

January 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, February 12, 2020
Time: 10:00 a.m.
Place: Orchid Room
Sheraton Ontario Airport Hotel
429 North Vineyard Avenue
Ontario, CA 91764

The Colorado River Board of California welcomes any comments from members of the public pertaining to items included on this agenda and related topics. Oral comments can be provided at the beginning of each Board meeting; while written comments may be sent to Mr. Peter Nelson, Chairperson, Colorado River Board of California, 770 Fairmont Avenue, Suite 100, Glendale, California, 91203-1068.

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

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, February 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.

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 December 11, 2019 (Action)
- b. Consideration and approval of the Final Calendar-Year 2020 Board meeting schedule (Action)

4. Water Supply and Operations Reports

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

5. Staff Reports Regarding Colorado River Basin Programs

- a. Salinity Control Program
 - (i) Authorization for Chairman to sign Basin States letter regarding Salinity Control Program funding (Action)
- b. Glen Canyon Dam Adaptive Management Program
- c. Lower Colorado River Multi-Species Conservation Program 15th Anniversary Tour
- d. 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: March 11, 2020
1:30 p.m.
Imperial Irrigation District
Condit Auditorium
1285 Broadway Ave
El Centro, CA 92243

Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, December 11, 2019

A meeting of the Colorado River Board of California (Board) was held on Wednesday, December 11, 2019 at the Skyview Room 3 at Bally's Las Vegas Hotel and Casino, 3645 South Las Vegas Blvd., Las Vegas, Nevada.

Board Members and Alternates Present:

David De Jesus (MWD Alternate)	Peter Nelson, Chairman (CVWD)
Norma Sierra Galindo (IID Alternate)	Glen D. Peterson (MWD)
Dana B. Fisher, Jr. (PVID)	David R. Pettijohn (LADWP)
Jeanine Jones (DWR Designee)	John Powell, Jr. (CVWD Alternate)
Jim Madaffer (SDCWA)	Jack Seiler (PVID Alternate)
Mark Watton (SDCWA Alternate)	

Board Members and Alternates Absent:

Evelyn Cortez-Davis (LADWP Alternate)	Henry Kuiper (Public Member)
James Hanks (IID)	Christopher Hayes (DFW Designee)
David Vigil (DFW Alternate)	

Others Present:

Steve Abbott	Tommy Drennan
Heather Baez	Jeremy Dodds
Judy Baker	Kevin Donhoff
Don Barnett	Chuck Dumars
David Bradshaw	Craig Elmore
Dee Bradshaw	John Fleck
Jerry Butkiewocz	Christy Guerin
Grant Chaffin	Melissa Baum Haley
Robert Cheng	Nadia Hardjadinata
Ted Chester	Christopher Harris
Brad Coffey	Kathleen Coates Hedberg
Michael Cohen	Tammy Hierling
Harvey De La Torre	Brad Hiltcher
Dione Deennan	Ned Hyduke
Dan Denham	Rich Juricich

Surabhi Karambelkar
Eric Katz
Sandy Kerl
Mark Krause
Eric Kuhn
Rebecca Laudbear
Laura Lamdin
Russell Lefevre
Wally Leimgruber
Henry Martinez
Mary Aileen Matheis
Kara Mathews
Aaron Mead
Jessica Neuwerth
G. Patrick O'Dowd
David Osias
Anisa Patch
Dennis Patel
Demetri Polyzos
Shanti Rosset

Mojgan Poursadighi
John Powell
Sergio Quirol
Angela Rashid
Ivory Reyburn
Kelly Rodgers
Alex Rodriguez
Martha Camacho Rodríguez
Phil Rosentrater
Keith Scoular
Jack Seiler
Tina Shields
Laura Simonek
Karyn Stockdale
Mitch Thompson
Sara Tucker
Mark Watton
Leticia Vasquez Wilson
Jerry Zimmerman

CALL TO ORDER

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:06 a.m.

Report from Commissioner Brenda Burman from the United States Bureau of Reclamation

Chairman Nelson introduced Commissioner Brenda Burman of the United States Bureau of Reclamation. Ms. Burman congratulated the Colorado River Board of California (Board), and the different agencies present for their accomplishments throughout the year. Ms. Burman thanked the Board and the agencies present for their leadership, commitment and support.

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 November 13, 2019, Board meeting minutes. Mr. Fisher moved that the minutes be approved, seconded by Mr. Peterson. By roll-call vote, the minutes were unanimously approved.

Chairman Nelson asked for a motion to approve the Proposed Calendar Year 2020, Board meeting schedule. Mr. Peterson suggested that the Proposed Calendar Year 2020 match up with the water conferences for the year 2020. Executive Director Mr. Harris stated that changes will be made to the Proposed Calendar Year 2020 Board meeting schedule. Chairman Nelson deferred action on the Proposed Calendar Year 2020 Board meeting schedule, to be considered for approval during the next Board meeting.

Chairman Nelson asked for a motion to approve the proposed Resolution 2019-1 Regarding Potential Applicant to Receive Lower Colorado Water Supply Project Water, which would recommend approval of an application for two acre-feet of annual domestic water use for one parcel of land in San Bernardino County. Mr. Madaffer moved approval of the resolution, seconded by Mr. Pettijohn. By roll-call vote, the motion was unanimously approved.

COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Report

Mr. Harris reported that as of December 2nd, the water level at Lake Powell was 3,611.20 feet with 12.85 million-acre feet (MAF) of storage, or 53% of capacity. The water level at Lake Mead was 1,083.89 feet with 10.34 MAF of storage, or 40% of capacity. Mr. Harris reported that the total system storage was 31.21 MAF, or 52% of capacity, which is about 3.9 MAF more of system storage than at this same time last year.

Mr. Harris reported that for Water Year 2019 the Observed Lake Powell inflow was 12.95 MAF, or 120% of normal and Observed April to July runoff into Lake Powell was 10.41 MAF, or 145% of normal. For Water Year-2020, the November observed inflow into Lake Powell was 0.40 MAF, or 85% of normal and the forecasted December inflow into Lake Powell is 0.33 MAF, or 91% of normal. Mr. Harris reported that Water Year-2020 precipitation to date is 81% of normal and the current Basin snowpack is 120% of normal.

Mr. Harris reported that precipitation conditions in October were dry and below average throughout the Basin, but conditions improved in November. Mr. Harris reported that snowpack conditions in early December are above average in the Upper Basin, particularly in the Lower Green and Little Snake basin in Wyoming.

Mr. Harris reported that as of December 2nd, the Upper Basin reservoir system was doing well, with exception to Lake Powell. He also reported on the regulatory storage conditions in the Lower Basin. In calendar year 2020, through November 21st, Brock and Senator Wash reservoirs captured 116,316 AF and 95,084 AF, respectively. Mr. Harris reported that as of December 7th, excess flows to Mexico were 52,773 AF, and at this time last year the excess flows were about 7,100 AF. Mr. Harris reported that 87,923 AF of saline drainage was bypassed to Mexico in calendar year 2019. Starting in September 2019, these bypass flows were discharged into the river channel in the Limitrophe division just below the Morelos Dam while maintenance was being completed on the Main Outlet Drain Extension (MODE) canal in the United States and Mexico.

State and Local Report

Ms. Jones, representing the California Department of Water Resources (CDWR), reported that the State Water Project's allocation is 10%, reflecting the customary initial allocation. She reported that precipitation conditions in southern California were better than other parts of the State, noting that it is early in California's winter season and the wettest months of the season are December, January and February.

Mr. Peterson, representing The Metropolitan Water District of Southern California (MWD), reported that the Colorado River Aqueduct is operating at a one-pump flow due to maintenance activities.

Mr. Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), reported that as of December 3rd, the Eastern Sierra precipitation conditions were 90% of normal with 5.8 inches of water content. He noted that within the course of two years the Eastern Sierra precipitation conditions went from the driest year on record (2014-2015) to the wettest year on record (2016-2017).

Agency End-of-Year Reports

San Diego County Water Authority

Mr. Madaffer, representing the San Diego County Water Authority (SDCWA), reported that the SDCWA recently marked its 75th anniversary. He also reported that Mr. Mark Watton, the SDCWA alternate on the Board and the general manager of the Otay Water District would be retiring soon. Mr. Madaffer also recognized several SDCWA agency members and staff, particularly that of the appointment of Ms. Sandra Kerl as the new General Manager of the SDCWA.

Mr. Madaffer also presented highlights of SDCWA's current projects and local water supply development. He reported that SDCWA launched a regional conveyance system study which will analyze technical and financial options for the conveyance of 280,000 AF of Quantification Settlement Agreement (QSA) water supplies from the Imperial Valley. He further explained that the study will also analyze the development of shared benefits of strategic

partnerships and assess the potential of multi-use projects that could address various issues such as agricultural water delivery. He stated that the overall goal of the project is to develop a project that could have multiple benefits as part of a long-term management strategy for not just the Southwest, but for the state of California.

Mr. Madaffer reported that SDCWA is also working on establishing a mutually beneficial Lake Mead storage program and seeking opportunities to participate using eligible Colorado River supplies. He explained that SDCWA's participation in this program would help ensure sustainability and reliability of the system by improving the elevation of Lake Mead, ultimately benefitting the Southwest and the other Basin States. He added that the SDCWA is working with MWD and the Department of Interior to develop the program.

Mr. Madaffer reported that SDCWA is partnering with the City of San Diego to develop a pumped storage project at the San Vicente Reservoir. He explained that the project would harness the energy created by moving water from a new forebay back to the reservoir. Mr. Madaffer stated that the reservoir will serve as a "battery", providing an additional energy source to San Diego's power grid and support the State's renewable power goals. Mr. Madaffer added that SDCWA is working on legislation to allow this project to be integrated with other renewable projects across the Southwest.

Mr. Madaffer reported on various local water supply development projects. He stated that MWD approved the City of San Diego's Pure Water project and Phase 1 of the project will develop 33,600 AF per year (AFY). The East County Advanced Water Purification project will develop 12,880 AFY by 2025, while the Fallbrook Santa Margarita Conjunctive Use project will develop for 3,100 AF per year and the Pure Water project in Oceanside will develop 5,060 AFY by 2021. He reported that Lower Santa Margarita Indirect Potable Reuse Pilot Project will be in pilot stage by 2021. Mr. Madaffer stated that these local supply projects will help the region during times of drought, preserve water levels in Lake Mead, and enhance the State's water portfolio.

Metropolitan Water District of Southern California

Mr. Peterson reported that MWD had record low diversions on the Colorado River in 2019. He also reported MWD's Lake Mead ICS account contains nearly 1.0 MAF of stored water, adding that MWD's total system storage is nearly 4 MAF.

Mr. Peterson reported that the MWD Board has approved the 2020 Seasonal Fallowing Program with Bard Water District, which extends through 2026. He explained that the program fallows up to 3,000 acres for four months during the summer, yielding up to 6,000 AF of water annually. He explained that the program allows farmers to sell high-value crops in the winter and conserve more water in the summer, as summer crops use more water. Mr. Peterson reported that MWD will pay \$452 per acre of fallowed land, computing to nearly \$200 per AF of water. Mr. Peterson explained that not all of Bard's farmers can participate in the program so the farmers receive 75% of the payment and 25% goes to Bard Water District to help farmers that have

permanent crops (e.g., date palms) that cannot be fallowed. In addition, \$15,000 is annually paid to Bard for the management and administration of the program.

Mr. Peterson reported that MWD completed the Regional Recycled Water Demonstration Project in October. He added that the project generates 500 million gallons of water a day and the one-year testing period began November 2019. Mr. Peterson reported that MWD developed a draft letter of intent with Southern Nevada Water Authority (SNWA) to explore partnership opportunities for the demonstration project.

California Department of Water Resources

Ms. Jones discussed the California Department of Water Resources' efforts to improve sub-seasonal to seasonal to (S2S) forecasting. Ms. Jones explained that the timeframe for operational weather models is two weeks, while S2S timeframe is about six weeks. She reported that the California DWR has been working with the Scripps Institute for two years to develop a three-week forecast for atmospheric rivers, adding that they are also working on efforts to forecast atmospheric ridging. Ms. Jones noted that the forecast for atmospheric rivers is available on the Scripps Institute website, adding that they will continue efforts to extend the forecasting ability for these projects as both could play an important role in supporting forecast-informed reservoir operations.

Ms. Jones reported that DWR has three research pilots underway with Scripps Institute, noting that the latest pilot project will be examine forecast-informed flood operations for Yuba County Water Agency. In addition, Ms. Jones reported that DWR is also working with NOAA, NASA JPL, University of California, Irvine, and University of California, Los Angeles on various forecasting improvements.

Los Angeles Department of Water and Power

Mr. Pettijohn reported that LADWP started its conservation program in the 1980s and have installed about 120,000 AF of hardware-based conservation since that time, noting that LADWP invests close to \$30 million a year on this type of conservation. He added that before recent droughts, per capita water use in the city of Los Angeles was 130 gallons per person per day (gpcd). This figure has dropped consistently, and over the past year was further reduced from 108 to 104 gpcd. Mr. Pettijohn explained that the gpcd figures accounts for all the water used in Los Angeles, not just water used by the residential sector, including losses from firefighting. He added that residential water use is close to 70 gpcd. He stated that LADWP is also exploring conservation opportunities for inventorying and retrofitting cooling towers, which were recently identified as a potential source of additional conservation.

Mr. Pettijohn reported that LADWP has been working with the Los Angeles County on stormwater issues for over thirty years. Currently, LADWP is capturing 60,000 to 70,000 AF a year of stormwater and LADWP's stormwater capture master plan lays out plan to double or triple

the amount of stormwater capture. Mr. Pettijohn explained that LADWP is close to completing the Tujunga Spreading Ground Project which will increase the amount of stormwater capture, noting that the project won various national and state awards. He reported that Measure W, Los Angeles County's Safe, Clean Water Program tax, will provide \$35 million to help fund stormwater capture programs for water supply and municipal separate storm sewer systems (MS4) compliance.

Mr. Pettijohn reported that LADWP has also made investments to construct three large treatment plans to treat contaminated groundwater in the San Fernando Basin, adding that Prop. 1 will provide \$300 million toward this effort.

Mr. Pettijohn explained that the Mayor Garcetti's Sustainability Plan includes initiatives to recycle 100% of raw water within the City of Los Angeles by 2035. He displayed various layouts that showed plans to take wastewater from the city's four wastewater treatment plants and transport the water into the Central Basin plant or the L.A. Aqueduct Filtration plant as source water. He added that the recycled water can also be connected to MWD's regional water recycling system. He stated that LADWP is also seeking partnership opportunities with other entities. Mr. Pettijohn reported that direct potable reuse regulations for raw water and treated drinking water augmentation are under development and is expected to be completed by 2023.

Mr. Pettijohn reported that in 2016-2017, the LADWP Eastern Sierra aqueduct system experienced its wettest year on record, delivering the most water ever through the L.A. aqueduct system. He stated that it was difficult to manage the large amount of water and that some of it had to be spread in the Owens Valley. He added that to address similar issues in the future, LADWP is rehabilitating and repurposing the Maclay Highline tunnel, which was used in the early 1980's but discontinued after much of the L.A. aqueduct water was diverted to the Owens Valley for environmental purposes. The Maclay Highline will be reestablished to deliver raw L.A. aqueduct water to San Fernando Valley spreading grounds.

Mr. Pettijohn reported that LADWP will be replacing 170,000 feet of water delivery trunk lines every year, noting that the system is over one-hundred years old. He added that they hope to replace the entire system within one-hundred years. Mr. Pettijohn reported that the city loses 5% to 7% of water a year from the water delivery lines and the replacement program will help alleviate water losses. He also reported the Upper Stone Canyon Reservoir has been completed and that construction is underway for the Headworks Reservoir which will provide additional regulatory storage.

Coachella Valley Water District

Board Chairman Nelson, representing Coachella Valley Water District (CVWD), reported that CVWD participated in the Drought Contingency Plans, congratulating all the participants and noting IID's contribution to the DCP planning efforts. He also reported that CVWD amended and restated exchange agreements for advanced delivery of water between MWD, Desert Water Agency, and CVWD for state water project water. The exchange agreement expires in 2035.

Mr. Nelson reported on CVWD's groundwater replenishment program, noting that there are three replenishment facilities, which include Whitewater, Thomas E. Levy, and Palm Desert. He reported that the groundwater basin elevation increased 21.7 feet over a ten-average in the western part of the groundwater basin and increased 31 feet in the eastern part of the basin. He stated that MWD delivered 230,000 AF of water to Whitewater Groundwater Facility in 2019. He stated that Thomas E. Levy Groundwater Facility recharged 30,000 AF. He added that 7,000 AF was delivered to the new Palm Desert Groundwater Facility, located close to CVWD's main offices. It is anticipated that the facility will be expanded to accept up to 25,000 AF per year.

Mr. Nelson reported that CVWD removed about one-million square-feet of turf in 2019 with water savings of 368 AF. Since 2008, a total of 17.5 million square-feet of turf has been removed with a total annual water savings of close to 17,000 AF since 2008.

Mr. Nelson reported that the CVWD Board made an initial decision to move forward with the Oasis project, which would expand CVWD's Colorado River canal system to preserve 21,000 AF of groundwater for other uses. The project is expected to cost \$41 million.

Palo Verde Irrigation District

Mr. Hyduke, representing the Palo Verde Irrigation District (PVID), reported that PVID successfully installed three new river intake gates at the Palo Verde Diversion Dam. He added that PVID decided to discontinue customer outages during maintenance of the system in the future. He also noted that PVID and its farmers are working with the Natural Resources Conservation Service (NRCS) on a three-year program to research deficit irrigation for alfalfa crops. Mr. Hyduke also reported on various infrastructure issues and recent stakeholder tours of the Palo Verde Valley. Board member Mr. Fisher stated that the NRCS study is important to better understand deficit irrigation, noting that it could be significant source of water that only moderately diminishes agricultural production.

Imperial Irrigation District

Ms. Shields, the Water Department Manager for the Imperial Irrigation District (IID), reported that IID is continuing to move forward on implementation of the 2003 Quantification Settlement Agreement (QSA) water conservation and transfer programs. She stated that IID's QSA conservation efforts, when fully implemented, will total close to a half-million AF a year, which is about 15% of IID's annual water supply. She stated that IID has had tremendous success with the on-farm conservation program but scaled the program back in order to manage excess water and storage opportunities.

Ms. Shields reported that IID is upgrading its 100-year old system with new technology to automate and monitor the system, providing information and real-time decision making. She added that the upgrades have been effective in managing operational discharges within the system and contribute to system conservation. Ms. Shield reported that IID is also installing interties to help

replumb the system. She stated that IID is also investigating adding additional regulating reservoirs to its water distribution system to help facilitate the on-farm conservation program and provide growers with additional water management flexibility.

Ms. Shields reported that IID was unable to participate in the final approved DCP program due to concerns with the Salton Sea. She explained that as part of the 2003 QSA, the State of California was obligated to perform restoration activities during a 15-year planning period but failed to complete its obligations within the timeframe. However, Ms. Shields acknowledged that State has been working to meet its obligations and has rededicated its efforts and commitments to funding restoration activities, adding that a water bond will also provide close to \$200 million to the restoration efforts.

Ms. Shields reported that IID is currently working to help fulfill the Salton Sea obligations. She stated that IID constructed over 2,000 acres of pilot air quality projects. She stated that IID is also working to help the State implement some supplemental projects to help the State meet milestones specified in the Salton Sea Management Program Phase I Ten-Year Plan. She stated that IID executed easement agreements with the State to help facilitate the construction of the Species Conservation Project on nearly 3,800 acres of IID-owned land. Ms. Shields added that they are working with the State to facilitate the implementation of additional air quality projects at Red Hill Bay. She reported that the Red Hill Bay project is a federal project that will utilize state funds and added that Reclamation will also provide supplemental funding. The Red Hill Bay project is expected to be completed in 2020.

Ms. Shields reported that on November 18, 2019, IID adopted Resolution No. 36-2019 which will establish parameters for future Colorado River negotiations. Ms. Shield explained the resolution is intended to lay the groundwork for the 2007 Interim Guidelines renegotiation and sets parameters to protect IID's right to allocate water, negotiate on behalf of its water users and advocate for safeguarding the Salton Sea. She added that public health risks are among IID's greatest concerns with managing a smaller Salton Sea in the future. She acknowledged IID's role in helping California manage and protect its Colorado River water resources, but also affirmed the importance of addressing local concerns.

Finally, Ms. Shields reported that on December 3, 2019, IID's Board voted on a resolution that will allow IID to work with Reclamation to resolve an outstanding issue from 2010 when IID pre-delivered 46,546 AF of water to the Salton Sea. She stated IID will use water created from excess 2019 conservation to resolve the issue. She concluded by displaying a chart that showed that IID's QSA water conservation and transfer program activities from 2003 to 2019 have totaled 5.8 MAF. She noted that IID has been focusing on meeting its conservation goals with efficiency-based conservation and has moved away from agricultural fallowing.

STATUS OF COLORADO RIVER BASIN PROGRAMS

Colorado River Basin Salinity Control Program

Chairman Nelson introduced the Executive Director of the Colorado River Basin Salinity Control Forum, Mr. Don Barnett, to give an overview of the progress and activities of the Salinity Control Program (Program). Mr. Barnett expressed appreciation for the Board for their support of Program.

Mr. Barnett provided a background on the formation of the Colorado River Salinity Control Forum, with the states governors appointing representatives to provide administrative leadership and policy for the Program. In 1974, the Forum helped to pass the Colorado River Basin Salinity Control Act, which created the Colorado River Basin Salinity Control Advisory Council, a formal federal committee that provides input to the Secretary of Interior, Secretary of Agriculture, and the Administrator of the Environmental Protection Agency on implementation of the Program. Mr. Barnett explained that although the governors appointed the same people to the Forum as to the Advisory Council, the organizations have separate and distinct functions. For this year, both organizations have elected MWD's Mr. Bill Hasencamp to be the chairman for the next two years. He had been serving as the vice-chairman on the Forum. Mr. Rich Juricich has taken on the role of the Work Group chairman. Mr. Barnett expressed his appreciation for both Mr. Hasencamp and Mr. Juricich for taking on their respective roles in the Program.

On funding appropriations, Mr. Barnett reported that this year's President's budget matches the Forum's request of ten million dollars for Reclamation's Basinwide Program. The House has appropriated that amount while the Senate has not yet done so. For the NRCS, the House has appropriated 1.6 billion dollars for EQIP funding, of which the NRCS uses about 1% of the appropriation on salinity projects. The Senate also has not yet appropriated this funding. The Forum requested two million dollars for BLM to spend on its salinity control effort but also does not have a bill yet.

Mr. Barnett explained the cost-share structure between the Upper Basin Fund and the Lower Basin Development Fund. He explained that the intention was to use surplus dollars in the Lower Basin Development Fund to cover salinity control effort. But there never really were surplus dollars so Congress established the current funding structure in 1984 to fund the Program. For the last thirty-five years, the Lower Basin's portion of the Program was funded by two-and-a-half mill in power generation sale to Nevada and California power users. At one point the bank account had about thirty-four million dollars surplus for expenditure. However, in the 1996 Farm Bill, a line item was changed to EQIP, which meant increased appropriations and in turn increased cost-share obligations. The second change from repaying the Treasury over time to upfront cost-share meant the Program must have dollars on-hand. That surplus of thirty-four million dollars has been utilized and the Lower Basin Development Fund is now operating at a deficit. Mr. Barnett explained that

solving this Lower Basin development fund deficit issue is a high priority if the Salinity Control Program's annual control measures are to continue on pace.

Mr. Barnett reported that the Forum is looking at different hydrology and funding levels to project salinity control levels for the 2020 Triennial Review report. At recent meetings, the Forum adopted a plan of implementation that calls for about 62,000 tons of new salinity control over the next three years. The Board will hear more updates on the Triennial Review in the near future.

Mr. Barnett provided an overview of the Paradox Valley Unit and explained that the injection-induced seismic activities have been a concern. The seismic rates in the near-well area have decreased since Mr. Barnett's report to the Board last year, but an earthquake on March 4th of this year prompted Reclamation to shut down the injection well. Reclamation has also been concerned with the several thousands of aftershocks since this earthquake. Reclamation has been analyzing the earthquake and its aftershocks and provided the Forum with a preliminary report two months ago on their core pressure study. While the Forum appreciates Reclamation's thoroughness in its investigations of earthquake hazard, the Forum continues to be concerned with the brine discharging into the Dolores River, which feeds into the Colorado River.

For the Paradox Valley Unit EIS, Mr. Barnett explained that it has been a ten-year process looking at alternatives for the injection well. Mr. Barnett reported that there are some folks who are considering the no-action alternative, under which no action would take place to reduce saline discharge into the Dolores River. The Draft EIS was released Friday for public comment and Reclamation will provide a briefing to the states this afternoon on the report. Reclamation is waiting to receive comments before arriving at a preferred alternative. Comments are due by February 4th, with the final Record of Decision expected by August.

Mr. Barnett distilled the Draft EIS for the Board. With the no-action alternative, the TDS at Imperial Dam would go up by 9.2 milligrams per liter per year. With a new injection well, the TDS would be reduced by 11 milligrams per liter, a similar reduction level as the current injection well. The reduction would be 16 milligrams per liter per year with evaporation ponds or the zero-liquid discharge technology. The economic damages downstream would increase by twenty-three million dollars per year without a project at Paradox. A new injection well will decrease the damage by twenty-eight million dollars per year, while evaporation ponds or zero-liquid discharge technology would reduce damage by forty-two million dollars per year. Mr. Barnett reported that the upfront construction costs of these alternatives is expected to be \$108 million for an injection well, \$132 million for the evaporation ponds, and \$112 million for the zero-liquid discharge technology. In terms of cost per ton of salt saved, costs are expected to be sixty dollars per ton for both the injection well and evaporation ponds and more than ninety dollars per ton for the zero-liquid discharge option. To put the costs in perspective, Mr. Barnett explained that the cost per ton in the recent FOA ranges from fifty to sixty-nine dollars per ton, with an average of about fifty-nine dollars per ton. The injection well and the evaporation ponds are in line with the FOA cost, but the cost for zero-liquid discharge is much higher. Mr. Barnett explained that how the states

cost-share differs depending on the types of costs. On the construction cost, the states would repay within fifty years without interest, while annual operational and maintenance costs are subject to an upfront cost-share, which would have a more immediate impact on the Lower Basin Development Fund. Chairman Nelson thanked Mr. Barnett for presentation and his efforts in the Salinity Control Program.

ANNOUNCEMENTS

Mr. Juricich reported that the Basin States Climate and Hydrology Work Group received an update on the draft of Colorado River Basin Climate and Hydrology State of the Science (SOS) Report during a November 12 meeting. Specifically, Mr. Juricich noted that the SOS report provides a comprehensive assessment of current and future trends in climate and hydrology within the Basin.

Washington D.C. Updates

Chairman Nelson introduced Ms. Sarah Tucker with Natural Resources Results to provide Washington D.C. updates to the Board. Ms. Tucker noted that Colorado River issues have unique, bipartisan support in Washington, as demonstrated by the speedy passage of the Drought Contingency Plan legislation in spring 2019, and Ms. Tucker predicted that this support would continue regardless of the upcoming election.

Ms. Tucker noted that the energy and natural resources appropriations bill included support for Colorado River programs and policies but was currently stalled. Ms. Tucker reported that there were currently sixteen bills in the House and Senate with relevance to the Colorado River. Ms. Tucker also reported that the House Natural Resources Committee planned to hold a hearing on the Salton Sea in early 2020.

Finally, Ms. Tucker noted that, along with the State's delegations, tribes, and other interests, the Natural Resource Results will continue to collaborate with partners back in Washington D.C. to provide continuous strong federal support for programs and projects.

Other Business

Chairman Nelson announced that one of the Board's public members, Ms. Nicole Neeman-Brady, was recently appointed to serve as a director on the Los Angeles Department of Water and Power Board and had therefore resigned her position as a public member of the Colorado River Board of California.

EXECUTIVE SESSION

Pursuant to provisions of Article 9, commencing with Section 11120, of Chapter 1 of Part 1, Division 3 of Title 2 of the government Section Program 12516 and 12519 of the Water Code to discuss matters concerning interstate negotiations with representatives from other states or the federal government, a motion was made by Chairman Nelson to go into Executive Session. The Board entered Executive Session at 11:45 a.m. and adjourned from executive session at 12:12 p.m.

RECONVENING & ADJOURNMENT

The regular session of the Colorado River Board of California was reconvened at 12:15 p.m. The Chairman reported that information was received by the Board during the Executive Session, but that no action was taken by the Board. With no further items to be brought before the Board, Chairman Peter Nelson adjourned the meeting at 12:20 p.m.

Final Schedule 2020 Colorado River Board Meetings

Date	Location	Time	Board Materials
January 15	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
February 12	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
March 11	Imperial Irrigation District	1:30 pm	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
April 15	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
May 13	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
June 10	San Diego County Water Authority	1:00 pm	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
July 15	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
August 12	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
September 9	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
October 14	Coachella Valley Water District	1:00 pm	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
November 18	Ontario	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes
December 16	Las Vegas, NV	10:00 am	<input type="checkbox"/> Notice <input type="checkbox"/> Board Folder <input type="checkbox"/> Executive Director's Report <input type="checkbox"/> Meeting Minutes

2/10/2020

LOWER COLORADO WATER SUPPLY REPORT

River Operations
Bureau of Reclamation

Questions: BCOOWaterops@usbr.gov

(702) 293-8373

<http://www.usbr.gov/lc/region/q4000/weekly.pdf>

	PERCENT	Content 1000 ac-ft (kaf)	Elev. (Feet above mean sea level)	7-Day Release (CFS)
CURRENT STORAGE	FULL			
LAKE POWELL	50%	12,201	3,604.67	11,700
* LAKE MEAD	43%	11,301	1,095.09	9,900
LAKE MOHAVE	92%	1,669	641.91	8,700
LAKE HAVASU	91%	562	447.03	6,500
TOTAL SYSTEM CONTENTS **	52%	31,134		
As of 2/9/2020				
SYSTEM CONTENT LAST YEAR	45%	26,830		
* Percent based on capacity of 26,120 kaf or elevation 1,219.6 feet.				
** TOTAL SYSTEM CONTENTS includes Upper & Lower Colorado River Reservoirs, less Lake Mead exclusive flood control space.				
Salt/Verde System	77%	1,756		
Painted Rock Dam	0%	0	530.00	0
Alamo Dam	14%	137	1,124.39	25
Forecasted Water Use for Calendar Year 2020 (as of 2/10/2020) (values in kaf)				
NEVADA			252	
SOUTHERN NEVADA WATER SYSTEM				216
OTHERS				36
CALIFORNIA			4,224	
METROPOLITAN WATER DISTRICT OF CALIFORNIA				700
IRRIGATION DISTRICTS				3,507
OTHERS				17
ARIZONA			2,483	
CENTRAL ARIZONA PROJECT				1,383
OTHERS				1,100
TOTAL LOWER BASIN USE				6,958
DELIVERY TO MEXICO - 2020 (Mexico Scheduled Delivery + Preliminary Yearly Excess ¹)				1,515
OTHER SIGNIFICANT INFORMATION				
UNREGULATED INFLOW INTO LAKE POWELL - FEBRUARY MID-MONTH FORECAST DATED 2/4/2020				
		MILLION ACRE-FEET		% of Normal
FORECASTED WATER YEAR 2020		8.640		80%
FORECASTED APRIL-JULY 2020		5.700		80%
JANUARY OBSERVED INFLOW		0.277		77%
FEBRUARY INFLOW FORECAST		0.340		87%
		Upper Colorado Basin	Salt/Verde Basin	
WATER YEAR 2020 PRECIP TO DATE		96% (12.0")	101% (11.6")	
CURRENT BASIN SNOWPACK		117% (12.3")	77% (4.0")	

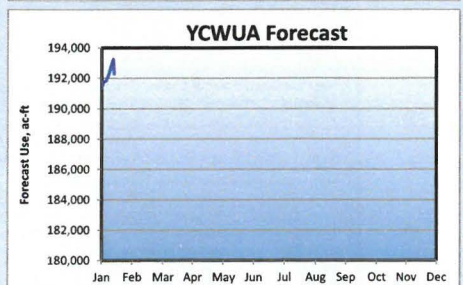
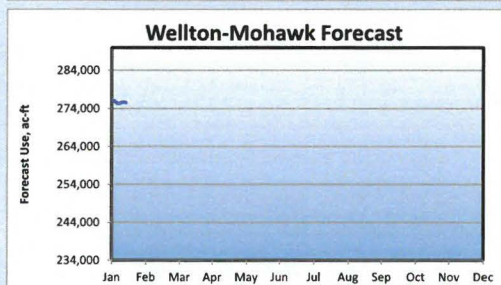
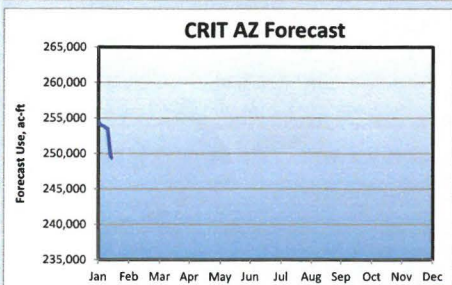
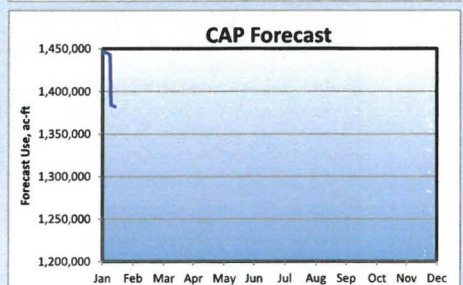
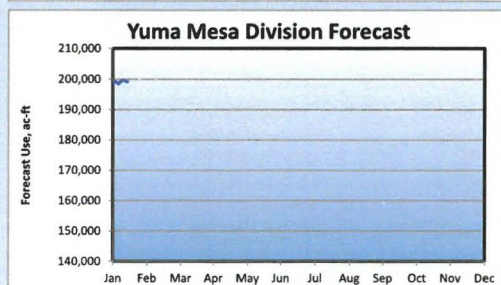
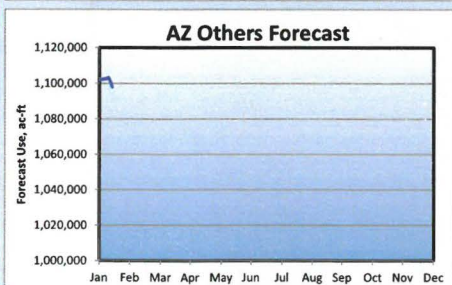
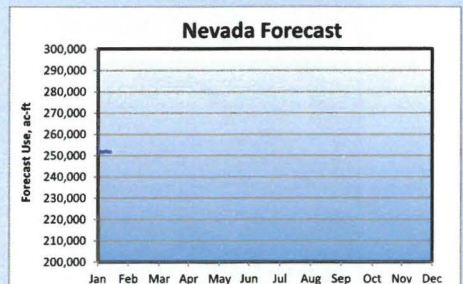
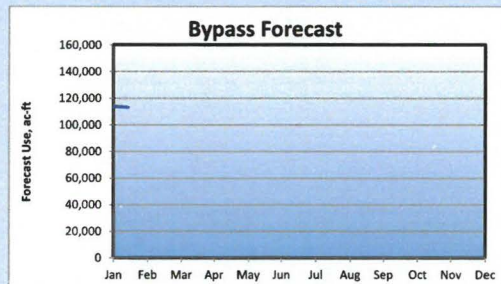
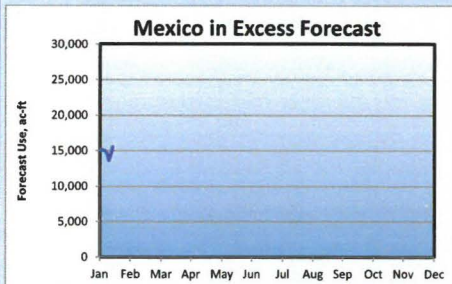
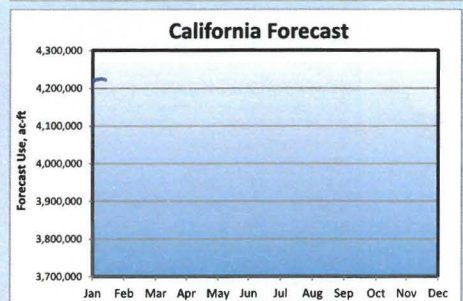
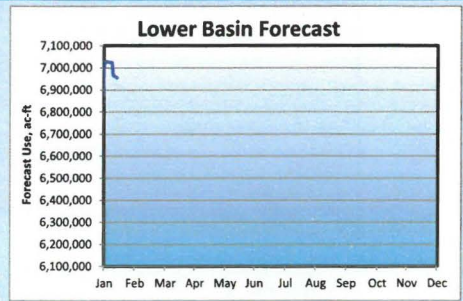
¹ Delivery to Mexico forecasted yearly excess calculated using year-to-date observed and projected excess.


BUREAU OF RECLAMATION
LOWER COLORADO BASIN REGION
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	153,551	2,480,602	2,473,916	6,686
CALIFORNIA	216,135	4,222,391	4,221,354	1,037
NEVADA	12,497	251,894	251,894	0
STATES TOTAL ³	382,183	6,954,887	6,947,164	7,723
ACCOUNTABLE DELIVERIES TO MEXICO	147,983	1,515,580	1,500,000	15,580
TO MEXICO IN SATISFACTION OF TREATY (including downward delivery) ⁴	147,022	1,500,000		
TO MEXICO IN EXCESS OF TREATY ⁵	961	15,580		
WATER BYPASSED PURSUANT TO IBWC MINUTE NO. 242 ⁶	11,375	113,355		
TOTAL LOWER BASIN & MEXICO	541,541	8,583,822		

¹ Incorporates 80 daily reporting stations which may be revised after provisional data reports are distributed by the USGS. Use to date estimated for users reporting monthly and annually.
² These values reflect adjusted apportionments. See Adjusted Apportionment calculation on each state page.
³ Includes unmeasured returns based on estimated consumptive use/diversion ratios by user from studies provided by Arizona Department of Water Resources, Colorado River Board of California, and Reclamation.
⁴ 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 the 5-year average for the period 2014-2018.
⁶ Bypass forecast is based on the average for the period 1990-2018.



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 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.



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

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

WATER USER	Use	Forecast	Estimated	Excess to	Diversion	Forecast	Approved	Excess to
	To Date CY 2020	Use CY 2020	Use CY 2020	Use CY 2020		To Date CY 2020	Diversion CY 2020	Diversion CY 2020
ARIZONA PUMPERS	1,088	14,074	14,074	---	1,674	21,654	21,654	0
LAKE MEAD NRA, AZ - Diversions from Lake Mead	4	86	86	---	4	86	86	0
LAKE MEAD NRA, AZ - Diversions from Lake Mohave	16	197	197	---	16	197	197	0
DAVIS DAM PROJECT	0	2	2	---	1	15	15	0
BULLHEAD CITY	718	8,122	8,122	---	1,137	12,720	12,720	0
MOHAVE WATER CONSERVATION DISTRICT	51	656	656	---	76	979	979	0
BROOKE WATER LLC	29	323	323	---	44	484	484	0
MOHAVE VALLEY IDD	1,078	16,516	16,516	---	1,996	30,585	30,585	0
FORT MOJAVE INDIAN RESERVATION, AZ	1,891	44,160	44,550	---	3,501	81,777	82,500	-723
GOLDEN SHORES WATER CONSERVATION DISTRICT	21	278	278	---	32	417	417	0
HAVASU NATIONAL WILDLIFE REFUGE	3	3,438	3,563	---	25	40,348	41,820	-1,472
LAKE HAVASU CITY	779	8,928	8,928	---	1,256	14,400	14,400	0
CENTRAL ARIZONA PROJECT (CAP)	98,500	1,382,603		---	98,500	1,382,603		---
TOWN OF PARKER	28	433	433	---	74	916	916	0
COLORADO RIVER INDIAN RESERVATION, AZ	2,314	249,374	246,946	---	29,007	512,082	512,102	-20
EHRENBURG IMPROVEMENT ASSOCIATION	18	228	228	---	25	319	319	0
CIBOLA VALLEY ¹	615	15,219	15,219	---	860	21,270	21,270	0
CIBOLA NATIONAL WILDLIFE REFUGE	316	14,264	14,264	0	509	23,005	23,005	0
IMPERIAL NATIONAL WILDLIFE REFUGE	413	3,799	3,799	0	665	6,128	6,128	0
BLM PERMITEES (PARKER DAM to IMPERIAL DAM)	58	756	756	0	90	1,163	1,163	0
CHA CHA, LLC	78	1,365	1,365	---	119	2,100	2,100	0
BEATTIE FARMS	41	722	722	---	62	1,110	1,110	0
YUMA PROVING GROUND	20	474	474	---	20	474	474	0
GILA MONSTER FARMS	156	5,006	5,257	---	289	8,709	9,156	-447
WELLTON-MOHAWK IDD	13,082	275,539	278,000	-2,461	25,576	408,919	412,965	-4,046
BLM PERMITEES (BELOW IMPERIAL DAM)	5	66	66	0	8	102	102	0
CITY OF YUMA	700	15,465	16,401	-936	1,701	26,242	27,500	-1,258
MARINE CORPS AIR STATION YUMA	104	1,345	1,360	---	104	1,345	1,360	-15
UNION PACIFIC RAILROAD	3	29	29	---	5	48	48	0
UNIVERSITY OF ARIZONA	57	896	896	---	57	896	896	0
YUMA UNION HIGH SCHOOL DISTRICT	7	150	150	---	9	200	200	0
DESERT LAWN MEMORIAL	2	20	20	---	2	28	28	0
NORTH GILA VALLEY IRRIGATION DISTRICT	374	12,097	12,165	---	2,837	43,871	44,200	-329
YUMA IRRIGATION DISTRICT	3,040	39,430	38,701	---	4,853	71,905	71,700	205
YUMA MESA IDD	10,006	147,608	143,893	---	13,400	234,945	239,280	-4,335
UNIT "B" IRRIGATION DISTRICT	1,152	21,457	20,888	---	1,372	29,174	29,400	-226
FORT YUMA INDIAN RESERVATION	97	1,259	1,259	---	150	1,937	1,937	0
YUMA COUNTY WATER USERS' ASSOCIATION	16,262	192,289	186,507	---	27,259	287,707	282,000	5,707
COCOPAH INDIAN RESERVATION	417	1,826	1,651	---	451	2,604	2,530	74
RECLAMATION-YUMA AREA OFFICE	8	103	103	---	8	103	103	0
RETURN FROM SOUTH GILA WELLS								
TOTAL ARIZONA	153,551	2,480,602	2,473,847		217,774	3,273,567	3,282,849	
CAP	98,500	1,382,603				1,382,603		
ALL OTHERS	55,051	1,097,999	1,088,847			1,890,964	1,897,849	
YUMA MESA DIVISION, GILA PROJECT	13,420	199,135	171,610	27,525		350,721		

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)	(63,811)
Total State Adjusted Apportionment	2,473,916
Excess to Total State Adjusted Apportionment	6,686
Estimated Allowable Use for CAP	1,446,414

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 (LBOs), 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 LBOs, the state of Arizona shall make an annual DCP Contribution in the total amount of 192,000 AF. In accordance with the Agreement Regarding Lower Basin Drought Contingency Plan Obligations, it is currently anticipated that the required DCP Contribution will be made 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.



LOWER COLORADO BASIN REGION
CY 2020

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	Forecast	Estimated	Excess to	Diversion	Forecast	Approved	Excess to
	To Date	Use	Use	Use	To Date	Diversion	Diversion	Approved
	CY 2020	CY 2020	CY 2020	CY 2020	CY 2020	CY 2020	CY 2020	CY 2020
CALIFORNIA PUMPERS	132	1,704	1,704	---	238	3,080	3,080	0
FORT MOJAVE INDIAN RESERVATION, CA	309	8,650	8,996	---	574	16,077	16,720	-643
CITY OF NEEDLES (includes LCWSP use)	122	1,605	1,605	0	172	2,261	2,261	0
METROPOLITAN WATER DISTRICT	18,112	699,912		---	18,525	702,754		---
COLORADO RIVER INDIAN RESERVATION, CA	250	3,233	3,233	---	414	5,355	5,355	0
PALO VERDE IRRIGATION DISTRICT	10,053	419,260	419,768	---	48,702	853,495	856,000	-2,505
YUMA PROJECT RESERVATION DIVISION	2,550	51,008	50,562	---	6,171	97,074	96,819	255
YUMA PROJECT RESERVATION DIVISION - INDIAN UNIT	---	---	---	---	2,950	46,088	46,019	69
YUMA PROJECT RESERVATION DIVISION - BARD UNIT	---	---	---	---	3,221	50,987	50,800	187
YUMA ISLAND PUMPERS	169	2,188	2,188	---	306	3,954	3,954	0
FORT YUMA INDIAN RESERVATION - RANCH 5	30	547	547	---	56	990	990	0
IMPERIAL IRRIGATION DISTRICT ¹	158,126	2,638,791	2,640,300	-1,509	164,433	2,710,892	2,715,352	---
SALTON SEA SALINITY MANAGEMENT	0	0	0	0	0	0	0	---
COACHELLA VALLEY WATER DISTRICT	26,212	394,591	394,000	591	27,271	406,616	406,654	---
OTHER LCWSP CONTRACTORS	50	642	642	---	81	1,054	1,054	0
CITY OF WINTERHAVEN	5	63	63	---	7	97	97	0
CHEMEHUEVI INDIAN RESERVATION	15	197	197	---	877	11,340	11,340	0
TOTAL CALIFORNIA	216,135	4,222,391			267,827	4,815,039	4,818,519	

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	(1,509)
IID Creation of Additional Conserved Water (Estimated) ⁴	0
MWD Creation of Extraordinary Conservation ICS (Estimated) ⁵	(176,992)
Total State Adjusted Apportionment	4,221,354
Excess to Total State Adjusted Apportionment	1,037
Estimated Allowable Use for MWD	876,904

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.

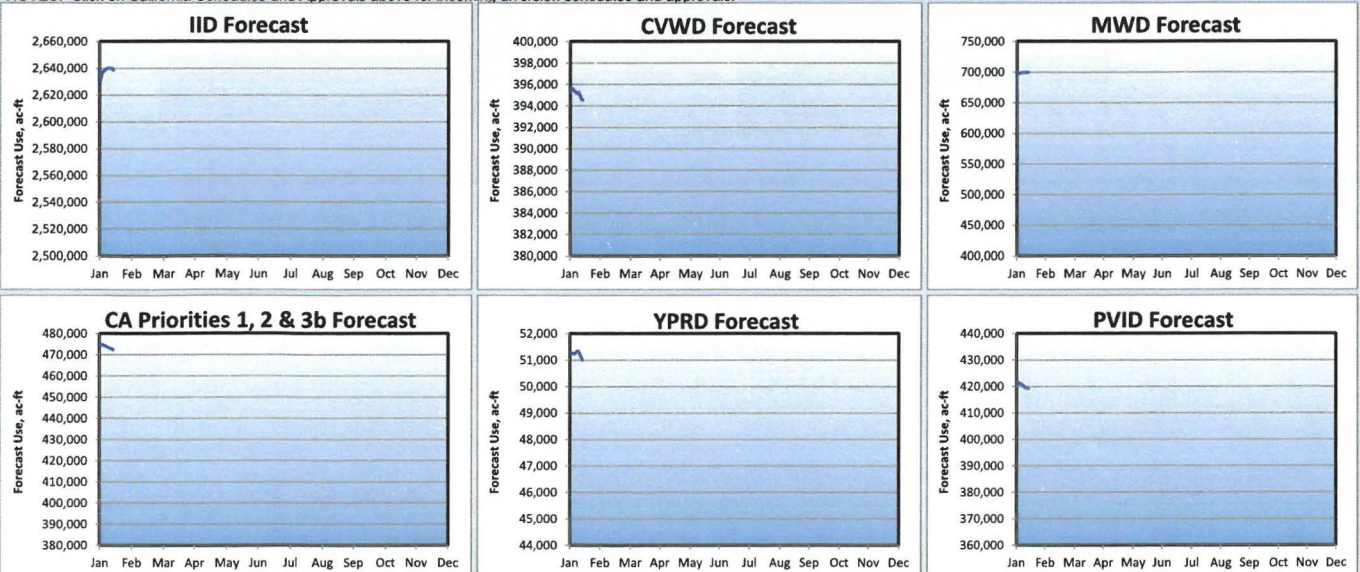
² System Conservation Water to be conserved by the City of Needles pursuant to System Conservation Implementation Agreement No. 15-XX-30-W0596, executed under the Pilot System Conservation Program. This water will remain in Lake Mead to benefit system storage.

³ IID has been approved to create up to 62,000 AF of 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.





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

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

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

WATER USER	Use	Forecast	Estimated	Excess to	Diversion	Forecast	Approved	Excess to
	To Date	Use	Use	Estimated		Diversion		Diversion
	<u>CY 2020</u>	<u>CY 2020</u>	<u>CY 2020</u>	<u>CY 2020</u>	<u>CY 2020</u>	<u>CY 2020</u>	<u>CY 2020</u>	<u>CY 2020</u>
ROBERT B. GRIFFITH WATER PROJECT (SNWS)	37,196	439,757		---	37,196	439,757		---
LAKE MEAD NRA, NV - Diversions from Lake Mead	111	1,500	1,500	---	111	1,500	1,500	0
LAKE MEAD NRA, NV - Diversions from Lake Mohave	58	500	500	---	58	500	500	0
BASIC MANAGEMENT INC.	733	8,208	8,208	---	733	8,208	8,208	0
CITY OF HENDERSON (BMI DELIVERY)	1,366	15,878	15,878	---	1,366	15,878	15,878	0
NEVADA DEPARTMENT OF WILDLIFE	1	12	12	0	61	1,000	1,000	---
PACIFIC COAST BUILDING PRODUCTS INC.	82	928	928	---	82	928	928	0
BOULDER CANYON PROJECT	13	172	172	---	23	300	300	0
BIG BEND WATER DISTRICT	340	4,822	4,822	---	848	10,000	10,000	0
FORT MOJAVE INDIAN TRIBE	48	3,842	4,020	---	72	5,734	6,000	-266
LAS VEGAS WASH RETURN FLOWS	-27,451	-223,725	-221,726	---				
TOTAL NEVADA	12,497	251,894	251,500	0	40,550	483,805	481,500	-266
SOUTHERN NEVADA WATER SYSTEM (SNWS)	9,745	216,032				439,757		
ALL OTHERS	2,752	35,862				44,048		
NEVADA USES ABOVE HOOVER	12,109	243,230				468,071		
NEVADA USES BELOW HOOVER	388	8,664				15,734		

Tributary Conservation Intentionally Created Surplus (ICS)

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

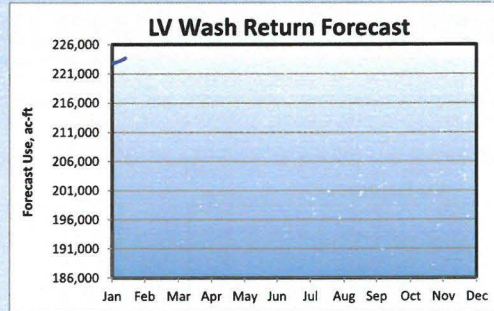
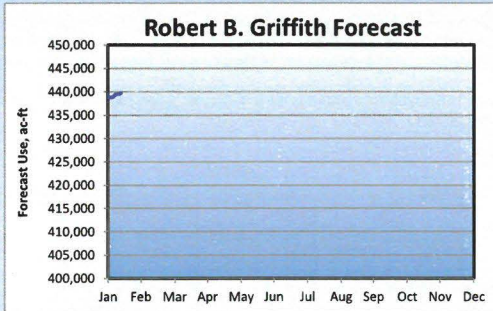
NEVADA ADJUSTED APPORTIONMENT CALCULATION

Nevada Basic Apportionment	300,000
SNWA Creation of Extraordinary Conservation (EC) ICS (Estimated) ²	(48,106)
Total State Adjusted Apportionment	251,894
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.

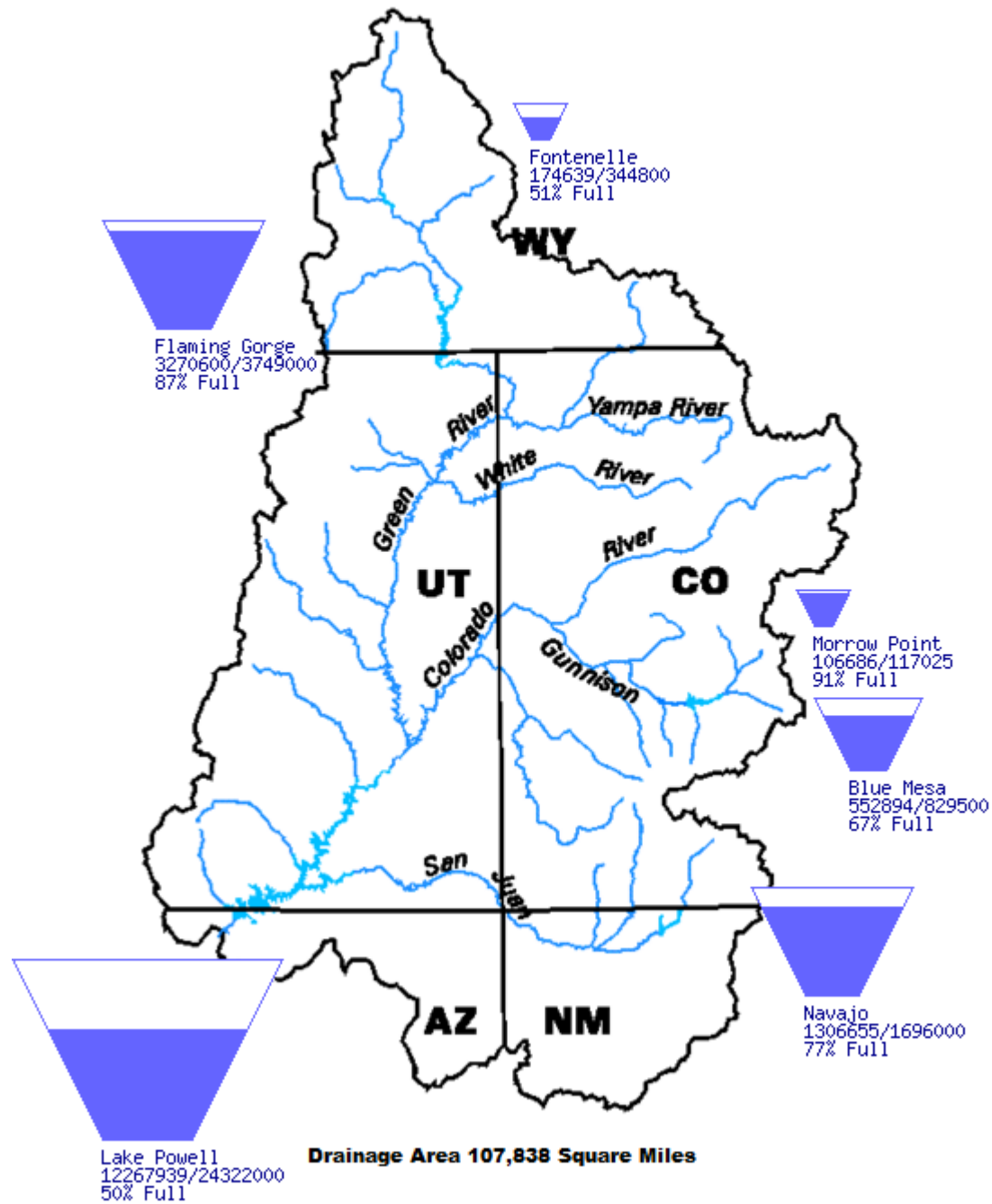


Upper Colorado Region Water Resources Group

River Basin Tea-Cup Diagrams

Data Current as of:
02/02/2020

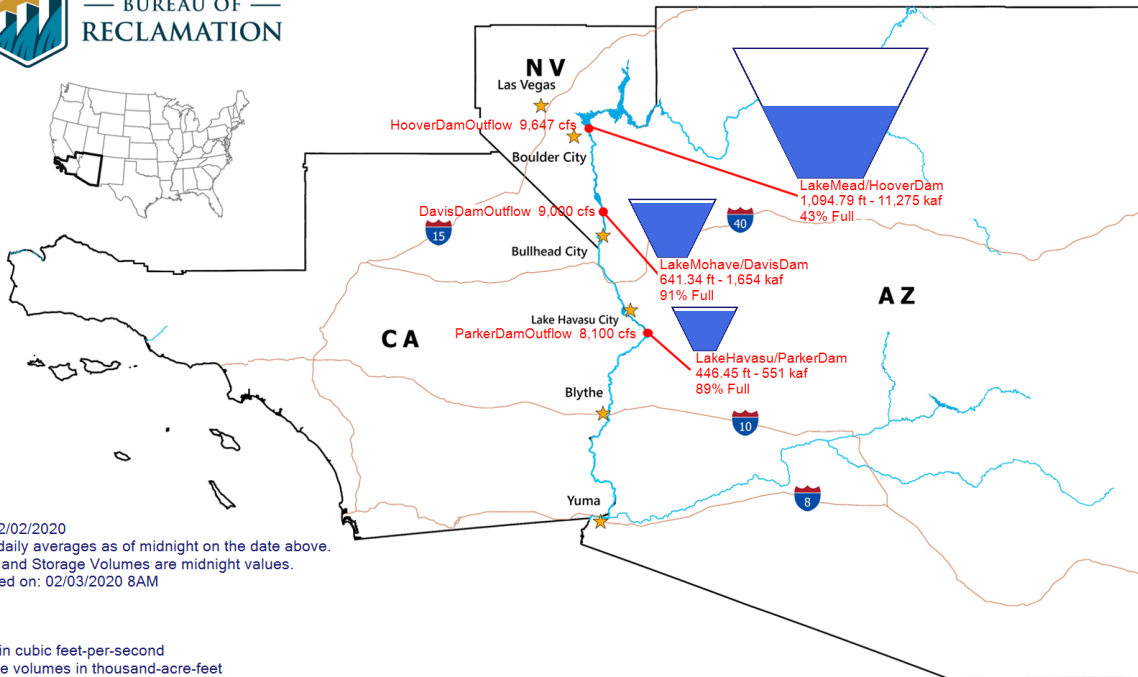
Upper Colorado River Drainage Basin



Lower Colorado River Teacup Diagram



BUREAU OF RECLAMATION



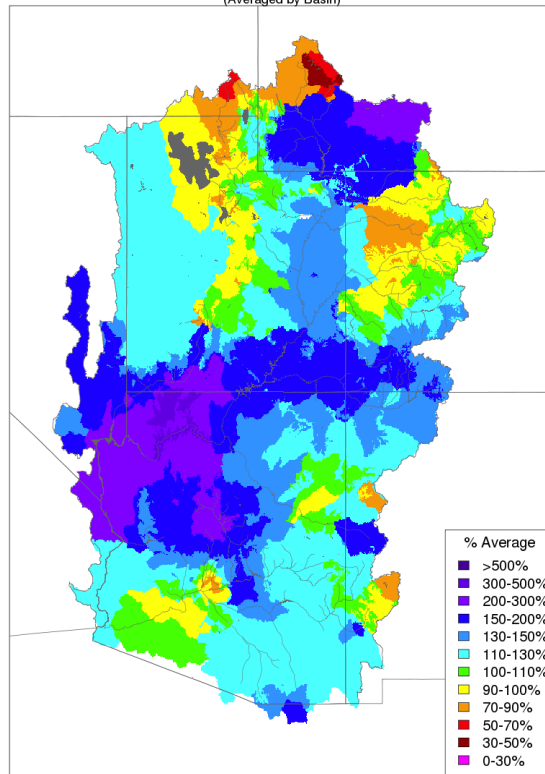
Data for: 02/02/2020
 Flows are daily averages as of midnight on the date above.
 Elevations and Storage Volumes are midnight values.
 Last updated on: 02/03/2020 8AM

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 December 2019 and January 2020

Monthly Precipitation - December 2019

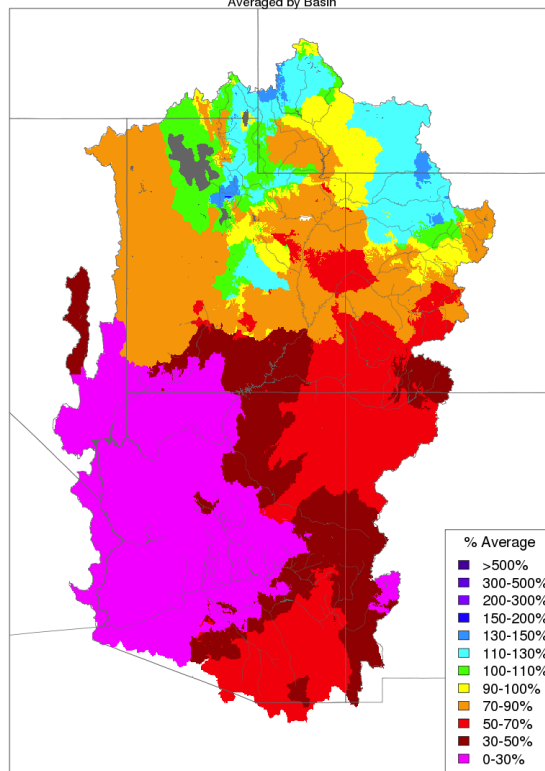
(Averaged by Basin)



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

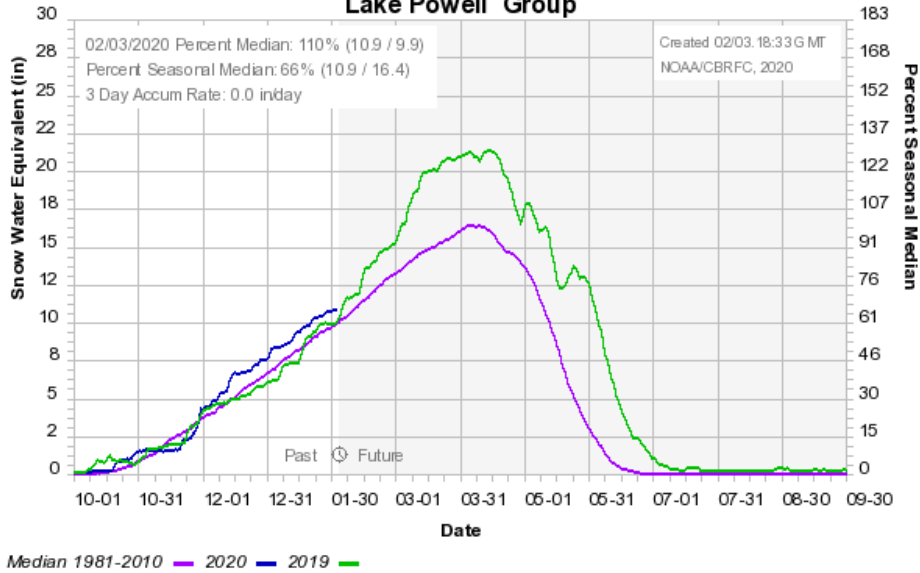
Monthly Precipitation - January 2020

(Averaged by Basin)

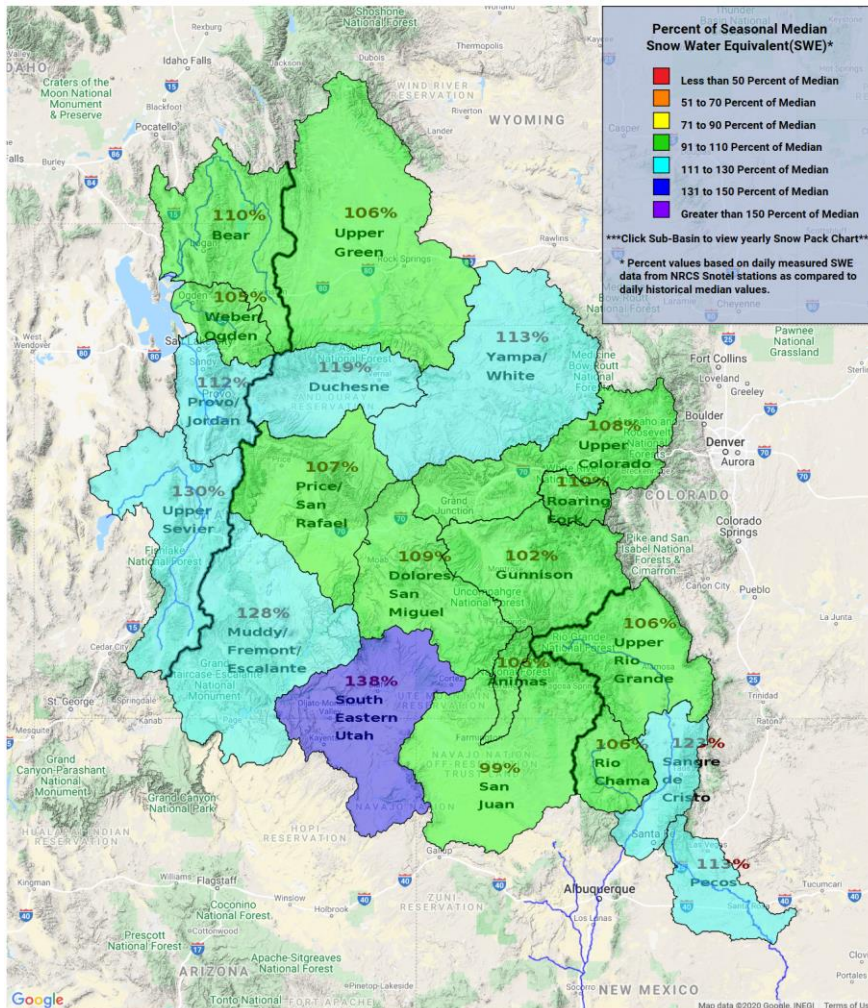


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Colorado Basin River Forecast Center Lake Powell Group

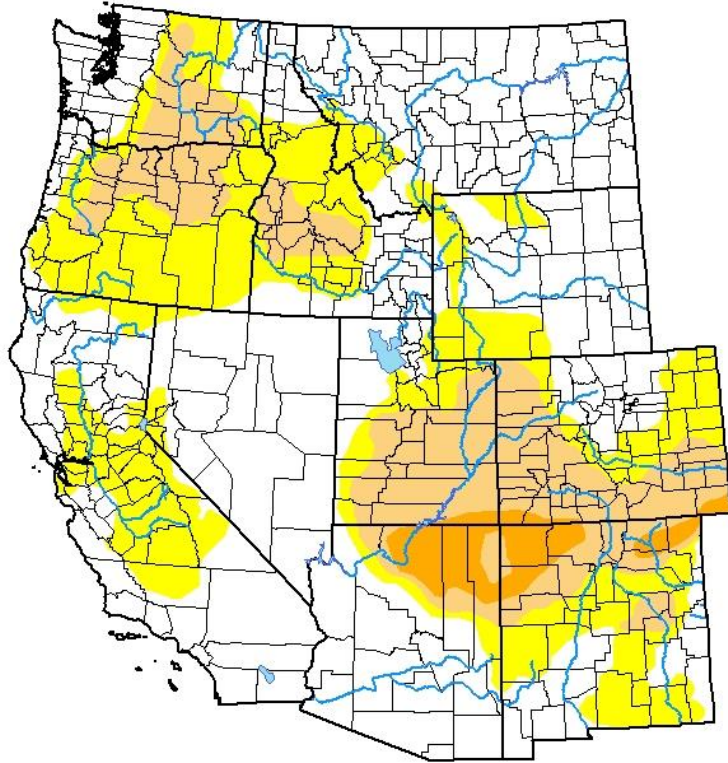


Snow Pack Conditions Map Upper Colorado Region



**U.S. Drought Monitor
West**

January 28, 2020
(Released Thursday, Jan. 30, 2020)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	55.43	44.57	18.96	3.08	0.00	0.00
Last Week <i>01-21-2020</i>	57.88	42.12	19.82	4.99	0.00	0.00
3 Months Ago <i>10-29-2019</i>	62.16	37.84	21.73	9.81	0.00	0.00
Start of Calendar Year <i>12-31-2019</i>	59.17	40.83	18.17	7.12	0.00	0.00
Start of Water Year <i>10-01-2019</i>	68.40	31.60	16.32	3.16	0.00	0.00
One Year Ago <i>01-29-2019</i>	30.36	69.64	41.22	17.12	4.86	0.39

Intensity:

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

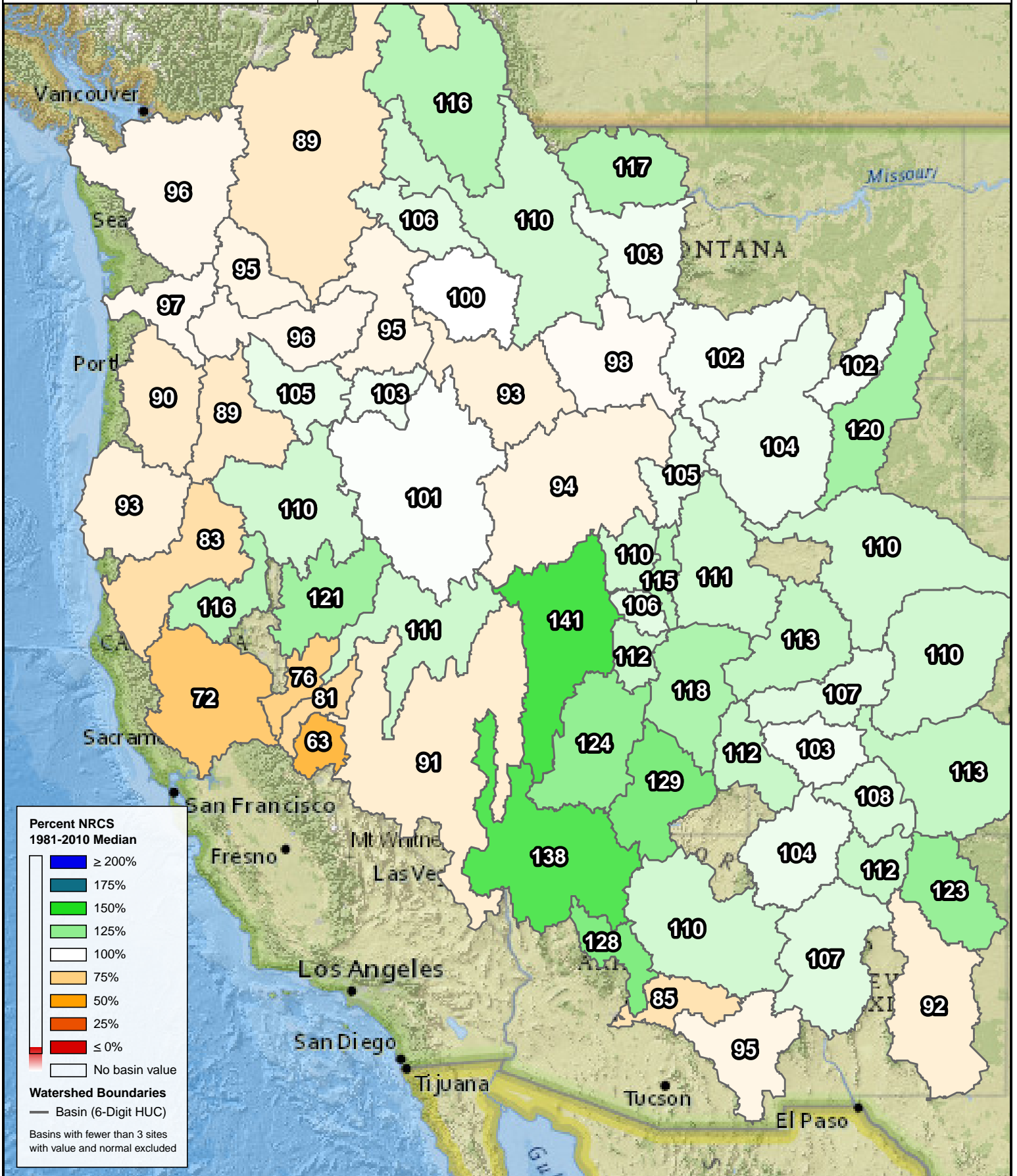
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

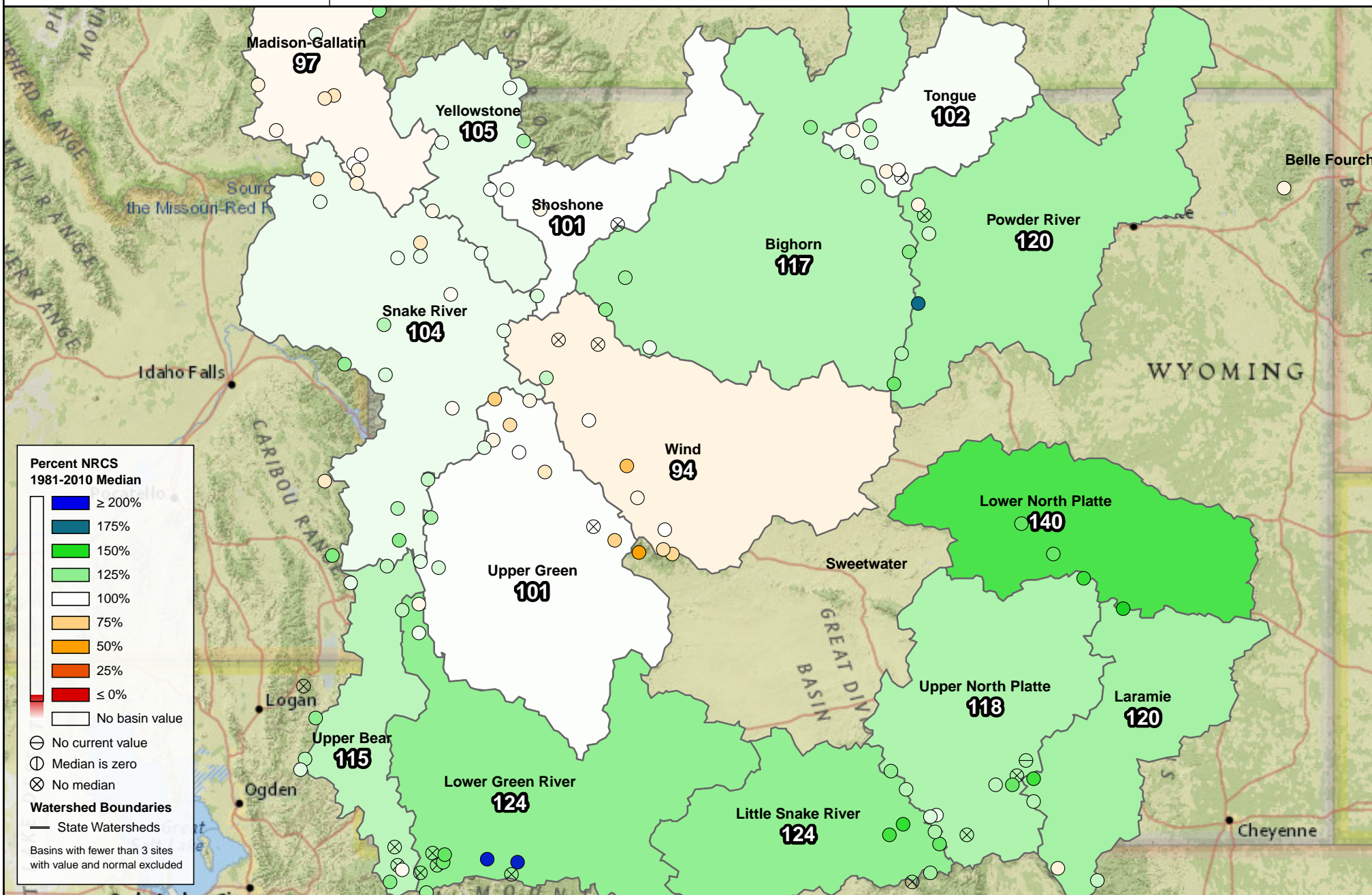
Author:

Richard Heim
NCEI/NOAA



droughtmonitor.unl.edu





Percent NRCS 1981-2010 Median

Dark Blue	≥ 200%
Blue	175%
Green	150%
Light Green	125%
White	100%
Light Orange	75%
Orange	50%
Dark Orange	25%
Red	≤ 0%
White	No basin value

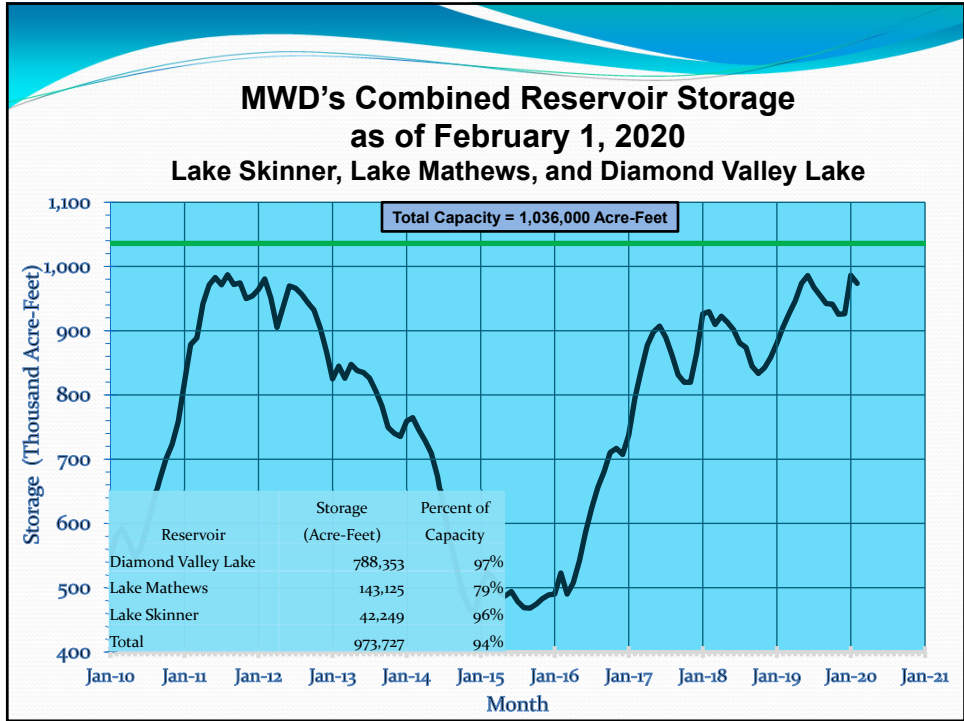
○ No current value
⊕ Median is zero
⊗ No median

Watershed Boundaries

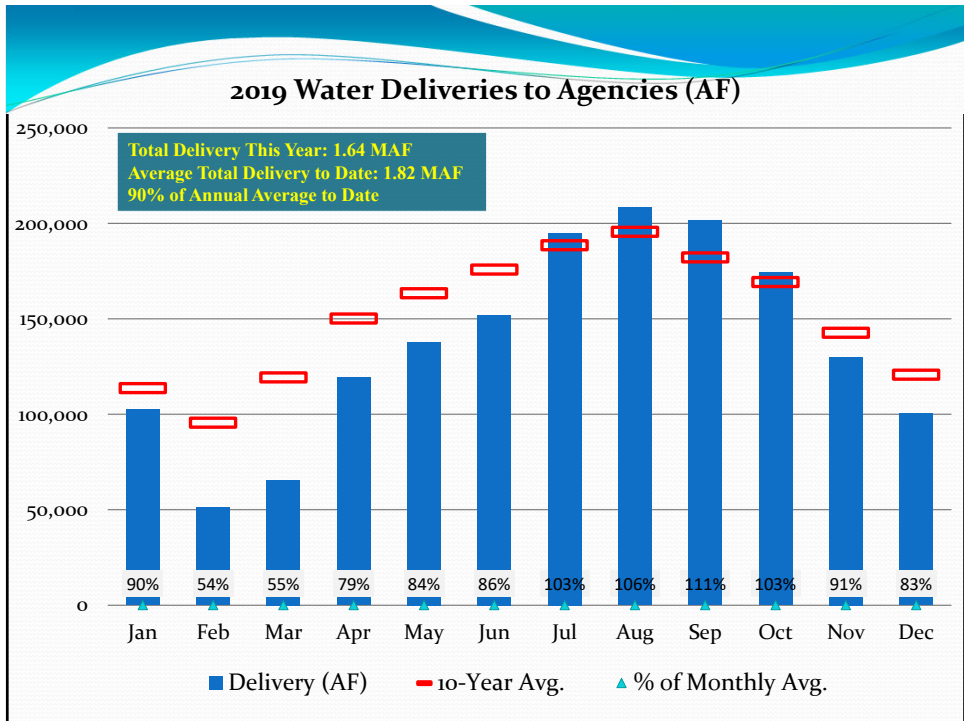
— State Watersheds

Basins with fewer than 3 sites with value and normal excluded





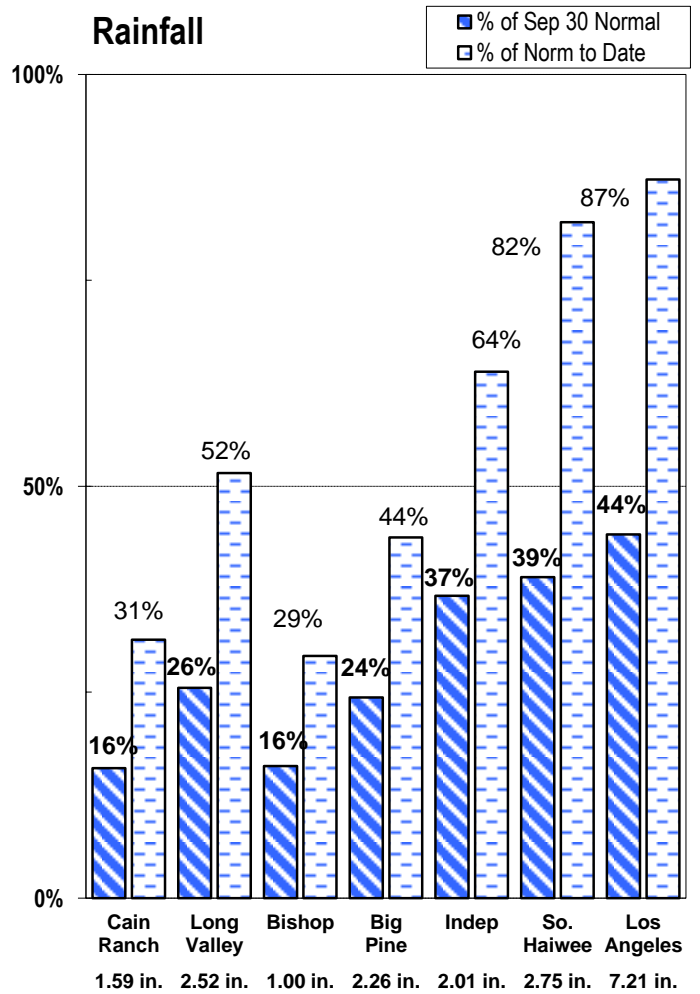
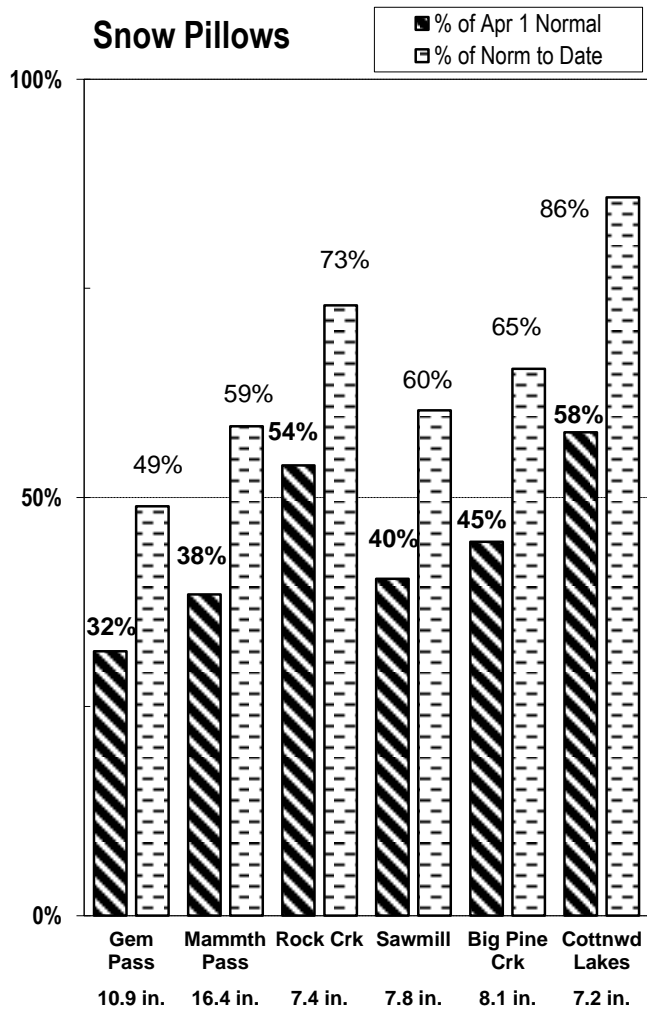
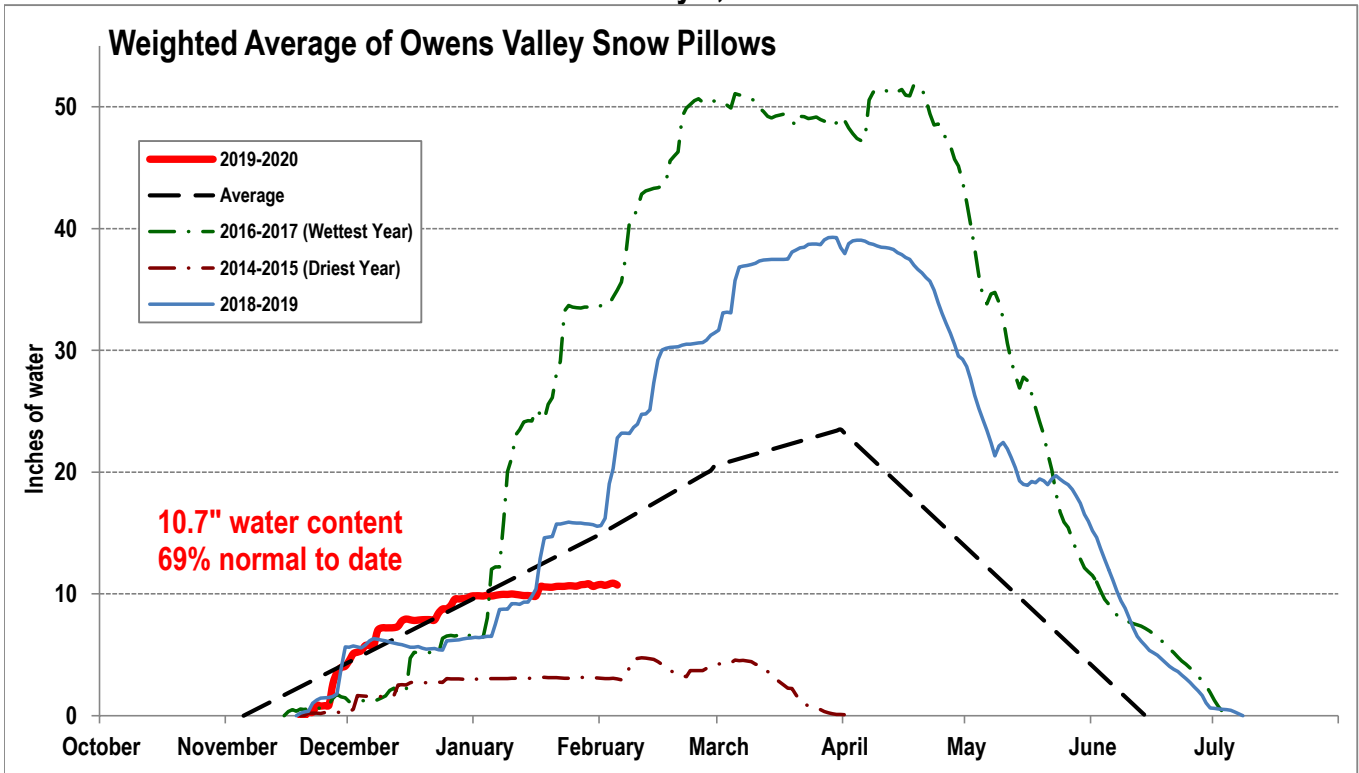
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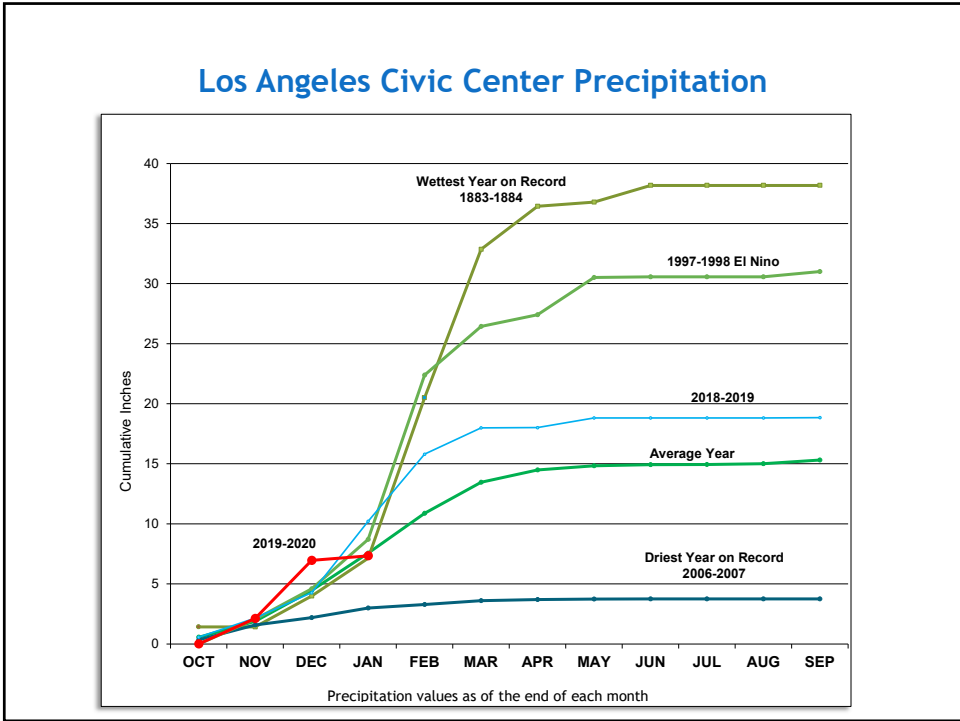
2

EASTERN SIERRA CURRENT PRECIPITATION CONDITIONS

February 5, 2020



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



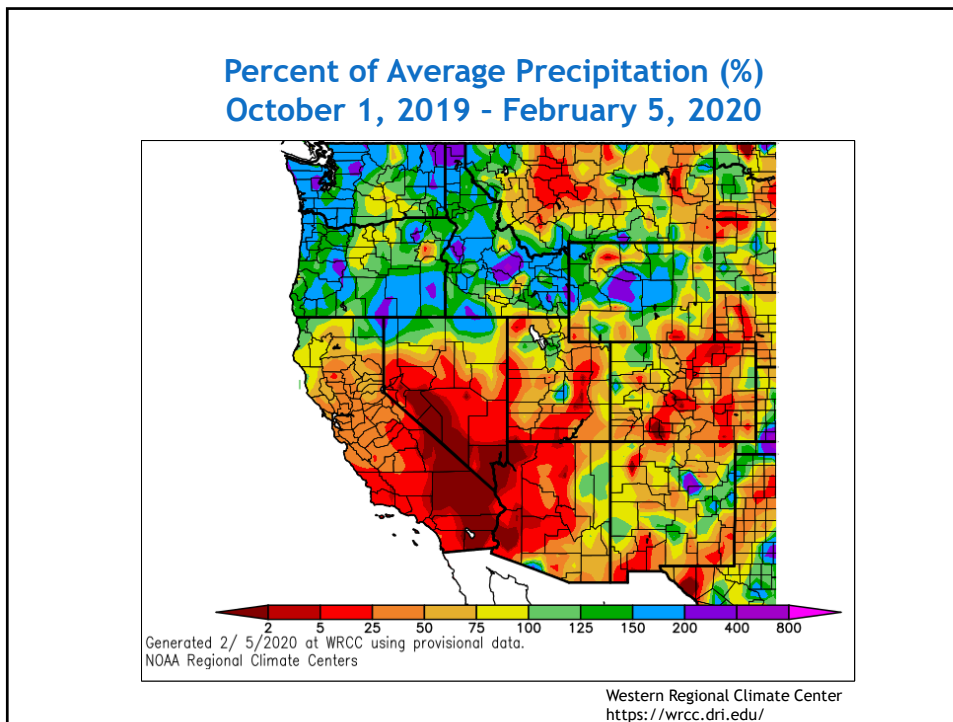
1

Precipitation at Six Major Stations in Southern California

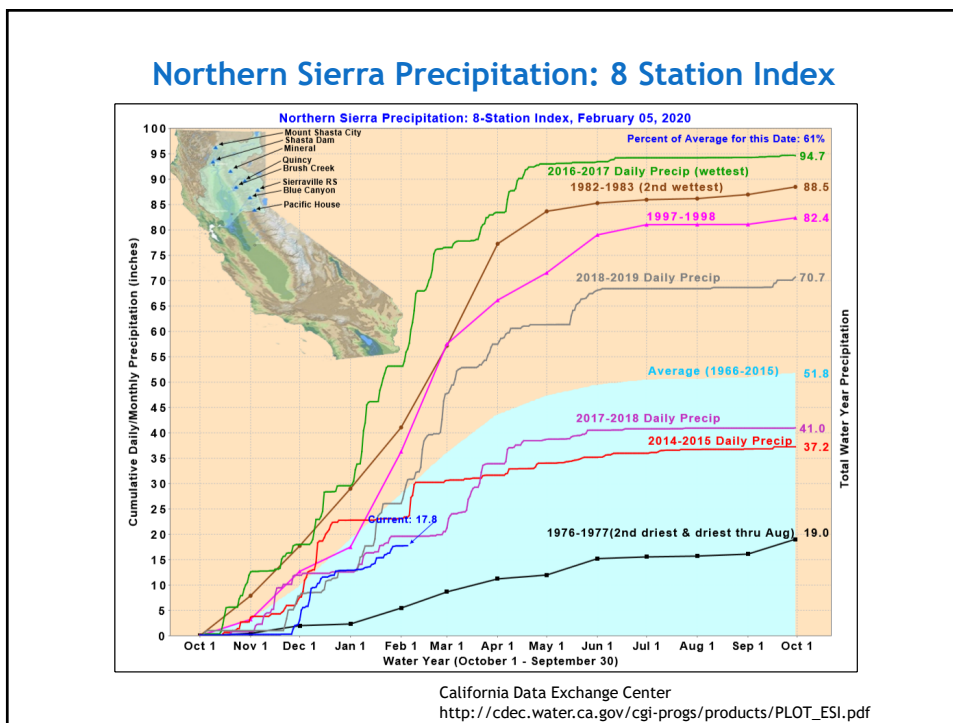
From October 1, 2019 to January 31, 2020

Station	Precipitation in inches		Average to Date	Percent of Average
	Jan	Oct 1 to Jan 31		
San Luis Obispo	0.38	5.36	12.04	45%
Santa Barbara	0.55	6.06	9.02	67%
Los Angeles	0.38	7.34	7.56	97%
San Diego	0.48	7.23	5.25	138%
Blythe	0.00	1.18	1.62	73%
Imperial	0.00	1.61	1.33	121%

2

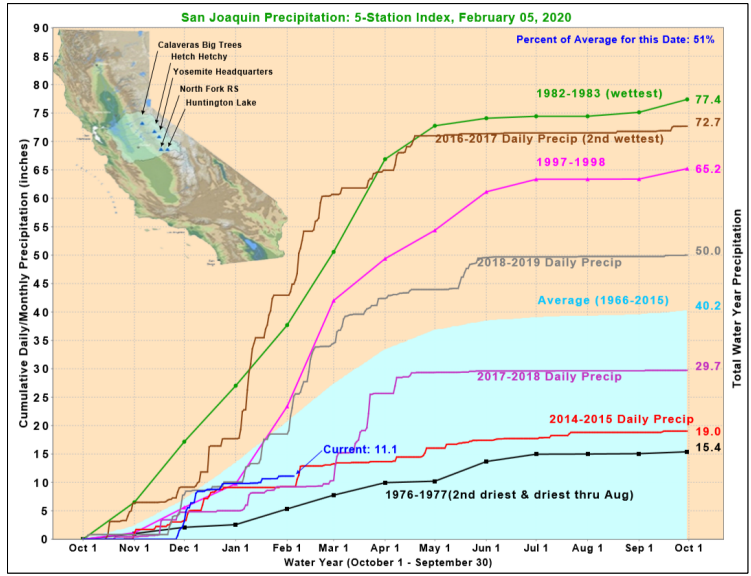


3



4

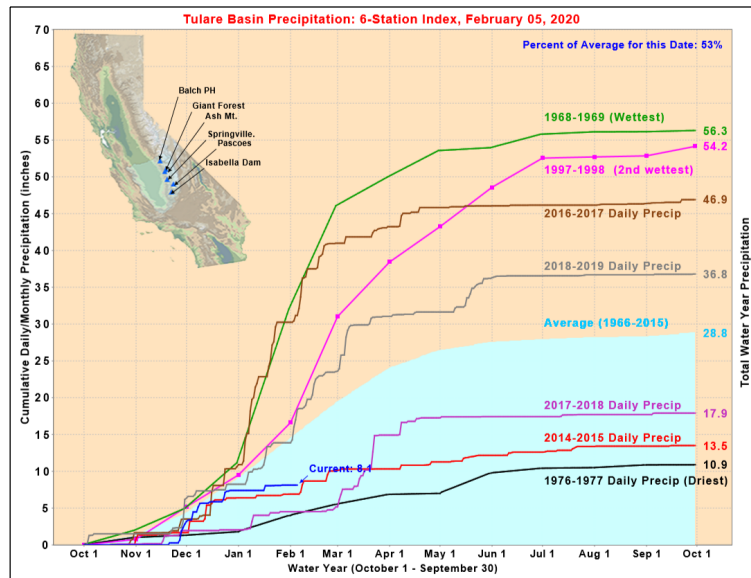
San Joaquin Precipitation: 5 Station Index



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

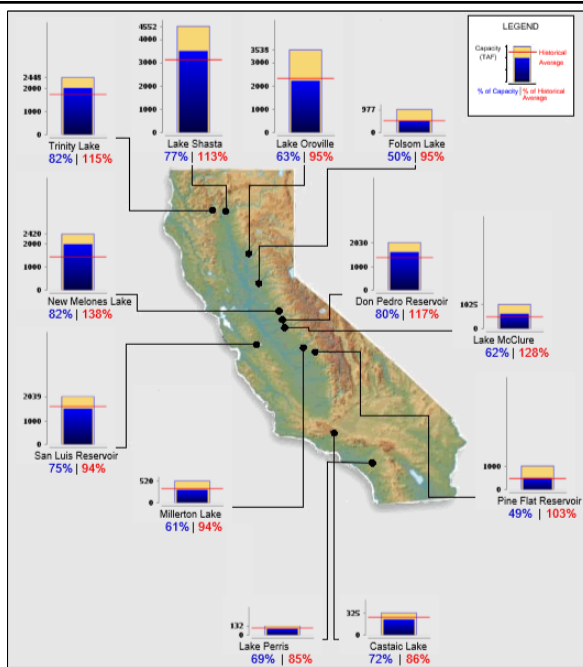
Comparison of SWP Water Storage

Reservoir	Capacity	2019 Storage (acre-feet)		2020 Storage (acre-feet)	
		As of Feb 1	% of Cap.	As of Feb 1	% of Cap.
Frenchman	55,475	42,135	76%	45,164	81%
Lake Davis	84,371	63,572	75%	63,330	75%
Antelope	22,564	14,302	63%	17,244	76%
Oroville	3,553,405	1,413,192	40%	2,210,865	62%
TOTAL North	3,715,815	1,533,201	41%	2,336,603	63%
Del Valle	39,914	30,143	76%	25,488	64%
San Luis	2,027,835	1,749,761	86%	1,522,160	75%
Pyramid	169,901	155,512	92%	154,491	91%
Castaic	319,247	243,397	76%	232,502	73%
Silverwood	74,970	66,073	88%	59,365	79%
Perris	126,841	114,916	91%	59,049	47%
TOTAL South	2,758,708	2,359,802	86%	2,053,055	74%
TOTAL SWP	6,474,523	3,893,003	60%	4,389,658	68%

As of January 24, 2020, the Table A allocations for SWP contractors is 15%.

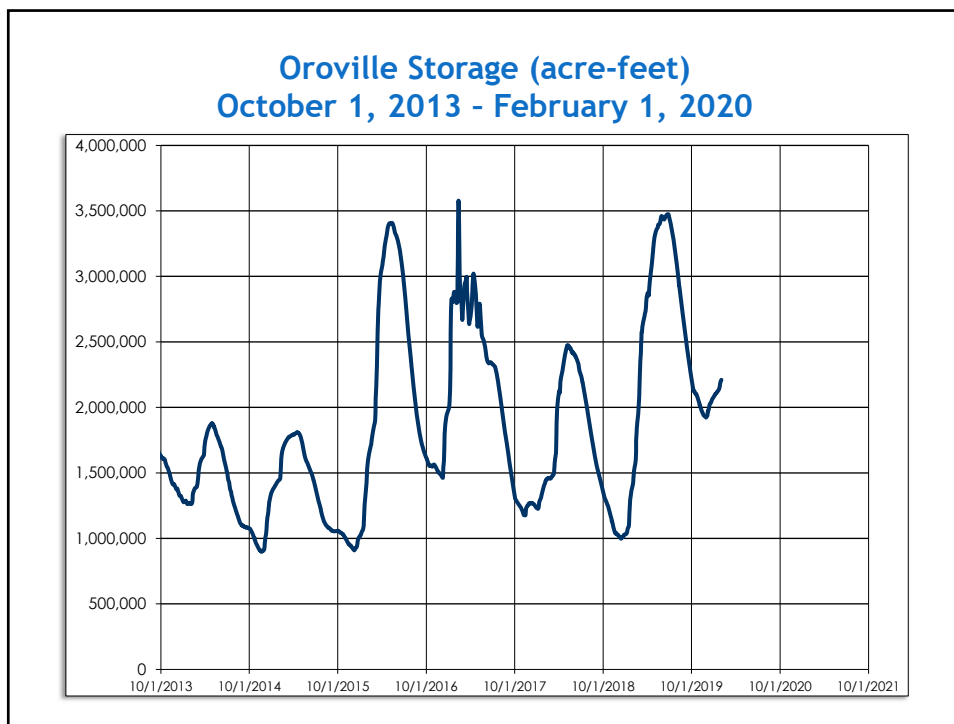
7

Reservoir Current Conditions as of February 5, 2020

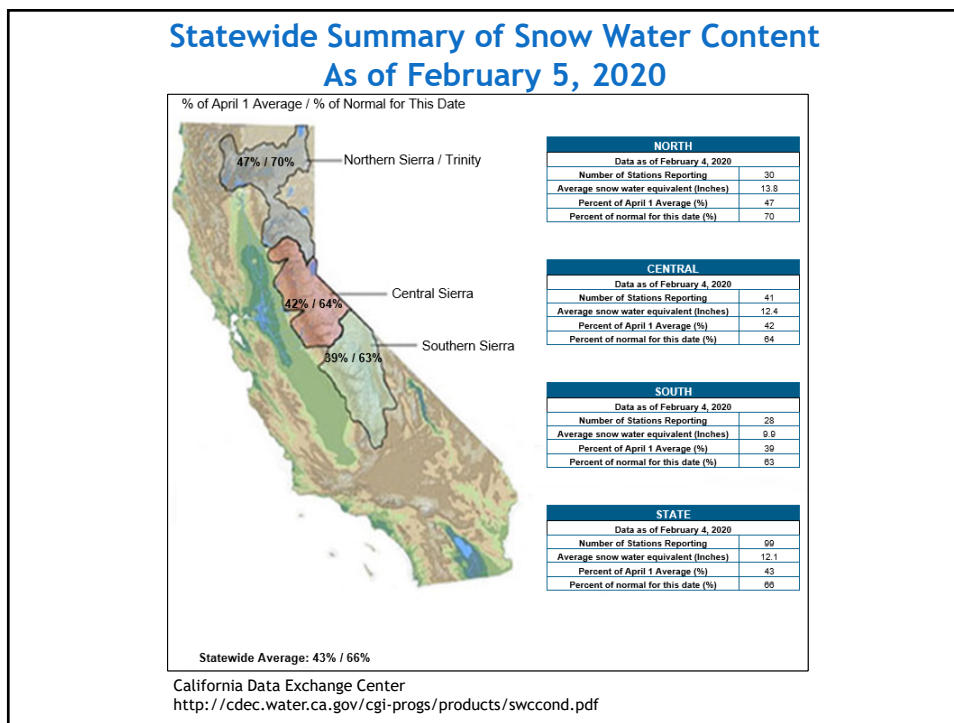


California Data Exchange Center
<https://cdec.water.ca.gov/reportapp/javareports?name=rescond.pdf>

8



9



10



*The Lower Colorado River Multi-Species Conservation Program
invites you to join us for the
15 - Year Tour*

*The bus tour will start at the
Hilton Garden Inn, Yuma, Arizona March 24, 2020 at 7:30 am
Ending at Cottonwood Cove, Nevada March 26, 2020 at 1 pm
Transportation to Boulder City, McCarran Airport and
Yuma will be provided at the conclusion of the tour*

*RSVP by February 28, 2020
to Carrie Ronning
cronning@usbr.gov, (702) 293-8106
Casual outdoor dress*



Conservation Gains for Humpback Chub Prompt Service to Propose Downlisting Native Colorado River Fish from Endangered to Threatened

For Immediate Release

January 21, 2020

DENVER - One of the Colorado River's native fishes is one-step closer to recovery thanks to the collaborative conservation work of the U.S. Fish and Wildlife Service and numerous state, federal, tribal and private partners.

After a thorough review using the best available science, the Service today proposes to reclassify the humpback chub from endangered to threatened under the

Endangered Species Act (ESA). This decision is based on a recent assessment that concluded the humpback chub is no longer in danger of immediate extinction because of ongoing recovery efforts. The proposed rule to reclassify this unique native fish will publish in the ***Federal Register*** on January 22, 2020 opening a 60-day public comment period.

Recovery efforts for the humpback chub are a result of a strong collaboration between the Upper Colorado River Endangered Fish Recovery Program and the Glen Canyon Dam Adaptive Management Program. Partners in these two programs have improved conditions by enacting conservation measures, such as restoring river flows through water release from reservoirs, removing non-native predators and introducing humpback chub to new locations across its native range.

“The improved status of the humpback chub would not have been possible without the shared commitment to conservation from all of our partners along this important and vital river,” said **U.S. Fish and Wildlife Service Regional Director Noreen Walsh**. “Our best chance for continued success rests in the power of these long-term, collaborative partnerships.”



A humpback Chub. Photo by USFWS.

The Colorado River is known for its scenic beauty as it flows over 1,400 miles from the Rocky Mountains to the Gulf of California. The river's beauty is not just above the surface – it is also found below, with many unique native fish species, including the humpback chub. This member of the minnow family was first documented in the Lower Colorado River Basin in the Grand Canyon in the 1940s and in the upper Colorado River Basin in the 1970s. It was placed on the United States' original list of endangered species in 1967. This fish is uniquely adapted to live in the swift and turbulent whitewaters found in the canyon-bound areas of the river. The fleshy hump behind its head, which gives the fish its name, and its large, curved fins allow the humpback chub to maintain its position in the swiftly moving current.

The largest population of humpback chub, which is found in the Colorado and Little Colorado rivers in the Grand Canyon of Arizona, has reached a stable population of about 12,000 adults. Surveys also recently identified fish living in smaller tributaries in the Grand Canyon, further supporting the species' viability in the wild. Four smaller populations in the Green and Colorado rivers of the Upper Colorado River Basin have also remained stable over the last 10-15 years. One of the factors that led to the decision to downlist the species is that all five populations have naturally remained stable without the need for stocking with hatchery-raised fish. These population gains, when coupled with ongoing flow management and non-native predatory fish control, led the Service to conclude that the humpback chub is no longer in danger of immediate extinction.

Despite these recent conservation gains, there are still threats to the humpback chub. Habitat alterations from changes in river flows and persistent drought, as well as competition and predation from invasive species, still pose a risk to the fish. The Service will continue working with our partners to mitigate these threats and monitor the population throughout its range.

In conjunction with this proposed change in status, the Service is proposing to utilize provisions under section 4(d) of the ESA. Under the proposed rule, the Service will no longer regulate "take" (harm or mortality) of humpback chub associated with certain conservation actions that benefit the fish. The 4(d) rule will also reduce the regulatory requirements for state fish and wildlife agencies, and other non-federal stakeholders to create refuge populations, expand the range of the species, remove non-native fishes and create catch-and-release fishing opportunities.

A 4(d) rule is one of many tools within the ESA. It allows the Service to tailor protections for threatened species to those that are most needed for the conservation of the species, while eliminating the regulatory burden of restrictions that serve no additional conservation benefit.

The Service will accept comments on the proposed rule and any new information on the species, threats to its viability and actions that may impact the species, for 60 days from January 22 until March 23, 2020. To review and learn more about the species status assessment, proposed rule and how to submit comments, please visit: <https://coloradodriverrecovery.org/events-news/updates-documents.html>.

For additional information about humpback chub conservation, visit: <https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=3930>.

*The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. For more information on our work and the people who make it happen in the West, visit **our website**, or connect with us through any of these social media channels: **Facebook**, **Twitter**, **Flickr**, **YouTube**, and **Instagram**.*

Trump admin fast-tracks Colorado River pipeline



Lake Powell, a man-made reservoir on the Colorado River that straddles Utah and Arizona. Brittany Patterson/E&E News

The Trump administration has put one of the largest new water projects on the Colorado River on the fast track, raising concerns among environmentalists.

Utah first proposed building a 140-mile pipeline from Lake Powell on the Utah-Arizona border more than a decade ago. The plan, however, was waylaid by environmental and other reviews during the Obama administration.

But last fall, the Utah Division of Water Resources updated the proposal, removing a hydropower plant and cutting \$100 million from its price tag.

The move also changed which federal agency had jurisdiction over it — from the Federal Energy Regulatory Commission to the Bureau of Reclamation.

Reclamation signaled to the state that it wants to move swiftly on the plan, in recognition of how it was stalled at FERC, said Joel Williams of the Utah Division of Water Resources. The agency is working on an "aggressive" schedule for the review, he added.

Advertisement

Utah wants to divert more than 86,000 acre-feet of water from Lake Powell, one of the Colorado River's main reservoirs, and shuttle it to St. George and other communities in the southern part of the state. The project is expected to cost between \$1 billion and \$1.7 billion, according to the state.

The state has characterized the project as key to securing water reliability for its quickly growing population.

But environmentalists and conservationists say the plan is a misguided attempt to wring more water out of the Colorado River, which provides water to 40 million people and millions of acres of farmland. They argue that the waterway is already overdrafted and is struggling with the effects of climate change, including more frequent and intense droughts.

Groups including Living Rivers, WildEarth Guardians and the Center for Biological Diversity [submitted](#) comments to Reclamation last week as the agency began the National Environmental Policy Act review.

"The Colorado River is tapped out," said Jen Pelz, the wild rivers program director at WildEarth Guardians. "The Lake Powell Pipeline is part of the Upper Basin state's feeding frenzy to squeeze every last drop out of the river before reality sets in and someone finally says enough is enough."

The groups said the environmental review must take into account climate change impacts, including how it will affect water availability, as well as endangered and threatened species.

But of particular concern for the groups is the timing of the proposal and review.

The Colorado River's seven basin states are managing water under a new Drought Contingency Plan, an agreement to safeguard water levels at the river's two main reservoirs, Lake Mead and Lake Powell, through cutbacks. The two lakes are critical water buffers during droughts ([Greenwire](#), March 20, 2019).

Powell is the primary bank for the upper basin states — Wyoming, Utah, Colorado and New Mexico — which do not use their full allocation of Colorado River water. What they

don't use flows to Lake Powell, which then releases water downriver to Lake Mead, which serves the lower basin states of California, Nevada and Arizona.

Under a 1922 compact, Utah is allocated about 23% of the Upper Basin's water. It currently uses about 72% of that allotment.

The state has pushed back on criticism of the project based on Colorado River water availability.

"All water providers, including the state of Utah, understand the level of concern some have regarding the perceived uncertainty associated with the use of Colorado River water," Eric Millis said last year when he was director of the Utah Division of Water Resources.

"The Colorado River is reliable," he said. "We work closely with our federal partners and other basin states to plan for future needs and mitigate potential impacts."

Even with an accelerated timeline, the environmental review will still take years, said Williams, the assistant director of development at Utah's Division of Water Resources. He anticipates the final analysis will be released early next year, but then it would take a couple of years for designing the project and another four to six years to build it.

So, he said, between 2028 and 2030 is the earliest the pipeline could deliver water to St. George.

Environmental groups charge that the state and Reclamation are trying to get the additional water diversion on the books before new operational guidelines for the Colorado River are finalized. Those are due in 2026.

"That's a major part of this push," said Sarah Stock of Living Rivers. "St. George doesn't need the water now, they won't need it for decades. They are trying to use this water while they still have claim to it."

Reclamation's project manager in Utah did not respond to a phone message.

Williams said that's not the case and that the timing is more a reflection of Reclamation recognizing how long the project was stuck under FERC's jurisdiction.

"It was never planned that way," he said. "It's kind of a coincidence of timing."

But he added that a lot is likely to change on the Colorado River in the coming years.

"It's an exciting time for the Colorado River," he said, "that's for sure."



— BUREAU OF —
RECLAMATION

NEWS RELEASE

For Release: January 31, 2020

Contact: Justyn Liff, 970-248-0625, jliff@usbr.gov or Lesley McWhirter, 970-248-0608, lmcwhirter@usbr.gov

Reclamation extends comment period on alternatives to reduce salinity and improve water quality in the Colorado River

GRAND JUNCTION, Colo. – The Bureau of Reclamation is extending the public comment period on a draft Environmental Impact Statement that analyzes alternatives to reduce salinity in the Colorado River from sources in the Paradox Valley in western Colorado. The public comment period now closes February 19, 2020.

Currently, the Paradox Valley Unit in Montrose County, Colorado, is intercepting naturally occurring brine and injecting it 16,000 feet underground via a deep injection well. The PVU began operating in 1996 and is nearing the end of its useful life. The United States has a water quality obligation to control salt in the Colorado River, in compliance with the Colorado River Basin Salinity Control Act and a 1944 treaty with Mexico.

Reclamation is preparing an EIS and has released a draft for public review and comment. Alternatives analyzed in the draft EIS include a new injection well; evaporation ponds; zero liquid discharge technology; and no action, which would result in no salinity control in the Paradox Valley.

The draft Environmental Impact Statement is available online at www.usbr.gov/uc/progact/paradox/index.html or a copy can be requested by contacting Reclamation.

Reclamation will consider all comments received by 11:59 p.m. Mountain Standard Time on February 19, 2020. Those interested may submit comments by email to paradoxeis@usbr.gov or to Ed Warner, Area Manager, Bureau of Reclamation, 445 West Gunnison Avenue, Suite 221, Grand Junction, CO 81501.

#

The Bureau of Reclamation is a federal agency under the U.S. Department of the Interior and is the nation's largest wholesale water supplier and second largest producer of hydroelectric power. Its facilities also provide substantial flood control, recreation opportunities, and environmental benefits. Visit our website at www.usbr.gov and follow us on Twitter [@USBR](https://twitter.com/USBR).