

April 29, 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, May 12, 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/83081086483>
Telephone: US: +1 669 900 9128, enter Meeting ID: 830 8108 6483, 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 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.

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.

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, May 12, 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 March 10, 2021
(**Action**)
 - b. Presentation of Draft Colorado River Board of California FY-2021/2022 Budget
(**Information**)
 - c. FY-2020/2021 Accomplishments Report and FY-2021/2022 Planned Activities Report
(**Information**)
- 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: June 9, 2021
10:00 a.m.
Webinar

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

A meeting of the Colorado River Board of California (Board) was held virtually on Wednesday, March 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)
Delon Kwan (LADWP Alternate)
Jim Madaffer (SDCWA)

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

Board Members and Alternates Absent:

Norma Sierra Galindo (IID Alternate)
Christopher Hayes (DFW Designee)
Henry Kuiper (Public Member)

David R. Pettijohn (LADWP)
John Powell, Jr. (CVWD Alternate)

Others Present:

Steven Abbott
Brian Alvarez
Jim Barrett
Bert Bell
JR Echard
Castulo Estrada
Melissa Baum-Haley
Emily Halvorsen
JB Hamby
Christopher Harris
Bill Hasencamp
Joanna Smith-Hoff
Michael Hughes
Ned Hyduke
Sarai Jimenez
Lisa Johansen
Rich Juricich
Larry Lai
Tom Levy
Lindia Liu

Victor Lujan
Henry Martinez
Kara Mathews
Aaron Mead
Dylan Mohamed
Jessica Neuwerth
Jessica Rangel
Shana Rapoport
Angela Rashid
Ivory Reyburn
Kelly Rodgers
Shanti Rosset
Tom Ryan
Tina Shields
Andrew Slagan
Gary Tavetian
Cherie Watte
Jay Weiner
Jerry Zimmerman

CALL TO ORDER

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:02 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 February 10, 2021, meeting minutes. Mr. Madaffer moved that the minutes be approved, seconded by Mr. Fisher. By roll-call vote, the minutes were unanimously approved.

Chairman Nelson asked for a motion to approve the proposed Board Resolution Posthumously Honoring Mr. Kevin Kelley, former General Manager of the Imperial Irrigation District. Mr. Fisher moved that the Board Resolution be approved, seconded by Mr. Peterson. By roll-call vote, the Board Resolution was unanimously approved.

COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Report

Mr. Juricich reported that as of March 1st, the water level at Lake Powell was 3,571.46 feet with 9.23 million-acre feet (MAF) of storage, or 38% of capacity. The water level at Lake Mead was 1,087.26 with 10.62 MAF of storage, or 41% of capacity. The total system storage was 26.96 MAF, or 45% of capacity, which is 4.05 MAF less than system storage at this time last year. Mr. Juricich added that the storage levels for both Lake Powell and Lake Mead is in the 10th percentile relative to the average from 1981 and 2019.

Mr. Juricich reported that as of February 16th, the unregulated inflow into Lake Powell for Water Year-2021 is 5.42 MAF, or 50% of normal and the WY-2021 forecasted April to July inflow to Lake Powell is 3.60 MAF, or 50% of normal. For WY-2021, the observed January inflow to Lake Powell was 0.20 MAF, or 55% of normal. The February inflow forecast to Lake Powell is

0.22 MAF, or 56% of normal. To date, the WY-2021 precipitation in the Upper Colorado River Basin is 74% of normal and the current Basin snowpack is 83%.

Mr. Juricich reported that in January the Upper Basin experienced dry precipitation conditions while the Lower Basin benefited from a series of storms. In February, the reverse occurred, with improved precipitation conditions in the Upper Basin (150% to 200% of average) due to storm activity and very dry (0% to 30% of average) precipitation conditions in the Lower Basin.

Mr. Juricich reported that the Basin that as of February 25th, the Brock and Senator Wash regulating reservoirs captured 17,682 AF and 12,736 AF, respectively. He also reported that the excess deliveries to Mexico through January 31st, were 7,104 AF. As of March 1st, the total amount of saline drainage water bypassed to the Cienega de Santa Clara in Mexico was 16,424 AF.

Mr. Juricich reported on the historical consumptive use of the Lower Division States and Mexico. He reported that as a whole, the Lower Division States have been using less than their 7.5 MAF apportionment. Mr. Juricich also reported on the February 24-Month Study. He stated that for WY-2021 the most probable operating tier for Lake Powell is the Mid-Elevation Release Tier with a release of 8.23 MAF and in WY-2022 and WY-2023 the most probable release from Lake Powell is forecasted to be 7.48 MAF. He reported that the 24-Month Study projects that Lake Mead's elevation will fall below the first tier of shortage in WY-2021, which would trigger a shortage condition in 2022. He stated that Reclamation's January 5-Year Probability table projects a high probability of shortage conditions over the next several years.

Chairman Nelson inquired about the impact of adjusting the period of record for the Snow Water Equivalent (SWE) values from its current period of record of 1981 to 2010 to 1991 to 2020. Mr. Juricich stated that the new period of record will reflect the drier conditions the Basin has experienced over the last few decades.

State and Local Report

Ms. Jones, representing the California Department of Water Resources (DWR), reported that Northern Sierra precipitation index is 49% of average, noting that similar precipitation conditions existed this time last year. She added that last Water Year ended up being the third driest Water Year on record in terms of statewide precipitation. Ms. Jones reported that in the San Joaquin Basin precipitation conditions are 49% of average, which is slightly greater than last year's conditions due to storm activity during late January and early February that brought atmospheric river conditions to the Central Sierra watershed. She reported that in the southern end of the San Joaquin Valley and Tulare Lake Basin, precipitation conditions were 37% of average which is slightly below last year's precipitation conditions.

Ms. Jones reported that current precipitation conditions are tracking closely with conditions from 2013 and 2014, which were extremely dry years. However, she noted that the current snowpack conditions are better than they were in 2013 and 2014, and once runoff season begins natural flow conditions may improve.

Mr. Peterson, representing The Metropolitan Water District of Southern California (MWD), reported that MWD's total system storage is 77% of capacity. He noted that the Colorado River aqueduct was shut down in February for repairs and has since resumed a seven-pump flow. Mr. Peterson reported that water deliveries for January 2021 were 86% of average and MWD plans to deliver 92,000 AF to the Desert/Coachella facility.

Mr. Kwan, representing the Los Angeles Department of Water and Power (LADWP), reported that as of March 9th, the Eastern Sierra snowpack is 41% of normal of the April 1st target and 46% normal to date. He noted that a slight warming trend in mid-February to late March caused premature snow melting. Mr. Kwan reported that LADWP is anticipating an inch of SWE from upcoming storm activity.

STATUS OF COLORADO RIVER BASIN PROGRAMS

Status of the Salinity Control Program

Mr. Juricich provided an update on the recent Salinity Control Forum Work Group meeting held at the end of February. During the meeting, the different federal agencies supporting the Salinity Control Program each provided updates on on-going research and funding status. Mr. Juricich reported that the Work Group received a good update and briefing on the Paradox Valley Unit (PVU) project from the Bureau of Reclamation Upper Colorado Basin Region regional director Mr. Wayne Pullan. Due to some recent increases in seismic activities, Reclamation is proposing to do an engineering risk assessment to understand the risk to property damage and the people living in the area. Unfortunately, while the two-year study is underway, the existing brine injection well will not be in operation. Mr. Juricich reported that Mr. Pullan recognizes the importance of the PVU project and Reclamation will explore options after the completion of the risk assessment. Potential options could be new projects outside of the Paradox Valley, including ramping up the Basinwide Program.

Mr. Juricich presented a few slides of seismographs showing seismic rates from when the well was first in operation in the late nineties to the present. The seismographs showed the time Reclamation worked with the injection rates to control seismic activities prior to the March 2019 earthquake, which resulted in the shutdown of the injection well. During last summer, Reclamation restarted the well as a six-month pilot test, but ended the test after one month. Due to unexpected spikes in seismic activities in November and December last year, Reclamation made the decision

to do the risk assessment. Mr. Juricich explained how the various graphs showed the seismic activities magnitudes and locations. One graph showed a drop in salt load that corresponds to the thirty-nine-day injection test last summer and then an uptick in the salt load when the injections ceased even though the river flow remained constant during the same period. USGS has been doing studies looking at the causes of this increase in salt load while river flow rate is constant. USGS suspects that the increase may be associated with the daily freeze, thaw, and melt cycles of the river. USGS also observed a seasonal trend, where increase occurs in the spring and early-winter period in other years.

Glen Canyon Dam Adaptive Management Program

Board Staff Ms. Neuwerth reported that the Adaptive Management Work Group (AMWG) for the Glen Canyon Dam Adaptive Management Program (GCDAMP) met via webinar on February 10-11. Ms. Neuwerth noted that the AMWG heard an update from the Western Area Power Administration (WAPA), which oversees power generation at Colorado River Storage Project facilities, on the status of power generation and power revenues at Glen Canyon Dam. WAPA anticipates low hydropower revenues in the near term due to a combination of factors, including low reservoir levels, low projected dam releases, and the high cost of replacement power. This will result in less funding for the Upper Colorado River Basin Fund, which has historically provided funding to a number of programs, including the Salinity Control Program and the GCDAMP. Ms. Neuwerth noted that Congress directed the GCDAMP to be funded with power revenues from the Upper Colorado River Basin Fund in FY-2020, although future program funding may not rely as heavily on this fund.

Ms. Neuwerth reported that Department of the Interior (DOI) solicitors provided a brief update to the AMWG on ongoing litigation related to the 2016 Long-Term Experimental and Management Plan (LTEMP) EIS, which guides releases from Glen Canyon Dam. In October 2019, several NGOs filed suit against DOI and then-Secretary David Bernhardt over the LTEMP, alleging that the plan failed to adequately consider the effects of climate change. Ms. Neuwerth reported that six of the Basin States moved to intervene in the case in April 2020. Ms. Neuwerth noted that the scope of the administrative record for the case has been nearly established and that DOI expects initial briefings on the case in the near future. In response to a question from Mr. Peterson, Ms. Neuwerth noted that New Mexico had not moved to intervene in the LTEMP case but had instead filed an amicus brief in support of DOI's position.

Ms. Neuwerth reported that a spring disturbance flow would be taking place at Glen Canyon Dam starting on March 15th, beginning with five days of low steady flows to allow for repair to the concrete apron below the dam. Once the repair is complete, dam releases would ramp up to the maximum powerplant capacity release of about 20,000 cfs for 84 hours before ramping back down. Ms. Neuwerth reported that the spring disturbance flow is intended to test the ecosystem response of spring high flows.

Finally, Ms. Neuwerth noted that the Technical Work Group for the GCDAMP would be meeting April 13-14 via webinar.

Lower Colorado River Multi-Species Conservation Program

Ms. Neuwerth reported that the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) Financial Work Group met via webinar on February 18th to discuss the FY-2020 budget. Ms. Neuwerth noted that FY-2020 expenses came in below the budgeted amount of \$27.1 million, due in part to the effects of the pandemic, which required changes in construction and monitoring efforts. Ms. Neuwerth reported that the FY-2021 budget is \$26.5 million, and the FY-2022 budget is \$31.2 million. Finally, Ms. Neuwerth noted that the LCR MSCP Steering Committee would be meeting on April 28th via webinar.

ANNOUNCEMENTS

Governor Newsom's State-of-the-State Address

Mr. Harris reported that Governor Newsom addressed the State of California on March 9, 2021. Mr. Harris noted that the Governor's address was livestreamed over various social media platforms.

Law of Colorado River Conference

Mr. Harris reported that Mr. Hasencamp and Mr. Pearce will be co-hosting the 23rd Annual Law of Colorado River Conference. Mr. Harris noted that the Law of Colorado River Conference would be held on March 11-12, 2021 and would be held virtually as well.

Washington, D.C. Updates

Mr. Harris reported that the Senate Energy and Natural Resources Committee voted to advance New Mexico's Representative Deb Haaland's nomination to serve as Secretary of the Interior to the Senate for consideration. Mr. Harris also reported that the Senate Environment and Public Works Committee voted to advance Michael Regan's nomination as the next U.S. EPA administrator to the Senate for consideration as well.

Mr. Harris reported that President Biden's FY-2022 budget request would be submitted to Congress in early-April.

Mr. Harris reported that Congress is expected to move forward with infrastructure legislation following the passage of the COVID relief bill.

Mr. Harris reported on key water-related legislation. Mr. Harris noted that various bills were presented to Congress, including the New River Cleanup and Restoration; Emergency Assistance for Rural Water Systems; Water and Wastewater Infrastructure on Indian Reservations; Water Infrastructure Improvements for the Nation likely proceeding for reauthorization; and Water Act for Infrastructure Improvements.

Next Scheduled Board Meeting

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be held on April 14, 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 11:00 a.m.

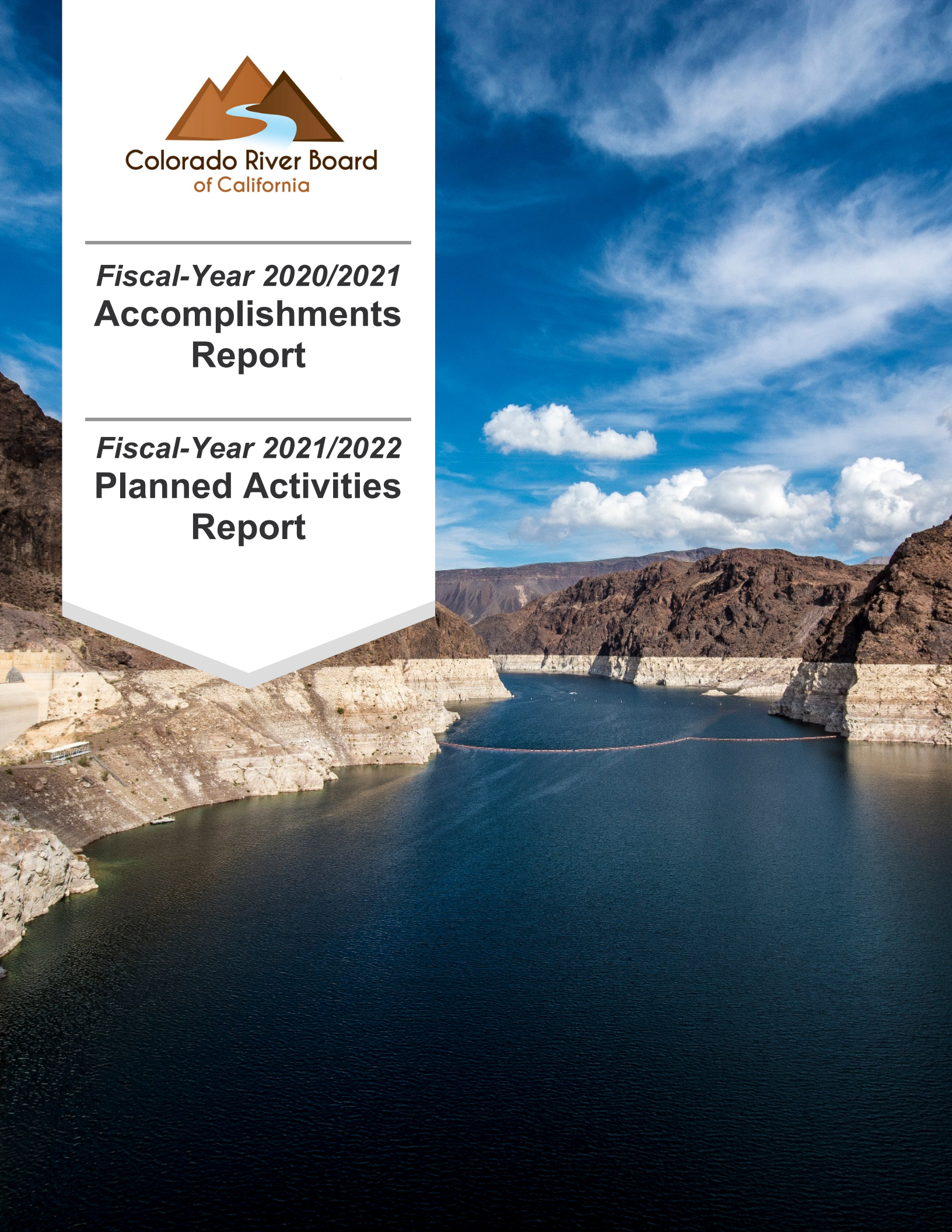
COLORADO RIVER BOARD OF CALIFORNIA
FY 2021-22 BUDGET
as of 05/01/2021

[illegible]



Fiscal-Year 2020/2021 Accomplishments Report

Fiscal-Year 2021/2022 Planned Activities Report



Fiscal-Year 2020/2021 Budget

The budget for the Colorado River Board of California for Fiscal Year 2020/2021 was \$2,400,000, and was adopted by the Board at its June 10, 2020, regularly scheduled meeting.

Fiscal-Year 2020/2021 Accomplishments

COVID-19 Operations

During the entire period of Fiscal-Year 2020/2021, the staff of the Colorado River Board of California (CRB), operated under the public health guidance and restrictions associated with responding to the COVID-19 pandemic. This included all staff working remotely in a telework environment with no in-person meetings or travel and conducting all CRB meetings using web-based meeting software. CRB staff only visited the headquarters office location to pick up office and work-related materials and complied with all state, county, and local public health agency guidance and public safety protocols.

Fiscal-Year 2020/2021 Accomplishments

In Fiscal Year 2020/2021 (July 2020 through June 2021), Colorado River Board of California staff participated in the following major programs and activities:

- Continued to provide California representation and coordination associated with the binational implementation of Minute No. 323 with Mexico, including participation in the Minute No. 323 Oversight Group, Salinity Work Group, Hydrology Work Group, Environmental Work Group, and Desalination Work Group;
- Represented California's interests in the ongoing implementation of the Lower Colorado River Multi-Species Conservation Program (LCR MSCP), including ongoing discussions with Reclamation and the California Department of Fish and Wildlife regarding the implementation of habitat restoration activities pursuant to the terms and conditions of the California Endangered Species Act Section 2081 permit for California LCR MSCP participants. The CRB contributed approximately \$15,000 in FY-20/21 for LCR MSCP implementation;
- Represented California's interests in the ongoing implementation of the Glen Canyon Dam Adaptive Management Program, including annual decision-making regarding Glen Canyon

Dam operational activities pursuant to implementation of the Long-Term Experimental Management Plan. Continued monitoring and review of activities related to the potential down-listing of the humpback chub and razorback sucker from endangered to threatened;

- Represented California's interests in the Colorado River Basin Salinity Control Program, where Mr. Rich Juricich continues to serve as Work Group Chair; Developed and organized consensus comments between the basin states on the Final EIS for the Paradox Valley Unit Salinity Control Project released by Reclamation on December 4th, 2020; Board staff are working closely with the basin states to identify a pathway with Reclamation for continued long-term salinity control in Paradox Valley; Worked collaboratively with Reclamation and the Salinity Control Forum to publish the 2020 Triennial Review of Water Quality Standards for Salinity, Colorado River Basin; Continued participation in and contributed annual cost-share funding of approximately \$45,000 for the Colorado River Basin Salinity Control Program and the monitoring of other important water quality programs and initiatives including the Topock Hexavalent Chromium, Las Vegas Wash Perchlorate, and Moab Uranium Mill-Tailings remediation efforts;
- Participated in the planning and implementation of ongoing weather modification activities in Colorado, Utah, and Wyoming during the 2020/2021 winter season under the Basin States programmatic funding agreement. California's cost share in FY-20/21 was approximately \$321,000 provided through the Six Agency Committee;
- Oversaw the ongoing development of the Lower Colorado River Riparian Restoration Project Needs Assessment to determine resources, schedule, and budget needed to implement tamarisk and riparian restoration projects in the Lower Colorado River basin, and implementation of a salt-cedar beetle monitoring program;
- Continued ongoing annual cost-sharing support for maintenance and operation of Lower Colorado River Basin stream gaging station network with the U.S. Geological Survey. FY-20/21 contributions totaled approximately \$27,000;
- Provided California representation on the Colorado River Climate and Hydrology Workgroup and participated in the review and development of the Colorado River Basin Climate and Hydrology: State of the Science (SOS) Report and various climate and hydrology research & modeling projects;
- Continued development of the Board's strategy for updating the guidelines for lower basin shortages and coordinated operations for Lake Powell and Lake Mead including development of several technical papers on Colorado River management issues, organizing meetings with California agency technical staff, and participating in Basin States organizing meeting, reviewing and commenting on Reclamations Effectiveness Review of the 2007 Colorado River Interim Operating Guidelines;

- Filled the CRB's vacant Environmental Program Manager position;
- Board staff led or organized webinars for the California agencies on various technical aspects of the Colorado River System including a November 2, 2020, webinar on Future Hydrology of the Colorado River Basin by researchers at Utah State University's Center for Colorado River Studies; a staff-led December 16, 2020 webinar on Hydrologic Periods; and a May 2021 webinar on Alternative Management Paradigms by researchers at Utah State University's Center for Colorado River Studies;
- Board staff held regularly virtual meetings with technical staff from the California agencies to share agency perspectives and activities associated with the Colorado River; and
- Board staff continue to review and track activities associated with the State of Utah's proposed Lake Powell Pipeline Project, which was released to the public on June 8, 2020; Staff reviewed and commented on the Draft EIS through a letter submitted to Reclamation on September 8, 2020.

Fiscal-Year 2021/2022 Planned Activities

COVID-19 Operations

It is currently unclear what level of COVID-19 operations will need to be maintained and/or continued during FY-2021/2022, but the expectation is that staff will continue to adhere to and implement all applicable public health and safety guidance provided by state, county, and local public health agencies. Currently, the State of California and the Natural Resources Agency are in the process of developing long-term post-pandemic teleworking policies and guidance for agency implementation. It is expected that CRB staff will maintain some level of teleworking going forward. For the foreseeable future, it is expected that CRB monthly Board meetings may continue to be held via web-based meeting software platforms.

CRB Planned Activities for FY-2021/2022

With the proposed Governor's budget of \$2,413,000 for Fiscal-Year 2021/2022 (July 1, 2021 through June 30, 2022), Colorado River Board of California staff anticipates participating in the following major programs and activities:

- Continue to participate in ongoing activities associated the implementation of Minute No. 323 and associated workgroups;
- Continue staff participation in programs and activities associated with Colorado River operations, including implementation of the 2007 Interim Guidelines and the Basinwide Drought Contingency Plans; as well as monitoring and evaluating annual water use accounting of mainstream Colorado River water supplies in the Lower Basin;
- Continue participation in the ongoing implementation of the Glen Canyon Dam Adaptive Management Program;
- Continue participation in the Lower Colorado River Multi-Species Conservation Program, including a projected annual contribution of approximately \$15,000 for FY-21/22;
- Continue participation in and cost-share funding of the Colorado River Basin Salinity Control Program and the monitoring of other ongoing water quality programs and activities;
- Oversee completion of the Lower Colorado River Non-Native Vegetation Management Needs and Feasibility assessment;
- Continue participation in the Basin States cost-sharing of winter season weather modification efforts in Colorado, Utah, and Wyoming;
- Continue providing annual financial support to the U.S. Geological Survey to provide effective stream gaging stations in the Lower Colorado Basin;
- Continue participation in the Colorado River Climate and Hydrology Workgroup, which includes planning of the next Climate and Hydrology Symposium, and ongoing development of proposed climate and hydrology research projects;
- Continue to develop and provide effective Colorado River Simulation System modeling expertise, capability and support to the agencies;
- Continue providing effective direction, participation and technical support related to the development of the next set of interim operating guidelines for the Colorado River System, including development of draft California Guiding Principles, outreach to California agencies and stakeholders, leading and organizing technical and policy webinars for the California agencies; and
- Continue participation by Board staff in advocating California positions at conferences and symposia.

5/3/2021

LOWER COLORADO WATER SUPPLY REPORT

River Operations
Bureau of Reclamation

Questions: BCOOWaterops@usbr.gov

(702) 293-8373

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

	PERCENT	Content 1000 ac-ft (kaf)	Elev. (Feet above mean sea level)	7-Day Release (CFS)
CURRENT STORAGE	FULL			
LAKE POWELL	35%	8,485	3,562.12	10,200
* LAKE MEAD	38%	9,922	1,078.92	19,300
LAKE MOHAVE	93%	1,678	642.25	18,200
LAKE HAVASU	94%	584	448.19	11,500
TOTAL SYSTEM CONTENTS **	43%	25,504		
As of 5/2/2021				
SYSTEM CONTENT LAST YEAR	51%	30,635		
* 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	74%	1,692		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam	11%	115	1,117.97	25
Forecasted Water Use for Calendar Year 2021 (as of 5/3/2021) (values in kaf)				
NEVADA			267	
SOUTHERN NEVADA WATER SYSTEM				235
OTHERS				32
CALIFORNIA			4,478	
METROPOLITAN WATER DISTRICT OF CALIFORNIA				1,074
IRRIGATION DISTRICTS				3,387
OTHERS				17
ARIZONA			2,550	
CENTRAL ARIZONA PROJECT				1,421
OTHERS				1,130
TOTAL LOWER BASIN USE				7,295
DELIVERY TO MEXICO - 2021 (Mexico Scheduled Delivery + Preliminary Yearly Excess)				1,460
OTHER SIGNIFICANT INFORMATION				
UNREGULATED INFLOW INTO LAKE POWELL - APRIL MID-MONTH FORECAST DATED 4/16/2021				
		MILLION ACRE-FEET	% of Normal	
FORECASTED WATER YEAR 2021		4.397	41%	
FORECASTED APRIL-JULY 2021		2.700	38%	
MARCH OBSERVED INFLOW		0.297	45%	
APRIL INFLOW FORECAST		0.320	30%	
		Upper Colorado Basin	Salt/Verde Basin	
WATER YEAR 2021 PRECIP TO DATE		73% (15.6")	51% (8.9")	
CURRENT BASIN SNOWPACK		58% (7.0")	NA% (NA)	

¹ Forecasted value as of 4/26/2021. Delivery to Mexico forecasted yearly excess calculated using year-to-date observed and projected excess.

² Data as of 4/28/2021



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

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

WATER USE SUMMARY

	Use To Date CY 2021	Forecast Use CY 2021	Approved Use ² CY 2021	Excess to Approval CY 2021
ARIZONA	889,484	2,550,224	2,492,097	58,127
CALIFORNIA	1,279,225	4,477,963	4,398,276	79,687
NEVADA	60,837	266,864	333,136	-66,272
STATES TOTAL ³	2,229,546	7,295,051	7,223,509	71,542
TOTAL DELIVERIES MEXICO IN SATISFACTION OF TREATY REQUIREMENTS ⁴	585,026	1,421,660		
CREATION OF MEXICO'S RECOVERABLE WATER SAVINGS ⁵	0	41,000		
CREATION OF MEXICO'S WATER RESERVE ⁶	36,994	37,340		
TOTAL TO MEXICO IN SATISFACTION OF TREATY REQUIREMENTS	622,020	1,500,000		
TO MEXICO IN EXCESS OF TREATY ⁷	15,568	30,374		
WATER BYPASSED PURSUANT TO IBWC MINUTE NO. 242 ⁸	40,485	116,502		
TOTAL LOWER BASIN & MEXICO ⁹	2,870,625	8,863,587		

¹ Incorporates 80 daily reporting stations which may be revised after provisional data reports are distributed by the USGS.

Use to date has been updated through February for users reporting monthly and estimated for users reporting 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 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.

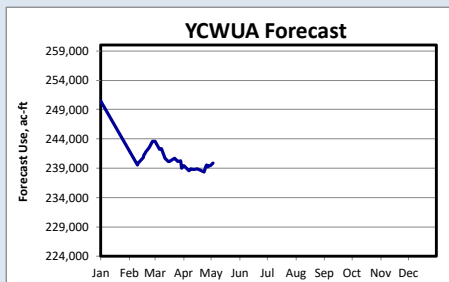
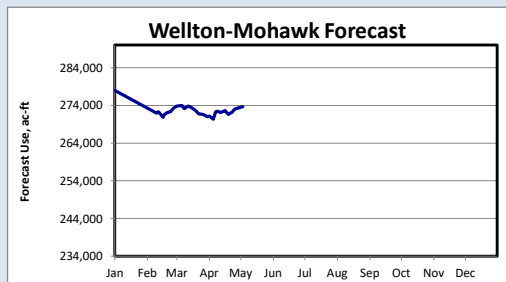
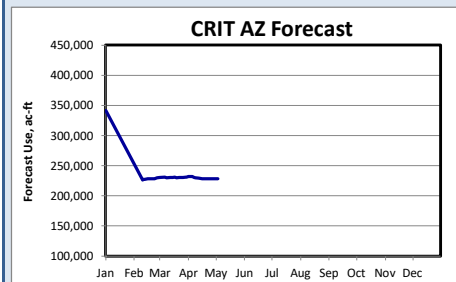
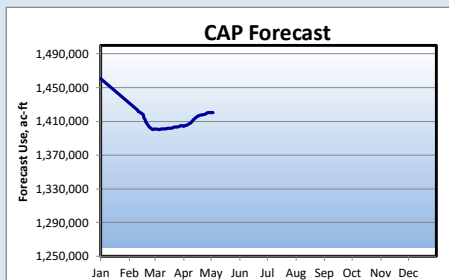
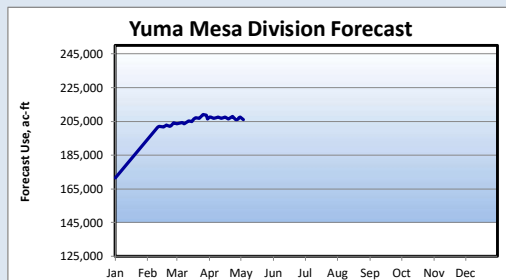
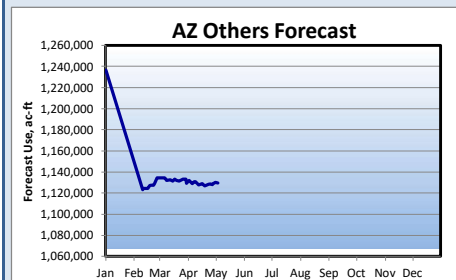
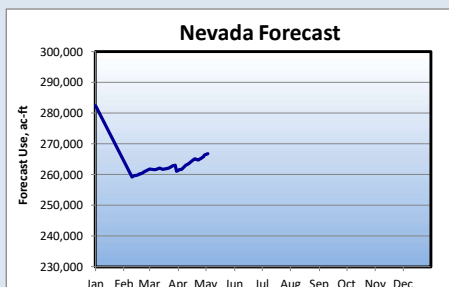
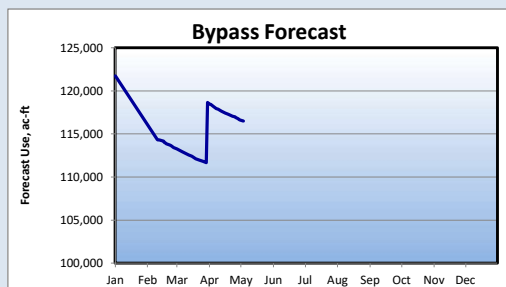
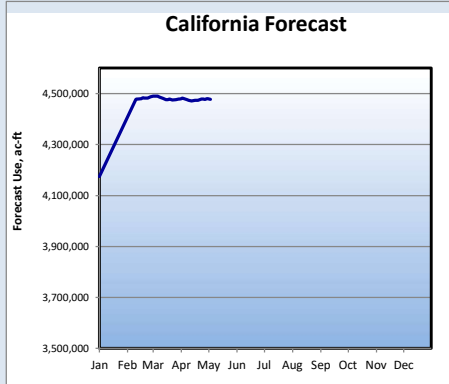
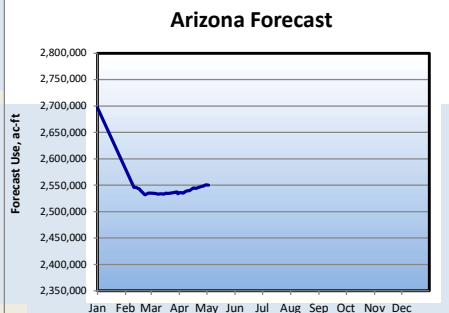
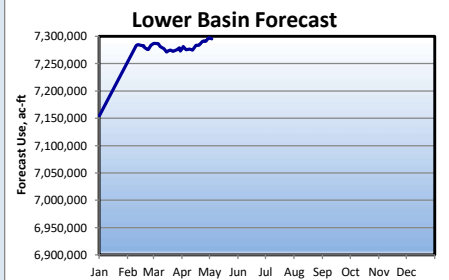
⁵ Water deferred by Mexico pursuant to Section IV of IBWC Minute 323 and the Joint Report of the Principal Engineers with the Implementing Details of the Binational Water Scarcity Contingency Plan in the Colorado River Basin, dated July 11, 2019. (Mexico's required Binational Water Scarcity Contingency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

⁶ Water deferred by Mexico pursuant to Section V of IBWC Minute 323.

⁷ 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
WATER USER								
ARIZONA PUMPERS	5,208	15,512	15,512	---	7,692	22,912	22,912	0
LAKE MEAD NRA, AZ - Diversions from Lake Mead	16	71	71	---	16	71	71	0
LAKE MEAD NRA, AZ - Diversions from Lake Mohave	71	223	223	---	71	223	223	0
DAVIS DAM PROJECT	1	2	2	---	6	17	17	0
BULLHEAD CITY	3,653	9,548	8,163	---	5,623	14,775	12,720	2,055
MOHAVE WATER CONSERVATION DISTRICT	227	676	676	---	339	1,010	1,010	0
BROOKE WATER LLC	99	324	323	---	149	487	485	2
MOHAVE VALLEY I.D.D.	4,051	15,120	15,932	---	7,502	27,998	29,503	-1,505
FORT MOJAVE INDIAN RESERVATION, AZ	12,322	44,373	44,550	---	22,818	82,172	82,500	-328
GOLDEN SHORES WATER CONSERVATION DISTRICT	96	286	286	---	143	427	427	0
HAVASU NATIONAL WILDLIFE REFUGE	1,263	3,663	3,564	---	10,514	38,684	41,835	-3,151
LAKE HAVASU CITY	2,189	8,647	9,021	---	3,531	13,947	14,550	-603
CENTRAL ARIZONA PROJECT	558,207	1,420,546	---	---	558,207	1,420,546	---	---
TOWN OF PARKER	142	470	430	---	224	898	917	-19
COLORADO RIVER INDIAN RESERVATION, AZ	64,471	228,532	226,280	---	146,912	500,910	509,647	-8,737
EHRENBURG IMPROVEMENT ASSOCIATION	78	232	232	---	109	325	325	0
CIBOLA VALLEY ¹	2,799	15,014	15,618	---	3,915	20,998	21,843	-845
CIBOLA NATIONAL WILDLIFE REFUGE	2,440	14,207	14,264	-57	3,935	22,913	23,005	-92
IMPERIAL NATIONAL WILDLIFE REFUGE	1,268	3,799	3,799	0	2,044	6,128	6,128	0
BLM PERMITEES (PARKER DAM to IMPERIAL DAM)	283	844	844	---	436	1,299	1,299	0
CHA CHA, LLC	273	1,292	1,365	---	421	1,988	2,100	-112
BEATTIE FARMS	147	685	722	---	224	1,053	1,110	-57
YUMA PROVING GROUND	97	511	516	---	97	511	516	-5
GILA MONSTER FARMS	1,732	5,131	5,273	---	2,900	8,762	9,156	-394
WELLTON-MOHAWK IDD	83,498	273,569	278,000	-4,437	122,251	402,769	412,965	-10,196
BLM PERMITEES (BELOW IMPERIAL DAM)	25	74	74	0	38	114	114	0
CITY OF YUMA	3,398	14,425	16,201	-1,776	6,962	25,520	27,500	-1,980
MARINE CORPS AIR STATION YUMA	360	1,305	1,320	---	360	1,305	1,320	-15
UNION PACIFIC RAILROAD	8	29	29	---	16	48	48	0
UNIVERSITY OF ARIZONA	225	883	898	---	225	883	898	-15
YUMA UNION HIGH SCHOOL DISTRICT	32	150	150	---	43	200	200	0
DESERT LAWN MEMORIAL	8	23	23	---	11	33	33	0
NORTH GILA VALLEY IRRIGATION DISTRICT	2,220	10,304	11,563	---	11,257	41,602	44,200	-2,598
YUMA IRRIGATION DISTRICT	12,635	38,101	37,835	---	22,021	68,879	69,900	-1,021
YUMA MESA I.D.D.	34,658	157,689	150,455	---	54,082	241,425	242,080	-655
UNIT "B" IRRIGATION DISTRICT	4,366	20,944	20,816	---	6,126	27,866	29,400	-1,534
FORT YUMA INDIAN RESERVATION	502	1,494	1,494	---	772	2,299	2,299	0
YUMA COUNTY WATER USERS' ASSOCIATION	85,992	239,921	242,377	---	117,694	349,646	360,400	-10,754
COCOPAH INDIAN RESERVATION	348	1,384	1,686	---	425	2,006	2,585	-579
RECLAMATION-YUMA AREA OFFICE	76	227	227	---	76	227	227	0
RETURN FROM SOUTH GILA WELLS								
TOTAL ARIZONA	889,484	2,550,224	2,555,314		1,120,187	3,353,876	3,400,968	
CAP	558,207	1,420,546				1,420,546		
ALL OTHERS	331,277	1,129,678	1,130,814			1,933,330	1,976,468	
YUMA MESA DIVISION, GILA PROJECT	49,513	206,094	199,853	6,241		351,906		

ARIZONA ADJUSTED APPORTIONMENT CALCULATION

Arizona Basic Apportionment	2,800,000
System Conservation Water - Pilot System Conservation Program ²	(360)
System Conservation Water - Colorado River Indian Tribes (CRIT) ³	(50,000)
System Conservation Water - Fort McDowell Yavapai Nation (FMYN) ⁴	(13,933)
System Conservation Water - Mohave Valley I.D.D. (MVIDD) ⁵	(6,925)
Creation of Extraordinary Conservation ICS - CRIT (Estimated) ^{6,8}	(4,685)
Creation of Extraordinary Conservation ICS - GRIC (Estimated) ^{7,8}	(40,000)
Arizona DCP Contribution ⁹	(192,000)
Total State Adjusted Apportionment	2,492,097
Excess to Total State Adjusted Apportionment	58,127
Estimated Allowable Use for CAP	1,363,805

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.

² 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.

³ 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, Through the Arizona Department of Water Resources, the Central Arizona Water Conservation District, and the Colorado River Indian Tribes to Fund the Creation of Colorado River System Water Through 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.

⁴ 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 Basin Drought Contingency Plan Agreement (LB DCP Agreement), the Bureau of Reclamation intends to apply this water towards the Secretary of the Interior's commitment to create or conserve 100,000 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.

⁵ LB DCP Agreement, Reclamation intends to apply this water towards the Secretary's commitment to create or conserve 100,000 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.

⁶ 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.

⁷ CAP water being conserved by GRIC in 2021 to create EC ICS. The actual amount of EC ICS created by GRIC will be based on final accounting and verification.

⁸ 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.

⁹ 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* 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
RECLAMATIONLOWER COLORADO BASIN REGION
CY 2021

NOTE:

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

[California Schedules and Approvals](#)

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

WATER USER	Use To Date 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	492	1,466	1,466	---	888	2,646	2,646	0
FORT MOJAVE INDIAN RESERVATION, CA	2,019	7,324	8,996	---	3,753	13,612	16,720	-3,108
CITY OF NEEDLES (includes LCWSP use)	358	1,513	1,605	-92	608	2,235	2,261	-26
METROPOLITAN WATER DISTRICT	276,535	1,074,413	---	---	277,521	1,077,068	---	---
COLORADO RIVER INDIAN RESERVATION, CA	1,683	5,014	5,014	---	2,789	8,307	8,307	0
PALO VERDE IRRIGATION DISTRICT	87,346	404,866	428,620	---	219,167	843,038	865,000	-21,962
YUMA PROJECT RESERVATION DIVISION	12,645	43,499	50,244	---	25,044	86,503	96,884	-10,381
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	12,632	40,126	45,384	-5,258
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	12,412	46,377	51,500	-5,123
YUMA ISLAND PUMPERS	547	1,630	1,630	---	989	2,946	2,946	0
FORT YUMA INDIAN RESERVATION - RANCH 5	334	926	938	---	606	1,675	1,696	-21
IMPERIAL IRRIGATION DISTRICT ¹	793,234	2,560,330	2,622,800	-62,470	804,286	2,620,608	2,694,973	---
SALTON SEA SALINITY MANAGEMENT	0	0	0	0	0	0	0	---
COACHELLA VALLEY WATER DISTRICT	103,764	376,183	379,000	-2,817	107,826	388,716	390,812	---
OTHER LCWSP CONTRACTORS	177	527	527	---	310	922	922	0
CITY OF WINTERHAVEN	21	63	63	---	31	91	91	0
CHEMEHUEVI INDIAN RESERVATION	70	209	209	---	3,807	11,340	11,340	0
TOTAL CALIFORNIA	1,279,225	4,477,963			1,447,625	5,059,707	5,164,598	

CALIFORNIA ADJUSTED APPORTIONMENT CALCULATION

California Basic Apportionment

4,400,000

System Conservation Water - Pilot System Conservation Program ²

(145)

IID Creation of Extraordinary Conservation ICS - Stored in Lake Mead (Estimated) ³

(1,579)

MWD Creation of Extraordinary Conservation ICS (Estimated) ⁴

0

Total State Adjusted Apportionment

4,398,276

Excess to Total State Adjusted Apportionment

79,687

Estimated Allowable Use for MWD

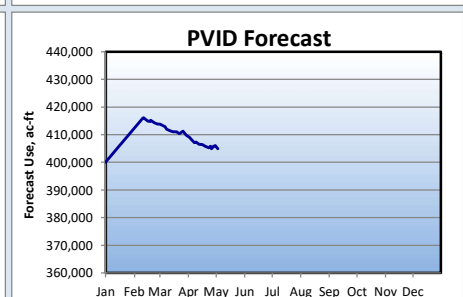
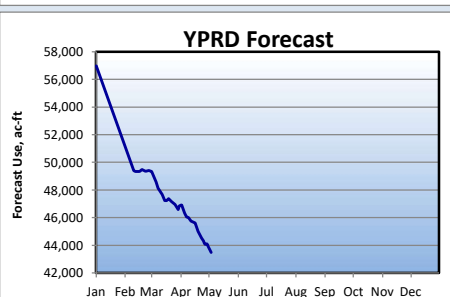
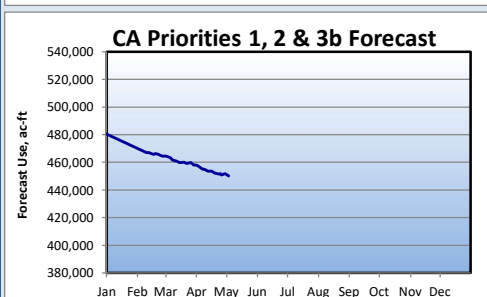
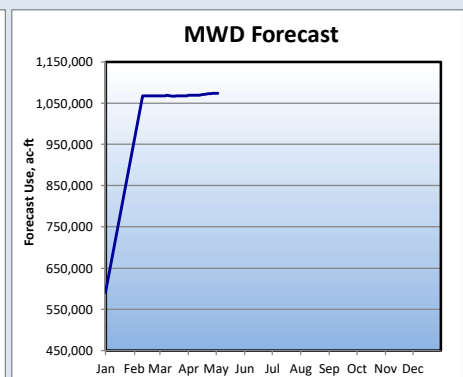
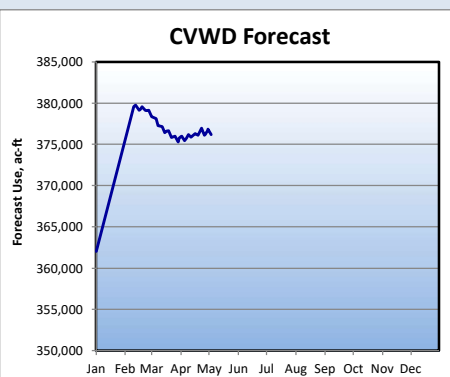
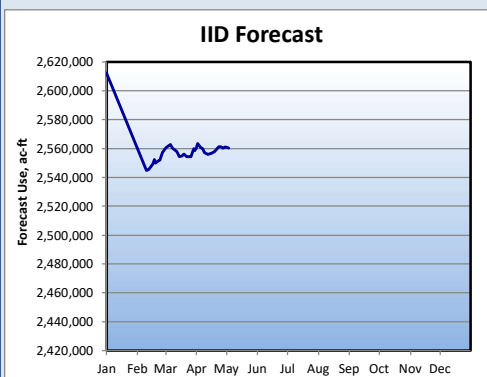
994,726

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

² 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.

³ 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.

⁴ 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 \(Water Accounting Reports\)](#)

	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
WATER USER								
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	128,628	458,419	440,686	17,733	128,628	458,419	440,686	17,733
LAKE MEAD NRA, NV - Diversions from Lake Mead	269	1,378	1,500	---	269	1,378	1,500	-122
LAKE MEAD NRA, NV - Diversions from Lake Mohave	128	461	500	---	128	461	500	-39
BASIC MANAGEMENT INC.	1,770	7,894	8,208	---	1,770	7,894	8,208	-314
CITY OF HENDERSON (BMI DELIVERY)	4,496	13,227	15,878	---	4,496	13,227	15,878	-2,651
NEVADA DEPARTMENT OF WILDLIFE	4	12	12	0	278	991	1,000	---
PACIFIC COAST BUILDING PRODUCTS INC.	320	923	928	---	320	923	928	-5
BOULDER CANYON PROJECT	58	172	172	---	101	300	300	0
BIG BEND WATER DISTRICT	691	4,229	4,733	---	1,522	8,675	10,000	-1,325
FORT MOJAVE INDIAN TRIBE	616	3,462	4,020	---	920	5,168	6,000	-832
LAS VEGAS WASH RETURN FLOWS	-76,143	-223,313	-221,637	---				
TOTAL NEVADA	60,837	266,864	255,000	17,733	138,432	497,436	485,000	12,445
SOUTHERN NEVADA WATER SYSTEM (SNWS)	52,485	235,106				458,419		
ALL OTHERS	8,352	31,758				39,017		
NEVADA USES ABOVE HOOVER	59,530	259,173				483,593		
NEVADA USES BELOW HOOVER	1,307	7,691				13,843		

Tributary Conservation (TC) Intentionally Created Surplus (ICS)
 Southern Nevada Water Authority (SNWA) Creation of TC ICS (Approved) ¹

43,000

NEVADA ADJUSTED APPORTIONMENT CALCULATION

Nevada Basic Apportionment

300,000

 SNWA Creation of Extraordinary Conservation (EC) ICS (Estimated) ²

33,136

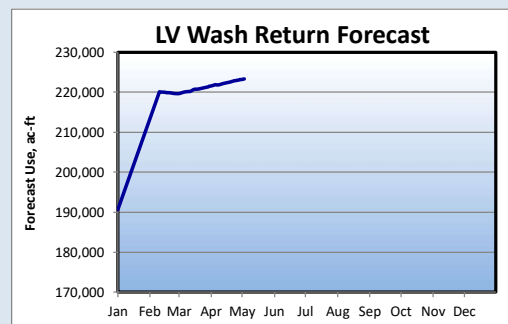
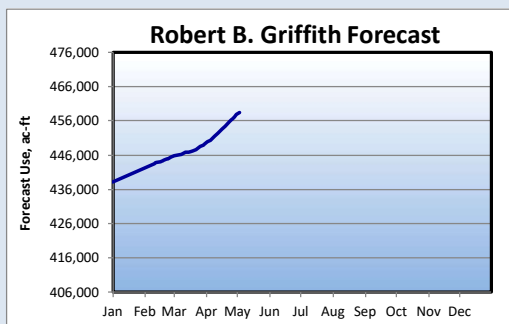
Total State Adjusted Apportionment

333,136

Excess to Total State Adjusted Apportionment

-66,272

¹ 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.

² 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*.


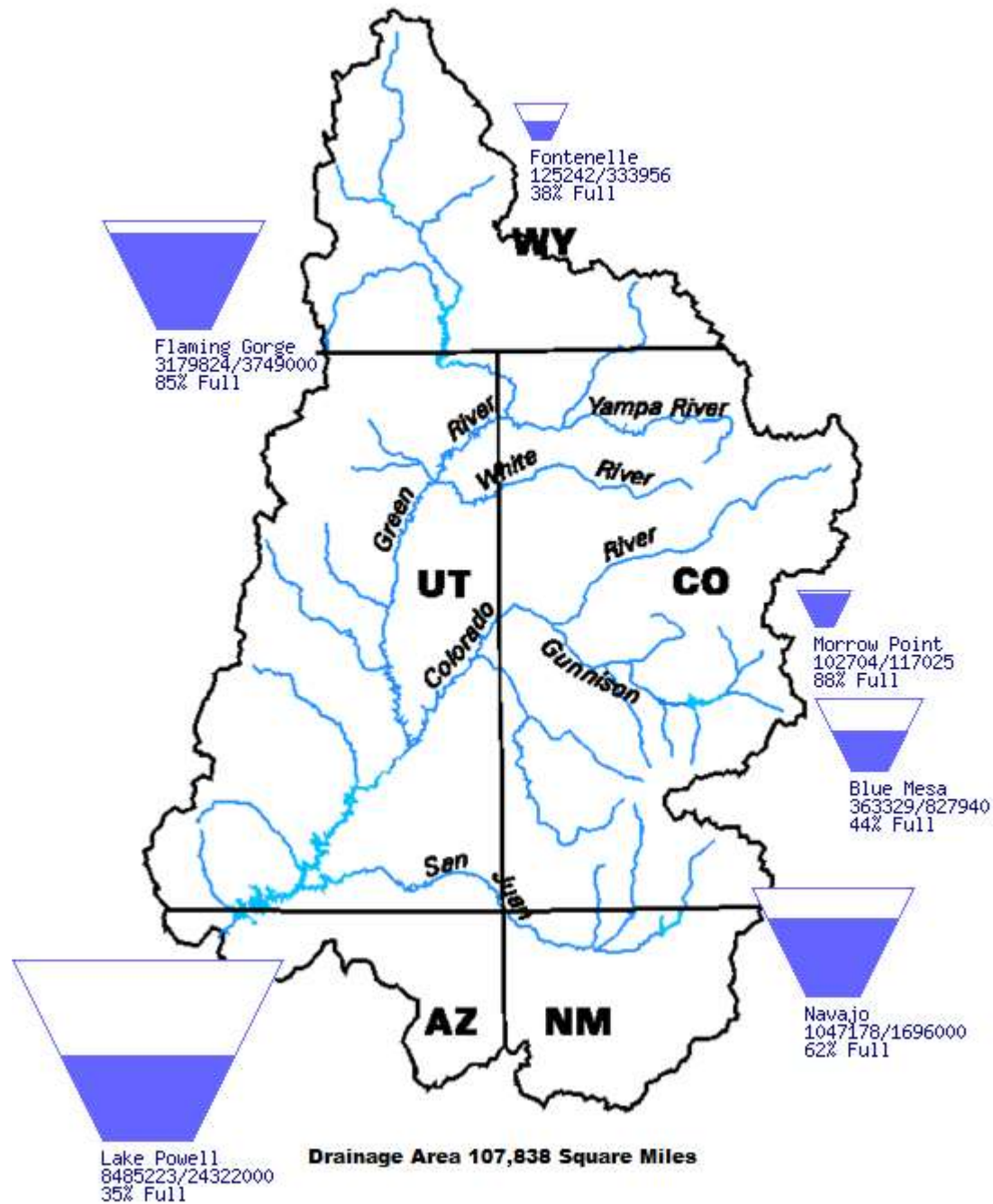
NOTES: Click on Nevada Schedules and Approvals above for incoming diversion schedules and approvals.

Upper Colorado Region Water Resources Group

River Basin Tea-Cup Diagrams

Data Current as of:
05/02/2021

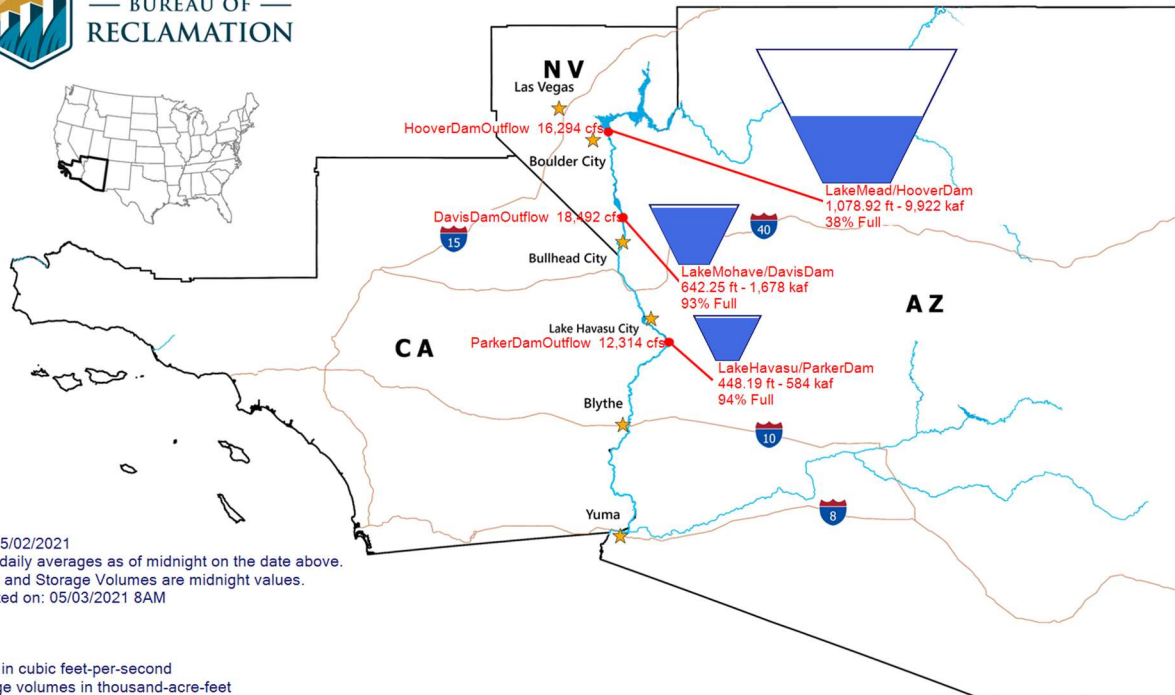
Upper Colorado River Drainage Basin



Lower Colorado River Teacup Diagram



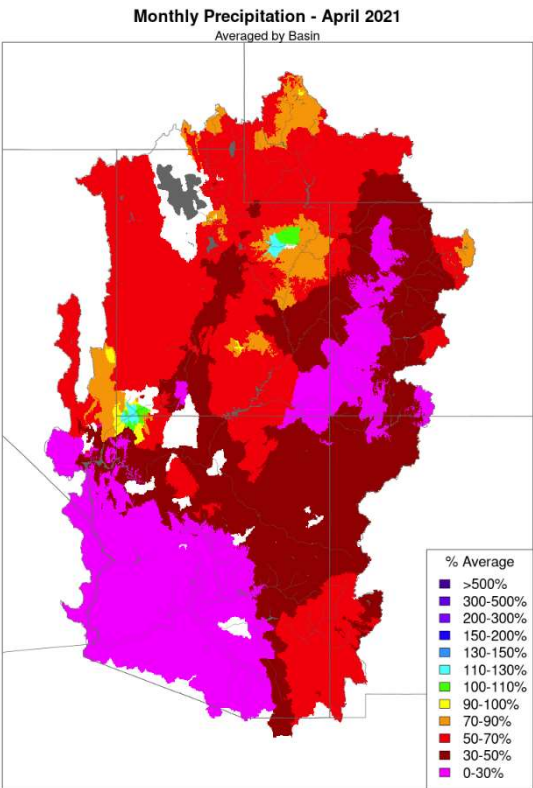
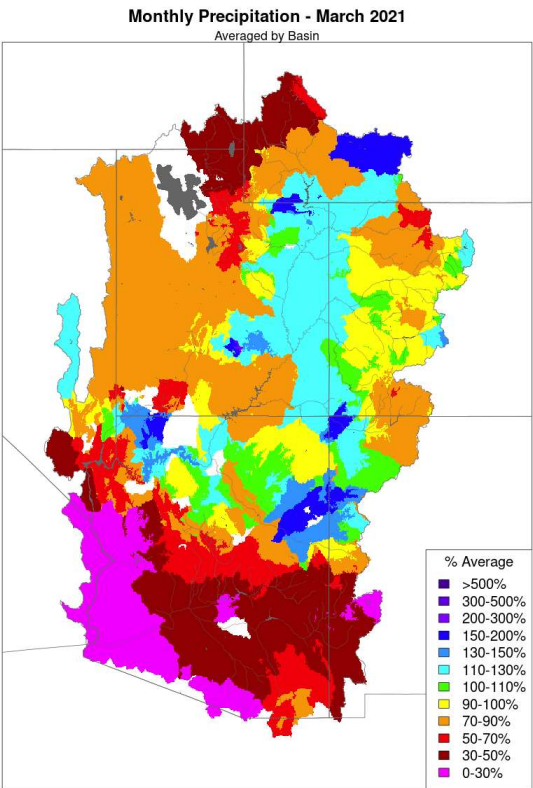
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RECLAMATION

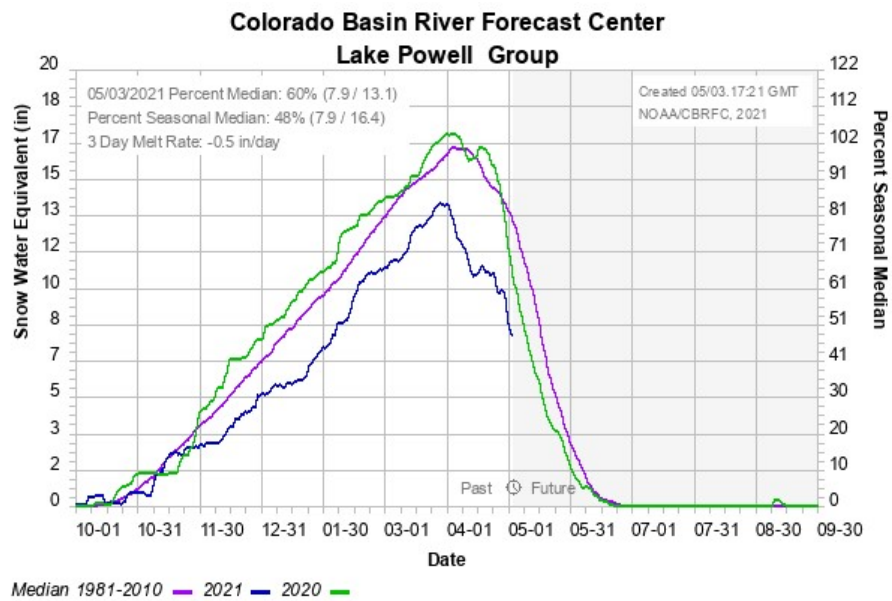


LEGEND:

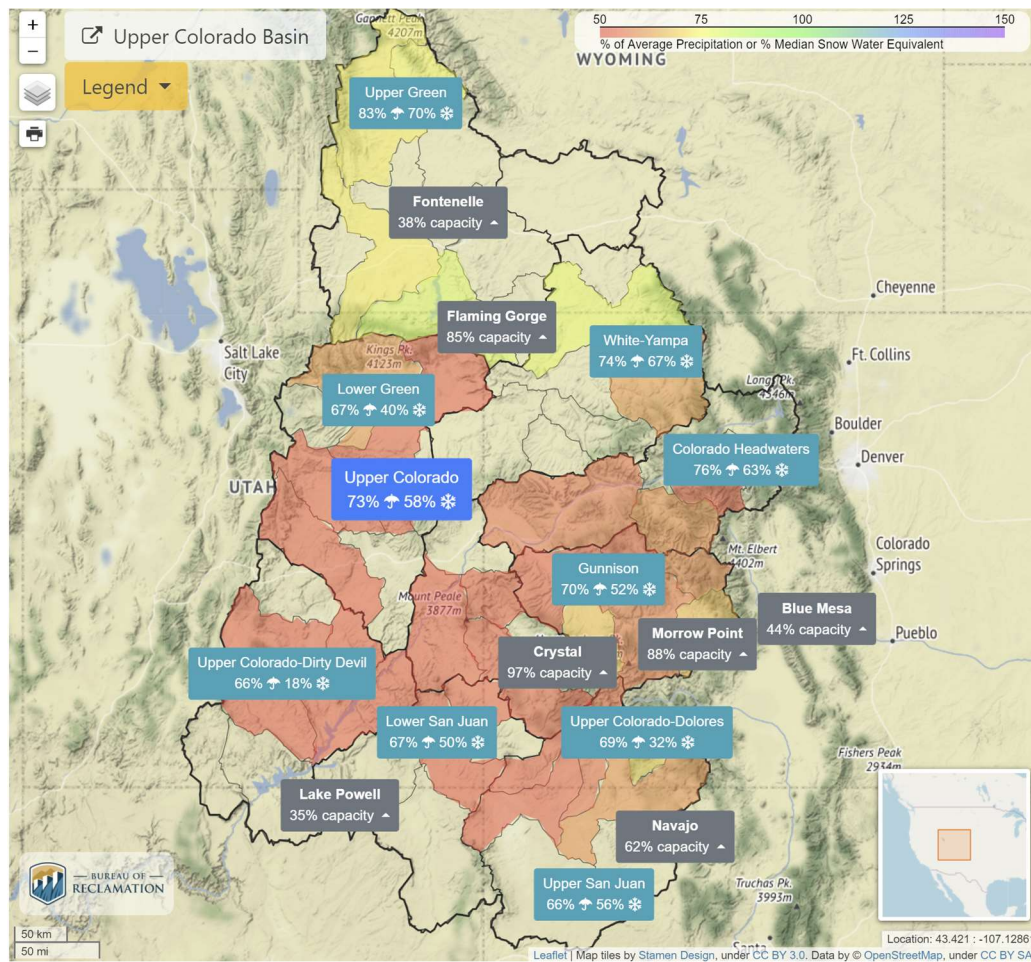
cfs: Flows in cubic feet-per-second
 kaf: Storage volumes in thousand-acre-feet
 ft: Elevations in feet above mean-sea-level

NOAA National Weather Service Monthly Precipitation Map March and April 2021





Snow Pack Conditions Map Upper Colorado Region



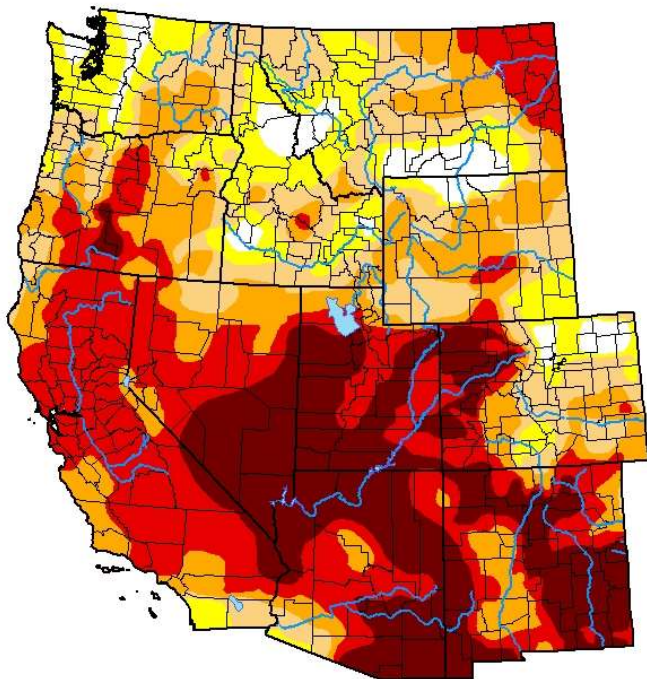
USDA United States Drought Monitor Map

U.S. Drought Monitor West

May 4, 2021

(Released Thursday, May. 6, 2021)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	4.25	95.75	84.18	67.07	47.03	21.18
Last Week 04-27-2021	4.02	95.98	83.83	64.71	43.35	21.20
3 Months Ago 02-02-2021	6.75	93.25	79.73	63.73	45.19	21.03
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 05-05-2020	44.69	55.31	34.13	13.47	2.06	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>

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Western Regional Climate Center



droughtmonitor.unl.edu

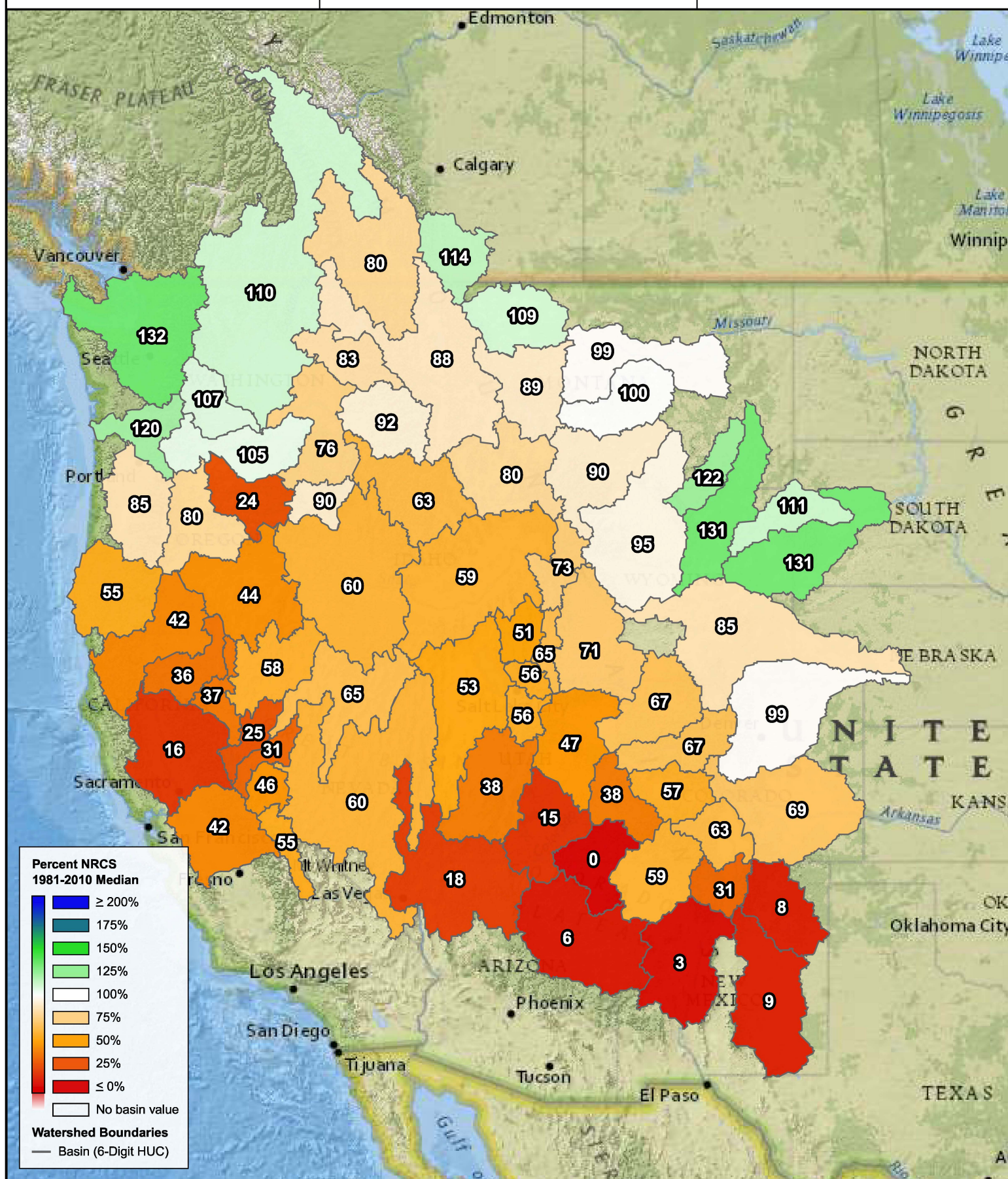
Total Lower Division States Consumptive Use Colorado River



Snow Water Equivalent

Percent NRCS 1981-2010 Median

May 1st, 2021



Natural Resources
Conservation Service
United States Department of Agriculture



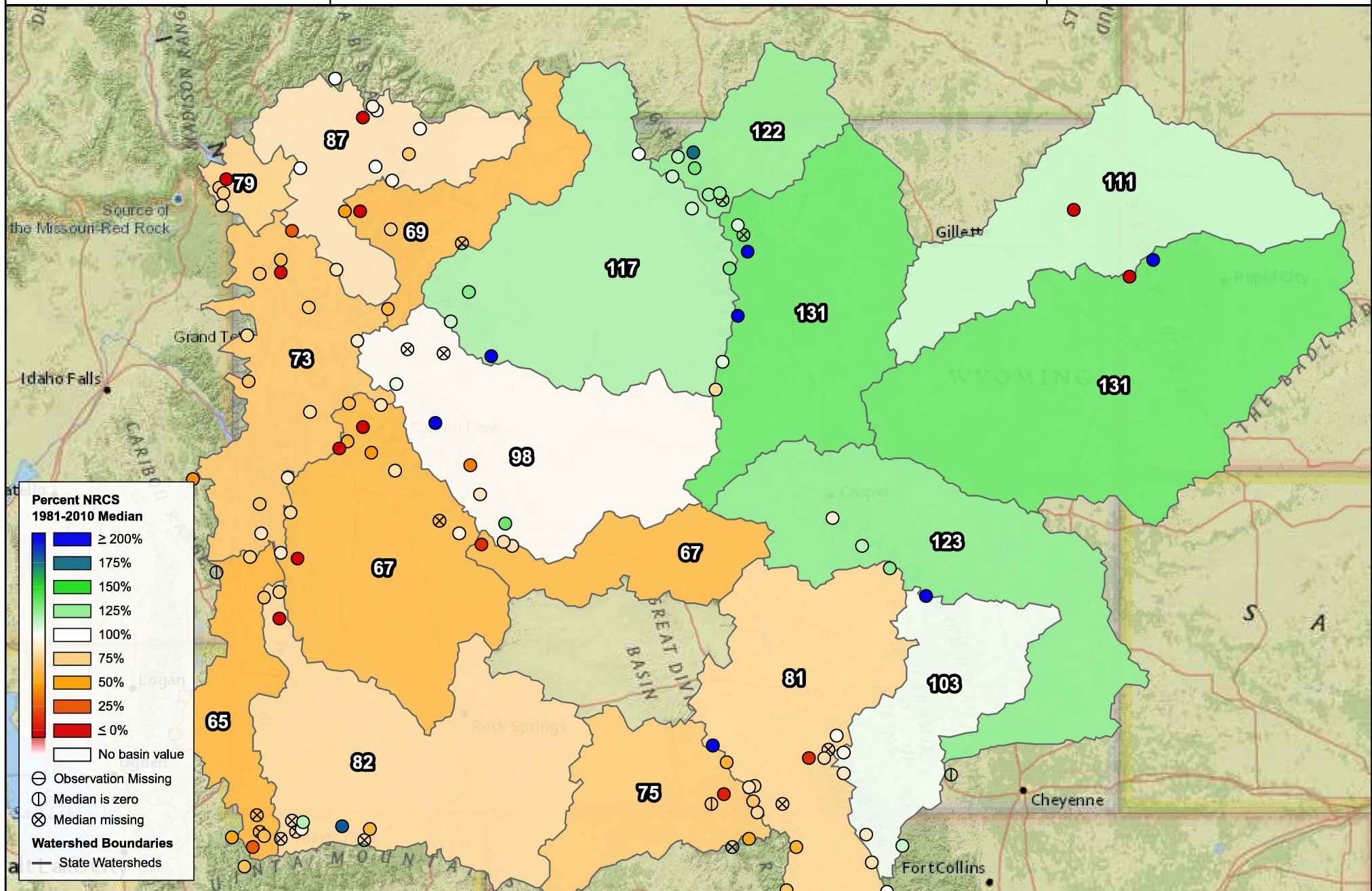
0 50 100 200 300 400 500 Miles

Created 5-06-2021

Snow Water Equivalent

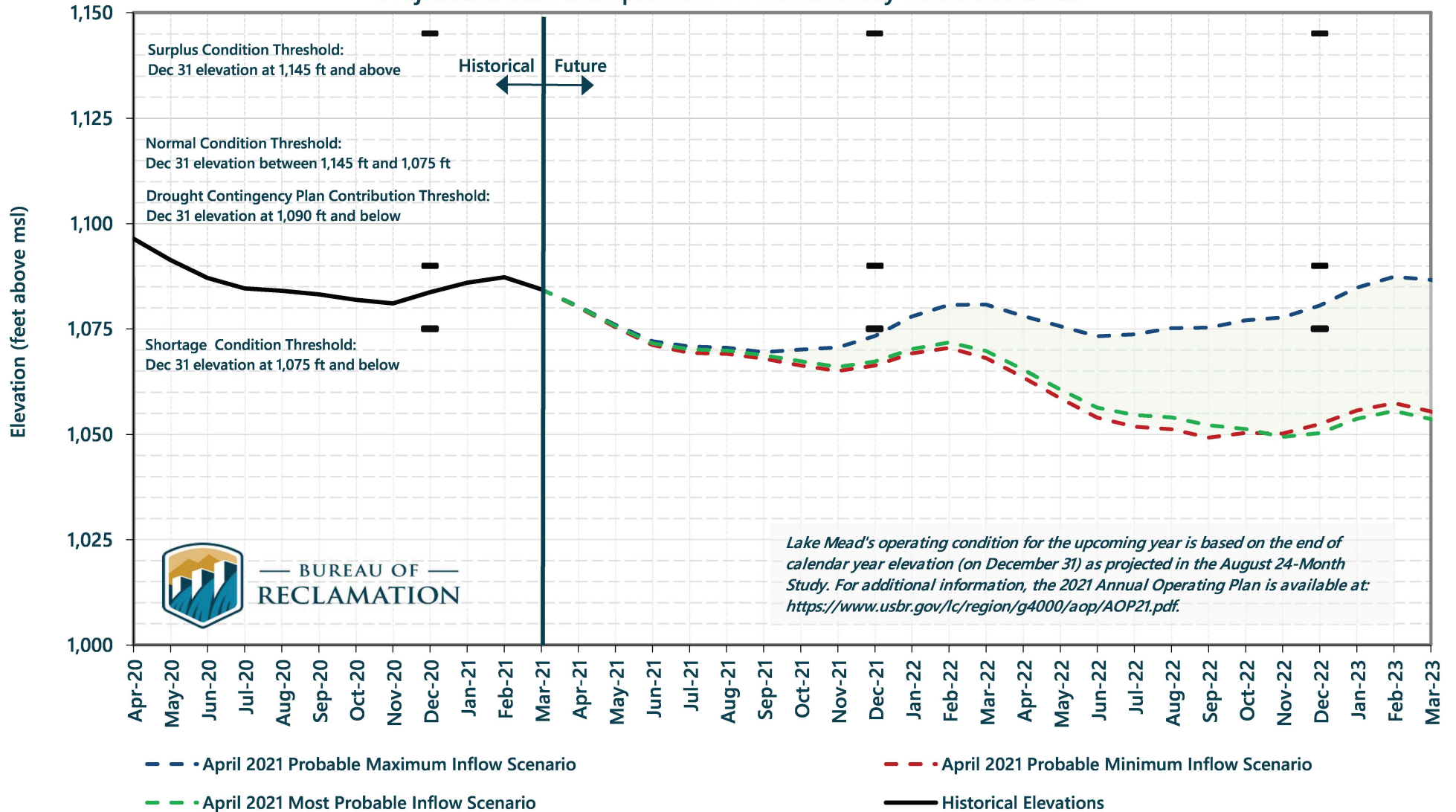
Percent NRCS 1981-2010 Median

May 1st, 2021



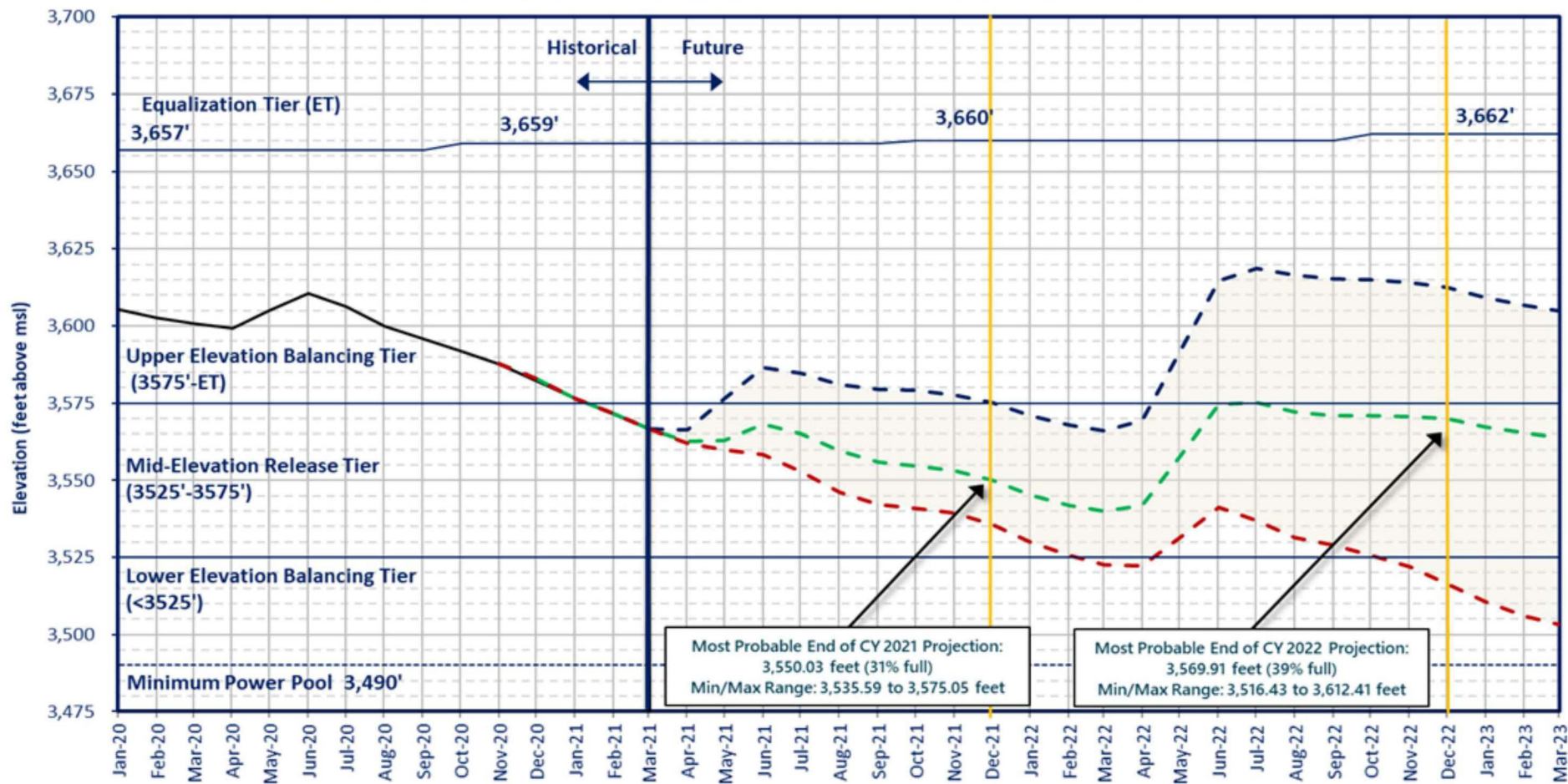
Lake Mead End of Month Elevations

Projections from the April 2021 24-Month Study Inflow Scenarios



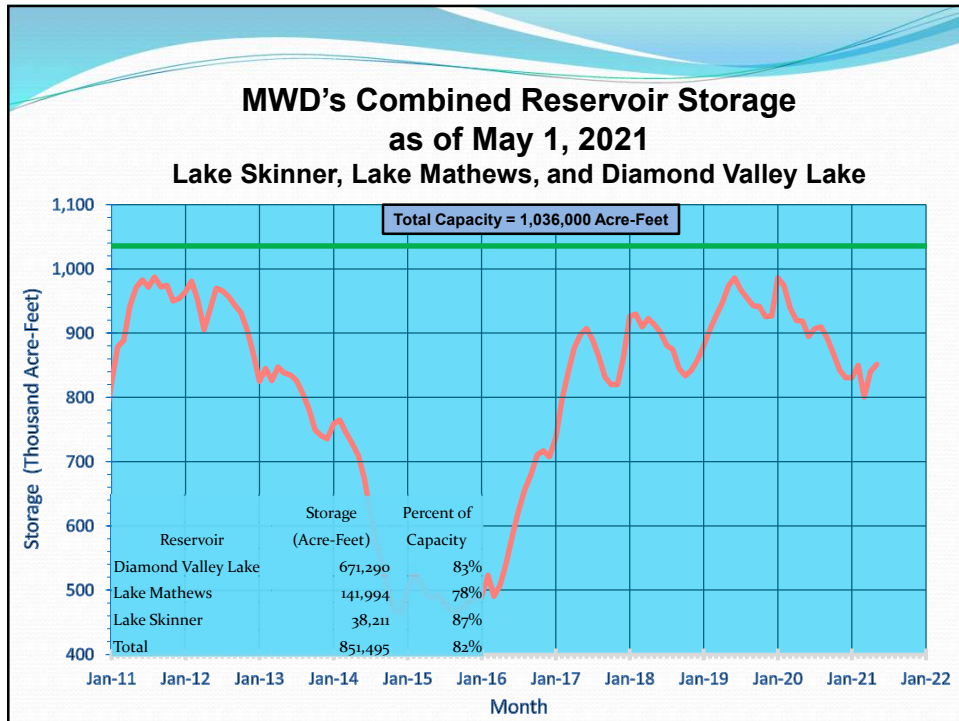
Lake Powell End of Month Elevations

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

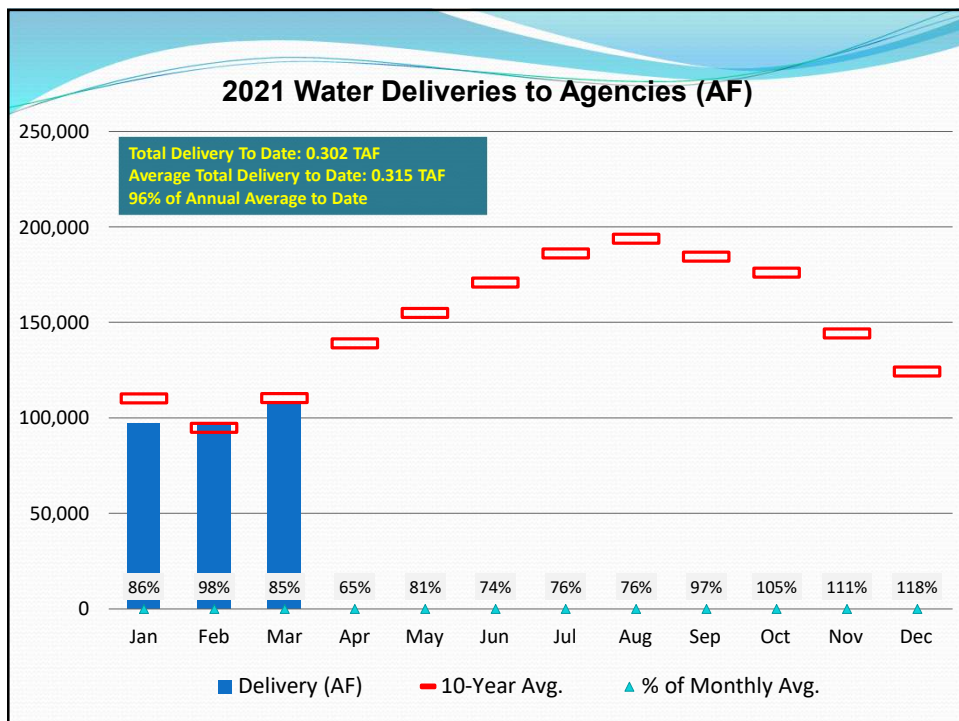


BUREAU OF
RECLAMATION

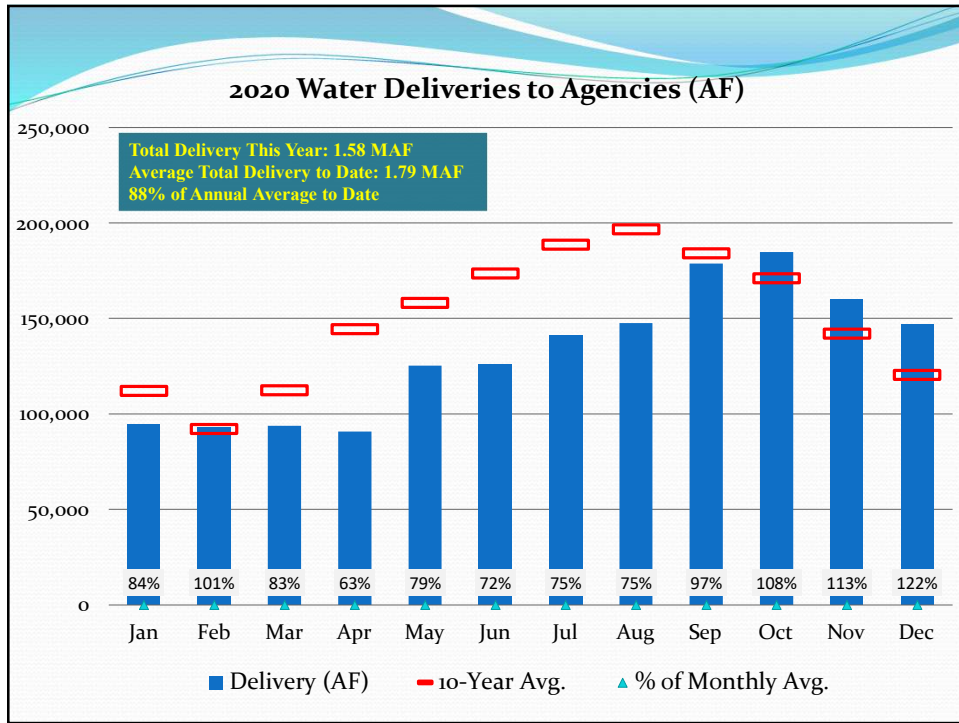
- Historical Elevations
- Apr 2021 Most Probable - Lake Powell release of 8.23 maf in WY2021 and 7.48 maf in WY2022
- Apr 2021 Max Probable - Lake Powell release of 8.23 maf in WY2021 and 9.0 maf in WY2022
- Apr 2021 Min Probable - Lake Powell release of 8.23 maf in WY2021 and 7.48 maf in WY2022



1

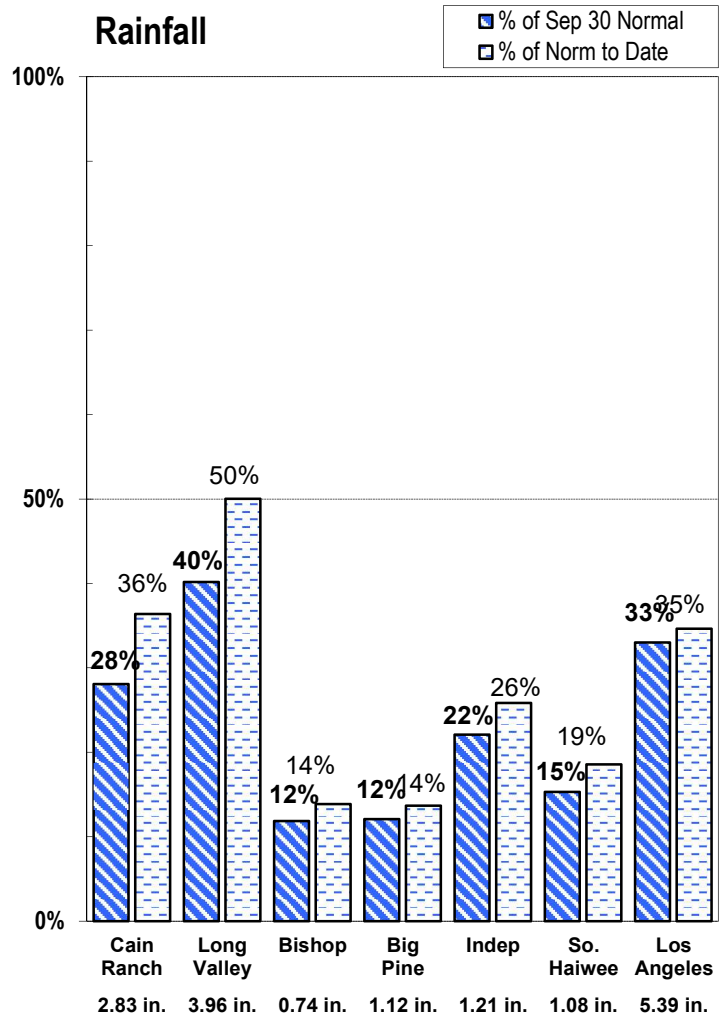
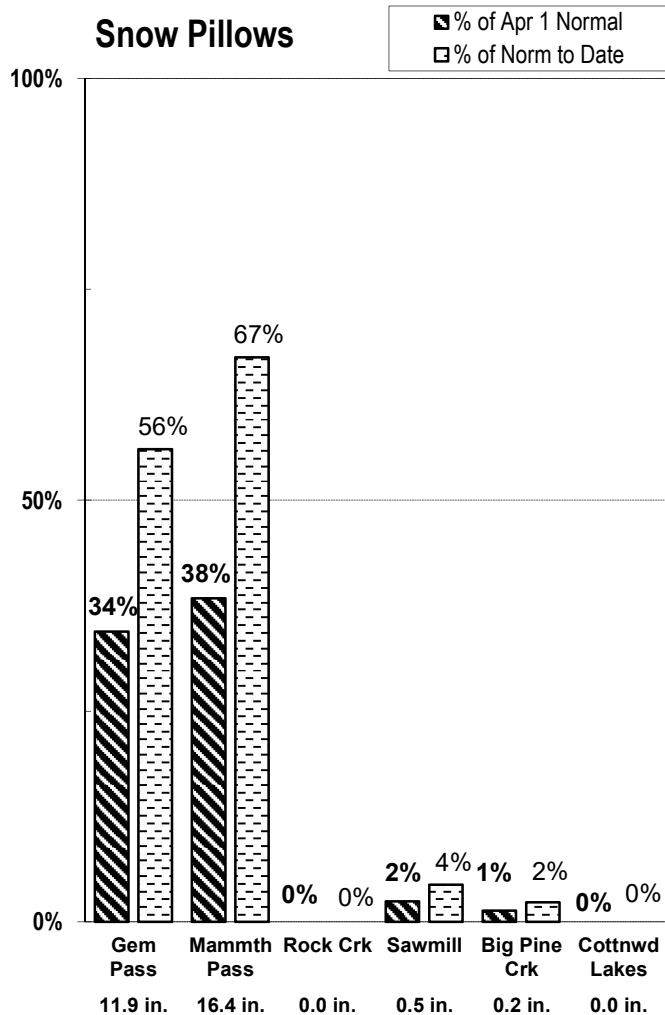
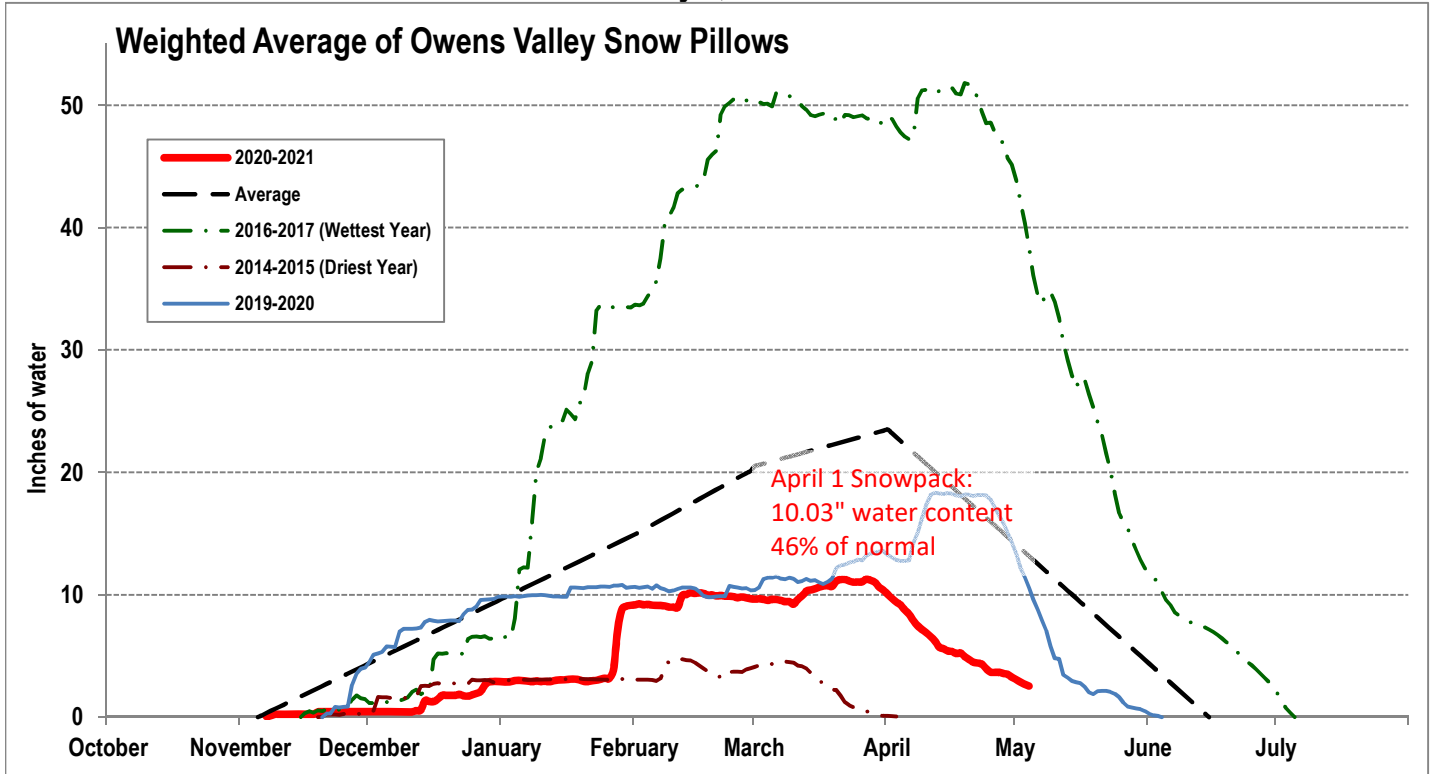


2



3

EASTERN SIERRA CURRENT PRECIPITATION CONDITIONS May 4, 2021



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