Colorado River Board of California

July 30, 2020

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, August 12, 2020
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/89059321952 Telephone: US: +1 669 900 9128, enter Meeting ID: 890 5932 1952, 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, August 12, 2020
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 June 10, 2020 (Action)

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

5. Presentation by Bureau of Reclamation – CRSS 101

6. Staff Reports Regarding Colorado River Basin Programs
a. Minute No. 323 Implementation
b. Salinity Control Program
c. Lake Powell Pipeline Project
d. Status of development of the next set of Interim Operating Guidelines
e. Glen Canyon Dam Adaptive Management Program
f. Lower Colorado River Multi-Species Conservation Program
g. General Announcements

7. Executive Session
An Executive Session may be held by the Board pursuant to provisions of Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code and Sections 12516 and 12519 of the Water Code to discuss matters concerning interstate claims to the use of Colorado River system waters in judicial proceedings, administrative proceedings, and/or negotiations with representatives from other states or the federal government.

8. Other Business

9. Future Agenda Items/Announcements

Next Scheduled Board Meeting: September 9, 2020
10:00 a.m.
Webinar

Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, June 10, 2020

A meeting of the Colorado River Board of California (Board) was held virtually on Wednesday, June 10, 2020, 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)
John Powell, Jr. (CVWD Alternate)
Jack Seiler (PVID Alternate)
David Vigil (DFW Alternate)
Mark Watton (SDCWA Alternate)

Board Members and Alternates Absent:

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

Others Present:

Steven Abbott
Brian Alvarez
Robert Cheng
Michael Coleman
Melissa Baum-Haley
Nadia Hardjadinita
Christopher Harris
Bill Hasencamp
Joanna Smith Hoff
Lynda Lo-Hill
Michael Hughes
Sarai Jimenez
Lisa Johansen
Lori Jones
Rich Juricich
Laura Lamdin
Tom Levy
Lindia Liu
Henry Martinez
Kara Mathews
Aaron Mead
Brea Mohamed
Dylan Mohamed
Jessica Neuwerth
Demetri Polyzos
Angela Rashid
Ivory Reyburn
Kelly Rodgers
Tom Ryan
Tina Shields
Zach Stevens
Gary Tavetian
Tiffany Tran
Margaret Vick
Jay Weiner
Meena Westford
Jerry Zimmerman

CALL TO ORDER

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:05 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 May 13, 2020, meeting minutes. Mr. Kuiper moved that the minutes be approved, seconded by Mr. Peterson. By roll-call vote, the minutes were approved. Mr. Pettijohn from the Los Angeles Department of Water and Power abstained.

Chairman Nelson asked for a motion to approve the Fiscal Year 2020-2021 budget. Mr. Madaffer moved that the budget be approved, seconded by Mr. Kuiper. By roll-call vote, the budget was unanimously approved.

Chairman Nelson asked for a motion to approve the proposal of the Lower Colorado Water Supply Project. Mr. Peterson moved that the proposal be approved, seconded by Mr. Madaffer. By roll-call vote, the proposal was approved. Mr. Vigil from the Department of Fish and Wildlife abstained.

COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Report

Mr. Juricich reported that as of June 1st, the water level at Lake Powell was 3,605.05 feet with 12.24 million-acre feet (MAF) of storage, or 50% of capacity. The water level at Lake Mead was 1,091.32 with 10.97 of storage, or 42% of capacity. The total system storage was 30.96 MAF, or 52% of capacity, which is about 2.32 MAF more than system storage at this time last year.

Mr. Juricich reported that as of May 18th, the mid-month forecast for the unregulated inflow into Lake Powell for Water Year 2020 was 7.15 MAF, or 66% of normal and the Water Year-2020

forecasted April to July inflow to Lake Powell is 4.40, or 61% of normal. For Water Year-2020, the observed April inflow to Lake Powell was 0.48 MAF, or 45% of normal and the forecasted May inflow to Lake Powell is 1.70 MAF, or 79% of normal. The current Basin snowpack is 54% and precipitation to date is 81%.

Mr. Jurich reported that the precipitation conditions in April and May were very dry throughout the Basin. He noted that as of June 1st, snow conditions in the Upper Basin were much below median, with exception to the Upper Green River and Yampa/White Basins.

Mr. Juricich reported that as of June 4th, the Brock and Senator Wash regulating reservoirs captured 67,770 AF and 34,151 AF, respectively. He also reported that the excess deliveries to Mexico through June 7th, were 47,252 AF, noting that the flows were higher than the excess flows in 2019, which were close to 34,000 AF. Mr. Juricich reported that as of June 1st, the total amount of saline drainage water bypassed to the Cienega de Santa Clara in Mexico was 59,191 AF.

Mr. Harris stated that the increase in excess flows to Mexico is attributed to a few big storms that occurred in February 2020 during a two-week period, impacting water orders. Mr. Harris added that once the water is released from Parker Dam, it is difficult to stop and hold it back. He stated that it is likely that this water would have exceeded the capacity of Senator Wash and Brock Reservoir. Chairman Nelson inquired about how excess flows to Mexico could be captured and possibly stored in a groundwater bank. Mr. Harris stated that the excess water would need to be captured and then routed to a regulating reservoir, where it could be held and moved off-stream if needed. He stated that because we do not know when precipitation events will impact water that has already been ordered and released, it would be difficult to capture the water as it moves down from Hoover Dam. He noted that Reclamation would need to hold back supplies at Mojave or Havasu reservoirs or further downstream, which becomes more challenging. Mr. Harris said that the excess flow that travels through Morelos Dam is utilized by Mexico and is not counted as a treaty delivery credit.

Chairman Nelson inquired whether California could utilize excess water in the Colorado River System, in a similar fashion to Mexico. Mr. Harris reported that Colorado River users in the United States put their water orders in with Reclamation and can change their orders on a weekly basis. He added that if there was a high probability of a rainfall event, and some of the water orders could be cutback, there may be an opportunity to capture some of the excess water and convey it off-stream. However, he added that this scenario would have to be discussed and designed among the water users and Reclamation. Mr. Harris stated that overall, Reclamation does a good job managing the releases down through the Lower Basin facilities and making deliveries to all the users in the U.S. as well as the treaty deliveries to Mexico. He added that these types of precipitation events occur periodically and are more anomalous than not. Mr. Harris reported that over that last 20 years, excess flows to Mexico were relatively high on a routine basis each year, sometimes more than 100,000 or more a year. Mr. Harris added that Reclamation has done a great

job tightening up the system and working with U.S. water users to reduce "Water Ordered but Not Delivered" (WOND), which is reported in the annual Accounting Decree Report.

Responding to a question from Board member Mr. Peterson regarding the regulatory storage in Havasu, Mr. Harris reported that storage in Lake Havasu stays static because it contains water diverted MWD's Colorado River aqueduct and water moving down through the system to Imperial Dam and down to Morelos dam. He added that there is very little freeboard in the Lake Havasu system to capture additional water, noting a similar capacity issue with Lake Mohave. He reported that the contents in both reservoirs do not fluctuate often and remain at a constant elevation month by month. However, Mr. Harris added that there may be an opportunity for a small amount of storage within the Lake Havasu system.

Chairman Nelson reiterated that Southern California received significant rainstorms in February, noting that Thermal received 178% of normal rainfall this year. Mr. Zimmerman added that Reclamation makes releases from Havasu to supply the Yuma area, Imperial Irrigation District, Coachella Valley Water District, and deliveries to Mexico. He stated that in large rainstorms water orders have already been released and are already in the river system. Mr. Harris added that Reclamation also works closely with Western Area Power Administration (WAPA) to put together 24-Hour generation schedules at Davis and Parker Dam regarding contract rate of delivery that they have with customers in WAPA's service area. Mr. Harris thanked everyone for their comments regarding this issue and stated that these topics comes up periodically with Reclamation about how they can continue to fine tune and improve operating efficiencies and conservation of water supplies as they are released from Hoover Dam.

Mr. Fisher remarked that Reclamation's work to maintain Senator Wash and State funding for the construction of Drop 2, have saved an immense amount of water annually. He noted that ten years ago, Mexico received in excess 100,000 AF to 150,000 AF in some years.

State and Local Report

Ms. Jones, representing the California Department of Water Resources (DWR), reported that precipitation conditions throughout California have been much below normal with exception to the Southeastern California desert region. She noted that region benefited from two late spring storms. She added that the northern part of the State is significantly drier than average and in May, the remaining snowpack melted due to increasing temperatures. Ms. Jones reported that wildfire season has already started in Northern California, now that precipitation conditions are drying up and temperatures are increasing.

Ms. Jones reported that the White House Office of Science and Technology Policy has announced that their research funding priority for Fiscal Year 2021 will focus on Earth System Predictability, such as the predictability of rainfall. She noted that last week, the National Academy

of Sciences held a large workshop on this subject. She added that they have been collecting input on this subject through a Request for Information (RFI) to the science community. The National Academy of Sciences will be using the information they gather to inform their research budget for the next federal fiscal year. Ms. Jones added that we should all encourage and support their efforts to better precipitation predictions and manage the system.

Mr. Peterson, representing the Metropolitan Water District of Southern California (MWD), reported that the State Water Project (SWP) increased its allocation to 20% this month, up from its previous 15% allocation. He stated that the Colorado River Aqueduct will be operated at a seven-pump flow on the river and will remain that way throughout the year. Responding to a question from Mr. Harris regarding the decline in water deliveries and sales, Mr. Peterson reported that sales have declined a bit and they are predicting 1.65 MAF of water sales this year. He added that the decline of sales in February, March and April are due to above average precipitation. Mr. Peterson added that sewage in residential communities has increased significantly because more people are staying home.

Mr. Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), reported that to date, precipitation conditions in the Eastern Sierra were below average, but added that they were able to get a decent amount of water out of the LA aqueduct system.

Special Presentation: Status Report on MWD's Update to its Integrated Resource Plan, Mr. Demetri Polyzos

Mr. Demetri Polyzos provided an update on MWD's Update to its Integrated Resource Plan (IRP). Mr. Polyzos began his presentation providing an overview of MWD's service area and its mission to providing reliable, high quality water in an environmentally and economically responsible way. Mr. Polyzos explained that at the turn of the century, the city of Los Angeles identified the need to augment local supplies with imported supplies to satisfy the needs of the growing city. He stated Metropolitan was formed in the 1920s with the objective to secure water rights and build the Colorado River Aqueduct. In the 1960s, MWD contracted with the State for the newly constructed California Aqueduct. Mr. Polyzos reported that from 1987 to 1992, California experienced an unprecedented drought that made it clear to MWD that they could not rely solely on imported water supplies to meet present and future needs. Mr. Polyzos stated that at this moment, MWD became more than a water importer, but the planner for the region's water supply reliability, leading to the development of the Integrated Water Resources Plan (IRP).

Mr. Polyzos explained that the IRP is a long-term strategy that adapts to changing conditions and focuses on diversifying its resource portfolio. During the last IRP, in 2015, MWD set a goal to manage Colorado River supplies to protect and maintain base water supply while also being able to develop the capacity to fill the Colorado River Aqueduct during dry years. He stated

that the 2015 IRP set a target to provide a minimum supply of 900,000 AF, which is about 75% of the water MWD diverted prior to 2003.

Mr. Polyzos stated that the IRPs also consider local resources and partnerships with its member agencies in supporting local resource projects such as recycling, groundwater, and storm water capture. MWD has supported over 112 local projects, providing nearly $680 million in incentives, and developing nearly 400 MAF of water to date, reducing the need to import additional supplies. The IRP also examines water use efficiency projects and supports these projects through rebates, incentives, and outreach. Mr. Polyzos noted that because of water efficiency projects, MWD's service area has been able to grow while keeping demand relatively flat. Mr. Polyzos noted that per capita water use in MWD's service area has also declined more than what was predicted in the 2015 IRP and more than mandated by former Governor Brown's twenty-five percent cutback in 2015 during the last drought.

Mr. Polyzos reported that the IRPs also led to investments in storage, increasing the storage capacity of its system by thirteen-fold since the 1980. MWD has more water in storage now than at any time in history. In 2019, MWD ended the year with roughly 3.1 MAF of dry year storage, on top of its 720,000 AF of emergency storage. Mr. Polyzos noted that the water is stored in various locations from Hoover Dam, to underground with their partners in San Joaquin Valley, to regional reservoirs in Riverside County. He added that MWD has been able to store significant amounts of water in Hoover Dam and in 2019, it stored roughly 370,000 AF and projects to store about 130,000 AF in 2020.

Mr. Polyzos reported that the IRP sets a planning horizon for twenty-five years and is updated every five years. He explained that the IRP has helped the region face and meet the challenges of the last twenty-five years that included cutbacks on the Colorado River in 2003, State Water Project restrictions in 2008 and 2009, droughts in 2014 and 2015, as well as economic downturns.

Mr. Polyzos explained that past IRPs took a deterministic approach, essentially generating a single "best path" for forecasting supplies and demands, but MWD intends to use a scenario planning approach for the 2020 IRP, which will explore multiple, plausible futures. He stated that the first step of this approach is identifying drivers of change, which are uncertainties that can shape the future. Next, those drivers will be used to construct scenarios. In the third step, MWD will figure out what action will be needed to create a reliable water supply in each of those futures. The final step is to create an adaptive management strategy. He explained that adjustments can be made to the plan and appropriate actions taken. He stated that for the past several months, the IRP team has been working with the MWD Board, member agencies and stakeholders in various brain storming activities and discussions to identify drivers of change. He explained that a driver is a factor that has a big impact on those aspects of the systems that matter to an individual or organization, which for MWD, is the water supply-demand balance and water supply reliability.

He added to identify a driver it must answer yes to the following questions: (i) Is it impactful to the balance of supply and demand; (ii) Is it impactful to institutional sustainability and integrity; and (iii) Is it largely outside of MWD's control. He stated that an example of a driver related to the Colorado River is cooperation among Colorado River agencies, explaining that with the 2007 Interim Guidelines set to expire in 2026, the management of future Colorado River conditions are uncertain for all and can have a significant impact to water supply. He added that finding replacement water, should MWD lose supply, could be costly and although MWD can work to negotiate under the best intentions, the Colorado River agencies all have different needs and face unique challenges. It is not certain what the outcome will be, and it is largely outside of MWD's control. Mr. Polyzos concluded his presentation by presenting a few more examples of drivers that MWD is considering during its IRP process. Mr. Polyzos stated that the process of identifying drivers should be wrapping up in the next few weeks.

Chairman Nelson asked for more clarity regarding MWD's ICS puts and its SWP allocation. Mr. Polyzos confirmed that MWD plans to put 130,000 AF in its Lake Mead ICS account and anticipates that figure may change depending on how water use goes this year. He added that the SWP allocation is 20%, which is roughly 395,000 AF. Mr. Harris inquired about MWD's timeline to complete the IRP. Mr. Polyzos responded that MWD does not have a set end date and that the IRP process it will be iterative and will include both technical analysis and policy discussion with MWD's Board and member agencies. He added that they want to provide enough time for a feedback loop but anticipated that the process will be completed by next year.

Mr. Pettijohn asked for more clarity about the supply-demand gaps that were identified in the 2015 IRP. Mr. Polyzos responded that MWD is currently in the process of collecting data and performing a retrospective of 2015 in order to clarify the supply-demand gap, which they plan to report on in the coming weeks for the IRP committee. Mr. Pettijohn noted it will be important for the Colorado River Board to understand what the gap is and how much of that gap MWD plans on filling with Colorado River water. Mr. Polyzos concurred and noted that the gap identified in 2015 was based on assumptions that assumed one scenario for the future. He noted that during this next round of IRP, there will be several potential futures that will have very different supply-demand gaps associated with each, with some greater than the gap identified in 2015, and some may be lower.

Responding to a question from Mr. Robert Cheng, from Coachella Valley Water District asking for more clarity about the work product that would be developed after the drivers were identified, Mr. Polyzos responded that the drivers will help build or construct the scenarios. He stated that feedback from MWD's Board and member agencies would be used to evaluate the actions and policies that will be needed to satisfy the supply-demand gap and reliability goals. He explained that each plausible future will have different needs and different associated actions, as well as an assessment of the cost to achieve reliability in each of the plausible futures. There will be some futures that will not be costly, and some that will be very costly.

STATUS OF COLORADO RIVER BASIN PROGRAMS

Status of Minute No. 323 Implementation

Mr. Harris reported that the Minute Oversight Group met via webinar on June 3-4 and received reports from each of the other Minute groups. The group also received a report on current hydrology and Mexico's plans for increasing the volume of conserved water supplies in Mexico's Water Reserve in Lake Mead. Mr. Harris also noted that Roberto Salmon, who had served as Mexican CILA Commissioner for eleven years, was asked to step down by the Mexican federal government. Mr. Harris noted that the dedication and collaborative spirit that Mr. Salmon brought to the position were instrumental to the passage of recent Minutes, including 317, 318, 319, and 323. Board Member Fisher remarked that Mr. Salmon was a visionary whose focus on collaboration made him a great partner on the river.

Mr. Harris reported that the efforts of the Projects Work Group, including the completion of the final Minute No. 319 projects, had been affected by the COVID-19 pandemic. CILA, Conagua, and District No. 14 are working to identify potential water conservation and management projects under Minute No. 323.

Mr. Harris reported that the Desalination Work Group had released the draft feasibility assessment for potential desalination opportunities on the Sonoran Gulf of California Coast. The Desalination Work Group will now be turning its attention toward working with the Projects Work Group to evaluate desalination opportunities along the Sonoran and Pacific coasts of Baja. Ultimately, the Minute Oversight Group will evaluate these potential water supply augmentation projects and determine whether they should be pursued.

Mr. Harris reported that the Environmental Work Group had also been impacted by the COVID-19 pandemic, which presents challenges for creating, maintaining, and monitoring habitat restoration projects in the Colorado River Delta. NGO water acquired through the Delta Trust continues to support habitat areas in the Delta, but the Environmental Work Group expressed concern that no federal water has yet been identified or made available for environmental purposes.

Mr. Harris noted that the Salinity Work Group reported that the real-time salinity monitoring program recently put in place below Imperial Dam is working well and allowing Mexican water users to make on-the-spot decisions regarding water delivery points and blending options.

Finally, Mr. Harris noted that Mexico is completing contracts to dredge the forebay of the Sanchez Mejorada Canal at the Southerly International Boundary, which will allow for increased volumes of water to be delivered there in the future. Additionally, Mexico plans to increase its

storage in Lake Mead by approximately 40,000 AF in 2020, with an overall goal of reaching 200,000 AF of Lake Mead storage.

Status of the Salinity Control Program

Mr. Juricich updated the Board on the status of different activities of the Salinity Control Program. The Paradox Valley Unit (PVU) EIS is currently under confidential review by the cooperating agencies before the draft of the Final EIS becomes available for public review. The cooperating agencies requested Reclamation for a couple of extensions of the review period to end on June 22nd. With this extension, the final EIS would likely be published for public review in August and the Record of Decision would come out closer to October.

Mr. Juricich reported that the Advisory Council, Forum, and Work Group met at the beginning of June via webinars with technical assistance from Board staff Mr. Brian Alvarez and Ms. Sarai Jimenz. During the meeting, the Forum approved the draft 2020 Triennial Review, which sets the salinity standards every three years per the Clean Water Act for below Hoover, below Parker and at Imperial Dam. The draft review will go to the Basin States regulatory agencies for public comments before coming back to the Forum for its final approval. The standards will ultimately be adopted by the Basin States in their regulatory programs.

Mr. Juricich reported that the Forum's finance subcommittee has renewed its efforts to look at the Lower Colorado River Basin Development Fund issue. Currently due to lower hydropower revenues from Hoover, Parker and Davis Dams in the Lower Basin, the forecasted revenues for the Salinity Control Program have not kept up with what the expected Lower Basin cost-share would be. The finance subcommittee is looking at potential options for solving this concern.

Mr. Juricich reported that the Advisory Council recommended approval of two new research projects by U.S. Geological Survey. The first one is looking at long-term salinity trends in the Lower Basin tributaries. The second study is looking at the impact of high intensity storm events on salinity transport in both Upper and Lower Basins of the Colorado River.

On the Paradox Valley Unit (PVU), Mr. Juricich reported that Reclamation restarted the injection well on April 21st but paused the trial injection a couple of weeks ago. Reclamation is doing an independent review of the protocols they currently have in place on seismic activity and well core pressure. It is expected that after this quick review the pilot test would resume at about two-thirds of thirty-two percent of the injection rate before the shutdown, which would be equivalent to 65,000 tons of salt per year. In response to Board member Hanks' question at the previous board meeting, Mr. Juricich reported that Reclamation had previously injected the brine at one hundred percent concentration but believes increasing the concentration would cause problems with the well and the associated transport infrastructure.

Status of Minute 242 Salinity Differential

Mr. Juricich provided an update on the Minute 242 salinity differential. Minute 242, approved in August of 1973, requires the water delivered at Morelos Dam has a salinity of no more than 145 parts per million (ppm) above the water arriving at Imperial Dam. During the Salinity Control Forum's Work Group meeting, Reclamation reported that the water delivered at Morelos Dam is anticipated to be 149 ppm, although Mexico's equivalent calculation came to be 140 ppm, which is below the exceedance criteria. Both Reclamation and IBWC are looking into this issue. Mr. Juricich reported that the cause of exceedance may be due to improved water quality arriving at Imperial Dam. There is also a concern there may be additional salt contributions in the Yuma Area that may be related to the salinity spikes from side inflows from the same area. In response to Chairman Nelson's question, Mr. Juricich said the salinity from the shutdown of the canal to the Cienega de Santa Clara did not contribute to the exceedance at Morelos Dam. Mr. Harris added that the exceedance is most likely due to the delicate balance Reclamation undertakes each year in blending saline drainage from the Wellton-Mohawk Irrigation and Drainage District in the lower Gila as well as from the Yuma Area proper. That saline drainage water is blended with better quality mainstream water before being delivered at Morelos Dam just below the NIB. It is not entirely clear whether the exceedance was solely related to blending or if there are some other complicating factors. Mr. Harris reported that Reclamation is going to initiate some work looking into what is going on in this area, which might also help illuminate the spikes in salinity seen below Parker Dam, especially in the January to March timeframe.

In response to a question from a board member, Mr. Harris stated that the remaining saline drainage goes into the bypass drain and into the Cienega, which is why the discharge to the Cienega is typically 125,000 to 140,000 acre-feet per year. Mr. Harris added that one of the big challenges for Arizona, California, and Reclamation is to try and replace the bypass water through either augmenting with new sources of supply or conserving and reducing the amount of saline drainage. This challenge is part of the rationale for replumbing the Minute 242 well field via the Yuma-Mesa conduit and being able to route pumped water from the well field to the NIB to help augment treaty deliveries. Reclamation is looking at this challenge with a toolbox approach to try and reduce the amount of saline drainage bypassed to the Cienega.

Status of the Glen Canyon Dam Adaptive Management Program

Board Staff Ms. Neuwerth reported that the Glen Canyon Dam Adaptive Management Work Group (AMWG) met via webinar on May 20th. The group focused on the draft Triennial Work Plan and Budget for FY21-23, which lays out the monitoring, management, and administrative work done by the program over a three-year period. Ms. Neuwerth reported that program funding was in a state of flux, and the source of funding for program implementation in 2021 and out remains uncertain.

Ms. Neuwerth also reported that macroinvertebrate production flows, or "bug flows" are being conducted at Glen Canyon. These low, steady weekend flows started on May 1st and will continue through August 31st in an effort to boost production of aquatic insects critical for the food web. 2020 will be the third year these flows are conducted, with previous years yielding mixed results. Ms. Neuwerth noted that this flow experiment is relatively low impact and has no effect on monthly or weekly release volumes from Glen Canyon Dam.

Finally, Ms. Neuwerth reported that the Technical Work Group for would meet via webinar on June 16-17 to reach a recommendation on the Triennial Work Plan and Budget for FY21-23.

ANNOUNCEMENTS

Lake Powell Pipeline

Mr. Harris reported that the State of Utah and the Bureau of Reclamation announced that they have published a draft EIS for the proposed Lake Powell Pipeline Project. Mr. Harris encouraged the agencies to have their staff begin to look at the draft EIS. Mr. Harris noted that there is a ninety-day comment period, and that comments are due in early September. Finally, Mr. Harris reported that a final EIS could be issued as early as December 2020 with a record of decision in early 2021.

Washington, D.C. Updates

Mr. Harris reported that Congress began to work on the 2021 appropriations process, including renewal of the Water Resources Development Act; fully fund the Land and Water Conservation Fund; fund deferred maintenance projects across federal lands; and a broad infrastructure bill for transportation. Mr. Harris also reported that Congress is expected to pass a stop-gap spending resolution to keep the government funded past the end of the fiscal-year on September 30th.

Mr. Harris reported that Reclamation announced the availability of funds for communities to apply for drought funding grants. Mr. Harris noted that these grants range between $300,000 and $750,000, and that applications are due by July 8th.

Mr. Harris reported that Mr. Chris Beardsley was named Director, Policy and Programs at Reclamation. Mr. Harris also reported that Dr. David Raff was named Reclamation's Chief Engineer on May 28th. Finally, Mr. Harris reported that Reclamation's UC Regional Director, Brent Esplin, had accepted the position of Regional Director for the Missouri Basin and Arkansas-Rio Grande Texas Gulf Regions.

Next Scheduled Board Meeting

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be held on July 15th 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 11:58 a.m.

8/3/2020

LOWER COLORADO WATER SUPPLY REPORT

River Operations

Bureau of Reclamation

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

CURRENT STORAGE	PERCENT FULL	Content 1000 ac-ft (kaf)	Elev. (Feet above mean sea level)	7-Day Release (CFS)
LAKE POWELL	51%	12,332	3,606.00	12,500
* LAKE MEAD	40%	10,393	1,084.57	14,700
LAKE MOHAVE	94%	1,694	642.83	13,700
LAKE HAVASU	93%	575	447.72	10,600
TOTAL SYSTEM CONTENTS **	51%	30,575		
As of 8/2/2020				
SYSTEM CONTENT LAST YEAR	55%	32,770		

* 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	89%	2,029		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam	14%	136	1,124.23	13

Forecasted Water Use for Calendar Year 2020 (as of 8/3/2020) (values in kaf)

NEVADA	259	
SOUTHERN NEVADA WATER SYSTEM		225
OTHERS		34
CALIFORNIA	4,140	
METROPOLITAN WATER DISTRICT OF CALIFORNIA		844
IRRIGATION DISTRICTS		3,281
OTHERS		15
ARIZONA	2,456	
CENTRAL ARIZONA PROJECT		1,408
OTHERS		1,048
TOTAL LOWER BASIN USE		6,855
DELIVERY TO MEXICO - 2020 (Mexico Scheduled Delivery + Preliminary Yearly Excess[1])		1,558

OTHER SIGNIFICANT INFORMATION

UNREGULATED INFLOW INTO LAKE POWELL - AUGUST FINAL FORECAST DATED 8/3/2020

	MILLION ACRE-FEET	% of Normal
FORECASTED WATER YEAR 2020	6.329	58%
PRELIMINARY OBSERVED APRIL-JULY 2020	3.732	52%
JULY OBSERVED INFLOW	0.263	24%
AUGUST INFLOW FORECAST	0.265	53%

	Upper Colorado Basin	Salt/Verde Basin
WATER YEAR 2020 PRECIP TO DATE	83% (22.6")	94% (21.6")
CURRENT BASIN SNOWPACK	NA% (NA)	NA% (NA)

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

Aug 03, 2020 07:26:27 AM

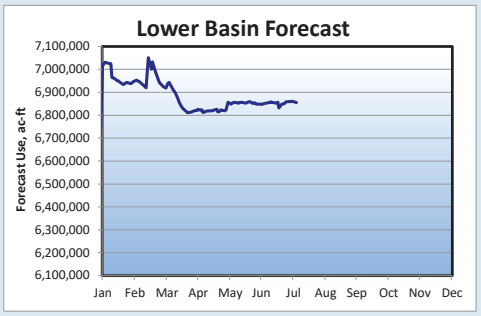
BUREAU OF RECLAMATION

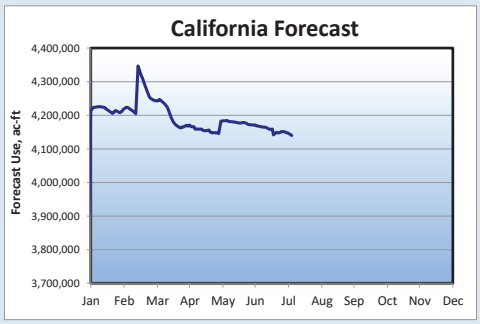
INTERIOR REGION 8: LOWER COLORADO BASIN
CY 2020

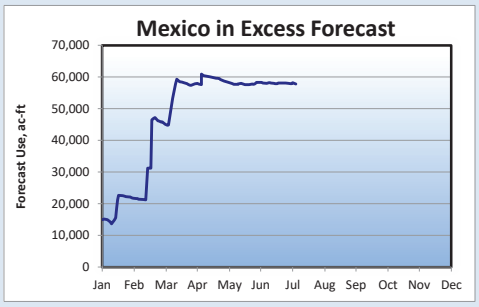
ARIZONA, CALIFORNIA, NEVADA, MEXICO
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS [1]
(ACRE-FEET)

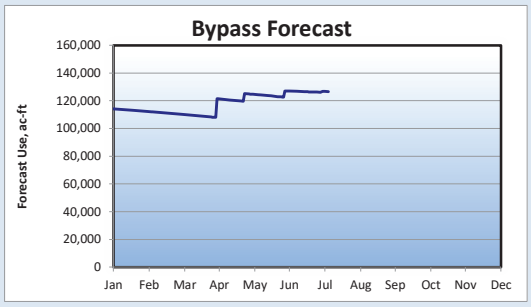
WATER USE SUMMARY	Use To Date CY 2020	Forecast Use CY 2020	Approved Use [2] CY 2020	Excess to Approval CY 2020
ARIZONA	1,421,835	2,456,432	2,419,942	**36,490**
CALIFORNIA	2,395,410	4,139,706	4,139,706	0
NEVADA	150,993	258,811	258,811	0
STATES TOTAL [3]	3,968,238	6,854,949	6,818,459	**36,490**
ACCOUNTABLE DELIVERIES TO MEXICO	1,050,894	1,557,795	1,500,000	**57,795**
TO MEXICO IN SATISFACTION OF TREATY (including downward delivery) [4]	1,002,465	1,500,000		
TO MEXICO IN EXCESS OF TREATY [5]	48,429	57,795		
WATER BYPASSED PURSUANT TO IBWC MINUTE NO. 242 [6]	80,004	126,580		
TOTAL LOWER BASIN & MEXICO	5,099,136	8,539,324		

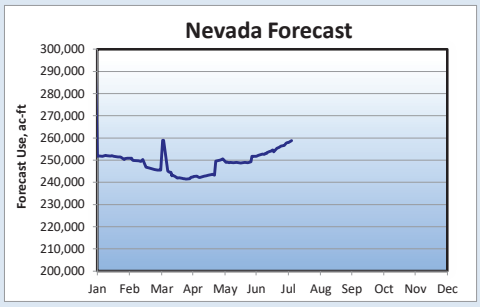
[1] Incorporates 80 daily reporting stations which may be revised after provisional data reports are distributed by the USGS. Use to date has been updated through May for users reporting monthly, and is estimated based on schedule for users reporting annually.
[2] These values reflect adjusted apportionments. 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 downward adjustment(s) to Mexico's annual delivery schedule for the creation of Mexico's Recoverable Water Savings and/or Mexico's Water Reserve.
[5] Mexico excess forecast is based on actual-to-date and the 5-year average for the period 2014-2018 for remainder of the year.
[6] Bypass forecast is based on actual-to-date and the average for the period 1990-2018 for the remainder of the year.

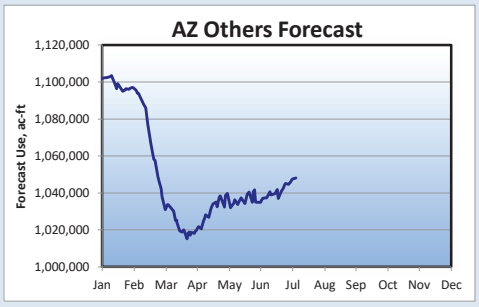


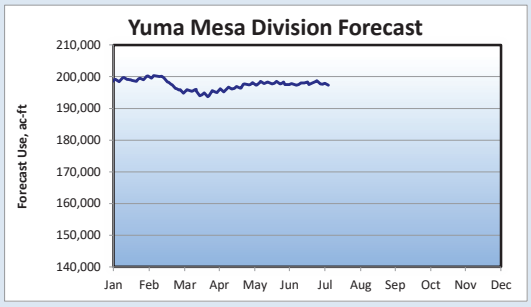


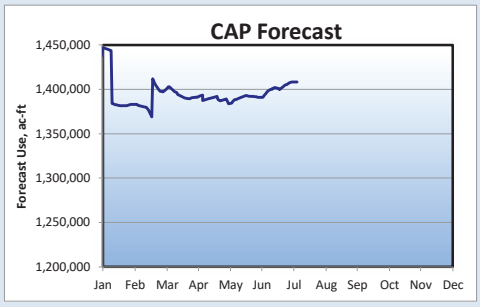


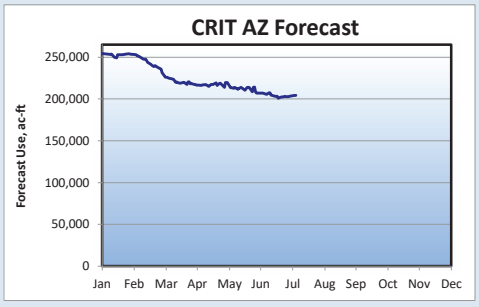


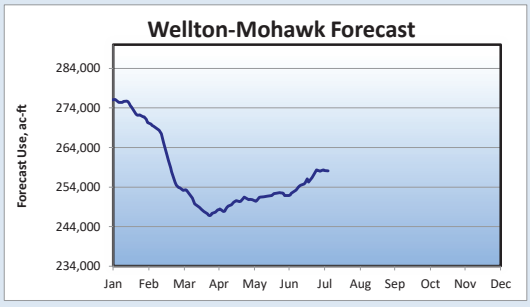


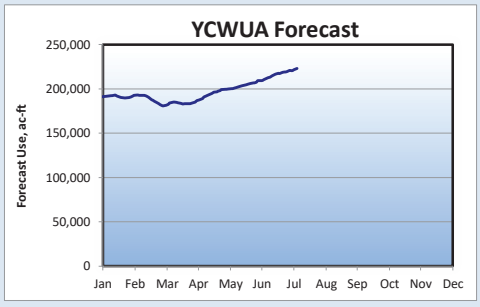












Graph notes: January forecast use is scheduled use in accordance with the Annual Operating Plan's state entitlements, available unused entitlements, and over-run paybacks. A downward sloping line indicates use at a lower rate than scheduled, upward sloping is above schedule, and a flat line indicates a use rate equal to schedule. Lower priority users such as CAP, MWD, and Robert 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.

Aug 03, 2020 07:26:27 AM

— BUREAU OF —
RECLAMATION

INTERIOR REGION 8: LOWER COLORADO BASIN
CY 2020

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

ARIZONA WATER USERS
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS
Arizona Schedules and Approvals
Historic Use Records (Water Accounting Reports)

WATER USER	Use To Date CY 2020	Forecast Use CY 2020	Estimated Use CY 2020	Excess to Estimated Use CY 2020	Diversion To Date CY 2020	Forecast Diversion CY 2020	Approved Diversion CY 2020	Excess to Approved Diversion CY 2020
ARIZONA PUMPERS	9,352	14,074	14,074	---	14,389	21,654	21,654	0
LAKE MEAD NRA, AZ - Diversions from Lake Mead	30	67	67	---	30	67	67	0
LAKE MEAD NRA, AZ - Diversions from Lake Mohave	123	205	205	---	123	205	205	0
DAVIS DAM PROJECT	1	2	2	---	10	15	15	0
BULLHEAD CITY	4,011	7,477	8,122	---	6,309	11,728	12,720	-992
MOHAVE WATER CONSERVATION DISTRICT	436	656	656	---	651	979	979	0
BROOKE WATER LLC	158	294	323	---	236	440	484	-44
MOHAVE VALLEY IDD	9,037	15,840	16,516	---	16,735	29,333	30,585	-1,252
FORT MOJAVE INDIAN RESERVATION, AZ	21,135	34,827	44,550	---	39,139	64,494	82,500	-18,006
GOLDEN SHORES WATER CONSERVATION DISTRICT	185	278	278	---	277	417	417	0
HAVASU NATIONAL WILDLIFE REFUGE	2,245	3,204	3,563	---	18,695	29,936	41,820	-11,884
LAKE HAVASU CITY	4,524	8,399	8,928	---	7,299	13,549	14,400	-851
CENTRAL ARIZONA PROJECT (CAP)	748,226	1,408,356		---	748,226	1,408,356		---
TOWN OF PARKER	238	420	433	---	501	885	916	-31
COLORADO RIVER INDIAN RESERVATION, AZ	133,822	204,225	246,946	---	284,250	464,671	512,102	-47,431
EHRENBURG IMPROVEMENT ASSOCIATION	152	228	228	---	212	319	319	0
CIBOLA VALLEY [1]	8,943	14,039	15,219	---	12,504	19,627	21,270	-1,643
CIBOLA NATIONAL WILDLIFE REFUGE	8,837	14,264	14,264	0	14,253	23,005	23,005	0
IMPERIAL NATIONAL WILDLIFE REFUGE	2,262	3,799	3,799	0	3,648	6,128	6,128	0
BLM PERMITEES (PARKER DAM to IMPERIAL DAM)	502	756	756	0	773	1,163	1,163	0
CHA CHA, LLC	642	1,194	1,365	---	990	1,839	2,100	-261
BEATTIE FARMS	498	789	722	---	765	1,215	1,110	**105**
YUMA PROVING GROUND	293	474	474	---	293	474	474	0
GILA MONSTER FARMS	2,509	3,963	5,257	---	4,358	6,889	9,156	-2,267
WELLTON-MOHAWK IDD	159,298	258,074	278,000	-19,926	226,040	382,058	412,965	-30,907
BLM PERMITEES (BELOW IMPERIAL DAM)	44	66	66	0	68	102	102	0
CITY OF YUMA	8,261	15,062	16,401	-1,339	14,285	25,899	27,500	-1,601
MARINE CORPS AIR STATION YUMA	776	1,324	1,360	---	776	1,324	1,360	-36
UNION PACIFIC RAILROAD	16	28	29	---	28	48	48	0
UNIVERSITY OF ARIZONA	450	813	896	---	450	813	896	-83
YUMA UNION HIGH SCHOOL DISTRICT	76	133	150	---	102	178	200	-22
DESERT LAWN MEMORIAL	13	20	20	---	19	28	28	0
NORTH GILA VALLEY IRRRIGATION DISTRICT	7,211	10,825	12,165	---	26,634	42,186	44,200	-2,014
YUMA IRRIGATION DISTRICT	22,621	37,046	38,701	---	41,194	68,239	71,700	-3,461
YUMA MESA IDD	91,872	149,401	143,893	---	127,101	221,019	239,280	-18,261
UNIT "B" IRRIGATION DISTRICT	11,817	20,135	20,888	---	14,082	25,537	29,400	-3,863
FORT YUMA INDIAN RESERVATION	995	1,497	1,497	---	1,527	2,298	2,298	0
YUMA COUNTY WATER USERS' ASSOCIATION	159,659	222,931	186,507	---	218,619	321,393	282,000	**39,393**
COCOPAH INDIAN RESERVATION	497	1,144	1,651	---	770	1,760	2,530	-770
RECLAMATION-YUMA AREA OFFICE	68	103	103	---	68	103	103	0
RETURN FROM SOUTH GILA WELLS								
TOTAL ARIZONA	1,421,835	2,456,432	2,474,074		1,846,429	3,200,373	3,283,199	
CAP	748,226	1,408,356				1,408,356		
ALL OTHERS	673,609	1,048,076	1,089,074			1,792,017	1,898,199	
YUMA MESA DIVISION, GILA PROJECT	121,704	197,272	171,610	25,662		331,444		

ARIZONA ADJUSTED APPORTIONMENT CALCULATION	
Arizona Basic Apportionment	2,800,000
System Conservation Water - Pilot System Conservation Program [2]	(400)
System Conservation Water - Colorado River Indian Tribes (CRIT) [3]	(50,000)
System Conservation Water - Fort McDowell Yavapai Nation (FMYN) [4]	(10,000)
Creation of Extraordinary Conservation ICS - CRIT (Estimated) [5,7]	(3,736)
Creation of Extraordinary Conservation ICS - MVIDD (Estimated) [6,7]	(6,137)
Arizona DCP Contribution [8]	(192,000)
CAWCD -Voluntary Contribution to Lake Mead (Estimated)	(117,785)
Total State Adjusted Apportionment	2,419,942
Excess to Total State Adjusted Apportionment	36,490
Estimated Allowable Use for CAP	**1,526,141**

[1] Includes the following water users within the Cibola Valley: Cibola Valley IDD, Arizona Game and Fish Commission, GSC Farm, LLC, Red River Land Company, LLC, Western Water, LLC, 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. 19-XX-30-W0658, 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* , 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] CRIT has been approved to create up to 3,736 AF of Extraordinary Conservation (EC) ICS in 2020. The actual amount of EC ICS created by CRIT will be based on final accounting and verification.

[6] MVIDD has been approved to create up to 6,137 AF of EC ICS in 2020. The actual amount of EC ICS created by MVIDD will be based on final accounting and verification.

[7] 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 approximately 153,000 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 (LBOps), the total amount of EC ICS that may be created by the states of Arizona, California, and Nevada in 2020 will be limited to 625,000 AF.

[8] In accordance with Section III.B.1.a of LBOps, 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 through reductions in consumptive use by the Central Arizona Water Conservation District.

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

BUREAU OF RECLAMATION

INTERIOR REGION 8: LOWER COLORADO BASIN
CY 2020

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

CALIFORNIA WATER USERS
FORECAST OF END OF YEAR CONSUMPTIVE USE
FORECAST BASED ON USE TO DATE AND APPROVED ANNUAL WATER ORDERS
California Schedules and Approvals
Historic Use Records (Water Accounting Reports)

WATER USER	Use To Date CY 2020	Forecast Use CY 2020	Estimated Use CY 2020	Excess to Estimated Use CY 2020	Diversion To Date CY 2020	Forecast Diversion CY 2020	Approved Diversion CY 2020	Excess to Approved Diversion CY 2020
CALIFORNIA PUMPERS	1,128	1,697	1,697	---	2,047	3,081	3,081	0
FORT MOJAVE INDIAN RESERVATION, CA	4,512	6,641	8,996	---	8,388	12,344	16,720	-4,376
CITY OF NEEDLES (includes LCWSP use)	637	1,298	1,605	-307	1,175	2,106	2,261	-155
METROPOLITAN WATER DISTRICT	373,021	843,836		---	374,753	846,722		---
COLORADO RIVER INDIAN RESERVATION, CA	2,148	3,233	3,233	---	3,558	5,355	5,355	0
PALO VERDE IRRIGATION DISTRICT	229,454	363,040	419,768	---	479,450	792,547	856,000	-63,453
YUMA PROJECT RESERVATION DIVISION	21,602	38,874	50,582	---	45,061	80,185	96,858	-16,673
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	24,851	41,936	46,058	-4,122
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	20,210	38,249	50,800	-12,551
YUMA ISLAND PUMPERS	1,454	2,188	2,188	---	2,627	3,954	3,954	0
FORT YUMA INDIAN RESERVATION - RANCH 5	458	787	832	---	829	1,422	1,501	-79
IMPERIAL IRRIGATION DISTRICT [1]	1,553,624	2,513,083	2,640,300	-127,217	1,550,798	2,543,457	2,715,352	---
SALTON SEA SALINITY MANAGEMENT	0	0	0	0	0	0	0	---
COACHELLA VALLEY WATER DISTRICT	206,772	364,127	394,000	-29,873	216,560	379,970	406,654	---
OTHER LCWSP CONTRACTORS	427	642	642	---	700	1,054	1,054	0
CITY OF WINTERHAVEN	42	63	63	---	64	97	97	0
CHEMEHUEVI INDIAN RESERVATION	131	197	197	---	7,535	11,340	11,340	0
TOTAL CALIFORNIA	2,395,410	4,139,706			2,693,545	4,683,634	4,980,930	

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)
IID Creation of Additional Conserved Water (Estimated) [4]	(23,421)
MWD Creation of Extraordinary Conservation ICS (Estimated) [5]	(235,149)
Total State Adjusted Apportionment	4,139,706
Excess to Total State Adjusted Apportionment	0

Estimated Allowable Use for MWD **1,078,985**

[1] As shown here, IID's Approved Diversion and Estimated Use values reflect the maximum amount of Colorado River water available to IID in 2020.

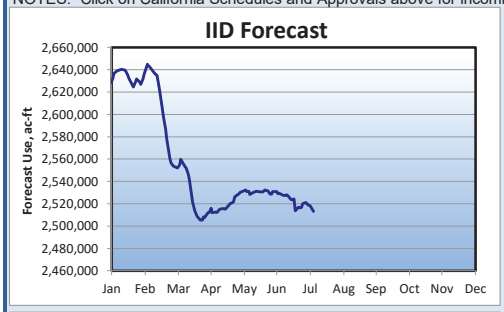
[2] System Consevation Water to be conserved by the City of Needles pursuant to System Conservation Implementation Agreement No. 15-XX-30-W0596, executed under the Pilot System Conservation Program. This water will remain in Lake Mead to benefit system storage.

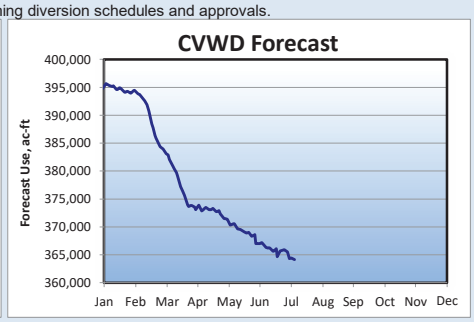
[3] IID has been approved to create up to 62,000 AF of Extraordinary Conservation (EC) ICS in 2020; however, due to limitations set forth in the California ICS Agreement, may only store up to 1,579 AF in its Lake Mead ICS Account. Creation and storage of EC ICS by IID in excess of 1,579 AF will require an executed amendment to the California ICS Agreement, which has not occurred as of the date of this forecast. The actual amount of EC ICS created by IID and stored in its Lake Mead ICS Account will be based on final accounting and verification.

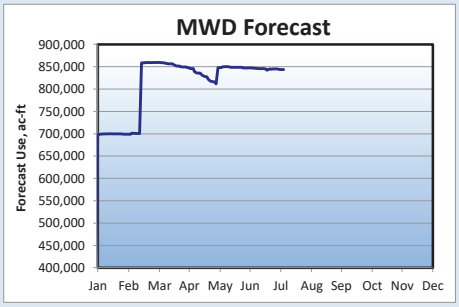
[4] In its CY 2020 water order, IID has indicated that it intends to create up to a total of 25,000 AF of "Additional Conserved Water" for purposes including, but not limited to, the creation of ICS for storage in Lake Mead. As noted above, IID may only use up to 1,579 AF of "Additional Conserved Water" for the creation and storage of EC ICS in its Lake Mead ICS Account. Storage of "Additional Conserved Water" as EC ICS in excess of this amount will require an executed amendment to the California ICS Agreement, which has not occurred as of the date of this forecast. The actual amount of "Additional Conserved Water" created by IID in 2020 will be based on final accounting and verification.

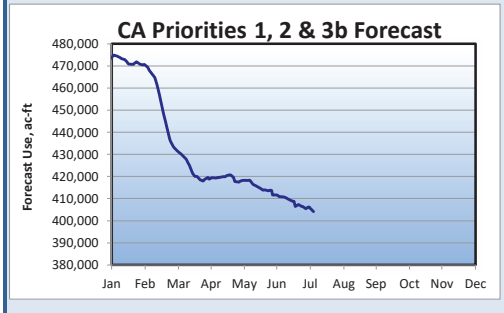
[5] MWD has been approved to create up to 450,000 AF of EC ICS in 2020, less the amount of EC ICS created by IID, and further limited to the amount that, when added to the EC ICS created by the states of Arizona and Nevada, does not exceed 625,000 AF. The actual amount of EC ICS created by MWD will be based on final accounting and verification.

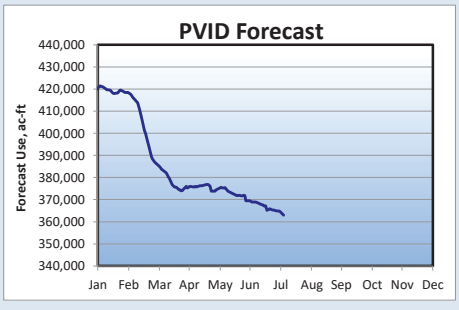
NOTES: Click on California Schedules and Approvals above for incoming diversion schedules and approvals.











Aug 03, 2020 07:26:27 AM

— BUREAU OF —
RECLAMATION

INTERIOR REGION 8: LOWER COLORADO BASIN
CY 2020

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

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

WATER USER	Use To Date CY 2020	Forecast Use CY 2020	Estimated Use CY 2020	Excess to Estimated Use CY 2020	Diversion To Date CY 2020	Forecast Diversion CY 2020	Approved Diversion CY 2020	Excess to Approved Diversion CY 2020
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	263,758	446,593		---	263,758	446,593		---
LAKE MEAD NRA, NV - Diversions from Lake Mead	441	1,057	1,500	---	441	1,057	1,500	-443
LAKE MEAD NRA, NV - Diversions from Lake Mohave	154	349	500	---	154	349	500	-151
BASIC MANAGEMENT INC.	3,352	7,032	8,208	---	3,352	7,032	8,208	-1,176
CITY OF HENDERSON (BMI DELIVERY)	8,740	17,969	15,878	---	8,740	17,969	15,878	**2,091**
NEVADA DEPARTMENT OF WILDLIFE	7	12	12	0	552	1,020	1,000	---
PACIFIC COAST BUILDING PRODUCTS INC.	554	987	928	---	554	987	928	**59**
BOULDER CANYON PROJECT	114	172	172	---	199	300	300	0
BIG BEND WATER DISTRICT	1,692	3,776	4,822	---	3,469	7,650	10,000	-2,350
FORT MOJAVE INDIAN TRIBE	1,344	2,654	4,020	---	2,008	3,963	6,000	-2,037
LAS VEGAS WASH RETURN FLOWS	-129,163	-221,790	-226,075	---				
TOTAL NEVADA	150,993	258,811	253,997	0	283,227	486,920	488,346	-4,007
SOUTHERN NEVADA WATER SYSTEM (SNWS)	134,595	224,803				446,593		
ALL OTHERS	16,398	34,008				40,327		
NEVADA USES ABOVE HOOVER	147,957	252,381				475,307		
NEVADA USES BELOW HOOVER	3,036	6,430				11,613		

Tributary Conservation Intentionally Created Surplus (ICS)

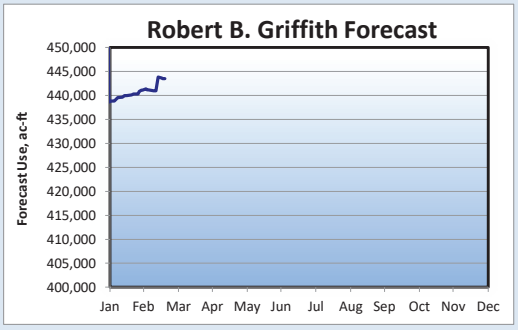
Southern Nevada Water Authority (SNWA) Creation of Tributary Conservation ICS (Approved) [1]	43,000

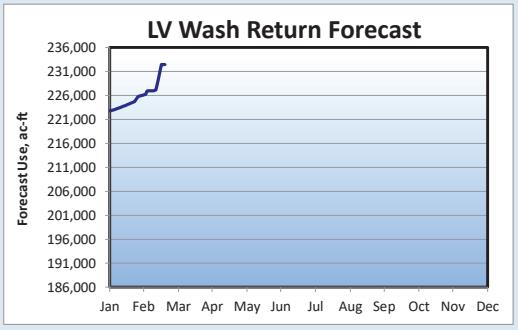
NEVADA ADJUSTED APPORTIONMENT CALCULATION

Nevada Basic Apportionment	300,000
SNWA Creation of Extraordinary Conservation (EC) ICS (Estimated) [2]	(41,189)
Total State Adjusted Apportionment	258,811
Excess to Total State Adjusted Apportionment	0

[1] SNWA has been approved to create up to 43,000 AF of TC ICS in 2020. 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 2020. The actual amount of EC ICS created by SNWA will be based on final accounting and verification.

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

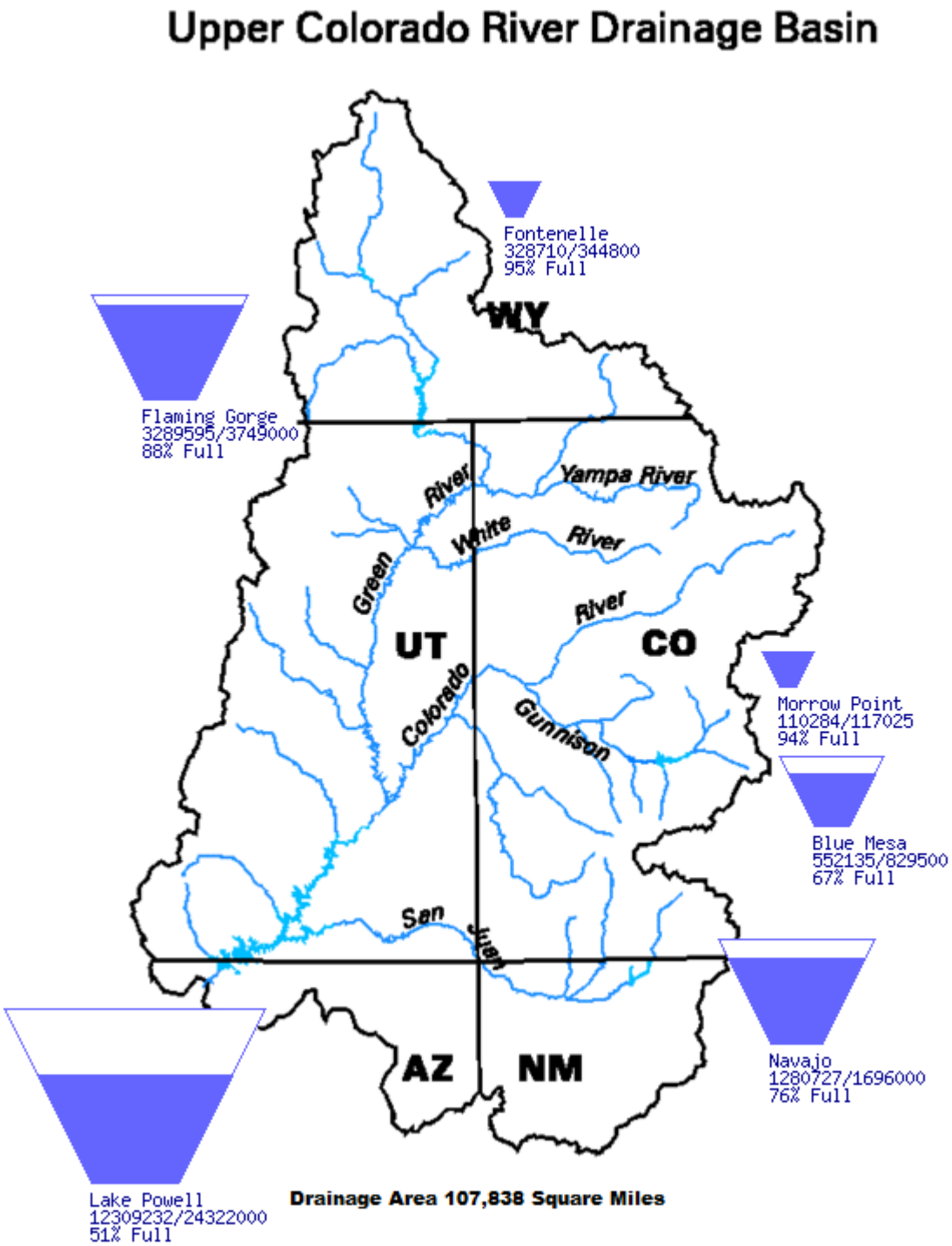




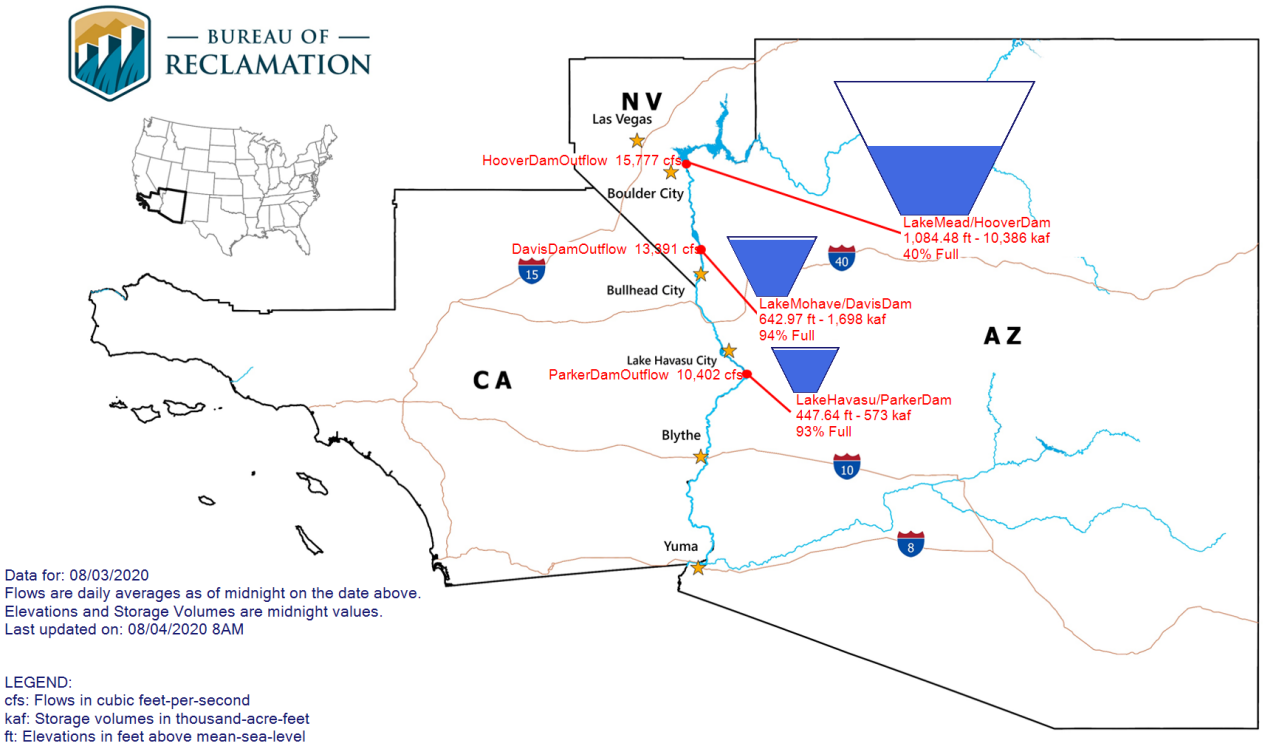
Upper Colorado Region Water Resources Group

River Basin Tea-Cup Diagrams

Data Current as of:
08/03/2020



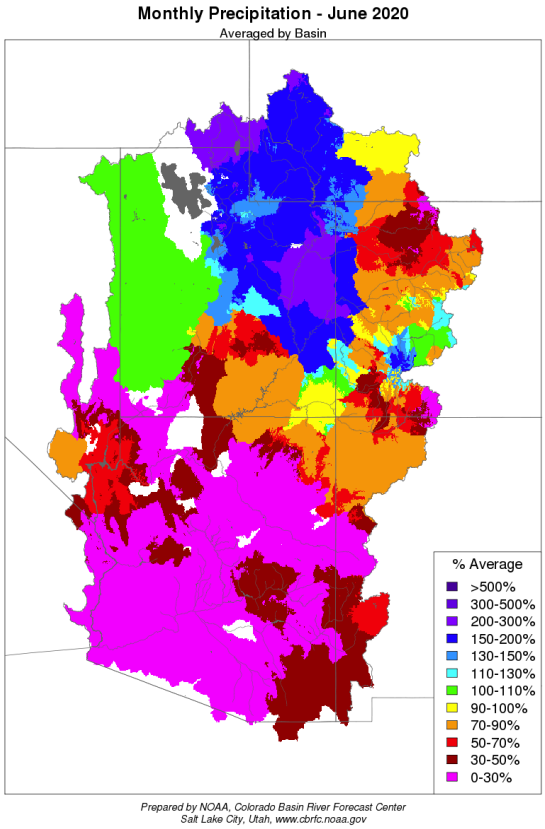
Lower Colorado River Teacup Diagram

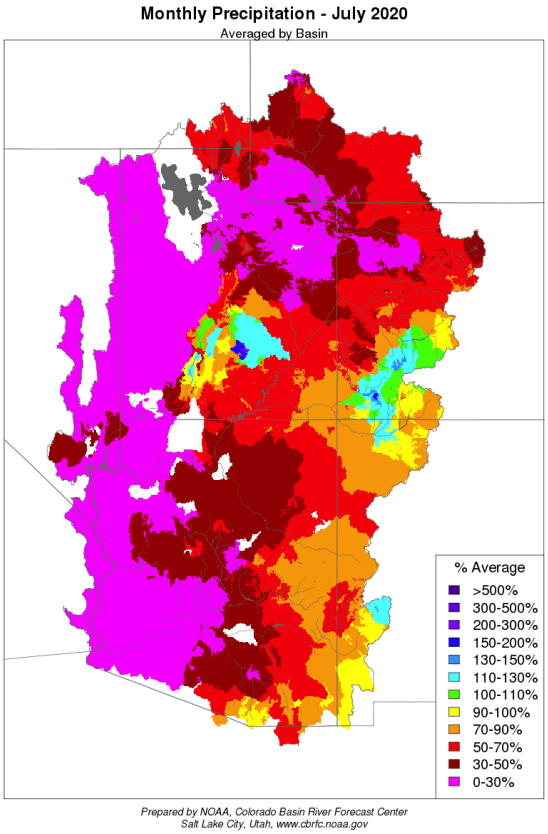


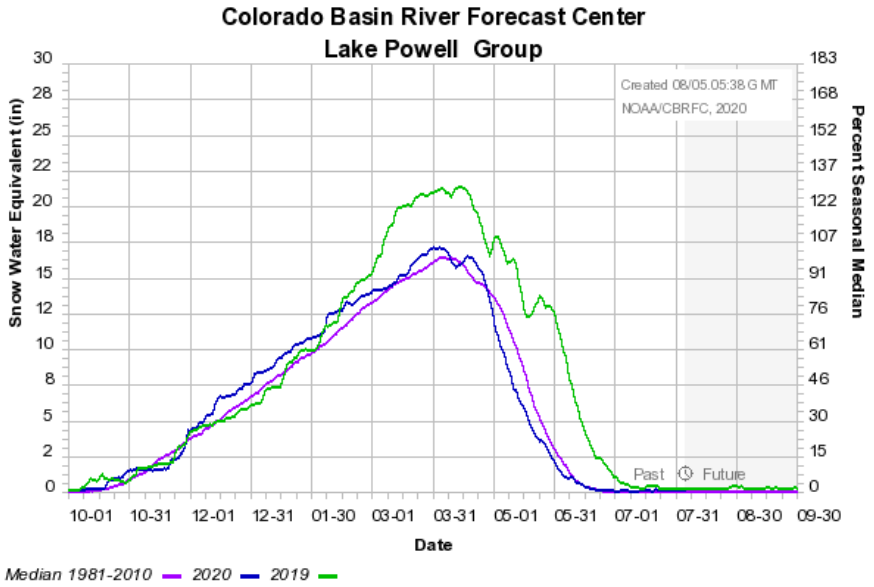
Data for: 08/03/2020
Flows are daily averages as of midnight on the date above.
Elevations and Storage Volumes are midnight values.
Last updated on: 08/04/2020 8AM

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

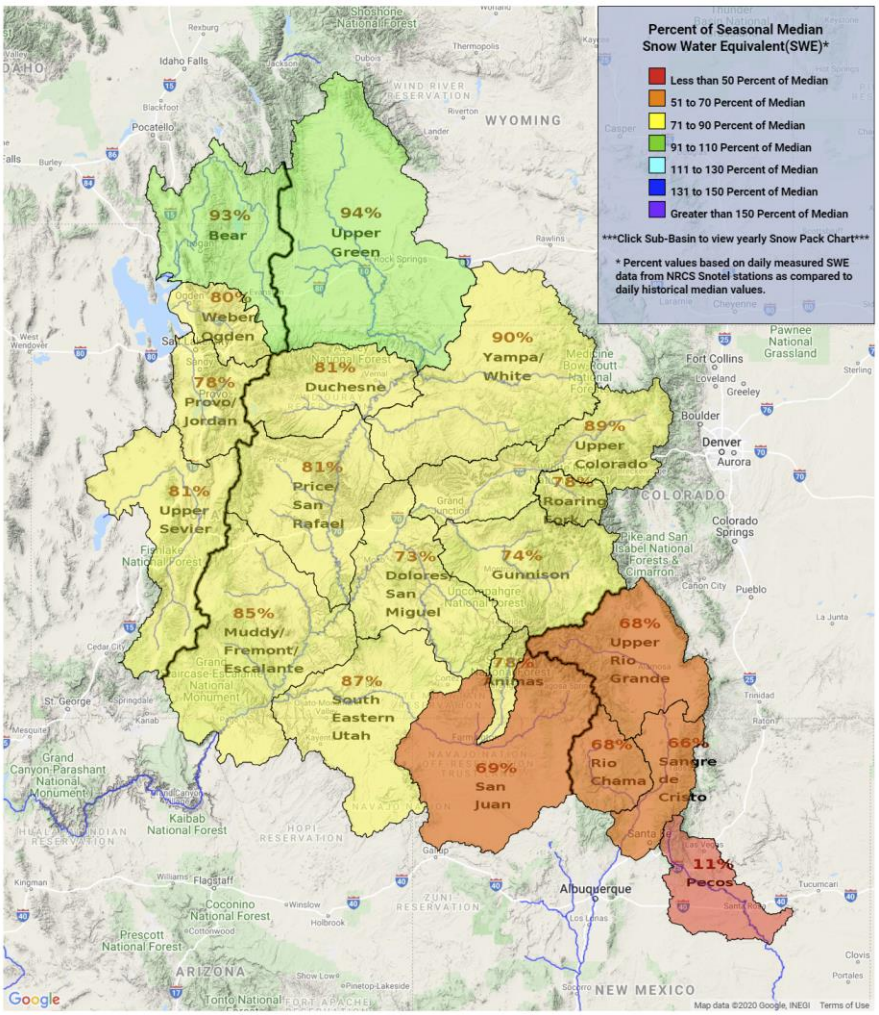
NOAA National Weather Service Monthly Precipitation Map June and July 2020





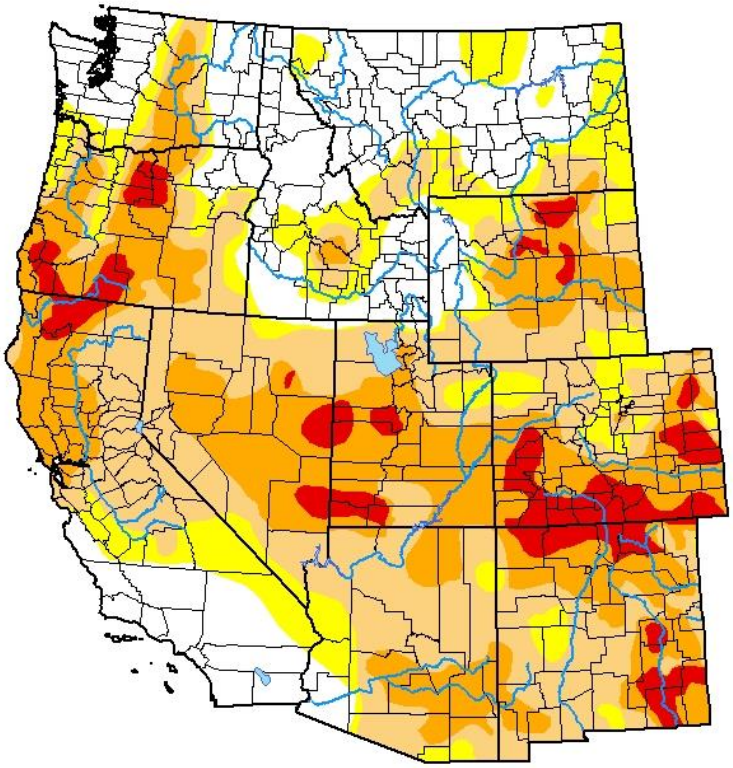


Snow Pack Conditions Map
Upper Colorado Region



USDA United States Drought Monitor Map

U.S. Drought Monitor
West



August 4, 2020
(Released Thursday, Aug. 6, 2020)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	23.29	76.71	62.55	32.65	6.98	0.00
Last Week *07-28-2020*	25.54	74.46	58.59	30.21	6.54	0.00
3 Months Ago *05-05-2020*	44.69	55.31	34.13	13.47	2.06	0.00
Start of Calendar Year *12-31-2019*	59.17	40.83	18.17	7.12	0.00	0.00
Start of Water Year *10-01-2019*	68.40	31.60	16.32	3.16	0.00	0.00
One Year Ago *08-06-2019*	81.34	18.66	6.48	0.77	0.00	0.00

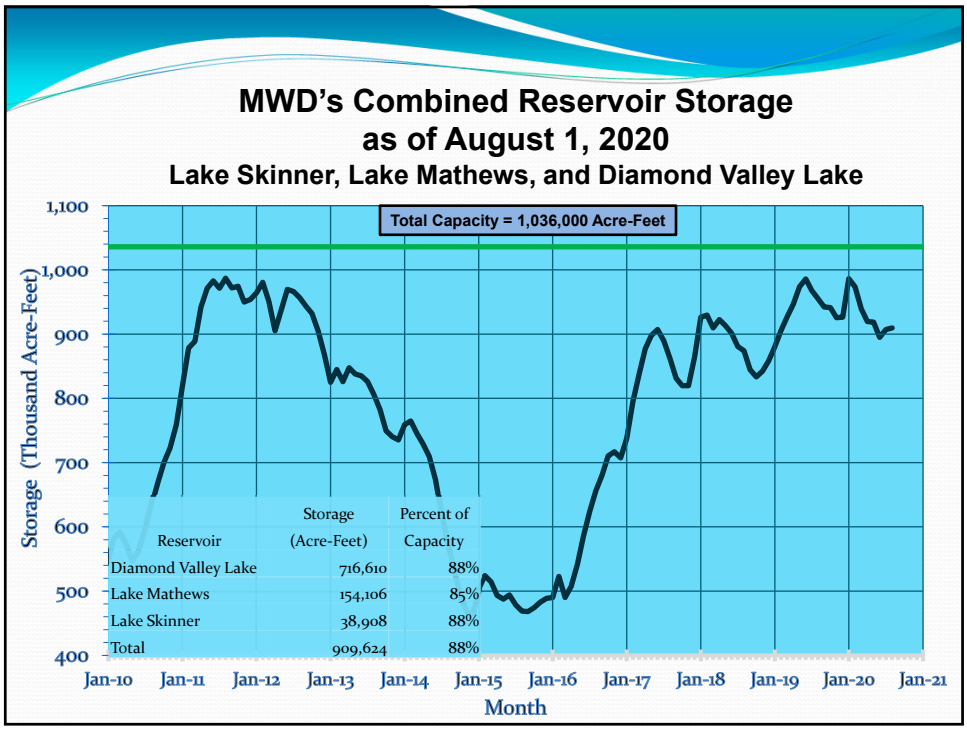
Intensity:

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

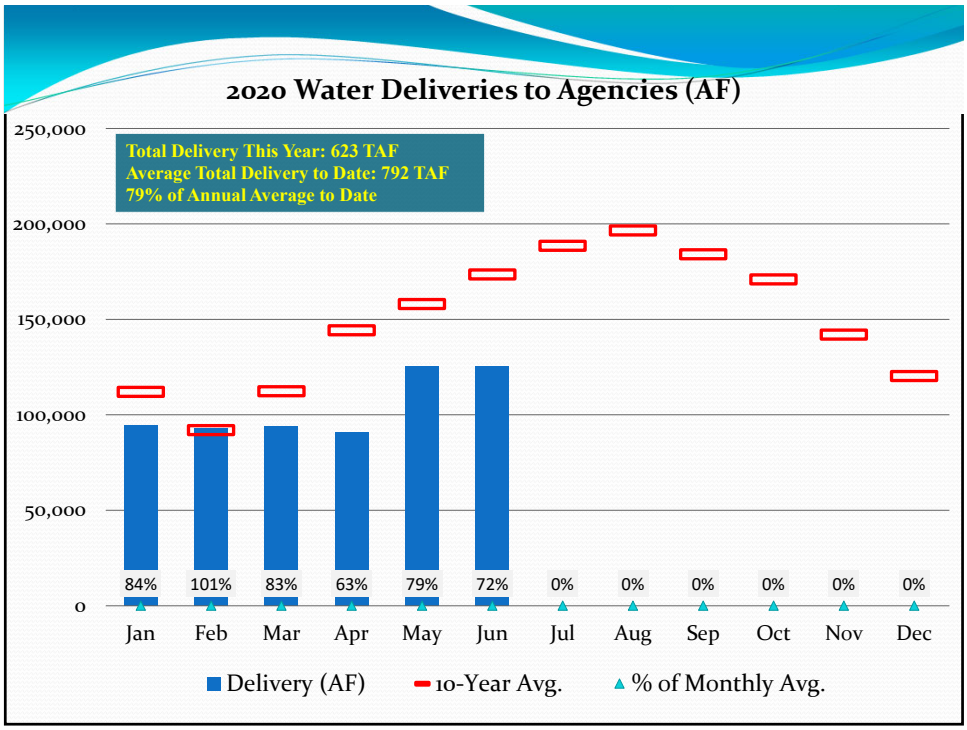
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Brian Fuchs
National Drought Mitigation Center

droughtmonitor.unl.edu

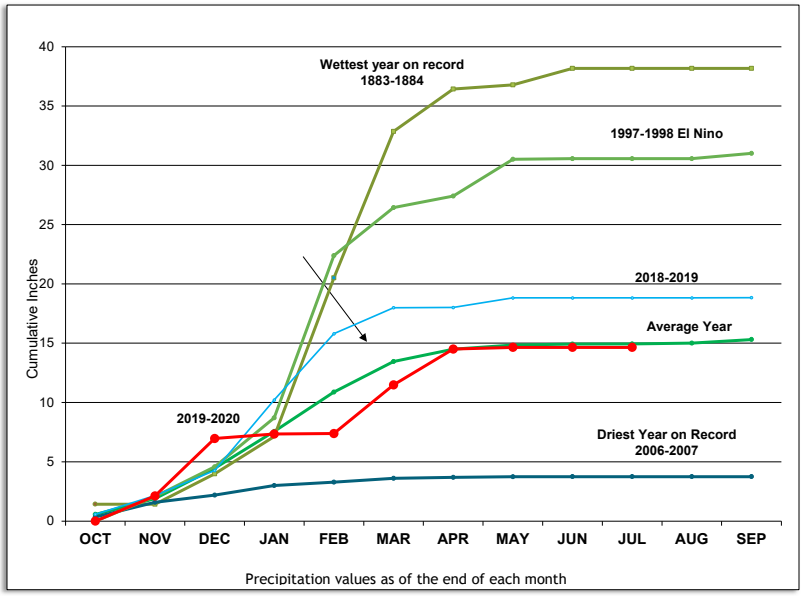

MWD's Combined Reservoir Storage
as of August 1, 2020
Lake Skinner, Lake Mathews, and Diamond Valley Lake
Total Capacity = 1,036,000 Acre-Feet
Storage (Thousand Acre-Feet)
1,100
1,000
900
800
700
600
500
400
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Month
Reservoir | Storage (Acre-Feet) | Percent of Capacity
Diamond Valley Lake | 716,610 | 88%
Lake Mathews | 154,106 | 85%
Lake Skinner | 38,908 | 88%
Total | 909,624 | 88%

1


2020 Water Deliveries to Agencies (AF)
Total Delivery This Year: 623 TAF
Average Total Delivery to Date: 792 TAF
79% of Annual Average to Date
250,000
200,000
150,000
100,000
50,000
0
84%
101%
83%
63%
79%
72%
0%
0%
0%
0%
0%
0%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Delivery (AF)
10-Year Avg.
% of Monthly Avg.

2

Los Angeles Civic Center Precipitation



1

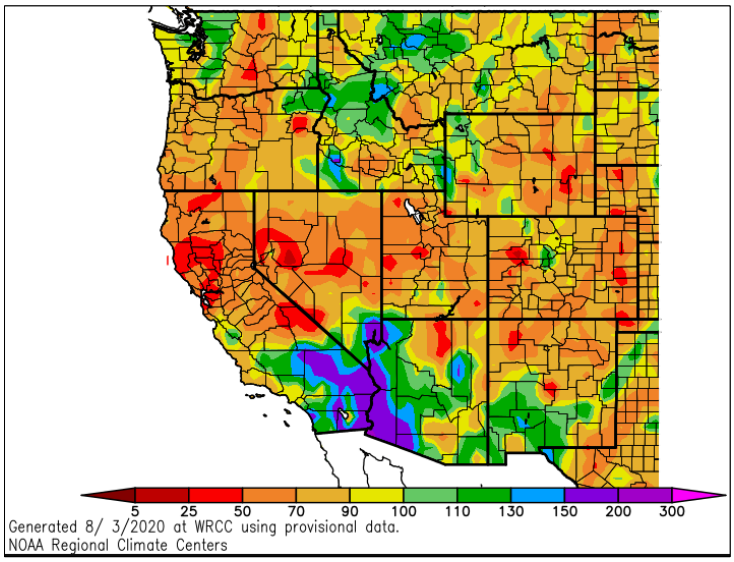
Precipitation at Six Major Stations in Southern California

From October 1, 2019 to July 31, 2020

Station	Precipitation in inches Jul	Oct 1 to Jul 31	Average to Date	Percent of Average
San Luis Obispo	0.00	9.59	22.14	43%
Santa Barbara	0.00	11.22	17.54	64%
Los Angeles	0.00	14.65	14.92	98%
San Diego	0.00	13.60	9.92	137%
Blythe	0.00	2.92	2.81	104%
Imperial	0.00	2.00	2.28	88%

2

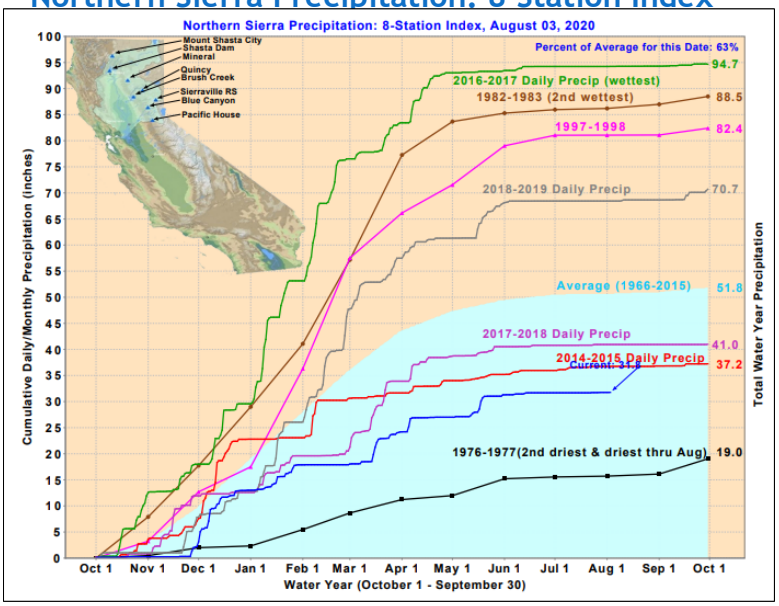
Percent of Average Precipitation (%)
10/1/2019 - 8/2/2020



Western Regional Climate Center
https://wrcc.dri.edu/cgi-bin/anomimage.pl?wrcOctPpct.png

3

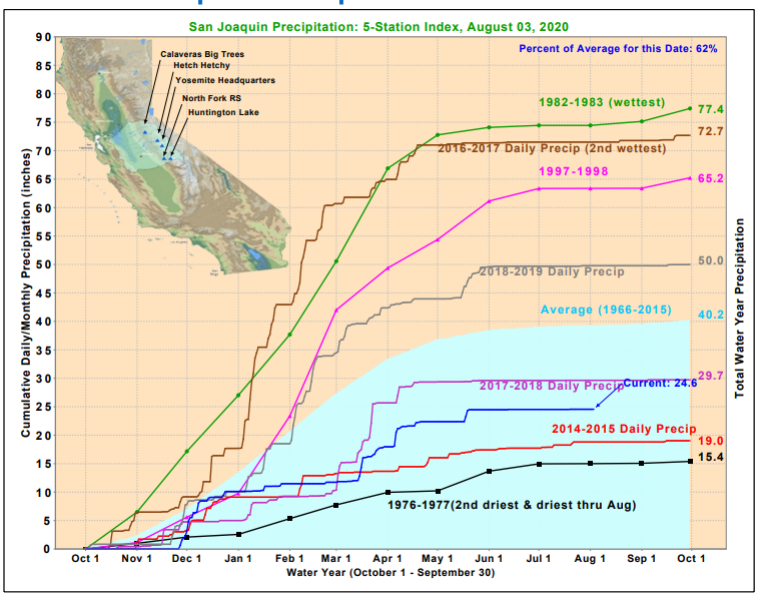
Northern Sierra Precipitation: 8 Station Index



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

4

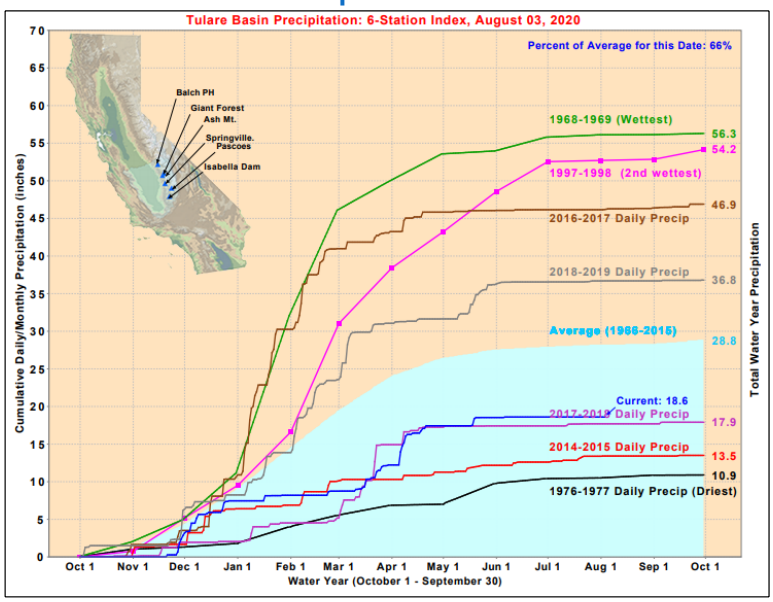
San Joaquin Precipitation: 5 Station Index



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

5

Tulare Basin Precipitation: 6 Station Index



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

6

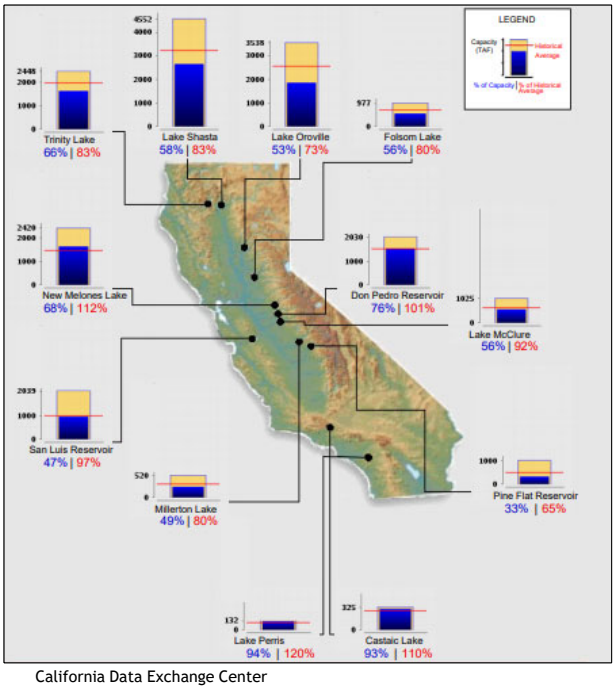
Comparison of SWP Water Storage

Reservoir	Capacity	2019 Storage (acre-feet) As of Aug 1	% of Cap.	2020 Storage (acre-feet) As of Aug 2	% of Cap.
Frenchman	55,475	51,736	100%	40,332	73%
Lake Davis	84,371	73,992	93%	58,541	69%
Antelope	22,564	21,233	100%	19,594	87%
Oroville	3,553,405	3,030,342	97%	1,861,254	52%
TOTAL North	3,715,815	3,177,303	97%	1,979,721	53%
Del Valle	39,914	40,184	89%	35,835	90%
San Luis	2,027,835	1,398,138	74%	960,395	47%
Pyramid	169,901	167,895	98%	168,472	99%
Castaic	319,247	298,357	96%	301,863	95%
Silverwood	74,970	70,054	95%	68,763	92%
Perris	132,164	118,558	99%	123,964	94%
TOTAL South	2,764,031	2,138,712	77%	1,659,292	60%
TOTAL SWP	6,479,846	5,758,294	89%	3,639,013	56%

As of May 22, 2020, the Table A allocations for SWP contractors is 20%.

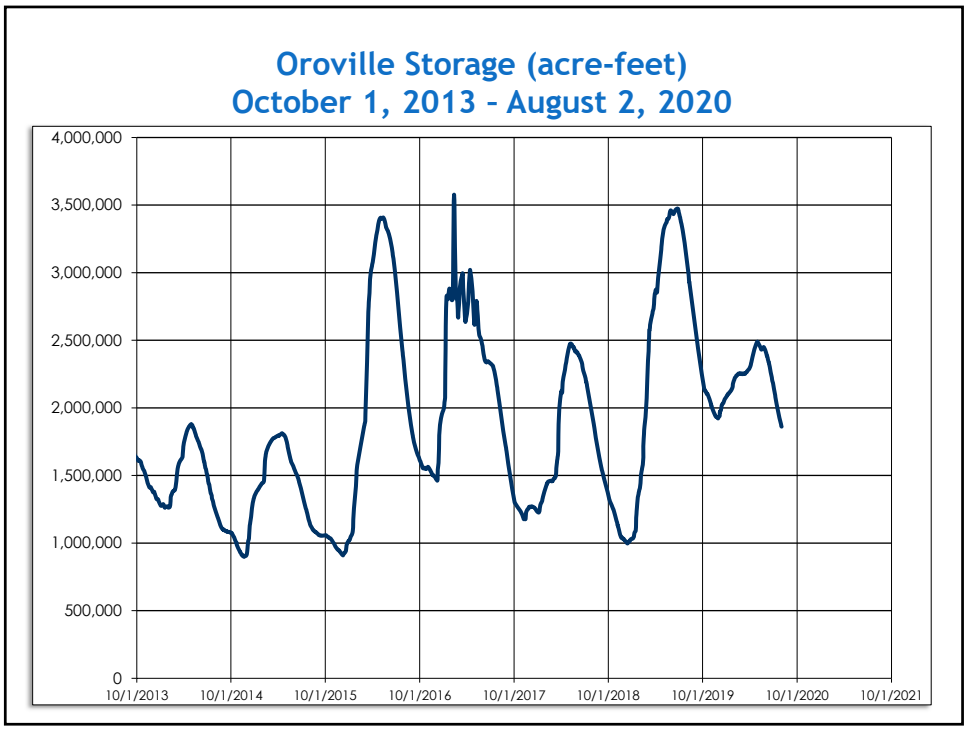
7

Reservoir Current Conditions as of 8/2/2020



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

8


Oroville Storage (acre-feet)
October 1, 2013 – August 2, 2020
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
10/1/2013
10/1/2014
10/1/2015
10/1/2016
10/1/2017
10/1/2018
10/1/2019
10/1/2020
10/1/2021

9