challenges and decades of drought; and

NOW THEREFORE BE IT RESOLVED that the Colorado River Board of California recognizes and honors the contributions of Mr. Kevin Kelley, including his dauntless advocacy for the Imperial Irrigation District and the Salton Sea and his tough but gracious leadership over his years of service to the District and the State of California and its water users;

BE IT FURTHER RESOLVED that the Colorado River Board of California and its staff extend their gratitude and condolences to Kevin's family and loved ones.

Unanimously adopted on the 10<sup>th</sup> day of March 2021.

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Peter Nelson, Chairman



3/1/2021

# 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	38%	9,226	3,571.46	12,000
* LAKE MEAD	41%	10,622	1,087.26	11,300
LAKE MOHAVE	93%	1,688	642.63	11,300
LAKE HAVASU	92%	572	447.56	9,000
TOTAL SYSTEM CONTENTS **	45%	26,959		
As of 2/28/2021				
SYSTEM CONTENT LAST YEAR	52%	31,010		
* 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	77%	1,760		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam	12%	119	1,119.26	25
Forecasted Water Use for Calendar Year 2021 (as of 3/1/2021) (values in kaf)				
NEVADA			262	
SOUTHERN NEVADA WATER SYSTEM				226
OTHERS				36
CALIFORNIA			4,490	
METROPOLITAN WATER DISTRICT OF CALIFORNIA				1,068
IRRIGATION DISTRICTS				3,404
OTHERS				18
ARIZONA			2,535	
CENTRAL ARIZONA PROJECT				1,401
OTHERS				1,135
TOTAL LOWER BASIN USE				7,287
DELIVERY TO MEXICO - 2021 (Mexico Scheduled Delivery + Preliminary Yearly Excess )				1,445
OTHER SIGNIFICANT INFORMATION				
UNREGULATED INFLOW INTO LAKE POWELL -FEBRUARY MID-MONTH FORECAST DATED 2/16/2021				
		MILLION ACRE-FEET	% of Normal	
FORECASTED WATER YEAR 2021		5.419	50%	
FORECASTED APRIL-JULY 2021		3.600	50%	
JANUARY OBSERVED INFLOW		0.198	55%	
FEBRUARY INFLOW FORECAST		0.220	56%	
		Upper Colorado Basin	Salt/Verde Basin	
WATER YEAR 2021 PRECIP TO DATE		74% (10.9")	47% (6.4")	
CURRENT BASIN SNOWPACK		83% (10.7")	33% (2.0")	

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

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)

**WATER USE SUMMARY**

	Use To Date CY 2021	Forecast Use CY 2021	Approved Use <sup>2</sup> CY 2021	Excess to Approval CY 2021
ARIZONA	314,718	2,535,186	2,532,097	3,089
CALIFORNIA	366,262	4,490,141	4,398,276	91,865
NEVADA	20,717	261,847	338,153	-76,306
STATES TOTAL <sup>3</sup>	701,697	7,287,174	7,268,526	18,648
TOTAL DELIVERIES MEXICO IN SATISFACTION OF TREATY REQUIREMENTS <sup>4</sup>	239,794	1,421,660		
CREATION OF MEXICO'S RECOVERABLE WATER SAVINGS <sup>5</sup>	0	41,000		
CREATION OF MEXICO'S WATER RESERVE <sup>6</sup>	36,994	37,340		
TOTAL TO MEXICO IN SATISFACTION OF TREATY REQUIREMENTS	276,788	1,500,000		
TO MEXICO IN EXCESS OF TREATY <sup>7</sup>	7,104	22,979		
WATER BYPASSED PURSUANT TO IBWC MINUTE NO. 242 <sup>8</sup>	16,424	113,278		
TOTAL LOWER BASIN & MEXICO <sup>9</sup>	965,019	8,845,091		

<sup>1</sup> 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.

<sup>2</sup> These values reflect adjusted apportionments. See Adjusted Apportionment calculation on each state page.

<sup>3</sup> 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.

<sup>4</sup> Includes deliveries to Mexico at the Northerly International Boundary, Southerly International Boundary, Limitrophe, and Diversion Channel Discharge; and diversions at Parker Dam for Emergency Delivery to Tijuana; does not include Creation of Mexico's Water Reserve or Creation of Mexico's Recoverable Water Savings.

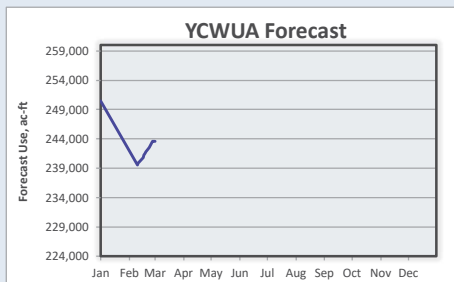
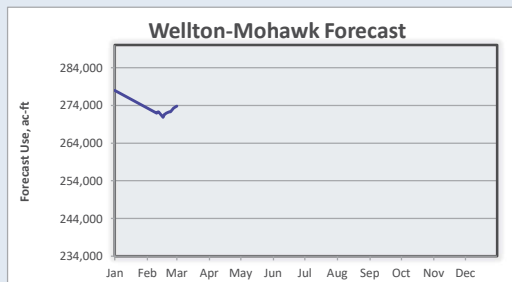
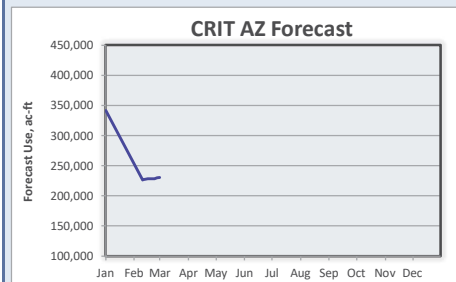
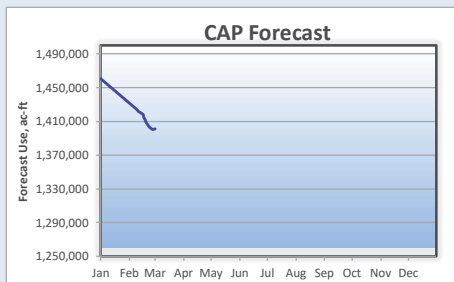
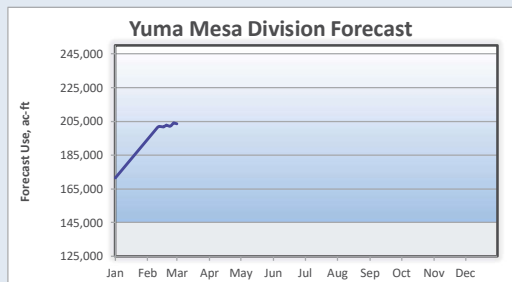
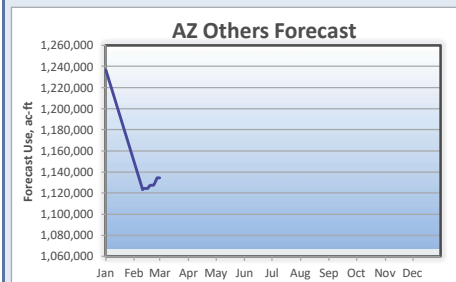
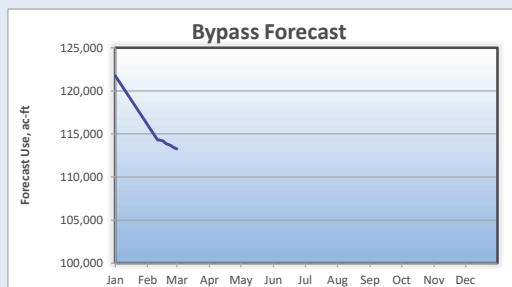
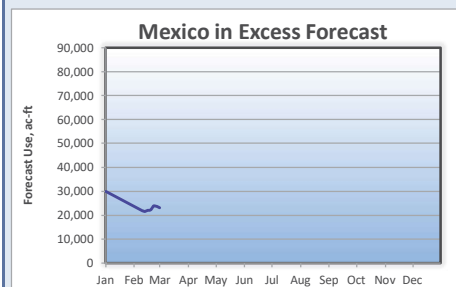
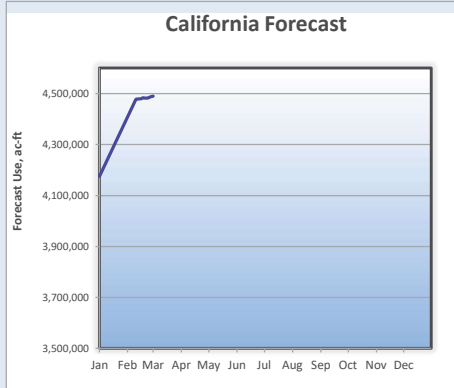
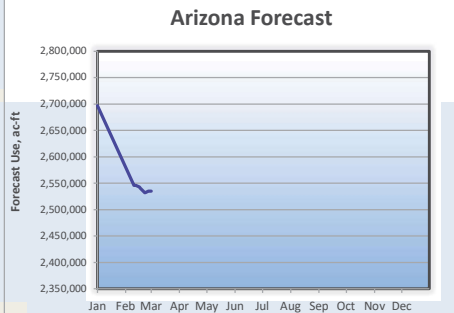
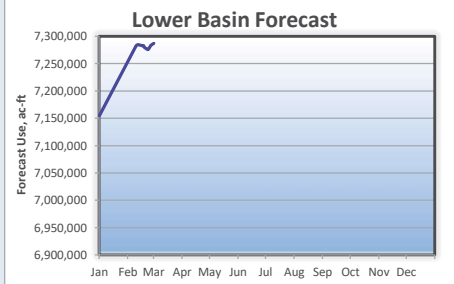
<sup>5</sup> Water deferred by Mexico pursuant to Section IV of IBWC Minute 323 and the Joint Report of the Principal Engineers with the Implementing Details of the Binational Water Scarcity Contingency Plan in the Colorado River Basin, dated July 11, 2019. (Mexico's required Binational Water Scarcity Contingency Plan Contribution).

<sup>6</sup> Water deferred by Mexico pursuant to Section V of IBWC Minute 323.

<sup>7</sup> Mexico excess forecast is based on the 5-year average for the period 2015-2019.

Bypass forecast is based on the average for the period 1990-2019.

Includes States Total, Deliveries to Mexico in Satisfaction of Treaty, To Mexico in Excess of Treaty, and Water Bypassed Pursuant IBWC Minute 242.



Graph notes: January 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.



**BUREAU OF  
RECLAMATION**  
**LOWER COLORADO BASIN REGION**  
**CY 2021**

**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 \(Water Accounting Reports\)](#)

	Use To Date CY 2021	Forecast Use CY 2021	Estimated Use CY 2021	Excess to Estimated Use CY 2021	Diversion To Date CY 2021	Forecast Diversion CY 2021	Approved Diversion CY 2021	Excess to Approved Diversion CY 2021
<b>WATER USER</b>								
ARIZONA PUMPERS	1,951	15,512	15,512	---	2,882	22,912	22,912	0
LAKE MEAD NRA, AZ - Diversions from Lake Mead	4	69	69	---	4	69	69	0
LAKE MEAD NRA, AZ - Diversions from Lake Mohave	23	212	212	---	23	212	212	0
DAVIS DAM PROJECT	0	2	2	---	2	17	17	0
BULLHEAD CITY	1,039	8,163	8,163	---	1,637	12,720	12,720	0
MOHAVE WATER CONSERVATION DISTRICT	85	676	676	---	127	1,010	1,010	0
BROOKE WATER LLC	44	323	323	---	65	485	485	0
MOHAVE VALLEY I.D.D.	2,073	15,932	15,932	---	3,839	29,503	29,503	0
FORT MOHAVE INDIAN RESERVATION, AZ	3,648	44,148	44,550	---	6,756	81,756	82,500	-744
GOLDEN SHORES WATER CONSERVATION DISTRICT	36	286	286	---	54	427	427	0
HAVASU NATIONAL WILDLIFE REFUGE	23	3,341	3,564	---	189	39,144	41,835	-2,691
LAKE HAVASU CITY	1,121	9,021	9,021	---	1,808	14,550	14,550	0
CENTRAL ARIZONA PROJECT	235,070	1,400,570	---	---	235,070	1,400,570	---	---
TOWN OF PARKER	38	430	430	---	103	917	917	0
COLORADO RIVER INDIAN RESERVATION, AZ	8,299	230,772	226,280	---	40,466	501,172	509,647	-8,475
EHRENBURG IMPROVEMENT ASSOCIATION	29	232	232	---	41	325	325	0
CIBOLA VALLEY <sup>1</sup>	371	15,618	15,618	---	518	21,843	21,843	0
CIBOLA NATIONAL WILDLIFE REFUGE	455	14,264	14,264	0	733	23,005	23,005	0
IMPERIAL NATIONAL WILDLIFE REFUGE	594	3,799	3,799	0	957	6,128	6,128	0
BLM PERMITEES (PARKER DAM to IMPERIAL DAM)	106	844	844	---	163	1,299	1,299	0
CHA CHA, LLC	112	1,365	1,365	---	171	2,100	2,100	0
BEATTIE FARMS	59	722	722	---	89	1,110	1,110	0
YUMA PROVING GROUND	30	516	516	---	30	516	516	0
GILA MONSTER FARMS	498	5,105	5,273	---	943	8,902	9,156	-254
WELLTON-MOHAWK IDD	18,548	273,754	278,000	-4,246	36,173	403,598	412,965	-9,367
BLM PERMITEES (BELOW IMPERIAL DAM)	9	74	74	0	14	114	114	0
CITY OF YUMA	905	14,692	16,201	-1,509	2,456	25,556	27,500	-1,944
MARINE CORPS AIR STATION YUMA	129	1,306	1,320	---	129	1,306	1,320	-14
UNION PACIFIC RAILROAD	4	29	29	---	8	48	48	0
UNIVERSITY OF ARIZONA	78	898	898	---	78	898	898	0
YUMA UNION HIGH SCHOOL DISTRICT	10	150	150	---	13	200	200	0
DESERT LAWN MEMORIAL	3	23	23	---	4	33	33	0
NORTH GILA VALLEY IRRIGATION DISTRICT	354	11,127	11,563	---	3,553	42,753	44,200	-1,447
YUMA IRRIGATION DISTRICT	3,326	37,467	37,835	---	6,446	68,946	69,900	-954
YUMA MESA I.D.D.	12,689	155,040	150,455	---	18,135	238,235	242,080	-3,845
UNIT "B" IRRIGATION DISTRICT	1,577	21,653	20,816	---	2,026	28,976	29,400	-424
FORT YUMA INDIAN RESERVATION	188	1,494	1,494	---	289	2,299	2,299	0
YUMA COUNTY WATER USERS' ASSOCIATION	20,769	243,585	242,377	---	36,630	359,930	360,400	-470
COCOPA INDIAN RESERVATION	392	1,745	1,686	---	488	2,553	2,585	-32
RECLAMATION-YUMA AREA OFFICE	29	227	227	---	29	227	227	0
RETURN FROM SOUTH GILA WELLS								
<b>TOTAL ARIZONA</b>	<b>314,718</b>	<b>2,535,186</b>	<b>2,555,301</b>		<b>403,141</b>	<b>3,346,364</b>	<b>3,400,955</b>	
<b>CAP</b>	<b>235,070</b>	<b>1,400,570</b>				<b>1,400,570</b>		
<b>ALL OTHERS</b>	<b>79,648</b>	<b>1,134,616</b>	<b>1,130,801</b>			<b>1,945,794</b>	<b>1,976,455</b>	
<b>YUMA MESA DIVISION, GILA PROJECT</b>	<b>16,369</b>	<b>203,634</b>	<b>199,853</b>	<b>3,781</b>		<b>349,934</b>		

**ARIZONA ADJUSTED APPORTIONMENT CALCULATION**

Arizona Basic Apportionment	2,800,000
System Conservation Water - Pilot System Conservation Program <sup>2</sup>	(360)
System Conservation Water - Colorado River Indian Tribes (CRIT) <sup>3</sup>	(50,000)
System Conservation Water - Fort McDowell Yavapai Nation (FMYN) <sup>4</sup>	(13,933)
System Conservation Water - Mohave Valley I.D.D. (MVIDD) <sup>5</sup>	(6,925)
Creation of Extraordinary Conservation ICS - CRIT (Estimated) <sup>6,7</sup>	(4,685)
Arizona DCP Contribution <sup>8</sup>	(192,000)
Total State Adjusted Apportionment	2,532,097
Excess to Total State Adjusted Apportionment	3,089
<b>Estimated Allowable Use for CAP</b>	<b>1,397,481</b>

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> The estimated amount of System Conservation Water that will be created by the City of Bullhead City pursuant to System Conservation Implementation Agreement (SCIA) No. 15-XX-30-W0587, as amended. This System Conservation Water will remain in Lake Mead to benefit system storage.

<sup>3</sup> System Conservation Water to be created by CRIT pursuant to the *Agreement Among the United States of America, Through the Department of the Interior, Bureau of Reclamation, the State of Arizona,*

*Voluntary Water Conservation and Reductions in use During Calendar Years 2020-2022.* This System Conservation Water will remain in Lake Mead to benefit system storage.

<sup>4</sup> CAP water being conserved by FMYN pursuant to SCIA No. 20-XX-30-W0688, which will remain in Lake Mead to benefit system storage. In accordance with this SCIA and Section 3.b of the Lower

AF per annum or more of Colorado River System water to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the Lower Basin.

<sup>5</sup>

conservation of water supplies in Lake Mead and other Colorado River reservoirs in the Lower Basin.

<sup>6</sup> CRIT has been approved to create up to 4,685 AF of Extraordinary Conservation (EC) ICS in 2021. The actual amount of EC ICS created by CRIT will be based on final accounting and verification.

<sup>7</sup> When combined with the approved EC ICS creation amounts of other ICS Creators in the state of Arizona, the total amount of EC ICS approved for creation in the state of Arizona is 110,185 AF, which exceeds the state's annual creation limit set forth in Section XI.G.3.B.4 of the 2007 Interim Guidelines. In accordance with Section XI.G.3.B.4 and Section IV.B of the *Lower Basin Drought Contingency Operations* (LBOs), the total amount of EC ICS that may be created by the states of Arizona, California, and Nevada in 2021 will be limited to 625,000 AF. Additionally, the total amount accumulated in Arizona's ICS accounts will be limited in accordance with Section IV.C. of LBOs.

<sup>8</sup> In accordance with Section III.B.1.a of LBOs, the state of Arizona shall make an annual DCP Contribution in the total amount of 192,000 AF. In accordance with the Agreement Regarding Lower Basin Drought Contingency Plan Obligations, it is currently anticipated that the required DCP Contribution will be made by the Central Arizona Water Conservation District (CAWCD) through the creation of EC ICS by and reductions in consumptive use. CAWCD has been approved to create up to 60,500 AF of EC ICS in 2021. The actual amount of EC ICS created by CAWCD and credited toward the DCP Contribution will be based on final accounting and verification.

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



# BUREAU OF RECLAMATION

## LOWER COLORADO BASIN REGION CY 2021

### NOTE:

- Diversions and uses that are pending approval are noted in **red italics**.
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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 To Date CY 2021	Forecast Use CY 2021	Estimated Use CY 2021	Excess to Estimated Use CY 2021	Diversion To Date CY 2021	Forecast Diversion CY 2021	Approved Diversion CY 2021	Excess to Approved Diversion CY 2021
CALIFORNIA PUMPERS	184	1,466	1,466	---	333	2,646	2,646	0
FORT MOJAVE INDIAN RESERVATION, CA	674	8,486	8,996	---	1,253	15,773	16,720	-947
CITY OF NEEDLES (includes LCWSP use)	175	1,605	1,605	0	247	2,261	2,261	0
METROPOLITAN WATER DISTRICT	69,739	1,068,106	---	---	70,069	1,070,569	---	---
COLORADO RIVER INDIAN RESERVATION, CA	631	5,014	5,014	---	1,045	8,307	8,307	0
PALO VERDE IRRIGATION DISTRICT	8,180	413,760	428,620	---	67,348	852,348	865,000	-12,652
YUMA PROJECT RESERVATION DIVISION	2,542	49,329	50,244	---	7,779	94,948	96,884	-1,936
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	3,719	44,488	45,384	-896
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	4,060	50,460	51,500	-1,040
YUMA ISLAND PUMPERS	205	1,630	1,630	---	371	2,946	2,946	0
FORT YUMA INDIAN RESERVATION - RANCH 5	82	938	938	---	147	1,696	1,696	0
IMPERIAL IRRIGATION DISTRICT <sup>1</sup>	242,370	2,560,628	2,622,800	-62,172	250,603	2,625,466	2,694,973	---
SALTON SEA SALINITY MANAGEMENT	0	0	0	0	0	0	0	---
COACHELLA VALLEY WATER DISTRICT	41,380	378,380	379,000	-620	42,841	389,194	390,812	---
OTHER LCWSP CONTRACTORS	66	527	527	---	116	922	922	0
CITY OF WINTERHAVEN	8	63	63	---	11	91	91	0
CHEMEHUEVI INDIAN RESERVATION	26	209	209	---	1,427	11,340	11,340	0
<b>TOTAL CALIFORNIA</b>	<b>366,262</b>	<b>4,490,141</b>			<b>443,590</b>	<b>5,078,507</b>	<b>5,164,598</b>	

### CALIFORNIA ADJUSTED APPORTIONMENT CALCULATION

California Basic Apportionment

4,400,000

System Conservation Water - Pilot System Conservation Program <sup>2</sup>

(145)

IID Creation of Extraordinary Conservation ICS - Stored in Lake Mead (Estimated) <sup>3</sup>

(1,579)

MWD Creation of Extraordinary Conservation ICS (Estimated) <sup>4</sup>

0

Total State Adjusted Apportionment

4,398,276

Excess to Total State Adjusted Apportionment

91,865

### Estimated Allowable Use for MWD

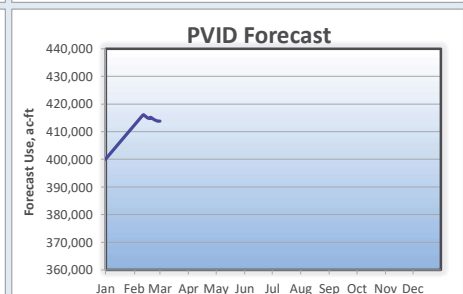
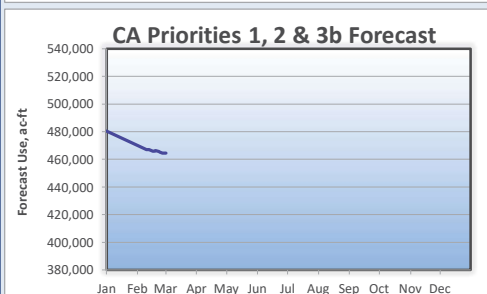
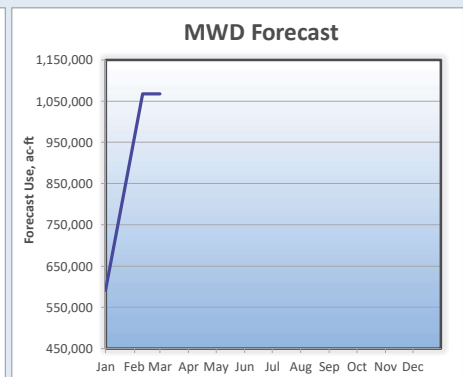
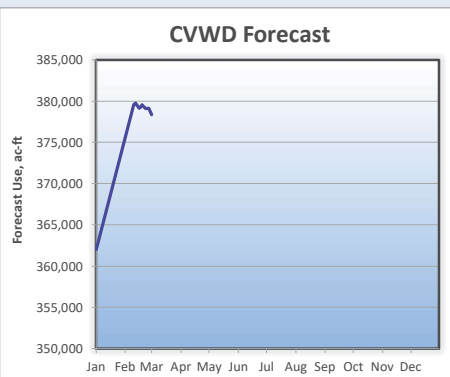
976,241

<sup>1</sup> As shown here, IID's Approved Diversion and Estimated Use values reflect the maximum amount of Colorado River water available to IID in 2021.

<sup>2</sup> System Conservation Water to be conserved by the City of Needles pursuant to System Conservation Implementation Agreement No. 15-XX-30-W0596, executed under the Pilot System Conservation Program. This water will remain in Lake Mead to benefit system storage.

<sup>3</sup> IID has been approved to create up to 62,000 AF of "Additional Conserved Water" in 2021 for purposes including, but not limited to, the creation of ICS. Due to limitations set forth in the California ICS Agreement, IID may currently only store up to 1,579 AF in its Lake Mead ICS Account. Should IID elect to use "Additional Conserved Water" to create and credit EC ICS to the ICS account of another California contractor through application of Section XI.G.3.B.8 of the 2007 Interim Guidelines, IID must first obtain written agreement of the contractor. The actual amount of "Additional Conserved Water" created by IID in 2021 will be based on final accounting and verification.

<sup>4</sup> MWD has been approved to create up to 450,000 AF of EC ICS in 2021, less the amount of EC ICS created by IID, and further limited to the amount that, when added to the EC ICS created by the states of Arizona and Nevada, does not exceed 625,000 AF. The actual amount of EC ICS created by MWD will be based on final accounting and verification.



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



**BUREAU OF  
RECLAMATION**  
**LOWER COLORADO BASIN REGION**  
**CY 2021**

**NOTE:**

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

<b>WATER USER</b>	<b>Use To Date CY 2021</b>	<b>Forecast Use CY 2021</b>	<b>Estimated Use CY 2021</b>	<b>Excess to Estimated Use CY 2021</b>	<b>Diversion To Date CY 2021</b>	<b>Forecast Diversion CY 2021</b>	<b>Approved Diversion CY 2021</b>	<b>Excess to Approved Diversion CY 2021</b>
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	52,605	445,787	440,686	5,101	52,605	445,787	440,686	5,101
LAKE MEAD NRA, NV - Diversions from Lake Mead	80	1,500	1,500	---	80	1,500	1,500	0
LAKE MEAD NRA, NV - Diversions from Lake Mohave	35	500	500	---	35	500	500	0
BASIC MANAGEMENT INC.	540	8,208	8,208	---	540	8,208	8,208	0
CITY OF HENDERSON (BMI DELIVERY)	1,740	15,878	15,878	---	1,740	15,878	15,878	0
NEVADA DEPARTMENT OF WILDLIFE	1	12	12	0	82	1,000	1,000	---
PACIFIC COAST BUILDING PRODUCTS INC.	81	928	928	---	81	928	928	0
BOULDER CANYON PROJECT	22	172	172	---	38	300	300	0
BIG BEND WATER DISTRICT	261	4,733	4,733	---	651	10,000	10,000	0
FORT MOJAVE INDIAN TRIBE	152	3,770	4,020	---	227	5,627	6,000	-373
LAS VEGAS WASH RETURN FLOWS	-34,800	-219,641	-221,637	---				
<b>TOTAL NEVADA</b>	<b>20,717</b>	<b>261,847</b>	<b>255,000</b>	<b>5,101</b>	<b>56,079</b>	<b>489,728</b>	<b>485,000</b>	<b>4,728</b>
SOUTHERN NEVADA WATER SYSTEM (SNWS)	17,805	226,146				445,787		
ALL OTHERS	2,912	35,701				43,941		
NEVADA USES ABOVE HOOVER	20,304	253,344				474,101		
NEVADA USES BELOW HOOVER	413	8,503				15,627		

**Tributary Conservation (TC) Intentionally Created Surplus (ICS)**Southern Nevada Water Authority (SNWA) Creation of TC ICS (Approved) <sup>1</sup>

43,000

**NEVADA ADJUSTED APPORTIONMENT CALCULATION**

Nevada Basic Apportionment

300,000

SNWA Creation of Extraordinary Conservation (EC) ICS (Estimated) <sup>2</sup>

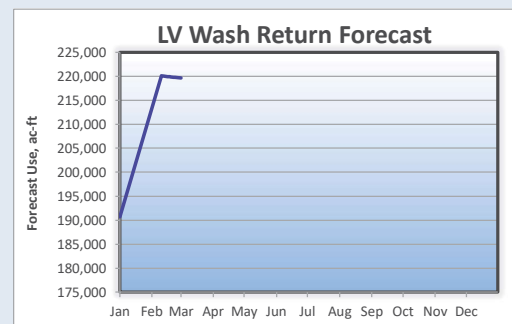
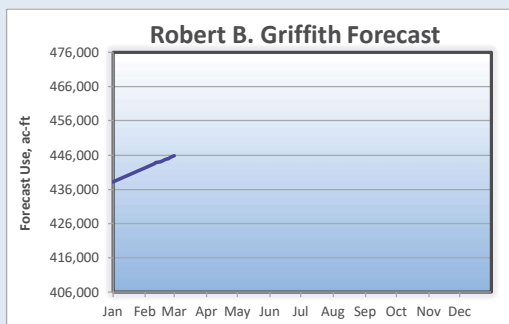
38,153

Total State Adjusted Apportionment

338,153

Excess to Total State Adjusted Apportionment

-76,306

<sup>1</sup> SNWA has been approved to create up to 43,000 AF of TC ICS in 2021. The actual amount of TC ICS created by SNWA will be based on final accounting and verification.<sup>2</sup> SNWA has been approved to create up to 100,000 AF of EC ICS in 2021. The actual amount of EC ICS created by SNWA will be based on final accounting and verification. The total amount accumulated in Nevada's ICS accounts will be limited in accordance with Section IV.C. of the *Lower Basin Drought Contingency Operations*.

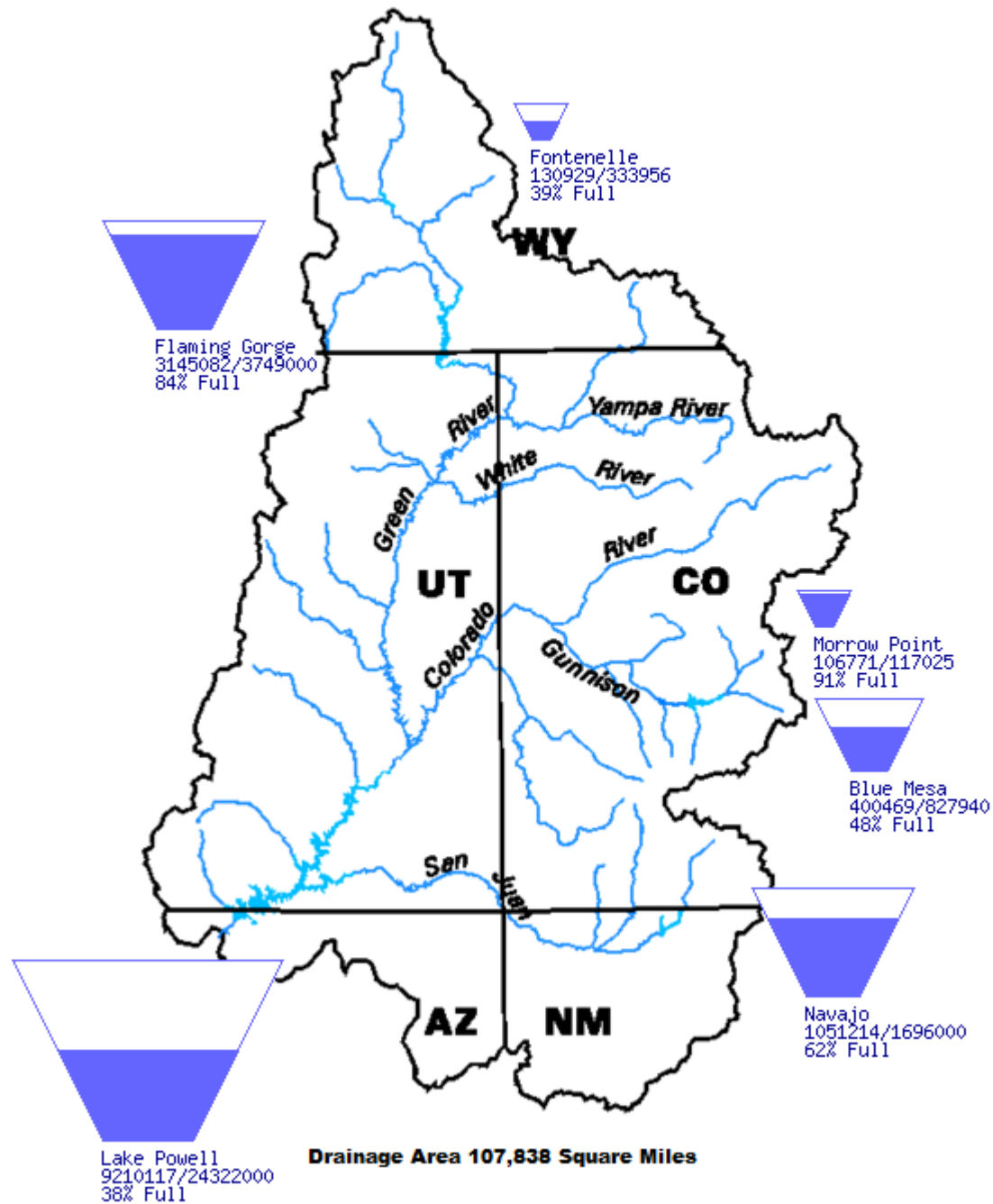
NOTES: Click on Nevada Schedules and Approvals above for incoming diversion schedules and approvals.

# Upper Colorado Region Water Resources Group

## River Basin Tea-Cup Diagrams

Data Current as of:  
03/01/2021

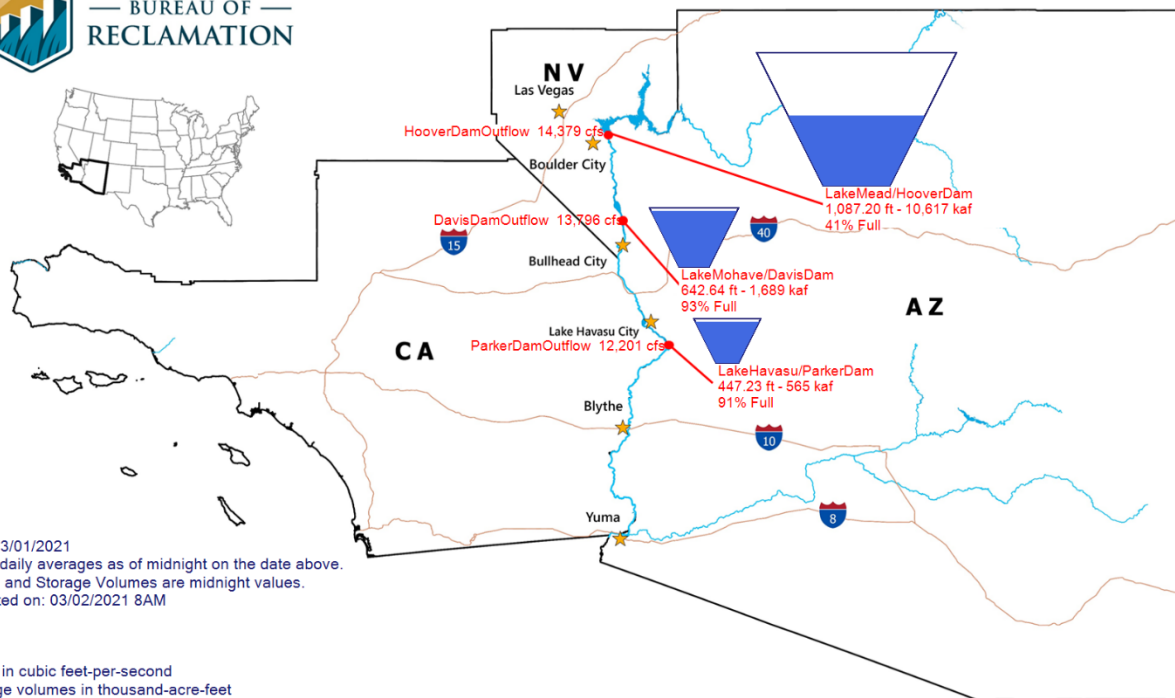
### Upper Colorado River Drainage Basin



# Lower Colorado River Teacup Diagram



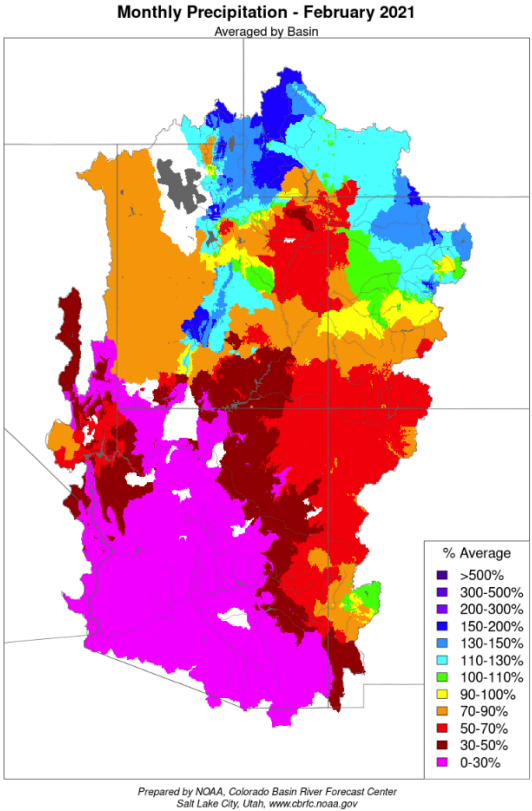
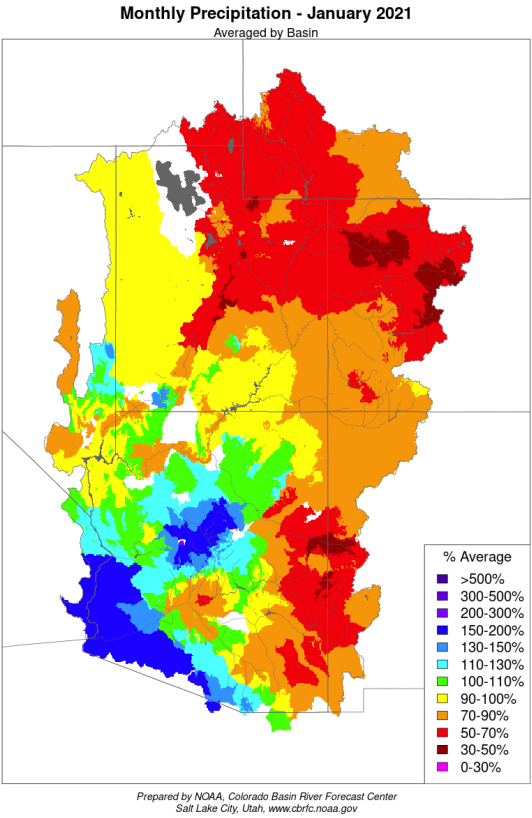
BUREAU OF  
RECLAMATION

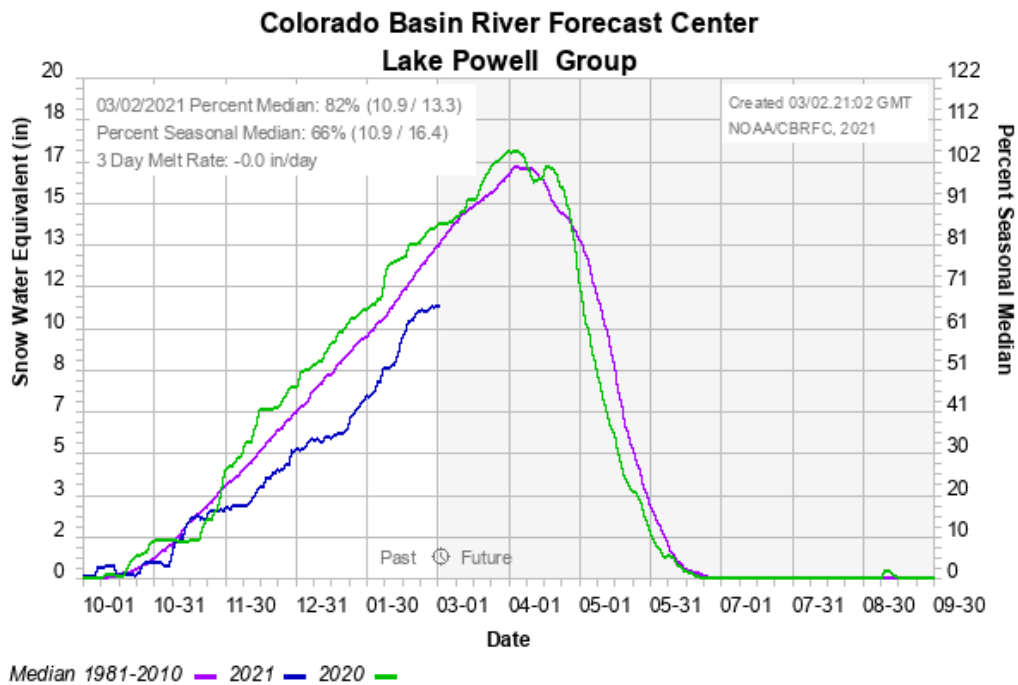


## LEGEND:

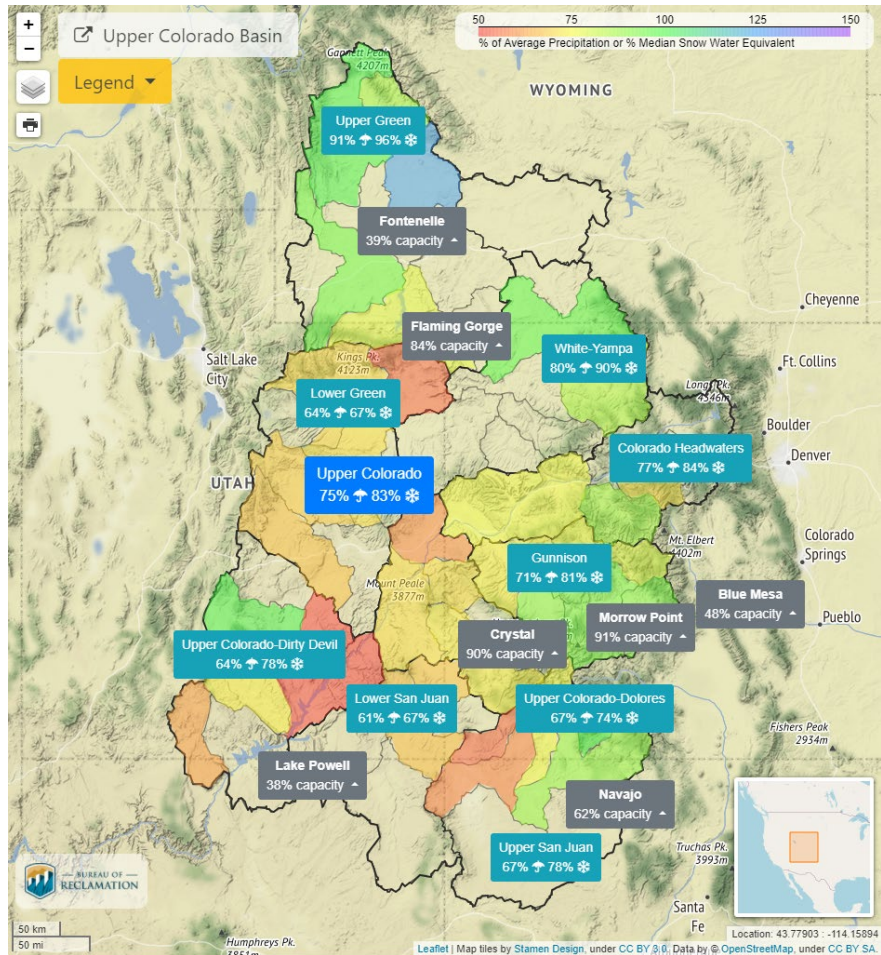
cfs: Flows in cubic feet-per-second  
kaf: Storage volumes in thousand-acre-feet  
ft: Elevations in feet above mean-sea-level

NOAA National Weather Service Monthly Precipitation Map January and February 2021





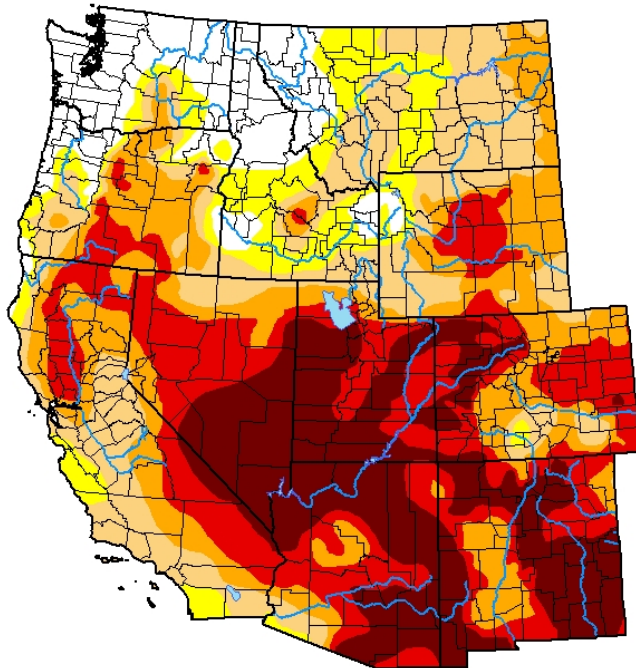
### Snow Pack Conditions Map Upper Colorado Region



# USDA United States Drought Monitor Map

## U.S. Drought Monitor West

**March 2, 2021**  
(Released Thursday, Mar. 4, 2021)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	10.91	89.09	79.92	60.82	41.80	20.42
Last Week 02-23-2021	7.35	92.65	78.93	61.18	42.13	20.43
3 Months Ago 12-01-2020	12.01	87.99	75.55	60.89	44.67	22.10
Start of Calendar Year 12-29-2020	11.57	88.43	78.63	65.18	46.49	22.16
Start of Water Year 09-29-2020	8.51	91.49	76.07	54.55	33.11	2.31
One Year Ago 03-03-2020	51.75	48.25	23.66	3.02	0.00	0.00

### Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

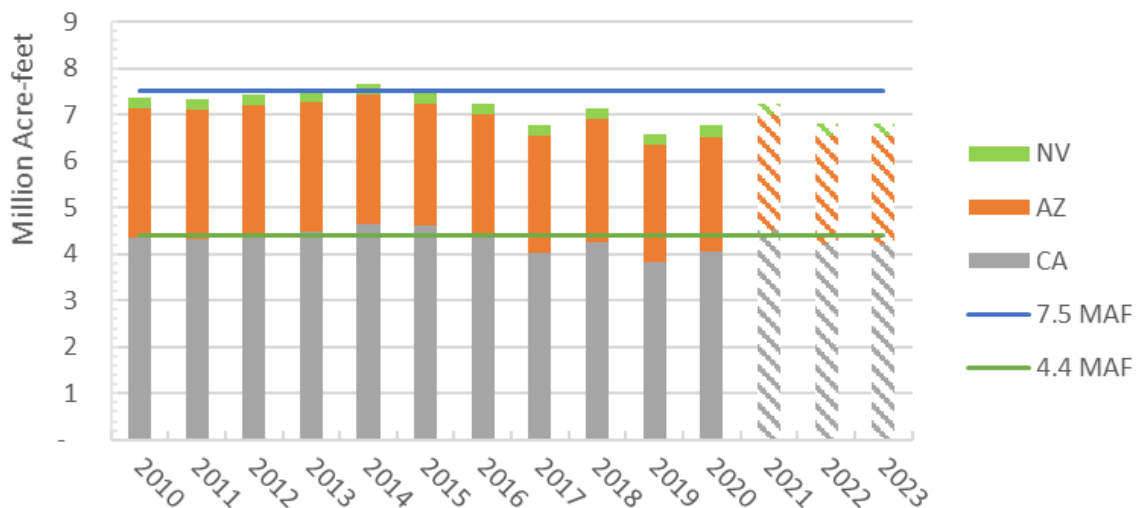
### Author:

Brian Fuchs  
National Drought Mitigation Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

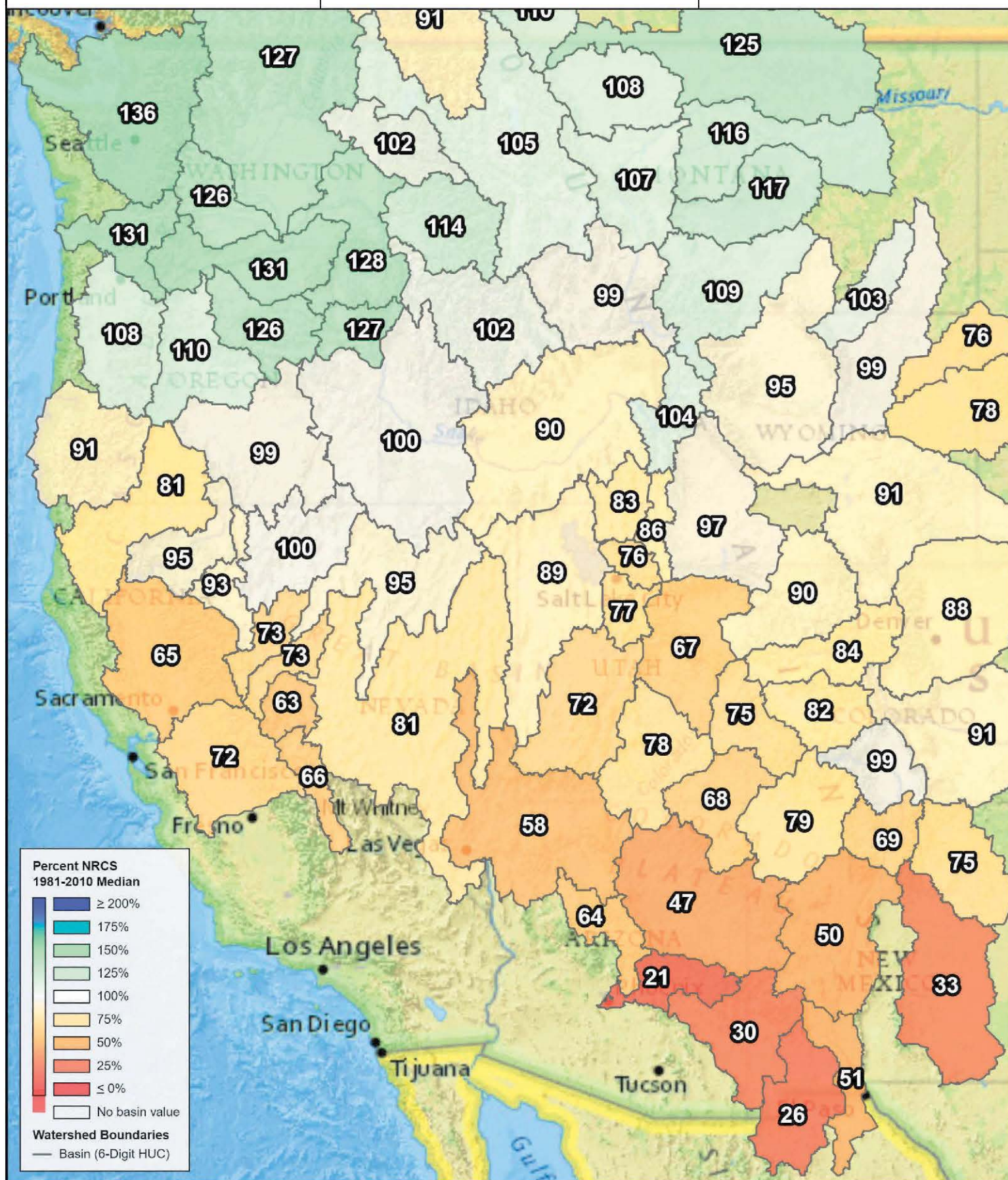
## Total Lower Division States Consumptive Use Colorado River



Snow Water Equivalent

Percent NRCS 1981-2010 Median

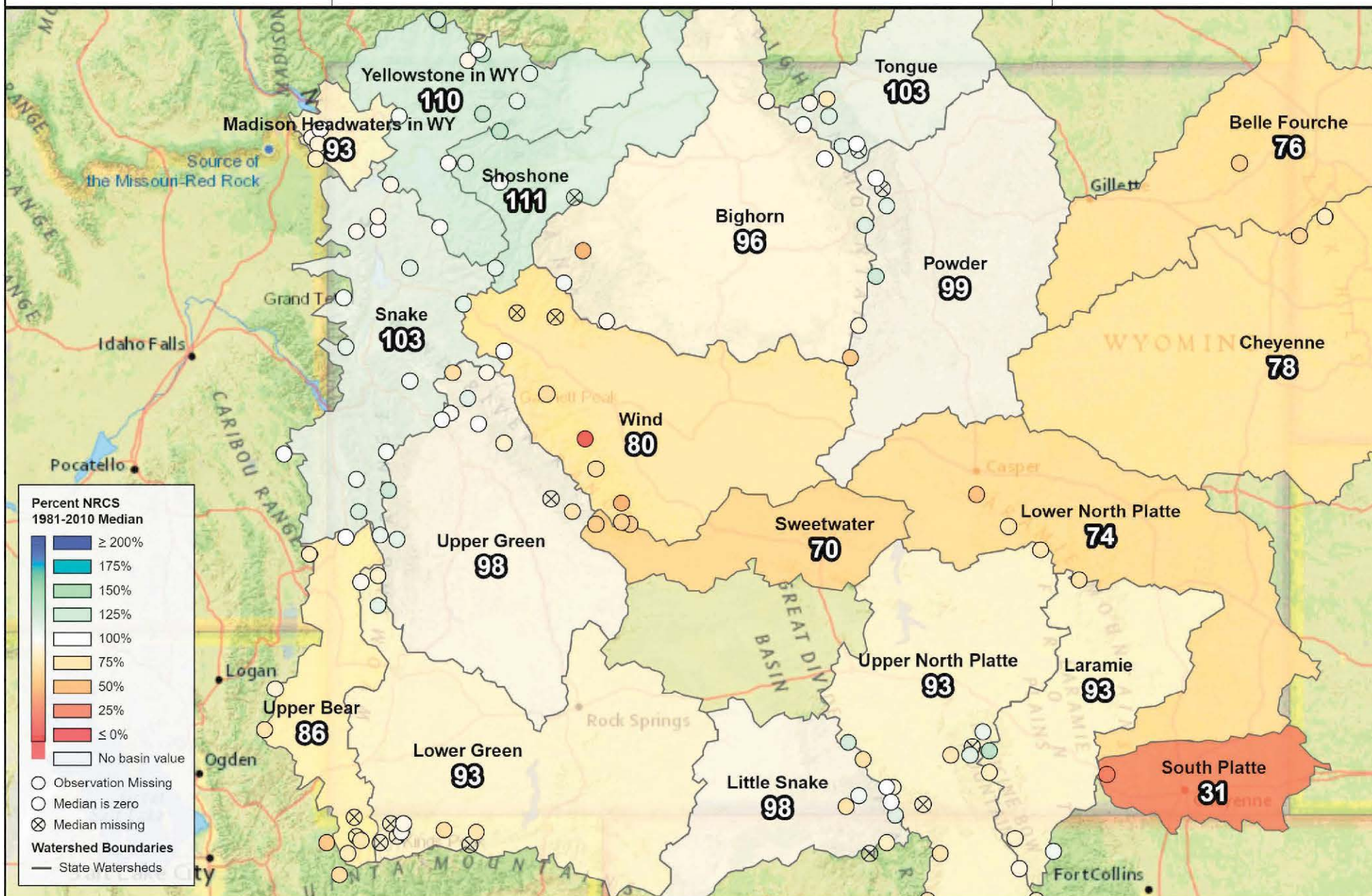
March 1st, 2021



Snow Water Equivalent

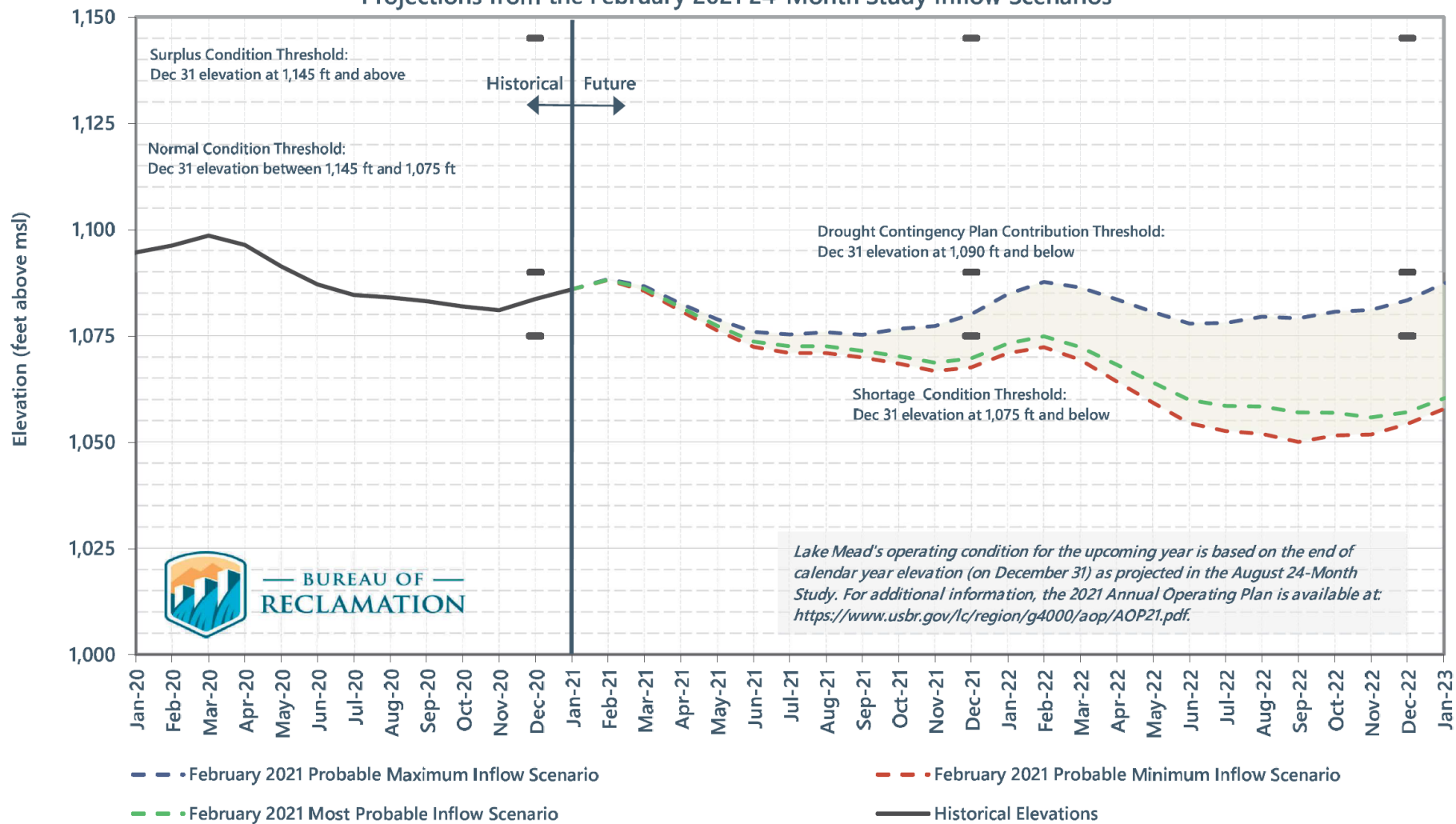
Percent NRCS 1981-2010 Median

March 1st, 2021



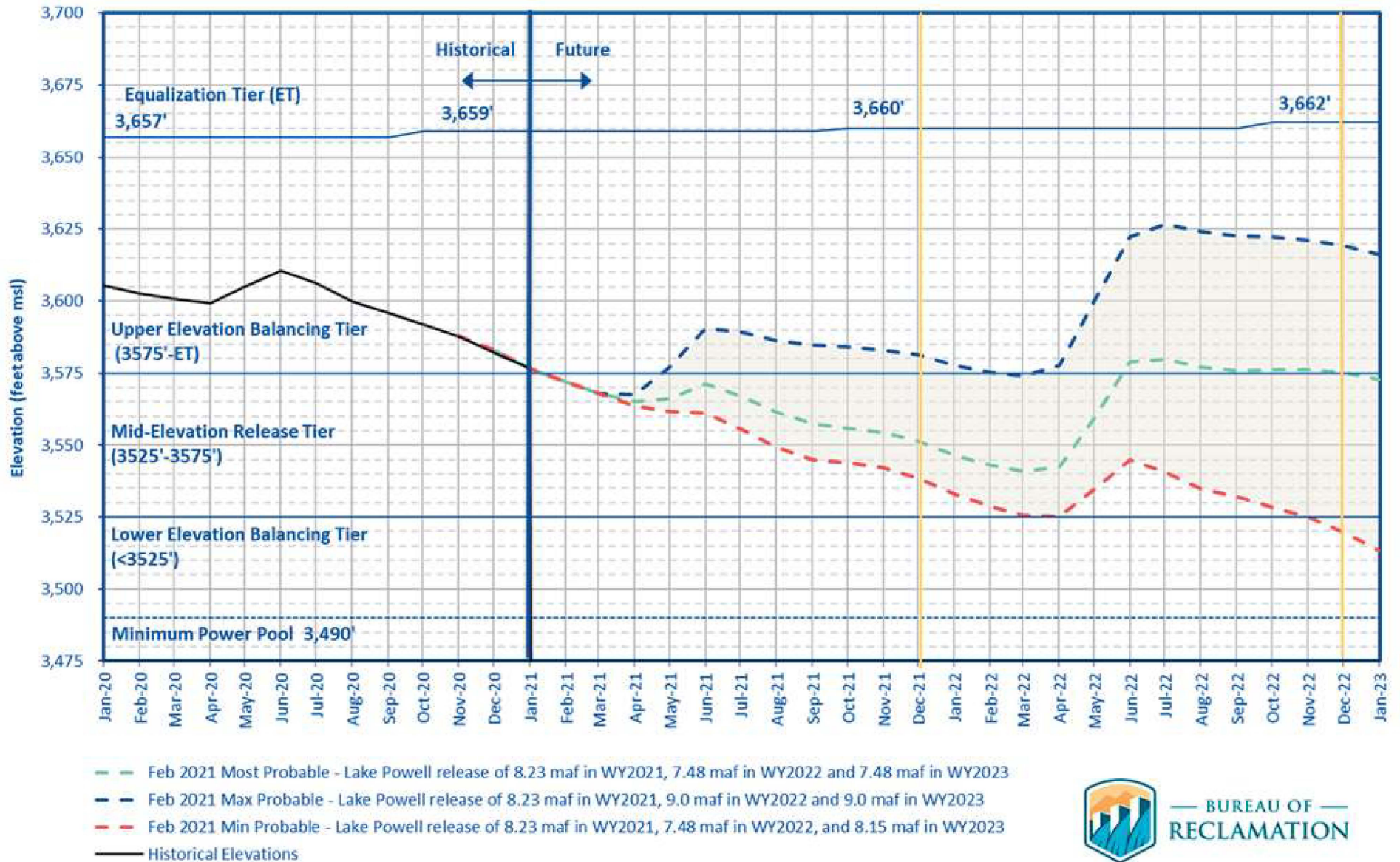
# Lake Mead End of Month Elevations

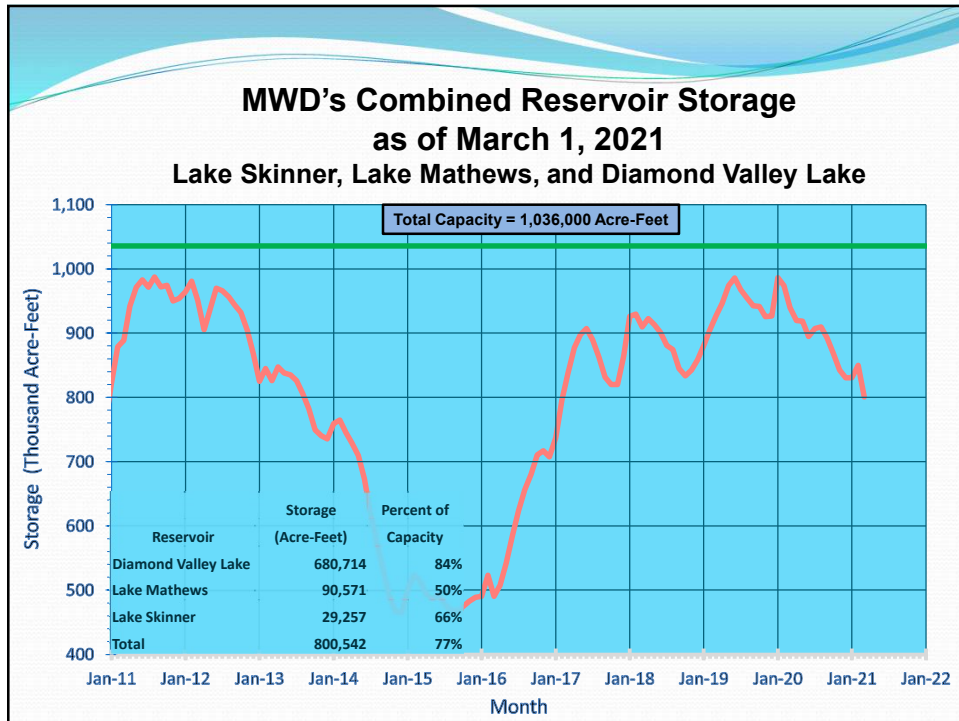
Projections from the February 2021 24-Month Study Inflow Scenarios



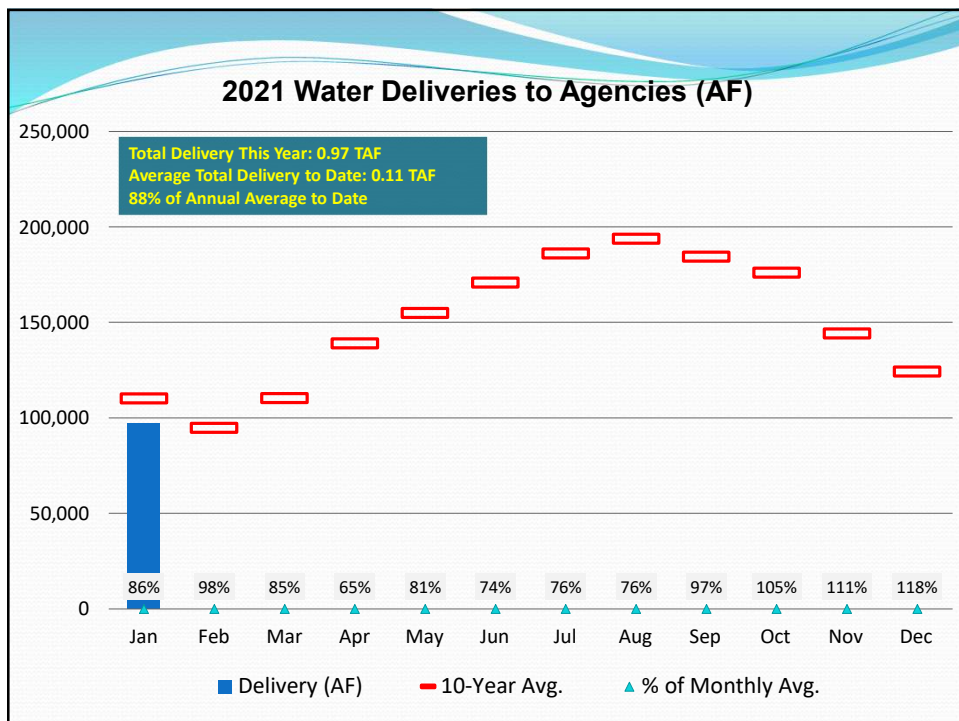
# Lake Powell End of Month Elevations

Historical and Projected based on February 2021 24-Month Study Inflow Scenarios

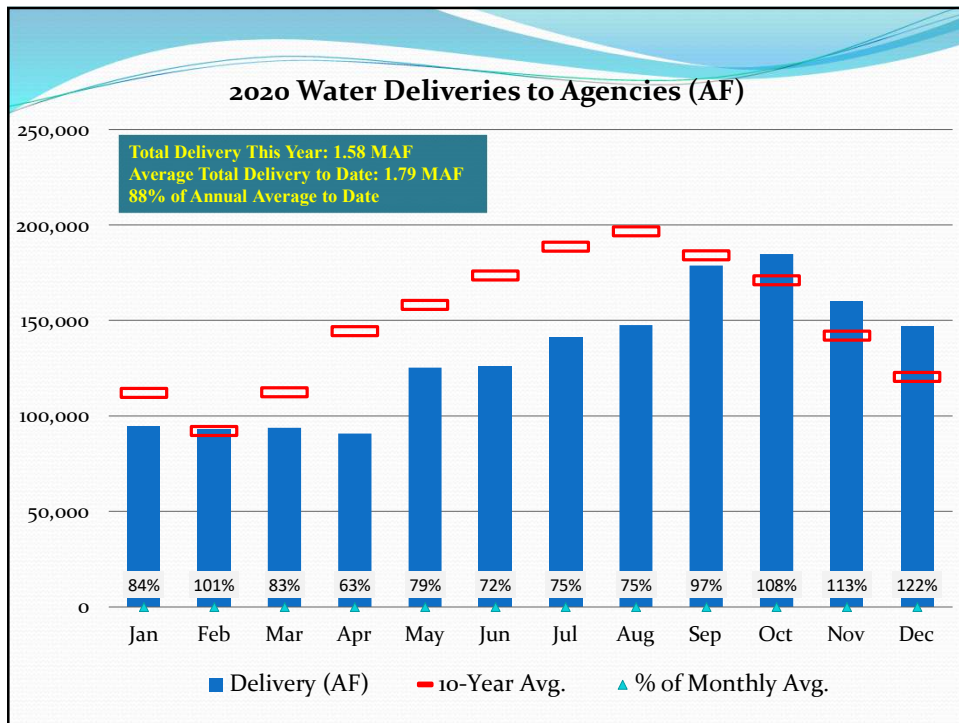




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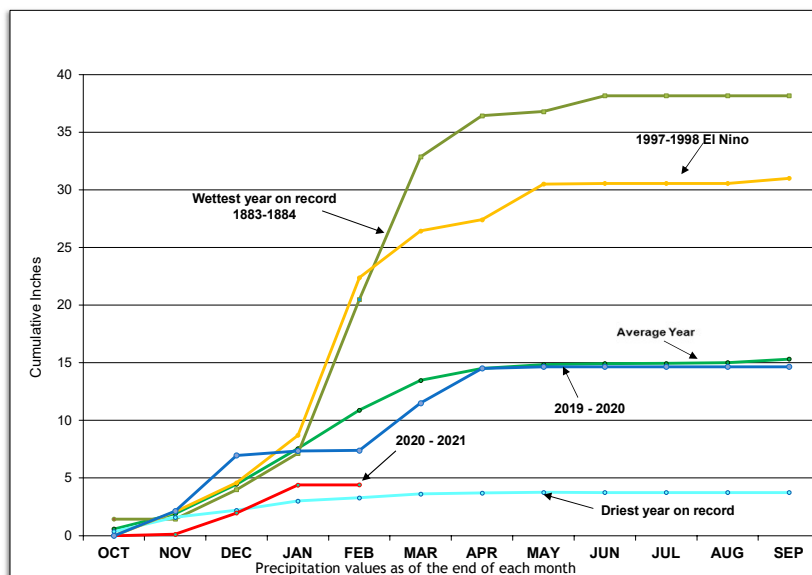


2



3

### Los Angeles Civic Center Precipitation



1

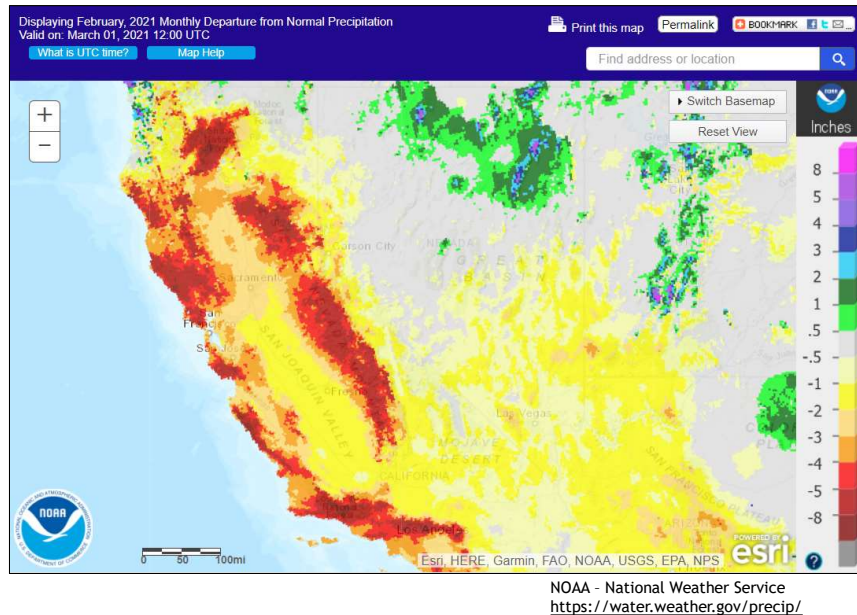
### Precipitation at Six Major Stations in Southern California

From October 1, 2020 to February 28, 2021

Station	Precipitation in inches		Average to Date	Percent of Average
	Feb	Oct 1 to Feb 28		
San Luis Obispo	0.14	7.61	16.69	46%
Santa Barbara	0.00	4.88	12.91	38%
Los Angeles	0.02	4.41	10.88	41%
San Diego	0.10	2.76	7.23	38%
Blythe	0.00	0.88	2.08	42%
Imperial	0.00	0.00	1.81	0%

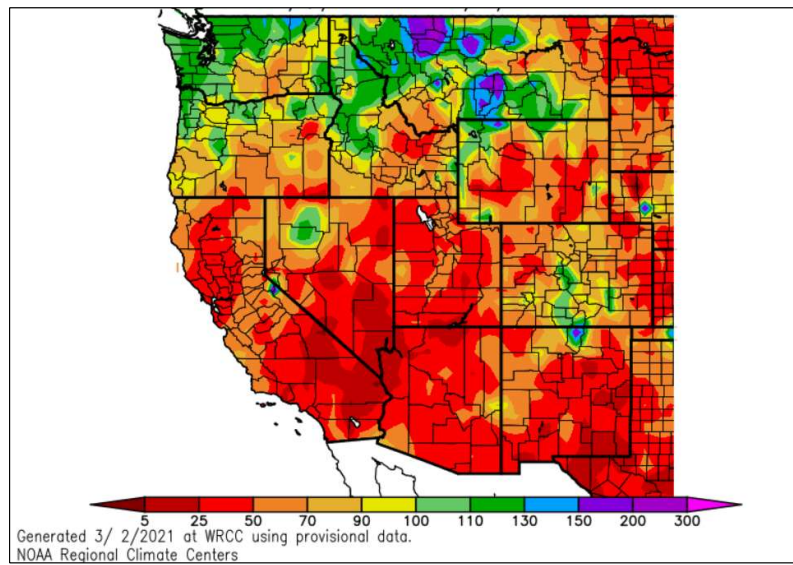
2

## Monthly Departure From Normal Precipitation (inches) February 2021



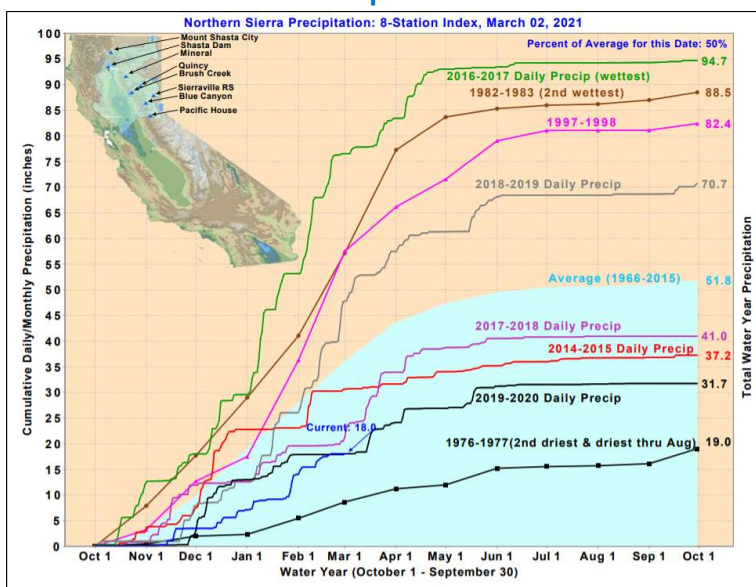
3

## Percent of Average Precipitation (%) 10/01/2020 - 03/04/2021



4

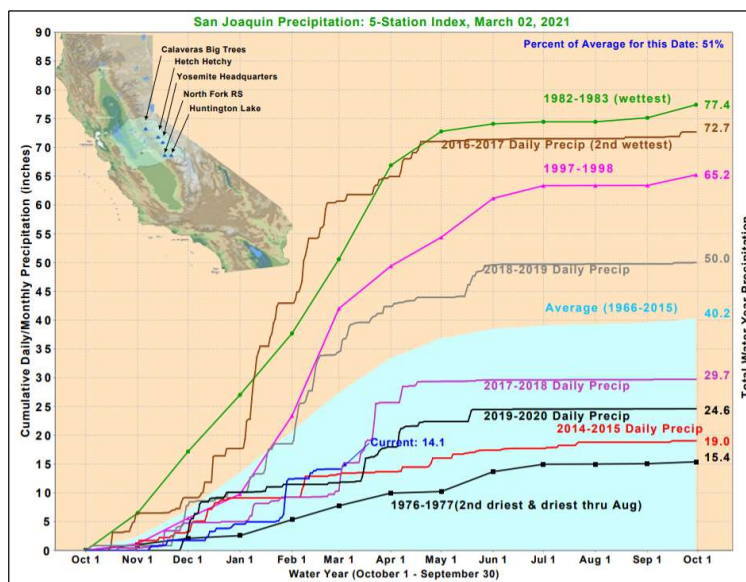
### Northern Sierra Precipitation: 8 Station Index



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)

5

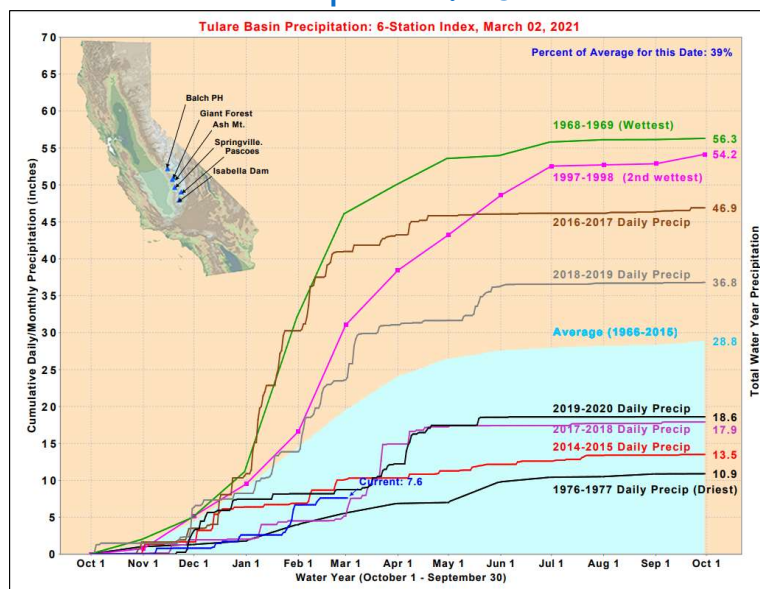
### San Joaquin Precipitation: 5 Station Index



California Data Exchange Center  
[http://cdec.water.ca.gov/reportapp/javareports?name=PLOT\\_FSI.pdf](http://cdec.water.ca.gov/reportapp/javareports?name=PLOT_FSI.pdf)

6

## 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)

7

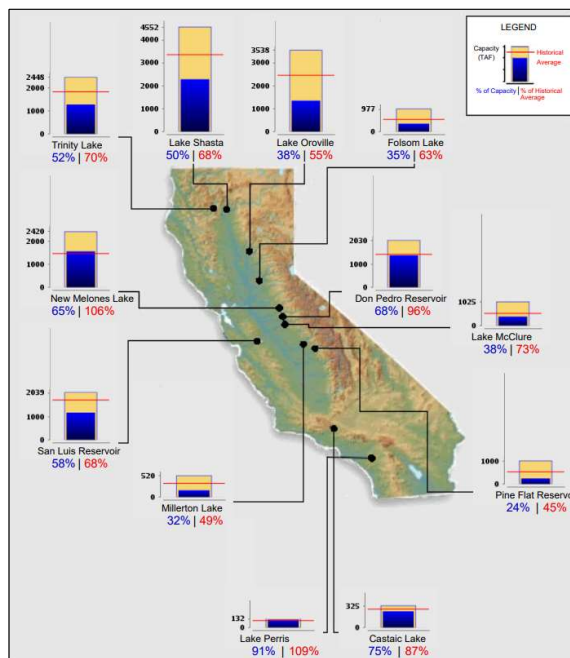
## Comparison of SWP Water Storage

Reservoir	Capacity	2020 Storage (acre-feet)		2021 Storage (acre-feet)	
		As of Mar 1	% of Cap.	As of Mar 1	% of Cap.
Frenchman	55,475	45,401	82%	36,140	65%
Lake Davis	84,371	62,027	74%	51,887	61%
Antelope	22,564	17,125	76%	13,011	58%
Oroville	3,553,405	2,225,634	63%	1,348,273	38%
<b>TOTAL North</b>	<b>3,715,815</b>	<b>2,350,187</b>	<b>63%</b>	<b>1,449,311</b>	<b>39%</b>
Del Valle	39,914	25,518	64%	30,574	77%
San Luis	2,027,835	1,405,526	69%	1,178,895	58%
Pyramid	169,901	155,793	92%	154,066	91%
Castaic	319,247	252,811	79%	244,711	77%
Silverwood	74,970	61,899	83%	65,554	87%
Perris	132,614	103,002	78%	119,766	90%
<b>TOTAL South</b>	<b>2,764,481</b>	<b>2,004,549</b>	<b>73%</b>	<b>1,793,566</b>	<b>65%</b>

As of December 1, 2020, the Table A allocations for SWP contractors is 10%.

8

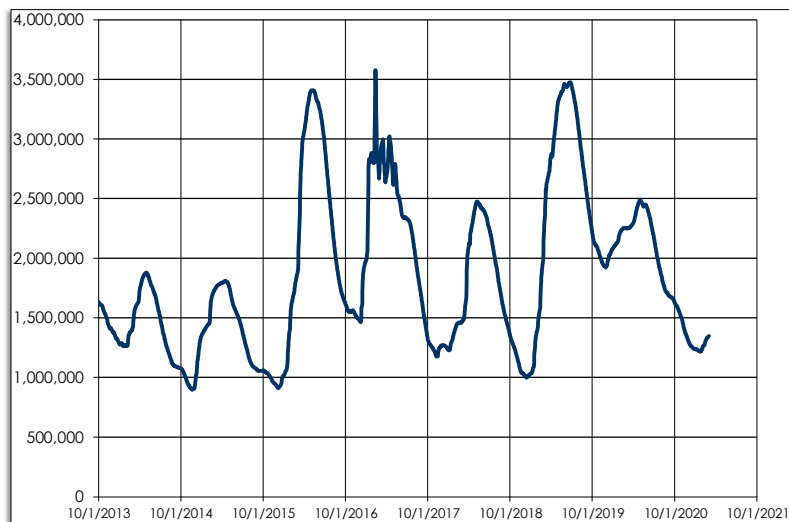
## Reservoir Current Conditions as of 03/02/2021



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

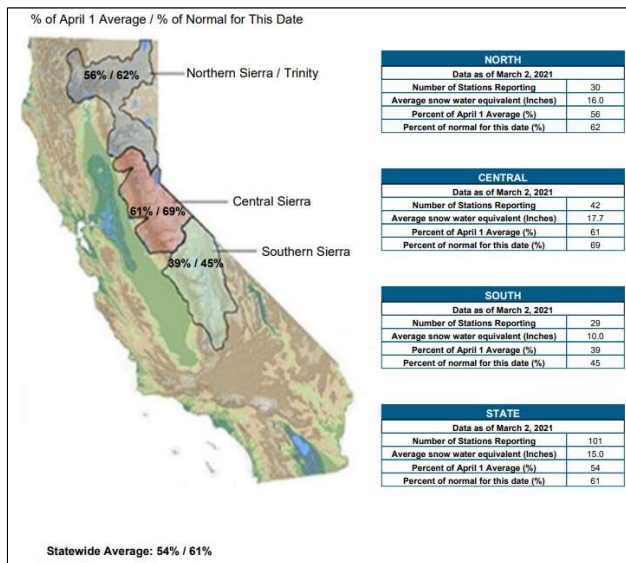
9

## Oroville Storage (acre-feet) October 1, 2013 - March 1, 2021



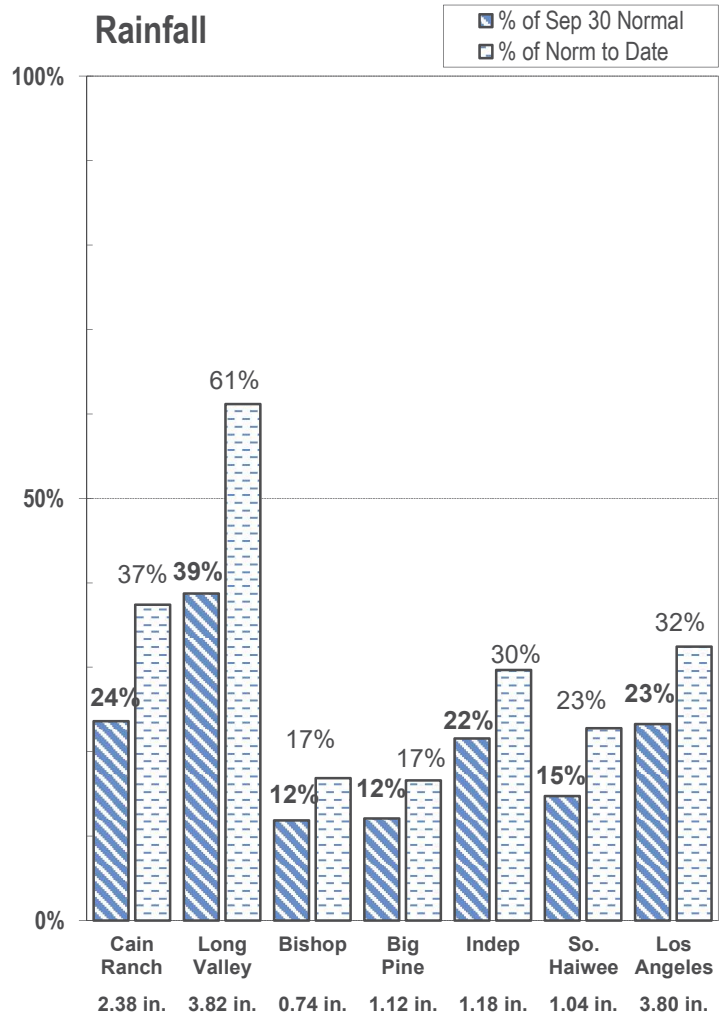
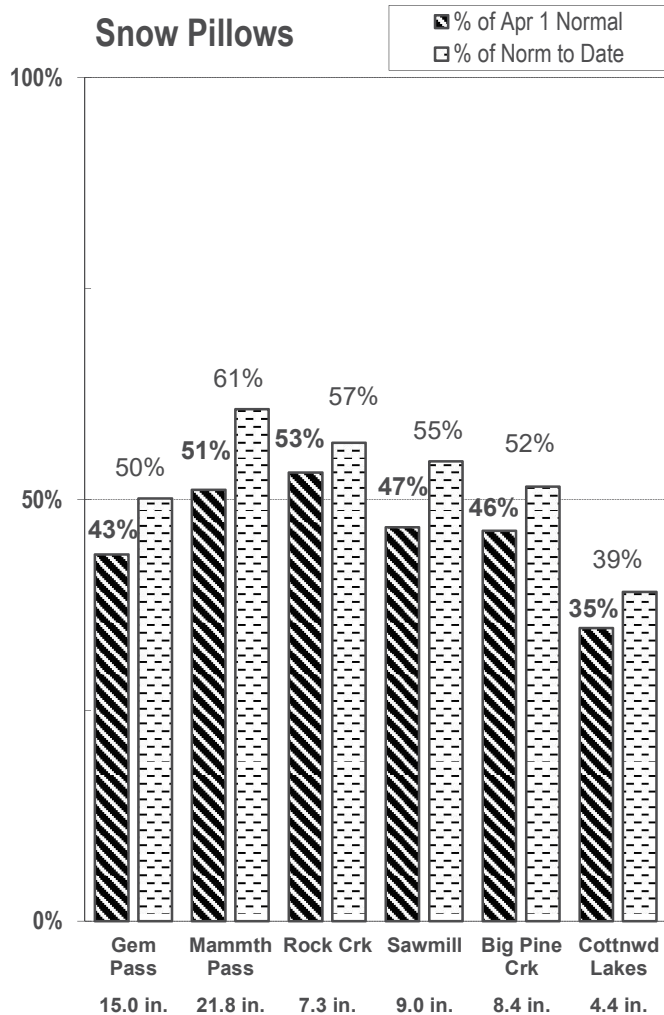
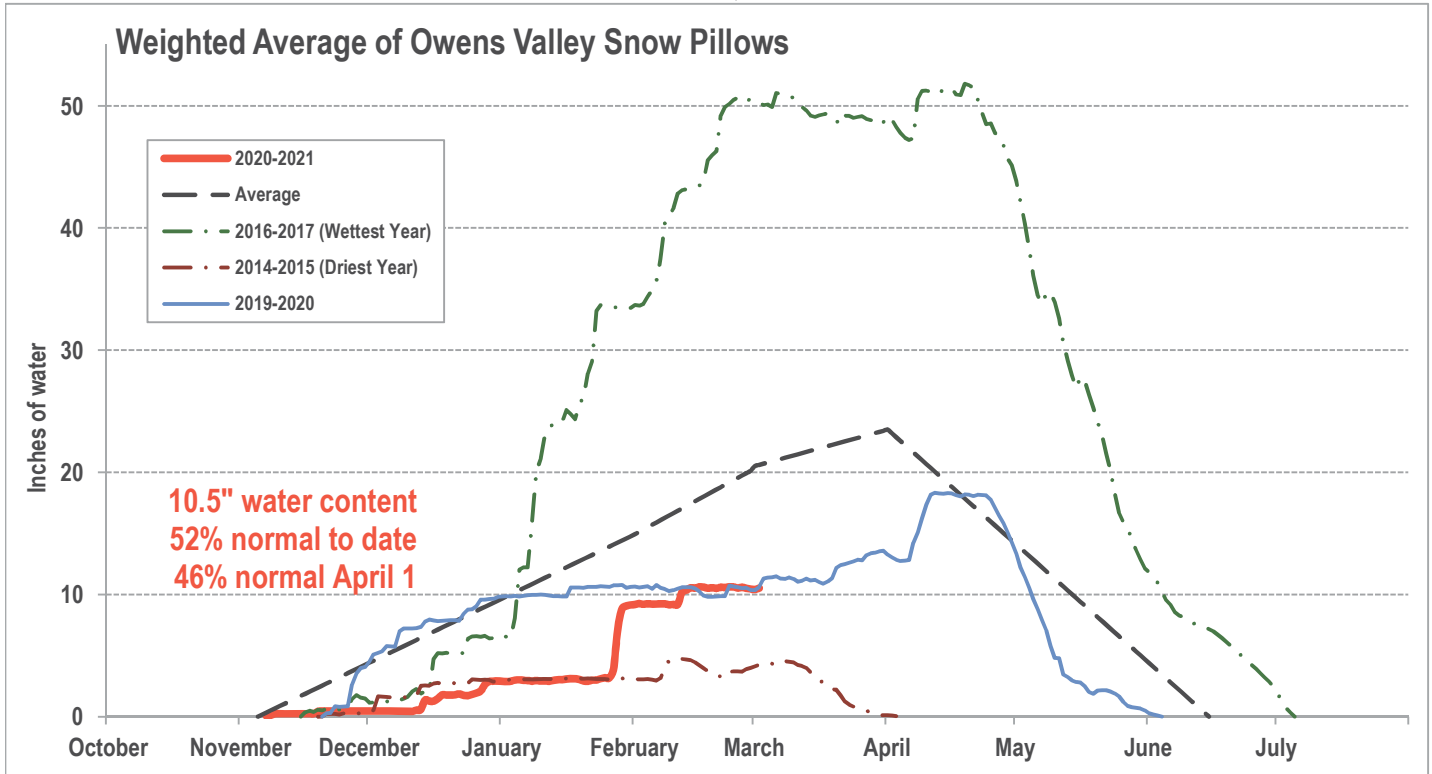
10

## Statewide Summary of Snow Water Content As of March 2, 2021



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

# EASTERN SIERRA CURRENT PRECIPITATION CONDITIONS March 2, 2021



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