

Minutes of Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
Wednesday, April 13, 2022

A meeting of the Colorado River Board of California (Board) was held on Wednesday, April 13, 2022, at the Sheraton Ontario Airport Hotel, 429 North Vineyard Avenue, Ontario, California 91764.

Board Members and Alternates Present:

David De Jesus (MWD Alternate)  
Dana B. Fisher, Jr. (PVID)  
John B. Hamby (IID)  
Jeanine Jones (DWR Designee)

Peter Nelson, Chairman (CVWD)  
Glen D. Peterson (MWD)  
David R. Pettijohn, Vice Chairman (LADWP)  
Jim Madaffer (SDCWA)

Board Members and Alternates Absent:

Castulo Estrada (CVWD Alternate)  
James Hanks (IID Alternate)  
Christopher Hayes (DFW Designee)  
Delon Kwan (LADWP Alternate)

Jack Seiler (PVID Alternate)  
Mark Watton (SDCWA Alternate)  
David Vigil (DFW Alternate))

Others Present:

Steve Abbott  
Robert Cheng  
Dennis Davis  
Nadia Hardjadinata  
Chris Harris  
Bill Hasencamp  
Larry Lai  
Jessica Neuwerth  
Angela Rashid

David Rheinheimer  
Kelly Rodgers  
Tom Ryan  
Alexi Schnell  
Tina Shields  
Gary Tavetian  
Petya Vasileva  
Jerry Zimmerman

## **CALL TO ORDER**

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:12 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 March 9, 2022, meeting minutes. Mr. Madaffer moved that the minutes be approved, seconded by Mr. Pettijohn. By roll-call vote, the minutes were unanimously approved.

Chairman Nelson asked for a motion to approve a Board resolution Posthumously Honoring Mr. Henry (Hank) Kuiper. Mr. Hamby moved that the resolution be approved, seconded by Ms. Jones. By roll-call vote, the resolution was unanimously approved.

Mr. Tavetian noted that Bill Abbey from the California Attorney General's office passed away about a month ago. He stated that Mr. Abbey was always happy, optimistic, and cheerful.

## **COLORADO RIVER BASIN WATER REPORTS**

### **Colorado River Basin Report**

Ms. Rashid reported that as of April 4<sup>th</sup>, the water level at Lake Powell was 3,523.04 feet with 5.81 million-acre feet (MAF) of storage, or 24% of capacity. The water level at Lake Mead was 1,061.04 feet with 8.50 MAF of storage, or 33% of capacity. The total system storage was 20.88 MAF, or 35% of capacity, which is 5.39 MAF less than system storage at this time last year.

Ms. Rashid reported that as of April 4<sup>th</sup>, for Water Year-2022 (WY-2022), the observed March inflow to Lake Powell was 0.33 MAF, or 55% of normal. The April inflow forecast to Lake Powell is 0.60 MAF, or 66% of normal. The forecasted unregulated inflow into Lake Powell for WY-2022 is 6.31 MAF, or 66% of normal and the WY-2022 forecasted April to July inflow to Lake

Powell is 4.1 MAF, or 64% of normal. Ms. Rashid reported that overall precipitation conditions in the Upper Colorado River Basin were 97% of normal and the current Basin snowpack is 87% of normal.

Ms. Rashid reported on the Water Year-2022 (October to March) Precipitation. She stated that the WY-2022 precipitation was near normal despite dry conditions over the last three months, noting that this was due to near normal to above normal precipitation conditions in October and December of last year.

Board member Peterson inquired about the impacts of shifting to the new climate normal period of 1991 to 2020, noting that the previous normal period of 1981 to 2010 had wetter precipitation conditions. He added that it is hard to determine whether the current conditions are normal or above normal for winter this year. Mr. Harris added that last year's monsoon season was above normal and the Lower Basin picks up most of its moisture during this season and it is also important for the side inflows between Glen Canyon Dam and Lake Mead.

*Drought Response Operations and Basin States Activities to Protect Critical Elevations in Lakes Powell and Mead*

Mr. Harris reported that precipitation conditions have been deteriorating since January and the 24-Month Study and Colorado River Midterm Modeling System (CRMMS) indicate the risk to Lake Powell was beginning to increase significantly. He reported that the latest modeling shows Lake Powell's elevation has the potential to reach 3,525 feet and by early 2023, may decline to or below 3,490 feet. Mr. Harris stated that the Basin States have been discussing how to further bolster and protect Lake Powell from reaching these critical elevations. He stated that there is a public roll-out of the Upper Basin's proposed Drought Operations Plan (DROA) for 2022. Mr. Harris stated that last year, the Bureau of Reclamation (Reclamation) implemented drought operation releases from Flaming Gorge reservoir and other Colorado River initial units, of 180,000 AF to Lake Powell to try to keep the elevation above 3,525 feet.

Mr. Harris reported that Upper Basin and Reclamation are working together to make a larger DROA release of about 500,000 AF. He added that is amount may not be enough to keep Lake Powell from reaching 3,525 feet and potential declining further. Mr. Harris stated that Reclamation indicated that monthly Glen Canyon Dam releases would be adjusted to shift 350,000 AF from release in the spring to the summer months. Mr. Harris noted if additional measures aren't made to protect Lake Powell's critical elevation, Lake Mead could be harmed.

Mr. Harris reported the Basin States and the Department of the Interior (DOI) have had a series of coordination meetings to consider additional measures to protect critical water elevations at Lakes Powell and Mead. He stated that Assistant Secretary for Water and Science, Tanya Trujillo issued a letter on April 8<sup>th</sup> that describes the need for additional action, outlines the justification to protect critical elevations in Lake Powell such as, operational reliability, water delivery uncertainty for downstream users and the risk and instability to the western electrical grid. DOI proposed to reduce Glen Canyon Dam annual release in 2022 from 7.48 MAF to 7.0 MAF and provide some certainty regarding proposed 2023 operations at both Lakes Powell and Mead. This proposed action will be done in conjunction with the Upper Basin's plan DROA release. He stated that these two actions together would result in about 1.0 MAF of additional storage in Lake Powell.

Chairman Nelson asked for more clarity about Lake Powell's critical elevations and how it is related to power generation and why Lake Mead's elevations, as outlined in the Lower Basin DCP, are used as thresholds by which the Lower Basin takes water use cuts. Mr. Harris explained that Lake Powell's elevations are tied to operational integrity of maintaining the management of Glen Canyon Dam. He explained that at 10 feet above elevation 3,490 feet, it will become very difficult to operate the reservoir, noting however, that there is very limited operational experience operating the facility at that elevation. Mr. Harris stated at 3,490 feet water could be routed to the river outlet works and pass water through the jet bypass tubes but there is an operational risk if one of the jet tubes fails or needs maintenance, limiting how much water can physically be released from the facility. He added that Reclamation has not done maintenance on the river outlet works in some time and maintenance is scheduled to over the next couple of years and will be needed if the elevation declines to or below 3,490 feet. Mr. Harris stated that the river outlet works are steel-lined and may be epoxy-coated, noting that maintenance is needed. He added that if the flapper gate on the jet tubes fails, they fail in the open position, with no way to close them or repair them.

Mr. Harris reported that Glen Canyon and Hoover Dams were black start units for Palo Verde nuclear generating station. Mr. Harris explained that if there is a failure of the western electrical grid, the hydropower facilities would be used to bring electricity back to grid and then the nuclear reactor could be put back online. He stated from a system redundancy perspective, Reclamation wants to preserve the ability to utilize the Glen Canyon Dam generating facility. He stated further, if Glen Canyon Dam was not able to generate electricity, power would have to be procured on the spot market, which would further stress the already maxed out southwestern power grid. He stated that Reclamation has been clear that hydropower is not trumping water supply or water delivery. Mr. Harris reported that Paige, Arizona, and a few other rural communities, including communities in the Navajo Nation, have a couple of plumb lines off the

penstocks in Lake Powell near the elevation of 3,490 feet that supply 100% of its water supply. He noted that they are using about 3,000 AF. He stated that the DOI is cognizant of all these issues and it trying to balance them all.

Mr. Harris stated there is an increased risk to storage in Lake Mead by taking this action. He stated the month of April has the highest water use demands, and now with the war in Ukraine, agricultural production has greatly increased to produce wheat. He stated that Lake Mead's capacity is 33% of storage and this action could cause further decline in storage. He explained that the Basin States and Reclamation are proposing that the action will be operationally neutral and will limit the risk of adverse impacts to downstream users below Glen Canyon Dam. He stated that with the DROA release from the Upper Basin, we need to get as much of the 500-plus plan into Lake Powell.

Mr. Peterson inquired about how Reclamation plans to account for the water not released downstream from Glen Canyon Dam. Mr. Harris explained that Reclamation would use its authority under the 2007 Interim Guidelines to take action for public safety and health infrastructure protection. Mr. Harris explained that under the Guidelines, a minimum release out of Glen Canyon Dam is allowed. He stated if for some reason this action wasn't taken and 7.48 MAF was released and we had another dry winter, Lake Powell's elevation could drop below 3,490 feet causing operational issues that only allow for releases less than 7.0 MAF. He stated further that taking this action can guarantee at least next year's release could be 7.0 MAF or greater. Mr. Harris stated this action will cause Lake Mead's elevation to decline and recovery is uncertain at the moment. He stated that this year's release from Glen Canyon Dam will be reduced and next year releases may vary between 7.0 MAF up to 8.23 MAF. Mr. Harris stated that the proposed action would not impact the Upper Basin's Compact requirement of delivering 75 MAF over a running ten-year period.

Mr. Zimmerman stated the first obligation for deliveries from Glen Canyon Dam are for the Mexican Treaty, then you can account for the 75 MAF over a ten-year period. Mr. Harris added that Upper Basin's carriage losses are not included but should be, and this issue can be discussed during the renegotiation of the Guidelines.

Mr. Harris stated that the April 8<sup>th</sup> letter from Ms. Trujillo have requested responses to the proposed action by April 22<sup>nd</sup> and the Board would discuss it during an Executive Session.

Board member Jones remarked that DOI's letter mentioned that it did not foresee the severity of the hydrologic conditions and that precipitation conditions this year were near normal, yet spring runoff forecasts began trailing off. She requested Board staff to address the

disconnect between precipitation and runoff forecasts at a future Board meeting. Mr. Harris stated that the Basin States, Reclamation and DOI have seen this coming and not enough media attention has been given to the issue and the collaborative work the Basin has done to deal with the drought since 2000. Mr. Harris outlined the various actions the Basin and California have employed to deal with the on-going drought. He stated in 2003, California implemented the the Quantification Settlement Agreement (QSA) in California to bring its uses from 5.2 MAF to 4.4 MAF, noting that there was no soft landing to reducing the use. Next, he stated that the 2007 Interim Shortage Guidelines were implemented, with shortage criteria at elevations 1,075 feet, 1,050 feet, and 1,025 feet, noting that in hindsight Arizona should probably have taken shortages at higher elevations. Mr. Harris stated that Minutes 319 and 323 included water conservation actions that called for Mexico to take shortages with the United States and set up policy for Mexico to store conserved water in Lake Mead to bolster its storage. Next, the Lower Basin developed that Drought Contingency Plan in 2019, along with the Upper Basin developing its own DCP. Mr. Harris stated after the Basin saw that there was still significant risk to Lakes Powell and Mead, the Lower Basin developed the 500-plus plan. Mr. Harris reiterated that all of these efforts need to be better messaged to the public to show that the Basin has reacted to the drought appropriately year by year to ensure that critical elevation in both reservoirs are protected. Board member Fisher remarked on the importance of addressing many of these issues in the next set of Guidelines.

Mr. Peterson expressed concern regarding how the water that should have been released will be repaid to the Lower Basin. Mr. Harris responded that the details for the repayment have not been figured out yet.

Ms. Jones remarked on the importance of improving runoff forecasting tools to better understand the Basin's snowpack. She noted that it is important to make these investments now, stating that a financial framework is needed by Reclamation to get snowpack data that will provide better runoff forecasts. Mr. Fisher concurred, noting having better data will help them better manage DROA releases in the future. Ms. Jones reported that in order to improve runoff forecasting physical basin models will be needed, such as the airborne snow observatory (ASO), which is costly. She stated historically in California, the State spends a million dollars to develop the old-fashion point-based snow data, which involves sticking a pole in the snow to take measurement of snow pillows. She stated that the California Department of Water Resources (DWR) has a budget for \$4 million a year to conduct ASO in the San Joaquin River Basin, primarily for flood control benefits. She remarked that DWR is hoping to get funding next year for ASO for the Sacramento Basin to improve runoff modeling, which will cost \$5 million. She stated that the Colorado River Basin snow covered area is bigger, hence will be more expensive. She stated that Reclamation does not have the authority in their budget, and the National Oceanic and

Atmospheric Administration (NOAA) does not have the money to fund ASO in the Basin. She stated this is a good opportunity for stakeholders to consider encouraging Reclamation to seek this funding in Fiscal Year 2024. Mr. Harris stated the Six Agency Committee (SAC) has sent letters of support for Reclamation to obtain funding to improve its forecasting abilities in the past.

### **State and Local Report**

Ms. Jones, representing the California Department of Water Resources (DWR), reported that the statewide precipitation was 69% of average. She stated that precipitation conditions are better this year than last year. She also stated that last year experienced extreme temperatures and dry conditions. She stated that snowpack was 22% of average and began to melt early. The April 1<sup>st</sup> snowpack was close to 34% of normal and has been rapidly declining. She added that statewide reservoir storage was 70% of average and that is partly due to a very wet precipitation conditions in October and December of last year.

Ms. Jones showed graphics of DWR's full natural flow at various California rivers noting that 2014, 2015 and 2021 were the driest years of the historical period. She added that runoff conditions were much drier last year for most of California's river basins.

Ms. Jones thanked the SAC for supporting the funding request for congressional appropriation for NOAA's sub-seasonal to seasonal (S2S) precipitation forecasting. She noted this is an area that greatly needs improvement, not just for the lead time that precipitation forecasting provides but also can provide insight into spring snowmelt runoff forecasts. She stated that the Western States Water Council (WSWC) is participating in a Snowmelt Runoff Forecasting workshop on June 1<sup>st</sup>. She stated that she hopes the workshop will encourage more federal investments in this area. She also announced that the WSWC is hosting an S2S forecasting workshop in San Diego May 17 – 19, 2022 and that everyone was welcome. Mr. Harris asked Ms. Jones to keep the Board abreast of additional efforts that the SAC or individual agencies can help with for NOAA's FY-2024 budget request. Ms. Jones encouraged agencies to send digital signatures that she could add to a letter that DWR is submitting to the congressional offices to begin funding precipitation forecasting efforts in FY-2023.

Board member Peterson, representing The Metropolitan Water District of Southern California (MWD) reported that as of April 1<sup>st</sup>, MWD's system storage is 70% of capacity. The Colorado River Aqueduct (CRA) is on an eight-pump flow, which is a full aqueduct, through September. He stated that MWD plans to pull 1.1 MAF of water out of MWD's storage accounts this year, already pulling out 215,000 AF. Mr. Peterson stated that dry conditions in February

caused an increase in deliveries. He noted that the deliveries over the last two months were 101% of the ten-year average. For 2022, the target delivery for the Desert Water Agency is 15,000 AF.

Mr. Peterson stated that MWD will adopt water restrictions in State Water Project (SWP) exclusive areas, with outdoor watering allowed only one day a week. He stated that those areas will also be on health and safety deliveries from the SWP, which MWD must pay back, but the payback schedule has not been determined. Mr. Peterson noted that the restrictions will be painful and is hoping that that a storm forecasted for later in the week will bring much need precipitation to the State. He noted that a few months ago, Lake Oroville's storage was at 1.6 MAF and if it gains additional water, the SWP may be able to increase its allocation to 15%. Mr. Peterson stated that the Los Angeles Department of Water and Power (LADWP) customers in the SWP exclusive areas are suffering the worst of the restrictions.

Ms. Jones added that the SWP and Central Valley Project (CVP) are currently operating under a Temporary Urgency Change Order (TUCO) that allows for more water to be pulled out of Lake Oroville from April to July because the system is so dry, adding that the system operated under a TUCO last year as well. She stated that TUCOs are granted through an approval process through the State Water Resources Control Board, noting that many people object to TUCOs because it reduces environmental flows. Ms. Jones stated that unfortunately, we are all gaining experience with minimum health and safety allocations. She stated that the SWP had initially announced a minimal health and safety allocation for contractors on December 1<sup>st</sup>. The health and safety allocation is based on the State Water Resources Control Board criteria which only applies to residential, not commercial, industrial, institutional (CII). She added that the CVP recently announced a health and safety allocation to all its municipal and industrial (M&I) contractors, noting that it has different criteria, allowing up to 70% of CII, but this becomes difficult in communities that have a large percentage of CII demand. She stated that the SWP had to provide emergency water to the city of Kettleman which has a significant commercial demand. She added that the State has been asked to help with emergency water for some of the CVP's M&I contractors, particularly in Avenal and Coalinga, both of which have very high institutional demands due to the State Prison and cannot be covered by a traditional residential allocation.

Vice Chairman Pettijohn, representing LADWP, reported that LADWP is in the worst water supply reliability situation that the city of Los Angeles has been in its entire history, dating back a hundred years. He stated that they are faced with historically low ability to meet demands and for the first time LADWP had to go to the state for health and safety deliveries, which only serve 55 gallons per capita per day (GPCD) for residential customers. He stated that the city of Los Angeles has a very large and critical CII needs such as hospitals and schools.



He reported that the snowpack on the Los Angeles aqueduct system peaked in January, and it has been followed by the three driest months on the Eastern Sierra in the system's history. In January, the aqueduct system was 60% of normal but declined to 26% of normal with no appreciable runoff. Mr. Pettijohn stated that MWD has the third highest amount of storage in its history but can't supply LADWP with the water because it does not have the ability to move water from storage to several parts of Los Angeles, and municipal water districts and agencies in its service area including Las Virgenes, Calleguas Upper San Gabriel Valley, Three Valleys, and the Inland Empire. He stated that these areas account for one-third of MWD's service area and are under a health and safety allocation.

Mr. Pettijohn stated that parts of the LADWP service area will be restricting to outdoor watering to one day a week and likely be restricted to zero later in the year. He added that several disadvantaged communities, about a quarter to one-third of the service area, will have yards and gardens that will go brown and die, while to the south of the service area, communities will have green gardens and full swimming pools due to the fact that these areas can receive water from MWD.

Mr. Cheng, representing the Coachella Valley Water District, commented on the potential for heightened water quality impacts such as salinity and PFAS will increase due to drought and the reduced release from Glen Canyon Dam.

## **GENERAL ANNOUNCEMENTS**

### **California Drought Executive Order**

Mr. Harris described that on March 28<sup>th</sup>, California Governor Newsom signed a new executive order regarding the ongoing drought conditions. The governor asked the State Water Board to consider a ban on watering of decorative grass around commercial, industrial, and institutional buildings. The governor is encouraging suppliers to consider going above and beyond level 2 of their existing shortage contingency plans. And he also directed state agencies to submit funding proposals in support of the state's short- and long-term drought response measures.

### **State/Local/Federal Agencies Announce Agreement to Improve Sacramento/San Joaquin River Delta Watershed**

Mr. Harris described that recent agreement was reached with respect to the Sacramento-San Joaquin River Delta Watershed on March 29th. The MOU among state, federal, and local

agencies lays out an eight-year program that provides in-stream flow commitments, additional flow for fish species in the January to June time frame. The MOU calls for habitat restoration and accelerated permitting and implementation of the restoration activities. Also sets up governance, monitoring, and decision-making framework, and requires progress reports every three years.

#### Funding Opportunity for Drought Resiliency

Mr. Harris described federal funding available for Drought Resiliency Projects that provides federal cost share funds for drought response measures and projects that improve water supply reliability and water management. Eligible applicants could include States, Tribes, irrigation districts and water districts, and NGOs. The amount of funding available is varied based upon proposed project size and completion.

#### Washington DC Updates

Mr. Harris reported that the 2023 federal budget proposes \$1.4 billion for Reclamation, and they are going to spend \$1.6 billion from the bipartisan Infrastructure Investment and Jobs Act by the end of fiscal year 2022. Senator Feinstein is working hard right now to get a draft of her big western water bill complete, and she hopes to introduce that in the April to May time frame in the Senate. At the end of March, there was a hearing in the Senate's Indian Affairs Committee on Senate Bill 3308, which is the CRIT legislation which has been agreed upon within the state of Arizona. This would grant the CRIT the ability to lease and enter into transfers and storage agreements for a portion of its Arizona allocation within Arizona for use within Arizona or storage within Arizona or storage in Lake Mead. Mr. Harris stated out of Arizona's 2.8 million acre-feet, 670 thousand acre-feet is CRIT water.

#### 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, a motion was made by Mr. Fisher to go into Executive Session, seconded by Mr. Madaffer, to discuss matters concerning interstate negotiations with representatives from other states or the federal government. The motion was unanimously approved. The Board entered Executive Session at 11:31 a.m.

## **REGULAR SESSION**

The Board resumed the regular session at 12:10 p.m. and Chairman Nelson reported that the Board took action during the Executive Session to authorize the Chairman to sign a response letter to the letter received from Assistant Secretary Trujillo from April 8th.

## **ADJOURNMENT**

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